IPORT

NETWORK SYSTEMS

TELECOMMUNICATION

CABLING SYSTEMS

KUANTUM HOLDING — Group Company

NETWORK COMMUNICATION SOLUTIONS
Overview

NETWORK COMMUNICATION SOLUTIONS
Standards from Cat5e to Cat7a

IPORT offers a wide range of networking cables from Cat5e to Cat7a and includes domestic and industrial LAN cables and their patch cables.

IPORT has developed Cat6a, Cat7 and Cat7a cables for the 10 G solution and these products are in mass production. Our Cat6a and Cat7a cables are approved for Delta EC Cabling certification.

Abbreviations

CCS Copper Clad Steel	SPE Solid PE
SBC Solid Bare Copper	FPE Foam PE
BC Bare Copper	PTFE Polytetrauroethylene
TC Tinned Copper	FEP Fluorinated Ethylene Propylene
CCA Copper Clad Aluminum	PVC Polyvinyl Chloride
SPC Silver Plated Copper	FR-PVC Fire Resistant PVC
SWA Steel Wire Armor	LSF Low Smoke and Smoke
SWB Steel Wire Mesh	LSZH Low Smoke Zero Halogen
STA Steel Tape Armor	XL-LSZH Cross Linked LSZH
PE Polyethylene	PUR Polyurethane
HDPE High density PE	

Cat7a IEC61156-5-2009

Frequency (MHz)	Attenuation (dB/100m)	NEXT (dB1100m)	Psnext (dB/100m)	Return Loss (dB/100m)	Elf ext (dB/100m)	Pselfext (dB/100m)	Propagation Delay(ns)	Delay Skew (ps)	ACR (dB/100m)	PS-ACR (dB/100m)
1	2,1	78,0	75,0	20,0	78,0	75,0	570,0	<0.025	75,9	72,9
4	3,7	78,0	75,0	23,0	78,0	75,0	552,0	<0.025	74,3	71,3
10	5,8	78,0	75,0	25,0	75,3	72,3	545,4	<0.025	72,2	69,2
16	7,3	78,0	75,0	25,0	71,2	68,2	543,0	<0.025	70,7	67,7
31,25	10,3	78,0	75,0	23,6	65,4	62,4	540,4	<0.025	67,7	64,7
62,50	14,6	78,0	75,0	21,5	59,4	56,4	538,6	<0.025	63,4	60,4
100	18,5	75,4	72,4	20,1	55,3	52,3	537,6	<0.025	56,9	53,9
250	29,7	69,4	66,4	17,3	47,3	44,3	536,3	<0.025	39,7	36,7
300	32,7	68,2	65,2	17,3	45,8	42,8	536,1	<0.025	35,6	32,6
350	35,4	67,2	64,2	17,3	44,4	41,8	535,9	<0.025	31,8	28,8
400	38,0	66,4	63,4	17,3	43,3	40,3	535,8	<0.025	28,4	25,4
550	45,0	64,3	61,3	17,3	40,5	37,5	535,5	<0.025	19,3	16,3
600	47,1	63,7	60,7	17,3	39,7	36,7	535,5	<0.025	16,6	13,6
650	49,2	63,2	60,2	17,3	39,0	36,0	535,4	<0.025	14,1	11,1
750	53,1	62,3	59,3	17,3	37,8	34,8	535,3	<0.025	9,2	6,2
850	54,9	61,9	58,9	17,3	37,2	34,2	535,3	<0.025	6,9	3,9
900	58,5	61,1	58,1	17,3	36,2	33,2	535,2	<0.025	2,6	-0,4
1000	61,9	60,4	57,4	17,3	35,3	32,3	535,1	<0.025	-1,5	-4,5

Cat7 IEC61156-5-2009

Frequency (MHz)	Attenuation (dB/100m)	NEXT (dB/100m)	Psnext (dB/100m)	Return Loss (dB/100m)	Elf ext (dB/100m)	Pselfext (dB/100m)	Propagation Delay(ns)	Delay Skew (ps)	ACR (dB/100m)	PS-ACR (dB/100m)
1	2,0	78,0	75,0	20,0	78,0	75,0	570,0	<0.025	76,0	73,0
4	3,7	78,0	75,0	23,0	78,0	75,0	552,0	<0.025	74,3	71,3
10	5,9	78,0	75,0	25,0	75,3	72,3	545,4	<0.025	72,1	69,1
16	7,4	78,0	75,0	25,0	71,2	68,2	543,0	<0.025	70,6	67,6
31,25	10,4	78,0	75,0	23,6	65,4	62,4	540,4	<0.025	67,6	64,6
62,50	14,9	75,5	72,5	21,5	59,4	56,4	538,6	<0.025	60,6	57,6
100	19,0	72,4	69,4	20,1	55,3	52,3	537,6	<0.025	53,4	50,4
250	31,0	66,4	63,4	17,3	47,3	44,3	536,3	<0.025	35,5	32,5
300	34,2	65,2	62,2	17,3	45,8	42,8	536,1	<0.025	31,1	28,1
350	37,2	64,2	61,2	17,3	44,4	42,4	535,9	<0.025	27,1	24,1
400	40,0	63,4	60,4	17,3	43,3	40,3	535,8	<0.025	23,4	20,4
550	47,7	61,3	58,3	17,3	40,5	37,5	535,5	<0.025	13,6	10,6
600	50,1	60,7	57,7	17,3	39,7	36,7	535,5	<0.025	10,6	7,6
*650	52,4	60,2	57,2	17,3	39,0	36,0	535,4	<0.025	7,8	5,8
*750	56,8	59,3	56,3	17,3	37,8	34,8	535,3	<0.025	2,5	-0,5
*850	61,0	58,5	55,5	17,3	36,7	33,7	535,2	<0.025	-2,5	-5,5
*900	63,0	58,1	55,1	17,3	36,2	33,2	535,2	<0.025	-4,9	-7,9
*1000	66,9	57,4	54,4	17,3	35,3	32,3	535,1	<0.025	-9,5	-12,5

Cat6a IEC61156-5-2009

Frequency (MHz)	Attenuation (dB/100m)	NEXT (dB/100m)	Psnext (dB/100m)	Return Loss (dB/100m)	Elfext (dB/100m)	Pselfext (dB/100m)	Propagation Delay(ns)	Delay Skew (ps)	ACR (dB/100m)	PS-ACR (dB1100m)
1	2,1	75,3	72,3	20,0	68,0	65,0	570,0	<0.045	73,2	70,2
4	3,8	66,3	63,3	23,0	56,0	53,0	552,0	<0.045	62,5	59,5
10	5,9	60,3	57,3	25,0	48,0	45,0	545,4	<0.045	54,4	51,4
16	7,5	57,2	54,2	25,0	43,9	40,9	543,0	<0.045	49,8	46,8
31,25	10,5	52,9	49,9	23,6	38,1	35,1	540,4	<0.045	42,4	39,4
62,50	15,0	48,4	45,4	21,5	32,1	29,1	538,6	<0.045	33,4	30,4
100	19,1	45,3	42,3	20,1	28,0	25,0	537,6	<0.045	26,2	23,2
250	31,1	39,3	36,3	17,3	20,0	17,0	536,3	<0.045	8,3	5,3
300	34,3	38,1	35,1	16,8	18,5	15,5	536,1	<0.045	3,9	0,9
350	37,2	37,1	34,1	16,3	17,1	14,1	535,9	<0.045	-0,1	-3,1
400	40,1	36,3	33,3	15,9	16,0	13,0	535,8	<0.045	-3,8	-6,8
500	45,3	34,8	31,8	15,2	14,0	11,0	535,6	<0.045	-10,4	-13,4
*600	50,1	33,6	30,6	14,7	12,4	9,4	535,5	<0.045	-16,4	-19,4
*650	52,3	33,1	30,1	14,4	11,7	8,7	535,4	<0.045	-19,2	-22,2

NETWORK COMMUNICATION SOLUTIONS
Standards from Cat5e to Cat7a

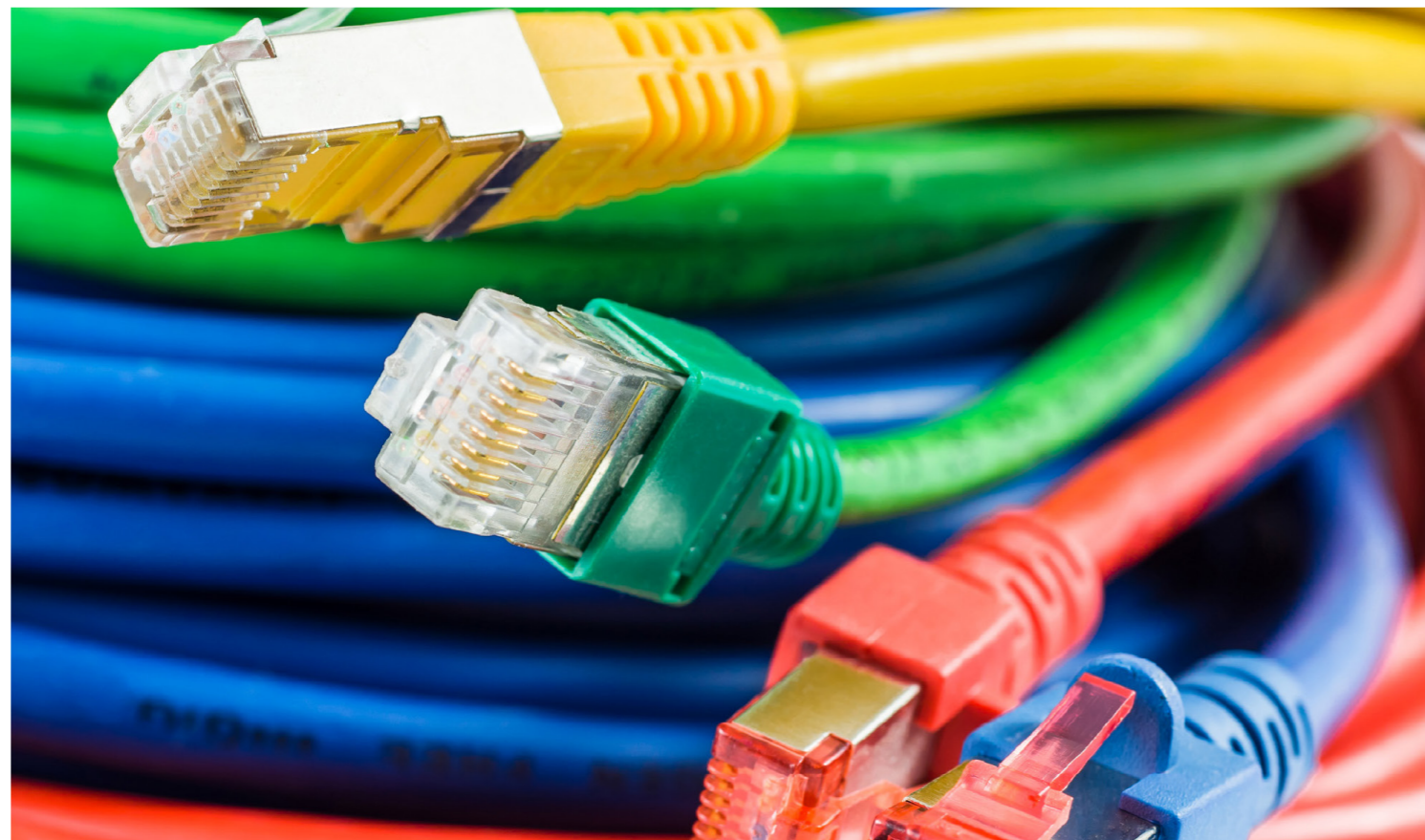# NETWORK COMMUNICATION SOLUTIONS
Copper Patch Cable Standards

Cat6 IEC61156-5-2009

Frequency (MHz)	Attenuation (dB/100m)	NEXT (dB/100m)	Psnext (dB/100m)	Return Loss (dB1100m)	Elfext (dB/100m)	Pselfext (dB/100m)	Propagation Delay(ns)	Delay Skew (ps)	ACR (dB/100m)	PS-ACR (dB/100m)
1	2,1	75,3	72,3	20,0	68,0	65,0	570,0	<0.045	73,2	70,2
4	3,8	66,3	63,3	23,0	56,0	53,0	552,0	<0.045	62,4	59,4
10	6,0	60,3	57,3	25,0	48,0	45,0	545,4	<0.045	54,3	51,3
16	7,6	57,2	54,2	25,0	43,9	40,9	543,0	<0.045	49,6	46,6
20	8,5	55,8	52,8	25,0	42,0	39,0	542,0	<0.045	47,3	44,3
31,25	10,7	52,9	49,9	23,6	38,1	35,1	540,4	<0.045	42,1	39,1
62,5	15,5	48,4	45,4	21,5	32,1	29,1	538,6	<0.045	32,9	29,9
100	19,9	45,3	42,3	20,1	28,0	25,0	537,6	<0.045	25,4	22,4
155,5	25,3	42,4	39,4	18,8	24,2	21,2	536,9	<0.045	17,1	14,1
175	27,1	41,7	38,7	18,4	23,1	20,1	536,7	<0.045	14,6	11,6
200	29,1	40,8	37,8	18,0	22,0	19,0	536,5	<0.045	11,6	8,6
250	33,0	39,3	36,3	17,3	20,0	17,0	536,3	<0.045	6,3	3,3
*300	36,6	38,1	35,1	16,8	18,5	15,5	536,1	<0.046	1,5	-1,5
*350	40,0	37,1	34,1	16,3	17,1	14,1	535,9	<0.045	-2,8	-5,8
*450	46,2	35,5	32,5	15,5	14,9	11,9	535,7	<0.045	-10,7	-13,7

Cat5e IEC61156-5-2009

Frequency (MHz)	Attenuation (dB/100m)	NEXT (dB/100m)	Psnext (dB/100m)	Return Loss (dB1100m)	Elfext (dB/100m)	Pselfext (dB/100m)	Propagation Delay(ns)	Delay Skew (ps)	ACR (dB/100m)	PS-ACR (dB/100m)
1	2,1	65,3	62,3	20,0	64,0	61,0	570,0	<0.045	63,2	60,2
4	4,1	56,3	53,3	23,0	52,0	49,0	552,0	<0.045	52,2	49,2
10	6,5	50,3	47,3	25,0	44,0	41,0	545,4	<0.045	43,8	40,8
16	8,3	47,2	44,2	25,0	39,9	36,9	543,0	<0.045	39,0	36,0
31,25	11,7	42,9	39,9	23,6	34,1	31,1	540,4	<0.045	31,1	28,1
62,5	17,0	38,4	35,4	21,5	28,1	25,1	538,6	<0.045	21,4	18,4
100	22,0	35,3	32,3	20,1	24,0	21,0	537,6	<0.045	13,3	10,3
*150	27,5	32,7	29,7	18,9	20,5	17,5	536,9	<0.045	5,1	2,1
*200	32,4	30,8	27,8	18,0	18,0	15,0	536,5	<0.045	-1,6	-4,6

Cat7a IEC61156-6-2009

Frequency (MHz)	Attenuation (dB/100m)	NEXT (dB/100m)	Psnext (dB/100m)	Return Loss (dB/100m)	Elf ext (dB/100m)	Pselfext (dB/100m)	Propagation Delay(ns)	Delay Skew (ps)	ACR (dB/100m)	PS-ACR (dB/100m)
1	3,0	78,0	75,0	20,0	78,0	75,0	570,0	<0.025	75,0	72,0
4	5,6	78,0	75,0	23,0	78,0	75,0	552,0	<0.025	72,4	69,4
10	8,8	78,0	75,0	25,0	74,0	71,0	545,4	<0.025	69,2	66,2
16	11,1	78,0	75,0	25,0	69,9	66,9	543,0	<0.025	66,9	63,9
31,25	15,6	78,0	75,0	23,3	64,1	61,1	540,4	<0.025	62,4	59,4
62,5	22,3	78,0	75,0	20,7	58,1	55,1	538,6	<0.025	55,7	52,7
100	28,5	75,4	72,4	19,0	54,0	51,0	537,6	<0.025	46,9	43,9
250	46,5	69,4	66,4	15,6	46,0	43,0	536,3	<0.025	23,0	20,0
300	51,3	68,2	65,2	15,6	44,6	41,5	536,1	<0.025	17,0	14,0
350	55,8	67,2	64,2	15,6	43,1	40,1	535,9	<0.025	11,5	8,5
400	60,0	66,4	63,4	15,6	42,0	39,0	535,8	<0.025	6,4	3,4
550	71,6	64,3	61,3	15,6	39,2	36,2	535,5	<0.025	-7,3	-10,3
600	75,1	63,7	60,7	15,6	38,4	35,4	535,5	<0.025	-11,4	-14,4
650	78,6	63,2	60,2	15,6	37,7	34,7	535,4	<0.025	-15,4	-18,4
750	85,2	62,3	59,3	15,6	36,5	33,5	535,3	<0.025	-22,9	-25,9
800	88,4	61,9	58,9	15,6	35,9	32,9	535,3	<0.025	-26,5	-29,5
900	94,5	61,1	58,1	15,6	34,9	31,9	535,2	<0.025	-33,4	-36,4

Cat7 IEC61156-6-2009

Frequency (MHz)	Attenuation (dB/100m)	NEXT (dB/100m)	Psnext (dB/100m)	Return Loss (dB/100m)	Elf ext (dB/100m)	Pselfext (dB/100m)	Propagation Delay(ns)	Delay Skew (ps)	ACR (dB/100m)	PS-ACR (dB/100m)
1	3,0	78,0	75,0	20,0	78,0	75,0	570,0	<0.25	75,0	72,0
4	5,6	78,0	75,0	23,0	78,0	75,0	552,0	<0.25	72,4	69,4
10	8,8	78,0	75,0	25,0	74,0	71,0	545,4	<0.25	69,2	66,2
16	11,1	78,0	75,0	25,0	69,9	66,9	543,0	<0.25	66,9	63,9
31,25	15,6	78,0	75,0	23,3	64,1	61,1	540,4	<0.25	62,4	59,4
62,5	22,3	75,5	72,5	20,7	58,1	55,1	538,6	<0.25	53,1	50,1
100	28,5	72,4	69,4	19,0	54,0	51,0	537,6	<0.25	43,9	40,9
250	46,5	66,4	63,4	15,6	46,0	43,0	536,3	<0.25	20,0	17,0
300	51,3	65,2	62,2	15,6	44,5	41,5	536,1	<0.25	14,0	11,0
350	55,8	64,2	61,2	15,6	43,1	10,1	535,9	<0.25	8,5	5,5
400	60,0	63,4	60,4	15,6	42,0	39,0	535,8	<0.25	3,4	0,4
550	71,6	61,3	58,3	15,6	39,2	36,2	535,5	<0.25	-10,3	-13,3
600	75,1	60,7	57,7	15,6	38,4	35,4	535,5	<0.25	-14,4	-17,4

Cat6a IEC61156-6-2009

Frequency (MHz)	Attenuation (dB/100m)	NEXT (dB/100m)	Psnext (dB/100m)	Return Loss (dB/100m)	Elf ext (dB/100m)	Pselfext (dB/100m)	Propagation Delay(ns)	Delay Skew (ps)	ACR (dB/100m)	PS-ACR (dB/100m)
1	3,1	75,3	72,3	20,0	68,0	65,0	570,0	<0.045	72,2	69,2
4	5,8	66,3	63,3	23,0	56,0	53,0	552,0	<0.045	60,5	57,5
10	9,0	60,3	57,3	25,0	48,0	45,0	545,4	<0.045	51,3	48,3
16	11,4	57,2	54,2	25,0	43,9	40,9	543,0	<0.045	45,8	42,8
31,25	16,1	52,9	49,9	23,6	38,1	35,1	540,4	<0.045	36,7	33,7
62,5	23,3	48,4	45,4	21,5	32,1	29,1	538,6	<0.045	25,1	22,1
100	29,9	45,3	42,3	20,1	28,0	25,0	537,6	<0.045	15,4	12,4
250	49,7	39,3	36,3	17,3	20,0	17,0	536,3	<0.045	-10,4	--13.4
300	55,1	38,1	35,1	16,8	18,5	15,5	536,1	<0.045	--17,0	--20,0
350	60,2	37,1	34,1	16,3	17,1	14,1	535,9	<0.045	-23,1	-26,1
400	65,0	36,1	33,3	15,9	16,0	13,0	535,9	<0.045	-28,7	-31,4
500	74,1	34,8	31,8	15,2	14,0	11,0	535,6	<0.045	-39,2	-42,2

NETWORK COMMUNICATION SOLUTIONS
Copper Patch Cable Standards

NETWORK COMMUNICATION SOLUTIONS
TIA And ISO Standards

Cat6 IEC61156-6-2009

Frequency (MHz)	Attenuation (dB/100m)	NEXT (dB/100m)	Psnext (dB/100m)	Return Loss (dB/100m)	Elf ext (dB/100m)	Pselfext (dB/100m)	Propagation Delay(ns)	Delay Skew (ps)	ACR (dB/100m)	PS-ACR (dB/100m)
1	3,1	75,3	72,3	20,0	68,0	65,0	570,0	<0.045	72,2	69,2
4	5,8	66,3	63,3	23,0	56,0	53,0	552,0	<0.045	60,5	57,5
10	9,0	60,3	57,3	25,0	48,0	45,0	545,4	<0.045	51,3	48,3
16	11,4	57,2	54,2	25,0	43,9	40,9	543,0	<0.045	45,8	42,8
20	12,8	55,8	52,8	25,0	42,0	39,0	542,0	<0.045	43,0	40,0
31,25	16,1	52,9	49,9	23,6	38,1	35,1	540,4	<0.045	36,7	33,7
62,5	23,3	48,4	45,4	21,5	32,1	29,1	538,8	<0.045	25,1	22,1
100	29,9	45,3	42,3	20,1	28,0	25,0	537,6	<0.045	15,4	12,4
155,5	38,1	42,4	39,4	18,1	24,2	21,2	536,9	<0.045	4,3	1,3
175	40,7	41,7	38,7	18,4	23,1	20,1	536,7	<0.045	1,0	−2,0
200	43,8	40,8	37,8	18,0	22,0	19,0	536,5	<0.045	−3,0	−6,0
250	49,7	39,3	36,3	17,3	20,0	17,0	536,3	<0.045	-10,4	-13,4

TIA and ISO Equivalent Classifications

Frequency Bandwidth	TIA (Cabling)	ISO (Cabling)
100 MHz	Category 5e	Class D
1-250 MHz	Category 6	Class E
1-500 MHz	Category 6a	Class EA
1-600 MHz	Not specified	Class F
1-1000 MHz	Not specified	Class FA

TIA Cable Standards

Category 5e	ANSI/TIA-568-C.2, Balanced Twisted-Pair Telecommunications Cabling and Components Standard, 2009
Category 6	ANSI/TIA-568-C.2, Balanced Twisted-Pair Telecommunications Cabling and Components Standard, 2009
Category 6a	ANSI/TIA-568-C.2, Balanced Twisted-Pair Telecommunications Cabling and Components Standard, 2009

Cat5e IEC61156-6-2009

Frequency (MHz)	Attenuation (d131100m)	NEXT (dB/100m)	Psnext (dB/100m)	Return Loss (dB/100m)	Elfext (dB/100m)	Pselfext (dB/100m)	Propagation Delay(ns)	Delay Skew (ps)	ACR (dB/100m)	PS-ACR (d131100m)
1	3,2	65,3	62,3	20,1	64,0	61,0	570,0	<0.045us	62,1	59,1
4	6,0	56,3	53,3	23,0	52,0	49,0	552,0	<0.045us	50,3	47,3
10	9,5	50,3	47,3	25,0	44,0	41,0	545,4	<0.045us	40,8	37,8
16	12,1	47,2	44,2	25,0	39,9	36,9	543,0	<0.045us	35,2	32,2
31,25	17,1	42,9	39,9	23,6	34,1	31,1	540,4	<0.045us	25,8	22,8
62,5	24,8	38,4	35,4	21,5	28,1	25,1	538,6	<0.045us	13,6	10,6
100	32,0	35,3	32,3	20,1	24,0	21,0	537,6	<0.045us	3,3	0,3

ISO Cable Standards

Class D	ISO/IEC 11801, 2nd Ed., Information technology - Generic Cabling for Customer Premises, 2002
Class E	ISO/IEC 11801, 2nd Ed., Information technology - Generic Cabling for Customer Premises, 2002
Class EA	Amendment 1 to ISO/IEC 11801, 2nd Ed., Information technology - Generic Cabling for Customer Premises, 2008
Class F	ISO/IEC 11801, 2nd Ed., Information technology - Generic Cabling for Customer Premises, 2002
Class FA	Amendment 1 to ISO/IEC 11801, 2nd Ed., Information technology - Generic Cabling for Customer Premises, 2008
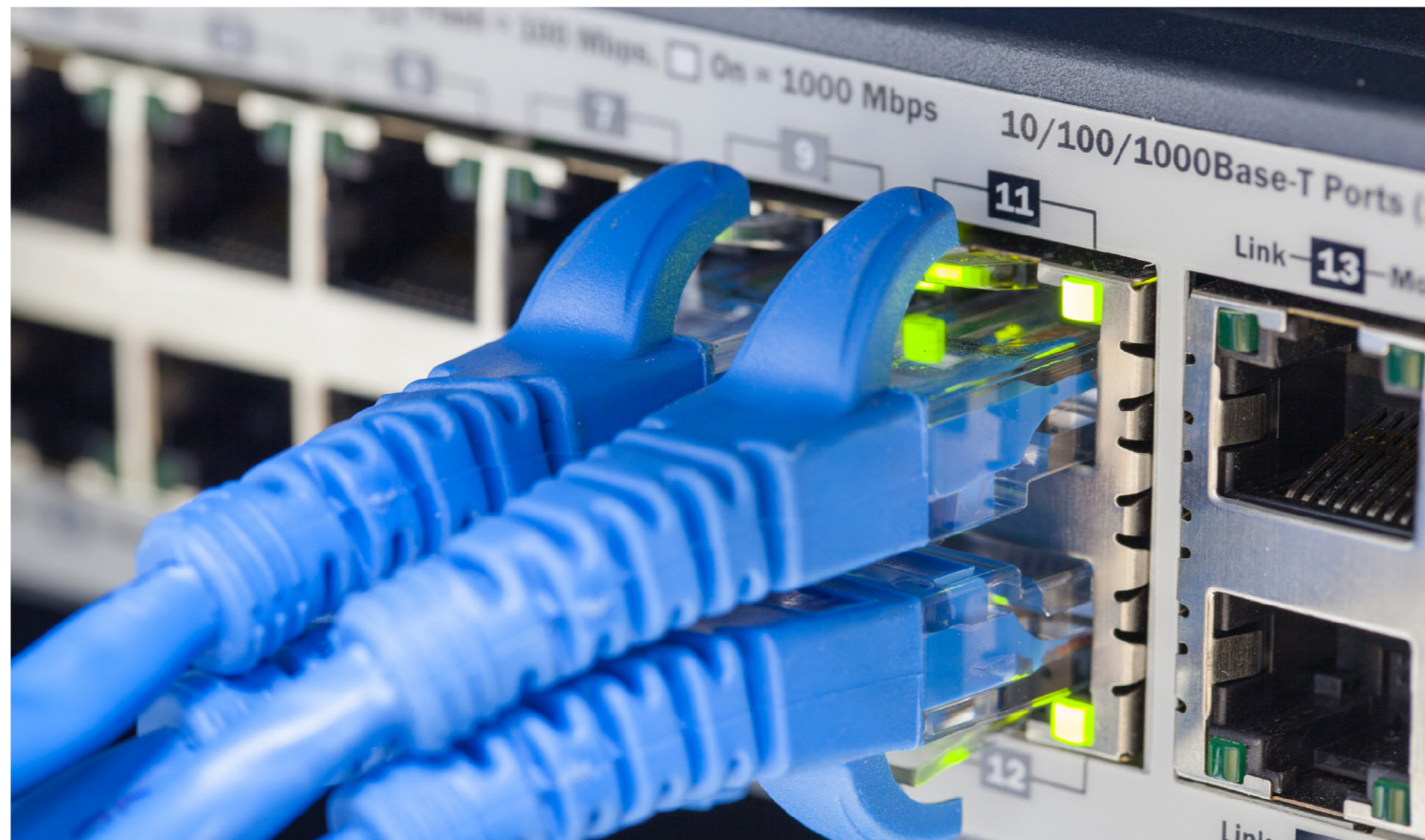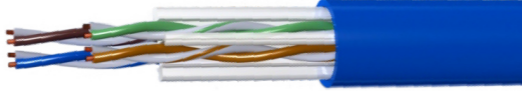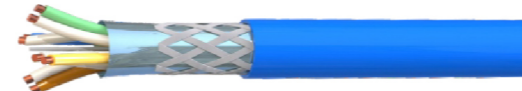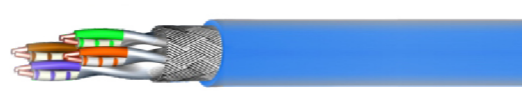
LAN Cables Application Table (Summary Table)

APPLICATIONS	UNSHIELDED		SHIELDED			
	CAT 5e	CAT 6	CAT 5e	CAT 6	CAT 6a	CAT 7
10 /100 Megabits/s Networks	✔	✔	✔	✔	✔	✔
1000 Megabit/s Networks	✔	✔	✔	✔	✔	✔
10 Gigabits/s Networks	✖	✖	✖	✖	✔	✔
40 Gigabits/s Networks	✖	✖	✖	✖	⚠	⚠
100 Gigabits/s Networks	✖	✖	✖	✖	⚠	⚠
Analog & Digital Phone	✔	✔	✔	✔	✔	✔
VoIP	✔	✔	✔	✔	✔	✔
VoIP + PoE	⚠	✔	⚠	✔	✔	✔
XDSL	✔	✔	✔	✔	✔	✔
Wi-Fi Access Point	⚠	✔	⚠	✔	✔	✔
Bluetooth Access Point	⚠	✔	⚠	✔	✔	✔
CCTV With Baluns	⚠	✔	⚠	✔	✔	✔
IP Camera	✔	✔	✔	✔	✔	✔
IP Camera + PoE	⚠	✔	⚠	✔	✔	✔
Analog & Digital TV (900 MHz max)	✖	✖	✖	✖	✖	✔
IPTV	⚠	✔	⚠	✔	✔	✔
IP Alarms & Safety Systems	⚠	✔	⚠	✔	✔	✔

✔ Recomended
⚠ Useable
✖ Unuseable

NETWORK COMMUNICATION SOLUTIONS
Cable Abbreviations

Cable Type		Structure
U-UTP or UTP Unshielded Twisted Pair		
F-UTP or FTP Overall Foiled Twisted Pair		
SF-UTP or SFTP Braiding and Foiled Twisted Pair		
U-FTP or STP Individually Foiled Twisted Pair		
F-FTP or FSTP Overall Foiled and Individually Foiled Twisted pair		
S-FTP or SSTP Braiding and Individually Foiled Twisted Pair		

NETWORK COMMUNICATION SOLUTIONS
Important Definitions

Alien Crosstalk

Unwanted signal coupling from one component, channel, or permanent connection to another is defined as alien crosstalk. Because alien crosstalk is an indication of differential (or balanced) signal coupling, alien crosstalk cannot be negatively affected by common-mode noise (for example) from motors or fluorescent lights present in the environment. Alien crosstalk only To approximate the energy when couples are energized

It is specified as a power sum parameter in the standards. The sum of the power measured at the near end depends on the alien crosstalk loss (PSANEXT The sum of the power loss) and the power measured at the far end is called the alien crosstalk attenuation ratio (PSAACRF). High power sum alien crosstalk levels can compromise the operation of a 10G BASE-T application.

Attenuation to Crosstalk Ratio, Far-End (ACRF) (Previously known as ELFEXT)

Pair to pair far-end crosstalk (FEXT) loss quantifies unwanted signal coupling between adjacent pairs at the end point opposite the transmit end (far end) of cables or a component. ACRF is calculated by subtracting the measured insertion loss from the measured far-end crosstalk loss and is used to compare cable and cable performance regardless of length.

Provides a normalized value that can be used for Weak ACRF levels can result in increased error rates and/or undeliverable signaling packets. NEXT loss margin alone is not sufficient to ensure correct ACRF performance.

Attenuation to Crosstalk Ratio (ACR)

A critical consideration when determining the capability of a cable system is the difference between insertion loss and near-end crosstalk (NEXT) loss. This difference is known as Attenuation to crosstalk ratio (ACR). Positive ACR calculations mean that the transmitted signal power is stronger than the near-end crosstalk power. ACR defines a signal bandwidth where signal-to-noise ratios are sufficient to support certain applications (e.g. category

6 to 200 MHz) can be used to define An interesting note is that digital signal processing (DSP) technology can perform crosstalk cancellation, which allows some applications to extend the available bandwidth to the point where the calculated ACR equals zero. Nevertheless, the maximum frequency at which positive ACR is achieved provides a benchmark for evaluating the usable bandwidth of double-stranded cable systems.

Balance

Reverse pair transmission relies on signal symmetry or "balance" between the two conductors of a pair. Maintaining the correct balance ensures that cable systems and components do not emit unwanted electromagnetic radiation and are not susceptible to electrical noise. Component stability requirements are specified for category 6/classE cables. Component and cable balance requirements,

Specified for cables of category 6 /class EA and higher classes. Equilibrium can be characterized by longitudinal conversion loss (LCL), longitudinal conversion transfer loss (LCTL), transverse conversion loss (TCL) or equal level transverse converse transfer loss (ELTCTL).

Equal Level Far-End Crosstalk (ELFEXT)

See definition of Attenuation to Crosstalk Ratio, Far-End.

NETWORK COMMUNICATION SOLUTIONS

Insertion Loss (Attenuation)

Insertion loss is a metric that measures the reduction in signal strength along the transmission line. It is important to ensure minimal signal attenuation because digital signal processing (DSP) technology cannot compensate for excessive signal loss.

Near-End Crosstalk (NEXT) Loss

Pair-to-pair near-end crosstalk (NEXT) loss quantifies unwanted signal coupling between adjacent pairs in cabling or at the near ends of a component (same end as the transmitting end). Excessive NEXT loss can be detrimental to applications that do not use crosstalk cancellation digital signal processing (DSP) technology.

Total power

Pair-to-pair crosstalk parameters can be expressed as a power sum that approximates the level of unwanted internal signal coupling present when all pairs are energized. Characterization of power sum NEXT loss, ACRF, ANEXT loss and AACRF to minimize crosstalk from multiple interferences in cabling confirms that it is significantly robust.

Such characterization is necessary to ensure compatibility with applications that use four pairs to transmit and receive signals simultaneously, such as 1000 BASE-T, and foreign crosstalk-sensitive applications such as 10G BASE-T.

Propagation Delay and Delay Variation

Propagation delay is the time between transmitting a signal and receiving it at the opposite end of the cable channel. This effect is similar to the time delay between lightning striking and hearing noise, but electrical signals travel much faster than sound.

The delay gap is the difference in arrival times between the couple with the least delay and the couple with the most delay. Transmission errors associated with excessive delay and delay difference include increased jitter and bit error rates.

Insertion Loss

Return loss is a measure of signal reflections that occur along a transmission line and is related to the impedance mismatches present along the cabling channel. New applications such as 1000 BASE-T and 10 G BASE-T, full duplex transmission
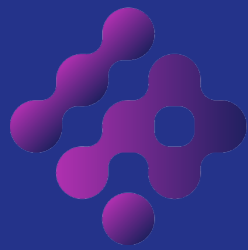
coding schemes (transmitting and receiving signals are on the same conductor
Because it is based on a superimposed pair), it is susceptible to errors that may result from limited return loss performance.
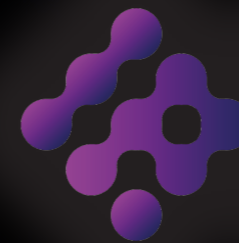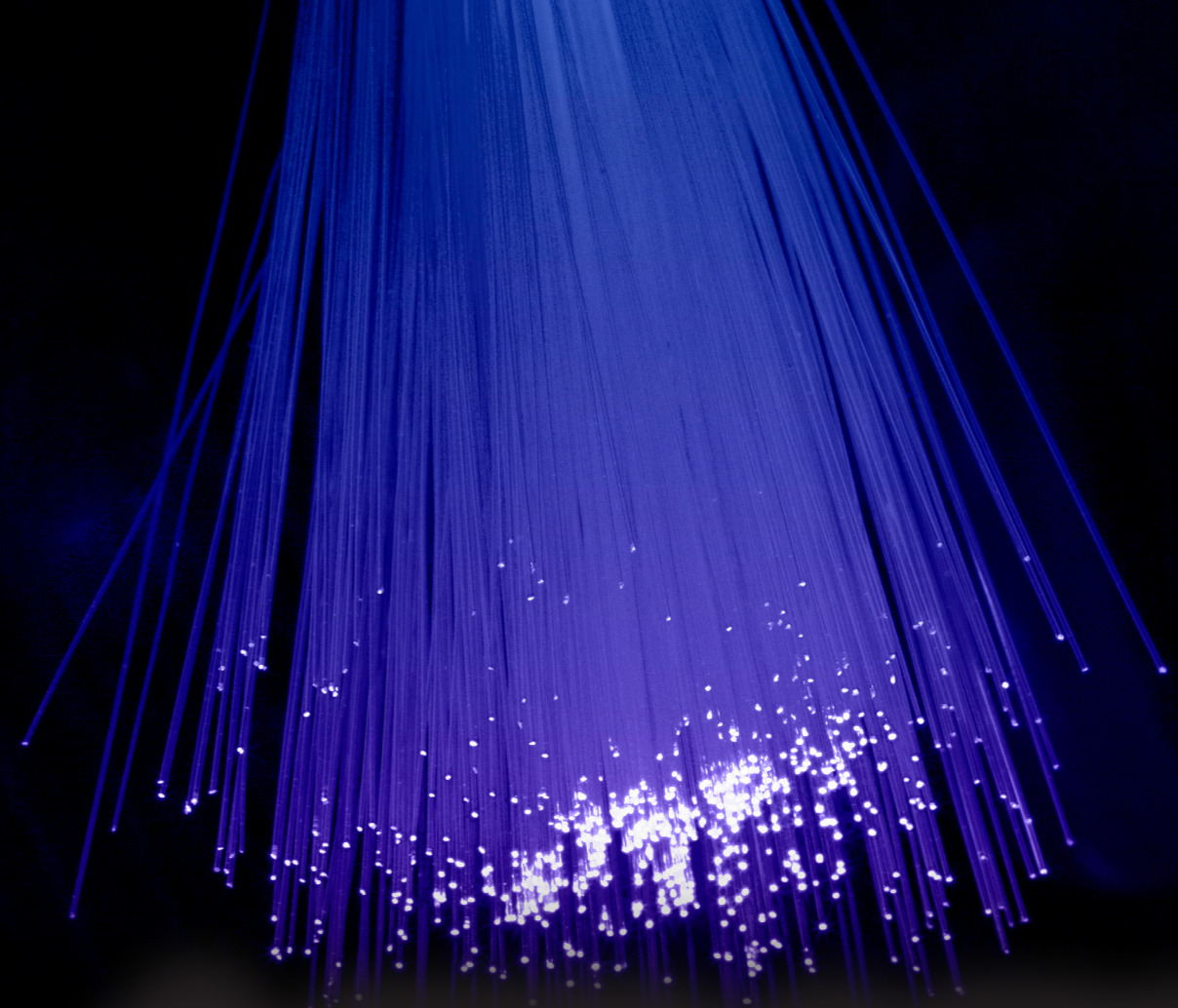
IPORT

NETWORK SYSTEMS

LAN CABLES

NETWORK COMMUNICATION SOLUTIONS

LAN CABLES | UTP Cat5e

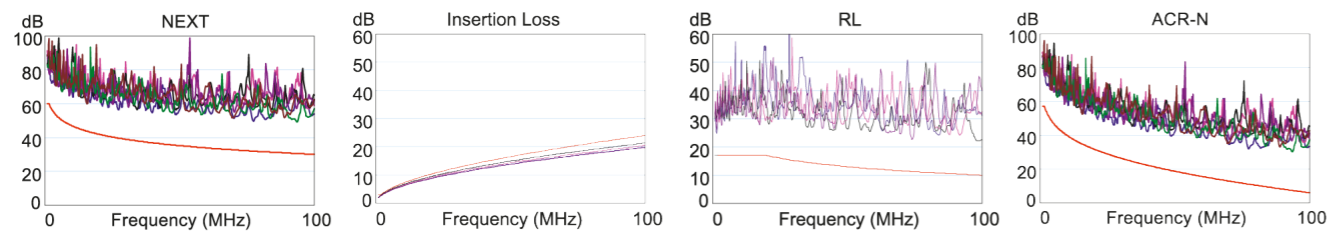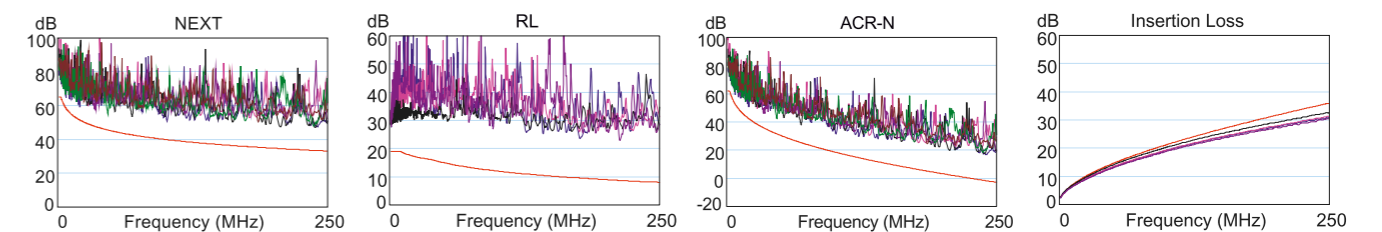# NETWORK COMMUNICATION SOLUTIONS

UTP Cat6 | LAN CABLES

25 YEAR SYSTEM WARRANTY

Transmission Features

NEXT — dB / Frequency (MHz)
Insertion Loss — dB / Frequency (MHz)
RL — dB / Frequency (MHz)
ACR-N — dB / Frequency (MHz)

Technicial Specifications

- Temperature range (C°): -40 to 70 Speed ratio (%): 69
- Characteristic impedance: 100 ±15 Ohm
- Bending radius (minimum): 8 x cable diameter
- Flame retardancy: CMP, CMR, CMG, CM UL file number E334179

Construction	Cat5E	Cat5E CCA
Conductor (dia.mm)	24 AWG SBC 0.50	24 AWG CCA 0.52
Insulation (dia.mm)	HDPE 0.92	HDPE 0.97
Nylon Rip Cable	150D	-
Jacket (dia.mm)	PVC/LS0H/PE 5.20	PVC - 5.20
Couple Number	4	4

Standards and Performances

- IEC 61156-5 Edition 2.0
- EN 50288-3-1
- EIA/TIA 568-B.2 – Cat 5e
- ISO 11801 Edition 2 – CLASS D
- EN 50173 Edition 2 – CLASS D

Product Code	Product Description
FO-LC5e-UTPP UTP	UTP CAT5e PVC Cable
FO-LC5e-UTPH UTP	UTP CAT5e LSZH Cable

Transmission Features

NEXT — dB / Frequency (MHz)
RL — dB / Frequency (MHz)
ACR-N — dB / Frequency (MHz)
Insertion Loss — dB / Frequency (MHz)

- 250 MHz and above Temperature range (C°): -40 to 70
- Speed ratio (%): 72 Characteristic impedance: (1 to 250 MHz) 100 ±15 Ohm
- Bending radius (minimum): 8 x cable diameter
- Flame retardancy: CMP, CMR, CMG, CM UL file number E357704 3P channel test number 113796
- Delta file number 2013-014 ETL
- Compliance number 101768951CRT-001a.

Standards and Performances

- IEC 61156-5 Ed- 2
- IEC 60754
- Reference standard: UL 444, UL1581
- ISO / IEC 11801, ISO / IEC 14763-2
- EN 50288-6-1
- ISO / IEC 11801, ANSI / TIA-568-C-2
- IEC 60332-1, IEC 60932-3C
- EN 50173 Edition 2 - Class E
- IEC 60332-3C
- Ref. Stand: UL 444, UL 1581

Structure

Conductor (dia.mm)	23 AWG SBC 0.573
Insulation (dia.mm)	Solid PE-0.94 HDPE 1.02 F 0.03 mm.
Filler Material	Cross Member
Jacket (dia.mm)	pvc/lszh - 6.3 ±0.4 mm.
Couple Number	4

Product Description

- Nominal temperature: 90 °C
- Reference Standard: UL444, UL1581
- Pure solid copper conductor Rohs/REACH compliant PVC/LSZH coating
- Flame Test: IEC60332-1 ,IEC60332-3C
- Mounting temperature: -40 °C + 70 °C

APPLICATION

- 100Base-TX
- 100Base-T
- 100VG-AnyLAN
- 1000Base-T (Gigabit Ethernet)
- 1000Base-TX
- ATM
- Noisy Environments
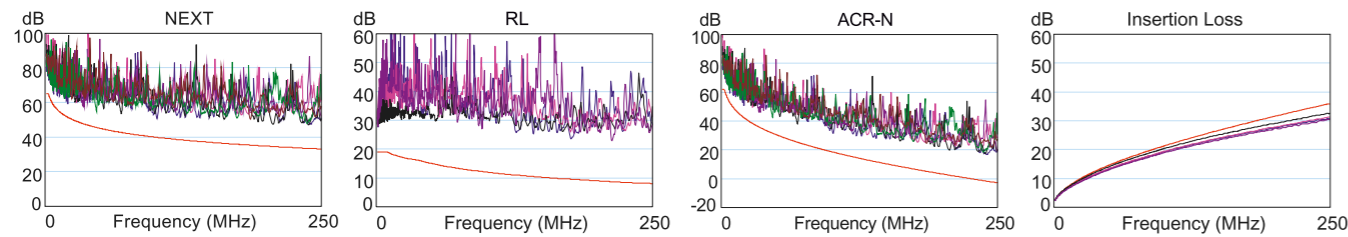
NETWORK COMMUNICATION SOLUTIONS

Technical Performance (100m.):

Frequency (MHz)	RL ≥dB	ATT(20 ˚C) ≤dB	NEXT ≥dB	PHASE DELAY ≤ns		Frequency (MHz)	PSNEXT ≥dB	ELFEXT ≥dB	PSELFEXT ≥dB
1	20.0	2.03	74.3	570.00		1	72.3	67.8	64.8
4.0	23.0	3.78	65.3	552.00		4	63.3	55.8	52.8
8.0	24.5	5.32	60.8	546.73		8	58.8	49.7	46.7
10.0	25.0	5.95	59.3	545.38		10	57.3	47.8	44.8
16.0	25.0	7.55	56.2	543.00		16	54.2	43.7	40.7
20.0	25.0	8.47	54.8	542.05		20	52.8	41.8	38.8
25.0	24.3	9.51	53.3	541.20		25	41.3	39.8	36.8
31.25	23.6	10.67	51.9	540.44		31.25	49.9	37.9	34.9
62.5	21.5	15.38	47.7	538.55		62.5	45.4	31.9	28.9
100	20.1	19.80	44.3	537.60		100	42.3	27.8	24.8
200	18.0	28.98	39.8	536.54		200	37.8	21.8	18.8
250	17.3	32.85	38.3	536.27		250	36.3	19.8	16.8

Content of the Data Sheet				
Category	U/UTP CAT6-4P-LSZH 23 AWG			
Test Standard	ISO/IEC11801, TIA-568-C.2, YD/T1019			
Conductor	Material	Solid-Bare Copper		
	Nom.O.D.(mm)	0.570	up +0.005	
			down -0.005	
Insulation	Material	HDPE		
	Diameter	1.02 ± 0.03mm		
Sheath	Thickness	0.55 ± 0.05 mm		
	External O.D.	6.3 ± 0.4 mm	**Sheath Physical Properties**	Before Aging Tensile Strength (Mpa) ≥10.0 Elongation (%) ≥125
	Surface	Clean, Frap, Satiation		
	Material	LSZH		Aging Period (℃ × hrs) 100 ℃ × 24h × 7d
	Color	According to the requires		After Aging Tensile Strength (Mpa) ≥8.0 Elongation (%) ≥100
Surface Printing	Letter height	3.0 ± 0.3mm		
	Color	Black		Cold bend (-20 ± 2 ˚C × 4h) 8 × Cable O.D.
	Print error & Space	< ± 0.5%, 1m	**Electrical Characteristics (20˚C)**	1.0-250.0 MHz Impedance ((Ω) 100±15
Core Color	1 White- Blue /Blue	2 White-Orange /Orange		1.0-250.0 MHz Delay Shew (ns/100m) ≤45
	3 White-Green /Green	4 White- Brown /Brown		NVP 69%
Packing	Wooden Tray & Carton			Capacitance (nF/100m) max: 5.6
Carton Dimension	40.5*40.5*21cm			DC Resistance (Ω/100m) max 9.5
Packing Length	305±1.5m / 500± m			DC Conductor Resistance Unbalance (%) max 5.0
Rip-Cord	Yes	Drain Wire	No	

Product Code	Product Description
FO-KBLC6-UTPPVC-001	UTP Cat6 PVC Cable (Grey)
FO-KBLC6-UTPHF-001	UTP Cat6 LSZH Cable (Grey)
FO-KBLC6-UTPHF-002	UTP CAT6 LSZH Cable (Blue)

NETWORK COMMUNICATION SOLUTIONS

Lan Cables | F/UTP Cat6

25 YEAR SYSTEM WARRANTY

Technical Performance (100m) :

Frequency (MHz)	RL ≥dB	ATT (20 °C) ≤dB	NEXT ≥dB	PHASE DELAY ≤ns	Frequency (MHz)	PSNEXT ≥dB	ELFEXT ≥dB	PSELFEXT ≥dB
1	20.0	2.03	74.3	570.00	1	72.3	67.8	64.8
4.0	23.0	3.78	65.3	552.00	4	63.3	55.8	52.8
8.0	24.5	5.32	60.8	546.73	8	58.8	49.7	46.7
10.0	25.0	5.95	59.3	545.38	10	57.3	47.8	44.8
16.0	25.0	7.55	56.2	543.00	16	54.2	43.7	40.7
20.0	25.0	8.47	54.8	542.05	20	52.8	41.8	38.8
25.0	24.3	9.51	53.3	541.20	25	41.3	39.8	36.8
31.25	23.6	10.67	51.9	540.44	31.25	49.9	37.9	34.9
62.5	21.5	15.38	47.7	538.55	62.5	45.4	31.9	28.9
100	20.1	19.80	44.3	537.60	100	42.3	27.8	24.8
200	18.0	28.98	39.8	536.54	200	37.8	21.8	18.8
250	17.3	32.85	38.3	536.27	250	36.3	19.8	16.8

Transmission Features

NEXT — dB (0–100) vs Frequency (MHz) (0–250)
RL — dB (0–60) vs Frequency (MHz) (0–250)
ACR-N — dB (-20–100) vs Frequency (MHz) (0–250)
Insertion Loss — dB (0–60) vs Frequency (MHz) (0–250)

- Temperature range (C°): -40 to 70
- Speed ratio (%): 72
- Characteristic impedance: (from 1 to 250 MHz) 100±15 Ohm
- Bending radius (min.): 8 x cable diameter
- Flame retardancy: CMP, CMR, CMG, CM
- UL file number: E334179 Testable up to 250 MHz for Cat6 performance
- ETL Compliance Number: 101768951CRT-001b

Structure

Structure	FTP Cat6	FTP Cat6a
Conductor	23AWG SBC 0.55	23AWG SBC 0.57
Insulation	Solid PE 1.02	Solid PE 1.10
Filler Material	Cross Member	Cross Member
Mylar Scope (%)	>=125%	>=125%
Drain Wire	TC	TC
AI-PET Protected	>=125%	>=125%
Jacket (dia.mm)	PVC/LSZH - 7.20	PVC/LSZH - 7.30
Couple Number	4	4

Product Description

- Rated temperature: 90 °C
- Reference Standard: UL444, UL1581 Pure solid copper conductor Rohs/REACH compliant PVC / LSZH
- Sheath Flame Test: IEC60332-1, IEC60332-3C
- Mounting temperature: -30°C to +50°C

APPLICATION

- 100Base-TX
- 100Base-T
- 100VG-AnyLAN
- 1000Base-T (Gigabit Ethernet)
- 1000Base-TX
- ATM
- Noisy Environments

Standards and Performances

- IEC 61156-5 Edition 2.0
- EN 50288-5-1
- EIA/TIA 568-C.2-1 – Cat 6
- ISO 11801 Edition 2 – CLASS E
- EN 50173 Edition 2 – CLASS E

Content of the Data Sheet

Category	F/UTP CAT6-4P-LSZH			
Test Standard	ISO/IEC11801, TIA- 568-C.2, YD/T 1019			
Conductor	Material	Solid-Bare Copper		
	Nom.O.D.(mm)	0.570	up	+0.005
			down	-0.005
Insulation	Material	HDPE		
	Diameter	1.09±0.03 mm		
Screening Material	Aluminum Foil			
Sheath	Thickness	0.60±0.05mm		
	External O.D.	7.4±0.4 mm	Sheath Physical Properties	Before Aging Tensile Strength (Mpa) ≥10.0 Elongation (%) ≥125
	Surface	Clean,Frap,Satiation		
	Material	LSZH / PVC		Aging Period (°C×hrs) 100°C × 24h × 7d
	Color	According to the requires		After Aging Tensile Strength(Mpa) ≥8.0 Elongation(%) ≥100
Surface Printing	Letter height	3.0±0.3mm		
	Color	Black		Cold bend(-20±2°C×4h) 8×Cable O.D.
	Print error & Space	< ± 0.5%, 1m	Electrical Characteristics (20 °C)	1.0-250.0MHz Impedance ((Ω) 100±15
Core Color	1 White- Blue /Blue	2 White-Orange /Orange		1.0-250.0MHz Delay Shew (ns/100m) ≤45
	3 White-Green /Green	4 White- Brown /Brown		NVP 69%
Packing	Wooden Tray & Carton			Capacitance(nF/100m) max: 5.6
Wooden Tray dimension	According to the requires			Unbalanced-to-ground capacitance (pf/100m) max 330
Packing Length	305±1.5m / 500±			DC Resistance (Ω/100m) max 9.38
Rip-Cord	Yes	Drain Wire	Yes	DC Conductor Resistance Unbalance (%)max 5.0

Product Code	Product Description
FO-LC6-FTPP	FTP CAT6 PVC Cable
FO-LC6-FTPH	FTP CAT6 LSZH Cable

NETWORK COMMUNICATION SOLUTIONS

Lan Cables | F/UTP Cat6a

SYSTEM WARRANTY
25 YEAR

Technical Performance (100m) :

Frequency (MHz)	RL ≥dB	ATT (20 °C) ≤dB	NEXT ≥dB	PHASE DELAY ≤ns	Frequency (MHz)	PSNEXT ≥dB	ELFEXT ≥dB	PSELFEXT ≥dB
1	20.0	2.03	74.3	570.00	1	72.3	67.8	64.8
4.0	23.0	3.78	65.3	552.00	4	63.3	55.8	52.8
8.0	24.5	5.32	60.8	546.73	8	58.8	49.7	46.7
10.0	25.0	5.95	59.3	545.38	10	57.3	47.8	44.8
16.0	25.0	7.55	56.2	543.00	16	54.2	43.7	40.7
20.0	25.0	8.47	54.8	542.05	20	52.8	41.8	38.8
25.0	24.3	9.51	53.3	541.20	25	41.3	39.8	36.8
31.25	23.6	10.67	51.9	540.44	31.25	49.9	37.9	34.9
62.5	21.5	15.38	47.7	538.55	62.5	45.4	31.9	28.9
100	20.1	19.80	44.3	537.60	100	42.3	27.8	24.8
200	18.0	28.98	39.8	536.54	200	37.8	21.8	18.8
250	17.3	32.85	38.3	536.27	250	36.3	19.8	16.8

Transmission Features

NEXT / RL / ACR-F / Insertion Loss — Frequency (MHz)

- Temperature range (C°): -40 to 70
- Speed ratio (%): 78
- Characteristic impedance: (between 1 and 250 MHz) 100±15 Ohm, (between 250 and 500 MHz) 100±20 Ohm
- Bending radius (min.): 8 x cable diameter
- Flame retardancy: CMP, CMR, CMG, CM
- Smoke emission: IEC 61034
- UL file number: E334179

Product Structure

Conductor (dia.mm)	23 AWG SBC 0.57
Insulation (dia.mm)	Solid PE - 1.03
FillerMaterial	Cross Member
Jacket (dia.mm)	PVC/LSZH - 7.6 ± 0.4 mm.
Couple Number	4

Product Description

- Rated temperature: 90 °C
- Reference Standard: UL444, UL1581 Pure solid copper conductor Rohs/REACH compliant PVC / LSZH
- Sheath Flame Test: CMX, CM, CMR
- Mounting temperature: -30°C to +50°C

Application

- Volp , ISDN
- Token , 100M TP-PDM
- Analong and Data Video
- TR-16 Active And Passive
- 155M/662m/1.2GATM
- IEEE802.3: 100Bease; 100Base-T 1000Base-T 10GBase-T

Standards and Performances

- ANSI/TIA 568 C.2 - 10
- TIA 568 C Draft
- RoHS Compliant Directive 2002/95/EC
- UL 444

Content of the Data Sheet				
Category	F/UTP CAT6-4P-LSZH			
Test Standard	ISO/IEC11801, TIA- 568-C.2, YD/T 1019			
Conductor	Material	Solid-Bare Copper		
	Nom.O.D.(mm)	0.570	up +0.005	
			down -0.005	
Insulation	Material	HDPE		
	Diameter	1.09±0.03 mm		
Screening Material	Aluminum Foil			
Sheath	Thickness	0.60±0.05mm		
	External O.D.	7.4±0.4 mm	Sheath Physical Properties	Before Aging Tensile Strength (Mpa) ≥10.0 Elongation (%) ≥125
	Surface	Clean,Frap,Satiation		
	Material	LSZH / PVC		Aging Period (°Cxhrs) 100°C × 24h × 7d
	Color	According to the requires		
Surface Printing	Letter height	3.0±0.3mm		After Aging Tensile Strength(Mpa) ≥8.0 Elongation(%) ≥100
	Color	Black		Cold bend(-20±2°Cx4h) 8×Cable O.D.
	Print error & Space	< ± 0.5%, 1m	Electrical Characteristics (20 °C)	1.0-250.0MHz Impedance ((Ω)) 100±15
Core Color	1 White- Blue /Blue	2 White-Orange /Orange		1.0-250.0MHz Delay Shew (ns/100m) ≤45
	3 White-Green /Green	4 White- Brown /Brown		NVP 69%
Packing	Wooden Tray & Carton			Capacitance(nF/100m) max: 5.6
Wooden Tray dimension	According to the requires			Unbalanced-to-ground capacitance (pf/100m) max 330
Packing Length	305±1.5m / 500±			DC Resistance (Ω/100m) max 9.38
Rip-Cord	Yes	Drain Wire	Yes	DC Conductor Resistance Unbalance (%)max 5.0

Product Code	Product Description
FO-LC6a-UUTPP	U/UTP CAT6a PVC Cable
FO-LC6a-UUTPH	U/UTP CAT6a LSZH Cable

NETWORK COMMUNICATION SOLUTIONS
Lan Cables | U/FTP Cat6a

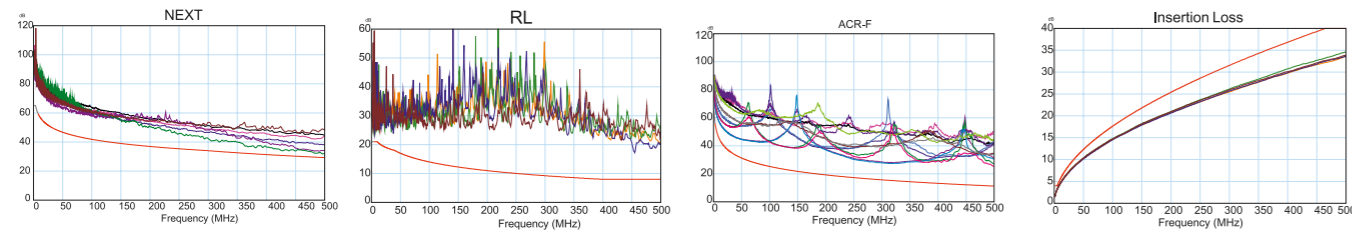# NETWORK COMMUNICATION SOLUTIONS

SYSTEM WARRANTY
25 YEAR

Features and Benefits

- Exceeds CAT6a standard specifications
- Can be used for CAT6a patch cables
- Available in different colors on request.

Transmission Features

NEXT

RL

ACR-F

Insertion Loss

- Temperature range (C°): -30 to 50
- Speed ratio (%): 76
- Characteristic impedance: (from 1 to 250 MHz) 100±15 Ohm, (from 250 to 500 MHz) 100±18 Ohm, (from 250 to 500 MHz) 100±25 Ohm Bending radius (min.): 8 x cable outer diameter
- Flame retardancy: IEC60332-1
- UL file number: E334179 ETL
- Compliance Number: 101768951CRT-001c

Standards and Performances

- IEC 61156-6
- EIA/TIA 568-C.2-1 CAT6
- ISO 11801 Edition 2 - CLASS D
- EN 50173 Edition 2 - CLASS D

Network Applications

- ISDN - VoIP
- TOKEN RING 4/16 Mbits - 100 VGAnyLAN
- TP-PMD/TP-DDI - ATM 155, 622, 1200
- Mbits

Product Structure

Conductor (dia.mm)	23 AWG SBC 0.57
Insulation (dia.mm)	Skin-Foam-Skin PE
Individual Protection	Foil
Drain Wire	0.45 mm TC
Jacket (dia.mm)	PVC / LSZH 7.4 ± 0.5
Couple Number	4

Product Description

- Nominal temperature: 90 °C
- Reference Standard: UL444, UL1581
- pure solid copper conductor
- Rohs/REACH compliant PVC / LSZH Jacket
- Flame Test: IEC60332-1 ,IEC60332-3C CMX
- Installation temperature: -30℃ + 50℃

APPLICATION

- Volp, ISDN
- Token, 100M TP-PDM
- Analong and Data Video
- TR-16 Active And Passive
- 155M/662m/1.2GATM
- IEEE802.3: 100Bease;100Base-T 1000Base-T 10GBase-T

Technical Performance (100m) :

Frequency (MHz)	RL ≥dB	ATT(20 °C) ≤dB	NEXT ≥dB	PHASE DELAY ≤ns	Frequency (MHz)	PSNEXT ≥dB	ELFEXT ≥dB	PSELFEXT ≥dB
1	20.0	2.1	74.3	570.0	1	72.3	68.0	65.0
4.0	23.0	3.8	65.3	552.0	4	63.3	56.0	53.0
8.0	24.5	5.3	60.8	546.7	8	58.8	49.9	46.9
10.0	25.0	5.9	59.3	545.4	10	57.3	48.0	45.0
16.0	25.0	7.5	56.2	543.0	16	54.2	43.9	40.9
20.0	25.0	8.4	54.8	542.1	20	52.8	42.0	39.0
25.0	24.3	9.4	53.3	541.2	25	51.3	40.0	37.0
31.25	23.6	10.5	51.9	540.4	31.25	49.9	38.1	35.1
62.5	21.5	15.0	47.7	538.6	62.5	45.4	32.1	29.1
100	20.1	19.1	44.3	537.6	100	42.3	28.0	25.0
200	18.0	27.6	39.8	536.5	200	37.8	22.0	19.0
250	17.3	31.1	38.3	536.3	250	36.3	20.0	17.0
300	16.8	34.3	37.1	536.1	300	35.1	18.5	15.5
500	15.2	45.3	33.8	535.6	500	31.8	14.0	11.0

Content of the Data Sheet

Category	U/FTP-CAT6A-4P-LSZH			
Test Standard	ISO/IEC11801, TIA-568-C.2, YD/T1019			
Conductor	Material	Solid-Bare Copper		
	Nom.O.D.(mm)	0.570	up	+0.005
			down	-0.005
Insulation	Material	Skin-foam-skin PE		
	Diameter	1.350 ± 0.05 mm		
Screening	Aluminum Foil	Drain Wire	TC 0.45mm	
Sheath	Thickness	0.55 ± 0.05 mm		
	External O.D.	7.4 ± 0.5 mm		Sheath Physical Properties: Before Aging Tensile Strength (Mpa) ≥10 Elongation(%) ≥125
	Surface	Clean		
	Material	LSZH / PVC		Aging Period (° C × hrs) 100 ° C × 24h × 7d
	Color	According to the requires		After Aging Tensile Strength(Mpa) ≥8.0 Elongation(%) ≥100
Surface Printing	Letter height	3.0 ± 0.3mm		
	Color	Black		Cold bend(-20±2 ° C × 4h) 8 × Cable O.D.
	Print error & Space	< ± 0.5%, 1m		Electrical Characteristics (20 °C): Delay Shew (ns/100m) ≤45
Core Color	1 White– Blue /Blue	2 White–Orange /Orange		Velocity of Propagation (%) 74
	3 White-Green /Green	4 White- Brown /Brown		Unbalanced-to-ground capacitance (pf/100m max 330
Packing	Wooden Tray & Carton			DC Resistance (Ω/100m) max 9.38
Carton Dimension	40.5*40.5*21cm			DC Conductor Resistance Unbalance (%) max 2.0
Packing Length	305±1.5m			
Rip-Cord	Yes			
Sheath Printing	TTAF FO-LC6a-U/FTPH 4X2X23 AWG U/FTP CATEGORY 6A 550 MHZ LSZH CABLE ETL VERIFIED TO ANSI/TIA-568-C.2 IEC 60332-1 CE ROHS 2014/10 TFC6/2014-5-FR ****m mm/dd/yyyy			

Product Code	Product Description
FO-LC6a-UFTPP	U/FTP CAT6a PVC Cable
FO-LC6a-UFTPH	U/FTP CAT6a LSZH Cable

NETWORK COMMUNICATION SOLUTIONS
Lan Cables | S/FTP Cat7

NETWORK COMMUNICATION SOLUTIONS
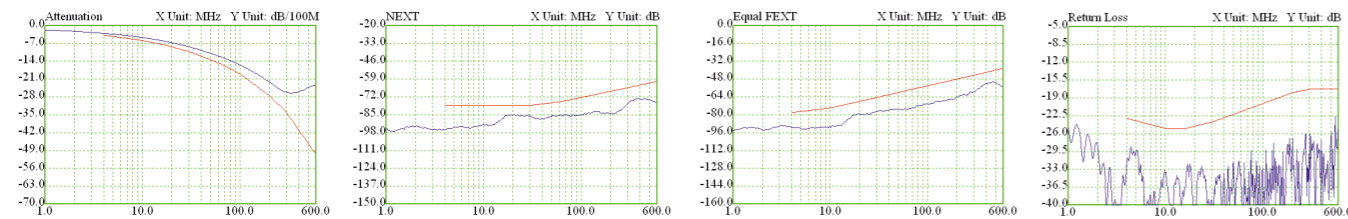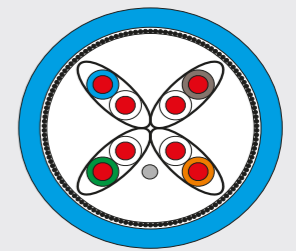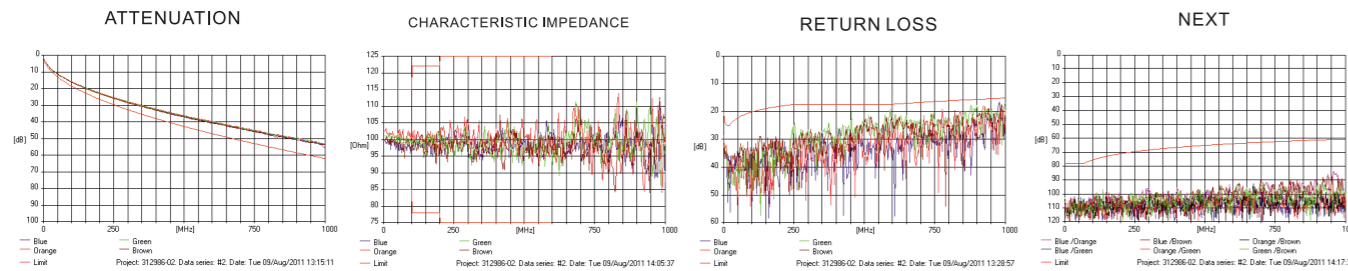
25 YEAR SYSTEM WARRANTY
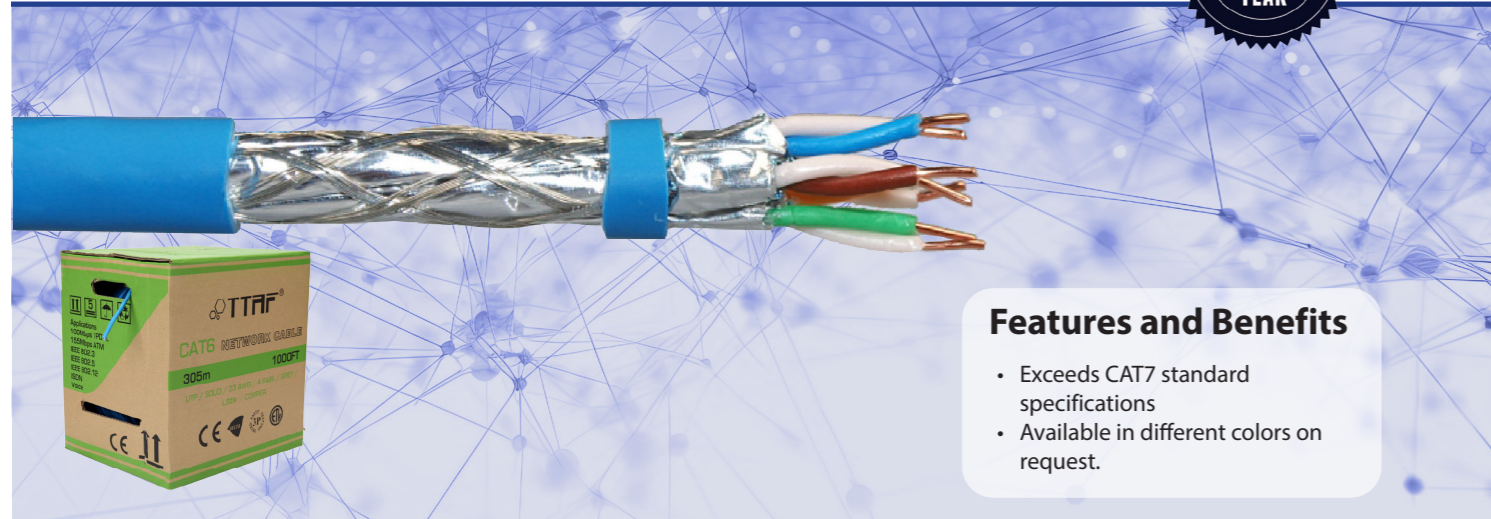
Features and Benefits

- Exceeds CAT7 standard specifications
- Available in different colors on request.

Technical Performance (100m) :

Frequency (MHz)	RL ≥dB	ATT(20 °C) ≤dB	NEXT ≥dB	PHASE DELAY ≤ns	Frequency (MHz)	PSNEXT ≥dB	ELFEXT ≥dB	PSELFEXT ≥dB
1	20.0	2.0	78.0	570.0	1	75.0	78.0	75.0
4.0	23.0	3.74	78.0	552.0	4	75.0	78.0	75.0
8.0	24.5	5.24	78.0	546.7	8	75.0	75.9	72.9
10.0	25.0	5.86	78.0	545.4	10	75.0	74.0	71.0
16.0	25.0	7.41	78.0	543.0	16	75.0	69.9	66.9
20.0	25.0	8.29	78.0	542.0	20	75.0	68.0	65.0
25.0	24.3	9.29	78.0	541.2	25	75.0	66.0	63.0
31.25	23.6	10.41	78.0	540.4	31.25	75.0	64.1	61.1
62.5	21.5	14.88	75.5	538.6	62.5	72.5	58.1	55.1
100	20.1	19.02	72.4	537.6	100	69.4	54.0	51.0
150	18.9	23.56	69.8	536.9	150	66.8	50.2	47.2
200	18.0	27.47	67.9	536.5	200	64.9	48.0	45.0
250	17.3	30.97	66.4	536.3	250	63.4	46.0	43.0
300	17.3	34.19	65.2	536.1	300	62.2	44.5	41.5
600	17.3	50.10	60.7	535.5	600	57.7	38.4	35.4

Transmission Features

Content of the Data Sheet

Category	S/FTP-CAT7-4P-LSZH-TC40			
Test Standard	ISO/IEC 61156-5;EN 50288-4 ,YD/T1019			
Conductor	Material	Solid-Bare Copper		
	Nom.O.D.(mm)	0.560	up	+0.005
			down	-0.005
Insulation	Material	Skin-foam-skin PE		
	Diameter	1.330 ± 0.05mm		
Inner Screening Material	Aluminum Foil	Drain wire	No	
Outer Screening	Tinned copper 0.10mm	Coverage	≥40%	
Sheath	Thickness	0.55 ± 0.05 mm (Avg.)		
	External O.D.	7.8 ± 0.5 mm	Sheath Physical Properties	Before Aging Tensile Strength (Mpa) ≥10.0 Elongation(%) ≥125
	Surface	Clean		Aging Period (° C×hrs) 100 ° C×24h×7d
	Material	PVC		After Aging Tensile Strength(Mpa) ≥8.0 Elongation(%) ≥100
	Color	According to the requires		
Surface Printing	Letter height	3.0 ± 0.3mm		Cold bend(-20±2 ° C×4h) 8×Cable O.D.
	Color	Black		
	Print error & Space	< ± 0.5%, 1m	Electrical Characteristics (20 °C)	
Core Color	1 White- Blue	2 White-Orange		Delay Shew (ns/100m) ≤25
	3 White-Green	4 White- Brown		Velocity of Propagation (%) 74
Packing	Wooden Tray & Carton			Unbalanced to ground capacitance (pf/100m)max 330
Wooden Tray Dimension	According to th requires			DC resistance (ohm/100m) max 9.5
Packing Length	305 ± 1.5m			DC Conductor resistance unbalance (%) max 2.0
Rip-Cord	Yes			

- Temperature range(C°): -40 to 70
- Speed ratio (%): 80
- Characteristic impedance: (between 1 - 100 MHz)100±15 Ohm (between 100 - 250 MHz)100±20 Ohm (between 250 - 600 MHz)100±25 Ohm
- Bending radius (min.): 8 x cable diameter
- Flame retardant: CMP, CMR, CMG, CM
- ETL Compliance Number is 101768951CRT-OO1d

Product Structure

Conductor (dia.mm)	23 AWG SBC 0.57
Insulation (dia.mm)	Skin-Foam-Skin PE
AI-PET Protected	>=125%
Drain Wire	TC 0.4
Knitting coverage (%)	TC 30% to 68%
Jacket (dia.mm)	PVC/LSZH 7.5 ± 0.5
Couple Number	4

Product Description

- Nominal Temperature: 60 °C, 75 °C, 90 °C
- Reference Standard: UL444,UL1581,UL1666
- Pure Solid Copper Conductor
- Rohs/REACH compliant PVC / LSZH Jacket
- Flame Test: CMX,CM,CMR
- Installation Temperature:-30°C+50°C

APPLICATION

- Volp , ISDN
- Token , 100M TP-PDM
- Analong and Data Video
- TR-16 Active And Passive
- 155M / 622m / 1.2GATM
- IEEE802.3: 100Bease;100Base-T 1000Base-T 10GBase-T

Standards and Performances

- IEC 61156-6
- EIA/TIA 568-C.2-1 CAT6
- ISO 11801 Edition 2 - CLASS D
- EN 50288-4-1
- IEC 61156-5
- EN 50173 Edition 2 – CLASS FA
- ISO 11801 Edition 2 – CLASS FA

Product Code

Product Code	Product Description
FO-LC7-SFTPP	S/FTP CAT7 PVC Cable
FO-LC7-SFTPH	S/FTP CAT7 LSZH Cable

◈ IPORT | TELECOMMUNICATION AND CABLE SYSTEMS

NETWORK COMMUNICATION SOLUTIONS

Lan Cables | Pur Cat5e

NETWORK COMMUNICATION SOLUTIONS

Pur Cat7 | **Lan Cables**

- Temperature range (°C): -40 to 70
- Speed ratio (%): 80
- Characteristic impedance: 100±15 Ohm (from 1 to 100 MHz), 100±20 Ohm (from 100 to 250 MHz), 100±25 Ohm (from 250 to 600 MHz)
- Bending radius (min.): 8 x cable diameter
- Flame retardancy: CMP, CMR, CMG, CM
- ETL Compliance Number: 101768951CRT-OO1d

Structure

Structure	
Conductor	BC AWG (26/7)
Insulation	PO
Winding Element	Dual Core
Screen	Individual AI-PET and TC weave
Jacket	PUR 5.7
Couple Number	4

- Temperature range (°C): -40 to 80
- Speed ratio (%): 66 Characteristic impedance: 100±15 Ohm (from 1 to 100 MHz), 100±20 Ohm (from 100 to 600 MHz)
- Bending radius (min.): 8 x cable diameter
- Flame retardancy: IEC 60332-1

Structure

Structure	
Conductor	BC (AWG 23/1)
Insulation	Köpük - Cilt - PE
Winding Element	Dual Core
Screen	Individual AI-PET and TC weave
Jacket	PUR 8.2
Couple Number	4

Standards and Performances

- CABLE: - IEC 61156
- EN 50288-3-2
- SYSTEM: - EIA/TIA 568-B.2 – CAT5e
- ISO 11801 Edition 2 - CLASS D
- EN 50173 Edition 2 – CLASS D

- ISDN - VoIP
- TOKEN RING 4/16 Mbits - 100 VGAnyLAN
- TP-PMD/TP-DDI - ATM 155, 622,1200 Mbits
- ETHERNET: 10 Base T, 100 Base Tx,
- 100 Base T4, 1000 Base T

Data Transmission Features

Frequency	Insertion Loss (dB/100m)	Next Loss (dB/100m)	ACR (dB/100m)
10 MHz	0.8	58.0	57.2
16 MHz	1.1	56.0	54.9
62.5 MHz	2.4	45.0	42.6
100 MHz	2.9	43.0	40.1
200 MHz	4.3	37.0	32.7

Standards and Performances

- EN 50288-4-1
- IEC 61156-5
- EN 50173 Edition 2 – CLASS F
- ISO 11801 Edition 2 – CLASS F

Data Transmission Features

Frequency	Insertion Loss (dB/100m)	Next Loss (dB/100m)	ACR (dB/100m)
10 MHz	5.60	100.0	94.4
16 MHz	7.10	100.0	92.9
62.5 MHz	13.9	96.0	82.1
100 MHz	17.5	94.0	76.5
200 MHz	25.2	88.0	62.8
300 MHz	32.1	84.0	51.9
600 MHz	44.9	73.0	28.1

Product Code	Product Description
FO-LC5e-IP	Industrial CAT5e PVC Cable
FO-LC5e-IH	Industrial CAT5e LSZH Cable

Product Code	Product Description
FO-LC7-IP	Industrial CAT7 PVC Cable
FO-LC7-IH	Industrial CAT7 LSZH Cable

NETWORK COMMUNICATION SOLUTIONS

Lan Cables | S/FTP Cat7a

NETWORK COMMUNICATION SOLUTIONS

SYSTEM WARRANTY 25 YEAR

ETL RoHS

Features and Benefits

- Exceeds CAT7 standard specifications
- Different colors available on request

Technical Performance (100m.) :

Frequency (MHz)	RL ≥dB	ATT(20 °C) ≤dB	NEXT ≥dB	PHASE DELAY ≤ns	Frequency (MHz)	PSNEXT ≥dB	ELFEXT ≥dB	PSELFEXT ≥dB
1	20.0	2.0	78.0	570.0	1	75.0	78.0	75.0
4.0	23.0	3.74	78.0	552.0	4	75.0	78.0	75.0
8.0	24.5	5.24	78.0	546.7	8	75.0	75.9	72.9
10.0	25.0	5.86	78.0	545.4	10	75.0	74.0	71.0
16.0	25.0	7.41	78.0	543.0	16	75.0	69.9	66.9
20.0	25.0	8.29	78.0	542.0	20	75.0	68.0	65.0
25.0	24.3	9.29	78.0	541.2	25	75.0	66.0	63.0
31.25	23.6	10.41	78.0	540.4	31.25	75.0	64.1	61.1
62.5	21.5	14.88	75.5	538.6	62.5	72.5	58.1	55.1
100	20.1	19.02	72.4	537.6	100	69.4	54.0	51.0
150	18.9	23.56	69.8	536.9	150	66.8	50.2	47.2
200	18.0	27.47	67.9	536.5	200	64.9	48.0	45.0
250	17.3	30.97	66.4	536.3	250	63.4	46.0	43.0
300	16.8	34.19	65.2	536.1	300	62.2	44.5	41.5
600	14.7	50.10	60.7	535.5	600	57.7	38.4	35.4
1000	13.1	66.93	57.4	535.1	1000	54.4	34.0	31.0

Transmission Features

ATTENUATION

Blue — Green
Orange — Brown
Limit
Project: 312986-02. Data series: #2. Date: Tue 09/Aug/2011 13:15:11

CHARACTERISTIC IMPEDANCE

Blue — Blue /Orange
Orange — Brown
Limit
Project: 312986-02. Data series: #2. Date: Tue 09/Aug/2011 14:05:37

RETURN LOSS

Blue — Green
Orange — Brown
Limit
Project: 312986-02. Data series: #2. Date: Tue 09/Aug/2011 13:28:57

NEXT

Blue /Orange — Orange /Brown
Blue /Green — Green /Brown
Limit
Project: 312986-02. Data series: #2. Date: Tue 09/Aug/2011 14:17:32

- Temperature range (°C): -40 to 70
- Speed ratio (%): 80
- Characteristic impedance: 100±15 Ohm (from 1 to 100 MHz), 100±20 Ohm (from 100 to 250 MHz), 100±25 Ohm (from 250 to 600 MHz)
- Bending radius (min.): 8 x cable diameter
- Flame retardancy: CMP, CMR, CMG, CM can be tested up to 1000 MHz
- ETL Compliance Number: 101768951CRT-001d

Product Structure

Conductor (dia.mm)	23 AWG SBC 0.57
Insulation (dia.mm)	AI-PET Protected
AI-PET Protected	>=125%
Drain Wire	TC 04
Coverage of Knitting (%)	TC 30% to 68%
Jacket	PVC/LSZH 7.5 ± 0.5
Couple Number	4

Product Description

- Nominal temperature: 90 °C
- Reference Standard: UL444, UL1581
- Bare solid copper conductor RoHS/REACH compliant PVC/LSZH sheath
- Flame Test: IEC60332-1, IEC60332-3C CMX
- Installation temperature: -30°C to +50°C

APPLICATION

- Volp , ISDN
- Token , 100M TP-PDM
- Analong and Data Video
- TR-16 Active And Passive
- 155M/622m/1.2GATM
- IEEE802.3, 100Bease;100Base-T 1000Base-T 10GBase-T

Standards and Performances

- EN 50288-4-1
- IEC 61156-5
- EN 50173 Edition 2 – CLASS F
- ISO 11801 Edition 2 – CLASS F

Content of the Data Sheet

Category	S/FTP-CAT7a-4P-LSZH-TC40		
Test Standard	ISO/IEC 61156-5;EN 50288-4 ,YD/T1019		
Conductor	Material	Solid-Bare Copper	
	Nom.O.D.(mm)	0.580	up +0.005
			down -0.005
Insulation	Material	Skin-foam-skin PE	
	Diameter	1.330 ± 0.05mm	
Inner Screening Material	Aluminum Foil	Drain wire	No
Outer Screening	Tinned copper 0.10mm	Coverage	≥40%
Sheath	Thickness	0.55 ± 0.05 mm (Avg.)	
	External O.D.	7.9 ± 0.5 mm	
	Surface	Clean	
	Material	LSZH / PVC	
	Color	According to the requires	
Surface Printing	Letter height	3.0 ± 0.3mm	
	Color	Black	
	Print error & Space	< ± 0.5%, 1m	
Core Color	1 White- Blue	2 White-Orange	
	3 White-Green	4 White- Brown	
Packing	Wooden Tray & Carton		
Wooden Tray Dimension	According to th requires		
Packing Length	305 ± 1.5m		
Rip-Cord	Yes		

Sheath Physical Properties	
Before Aging Tensile Strength (Mpa) ≥10.0 Elongation(%) ≥125	
Aging Period (°C x hrs) 100 ° C x 24h x 7d	
After Aging Tensile Strength(Mpa) ≥8.0 Elongation(%) ≥100	
Cold bend(-20±2°C×4h) 8×Cable O.D.	

Electrical Characteristics (20°C)	
Delay Shew (ns/100m) ≤25	
Velocity of Propagation (%) 74	
Unbalanced to ground capacitance (pf/100m)max 330	
DC resistance (ohm/100m) max 9.5	
DC Conductor resistance unbalance (%) max 2.0	

Product Code / Product Description

Product Code	Product Description
FO-LC7a-SFTPP	S/FTP CAT7a PVC Cable
FO-LC7a-SFTPH	S/FTP CAT7a LSZH Cable

IPORT
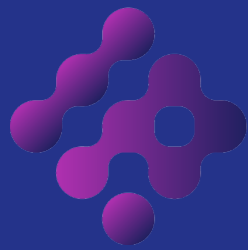
NETWORK SYSTEMS

PATCH PANELS

NETWORK COMMUNICATION SOLUTIONS

CAT3 Patch Panel Series | CAT3 ISDN 25 Port Telephone Connection Patch Panel

NETWORK COMMUNICATION SOLUTIONS

CAT3 ISDN 50 Port Telephone Connection Patch Panel | **CAT3 Patch Panel Series**
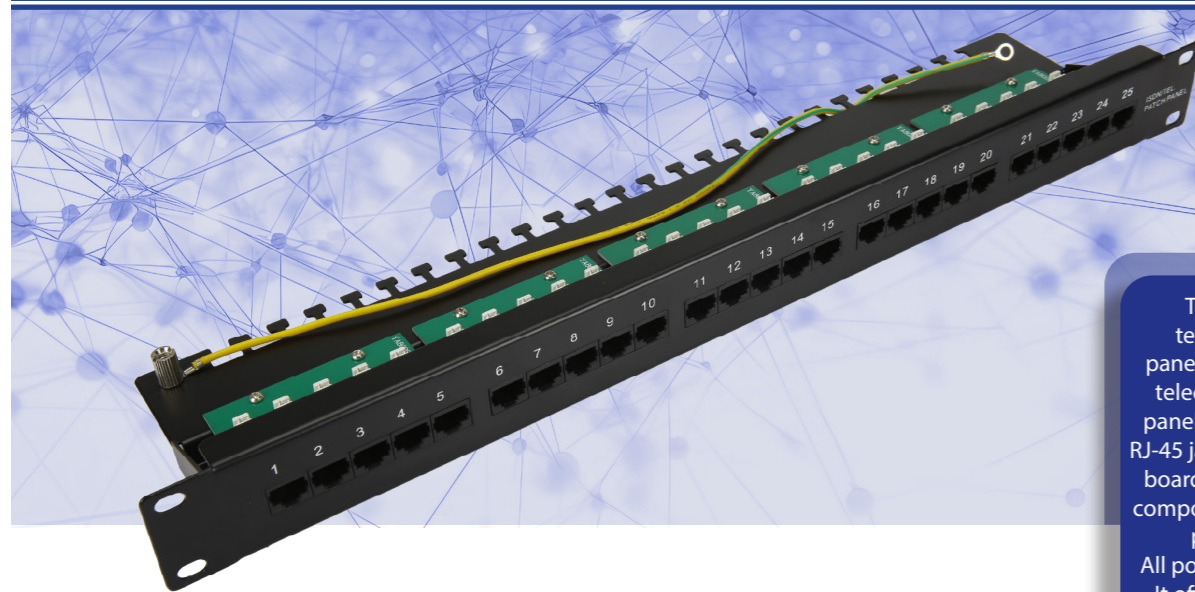
The Cat3/ISDN telephone patch panel is a high-density telecommunications panel with 25 standard RJ-45 jacks. Printed circuit board and high quality components ensure Cat3 performance. All ports are numbered. It offers a simple and economical way to connect a telephone system or telephone infrastructure. The panel is available in 1U height.

Cat3/ISDN telephone patch panel is a high-density telecommunications panel with 50 standard RJ-45 jacks. Printed circuit board and high quality components ensure Cat.3 performance. All ports are numbered. It offers a simple and economical way to connect a telephone system or telephone infrastructure. The panel is available in 1U height.

Features

- Conforms to ANSI/TIA-568-C.2 Category 3, ISO/IEC11801 and EN501731 specifications.
- T568 supports A&B connection diagrams and provides easy installation.
- The IDC connector can accept 23-26 AWG solid and coiled wires.
- Supports industry standard tools such as 110 or Krone punch down tools.
- There is a cable management hole to easily manage cables with cable ties.
- RoHS Compliant

Features

- Conforms to ANSI/TIA-568-C.2 Category 3, ISO/IEC11801 and EN50173-1 specifications.
- T568 supports A&B connection diagrams and provides easy installation.
- The IDC connector can accept 23-26 AWG solid and coiled wires.
- Industry standard tools (110 or Krone punch down tools).
- Cable management hole to easily manage cables with cable ties.
- RoHS Compliant.

Electrical and Physical Properties

- IDC Connection: 0.8mm thick Phosphor Bronze, tin plated over nickel
- Jack Lifetime: minimum 750 insertion-disconnection operations High impact resistant plastic housing, UL 94V-0
- Jack Connection: Phosphor Bronze, 50µinch thick gold plated over nickel
- IDC Lifespan: minimum 200 installation-disconnection operations
- PCB: FR-4, 1.6mm thickness
- Dielectric Strength: 1000V RMS for 1 minute
- Insulation Resistance: Minimum 10MΩ
- Connection Resistance: 2mΩ per connection
- Temperature Range: -20℃ to +80℃
- Humidity: 10% - 65%

Electrical and Physical Properties

- IDC Connection: 0.8mm thick Phosphor Bronze, tin plated over nickel
- Jack Lifetime: minimum 750 insertion-disconnection operations High impact resistant plastic housing, UL 94V-0
- Jack Connection: Phosphor Bronze, 50µinch thick gold plated IDC on nickel
- Lifespan: minimum 200 assembly-disassembly operations
- PCB: FR-4, 1.6mm thickness
- Dielectric Strength: 1000V RMS for 1 minute
- Insulation Resistance: Minimum 10MΩ
- Connection Resistance: 2mΩ per connection
- Temperature Range: -10℃ to 60℃ Humidity: 10% - 65%

APPLICATION

- 10BASE-TX Ethernet
- Audio, Video and other applications

APPLICATION

- 10BASE-TX Ethernet
- Audio, Video and other applications

Product Code	Product Description
FO-SP-3005-25PC3L	1U 25 Port UTP Cat3 ISDN Patchpanel

Product Code	Product Description
FO-SP-3005-50PC3L	1U 50 Port UTP Cat3 ISDN Patchpanel

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NETWORK SYSTEMS

TELECOMMUNICATION AND CABLE SYSTEMS

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NETWORK SYSTEMS

NETWORK COMMUNICATION SOLUTIONS

CAT5 Patch Panel Series | CAT5e 24 Port UTP Fast Ethernet Connection Patch Panel

NETWORK COMMUNICATION SOLUTIONS

CAT5e 48 Port UTP Fast Ethernet Connection Patch Panel | **CAT5 Patch Panel Series**
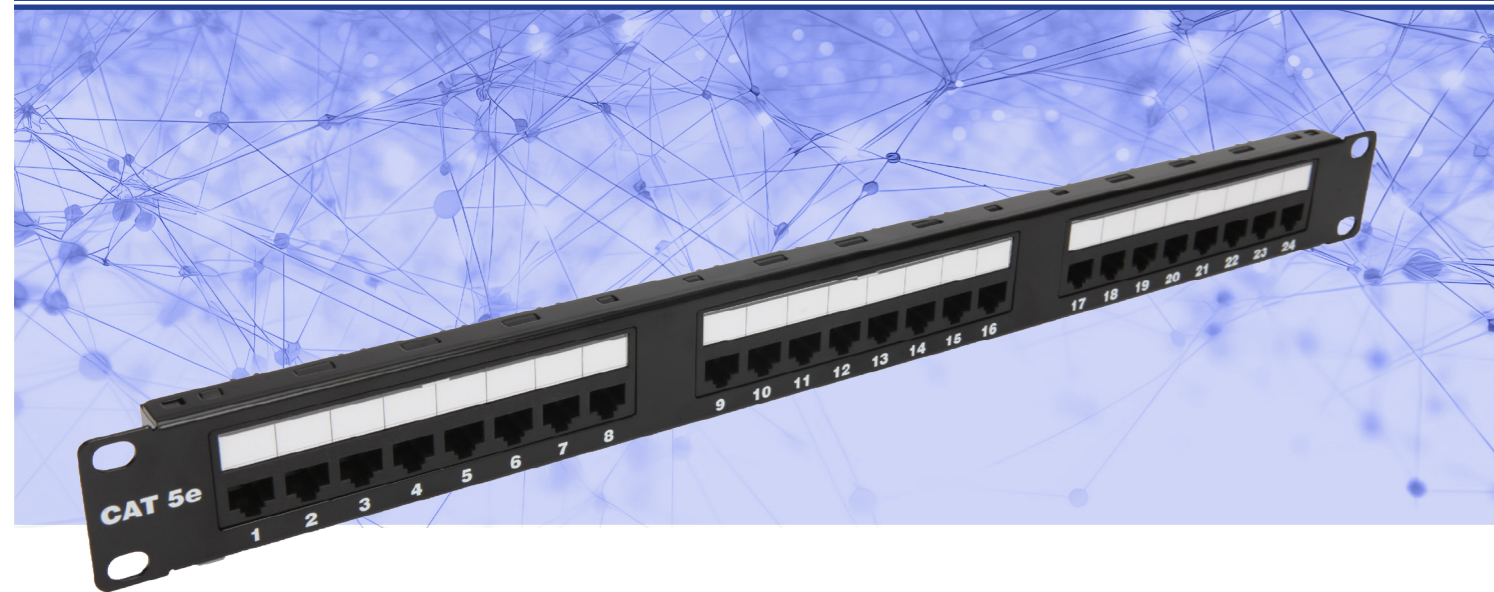
Features

- Hinged style window with white label
- Every 8-Port based module is interchangeable

Electrical and Physical Properties

- UL 1863 safety listed.
- UL 94V-0 flame retardant plastic.
- Complies with ANSI/TIA-568-C.2 standards.
- Dimensions: 482.6mm (Width) x 43.65mm (Height) x 35.0mm (Depth).

APPLICATION

- The protruding part of the IDC terminals holds the wires in place before termination.
- Double IDC with 110 or Krone vehicle.
- ANSI/TIA-568-C.2
- Compatible with CAT5e component performance.

Features

- Hinged style window with white label
- Every 6-Port based module is replaceable

Electrical and Physical Properties

- UL 1863 safety listed.
- UL 94V-0 flame retardant plastic.
- Complies with ANSI/TIA-568-C.2 standards.
- Dimensions: 482.6mm(W) x 87.40mm(H) x 35.0mm(D)

APPLICATION

- The protruding portion of the IDC terminal holds the wires in place before termination.
- Double IDC with 110 or Krone vehicle.
- ANSI/TIA-568-C.2
- Compatible with CAT 5e UTP component performance.

Product Code	Product Description
FO-SP-3000-PCB-24PC5E	1U 24 Port UTP Cat5e Patchpanel (110 Krone IDC - Horizontal)

Product Code	Product Description
FO-SP-3000-PCB-48PC5E	2U 48 Port UTP Cat5e Patchpanel (110 Krone IDC - Horizontal)

NETWORK COMMUNICATION SOLUTIONS

CAT5 Patch Panel Series | CAT5e 24 Port Utp Fast Ethernet Patch Panel (Straight Connection Type)

NETWORK COMMUNICATION SOLUTIONS

CAT5e 24 Port UTP Fast Ethernet Patch Panel (Straight Connection Type) | **CAT5 Patch Panel Series**

Features

- PLUG to PLUG RJ45 CONNECTORS
- UTP MATCHING SLOT
- THE BACK OF THE BODY IS A HALF-MOON-SHAPED METAL CASE
- SQUARE CABLE ORGANIZERS
- COLOR CODE: BLACK RAL 9005 POSITIONED ON THE LEFT AND RIGHT SIDE OF THE PATCH PANEL

Technicial Specifications

- 1U HEIGHT= 44.45mm
- 19 INCH WIDTH = 483 mm
- 8*3=24 = NUMBER OF PORTS UTP (unshielded pair cable)
- Compatible with RJ45 Connector CATEGORY 5 and 6
- METAL CASE BODY STAINLESS METAL BODY PORT NUMBERS

Features

- RJ45 PORTS UTP
- MATCHING SLOT IS THE ROUND BACK OF THE METAL CASE BODY, HALF-MOON-SHAPED AND SQUARE-SHAPED CABLE ORGANIZERS ARE AVAILABLE.
- COLOR CODE BLACK RAL 9005 ON LEFT AND RIGHT SIDE OF PATCH PANEL

Technicial Specifications

- 2U HEIGHT= 88.90 mm
- 19 INCH WIDTH = 483 mm
- 8*6=48 NUMBER OF PORTS UTP (unshielded pair cable)
- RJ45 Connector
- CATEGORY 5 METAL CASE BODY STAINLESS METAL BODY PORT NUMBERS

Product Code	Product Description
FO-PP-1U-CAT5-24	1U 24 Port UTP Cat5e Patchpanel (In-line UTP Coupler Type)

Product Code	Product Description
FO-PP-2U-CAT5-48	2U 48 Port UTP Cat5e Patchpanel (110 Krone IDC - Horizontal)

NETWORK COMMUNICATION SOLUTIONS

CAT6 Patch Panel Series | CAT6 Gigabit Ethernet Patch Panels

NETWORK COMMUNICATION SOLUTIONS

Cat6 24 Port UTP Fast Ethernet Patch Panel (IDC Type) | **CAT6 Patch Panel Series**
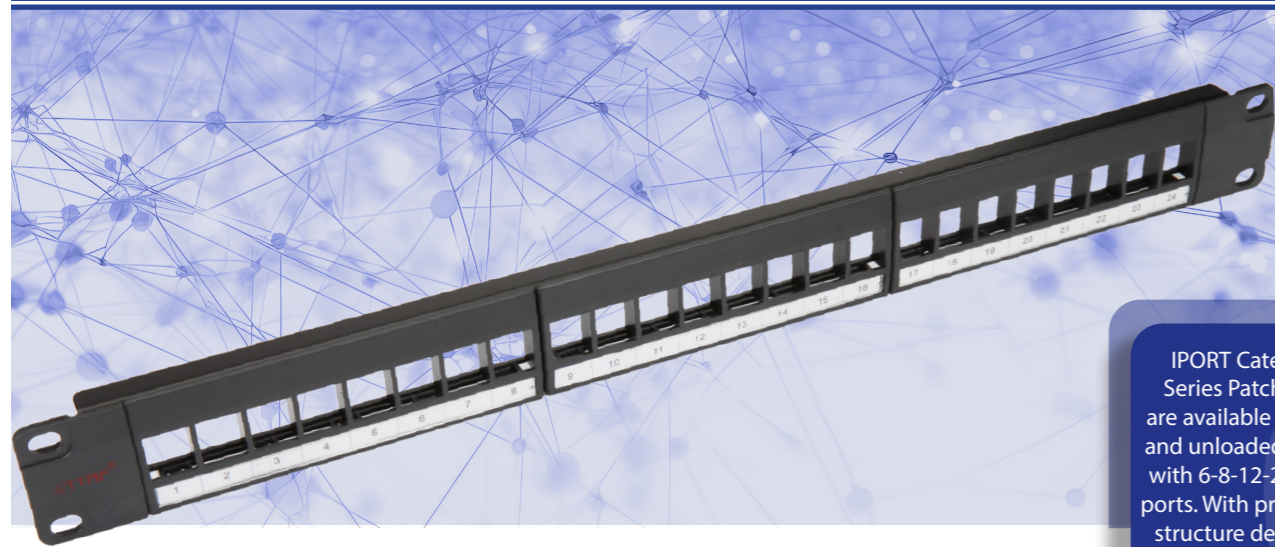
IPORT Category 6 Series Patch Panels are available in loaded and unloaded versions with 6-8-12-24 and 48 ports. With professional structure design, our Category 6 UTP patch panels are extremely durable to punch down powerfully. With its 110 and dual type IDC design, it accepts 110 Krone type punch down tools and fits 23-26 AWG solid and coiled UTP cables. There are writable and erasable marking surfaces on the front panel for each port for efficient system management.

Applications

- 10BASE-TX Ethernet
- 100BASE –TX Fast Ethernet
- 1000BASE –TX Fast Ethernet
- 250MHz and above
- Audio, video and other applications

Electrical Properties

- Dielectric Strength: 1000 for 1 minute
- V RMS Insulation Resistance: 10MΩ min
- Contact Resistance: 20 mΩ maximum
- Storage Temperature: -40 °C to +70 °C maximum
- Operating Temperature: -20 °C to +60 °C maximum
- Humidity: 10% - 65%
- Unbalance Input/Output Resistance: 200 m Ohm maximum
- Insulation Resistance: 500 Mega Ohm min. @500 Vdc DC Resistance: 0.1
- Ohm maximum @20 °C
- EMC Standards: EN-55022 Class B, FCC Part 15 Subpart J Class A

Certificate and Test Numbers

- UL CODE: Patch panels shall be UL Listed under file number E357669
- 3P CODE: P/N IPORT Attestation of Conformity No.113796
- ETL Conformity No: 101069064CRT-001e

Features

- Hinged style window with white label
- Every 8 Port based module can be replaced

Standards And Physical Properties

- 250MHz and above
- ISO/IEC-11801
- UL 1863 safety listing
- UL 94V-0 fire retardant plastic
- ANSI/TIA/EIA-568-C.2
- 482.6mm(W) x 43.65mm(H) x 35.0mm(D)

Applications

- The protruding portion of the IDC terminal holds wires in place before termination
- Dual IDC with 110 or Krone tool
- Compliant with ANSI/TIA-568-C.2 CAT 6 component performance

Product Code	Product Description
FO-SP-3000-12PC6	12 Port Cat6 Patchpanel (Unloaded / Keystone Jack - Modular Type)
FO-SP-3000-24PC6	24 Port Cat6 Patchpanel (Unloaded / Keystone Jack - Modular Type)
FO-SP-3000-48PC6	48 Port Cat6 Patchpanel (Unloaded / Keystone Jack - Modular Type)
FO-SP-3000-12PC6L	12 Port Cat6 Patchpanel (Loaded / Keystone Jack - Modular Type)
FO-SP-3000-24PC6L	24 Port Cat6 Patchpanel (Loaded / Keystone Jack - Modular Type)
FO-SP-3000-48PC6L	48 Port Cat6 Patchpanel (Loaded / Keystone Jack - Modular Type)
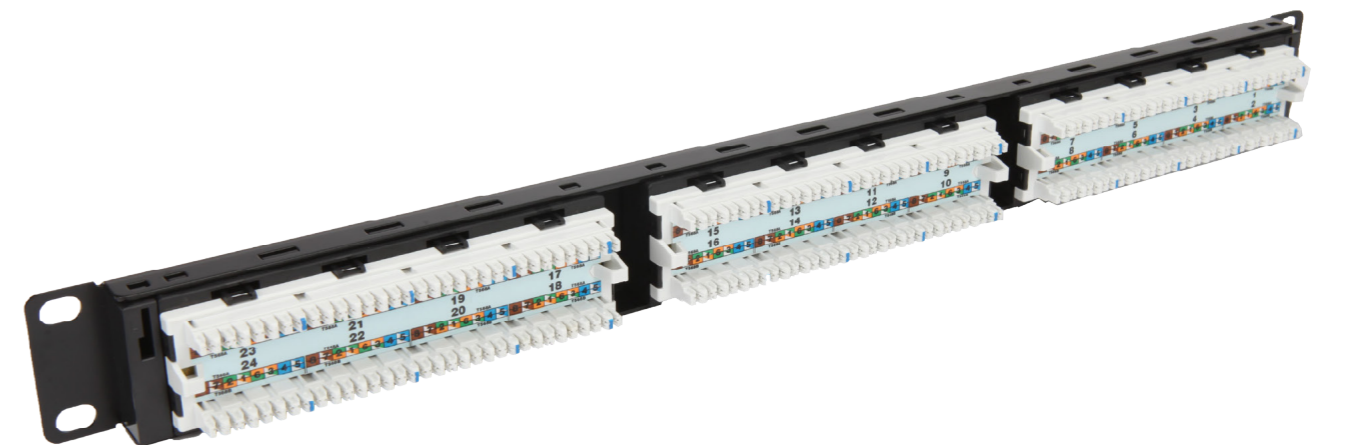
Product Code	Product Description
FO-SP-3000-PCB-24PC6	1U 24 Port UTP Cat6 Patchpanel (110 Krone IDC - Horizontal)

NETWORK COMMUNICATION SOLUTIONS

CAT6 Patch Panel Series | CAT6 24 Port Utp Ring Patch Panels (D-Ring / IDC Type)

NETWORK COMMUNICATION SOLUTIONS

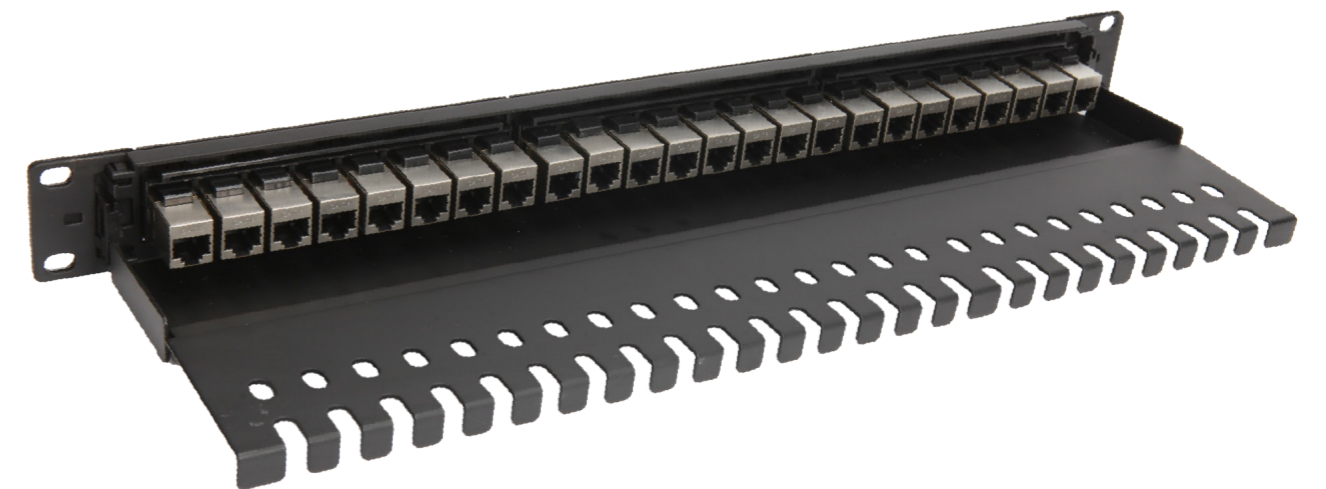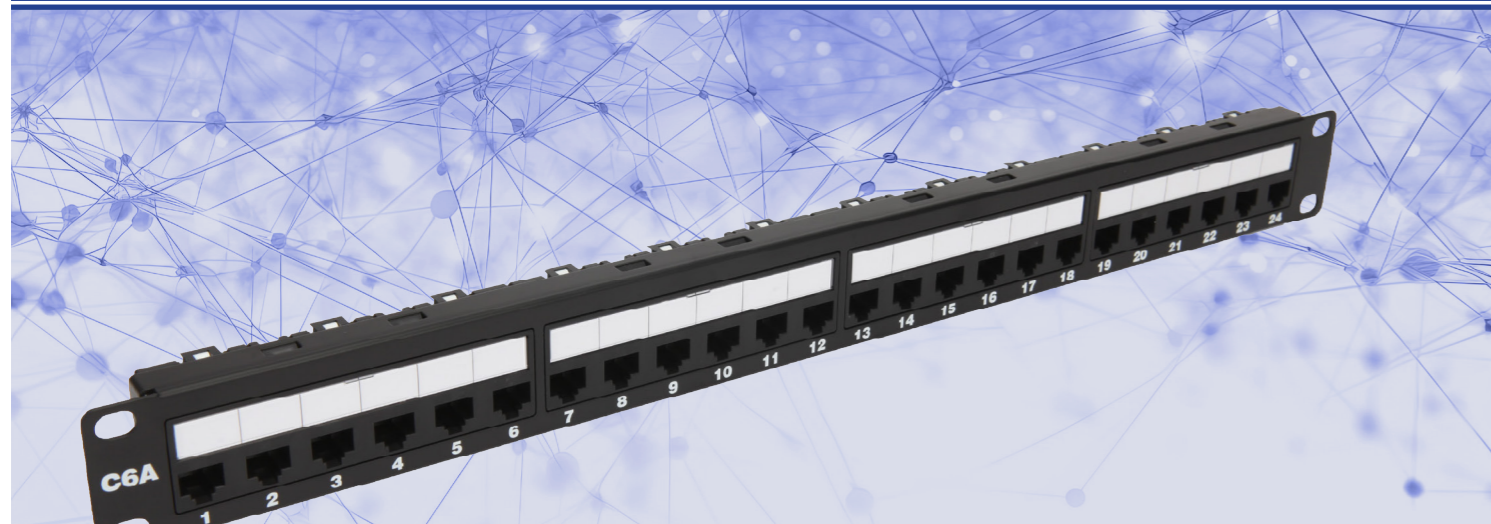Cat6 24 Port S/FTP Fast Ethernet Patch Panel (IDC Type) | **CAT6 Patch Panel Series**

IPORT 6 S/FTP tray panel meets standards that exceed transmission performance. It supports bandwidth up to 250MHz and beyond and passes the ANSI/TIA-568C.2 Category 6 performance standard.

Features

- Hinged label holder for easy label replacement
- Every 8-Port based module is interchangeable
- Compatible with both 110 and Krone finishing tools

Standards And Physical Properties

- UL 1863 safety listing
- UL 94V-0 fire resistant plastic
- ANSI/TIA-568-C.2
- Dimensions: 482.6mm(W) x 43.65mm(H) x 34.8mm(D)

Application

- For CAT 6 UTP solutions
- Features D-ring design to organize cables horizontally to reduce installation space
- Compliant with ANSI/TIA-568-C.2 CAT 6 component performance

Features

- Tray type patch panel
- UL 1863 Safety Listed
- Printed labels for port identification
- Ground wire installed
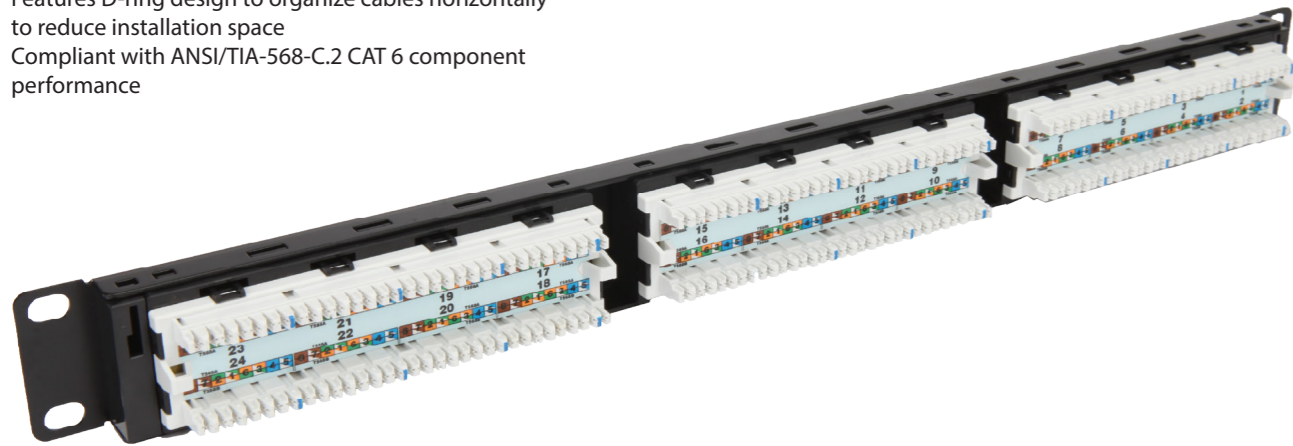
Product Code	Product Description
FO-SP-3000-PCB-24PC6M	1U 24 Port UTP Cat6 Patchpanel (D-Ring 110 Krone IDC - Horizontal)

Product Code	Product Description
FO-SP-4000-T24PC6	1U 24 Port S/FTP Cat6 Patchpanel (110 Krone IDC Closed)

IPORT
NETWORK SYSTEMS
TELECOMMUNICATION AND CABLE SYSTEMS

TELECOMMUNICATION AND CABLE SYSTEMS
IPORT
NETWORK SYSTEMS

NETWORK COMMUNICATION SOLUTIONS

CAT5 Patch Panel Series | CAT5e 24 Port Utp Fast Ethernet Patch Panel (Straight Connection Type)

NETWORK COMMUNICATION SOLUTIONS

Cat6 24 Port S/FTP Fast Ethernet Patch Panel (In-Line Coupler Type) | **CAT6 Patch Panel Series**

Features

- PLUG RJ 45 CONNECTORS
- UTP JOINING KEYSTONES
- ROUNDED BACK SIDE OF THE METAL CHASSIS HALF-MOON-SHAPED, SQUARE-SHAPED CABLE ORGANIZERS.
- COLOR CODE BLACK RAL 9005
- ON THE LEFT AND RIGHT SIDE OF THE PATCH PANEL

Technicial Specifications

- 1U HEIGHT= 44.45mm
- 19 INCH WIDTH = 483 mm
- 8*3=24 = NUMBER OF PORTS
- UTP (unshielded twisted pair) RJ45 Connector
- CATEGORY 5&6 Compatible
- METAL CHASSIS BODY
- STAINLESS METAL BODY
- ENTRY NUMBERS

Features

- PLUG RJ 45 CONNECTORS
- UTP JOINING KEYSTONES
- ROUNDED BACK SIDE OF THE METAL CHASSIS HALF-MOON-SHAPED, SQUARE-SHAPED CABLE ORGANIZERS.
- COLOR CODE BLACK RAL 9005
- ON THE LEFT AND RIGHT SIDE OF THE PATCH PANEL

Technicial Specifications

- 1U HEIGHT= 44.45mm
- 19 INCH WIDTH = 483 mm
- 8*3=24 = NUMBER OF PORTS
- UTP (unshielded twisted pair) RJ45 Connector
- CATEGORY 5&6 Compatible
- METAL CHASSIS BODY
- STAINLESS METAL BODY
- ENTRY NUMBERS

Product Code	Product Description
FO-PP-1U-CAT6-24	1U 24 Port UTP Cat6 Patchpanel (In-Line UTP Coupler Type)

Product Code	Product Description
FO-PP-1U-CAT6-24S	1U 24 Port S/FTP Cat6 Patchpanel (In-Line S/FTP Coupler Type)

NETWORK COMMUNICATION SOLUTIONS

CAT6 Patch Panel Series | CAT6 48 Port UTP Fast Ethernet Patch Panels (In-Line Coupler Type)

NETWORK COMMUNICATION SOLUTIONS

Cat6 48 Port UTP Fast Ethernet Patch Panel (IDC) | **CAT6 Patch Panel Series**
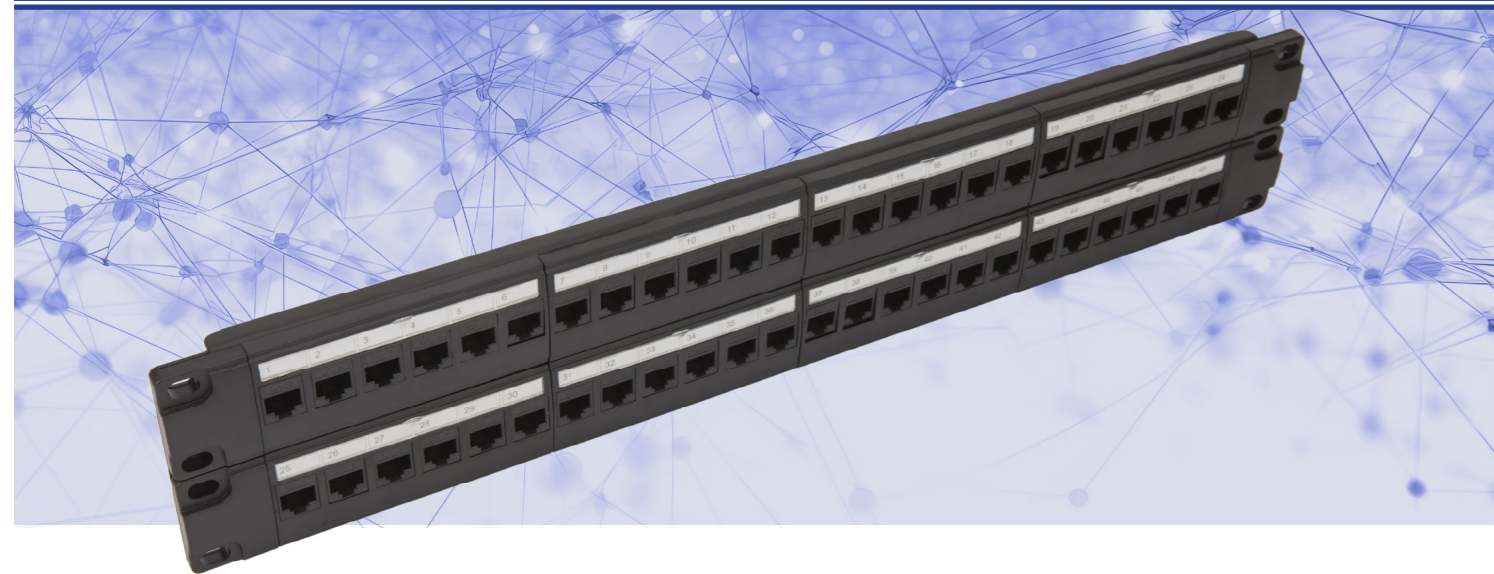
Features

- RJ45 plug-to-plug connectors
- UTP match stones
- Round back of the metal case body, square cable organizers in the shape of a half moon.
- Color code black RAL 9005
- On the left and right side of the patch panel

Technicial Specifications

- 2U HEIGHT= 88.90 mm
- 19 INCH WIDTH = 483 mm
- 8*6=48 =NUMBER OF PORTS
- UTP (unshielded twisted pair) RJ45 Connector
- CATEGORY 6
- METAL CHASSIS BODY
- STAINLESS METAL BODY
- ENTRY NUMBERS

Features

- Hinged style window with white label
- Every 6-Port based module is replaceable

Standards And Physical Properties

- 250MHz and above
- ISO/IEC-11801
- UL 1863 safety listing
- UL 94V-0 fire retardant plastic
- ANSI/TIA/EIA-568-C.2
- Dimensions: 482.6 mm(W) x 87.40 mm(H) x 35.0 mm(D)

Application

- Protruding portion of IDC terminal holds wires in place before termination
- Dual IDC with 110 or Krone tool
- Compliant with ANSI/TIA-568-C.2 CAT 6 UTP component performance

Product Code	Product Description
FO-PP-2U-CAT6-48	2U 48 Port UTP Cat6 Patchpanel (In-Line UTP Coupler Type)

Product Code	Product Description
FO-SP-3000-PCB-48PC6	2U 48 Port UTP Cat6 Patchpanel (110 Krone IDC - Horizontal)

NETWORK COMMUNICATION SOLUTIONS

CAT6a Patch Panel Series | CAT6a 24 UTP Fast Ethernet Patch Panels (IDC Type)

NETWORK COMMUNICATION SOLUTIONS

CAT6 24 Port S/FTP Fast Ethernet Patch Panels (IDC Type) | **CAT6a Patch Panel Series**

IPORT S/FTP CAT 6A tray patch panel meets standards exceeding transmission performance. It is designed to be quick and easy to install and terminate.

Features

- Hinged label holder for easy label replacement
- The protruding part of the IDC terminal can hold wires in place before termination
- Every 6 Port based module can be replaced
- Compatible with both 110 and Krone finishing tools

Certificate and Test Numbers

- UL CODE: Patch panels will be UL Listed with file number E357669.
- 3P CODE: P/N IPORT Declaration of Conformity No.113796
- ETL Compliance Number: 101069064CRT-001e

Standards And Physical Properties

- UL 1863 safety listing
- UL 94V-0 fire resistant plastic
- ANSI/TIA-568-C.2
- 482.6mm(W) x 43.65mm(H) x 32.55mm(D)

Certificate and Test Numbers

- UL CODE: Patch panels will be UL Listed with file number E357669.
- 3P CODE: P/N IPORT Declaration of Conformity No.113796
- ETL Compliance Number: 101069064CRT-001e

Features

- Compliant with CAT 6A component performance (ISO/IEC 11801)
- 1U 24-port S/FTP tray patch panel
- Port numbers with sill display on front of panel to facilitate easy reading
- UL 1863 safety listing
- UL 94V-0 flammability standard
- CAT 6A UTP tray type patch panel available
- Suitable for 10 Gigabit Ethernet applications

Application

- 10 Gigabit for CAT 6A UTP solutions.
- Compliant with ANSI/TIA-568-C.2 CAT 6A component performance
- Suitable for 10 Gigabit Ethernet applications
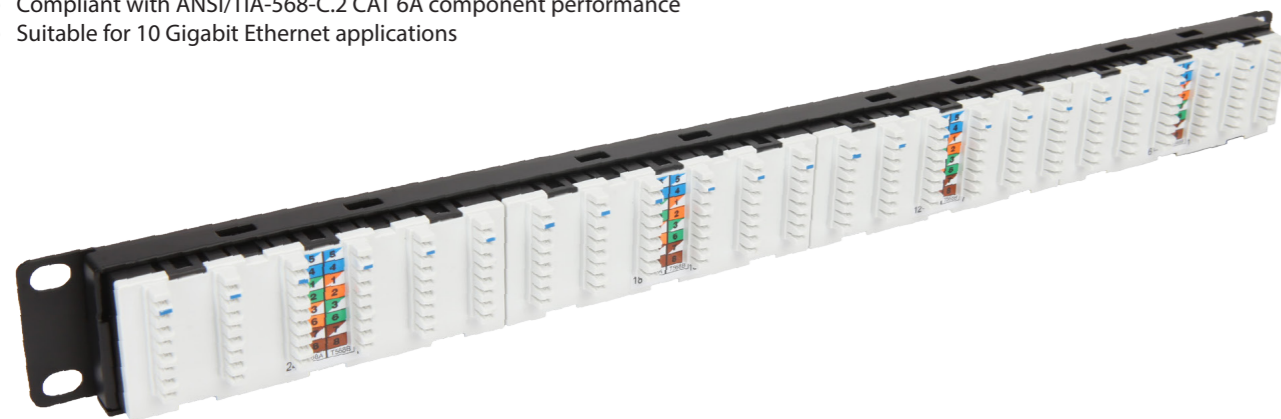
Product Code	Product Description
FO-SP-3000-PCB-24PC6A	1U 24 Port UTP Cat6a Patchpanel (110 Krone IDC - Vertical)
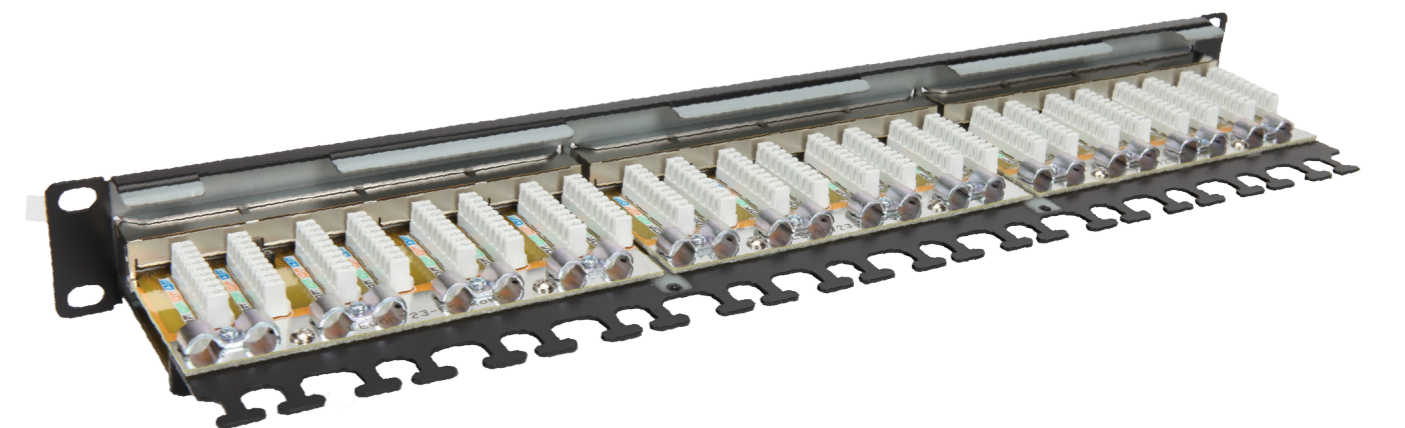
Product Code	Product Description
FO-SP-4000-T24PC6A	1U 24 Port S/FTP Cat6a Patchpanel (110 Krone IDC Closed)

NETWORK COMMUNICATION SOLUTIONS

CAT6 Patch Panel Series | CAT6 24 Port S/FTP Fast Ethernet Patch Panels (Keystone Type)

NETWORK COMMUNICATION SOLUTIONS

CAT6 48 Port UTP Fast Ethernet Patch Panels (IDC Type) | **CAT6 Patch Panel Series**
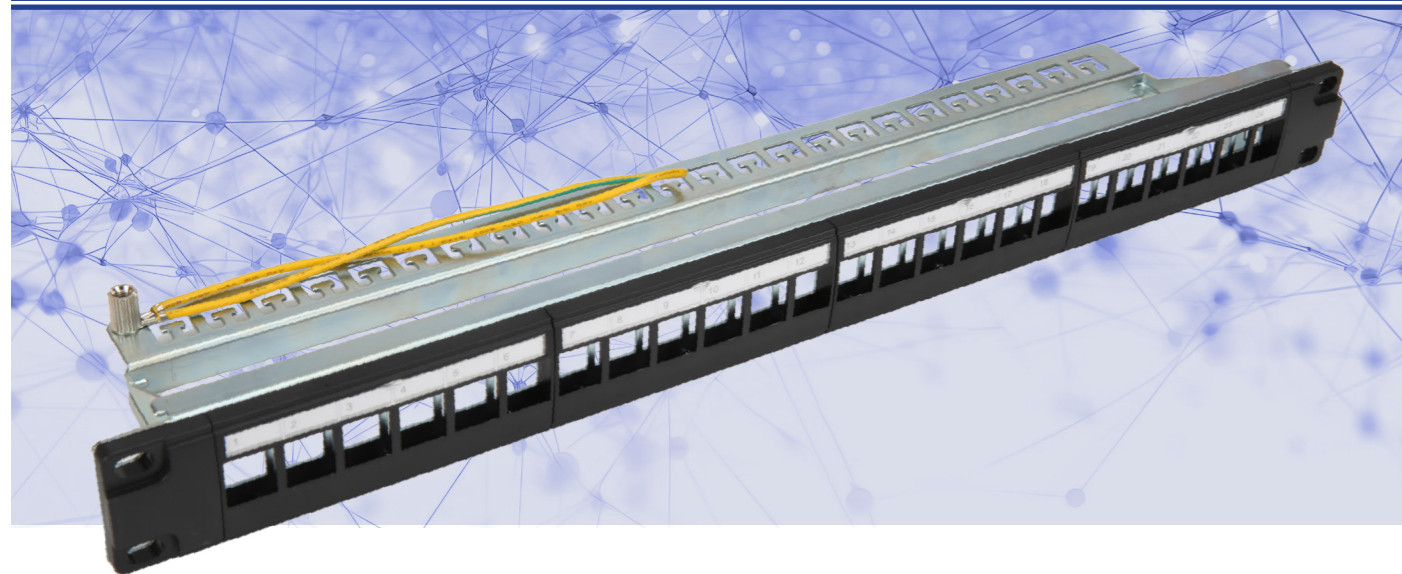
Features

- Hinged label holder for easy label replacement
- Each 6/8-Port based module is interchangeable
- Compatible with IPORT UTP-FTP-STP Keystone Jack

Standards And Physical Properties

- UL 1863 safety listing
- UL 94V-0 fire resistant plastic
- ANSI/TIA-568-C.2
- Dimensions: 482.6mm(W) x 43.65mm(H) x 34.8mm(D)

Application

- For CAT 6 FTP and STP solutions
- Compliant with ANSI/TIA-568-C.2 CAT 6 component performance

Features

- Hinged style window with white label
- Each 6/8-Port based module is interchangeable
- 2U HEIGHT: 88.90mm
- 19 INCH WIDTH: 483mm
- UTP (unshielded twisted pair keystone type)

Application

- 10BASE-TX Ethernet
- 100BASE –TX Fast Ethernet
- 1000BASE –TX Fast Ethernet
- Audio, Video and other applications

Standards And Physical Properties

- 250MHz and above
- ISO/IEC-11801
- UL 1863 safety listing
- UL 94V-0 fire retardant plastic
- ANSI/TIA/EIA-568-C.2
- Dimensions: 482.6 mm(W) x 87.40 mm(H) x 35.0 mm(D)

Electrical properties

- Dielectric Strength: 1000 V RMS for 1 minute
- Insulation Resistance: 10MΩ min
- Contact Resistance: Maximum 20 mΩ
- Storage Temperature: -40 ℃ to +70 ℃ max.
- Operating Temperature: -20 ℃ to +60 ℃ max.
- Humidity: 10% - 65%
- Unbalance Input/Output Resistance: 200 m Ohm max.
- Insulation Resistance: 500 Mega Ohm min. @500VDC
- DC Resistance: 0.1 Ohm maximum @20 ℃
- EMC Standards: EN-55022 Class B, FCC Part 15 Subpart J Class A

Product Code	Product Description
FO-SP-3000-24PC6F	1U 24 Port FTP Cat6 Patchpanel (Keystone Type)

Product Code	Product Description
FO-SP-3000-48PC6	2U 48 Port UTP Cat6 Patchpanel (Unloaded Keystone Type)
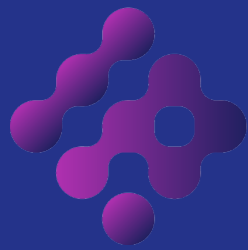
IPORT

NETWORK SYSTEMS

KEYSTONE JACKS

NETWORK COMMUNICATION SOLUTIONS

KEYSTONE JACKS | UTP/FTP/STP Keystone Jacks

NETWORK COMMUNICATION SOLUTIONS

UTP Keystone Jacks | **Keystone Jacks**
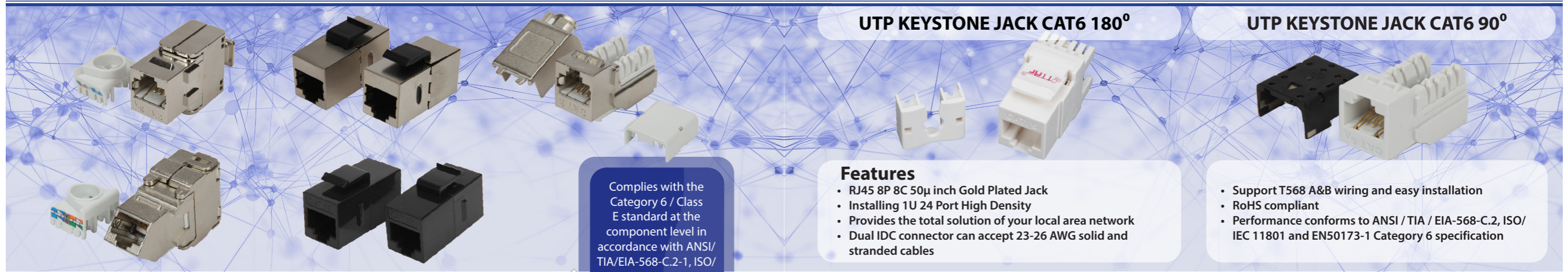
UTP KEYSTONE JACK CAT6 180°

UTP KEYSTONE JACK CAT6 90°

Features
- **RJ45 8P 8C 50µ inch Gold Plated Jack**
- **Installing 1U 24 Port High Density**
- **Provides the total solution of your local area network**
- **Dual IDC connector can accept 23-26 AWG solid and stranded cables**

- **Support T568 A&B wiring and easy installation**
- **RoHS compliant**
- **Performance conforms to ANSI / TIA / EIA-568-C.2, ISO/ IEC 11801 and EN50173-1 Category 6 specification**

S T A N D A R D S

Complies with the Category 6 / Class E standard at the component level in accordance with ANSI/ TIA/EIA-568-C.2-1, ISO/ IEC 11801 2nd edition and CENELEC EN50173. » Simple and labor-saving termination using standard 110 Block termination and Krone tools. » Supports solid or stranded 22-26 AWG wires. » Adjustable protective strain relief. » Simple assembly and installation for reliable performance. » Compatible with various international faceplates and patch panels in accordance with IEC 60603-7 (603-7). » Plastic Rating UL-94V0.

UTP / FTP / STP is available for 1Gb / 10Gb systems, Jacks comply with ANSI/TIA/EIA-568-C.2-1, ISO/ IEC 11801 2nd edition and CENELEC EN50173 Category 6 and high ATM 622 Mbps, Fast applications such as Gigabit Ethernet 1000 Mbps and the high-speed applications of the future. IPORT's modular jacks are designed to work with 110 and Krone termination tools. The Keystone jack is available in 90 and 180 degree termination design with wiring diagram and conductor protection cover. The jacks are compatible with a wide range of standard international front panels and patch panels. The jacks support both solid and braided cables. A unique, adjustable protective strain relief cap is used, supporting versatile horizontal cable termination. Jacks comply with IEC 60603-7 standards.

Category 6 UTP 90°/180° keystone jacks are PC plastic package, suitable 250MHz bandwidth for different application environments, international standard ISO/IEC 11801 / EN-55022-EN50173 and ANSI/TIA -T568-C.2 requirements. 8 Pin insert has good flexibility It has and durability. Conforms to RoHS standards

Technicial Specifications
- Suitable for 22-24 AWG cable
- IDC termination interface
- Durability: 1500 times wearing
- Terminating 250 times

Materials
- Jack Housing: Polycarbonate UL 94V-0
- Jack Contacts: Phosphor bronze, 50 micro inch gold plated over nickel
- Wiring Block Housing: Polycarbonate UL 94V-0
- IDC Contacts: Lead-tin plated phosphor bronze
- Flammability: Conforms to UL 94V-0
- Standards: Jack openings comply with IEC 60603-7 and FCC 68.500

Electrical Properties
- Dielectric Strength: 1000V RMS for 1 minute
- Insulation Resistance: 10 MΩ min
- Contact Resistance: 2 mΩ per contact
- Temperature Range: -20°C to 60°C maximum
- Humidity: 10%-65%
- Contact Resistance: 20m Ohm max
- Unbalance Input: 200m Ohm max
- Input/Output Resistance:
- Dielectric Strength: 1 Minute for 1000 Volts
- rms
- Insulation Resistance: 500MegaOhm min.@
- 500VDC
- DC Resistance: 0.1 Ohm max. @20C

Applications
- 10BASE-TX Ethernet
- 100BASE –TX Fast Ethernet
- 1000BASE –TX Fast Ethernet
- Audio, video and other applications

Certificate and Test Numbers
- UL CODE: Keystone Jack will be UL
- Listed under file number E357669
- 3P CODE: P/N IPORT Approval
- Compliance No.113786 &113796
- ETL Compliance Number:
- 101769064CRT-001a

Dimensions and Physical Properties
- High impact resistant plastic housing, Flame retardant UL 94V-0
- (ABS+PC,UL 94V-0)
- IDC Contact: 100 µ inch nickel plated on phosphor bronze
- IDC Operating Life: Minimum 250 Re-Terminations
- Jack Contact: Phosphor bronze, 50µ inch gold plated over nickel plated at contact area
- Jack Working Life: Minimum 750 placements
- PCB: FR-4, 1.6mm thickness
- RJ Standard socket conforming to FCC part 68, endurance 750
- loops can be used on any keystone wall plate or patch panel without Load;
- Cat6, T568A and T568B cabling options are available. Meet every wiring requirement.
- Plastic Housing: PC UL94V-0
- Contact Material: Phosphor Bronze Selective Gold Plated on Nolide Wire, durability 200 cycles;
- Including 100 micron nickel information on copper and 50u gold plating.
- Supports T568A and TS568B
- Supports ANSI/EIA/TIA, 568B2-1 standards
- Storage degree. : -40+85°C
- Operating temperature. : -20+60°C
- EMC tested and passed; EN-5502, Class B (Europe); FCC Part 15, Subpart J, Class A (US) Certified
- Tin-plated IDC contact material phosphor bronze:
- IDC Enclosure:
- 1.Double IDC: 110 and LSA
- 2. PC UL94V-0
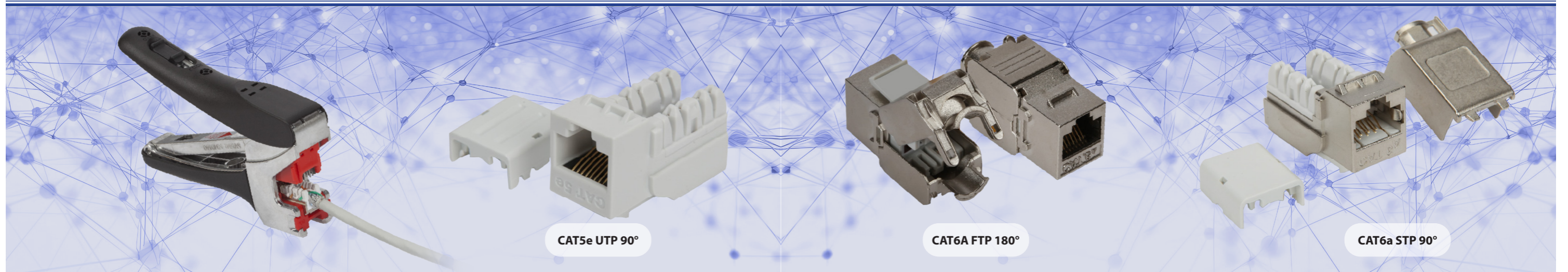- IDC Cover: ABS

Product Code	Product Description
FO-SM-2000	UTP Keystone Jack CAT6 180°
FO-SM-2001	UTP Keystone Jack CAT6 90°

NETWORK COMMUNICATION SOLUTIONS

Keystone Jacks | UTP/FTP/STP Keystone Jacks (Quick Tool)

NETWORK COMMUNICATION SOLUTIONS

UTP / FTP / STP Keystone Jacks (Quick Tool) | **Keystone Jacks**

CAT5e UTP 90°

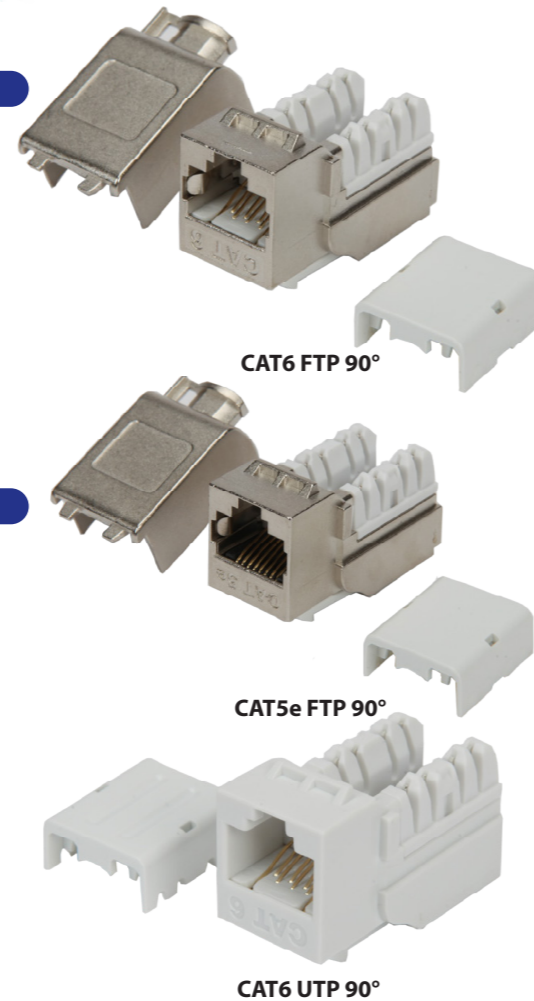**CAT6A FTP 180°**

CAT6a STP 90°

Quick Tools

- Up to 70% increase in finishing speed
- Finishing power reduced by 70%
- Suitable termination for any field installation
- Cutting modules are compatible with:
- CAT 3/5e/6/6A jacks
- Cutting module blades are replaceable
- More than 1200 terminations capacity

UTP / FTP / STP is available for 1Gb / 10Gb systems, Jacks comply with ANSI/TIA/EIA-568-C.2-1, ISO/IEC 11801 2nd edition and CENELEC EN50173 Category 6 and high ATM 622 Mbps, Fast applications such as Gigabit Ethernet 1000 Mbps and high-speed applications of the future. IPORT's modular jacks are designed to work with 110 and Krone termination tools. The Keystone jack is available in 90 and 180 degree termination design with wiring diagram and conductor protection cover. The jacks are compatible with a wide range of standard international front panels and patch panels. The jacks support both solid and braided cables. A unique, adjustable protective strain relief cap is used, supporting versatile horizontal cable termination. Jacks comply with IEC 60603-7 standards.

CAT6 FTP 90°

CAT6a UTP 90°

Technical Specifications

- Suitable for 22-24 AWG cable
- IDC termination interface
- Durability: 1500 times wearing
- Terminating 250 times

Features

- Jack Housing: Polycarbonate UL 94V-0
- Jack Contacts: Phosphor bronze, 50 micro inch gold plated over nickel
- Wiring Block Housing: Polycarbonate UL 94V-0
- IDC Contacts: Lead-tin plated phosphor bronze
- Flammability: Conforms to UL 94V-0
- Standards: Jack openings comply with IEC 60603-7 and FCC 68.500

CAT5e FTP 90°

Materials

- Jack Housing: Polycarbonate UL 94V-0
- Jack Contacts: Phosphor bronze, 50 micro inch gold plated over nickel
- Wiring Block Housing: Polycarbonate UL 94V-0
- IDC Contacts: Lead-tin plated phosphor bronze
- Flammability: Conforms to UL 94V-0
- Standards: Jack openings comply with IEC 60603-7 and FCC 68.500

CAT6a FTP 90°

CAT6 UTP 90°

Product Code	Product Description
FO-SM-QT	Quick Tool
FO-SM-2000-90QTE	UTP CAT5e 90°
FO-SM-2006-90QTE	FTP CAT5e 90°
FO-SM-2000-90QT	UTP CAT6 90°
FO-SM-2006-90QT	FTP CAT6 90°

Product Code	Product Description
FO-SM-2005 (ETL)	UTP CAT6a 90°
FO-SM-2005-90QT	UTP CAT6a 90°
FO-SM-2008-90QT	FTP CAT6a 90°
FO-SM-2003-90QT	STP CAT6a 90°
FO-SM-2006-180-AC	S/FTP CAT6a 180°

IPORT
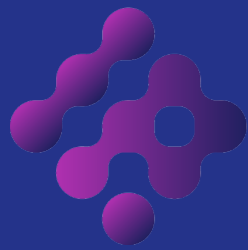
NETWORK SYSTEMS

PATCH CABLES

NETWORK COMMUNICATION SOLUTIONS
Cat5 Series | UTP/FTP/Cat5e Patch Cables

NETWORK COMMUNICATION SOLUTIONS
UTP/FTP Cat5e Patch Cables | Cat5 Series
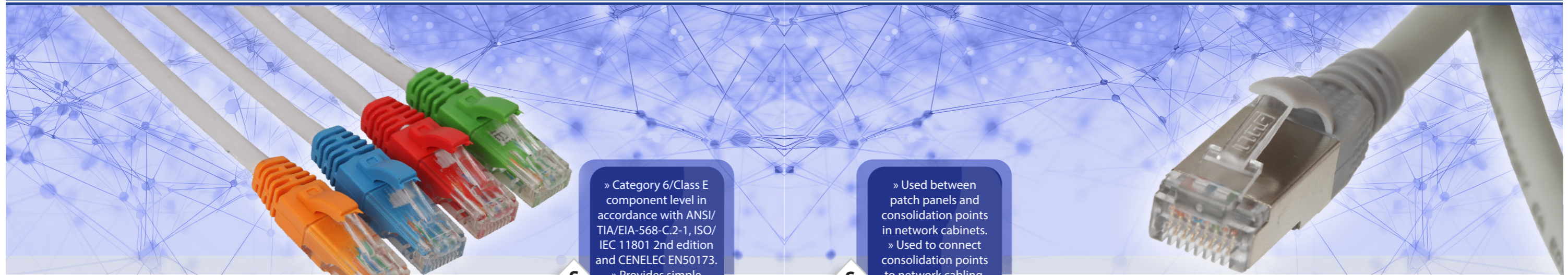
Technical Specifications (For UTP)

- Outside Diameter: 5.3 mm(nom)
- Durability: 1000 Cycles
- Impedance: 100 ohms
- Contact Resistance: 20m Ohm max.
- Imbalance Resistance: 2% Max
- Dielectric Strength: 1000 Volt/1 minute min.
- Insulation Resistance: 500 MOhm min.@500 Vdc
- Storage Temperature: -40℃……+80℃
- Operating Temperature: -20℃……+80℃
- Hold: 50 N (11 IBF) for 60 ± 5 s
- Mating cycle life: Min. 1000 cycles
- Tensile strength: ≥ 10 N per wire
- Outer Sheath: PVC / LSZH
- Type: Unshielded RJ45 8P8C modular plug.
- Housing: UL listed 94V-0 flame retardant polycarbonate
- IDC blades: Phosphor bronze, gold plated over 100 μ inch nickel in the contact area.
- Minimum band radius: 4 outer cable diameters.
- Builder: 4 pairs, 7 strands, 24/26 AWG, UTP
- Conductor: Stranded bare copper
- Ground Wire: Solid tinned copper

STANDARDS

» Category 6/Class E component level in accordance with ANSI/TIA/EIA-568-C.2-1, ISO/IEC 11801 2nd edition and CENELEC EN50173.
» Provides simple labor savings by using standard 110 Block termination and Krone tools.
» Supports solid or compressed 22-26 AWG wires.
» Adjustable protective strain relief.
» Simple assembly and installation for reliable performance.
» Compatible with various international face sheets and patch panels in accordance with IEC 60603-7 (603-7).
» Plastic Rating UL-94V0
» IEC 60603-7-2 (for UTP)
» IEC 60332-1 (for UTP and FTP)
» IEC 60603-7-3 (for FTP)

STANDARDS

» Used between patch panels and consolidation points in network cabinets.
» Used to connect consolidation points to network cabling.
» Fully supports LAN applications.
» Horizontal communication cable; Used for indoor installations.

Technical Specifications (For FTP)

- Outer Diameter: 5.5 mm(nom)
- Durability: 1000 Cycles
- Impedance: 100 ohms
- Contact Resistance: 20m Ohm max.
- Imbalance Resistance: 2% Max
- Dielectric Strength: 1000 Volt/1 minute min.
- Insulation Resistance: 500 MOhm min.@500 Vdc
- Storage Temperature: -40℃……+80℃
- Operating Temperature: -20℃……+80℃
- Hold: 50 N (11 IBF) for 60 ± 5 s
- Mating cycle life: Min. 1000 cycles
- Tensile strength: ≥ 10 N per wire
- Outer Sheath: PVC / LSZH
- Type: Shielded RJ45 8P8C modular plug.
- Housing: UL listed 94V-0 flame retardant polycarbonate
- IDC blades: Phosphor bronze, gold plated over 100 μ inch nickel in the contact area.
- Minimum band radius: 4 outer cable diameters.
- Builder: 4 pairs, 7 strings, 24/26 AWG, FTP
- Conductor: Stranded bare copper
- Ground Wire: Solid tinned copper

Transmission Features

Frequency (MHZ)	Next (dB/100m)				Return Loss (dB/100m)			
	1m	2m	5m	10m	1m	2m	5m	10m
1 MHz	67.0	67.0	67.0	67.0	21.80	21.80	21.80	21.80
4 MHz	64.6	64.3	63.5	62.4	23.61	23.61	23.61	23.61
10 MHz	56.8	56.5	55.7	54.8	24.80	24.80	24.80	24.80
16 MHz	52.7	52.4	51.7	50.9	25.41	25.41	25.41	25.41
20 MHz	50.8	50.5	49.9	49.1	25.70	25.70	25.70	25.70
31.25 MHz	47.0	46.8	46.2	45.5	25.05	25.05	25.05	25.05
62.5 MHz	41.1	40.9	40.5	40.1	22.04	22.04	22.04	22.04
100 MHz	37.2	37.1	36.8	36.6	20.00	20.00	20.00	20.00

COLOUR ⌐ ⌐ LENGTH

FO-XTP-CAT5e-XYZZZ

Product Code	Product Description
FO-UTP-CAT5e-XYZZZ	U-UTP Cat5e Patchcord L: x meter.
FO-FTP-CAT5e-XYZZZ	F-UTP Cat5e Patchcord L: x meter.

NETWORK COMMUNICATION SOLUTIONS

Cat6 Series | UTP/FTP/Cat6 Patch Cables

NETWORK COMMUNICATION SOLUTIONS

UTP/FTP Cat6 Patch Cables | **Cat6 Series**
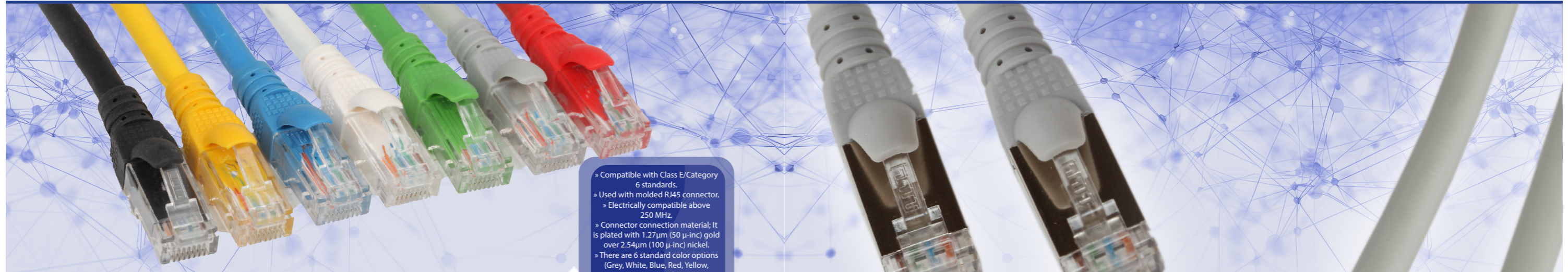
STANDARDS

» Compatible with Class E/Category 6 standards.
» Used with molded RJ45 connector.
» Electrically compatible above 250 MHz.
» Connector connection material; It is plated with 1.27µm (50 µ-inc) gold over 2.54µm (100 µ-inc) nickel.
» There are 6 standard color options (Grey, White, Blue, Red, Yellow, Green, Orange). » There are 9 standard length options (0.5m, 1m, 2m, 3m, 5m, 7m, 10m, 15m, 20m), other lengths can be provided on request.
» Carefully designed and tested to keep near-end confusion (NEXT) within acceptable limits.
» Colored covers are available for department color coding.
» Built with top quality components.
» RoHS compliant 2002/95/EC
» High quality 23/24/AWG solid and compressed copper wire is used.
» Number of conductors 4 pairs UTP
» Number of isolated conductors There is 8 pairs, each of them is braided.
» Cable covering type PVC (Polyvinyl Chloride)
» Connector A&B RJ-45 Male, RJ-45 Male
» Both RJ-45 connectors comply with IEC 60603-7-41 standards.

Applications

- Designed for use with Megabit&Gigabit networks
- Patches from hub to distribution panel
- Connects workstation to wall outlet
- 10 Base-T,100 Base-TX,1000Base-TX
- Token Ring 4-16 Mbit, 155-622 Mbit ATM
- ISDN etc

Technical Specifications (For UTP)

- Outer diameter   : 5.7mm(nom)
- Durability   : 750 Cycles
- Internal resistance   : 100ohm
- Contact resistance   : 20m Ohm max.
- Imbalance Resistance   : 2% Maximum
- Dielectric strength   : 1000 Volt/1 minute min.
- Insulation Resistance : 500MOhm min.@500 Vdc
- Storage temperature   : -40℃……+80℃
- Operating temperature: -20℃……+60℃
- Outer jacket   : PVC/LSZH
- Eclipse   : 50 N (11 IBF) for 60 ± 5 s
- Mating cycle   : Min. 1000 cycles
- Tensile strength   : ≥ 20 N per wire
- Medicine   : Unshielded RJ45 8P8C modular plug
- Housing   : UL listed 94V-0 flame retardant polycarbonate
- IDC blades   : Phosphor bronze, gold plated over 100 µ nickel in the contact area.

Applications

- Designed for use with Megabit&Gigabit networks
- Patches from hub to distribution panel
- Connects workstation to wall outlet
- 10 Base-T,100 Base-TX,1000Base-TX
- Token Ring 4-16 Mbit, 155-622 Mbit ATM
- ISDN etc

Technical Specifications (For FTP)

- Outer diameter   : 5.7mm(nom)
- Durability   : 1000 Cycles
- Internal resistance   : 100ohm
- Contact resistance   : 20m Ohm max.
- Imbalance Resistance   : 2% Maximum
- Dielectric strength   : 1000 Volt/1 minute min.
- Insulation Resistance : 500MOhm min.@500 Vdc
- Storage temperature   : -40℃……+80℃
- Operating temperature: -20℃……+60℃
- Outer jacket   : PVC/LSZH
- Eclipse   : 50 N (11 IBF) for 60 ± 5 s
- Mating cycle   : Min. 1000 cycles
- Tensile strength   : ≥ 20 N per wire
- Medicine   : Unshielded RJ45 8P8C modular plug
- Housing   : UL listed 94V-0 flame retardant polycarbonate
- IDC blades   : Phosphor bronze, gold plated over 100 µ nickel in the contact area.
- Conductor   : Stranded bare copper.
- A.W.G.   : 24/26AWG
- Drainage Wire   : Solid tinned copper.

Standards and Performances

- ANSI / EIA / TIA 568-C.2
- ISO / IEC – 11801
- EN 50173
- IEC 60603-7-4
- IEC 60332-1

Standards and Performances

- ANSI / EIA / TIA 568-C.2
- ISO / IEC – 11801
- EN 50173
- IEC 60603-7-5
- IEC 60332-1

Certificate and Test Numbers

- UL CODE: Keystone Jack will be UL Listed with file number E357704.
- 3P CODE: P/N IPORT Declaration of Conformity No.113796
- ETL Compliance Number is 101769064CRT-001c

Certificate

- ETL Conformance Number is 101769064CRT-001d

COLOUR ⌐ ⌐LENGTH
FO-UTP-CAT6-XYZZZ

COLOUR ⌐ ⌐LENGTH
FO-FTP-CAT6-XYZZZ

Product Code	Product Description
FO-UTP-CAT6-XYZZZ	4x2x24 UTP CAT6 Patchcord L: x meter

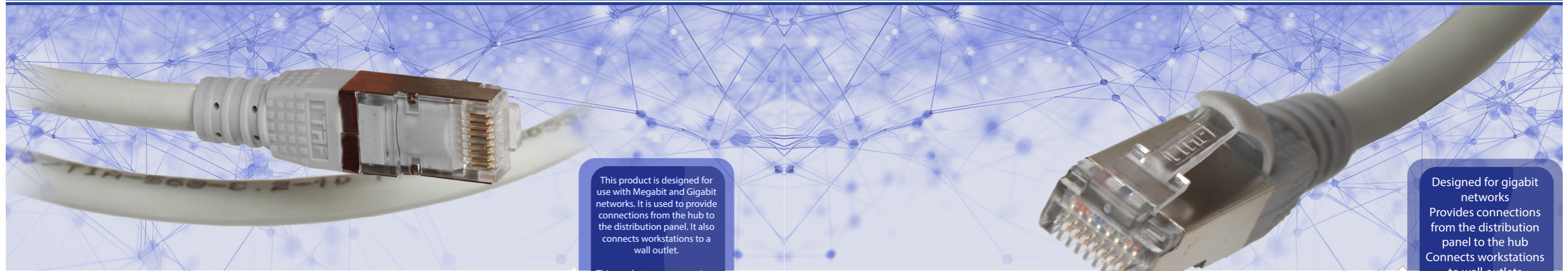| Product Code	Product Description
FO-FTP-CAT6-XYZZZ	4x2x24 FTP CAT6 Patchcord L: x meter.

NETWORK COMMUNICATION SOLUTIONS
Cat6 Series | SFTP Cat6 Patch Cables

NETWORK COMMUNICATION SOLUTIONS
SFTP Cat6a Patch Cables | Cat6a Series

STANDARDS

This product is designed for use with Megabit and Gigabit networks. It is used to provide connections from the hub to the distribution panel. It also connects workstations to a wall outlet.

This product supports various networking standards such as 10 Base-T, 100 Base-TX Fast Ethernet and 1000Base-T (IEEE802.3). Additionally, it supports Token Ring at 4-16 Mbit and ATM at 155-622 Mbit.

Besides network connections, this product also supports other applications such as ISDN, Voice and T1. It also supports Power over Ethernet (POE), which allows power transmission over an Ethernet cable.

Finally, this product has a bandwidth of 250 Mhz, which is suitable for broadband video applications.

STANDARDS

Designed for gigabit networks
Provides connections from the distribution panel to the hub
Connects workstations to wall outlets
10 Base-T, 100 Base-TX Fast Ethernet, 1000Base-T (IEEE802.3), 100 Base T4
Token Ring 4-16 Mbit, 100VG-Any LAN
155, 622, 1200 Mbit ATM
ISDN, Voice, T1, Voip
Power over Ethernet (POE)
500Mhz Broadband Video

Applications

- Designed for use with Megabit & Gigabit networks
- Patches from hub to distribution panel
- Connects the workstation to a wall outlet
- 10Base-T,100Base-TX,1000Base-TX
- Token Ring 4-16 Mbit, 155-622 Mbit ATM
- ISDN etc.

Technicial Specifications

- Outer diameter   : 6mm±0.2mm
- Durability   : 1000 Cycles
- Internal resistance   : 100ohm
- Contact resistance   : 20m Ohm max.
- Imbalance Resistance   : 2% Maximum
- Dielectric strength   : 1000 Volt/1 minute min.
- Insulation Resistance   : 500MOhm min.@500 Vdc
- Storage temperature   : -40℃……+80℃
- Operating temperature   : -20℃……+60℃
- Outer jacket   : PVC/LSZH
- Eclipse   : 50 N (11 IBF) for 60 ± 5 s
- Mating cycle lifespan   : Min. 1000 cycles
- Tensile strength   : ≥ 20 N per wire
- Medicine   : Unshielded RJ45 8P8C modular plug
- Housing   : UL listed 94V-0 flame retardant polycarbonate
- IDC blades   : Phosphor bronze, gold plated over 100 μ nickel in the contact area
- Transmission Performance: 1-750MHz specifications
- Builder   : 4 pairs, 7 strips, 24/26 Awg
- Cable type   : SSTP (PIMF) Cat 6 Cable
- Outer Jacket   : PVC/LSZH

Standards and Performances

- ANSI / EIA / TIA 568-C.2 T568A & T568B
- ISO / IEC – 11801
- EN 50173
- IEC 60603-7-5
- IEC 60332-1

Frequency (MHZ)	Next (dB/100m)				Return Loss (dB/100m)			
	1m	2m	5m	10m	1m	2m	5m	10m
1 MHz	65.0	65.0	65.0	65.0	19.80	19.80	19.80	19.80
4 MHz	65.0	65.0	65.0	65.0	21.61	21.61	21.61	21.61
10 MHz	65.0	65.0	64.5	62.9	22.80	22.80	22.80	22.80
16 MHz	62.6	62.0	60.5	59.0	23.41	23.41	23.41	23.41
20 MHz	60.7	60.1	58.6	57.2	23.70	23.70	23.70	23.70
31.25 MHz	56.9	56.2	54.9	53.6	23.05	23.05	23.05	23.05
62.5 MHz	51.0	50.4	49.2	48.1	20.04	20.04	20.04	20.04
100 MHz	47.0	46.4	45.3	44.4	18.00	18.00	18.00	18.00
200 MHz	41.1	40.6	39.8	39.3	15.00	15.00	15.00	15.00
250 MHz	39.2	38.8	38.1	37.6	14.00	14.00	14.00	14.00
300 MHz	36.4	36.2	35.9	35.8	12.80	12.80	12.80	12.80
400 MHz	31.8	31.9	32.1	32.5	10.90	10.90	10.90	10.90
500 MHz	28.2	28.4	29.0	29.8	9.50	9.50	9.50	9.50

Technicial Specifications

- Outer diameter   : 6.5mm(nom)
- Durability   : 1000 Cycles
- Internal resistance   : 100ohm
- Contact resistance   : 20m Ohm max.
- Imbalance Resistance   : 2% Maximum
- Dielectric strength   : 1000 Volt/1 minute min.
- Insulation Resistance   : 500MOhm min.@500 Vdc
- Storage temperature   : -40℃……+80℃
- Operating temperature   : -20℃……+60℃
- Outer jacket   : PVC/LSZH
- Eclipse   : 50 N (11 IBF) for 60 ± 5 s
- Mating cycle lifespan   : Min. 1000 cycles
- Tensile strength   : ≥ 90 N per wire
- Medicine   : Unshielded RJ45 8P8C modular plug
- Housing   : UL listed 94V-0 flame retardant polycarbonate
- IDC blades   : Phosphor bronze, gold plated over 100 μ nickel in the contact area.
- Conductor   : Stranded bare copper.
- A.W.G.   : 24/26AWG
- Drainage Wire   : Solid tinned copper.

Certificate
- ETL Conformance Number is 101268027CRT-001

Standards and Performances

- ANSI / EIA / TIA
- 568-C.2
- ISO / IEC – 11801
- Class Ea
- EN 50173
- IEC 60603-7-51
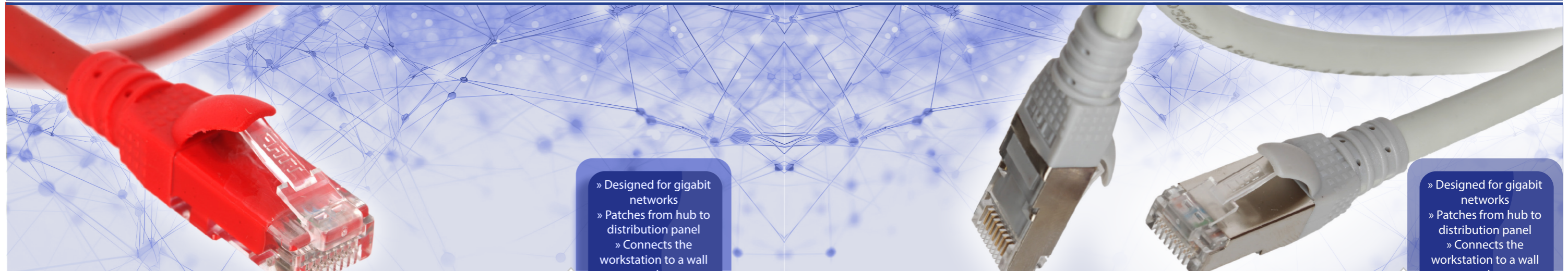- 10 GBASE-T 10 Gigabit Eth.

COLOUR ⌐ ⌐LENGTH
FO-SFTP-CAT6-XYZZZ

COLOUR ⌐ ⌐LENGTH
FO-FTP-CAT6-XYZZZ

Product Code	Product Description
FO-SFTP-CAT6-XYZZZ	SFTP Cat6 Patchcord L: x meter.

Product Code	Product Description
FO-SFTP-CAT6a-XYZZZ	SFTP CAT6a Patchcord L: x meter.

NETWORK COMMUNICATION SOLUTIONS
Cat6 Series | UTP Cat6a Patch Cables

NETWORK COMMUNICATION SOLUTIONS
FTP Cat6a Patch Cables | Cat6 Series

STANDARDS

» Designed for gigabit networks
» Patches from hub to distribution panel
» Connects the workstation to a wall outlet
» 10 Base-T, 100 Base-TX Fast Ethernet, 1000Base-T (IEEE802.3)
» Token Ring 4-16 Mbit, 155-622 Mbit ATM
» ISDN, Voice, T1
» Power over Ethernet (POE)
» 500 Mhz Broadband Video

STANDARDS

» Designed for gigabit networks
» Patches from hub to distribution panel
» Connects the workstation to a wall outlet
» 10 Base-T, 100 Base-TX Fast Ethernet, 1000Base-T (IEEE802.3)
» Token Ring 4-16 Mbit, 155-622 Mbit ATM
» ISDN, Voice, T1
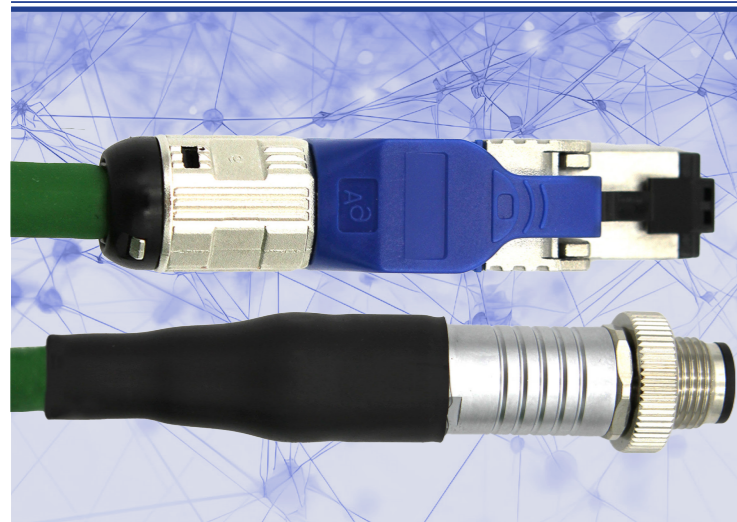» Power over Ethernet (POE)
» 500 Mhz Broadband Video

Applications

- Designed for use with Megabit & Gigabit networks
- Patches from hub to distribution panel
- Connects the workstation to a wall outlet
- 10Base-T,100Base-TX,1000Base-TX
- Token Ring 4-16 Mbit, 155-622 Mbit ATM
- ISDN etc.

Technicial Specifications

- Outer diameter   : 6.2mm (nom)
- Durability   : 1000 Cycles
- İnternal resistance   : 100ohm
- Contact resistance   : 20m Ohm max.
- Imbalance Resistance   : 2% Maximum
- Dielectric strength   : 1000 Volt/1 minute min.
- Insulation Resistance   : 500MOhm min.@500 Vdc
- Storage temperature   : -40°C……+80°C
- Operating temperature   : -20°C……+60°C
- Outer jacket   : PVC/LSZH
- Eclipse   : 50 N (11 IBF) for 60 ± 5 s
- Mating cycle lifespan   : Min. 1000 cycles
- Tensile strength   : ≥ 20 N per wire
- Medicine   : Unshielded RJ45 8P8C modular plug
- Housing   : UL listed 94V-0 flame retardant polycarbonate
- IDC blades   : Phosphor bronze, gold plated over 100 µ nickel in the contact area

Technicial Specifications

- Outer diameter   : 6.2mm(nom)
- Durability   : 1000 Cycles
- İnternal resistance   : 100ohm
- Contact resistance   : 20m Ohm max.
- Imbalance Resistance   : 2% Maximum
- Dielectric strength   : 1000 Volt/1 minute min.
- Insulation Resistance   : 500MOhm min.@500 Vdc
- Storage temperature   : -40°C……+80°C
- Operating temperature   : -20°C……+60°C
- Outer jacket   : PVC/LSZH
- Eclipse   : 50 N (11 IBF) for 60 ± 5 s
- Mating cycle lifespan   : Min. 1000 cycles
- Tensile strength   : ≥ 20 N per wire
- Medicine   : Unshielded RJ45 8P8C modular plug
- Housing   : UL listed 94V-0 flame retardant polycarbonate
- IDC blades   : Phosphor bronze, gold plated over 100 µ nickel in the contact area.
- Conductor   : Stranded bare copper.
- A.W.G.   : 24/26AWG
- Drainage Wire   : Solid tinned copper.

Standards and Performances

- ANSI / EIA / TIA 568-C.2
- ISO / IEC – 11801
- EN 50173
- IEC 60603-7-4
- 10 GBASE -T 10 Gigabit Eth.

Certificate

- ETL Conformance Number is 101268027CRT-001

Standards and Performances

- ANSI / EIA / TIA 568-C.2
- ISO / IEC – 11801
- EN 50173
- IEC 60603-7-4
- 10 GBASE -T 10 Gigabit Eth.

COLOUR ┌─┐ ┌─LENGTH
FO-UTP-CAT6a-XYZZZ

Product Code	Product Description
FO-UTP-CAT6a-XYZZZ	UTP Cat6a Patchcord L: x meter.

Product Code	Product Description
FO-FTP-CAT6a-XYZZZ	FTP CAT6a Patchcord L: x meter.

NETWORK COMMUNICATION SOLUTIONS

MTP/MPO Patchcords

NETWORK COMMUNICATION SOLUTIONS

M12 To M12 Industrial Cable

Applications

- Designed for use with Megabit&Gigabit networks
- Patches from hub to distribution panel
- Connects workstation to wall outlet
- 10 Base-T,100 Base-TX,1000Base-TX
- Token Ring 4-16 Mbit, 155-622 Mbit ATM
- ISDN etc

Technicial Specifications

- Outer diameter : 6.2mm (nom)
- Durability : 1000 Cycles
- Internal resistance : 100 ohms
- Contact resistance : 20m Ohm max.
- Imbalance Resistance : 2% Maximum
- Dielectric strength : 1000 Volt/1 minute min.
- Insulation Resistance : 500MOhm min.@500 Vdc
- Storage temperature : -40℃……+80℃
- Operating temperature : -20℃……+60℃
- Outer jacket : PVC/LSZH
- Eclipse : 50 N (11 IBF) for 60 ± 5 s
- Mating cycle lifespan : Min. 1000 cycles
- Tensile strength : ≥ 20 N per wire
- Medicine : Unshielded RJ45 8P8C modular plug
- Housing : UL listed 94V-0 flame retardant polycarbonate
- IDC blades : Phosphor bronze, gold plated over 100 μ nickel in the contact area

STANDARDS

» Designed for gigabit networks
» Patches from hub to distribution panel
» Connects the workstation to a wall outlet
» 10 Base-T, 100 Base-TX Fast Ethernet, 1000Base-T (IEEE802.3)
» Token Ring 4-16 Mbit, 155-622 Mbit ATM
» ISDN, Voice, T1
» Power over Ethernet (POE)
» 500 Mhz Broadband Video

Standards and Performances

- ANSI / EIA / TIA 568-C.2
- ISO / IEC – 11801
- EN 50173
- IEC 60603-7-4
- 10 GBASE -T 10 Gigabit Eth.
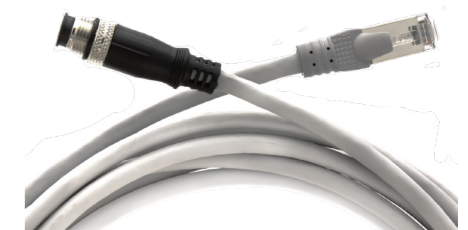
Technicial Specifications

- Outer diameter : 6.2mm (nom)
- Durability : 1000 Cycles
- Internal resistance : 100ohm
- Contact resistance : 20m Ohm max.
- Imbalance Resistance : 2% Maximum
- Dielectric strength : 1000 Volt/1 minute min.
- Insulation Resistance : 500MOhm min.@500 Vdc
- Storage temperature : -40℃……+80℃
- Operating temperature : -20℃……+60℃
- Outer jacket : PVC/LSZH
- Eclipse : 50 N (11 IBF) for 60 ± 5 s
- Mating cycle lifespan : Min. 1000 cycles
- Tensile strength : ≥ 20 N per wire
- Medicine : Unshielded RJ45 8P8C modular plug
- Housing : UL listed 94V-0 flame retardant polycarbonate
- IDC blades : Phosphor bronze, gold plated over 100 μ nickel in the contact area.
- Conductor : Stranded bare copper.
- A.W.G. : 24/26AWG
- Drainage Wire : Solid tinned copper.

Certificate

- ETL Conformance Number is 101268027CRT-001

STANDARDS

» Designed for gigabit networks
» Patches from hub to distribution panel
» Connects the workstation to a wall outlet
» 10 Base-T, 100 Base-TX Fast Ethernet, 1000Base-T (IEEE802.3)
» Token Ring 4-16 Mbit, 155-622 Mbit ATM
» ISDN, Voice, T1
» Power over Ethernet (POE)
» 500 Mhz Broadband Video

Product Code	Product Description
FO-UTP-CAT6a-XYZZZ	UTP Cat6a Patchcord L: x meter.

Product Code	Product Description
FO-FTP-CAT6a-XYZZZ	FTP CAT6a Patchcord L: x meter.

NETWORK COMMUNICATION SOLUTIONS

PUR CAT5e M12 To RJ45 Industrial Cable

NETWORK COMMUNICATION SOLUTIONS

M12 To RJ45 Injection Type Cable

STANDARDS

» Designed for gigabit networks
» Patches from hub to distribution panel
» Connects the workstation to a wall outlet
» 10 Base-T, 100 Base-TX Fast Ethernet, 1000Base-T (IEEE802.3)
» Token Ring 4-16 Mbit, 155-622 Mbit ATM
» ISDN, Voice, T1
» Power over Ethernet (POE)
» 500 Mhz Broadband Video

Applications

- Designed for use with Megabit&Gigabit networks
- Patches from hub to distribution panel
- Connects workstation to wall outlet
- 10 Base-T,100 Base-TX,1000Base-TX
- Token Ring 4-16 Mbit, 155-622 Mbit ATM
- ISDN etc

Technicial Specifications

- Outer diameter : 6.2mm (nom)
- Durability : 1000 Loops
- Internal resistance : 100 ohms
- Contact resistance : 20m Ohm max.
- Imbalance Resistance : 2% Max
- Dielectric strength : 1000 Volt/1 minute min
- Insulation Resistance : 500MOhm min.@500 Vdc
- Storage temperature : -40℃……+80℃
- Operating temperature : -20℃……+60℃
- Outer jacket : PVC/LSZH
- Eclipse : 50 N (11 IBF) for 60 ± 5 s
- Mating cycle lifespan : Min. 1000 cycles
- Tensile strength : ≥ 20 N per wire
- Medicine : Unshielded RJ45 8P8C modular plug
- Housing : UL listed 94V-0 flame retardant polycarbonate
- IDC blades : Phosphor bronze, gold plating over 100 μ in of nickel in contact area

Technicial Specifications

- Outer diameter : 6.2mm(nom)
- Durability : 1000 Cycles
- Internal resistance : 100ohm
- Contact resistance : 20m Ohm max.
- Imbalance Resistance : 2% Maximum
- Dielectric strength : 1000 Volt/1 minute min.
- Insulation Resistance : 500MOhm min.@500 Vdc
- Storage temperature : -40℃……+80℃
- Operating temperature : -20℃……+60℃
- Outer jacket : PVC/LSZH
- Eclipse : 50 N (11 IBF) for 60 ± 5 s
- Mating cycle lifespan : Min. 1000 cycles
- Tensile strength : ≥ 20 N per wire
- Medicine : Unshielded RJ45 8P8C modular plug
- Housing : UL listed 94V-0 flame retardant polycarbonate
- IDC blades : Phosphor bronze, gold plated over 100 μ nickel in the contact area.
- Conductor : Stranded bare copper.
- A.W.G. : 24/26AWG
- Drainage Wire : Solid tinned copper.

STANDARDS

» Designed for gigabit networks
» Patches from hub to distribution panel
» Connects the workstation to a wall outlet
» 10 Base-T, 100 Base-TX Fast Ethernet, 1000Base-T (IEEE802.3)
» Token Ring 4-16 Mbit, 155-622 Mbit ATM
» ISDN, Voice, T1
» Power over Ethernet (POE)
» 500 Mhz Broadband Video

Standards and Performances

- ANSI / EIA / TIA 568-C.2
- ISO / IEC – 11801
- EN 50173
- IEC 60603-7-4
- 10 GBASE -T 10 Gigabit Eth.

Certificate
- ETL Conformance Number is 101268027CRT-001

Standards and Performances

- ANSI / EIA / TIA 568-C.2
- ISO / IEC – 11801
- EN 50173
- IEC 60603-7-4
- 10 GBASE -T 10 Gigabit Eth.

Product Code	Product Description
FO-UTP-CAT6a-XYZZZ	UTP Cat6a Patchcord L: x meter.

Product Code	Product Description
FO-FTP-CAT6a-XYZZZ	FTP CAT6a Patchcord L: x meter.

NETWORK COMMUNICATION SOLUTIONS

Cat7 Series | SFTP CAT7 Patch Cables

RoHS Compliant

Technicial Specifications

•	Outer diameter	: 6.5mm(nom) ± 0.5
•	Durability	: 1000 Cycles
•	Internal resistance	: 100ohm
•	Contact resistance	: 20m Ohm max.
•	Imbalance Resistance	: 2% Maximum
•	Dielectric strength	: 1000 Volt/1 minute min.
•	Insulation Resistance	: 500MOhm min.@500 Vdc
•	Storage temperature	: -40℃……+80℃
•	Operating temperature	: -20℃……+60℃
•	Outer jacket	: PVC/LSZH
•	Eclipse	: 50 N (11 IBF) for 60 ± 5 s
•	mating cycle	: Min. 1000 cycles
•	Tensile strength	: ≥ 20 N per wire
•	Medicine	: Unshielded RJ45 8P8C modular plug
•	Housing	: UL listed 94V-0 flame retardant polycarbonate
•	IDC blades	: Phosphor bronze, gold plated over 100 μ nickel in the contact area
•	Conductor	: Stranded bare copper
•	A.W.G.	: 24/26AWG
•	Drainage Wire	: Solid tinned copper
•	Transmission Performance	: 1-750MHz specifications

STANDARDS

» Designed for gigabit networks
» Patches from hub to distribution panel
» Connects the workstation to a wall outlet
» 10 Base-T, 100 Base-TX Fast Ethernet, 1000Base-T (IEEE802.3), 100 Base T4
» Token Ring 4-16 Mbit, 100VG-Any LAN
» 155, 622, 1200 Mbit ATM
» ISDN, Voice, T1, Voip
» Power over Ethernet (POE)
» 1000 Mhz Broadband Video

Standards and Performances

- ANSI / EIA / TIA 568-C.2
- ISO / IEC – 11801
- EN 50173
- IEC 60603-7-4
- 10 GBASE -T 10 Gigabit Eth.

COLOUR ⌐ ⌐LENGTH
FO-SFTP-CAT7(a)-XYZZZ

Product Code	Product Description
FO-SFTP-CAT7a-XYZZZ	SFTP Cat7a Patchcord L: x meter.
FO-SFTP-CAT7-XYZZZ	SFTP Cat7 Patchcord L: x meter.

IPORT
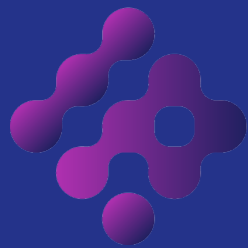
NETWORK SYSTEMS

ACCESSORIES

NETWORK COMMUNICATION SOLUTIONS

Accessories | Faceplate/Frame/Copper Accessories

NETWORK COMMUNICATION SOLUTIONS

Faceplate/Frame/Copper Accessories | **Accessories**

7001-6P4C (BLACK)
CAT6/5e 45x45 FACE PLATE (Dual Port)
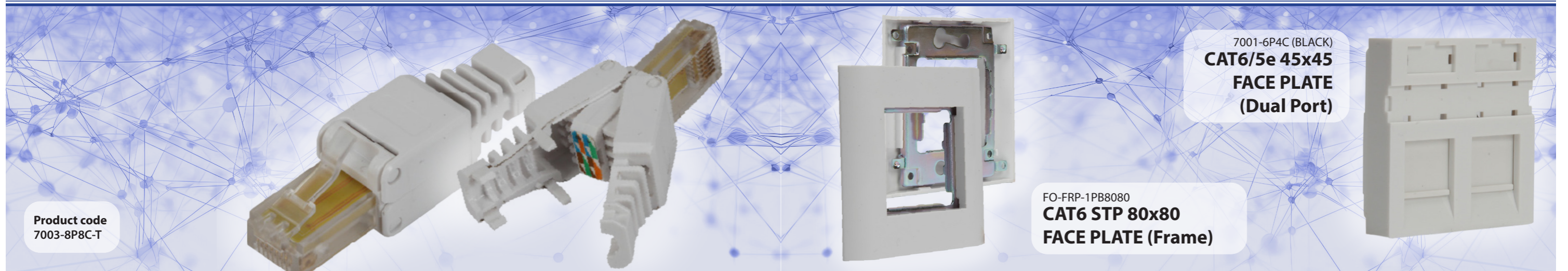
Product code
7003-8P8C-T

FO-FRP-1PB8080
CAT6 STP 80x80 FACE PLATE (Frame)

Product Code
FO-FRP-1PB8080
CABLE LABEL

7001-6P4C (BLACK)
RJ11/12 6P4C Plug 30µm

CAT6 / 5e 22.5x45 FACE PLATE (Single Port)

FO-FRP-CAT6
FO-FRP-CAT5e

Product Code
7001-8P8C-50U
UTP RJ45 8P8C Plug 50µm Gold Plated

Product Code
7001-8P8C-30U
UTP RJ45 8P8C Plug 30µm

CAT6 / 5e 45x45FACE PLATE (Single Port)

FO-FRP-1PB-4545

Product Code
CAP-01/RJ45
Protection Case for RJ45 Plug 8,5mm

COLOUR
B: BLUE
GR: GREY
R: RED
Y: YELLOW
G: GREEN

Product Code
7001-6P6C
RJ11/12 6P6C Plug 30µm

CAT6 UTP 80x80 FACE PLATE (Frame)

FO-FRP-1PB-4545

Product Code
7002-8P8C-STP50U
STP RJ45 8P8C Plug 50µm

Product Code
7001-4P4C
RJ11/12 4P4C Plug 30µm

IPORT | TELECOMMUNICATION AND CABLE SYSTEMS

NETWORK COMMUNICATION SOLUTIONS

Accessories | Cabinet / Frame / Copper Accessories

NETWORK COMMUNICATION SOLUTIONS

Cabinet / Frame / Copper Accessories | **Accessories**

Wall Cabinets 1U 10" Shelf D=150 mm

Modular Fans

Wall Cabinets

2 Cases of Containers or Trucks Per Line 320 in Total
TRUCK or CONTAINER: 50% Advantage
SAFES: 60% Advantage

Economical Fan Modules

2 Point Fixed Racks

Power Distribution Unit

Standard Power Distribution Unit

Mounting Hardware

Standard Power Distribution Unit

1U Connection Panel

Horizontal Cable Management

Wall Mount Cabinet 1U 10" Empty Panel

NETWORK COMMUNICATION SOLUTIONS

Accessories | Faceplate/Frame/Copper Accessories

Jacks available for UTP systems are designed to comply with ANSI/TIA/EIA-568-C.2-1, ISO/IEC 11801 2nd edition and CENELEC EN50173 Category 6. It is designed for high speed applications such as ATM 622 Mbps, Gigabit Ethernet 1000 Mbps and future high speed applications.

CAT6/5e Frame Box

FO-FRP-BB-8080

CAT6 / 5e 45x45 Frame (Single Port)

FO-FRP-1PBS-4545

CAT6/5e 45x45 Frame (Angled Dual Port)

FO-FRP-2PABS-4545
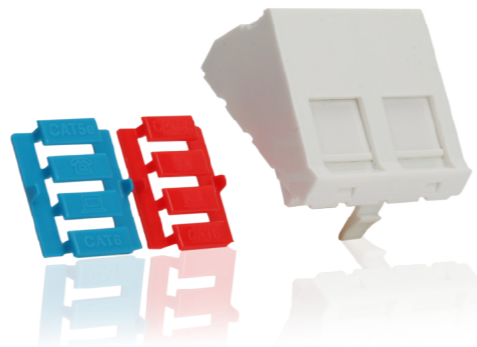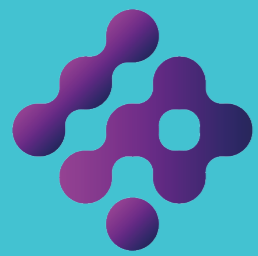
IPORT

NETWORK SYSTEMS

AUDIO / VIDEO

AUDIO AND VIDEO
DISPLAY PORT

AUDIO AND VIDEO
HDMI™

Why DisplayPort? Get Ready for the Next Generation and What Comes After with DisplayPort

DisplayPort offers high-performance digital connectivity for almost any use at home or work. This is the standard of the future. How DisplayPort performs compared to other technologies Would you like to see it show?

HDMI Technology

Thanks to HDMI technology, it is possible to transfer digital data without compression. For this reason, while the data transfer rate is increased, the image and sound quality are also preserved.

House	Work	Game

You finally have space to work without all those extra cables, cords, and bulky monitors.

Office
DisplayPort makes ultra-thin monitors and displays a reality thanks to its exclusive direct drive feature, allowing monitors to take up less desk space while delivering the visual performance you need. Forget about fighting with your monitor to twist the thumbscrews on large, invisible connectors. Monitor setup is now very easy with DisplayPort. Just plug and play with the new ultra-small DisplayPort connector and ultra-thin DisplayPort cables that deliver high-resolution digital display, digital audio, and two-way communication. With DisplayPort-enabled products, your home office has never looked cleaner and more organized.

Video Editing
DisplayPort delivers up to 10.8 Gbps of bandwidth over standard cables, delivering billions of colors, enabling the fastest refresh rates and highest color depths. Because DisplayPort allows your monitor to deliver the deepest color depths at the highest resolutions and update rates, editing and creating content at high resolution and beyond becomes possible. DisplayPort is designed to easily handle advanced 3-D and Blu-Ray signals. With DisplayPort, you get the high performance you need to edit in HD and see what you're working on as it was truly meant to be seen.

Digital Photography
Only DisplayPort offers both high resolution and high color depth, making it ideal for the digital darkroom. Now your monitor can be enabled to closely match your printer or even a professional off-site printer, allowing professional creative image control from standard products.

We need the high resolution and accurate color reproduction that we can only get from DisplayPort.

IT
DisplayPort can operate up to 15 meters (49.21 feet) without the need for signal boosters. Making DisplayPort the perfect choice for conference room projectors, digital displays and remote PC applications. Simple adapters allow you to connect displays that use older connection standards such as DVI, HDMI and VGA. Therefore, switching to high performance with DisplayPort will not strain your budget. Remember the problems you faced when a projector never worked properly with your laptop? Never worry again. DisplayPort provides a true plug-and-play digital projector experience with your laptop. Projectors are laptop friendly again.

Medical Imaging
Medical imaging is one area where DisplayPort is unrivaled when it comes to image resolution and accuracy. With lower EMI (Electromagnetic Interference) and RFI (Radio Frequency Interference) rates than other digital display interface technologies, DisplayPort is ideal for sensitive environments. And it delivers each pixel directly to the screen without compression, ensuring the highest fidelity and most accurate image reproduction. With native fiber optic support, DisplayPort can be operated from 100s of meters to remote monitors or other imaging equipment. Cables can extend up to 15 meters (49.21 feet) without requiring significant signal degradation or signal boosters.

It's as if we were in the game, it's so realistic.

Game
DisplayPort is the best choice for high-performance PC gaming. Designed to support 3D stereo streaming, DisplayPort is the ideal gaming interface for today and the future. DisplayPort natively supports high resolutions and refresh rates for the best gaming monitors in the industry. Get in the game with DisplayPort when fast response and high performance are important to your gaming experience.

Home Cinema
Setting up your home theater system with DisplayPort is as easy as plug and play. With native fiber optic cable support, DisplayPort can be used from room to room to provide high-performance display, audio, and bi-directional control over ultra-thin fiber optic cables; wall-operated boxes at both ends. DisplayPort is Blu-ray Disc ready with built-in HDCP support. With its unique direct drive capability, DisplayPort simplifies the design of ultra-sleek HDTVs, enabling ultra-thin, high-resolution display panels with discrete electronics that can be hidden from view.

Technology
HDMI is fully backwards compatible with PCs, displays, and consumer electronics devices that include the Digital Visual Interface (DVI) standard. Both HDMI and DVI were pioneered by Silicon Image and are based on TMDS®, Silicon Image's powerful, high-speed serial link technology. HDMI supports standard, enhanced or high-definition video as well as multi-channel digital audio over a single cable. It transmits all ATSC HDTV standards and supports 8-channel digital audio, and with 5 Gbps bandwidth, HDMI can accommodate future enhancements and requirements. Because HDMI is designed specifically for consumer electronics applications, it offers a number of additional consumer enhancements. Because digital content can present itself in a variety of sizes, resolutions and formats, HDMI-enabled systems will automatically configure to display content in the most effective format. Additionally, HDMI enables single remote point and click, allowing manufacturers to offer home theater systems that are automatically configured with a single command from the remote; View DVDs, listen to CDs, or watch cable or satellite TV.

HDMI Ethernet Channel
HDMI Ethernet Channel technology combines video, audio and data streams into a single HDMI cable, combining the unparalleled signal quality and convenience of an HDMI connection with the power and flexibility of a home entertainment network. Provides high-speed, bi-directional network connectivity up to 100 Mbps by adding a dedicated data channel to the HDMI connection
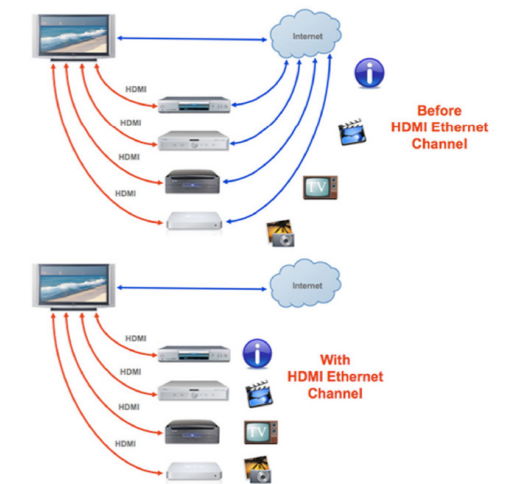
HDMI STANDARD
Standard HDMI Cable
Standard HDMI cable is designed to support most home applications and has been tested to reliably transmit 1080i or 720p video (HD resolutions typically associated with cable and satellite television, digital broadcast HD, and upscaling DVD players).

HDMI STANDARD with ETHERNET
Standard HDMI Cable with Ethernet
This type of cable offers the same basic performance (720p or 1080i video resolution) as the Standard HDMI Cable shown above, plus an additional, dedicated data channel for the device network, known as the HDMI Ethernet Channel. The HDMI Ethernet Channel function is only available if both connected devices are HDMI Ethernet Channel enabled.

HDMI STANDARD AUTOMOTIVE
Automotive HDMI Cable
Designed for internal wiring of vehicles equipped with on-board HD video systems. Tested to a more robust performance standard and capable of withstanding the unique stresses of the driving environment, such as vibration and extreme temperatures.

HDMI HIGH SPEED
High Speed HDMI Cable
The High Speed HDMI cable is designed and tested to handle video resolutions of 1080p and above, including advanced imaging technologies such as 4K, 3D and Deep Color. This is the recommended cable if you're using any of these technologies or connecting your 1080p display to a 1080p content source, such as a Blu-ray Disc player.

HDMI HIGH SPEED with ETHERNET
High Speed HDMI Cable with Ethernet
This type of cable offers the same basic performance (1080p video resolution and beyond) as the High Speed HDMI Cable shown above, plus an additional, dedicated data channel for the device network, known as the HDMI Ethernet Channel. The HDMI Ethernet Channel function is only available if both connected devices are HDMI Ethernet Channel enabled.

AUDIO AND VIDEO

HDMI™ Connector To HDMI™ Connector | High Speed HDMI Cable with Ethernet

AUDIO AND VIDEO

HDMI V1.4 Active Optical Cable

HDMI
HIGH SPEED
with ETHERNET

Overview

- HDMI cable, HDMI type A plug-HDMI type A plug
- Cable: Triple shielded oxygen-free copper cable
- Conductor: 99.99% oxygen-free copper
- Outer sheath: PVC
- Connector: 24K gold plated
- Insulator: Aluminum foil shielding and foam polyethylene dielectric insulator
- Supports 3D Technology: Defines input/output
- Protocols for major 3D video formats.
- 1920x1080 Full HD support

A) CONDUCTOR: 7 Strands/0.127mm (96246 & 96247: 7 Strands/0.16 mm)
INSULATOR: FPE + SKIN 28AWG Bare Copper Wire Stranded
DRAIN WIRE: 7 Strands/0.127mm (96246 & 96247: 7 Strands/0.16 mm) 28AWG Bare Copper Wire Stranded
SHIELDING: Aluminium Foil + Mylar (96246 & 96247: Foil-free Edge Aluminium Mylar)
B) CONDUCTOR: 7 Strands/0.127mm (96246 & 96247: 7 Strands/0.16 mm)
INSULATOR: HD - PE 28AWG Bare Copper Wire Stranded
C) DRAIN WIRE: 7 Strands /0.127mm (96246 & 96247: 7 Strands/0.16 mm)
28AWG Bare Copper Wire Stranded

D) CONDUCTOR: 7 Strands /0.127mm (96246 & 96247: 7 Strands/0.
28AWG Bare Copper Wire Stranded
INSULATOR: HD - PE
E) SHIELDING: Aluminum Mylar Spirally Wrapped
SHIELDING: Ø0.12mm/ 16x5 AL (96246 & 96247: Braid Shield
F) JACKET: 7. 3mm PVC Black (96246 & 96247: 8mm PVC Black)

Product Code	Product Description	Product Code	Product Description
96515	High Speed HDMI Cable with Ethernet 1m	96248	High Speed HDMI Cable with Ethernet 20m
96516	High Speed HDMI Cable with Ethernet 2m	96345	High Speed HDMI Cable with Ethernet 25m
96502	High Speed HDMI Cable with Ethernet 3m	96354	High Speed HDMI Cable with Ethernet 30m
96245	High Speed HDMI Cable with Ethernet 5m	96358	High Speed HDMI Cable with Ethernet 35m
96246	High Speed HDMI Cable with Ethernet 10m	96355	High Speed HDMI Cable with Ethernet 40m
96247	High Speed HDMI Cable with Ethernet 15m	96356	High Speed FHDMI Cable with Ethernet 50m

Features

- Maximum Length up to 100 m. (Custom Length Available)
- Providing computer storage up to 1080P and 4K
- Low Power Consumption: 250mW (Max.)
- Compatible with HDMI version 1.4
- Plug and play
- HDCP Support
- Hybrid optical cable with fiber and copper wire
- No External Power Required

Scope of Application

- In digital signal
- LED signs on streets and stadiums
- In Medical Imaging Equipment
- In In-Flight Video System
- in home theaters
- On TV Broadcasting Stations
- In Conference Room Video Equipment
- In the security system

Optical Performance		
Type	Description	
Units	Source	Sink
HDCP&DDC	HDCP 1.4 Fully Support bi-directional EDID and HDCP communication	
Standard	Compl iant with HDMI 1.4 version	
Video Bandwidth	3.4Gbps*3Channel (max)+ Clock(340MHz)	
Supported Resolution & Distance	PC: WUXGA 1920 x 1200 up to 100 meters, HDTV : 480p, 720p, 1080i and 1080p deep color, 4k, 3DFul l HD 1920 x 1080 up to 100 meters	
O/E Converter	4 channel 850 nm VCSEL array	4 CH GaAs PD array
Connector Type	HDMI Type A Female	
Cable Type	Hybrid type with OM2 fiber and copper wi re	
Cable Length	15m~330m (with 0~+30cm tolerance) Custom length avai lable	
Cable Outer Diameter	4.2mm	
Jacket Outer Material	PVC/TPU(Custom)	
Differential Input	100 ohm (typ.)	
Power Consumption	250mW (Max.)	
Power Supply	Non external power required	
Operating Temperature	0°C to 50°C (32°F to 122°F)	

Product Code	Product Description
FO-HDMI-AOC-030	HDMI V1.4 Active Optical Cable L: 100
FO-FHDMI4-100	HDMI V1.4 Active Optical Cable L: 200

AUDIO AND VIDEO

HDMI™ Connector To HDMI™ Connector | High Speed HDMI™ 2.0

SCOPE OF APPLICATION
- HDTVs, Monitors, Game Consoles, DVD Players, DVRs, Projectors, etc. Connects high-definition A/V devices such as

Features
- 2x HDMI® Male Connector
- Nickel-plated HDMI connector
- High quality construction
- Supports resolutions up to 4k x 2k

4K ULTRA HD

Overview

- IPORT High Speed HDMI digital video and audio cables are manufactured and engineered from high-quality materials and are expertly engineered to deliver high-quality, high-definition performance. The HDMI standard combines high bandwidth video and multi-channel digital audio in a single cable, providing crystal clear image resolution.
- FO-HDMI-XXM High Speed HDMI® cable (2m/3m/5m/7m/10m/20m/25m/40m) features 2 nickel-plated HDMI (male) connectors and durable high-quality construction for Blu-Ray Disc™ players, Provides a reliable HDMI-HDMI connection between devices such as HDTVs, DVD players, stereo receivers, projectors and more.
- This high-quality HDMI cable fully supports 1080p+ resolution up to 120Hz refresh rate and comes with true colors. To meet the demands of future high-definition devices, such as increasing resolutions and higher frame rates, our HDMI cables can support 340 MHz (10.2 Gbps) bandwidth and 1440p resolution.
- The HDMI cable is backed by IPORT's Lifetime Warranty.

Advantages
- Nickel-plated connections prevent corrosion to ensure a high-quality HDMI® connection.
- Shaped HDMI connectors provide a durable connection with strain reliefs, ensuring long-lasting, error-free HDMI-HDMI audio and video performance without damaging the connectors

Technicial Specifications

Warranty Information
Warranty: Lifetime

Hardware
Cable Jacket Type	: PVC - (Polyvinyl Chloride) / LSZH (Low Smoke Zero Halogen)
Cable Shield Type	: Braided Aluminum-Mylar Foil
Connector Plating	: Nickel

Connector(s)
Connector A	: 1 - HDMI (19 pin) Male
Connector B	: 1 - HDMI (19 pin) Male

Physical Properties
Cable Length: 2 m / 3m / 5m / 7m / 10m /15m /20m / 25m / 30m /40m
Color: Black
Connector Type: Straight
Product Length: 2m / 3m / 5m / 7m / 10m /15m/20m/25m/30m/40m
Product Weight: 0.1 kg
Data Rate: 10.2 Gbps
Bandwidth: 10.2GHz
Resolution: 4K
Color Depth: 36/48 Bit
Color Support: 16.7 Million
Audio sampling frequency: 192Khz

Product Code	Product Description	Product Code	Product Description
FO-HDMI-002	High Speed HDMI Cable v1.3 2m	FO-HDMI-015	High Speed HDMI Cable v1.3 15 m
FO-HDMI-003	High Speed HDMI Cable v1.3 3m	FO-HDMI-020	High Speed HDMI Cable v1.3 20m
FO-HDMI-005	High Speed HDMI Cable v1.3 5m	FO-HDMI-025	High Speed HDMI Cable v1.3 25m
FO-HDMI-007	High Speed HDMI Cable v1.3 7m	FO-HDMI-030	High Speed HDMI Cable v1.3 30m
FO-HDMI-010	High Speed HDMI Cable v1.3 10m	FO-HDMI-040	High Speed HDMI Cable v1.3 40m

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AUDIO AND VIDEO

High Speed HDMI™ 2.0 | HDMI™ Connector To HDMI™ Connector

SCOPE OF APPLICATION
- Blu-Ray Disc™ players, HDTVs, DVD Players, DVRs, game consoles, projectors, etc. Connecting high-definition A/V devices such as

Features
- 2x HDMI® Male Connector
- Gold-plated HDMI connector
- High quality construction
- Supports resolutions up to 4k x 2k

4K ULTRA HD

Overview

- The IPORT High Speed HDMI cable comes with ethernet capability.
- Provides connection between HDMI Connector and HDMI Connector.
- Conductor: 99.99% oxygen-free copper
- Cable: Double shielded oxygen-free copper cable
- Outer Case: PVC
- Connector: 24K Gold Plated Connector
- Insulator: Aluminum foil shield and foam PE insulator
- HDMI Ethernet Channel (HEC): HDMI Ethernet Channel provides the ability to share an internet connection via HDMI cable to HDMI Ethernet Channel output and HDMI devices capable of internet connection, it does not require a separate ethernet connection.
- Audio Return Channel (ARC): Audio Return Channel provides the opportunity to transmit audio data of televisions with Audio Return Channel output upwards to the AV Receiver via HDMI Cable, no extra cable is required.
- 3D: 3D describes the input/output protocols that allow 3D displays and source devices to communicate over an HDMI connection.
- 4K Support: 4K Support defines a resolution of 4000 lines wide and 2000 lines high.

Advantages
- Nickel-plated connections prevent corrosion to ensure a high-quality HDMI® connection.
- Shaped HDMI connectors provide a durable connection with strain reliefs, ensuring long-lasting, error-free HDMI-HDMI audio and video performance without damaging the connectors

Technicial Specifications

Warranty Information
Warranty	: Lifetime

Hardware
Cable Jacket Type	: PVC - (Polyvinyl Chloride) / LSZH (Low Smoke Zero Halogen)
Cable Shield Type	: Braided Aluminum-Mylar Foil
Connector Plating	: Gold

Connector(s)
Connector A	: 1 - HDMI (19 pin) Male
Connector B	: 1 - HDMI (19 pin) Male

Physical Properties
Cable Length: 2 m / 3m / 5m / 7m / 10m /15m /20m / 25m / 30m /40m
Color: Black
Connector Type: Straight
Product Length: 2m / 3m / 5m / 7m / 10m /15m/20m/25m/30m/40m
Product Weight: 0.1 kg
Data Rate: 10.2 Gbps
Bandwidth: 10.2GHz
Resolution: 4K
Color Depth: 36/48 Bit
Color Support: 16.7 Million
Audio sampling frequency: 192Khz

Product Code	Product Description	Product Code	Product Description
FO-HDMI4-002	High Speed HDMI Cable v1.4 2m	FO-HDMI4-015	High Speed HDMI Cable v1.4 15m
FO-HDMI4-003	High Speed HDMI Cable v1.4 3m	FO-HDMI4-020	High Speed HDMI Cable v1.4 20m
FO-HDMI4-005	High Speed HDMI Cable v1.4 5m	FO-HDMI4-025	High Speed HDMI Cable v1.4 25m
FO-HDMI4-007	High Speed HDMI Cable v1.4 7m	FO-HDMI4-030	High Speed HDMI Cable v1.4 30m
FO-HDMI4-010	High Speed HDMI Cable v1.4 10m	FO-HDMI4-040	High Speed HDMI Cable v1.4 40m

AUDIO AND VIDEO

90° HDMI™ Connector To HDMI™ Connector | High Speed HDMI™ 2.0

AUDIO AND VIDEO

High Speed HDMI™ 2.0 | 90° HDMI™ Connector To HDMI™ Connector

Scope of Application
- HDTVs, Monitors, Game Consoles, DVD Players, DVRs, Projectors, etc. Connects high-definition A/V devices such as.

Features
- 2x HDMI® Male Connector
- Nickel-plated HDMI connector
- High quality construction
- Supports resolutions up to 4k x 2k

4K ULTRA HD

Scope of Application
- HDTVs, Monitors, Game Consoles, DVD Players, DVRs, Projectors, etc. Connects high-definition A/V devices such as

Features
- 2x HDMI® Male Connector
- Gold-plated HDMI connector
- High quality construction
- Supports resolutions up to 4k x 2k

4K ULTRA HD

Overview

- IPORT High Speed HDMI digital video and audio cables are manufactured and engineered from high-quality materials and are expertly engineered to deliver high-quality, high-definition performance. The HDMI standard combines high bandwidth video and multi-channel digital audio in a single cable, providing crystal clear image resolution.
- FO-HDMI-XXM High Speed HDMI® cable (2m/3m/5m/7m/10m/20m/25m/40m) features 2 nickel-plated HDMI (male) connectors and durable high-quality construction for Blu-Ray Disc™ players, Provides a reliable HDMI-HDMI connection between devices such as HDTVs, DVD players, stereo receivers, projectors and more.
- This high-quality HDMI cable fully supports 1080p+ resolution up to 120Hz refresh rate and comes with true colors. To meet the demands of future high-definition devices, such as increasing resolutions and higher frame rates, our HDMI cables can support 340 MHz (10.2 Gbps) bandwidth and 1440p resolution.
- The HDMI cable is backed by IPORT's Lifetime Warranty.

Technicial Specifications

Warranty Information
Warranty: Lifetime

Hardware
Cable Jacket Type : PVC - (Polyvinyl Chloride) / LSZH (Low Smoke Zero Halogen)
Cable Shield Type : Braided Aluminum-Mylar Foil
Connector Plating : Nickel

Connector(s)
Connector A : 1 - HDMI (19 pin) Male
Connector B : 1 - HDMI (19 pin) Male

Physical Properties
Cable Length: 2 m / 3m / 5m / 7m / 10m /15m /20m / 25m / 30m /40m
Color: Black
Connector Type: Straight
Product Length: 2m / 3m / 5m / 7m / 10m /15m/20m/25m/30m/40m
Product Weight: 0.1 kg
Data Rate: 10.2 Gbps
Bandwidth: 10.2GHz
Resolution: 4K
Color Depth: 36/48 Bit
Color Support: 16.7 Million
Audio sampling frequency: 192Khz

Advantages
- Nickel-plated connections prevent corrosion to ensure a high-quality HDMI® connection.
- Shaped HDMI connectors provide a durable connection with strain reliefs, ensuring long-lasting, error-free HDMI-HDMI audio and video performance without damaging the connectors.

Product Code	Product Description	Product Code	Product Description
FO-HDMI-AR002	High Speed HDMI Cable v1.3 2m	FO-HDMI-AR015	High Speed HDMI Cable v1.3 15 m
FO-HDMI-AR003	High Speed HDMI Cable v1.3 3m	FO-HDMI-AR020	High Speed HDMI Cable v1.3 20m
FO-HDMI-AR005	High Speed HDMI Cable v1.3 5m	FO-HDMI-AR025	High Speed HDMI Cable v1.3 25m
FO-HDMI-AR007	High Speed HDMI Cable v1.3 7m	FO-HDMI-AR030	High Speed HDMI Cable v1.3 30m
FO-HDMI-AR010	High Speed HDMI Cable v1.3 10m	FO-HDMI-AR040	High Speed HDMI Cable v1.3 40m

Overview

- IPORT High Speed HDMI digital video and audio cables are manufactured and engineered from high-quality materials and are expertly engineered to deliver high-quality, high-definition performance. The HDMI standard combines high bandwidth video and multi-channel digital audio in a single cable, providing crystal clear image resolution.
- FO-HDMI-XXM High Speed HDMI® cable (2m/3m/5m/7m/10m/20m/25m/40m) features 2 nickel-plated HDMI (male) connectors and durable high-quality construction for Blu-Ray Disc™ players, Provides a reliable HDMI-HDMI connection between devices such as HDTVs, DVD players, stereo receivers, projectors and more.
- This high-quality HDMI cable fully supports 1080p+ resolution up to 120Hz refresh rate and comes with true colors. To meet the demands of future high-definition devices, such as increasing resolutions and higher frame rates, our HDMI cables can support 340 MHz (10.2 Gbps) bandwidth and 1440p resolution.
- The HDMI cable is backed by IPORT's Lifetime Warranty.

Technicial Specifications

Warranty Information
Warranty: Lifetime

Hardware
Cable Jacket Type : PVC - (Polyvinyl Chloride) / LSZH (Low Smoke Zero Halogen)
Cable Shield Type : Braided Aluminum-Mylar Foil
Connector Plating : Nickel

Connector(s)
Connector A : 1 - HDMI (19 pin) Male
Connector B : 1 - HDMI (19 pin)

Physical Properties
Cable Length: 2 m / 3m / 5m / 7m / 10m /15m /20m / 25m / 30m /40m
Color: Black
Connector Type: Straight
Product Length: 2m / 3m / 5m / 7m / 10m /15m/20m/25m/30m/40m
Product Weight: 0.1 kg
Data Rate: 10.2 Gbps
Bandwidth: 10.2GHz
Resolution: 4K
Color Depth: 36/48 Bit
Color Support: 16.7 Million
Audio sampling frequency: 192Khz

Advantages
- Nickel-plated connections prevent corrosion to ensure a high-quality HDMI® connection.
- Shaped HDMI connectors provide a durable connection with strain reliefs, ensuring long-lasting, error-free HDMI-HDMI audio and video performance without damaging the connectors

Product Code	Product Description	Product Code	Product Description
FO-HDMI4-A002	High Speed HDMI Cable v1.4 2m	FO-HDMI4-A015	High Speed HDMI Cable v1.4 15m
FO-HDMI4-A003	High Speed HDMI Cable v1.4 3m	FO-HDMI4-A020	High Speed HDMI Cable v1.4 20m
FO-HDMI4-A005	High Speed HDMI Cable v1.4 5m	FO-HDMI4-A025	High Speed HDMI Cable v1.4 25m
FO-HDMI4-A007	High Speed HDMI Cable v1.4 7m	FO-HDMI4-A030	High Speed HDMI Cable v1.4 30m
FO-HDMI4-A010	High Speed HDMI Cable v1.4 10m	FO-HDMI4-A040	High Speed HDMI Cable v1.4 40m

AUDIO AND VIDEO

Fiber USB-A 3.0 To Type-C

NEW PRODUCT

SCOPE OF APPLICATION
- Data transfer
- Charge
- Video Signal Transmission

4K ULTRA HD

Technicial Specifications

Cable Length: 2 m / 3m / 5m / 7m / 10m /15m /20m / 25m / 30m / 40m
Color: Black
Connector Type: Straight
Product Length: 2m / 3m / 5m / 7m / 10m /15m/20m/25m/ 30m/40m
Product Weight: 0.1 kg
Data Rate: 10.2 Gbps
Bandwidth: 340 MHz
Resolution: 4K
Color Depth: 36/48 Bit
Color Support: 16.7 Million
Audio sampling frequency: 192Khz

Warranty Information

Warranty: Lifetime

Hardware

Cable Jacket Type	: PVC - (Polyvinyl Chloride) / LSZH (Low Smoke Zero Halogen)
Cable Shield Type	: Braided Aluminum-Mylar Foil
Connector Plating	: Nickel

Connector(s)

Connector A	: USB A 3.0
Connector B	: TYPE-C

Advantages

1. High speed data transfer: Provides fast data transfer thanks to USB 3.0 support.
2. Reverse connection: The USB-C port is reverse-oriented so the cable can be plugged in either direction.
3. Charging support: Can be used to charge devices.
4. Video signal transfer: Can be used to transfer video signals, ideal for connecting displays.
5. Durability: Since it is made of quality materials, it is durable and long-lasting.
6. Universal compatibility: Provides wide compatibility across different devices.

Product Code	Product Description
FO-FUSB-AC-XX	Fiber USB-A 3.0 To Type C

AUDIO AND VIDEO

HDMI Male To Female Extension Cable

NEW PRODUCT

SCOPE OF APPLICATION
- HDTVs, Monitors, Game Consoles, DVD Players, DVRs, Projectors, etc. Connects high-definition A/V devices such as.

Features
- 2x HDMI® Male Connector
- Nickel-plated HDMI storage
- High quality construction
- Sizes up to 4k x 2k

4K ULTRA HD

Technicial Specifications

Cable Length: 2 m / 3m / 5m / 7m / 10m /15m /20m / 25m / 30m / 40m
Color: Black
Connector Type: Straight
Product Length: 2m / 3m / 5m / 7m / 10m /15m/20m/25m/ 30m/40m
Product Weight: 0.1 kg
Data Rate: 10.2 Gbps
Bandwidth: 340 MHz
Resolution: 4k-2k-1k
Color Depth: 36/48 Bit
Color Support: 16.7 Million
Audio sampling frequency: 192Khz

Warranty Information

Warranty: Lifetime

Hardware

Cable Jacket Type	: PVC - (Polyvinyl Chloride) / LSZH (Low Smoke Zero Halogen)
Cable Shield Type	: Braided Aluminum-Mylar Foil
Connector Plating	: Nickel

Connector(s)

Connector A	: HDMI (Male)
Connector B	: HDMI (Female)

Advantages

- Nickel-plated connections prevent corrosion to ensure a high-quality HDMI® connection.
- Shaped HDMI connectors provide a durable connection with strain reliefs, ensuring long-term, error-free HDMI-HDMI audio and video performance without damaging the connectors.
- It helps transfer short-running HDMI cables without delays and interruptions.

Product Code	Product Description
FO-HDMI-XX-FM	HDMI Male to Female Extension Cable

AUDIO AND VIDEO

HDMI With Screw Connection

NEW PRODUCT

Features
- 2x HDMI® Male Connector
- Nickel-plated HDMI connector
- High quality construction
- Supports resolutions up to 4k x 2k

4K ULTRA HD

Technicial Specifications

Cable Length: 2 m / 3m / 5m / 7m / 10m /15m /20m / 25m / 30m / 40m
Color: Black
Connector Type: Straight
Product Length: 2m / 3m / 5m / 7m / 10m /15m/20m/25m/ 30m/40m
Product Weight: 0.1 kg
Data Rate: 10.2 Gbps
Bandwidth: 340 MHz
Resolution: 4k
Color Depth: 36/48 Bit
Color Support: 16.7 Million
Audio sampling frequency: 192Khz

Warranty Information

Warranty: Lifetime

Hardware

Cable Sheath Type: PVC - (Polyvinyl Chloride) /LSZH (Low Smoke Zero Halogen)
Cable Armor Type: Braided Aluminum-Mylar Foil
Connector Plating: Nickel

Connector(s)

Connector A   : HDMI (Male)
Connector A   : HDMI (Male)

Advantages

- Nickel-plated connections prevent corrosion to ensure a high-quality HDMI® connection.
- Shaped HDMI connectors provide a durable connection with strain reliefs, ensuring long-term, error-free HDMI to HDMI audio and video performance without damaging the connectors.
- Thanks to its durable screw connection, it is resistant to vibration and breaks.
- Provides the most stable transmission.

Product Code	Product Description
FO-HDMI-S-XX	HDMI With Screw Connection

AUDIO AND VIDEO

Micro HDMI to HDMI

NEW PRODUCT

4K ULTRA HD

Features
- HDMI to Micro HDMI cables support 3D Technology, Audio Return Channel, 4K Ultra HD Resolution and Ethernet Channel High Quality Cable.

Technicial Specifications

Cable Length: 2 m / 3m / 5m / 7m / 10m /15m /20m / 25m / 30m / 40m
Color: Black
Connector Type: Straight
Product Length: 2m / 3m / 5m / 7m / 10m /15m/20m/25m/ 30m/40m
Product Weight: 0.1 kg
Data Rate: 10.2 Gbps
Bandwidth: 340 MHz
Resolution: 4K
Color Depth: 36/48 Bit
Color Support: 16.7 Million
Audio sampling frequency: 192Khz

Warranty Information

Warranty: Lifetime

Hardware

Cable Jacket Type	: PVC - (Polyvinyl Chloride) / LSZH (Low Smoke Zero Halogen)
Cable Shield Type	: Braided Aluminum-Mylar Foil
Connector Plating	: Nickel

Connector(s)

Connector A	: Micro HDMI (D-TYPE)
Connector B	: HDMI (Male)

Advantages

1. High Speed Micro HDMI cables connect a tablet, digital camera or camcorder to an Ultra HD TV (UHD TV), projector or monitor with HDMI input.
2. Compatible with Micro HDMI devices only
3. It simultaneously delivers high-definition video and lossless multi-channel digital audio.
4. 24K Gold-plated connectors resist corrosion, ensure durability and improve signal transmission.

Product Code	Product Description
FO-HDMI-MC-DD-1,5	Micro HDMI to HDMI

AUDIO AND VIDEO
USB NETWORK CABLES

AUDIO AND VIDEO
USB NETWORK CABLES

High And Full Speed USB 2.0 Network Cables

High And Full Speed USB 3.0 Network Cables

High And Full Speed USB 2.0 Network Cables

High And Full Speed USB 3.0 Network Cables

Overview

- Connector: Optionally available in many color options with gold/nickel/copper plating.
- Supports plug-and-play connections for devices such as external hard drives, modems.
- Printers, scanners, VoIP devices and other USB peripherals.
- Supports USB 480Mbps speed for fully rated USB 2.0.
- Supports plug-and-play connections for devices such as external hard drives, modems, printers, scanners.
- VoIP devices and other USB peripherals.

Overview

- Connector: Optionally available in many color options with gold/nickel/copper plating.
- Supports plug-and-play connections for devices such as external hard drives, modems.
- Printers, scanners, VoIP devices and other USB peripherals.
- Supports USB 4.8 Gbps speed for fully evaluated USB 3.0.
- Supports plug-and-play connections for devices such as external hard drives, modems, printers, scanners.
- VoIP devices and other USB peripherals.

Overview

- Connector: Optionally available in many color options with gold/nickel/copper plating.
- Supports plug-and-play connections for devices such as external hard drives, modems.
- Printers, scanners, VoIP devices and other USB peripherals.
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Overview

- Connector: Optionally available in many color options with gold/nickel/copper plating.
- Supports plug-and-play connections for devices such as external hard drives, modems.
- Printers, scanners, VoIP devices and other USB peripherals.
- Supports USB 4.8 Gbps speed for fully evaluated USB 3.0.
- Supports plug-and-play connections for devices such as external hard drives, modems, printers, scanners.
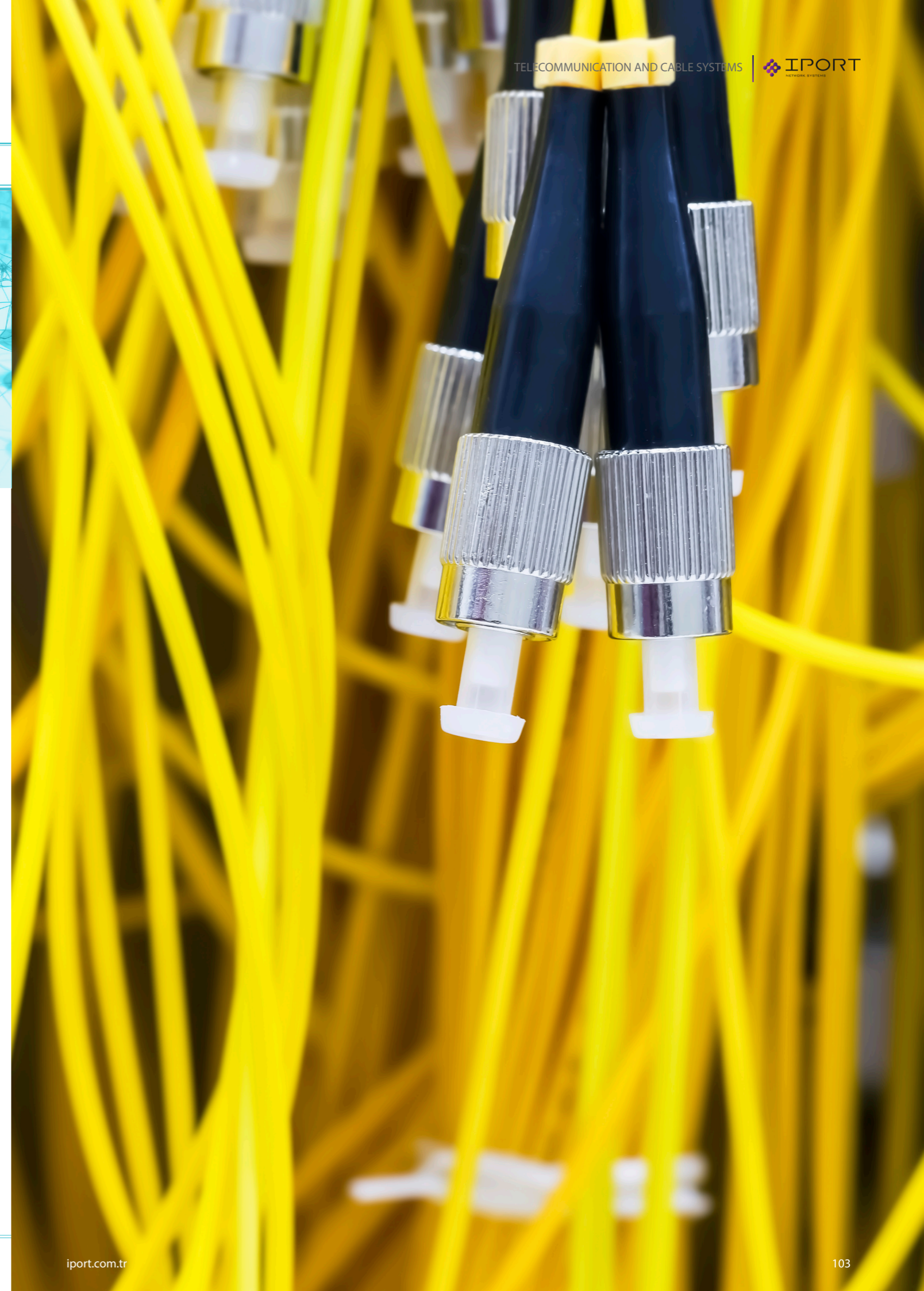- VoIP devices and other USB peripherals.

Features

- Conductor Material: Gold Plated
- Type: USB 2.0 LAN Cable
- Certification: USB Compatibility
- Jacket: PVC / LSZH
- Feature: Up to 480Mbps
- Feature2: Mbps Speed for USB 2.0

Features

- Conductor Material: Gold Plated
- Type: USB 3.0 LAN Cable
- Certification: USB Compatibility
- Jacket: PVC / LSZH
- Feature: Up to 4.8Gbps
- Feature2: Gbps Speed for USB 3.0

Features

- Conductor Material: Gold Plated
- Type: USB 2.0 LAN Cable
- Certification: USB Compatibility
- Jacket: PVC / LSZH
- Feature: Up to 480Mbps
- Feature2: Mbps Speed for USB 2.0

Features

- Conductor Material: Gold Plated
- Type: USB 3.0 LAN Cable
- Certification: USB Compatibility
- Jacket: PVC / LSZH
- Feature: Up to 4.8Gbps
- Feature2: Gbps Speed for USB 3.0

Product Code	Product Description	Product Code	Product Description
FO-USB-002	Yüksek Ve Tam Hızlı USB 2.0 Ağ Kablosu 2m	FO-USB3-002	Yüksek Ve Tam Hızlı USB 3.0 Ağ Kablosu 2m
FO-USB-003	Yüksek Ve Tam Hızlı USB 2.0 Ağ Kablosu 3m	FO-USB3-003	Yüksek Ve Tam Hızlı USB 3.0 Ağ Kablosu 3m
FO-USB-005	Yüksek Ve Tam Hızlı USB 2.0 Ağ Kablosu 5m	FO-USB3-005	Yüksek Ve Tam Hızlı USB 3.0 Ağ Kablosu 5m
FO-USB-007	Yüksek Ve Tam Hızlı USB 2.0 Ağ Kablosu 7m	FO-USB3-007	Yüksek Ve Tam Hızlı USB 3.0 Ağ Kablosu 7m
FO-USB-010	Yüksek Ve Tam Hızlı USB 2.0 Ağ Kablosu 10m	FO-USB3-010	Yüksek Ve Tam Hızlı USB 3.0 Ağ Kablosu 10m

Product Code	Product Description	Product Code	Product Description
FO-USB-R002	Yüksek Ve Tam Hızlı USB 2.0 Ağ Kablosu 2m	FO-USB3-R002	Yüksek Ve Tam Hızlı USB 3.0 Ağ Kablosu 2m
FO-USB-R003	Yüksek Ve Tam Hızlı USB 2.0 Ağ Kablosu 3m	FO-USB3-R003	Yüksek Ve Tam Hızlı USB 3.0 Ağ Kablosu 3m
FO-USB-R005	Yüksek Ve Tam Hızlı USB 2.0 Ağ Kablosu 5m	FO-USB3-R005	Yüksek Ve Tam Hızlı USB 3.0 Ağ Kablosu 5m
FO-USB-R007	Yüksek Ve Tam Hızlı USB 2.0 Ağ Kablosu 7m	FO-USB3-R007	Yüksek Ve Tam Hızlı USB 3.0 Ağ Kablosu 7m
FO-USB-R010	Yüksek Ve Tam Hızlı USB 2.0 Ağ Kablosu 10m	FO-USB3-R010	Yüksek Ve Tam Hızlı USB 3.0 Ağ Kablosu 10m

AUDIO AND VIDEO
USB NETWORK CABLES

AUDIO AND VIDEO
USB NETWORK CABLES

High And Full Speed USB 2.0 Network Cables

High And Full Speed USB 3.0 Network Cables

High And Full Speed USB 2.0 Network Cables

High And Full Speed USB 3.0 Network Cables

Overview

- Connector: Optionally available in many color options with gold/nickel/copper plating.
- Supports plug-and-play connections for devices such as external hard drives, modems.
- Printers, scanners, VoIP devices and other USB peripherals.
- Supports USB 480Mbps speed for fully rated USB 2.0.
- Supports plug-and-play connections for devices such as external hard drives, modems, printers, scanners.
- VoIP devices and other USB peripherals.

Overview

- Connector: Optionally available in many color options with gold/nickel/copper plating.
- Supports plug-and-play connections for devices such as external hard drives, modems.
- Printers, scanners, VoIP devices and other USB peripherals.
- Supports USB 4.8 Gbps speed for fully evaluated USB 3.0.
- Supports plug-and-play connections for devices such as external hard drives, modems, printers, scanners.
- VoIP devices and other USB peripherals.

Overview

- Connector: Optionally available in many color options with gold/nickel/copper plating.
- Supports plug-and-play connections for devices such as external hard drives, modems.
- Printers, scanners, VoIP devices and other USB peripherals.
- Supports USB 480Mbps speed for fully rated USB 2.0.
- Supports plug-and-play connections for devices such as external hard drives, modems, printers, scanners.
- VoIP devices and other USB peripherals.

Overview

- Connector: Optionally available in many color options with gold/nickel/copper plating.
- Supports plug-and-play connections for devices such as external hard drives, modems.
- Printers, scanners, VoIP devices and other USB peripherals.
- Supports USB 4.8 Gbps speed for fully evaluated USB 3.0.
- Supports plug-and-play connections for devices such as external hard drives, modems, printers, scanners.
- VoIP devices and other USB peripherals.

Features

- Conductor Material: Gold Plated
- Type: USB 2.0 LAN Cable
- Certification: USB Compatibility
- Jacket: PVC / LSZH
- Feature: Up to 480Mbps
- Feature2: Mbps Speed for USB 2.0

Features

- Conductor Material: Gold Plated
- Type: USB 3.0 LAN Cable
- Certification: USB Compatibility
- Jacket: PVC / LSZH
- Feature: Up to 4.8Gbps
- Feature2: Gbps Speed for USB 3.0

Features

- Conductor Material: Gold Plated
- Type: USB 2.0 LAN Cable
- Certification: USB Compatibility
- Jacket: PVC / LSZH
- Feature: Up to 480Mbps
- Feature2: Mbps Speed for USB 2.0

Features

- Conductor Material: Gold Plated
- Type: USB 3.0 LAN Cable
- Certification: USB Compatibility
- Jacket: PVC / LSZH
- Feature: Up to 4.8Gbps
- Feature2: Gbps Speed for USB 3.0

Product Code	Product Description
FO-USB-A002	High And Full Speed USB 2.0 Network Cable2m
FO-USB-A003	High And Full Speed USB 2.0 Network Cable 3m
FO-USB-A005	High And Full Speed USB 2.0 Network Cable 5m
FO-USB-A007	High And Full Speed USB 2.0 Network Cable 7m
FO-USB-A010	High And Full Speed USB 2.0 Network Cable 10m

Product Code	Product Description
FO-USB3-A002	High And Full Speed USB 3.0 Network Cable 2m
FO-USB3-A003	High And Full Speed USB 3.0 Network Cable 3m
FO-USB3-A005	High And Full Speed USB 3.0 Network Cable 5m
FO-USB3-A007	High And Full Speed USB 3.0 Network Cable 7m
FO-USB3-A010	High And Full Speed USB 3.0 Network Cable 10m

Product Code	Product Description
FO-USB-AR002	High And Full Speed USB 2.0 Network Cable 2m
FO-USB-AR003	High And Full Speed USB 2.0 Network Cable 3m
FO-USB-AR005	High And Full Speed USB 2.0 Network Cable 5m
FO-USB-AR007	High And Full Speed USB 2.0 Network Cable7m
FO-USB-AR010	High And Full Speed USB 2.0 Network Cable10m

Product Code	Product Description
FO-USB3-AR002	High And Full Speed USB 3.0 Network Cable 2m
FO-USB3-AR003	High And Full Speed USB 3.0 Network Cable 3m
FO-USB3-AR005	High And Full Speed USB 3.0 Network Cable 5m
FO-USB3-AR007	High And Full Speed USB 3.0 Network Cable 7m
FO-USB3-AR010	High And Full Speed USB 3.0 Network Cable 10m

AUDIO AND VIDEO
USB NETWORK CABLES

High And Full Speed USB 3.0 Network Cables (TypeB)
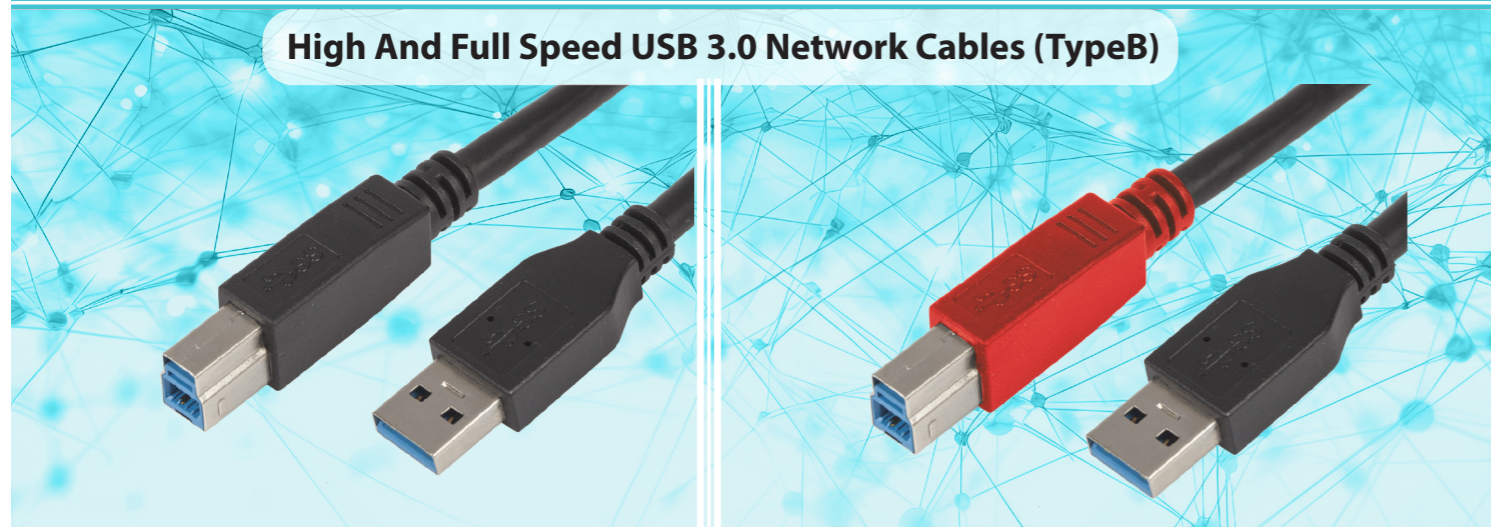
Overview

- USB 3.0 SuperSpeed cables provide transfer speeds of up to 5 Gbit/s with high quality and enhanced shielding. USB 3.0 connectors are partially compatible with USB 2.0 device plugs for their respective physical form factors. The cables can be used with PCs that have a true type A interface. The new USB 3.0 Type B connectors are not downward compatible.
- Color: Black

Overview

- USB 3.0 SuperSpeed cables provide transfer speeds of up to 5 Gbit/s with high quality and enhanced shielding. USB 3.0 connectors are partially compatible with USB 2.0 device plugs for their respective physical form factors. The cables can be used with PCs that have a true type A interface. The new USB 3.0 Type B connectors are not downward compatible.
- Color: Black

Features

- Conductor Material: Gold Plated
- Type: USB 3.0 LAN Cable
- Certification: USB Compatibility
- Jacket: PVC / LSZH
- Feature: Up to 480Mbps
- Feature2: Mbps Speed for USB 3.0

Features

- Conductor Material: Gold Plated
- Type: USB 3.0 LAN Cable
- Certification: USB Compatibility
- Jacket: PVC / LSZH
- Feature: Up to 4.8Gbps
- Feature2: Gbps Speed for USB 3.0

Product Code	Product Description	Product Code	Product Description
FO-USB-AB1	High And Full Speed USB 2.0 Network Cable B Type 1m	FO-USB3-ARB1	High And Full Speed USB 2.0 Network Cable B Type 1m
FO-USB-AB2	High And Full Speed USB 2.0 Network Cable B Type 2m	FO-USB3-ARB2	High And Full Speed USB 2.0 Network Cable B Type 2m
FO-USB-AB3	High And Full Speed USB 2.0 Network Cable B Type 3m	FO-USB3-ARB3	High And Full Speed USB 2.0 Network Cable B Type 3m
FO-USB-AB5	High And Full Speed USB 2.0 Network Cable B Type 5m	FO-USB3-ARB5	High And Full Speed USB 2.0 Network Cable B Type 5m

AUDIO AND VIDEO

USB / USB - v2.0 | **ADAPTER**　　　　**ADAPTER** | **USB / USB - v3.0**　　　　**HDMI / HDMI - v1.4** | **ADAPTER**

AUDIO AND VIDEO

Face Plate | **HDMI & USB**

Materiel

- Housing: White ABS High Impact UL94V-0 Thermoplastic.
- Shell: Copper Alloy, Tin-Lead Plating on Copper.
- Plastic: PBT High Impact UL94V-0 Thermoplastic, Glass Filled 130℃.
- Contact: Copper Alloy 3U" Gold Plated RoHS Compliant.

Materiel

- Housing: White ABS High Impact UL94V-0 Thermoplastic.
- Shell: Copper Alloy, Tin-Lead Plating on Copper.
- Plastic: PBT High Impact UL94V-0 Thermoplastic, Glass Filled 130℃.
- Contact: Copper Alloy 3U" Gold Plated RoHS Compliant.

Materiel

- Connector Housing: ABS High Impact UL94V-0 Thermoplastic
- Contact: 3U" Gold Plated.
- White color
- RoHS Compliant

Materiel

- Housing: White ABS High Impact
- UL94V-0 Thermoplastic

Physical Properties

- Durability: EIA 364-09,1500 Cycles.
- Temperature: -55℃-+85℃.
- Humidity: 10%-90% relative humidity.

Physical Properties

- Durability: EIA 364-09,1500 Cycles.
- Temperature: -55℃-+85℃.
- Humidity: 10%-90% relative humidity.

Physical Properties

- Durability Mating Cycle: 1000 Cycles Min.
- Insertion Force: 4.5Kgf Max.
- Pulling Force: 0.5Kgf-4Kgf.
- Operating Temperature: -55℃ to 85℃

Physical Properties

- Durability: EIA 364-09, 1500 Cycles.
- Size: 45X45 mm.

Electrical Properties

- Voltage: 30 VAC
- Current: 1.5 AM MIN PER CONTACT AT 30℃ T-INCREASE
- Insulation Resistance: 10 Mohm MINIMUM
- Permanent Voltage Dielectric: 300 V AC.
- Contact Resistance: 2 ohm MAX START.

Electrical Properties

- Voltage: 30 VAC
- Current: 1.5 AM MIN PER CONTACT AT 30℃ T-INCREASE
- Insulation Resistance: 10 Mohm MINIMUM
- Permanent Voltage Dielectric: 300 V AC.
- Contact Resistance: 2 ohm MAX START.

Electrical Properties

- Contact Current Value: 0.5A Min.
- Voltage Rating: 40V AC(RMS)
- Insulation Resistance: 100M ohm Min.
- Contact Resistance: 2 Ohm Max.
- Permanent Voltage Dielectric: 300 V. AC.

2 PORT HDMI&USB 2.0 Frame

2 PORT HDMI&USB 2.0 Frame

Product Code	Product Description
FO-AD-USB2	22,5 X 45 USB 2.0 Adapter

Product Code	Product Description
FO-AD-USB3	22,5 X 45 USB 3.0 Adapter
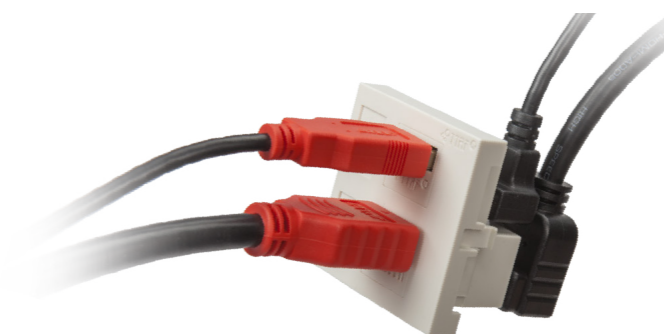
Product Code	Product Description
FO-AD-HDMI	22,5 X 45 HDMI Adapter

Product Code	Product Description
FO-FW04-2E-WH	45x45 2 Port HDMI&USB Face Plate (Unloaded)
FO-FW04-2L-WH2	45x45 2 Port HDMI&USB 2.0 Face Plate (Full Loaded)
FO-FW04-2L-WH3	45x45 2 Port HDMI&USB 3.0 Face Plate (Full Loaded)

AUDIO AND VIDEO

HDMI™Extender

Overview

- Extends HDMI up to 100 meters for 1080p over a CAT5.
- It follows the IEEE-568B standard.
- Supports up to 1080p Full HD resolution.
- Supports Ethernet bandwidth: 100M.
- HDCP compatible.
- Extends via router connection or LAN connection, cable length requirements are as follows.
- Maximum 80 meters for CAT5 between two devices.
- Maximum 100 meters for CAT5e between two devices.
- Maximum 120 meters for CAT6 between two devices.
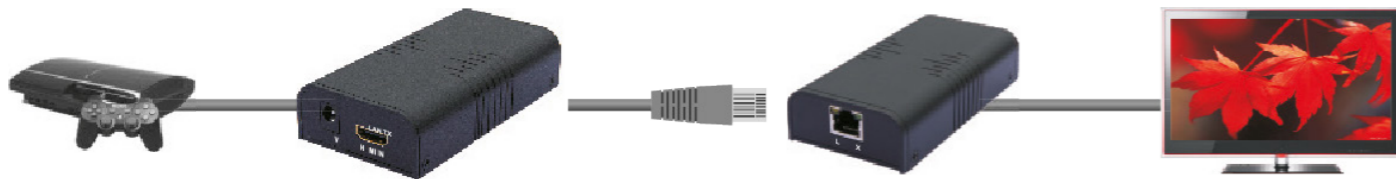
Product Code	Product Description
91132	HDMI™ Extender

FIBER OPTIC
HDMI
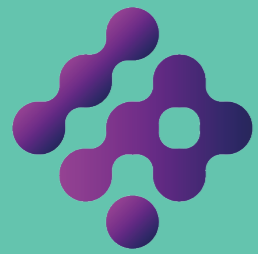
IPORT

NETWORK SYSTEMS

FIBER OPTIC CABLES

FIBER OPTIC CABLES

Patch Cables | Simplex and Zipcore Patch Cables
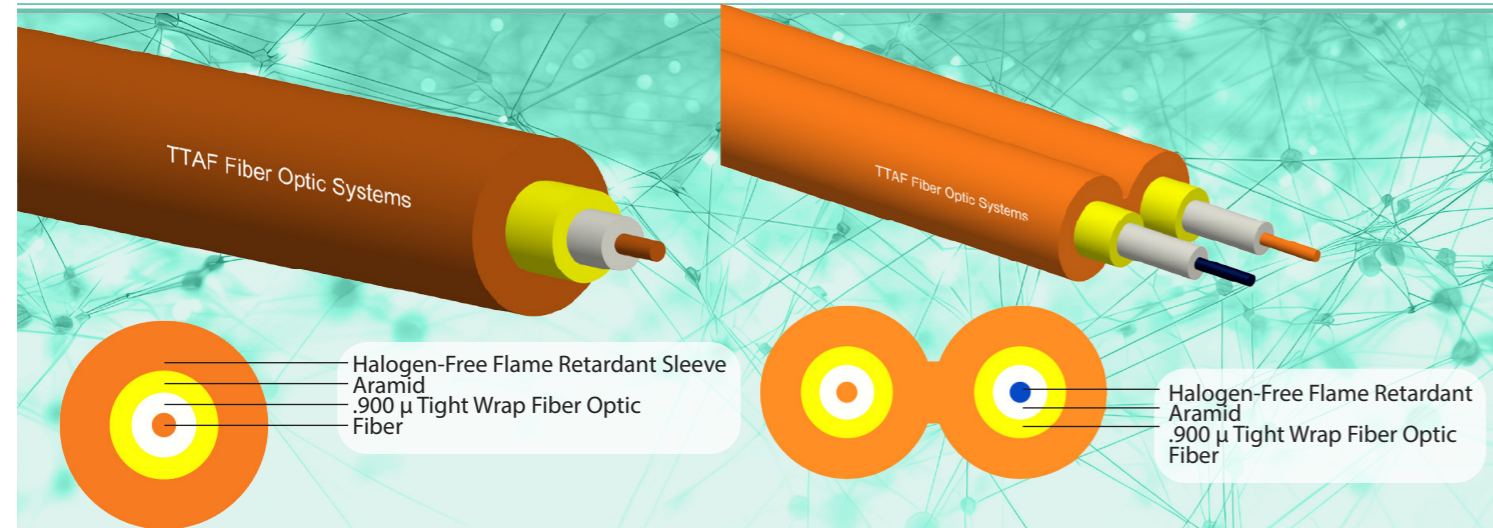
FIBER OPTIC CABLES

Duplex Patch Cables | Patch Cables

Halogen-Free Flame Retardant Sleeve
Aramid
.900 µ Tight Wrap Fiber Optic
Fiber

Halogen-Free Flame Retardant
Aramid
.900 µ Tight Wrap Fiber Optic
Fiber

LLDE Outer Jacket
Solid 2.00mm Fillers
Waterproof Tape
Core
FRP
Aramid Yam

HFRR Outer Jacket
Swellable Glass Yarns
Inner Jacket HFFR
Aramid Yam
Core

Scope of Application

- Temporary connections between patch panels and transmission equipment
- Local Network Systems and FDDI applications
- F/O connectors for factory assembly

Features

- Halogen-free and flame retardant sheath with good mechanical properties, fully fire resistant
- Produces low smoke and corrosive gases during combustion
- Totally dry design
- Easy installation and use
- Easy peelability and excellent peel force stability
- High flexibility and lightness
- 2mm or 2.9mm diameter alternatives
- Subunits with additional strengthening elements are desired.

Scope of Application

- Temporary connections between patch panels and transmission equipment
- Local Network Systems and FDDI applications
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Features

- Halogen-free and flame retardant sheath with good mechanical properties, fully fire resistant
- Produces low smoke and corrosive gases during combustion
- Totally dry design
- Easy installation and use
- Easy peelability and excellent peel force stability
- High flexibility and lightness
- 7 mm or 8.4 mm diameter alternatives
- Subunits with additional strengthening elements are desired.

Cable Specifications

	Simplex		Zipcord		
Outer Diameter	2 mm	2.9 mm	2x4 mm	2,9x5,8 mm	
Cable Unit Weight(kg/km)	4,3	9,1	8,6	18,2	
Cable Supplied Lengths	1 km				

Cable Specifications

	Dublex	Dublex	
Outer Diameter	7 mm	8.4mm	
Cable Unit Weight (kg/km)	45	75	
Cable Supplied Lengths (km)	1	1	

Mechanical And Environmental Properties

	Simplex		Zipcord		
Temperature Range fortransportationandstorage duringinstallationinservice	-25 C - +70 C -5 C - +50 C -20 C - +60 C				
Minimum Bending Radius (mm) duringinstallationinservice	35 30	50 45	35 40	50 45	
Maximum Allowed Tensile Strength (N)	150	200	300	400	

Mechanical And Environmental Properties

	Dublex	Dublex	
Temperature Range Conversion and for Storage During Installation Service	-40C~+85C	20C~+85C	
Minimum Bending Radius During installation service			
Maximum Allowed Tensile Strength (N)	400-600	300-450	

FIBER OPTIC CABLES

Standard Color Coding for Optical Cable Tubes and Fibers

FIBER OPTIC CABLES

Connection Length of Multi Fibers for Different LAN Applications

Multi Loose Tube & Flex Tube Fiber Optic Cables

Buffer Tube Colors (For maximum 24 loose tubes per cable)

TUBE NO	1	2	3	4	5	6	7	8	9	10	11	12
Color	Blue	Orange	Green	Brown	Grey	White	Red	Black	Yellow	Violet	Pink	Aqua

Longitudinal Strip Pipes

TUBE NO	13	14	15	16	17	18	19	20	21	22	23	24
Color	Blue	Orange	Green	Brown	Grey	White	Red	Black	Yellow	Violet	Pink	Aqua

Fiber Colors (For Max. 24 Fibers Per Tube)

TUBE NO	1	2	3	4	5	6	7	8	9	10	11	12
Color	Blue	Orange	Green	Brown	Grey	White	Red	Black	Yellow	Violet	Pink	Aqua

Ring Marked Fibers at 50/60 mm Intervals

TUBE NO	13	14	15	16	17	18	19	20	21	22	23	24
Color	Blue	Orange	Green	Brown	Grey	White	Red	Black	Yellow	Violet	Pink	Aqua

Centrak / Monotube Fiber Optic Cables

Fiber Colors (For Max. 24 Fibers Per Tube)

TUBE NO	1	2	3	4	5	6	7	8	9	10	11	12
Color	Blue	Orange	Green	Brown	Grey	White	Red	Black	Yellow	Violet	Pink	Aqua

Ring Marked Fibers at 50/60 mm Intervals

TUBE NO	13	14	15	16	17	18	19	20	21	22	23	24
Color	Blue	Orange	Green	Brown	Grey	White	Red	Black	Yellow	Violet	Pink	Aqua

Notes:

-Faux fillings for Multi Loose and Flex tubes are natural or black unless stated.
- Specially designed color codings are available on request according to DIN/VDE or IEC standards.
- Black ring marking is done for all fibers, but black fibers can be replaced using yellow ring marking or natural fibers.
- Optionally, using color-coded threads for fiber groups can be used instead of ring-marked fibers.
- Compliance with TIA / EIA 598 and EN 50174-1 standards can be achieved by using natural fibers instead of white fibers.

FIBER CLASS 11801 OFL BW	Fiber Type	1 Gb/s Link		10Gb/s Link 850nm serial	10 GB/s Link 1300nm WWDM
		850 nm	1300 nm		
		1000BASE		10GBASE-SR	10GBASE-LX4
		SX	LX		
OM1 62.5µm 200/500 MHz. km	Standard OM1 HiCap OM1 + 200/600 MHz. km	275m 500m	550m 1000m	33m 65m	300m 450m
OM2 50µm 500/500 MHz. km	Standard OM2 HiCap OM2+ 600/1200 MHz. km	550m 750m	550m 2000m	82m 110m	300m 900m
OM3 50µm 1500/500 MHz. km	OM3 MaxCap300 EMBc=2000/500 MHz. km	1100m	550m	300m	300m
OM3+/4 50µm 3500/500 MHz. km	OM3+/4 MaxCap550 EMBc=4700/500 MHz. km	1100m	550m	550m	300m

Longitudinal Strip Pipes

SYMBOLS	DESCRIPTION
SLT	SINGLE LOOSE TUBE
MLT	MULTI LOOSE TUBES CABLE
SA	CORRUGATED STEEL TAPE
NMA	NON METALLIC STRENGHT MEMBER
DA	DOUBLE ARMOR - TWO LEYERS OF GALVANIZED STEEL TAPE
SJ	SINGLE JACKET
DJ	DOUBLE JACKET
-A	AERIAL CABLE
-P	FIBER OPTIC + POWER HYBRID CABLE
LSZH	LOW SMOKE ZERO HALOGEN SHEATH
ADSS	ALL DIELECTRIC SELF SUPPORTIGN CABLE
-T.T.	TURKISH TELECOM STANDARTS
DIN VDE 0888	OPTICAL FIBER CABLES STANDART
A-	OUTDOOR CABLE
B	ARMORING
(BN)	GLASS-YARN - NON METALIC ARMORING FOR RODENT PROTECTION
D	LOOSE BUFFER TUBE, FILLED
E	SINGLE MODE FIBER
F	FILLING COMPOUND IN THE CABLE CORE
G	MULTI MODE FIBER
J-	INDOOR CABLE
(L)	LAMINATED ALUMINUM SHEATH
Q	(DRY SWELLABLE METARIAL IN THE CABLE CORE (DRY CORE)
(SR)	ARMORING BY LAMINATED, CORRUGATED, LONGITUDINAL, OVERLAPPED STEEL TAPE
Y	POLYVINYL CHLORIDE FACKET
2Y	POLYETHYLENE JACKET
(ZN)	NON-METALIC ANTI-BUCKLING ANG STRENGHT MEMBERS
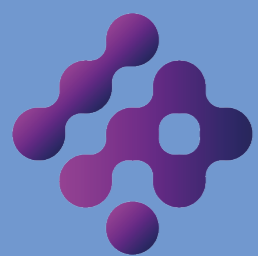
IPORT
NETWORK SYSTEMS

FIBER OPTIC CONNECTORS

FIBER OPTIC CONNECTORS
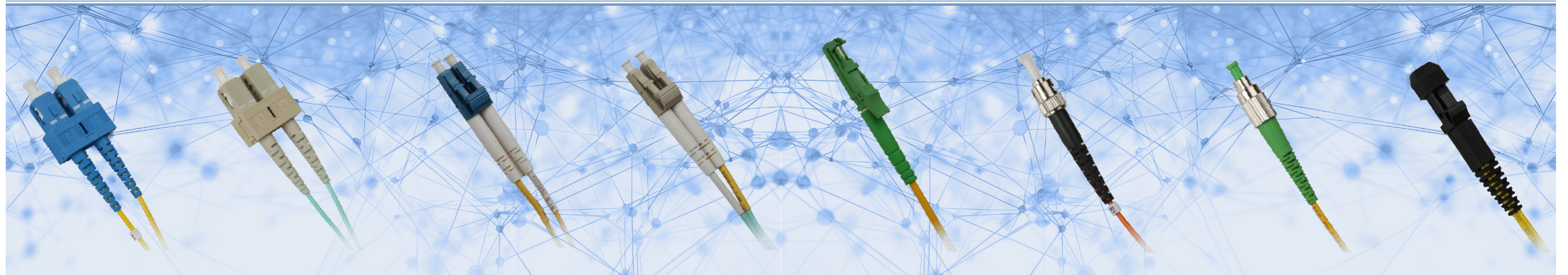
Connectors

The most important component of the connector is the ferrule and is strictly selected according to the application. Single mode ferrules are characterized by precision hole (diameter) workmanship combined with high production precision and centering. They are supplied pre-polished, that is, they are given a significant radius, which is reflected in the parameters of the products.

Multimode ferrules are also supplied pre-polished and have a hole diameter set for multimode cables. An adapter is a mechanical device used to align and join two or more fibers with different connection types.

Features

- High efficiency, repeatable, low loss optical connections and low reflection
- Good mechanical durability and stress relief
- Can be repaired in the field
- It should be strong physical structure, easy to use but small enough to pass through channels.
- Easy to clean
- Compatible with standard fibers and patch cords
- Can be repaired in the field
- Cost effective
- Low insertion loss and back reflection loss
- UL-rated plastic body and protective cover
- Free moving ceramic ferrule
- High precision alignment
- Protective covers in different colors

Scope of Application

- Patchcord and Pigtail Production
- Termination of cables at the construction site
- Telecommunication
- LAN Networks
- Automation
- Tracing
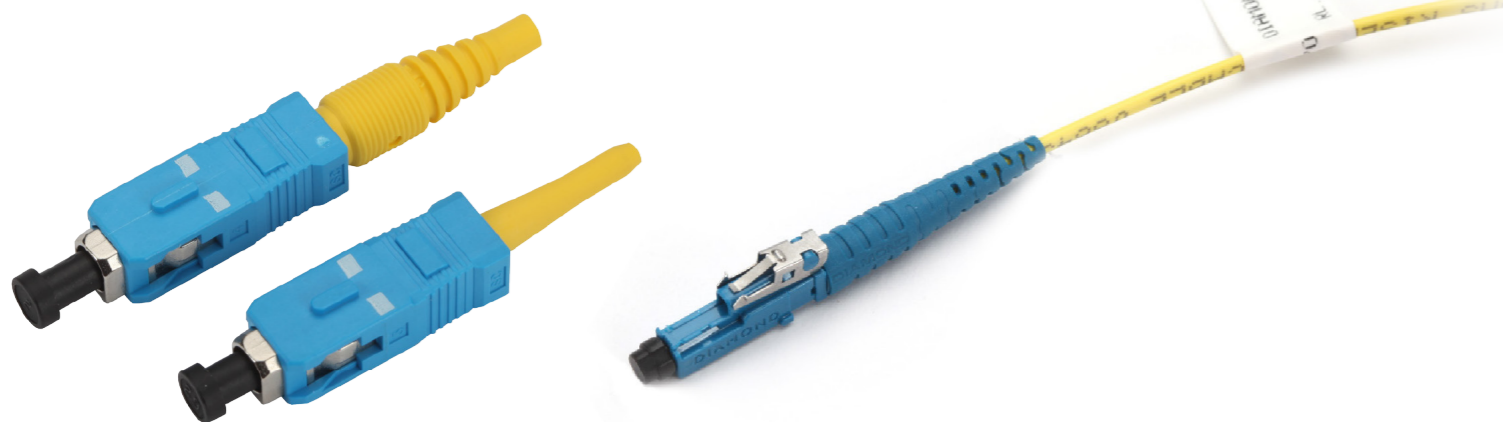
FIBER OPTIC ADAPTER TYPES

CONNECTOR TYPE	SC	LC	ST	FC	MU	MTRJ	E2000
CONFORMITY	IEC 61754-4 TIA 604-3	IEC 61754-20 TIA 604-10-A	IEC 61754-2 TIA 604-2	IEC 61754-13 TIA 604-4-A	IEC 61754-6	IEC 61754-18 TIA 604-12	IEC 61754-15 TIA 604-16
Mech./therm. perform							
Tensile load (N)	100	100	100	100	70	70	100
Mating durability (cycles)	1000	1000	1000	1000	1000	1000	1000
Operating temperature	40º to +85º	40º to +85º	40º to +85º	40º to +85º	40º to +85º	40º to +85º	40º to +85º
FLAMMABILITY							
UL 94 V-0	*	*			*		*
COLOUR OF HOUSING							
SM PC	blue	blue			brown	black	blue
SM APC	green	green					green
MM	beige	beige				black	beige
Brass nickel-plated							
FIBER TYPE							
E9/125	*	*	*	*	*	*	*
G50/125/OM3	*	*	*	*	*	*	*
G62,5/125	*	*	*	*	*	*	*
HCS200/230	*		*	*			*
FEATURES							
One-piece design	*	*	*	*	*		*
Automatic Metal Shutter					*		*
SFF connector		*			*	*	
Colour coding		*			*		
For HighPower applications	*	*			*		*
Cable diameter (mm)	0,6 up to 3,5	0,6 up to 2,8	0,6 up to 3,5	0,6 up to 3,5	0,6 up to 2,8	0,6 up to 1,7	0,6 up to 3,5

FIBER OPTIC CONNECTORS
Quick Connector

FIBER OPTIC
SOLUTIONS

Quick Connector

IPORT Fit Plus SC ve LC konektörleri, sahada 2 dakikadan daha kısa bir sürede kurulabilir. XP Fit Plus ise epoksi yerine indeks eşleştirme jeli ve iç mekanik tutucu kullanır; bu sayede fiberi nazikçe ve sağlam bir şekilde tutar. Kurulum hızlı ve kolaydır; standart bir kılıf soyucu ile fiberi soyun, bir fiber temizleyici ile kesin ve hazır XP Fit Plus konektörlere kaydırın. Cilalama veya yapıştırıcı gerektirmeyen bu yerinde kurulumlar kolayca gerçekleştirilebilir ve zaman kazandırır.

Features

• High Temperature Stability
• Good Interchangeability
• Good Durability
• Low Insertion Loss
• High Back Reflection Loss
• Standard: compliant with DIN 47256

Suitability

• Simplex / Duplex Patchcord Available
• SC/PC and SC/APC Patchcord Available
• Various Boot (cable) Sizes Available

Scope of Application

• Cable TV (CATV)
• Telecommunication Networks
• Active Device Link
• Local Area Networks (LANs)
• Video
• Data Processing Networks
• Wide Area Networks (WANs)
• Built-in Installations
• Industrial and Medical Applications

Optical Performance	
Applicable for	3.1 x 2.0 mm Drop cable
Optical fiber diameter	125µm, 2.00 mm or 3.00mm indoor cable (G657A or G652D)
Tight buffer diameter	250µm
Fiber mode	Single Mode
Insertion Loss	≤ 0.3 dB (1310nm&1550nm)
Return Loss	≥ 40dB
Tighten strenght of naked fiber	>10N
Tensile Strength	>50N
Using Temperature	-40 +85℃
On-line tensile strenght (20N)	IL≤0.2dB
Mechanical durability(500times)	IL≤0.2dB
Drop –off test (drop-off height 4m,once per direction totally 3 times)	IL≤0.3dB
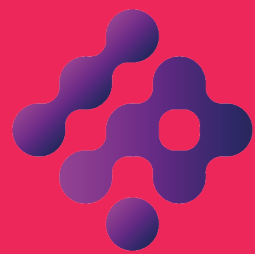
IPORT

NETWORK SYSTEMS

FIBER OPTIC PIGTAILS

FIBER OPTIC PIGTAIL

9/125 OS1/OS2 Fiber Optic Pigtail

FIBER OPTIC PIGTAIL

9/125 Single Mode Pigtail

ST/PC 9/125 SM SX	SC/PC 9/125 SM SX	FC/PC 9/125 SM SX	LC/PC 9/125 SM SX	MU/PC 9/125 SM SX	MTRJ 9/125 SM DX
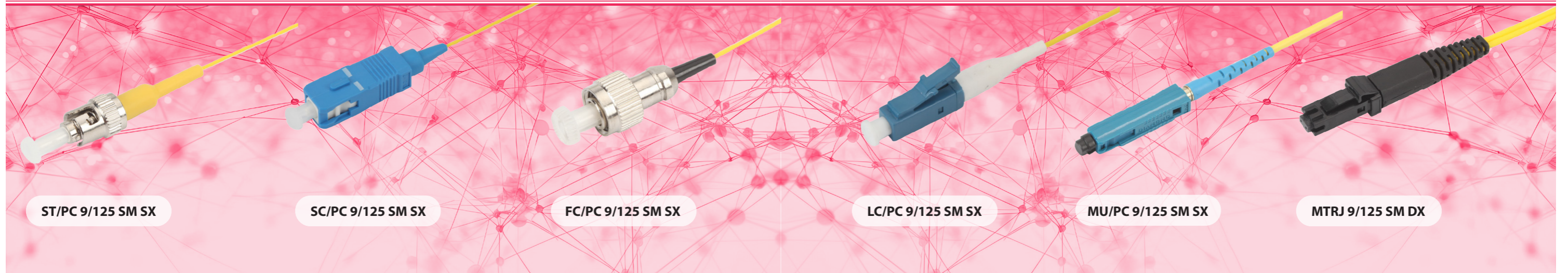
Pigtail

IPORT® single-mode pigtails are used in telecom, cable TV networks and high-speed metropolitan and access networks. The single-mode pigtail buffer is manufactured in accordance with IEC, EIA TIA and Telecordia standards. Single-mode pigtails are terminated with a standard IPORT® connector providing optimum optical performance.

Features

- SC, LC, ST, FC and E2000 connectors
- UPC and APC interfaces
- Low smoke zero halogen (LSZH) secondary buffer
- 900μm tight buffer or easy peel
- ITU G.652.D, TIA/EIA 492CAAB
- Bending strength ITU G.657.A1 or ITU G.657.A2
- Different connector performance range for specific applications
- Standard white color bumper and 12 standard color options according to IEC 60304
- Standard and blister packaging options available

Scope of Application

- Telecom and data communications applications
- Patch panels, wall boxes, ODFs and splice cassettes
- Installation possibility for easy-to-peel pigtails in the field
- Supports high-speed multi-channel video, data and voice services in metropolitan and access networks
- Compatible with ATM, SONET and WDM technologies

Connector Features

Optical Performance	Single mode	Suitability
IL Max/Master(Acceptance)	0,25 dB	IEC 61300-3-4
Ave/Master*	0,18dB	IEC 61300-3-4
Ave/Random*	0,18dB	IEC 61300-3-34
Return Loss	50/60	IEC 61300-3-6

Buffer Features

Features	Units	Simplex
Crushing	N/100mm	500
Operating temperature	°C	~20 to 60
Nominal buffer Diameter	μm	900+50
Maximum Towing Load	N	6

Fiber Properties

Features	
Attenuation (dB)/km	0.38 @ 1310nm / 0.25 @ 1550nm
Chromatic Dispersion (ps/nm x km)	3.0 @ 1310nm / 18.0 @ 1550nm
Polarization Mode Distribution (ps/√km)	≤ 0.2

FIBER OPTIC PIGTAIL
62.5/125 OM1 OPTICAL FIBER PIGTAILS

FIBER OPTIC PIGTAIL
62.5/125 OM1 MULTIMODE PIGTAILS
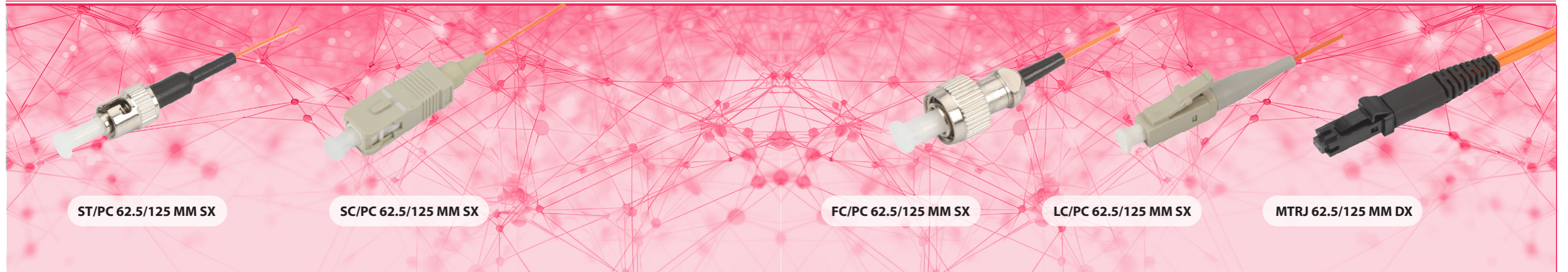
ST/PC 62.5/125 MM SX	SC/PC 62.5/125 MM SX	FC/PC 62.5/125 MM SX	LC/PC 62.5/125 MM SX	MTRJ 62.5/125 MM DX

Pigtail

IPORT® multimode pigtails are used to interconnect high-speed networks such as Gigabit Ethernet, Fast Ethernet and Ethernet. Multi-mode pigtail buffer complies with IEC, EIA TIA and Telecordia standards. Multimode pigtails are terminated with a standard IPORT® connector providing optimum optical performance.

Features

- SC, LC, ST, FC connectors
- Low smoke zero halogen (LSZH) buffer
- 900µm tight buffer or easy peel
- OM1 pigtail is available in standard white color
- Multimode fiber complies with ITU-G651, TIA/EIA 492AAAA standards
- Different connector performance range for specific applications
- Standard 12 color options according to IEC 60304
- Standard and blister packaging options available

Scope of Application

- Networks such as Ethernet, Fast Ethernet and GBE
- Internal link
- Ideal for a wide range of telecom, datacom and transaction control applications requiring durability
- Suitable for repetitive operations on patch panels and shelves
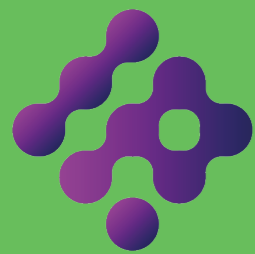
Connector Features

Optical Performance	Singlemode	Conformance
Insertion loss	0,30 dB	IEC 61300-3-4
Ave/Master*	0,15dB	IEC 61300-3-4
Ave/Random*	0,20dB	IEC 61300-3-34

Buffer Features

Features	Units	Simplex
Crushing	N/100mm	500
Operating temperature	°C	~20 to 60
Nominal buffer Diameter	µm	900+50
Maximum Towing Load	N	6

Buffer Features

Features		
Attenuation (dB)/km		
Chromatic Dispersion (ps/nm x km)	Compare	
Polarization Mode Distribution (ps/√km)	Chart	

FIBER OPTIC PIGTAIL
50/125 OM2 Fiber Optic Pigtail

FIBER OPTIC PIGTAIL
50/125 OM2 Fiber Optic Pigtail
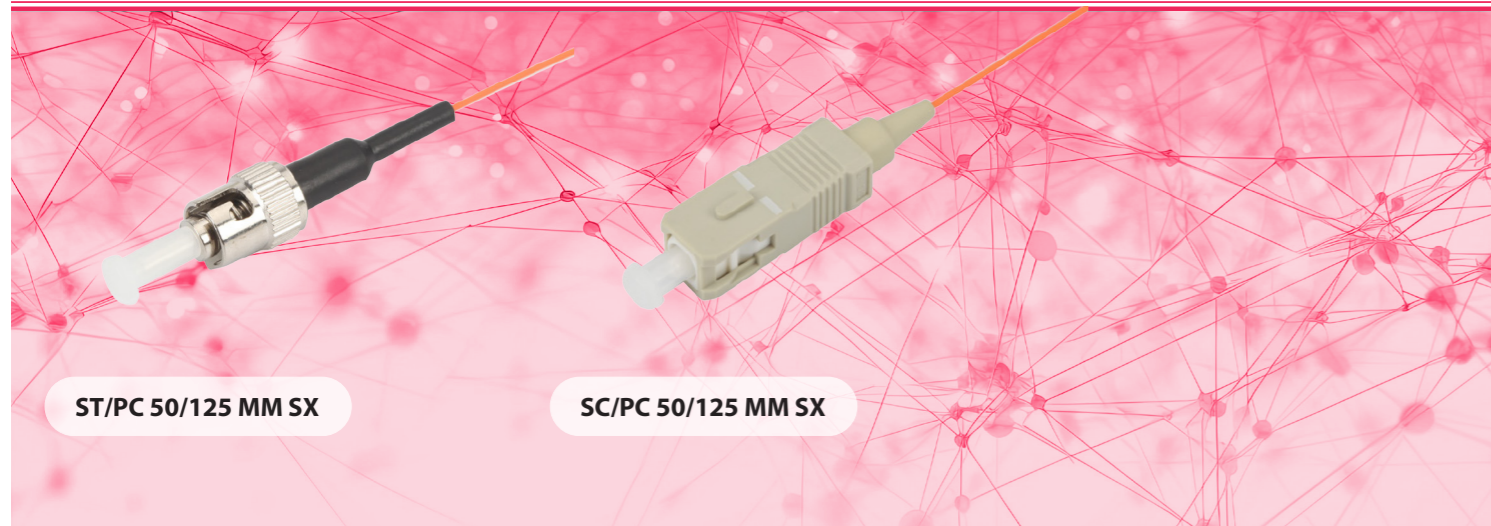
| ST/PC 50/125 MM SX | SC/PC 50/125 MM SX | FC/PC 50/125 MM SX | LC/PC 50/125 MM SX | MTRJ 50/125 MM DX |

Pigtail

IPORT® multimode pigtails are used to interconnect high-speed networks such as Gigabit Ethernet, Fast Ethernet and Ethernet. Multi-mode pigtail buffer complies with IEC, EIA TIA and Telecordia standards. Multimode pigtails are terminated with a standard IPORT® connector providing optimum optical performance.

Features

- SC, LC, ST, FC connectors
- Low smoke zero halogen (LSZH) buffer
- 900μm tight buffer or easy peel
- OM2 pigtail is available in standard white color
- Multimode fiber complies with ITU-G651, TIA/EIA 492AAAA standards
- Different connector performance range for specific applications
- Standard 12 color options according to IEC 60304
- Standard and blister packaging options available

Scope of Application

- Networks such as Ethernet, Fast Ethernet and GBE
- Internal link
- Ideal for a wide range of telecom, datacom and transaction control applications requiring durability
- Suitable for repetitive operations on patch panels and shelves

Connector Features

Optical Performance	Singlemode	Conformance
Insertion loss	0,30 dB	IEC 61300-3-4
Ave/Master*	0,15dB	IEC 61300-3-4
Ave/Random*	0,20dB	IEC 61300-3-34

Buffer Features

Features	Units	Simplex
Crushing	N/100mm	500
Operating temperature	°C	~20 to 60
Nominal buffer Diameter	μm	900+50
Maximum Towing Load	N	6

Fiber Properties

Features		
Attenuation (dB)/km		
Chromatic Dispersion (ps/nm x km)	Compare	
Polarization Mode Distribution (ps/√km)	Chart	

FIBER OPTIC PIGTAIL

50/125 OM3 Fiber Optic Pigtails

FIBER OPTIC PIGTAIL

50/125 OM3 Multimode Pigtails
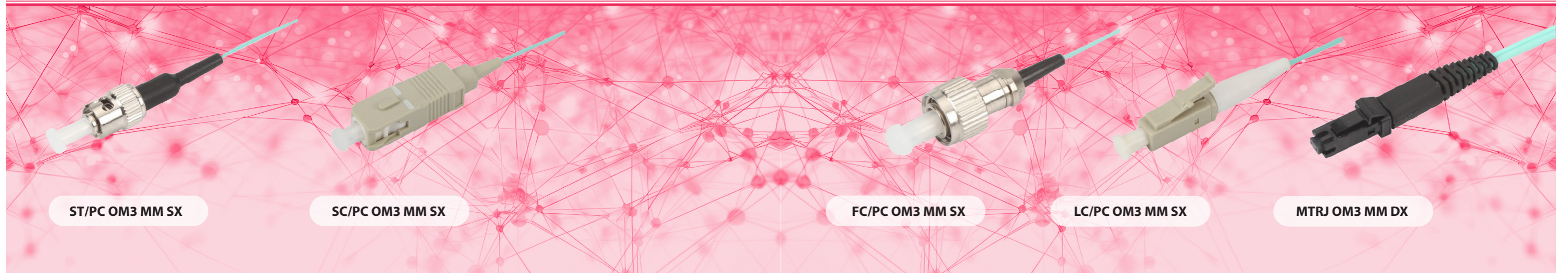
| ST/PC OM3 MM SX | SC/PC OM3 MM SX | FC/PC OM3 MM SX | LC/PC OM3 MM SX | MTRJ OM3 MM DX |

Pigtail

IPORT® multimode pigtails are used to interconnect high-speed networks such as Gigabit Ethernet, Fast Ethernet and Ethernet. Multi-mode pigtail buffer complies with IEC, EIA TIA and Telecordia standards. Multimode pigtails are terminated with a standard IPORT® connector providing optimum optical performance.

Features

- SC, LC, ST, FC connectors
- Low smoke zero halogen (LSZH) buffer
- 900µm tight buffer or easy peel
- OM3 pigtail is available in standard white color
- Multimode fiber complies with ITU-G651, TIA/EIA 492AAAA standards
- Different connector performance range for specific applications
- Standard 12 color options according to IEC 60304
- Standard and blister packaging options available

Scope of Application

- Networks such as Ethernet, Fast Ethernet and GBE
- Internal link
- Ideal for a wide range of telecom, datacom and transaction control applications requiring durability
- Suitable for repetitive operations on patch panels and shelves

Connector Features

Optical Performance	Singlemode	Conformance
Insertion loss	0,30 dB	IEC 61300-3-4
Ave/Master*	0,15dB	IEC 61300-3-4
Ave/Random*	0,20dB	IEC 61300-3-34

Buffer Features

Features	Units	Simplex
Crushing	N/100mm	500
Operating temperature	°C	~20 to 60
Nominal buffer Diameter	µm	900+50
Maximum Towing Load	N	6

Fiber Properties

Features		
Attenuation (dB)/km		
Chromatic Dispersion (ps/nm x km)	Compare	
Polarization Mode Distribution (ps/√km)	Chart	

FIBER OPTIC PIGTAIL
50/125 OM4 Fiber Optic Pigtails

FIBER OPTIC PIGTAIL
50/125 OM4 Multimode Pigtails
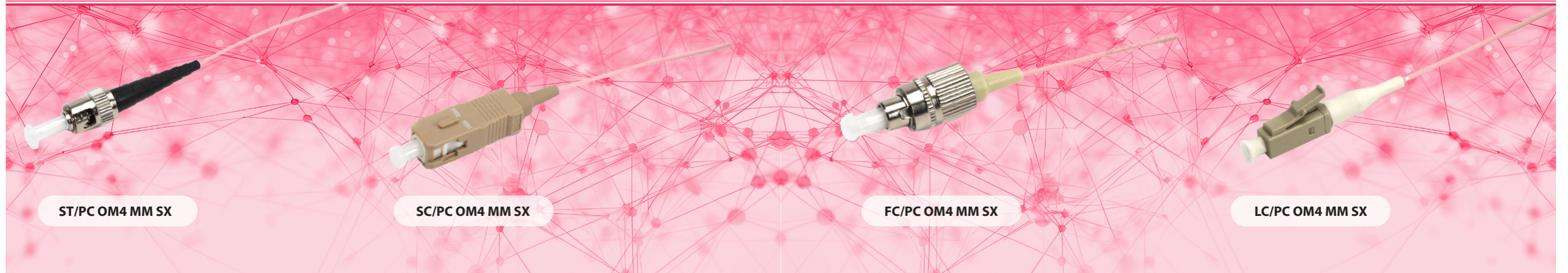
| ST/PC OM4 MM SX | SC/PC OM4 MM SX | FC/PC OM4 MM SX | LC/PC OM4 MM SX |

Pigtail

IPORT® multimode pigtails are used to interconnect high-speed networks such as Gigabit Ethernet, Fast Ethernet and Ethernet. Multimode pigtail buffer complies with IEC, EIA TIA and Telecordia standards. Multimode pigtails are terminated with a standard IPORT® connector providing optimum optical performance.

Features

- SC, LC, ST, FC connectors
- Low smoke zero halogen (LSZH) buffer
- 900μm tight buffer or easy peel
- OM4 pigtail is available in standard white color
- Multimode fiber complies with ITU-G651, TIA/EIA 492AAAA standards
- Different connector performance range for specific applications
- Standard 12 color options according to IEC 60304
- Standard and blister packaging options available

Scope of Application

- Networks such as Ethernet, Fast Ethernet and GBE
- Internal link
- Ideal for a wide range of telecom, datacom and transaction control applications requiring durability
- Suitable for repetitive operations on patch panels and shelves

Connector Features

Optical Performance	Singlemode	Conformance
Insertion loss	0,30 dB	IEC 61300-3-4
Ave/Master*	0,15dB	IEC 61300-3-4
Ave/Random*	0,20dB	IEC 61300-3-34

Buffer Features

Features	Units	Simplex
Crushing	N/100mm	500
Operating temperature	°C	~20 to 60
Nominal buffer Diameter	μm	900+50
Maximum Towing Load	N	6

Fiber Properties

Features		
Attenuation (dB)/km		
Chromatic Dispersion (ps/nm x km)	Compare	
Polarization Mode Distribution (ps/√km)	Chart	

FIBER OPTIC PIGTAIL
50/125 OM5 Fiber Optic Pigtails

FIBER OPTIC PIGTAIL
50/125 OM5 Multimode Pigtails
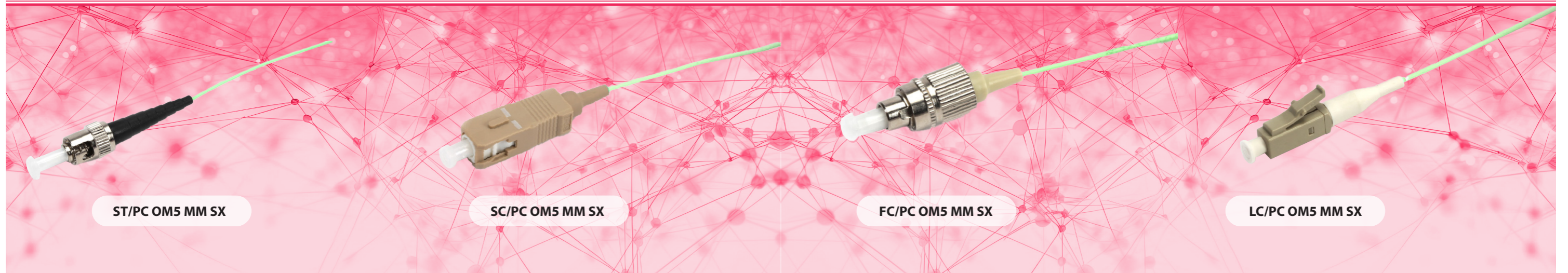
| ST/PC OM5 MM SX | SC/PC OM5 MM SX | FC/PC OM5 MM SX | LC/PC OM5 MM SX |

Pigtail

IPORT® multimode pigtails are used to interconnect high-speed networks such as Gigabit Ethernet, Fast Ethernet and Ethernet. Multimode pigtail buffer complies with IEC, EIA TIA and Telecordia standards. Multimode pigtails are terminated with a standard IPORT® connector providing optimum optical performance.

Features

- SC, LC, ST, FC connectors
- Low smoke zero halogen (LSZH) buffer
- 900μm tight buffer or easy peel
- OM5 pigtail is available in standard white color
- Multimode fiber complies with ITU-G651, TIA/EIA 492AAAA standards
- Different connector performance range for specific applications
- Standard 12 color options according to IEC 60304
- Standard and blister packaging options available

Scope of Application

- Networks such as Ethernet, Fast Ethernet and GBE
- Internal link
- Ideal for a wide range of telecom, datacom and transaction control applications requiring durability
- Suitable for repetitive operations on patch panels and shelves

Connector Features

Optical Performance	Singlemode	Conformance
Insertion loss	0,30 dB	IEC 61300-3-4
Ave/Master*	0,15dB	IEC 61300-3-4
Ave/Random*	0,20dB	IEC 61300-3-34

Buffer Features

Features	Units	Simplex
Crushing	N/100mm	500
Operating temperature	°C	~20 to 60
Nominal buffer Diameter	μm	900+50
Maximum Towing Load	N	6

Fiber Properties

Features		
Attenuation (dB)/km		
Chromatic Dispersion (ps/nm x km)	Compare	
Polarization Mode Distribution (ps/√km)	Chart	

IPORT

NETWORK SYSTEMS

FIBER OPTIC PATCHCORDS

FIBER OPTIC PATCHCORDS
Standard Type Patchcords

FIBER OPTIC PATCHCORDS
Standard Type Patchcords
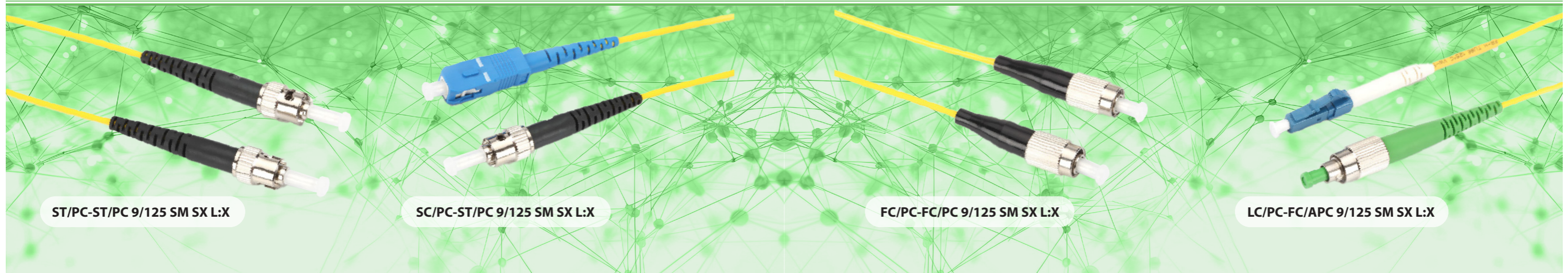
| ST/PC-ST/PC 9/125 SM SX L:X | SC/PC-ST/PC 9/125 SM SX L:X | FC/PC-FC/PC 9/125 SM SX L:X | LC/PC-FC/APC 9/125 SM SX L:X |

Patchcord

A fiber optic patch cord connects two remote fiber optic leads and uses the same type of fiber and connections as the respective fiber ends it connects. In the context of optogenetic experiments, in experiments with a rotary coupler, a fiber optic patch cord is required to connect the light source and the rotary coupler, and another patch cable is used to connect the rotary coupler and the fiber optic cannula.

Automating component preparation and connector polishing processes has an impact on end product parameters. Processes that limit end product quality and measurement verification are limited as follows:
• Visual connector inspection via Westover microscope, automatic scratch and surface detection program
• Attenuation measurement with Insertion Loss (IL) and Return Loss (RL) EXFO
• Interferometer SHUTTLE X for geometric connector measurement

Patchcord

IPORT has perfected fiber optic patch cables with various connectors such as FC, LC, SC, ST, DIN, MU, SMA, MTRJ, E2000 and MPO/MTP. IPORT is a leading supplier of advanced fiber optic components. Our extensive product range offers a full range of solutions including connectors and adapters, assemblies, termination kits and tools. Each assembly undergoes stringent testing and verification processes before shipment, ensuring you receive the highest quality product. We offer simplex and duplex fiber cable assemblies with ST, SC, FC, LC, MTRJ, MU, D4, DIN, SMA, FDDI, ESCON style connectors. We can also produce custom fiber optic patch cables according to your specifications.

MM Multi Mode

MM Multi Mode

- 62.5/125 OM1
- 50/125 OM2
- 50/125 OM3
- 50/125 OM3+/OM4+OM5
- Giga optimized for 1310nm transmission
- 1000Base-LX do 2000 m

SM Single Mode

- G652D / Low water peak fibre.
- G655/NZDS fiber for CWDW and DWDM transmissions.
- G656/NZDS NZDS fiber for CWDW and DWDM transmissions.
- G657A has a low bending radius for FTTH networks and is compatible with G652.
- G657B / Low bend radius fiber for FTTH networks.

MM Multi Mode

- Terminations: FC, SC, ST, MU, LC, D4, DIN, E2000, MT-RJ, MPO, SMA, E2000, FDDI and ESCON
- Fiber diameter(mm): Φ 0.9, φ 2.0, Φ 3.0 and customized size
- Fiber type: Singlemode (G.652, G655), multimode (50/125)/
- (62.5/125), OM3, OM4
- Types: single-mode, multi-mode
- Insertion Loss (dB): Less than 0.30 (PC and UPC)
- Return Loss (dB): More than 0.45 (PC and UPC)

- Interchangeability: less than 0.20 dB
- Tensile Strength: Less than 0.3 dB (0 to 15 kgf)
- Temperature Range: (- 20 to +60 degrees Celsius)
- Types: PC, UPC, APC
- Radius of Curvature: 10 to 25 mm, 5 to 15 mm
- Apex Offset: ≤50 um; ≤100µm
- Fiber Spherical Height: -90 nm, +50 nm
- Angular Offset: 8°± 0.5°C (APC)

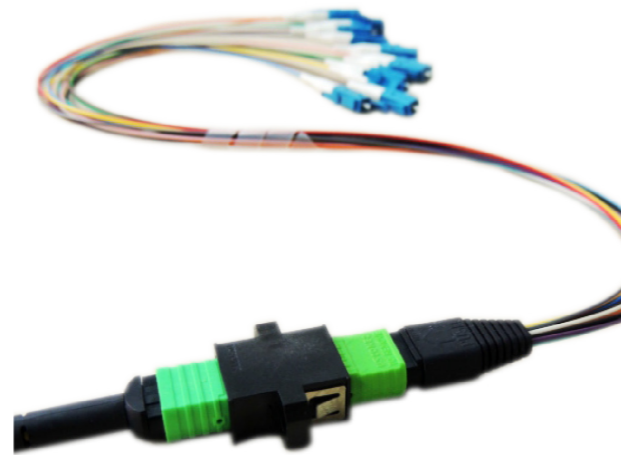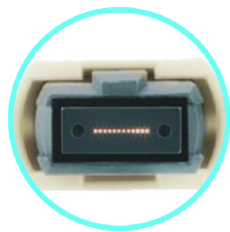| Attenuation Of random taken connections dB Acc. IEC 61300-3-34	Attenuation Towards reference connector dB Acc. IEC 61300-3-4	Reflection Atten. Of reflectance dB Acc. IEC61300-3-6
Connectors SM: ST, SC, FC, LC, E2000, MU, DIN		
IL conn.-conn.97%≤0,6 dB Average ≤ 0,20 dB	IL max.≤0,30 dB	RL PC > 45 RL UPC >50
Connectors SM: MTRJ		
IL conn.-conn.95%≤0,6 dB Average ≤ 0,30 dB	IL max.≤0,75 dB	RL PC > 35
Connectors SM MT: MTP, MPO		
IL conn.-conn.97%≤0,70 dB Average ≤ 0,35 dB		RL PC > 55
Connectors SM APC:	SC/APC, FC/APC, LC/APC, E2000/APC, MU/APC, DIN/APC	
IL conn.-conn.97%≤0,45 dB Average ≤ 0,20 dB	IL max.≤0,30 dB	RL APC > 65
Connectors MM: ST, SC, FC, LC, E2000, MU		
IL conn.-conn.97%≤0,70 dB Average ≤ 0,35 dB		RL PC > 30
Connectors MM: MTRJ		
IL conn.-conn.97%≤0,75 dB Average ≤ 0,50 dB		RL PC > 26
Connectors MM MT: MTP, MTPO		
IL conn.-conn.97%≤ 1 dB Average ≤ 0,50 dB		RL PC > 26
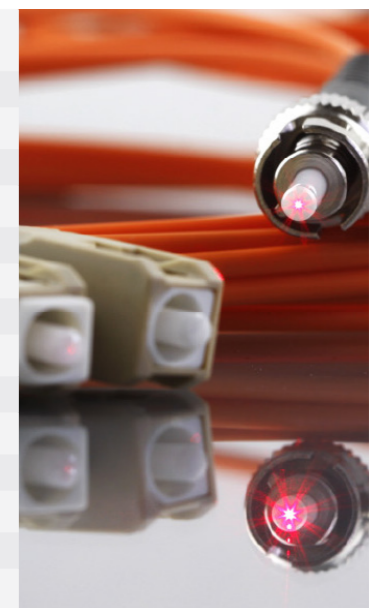
FIBER OPTIC PATCHCORDS
Premium Type Patchcords
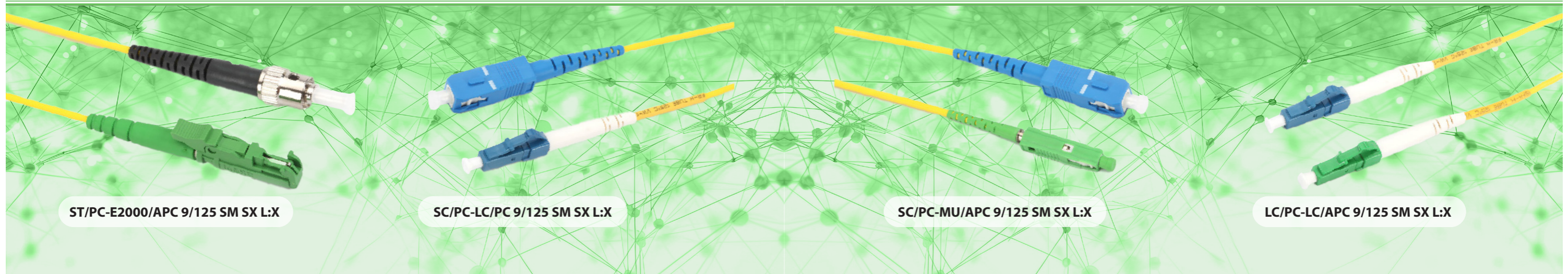
ST/PC-E2000/APC 9/125 SM SX L:X	SC/PC-LC/PC 9/125 SM SX L:X

FIBER OPTIC PATCHCORDS
Telecom Type Patchcords

SC/PC-MU/APC 9/125 SM SX L:X	LC/PC-LC/APC 9/125 SM SX L:X

Technicial Specifications

- Terminations: FC, SC, ST, MU, LC, D4, DIN, E2000, MT-RJ, MPO,
- SMA, E2000, FDDI and ESCON
- Fiber diameter(mm): Φ 0.9, φ 2.0, Φ 3.0 and customized size
- Fiber type: Singlemode (G.652, G655), multimode (50/125) / (62.5/125), OM3, OM4
- Types: single-mode, multi-mode
- Insertion Loss (dB): Less than 0.2 (PC and UPC)
- Return Loss (dB): More than 0.50 (PC and UPC)

- Interchangeability: less than 0.15 dB
- Tensile Strength: Less than 0.2 dB (0 to 15 kgf)
- Temperature Range: (- 40 to +85 degrees Celsius)
- Types: PC, UPC, APC
- Radius of Curvature: 10 to 25 mm, 5 to 15 mm
- Apex Offset: ≤50 um; ≤100μm
- Fiber Spherical Height: -90 nm, +50 nm
- Angular Offset: 8°± 0.5°C (APC)

Technicial Specifications

- Terminations: FC, SC, ST, MU, LC, D4, DIN, E2000, MT-RJ, MPO,
- SMA, E2000, FDDI and ESCON
- Fiber diameter(mm): Φ 0.9, φ 2.0, Φ 3.0 and customized size
- Fiber type: Singlemode (G.652, G655), multimode (50/125)/ (62.5/125), OM3, OM4
- Types: single-mode, multi-mode
- Insertion Loss (dB): Less than 0.25 (PC and UPC)
- Return Loss (dB): More than 0.50 (PC and UPC)

- Interchangeability: less than 0.15 dB
- Tensile Strength: Less than 0.2 dB (0 to 15 kgf)
- Temperature Range: (- 40 to +85 degrees Celsius)
- Types: PC, UPC, APC
- Radius of Curvature: 10 to 25 mm, 5 to 15 mm
- Apex Offset: ≤50 um; ≤100μm
- Fiber Spherical Height: -90 nm, +50 nm
- Angular Offset: 8°± 0.5°C (APC)

Features

- High quality and repeatability of transmission parameters
- Compliance with standards: EN-50173-1 EIA/TIA 568,EN 50377
- and compliance with Telcordia GR-326, GR-20, IEC 60793-2-10, TIA/EIA-492CAAB standards.

SM Single Mode

- **G652D /** Low water peak fibre.
- **G655/**NZDS fiber for CWDW and DWDM transmissions.
- **G656/**NZDS NZDS fiber for CWDW and DWDM transmissions.
- **G657**A has a low bending radius for FTTH networks and is compatible with G652.
- **G657B /** Low bend radius fiber for FTTH networks.

Features

- High quality and repeatability of transmission parameters
- Compliance with standards: EN-50173-1 EIA/TIA 568,EN 50377
- and compliance with Telcordia GR-326, GR-20, IEC 60793-2-10, TIA/EIA-492CAAB standards.

SM Single Mode

- **G652D /** Fiber with low water peak.
- **G655/**NZDS fiber for CWDW and DWDM transmissions.
- **G656/**NZDS NZDS fiber for CWDW and DWDM transmissions.
- **G657A** has a low bending radius for FTTH networks and is compatible with G652.
- **G657B /** Low bend radius fiber for FTTH networks.

Technical Parameters

Attenuation Of random taken connections dB Acc. IEC 61300-3-34	Attenuation Towards reference connector dB Acc. IEC 61300-3-4	Reflection Atten. Of reflectance dB Acc. IEC61300-3-6
Connectors SM: ST, SC, FC, LC, E2000, MU, DIN		
IL conn.-conn.97%≤0,15 dB Average ≤ 0,07 dB	IL max.≤0,15 dB	RL UPC >50
Connectors SM APC:	SC/APC, FC/APC, LC/APC, E2000/APC, MU/APC, DIN/APC	
IL conn.-conn.97%≤0,15 dB Average ≤ 0,07 dB	IL max.≤0,15 dB	RL APC > 65

Technical Parameters

Attenuation of random taken connections dB Acc. IEC 61300-3-34	Attenuation Towards reference connector dB Acc. IEC 61300-3-4	Reflection Atten. Of reflectance dB Acc. IEC61300-3-6
Connectors SM: ST, SC, FC, LC, E2000, MU, DIN		
IL conn.-conn.97%≤0,25 dB Average ≤ 0,12 dB	IL max.≤0,35 dB	RL UPC >50
Connectors SM APC:	SC/APC, FC/APC, LC/APC, E2000/APC, MU/APC, DIN/APC	
IL conn.-conn.97%≤0,25 dB Average ≤ 0,12 dB	IL max.≤0,35 dB	RL APC > 65

FIBER OPTIC PATCHCORDS
MTP/MPO Connection Cable

FIBER OPTIC PATCHCORDS
MTP/MTO Panels and Cassettes

Features

- High Temperature Resistance
- Easy Interchangeability
- Good Durability
- Low Insertion Loss
- High Backscatter Loss
- Standard: Telcordia GR-1435-CORE
- Compatible

Features

- CATV and Multimedia, Telecommunications Networks
- Active Device Termination
- Gigabit Ethernet
- Connection for O/E Modules
- Data Processing Networks
- Inter-Optical Switch Connection
- Premiz Setups
- Asynchronous Transmission Mode (ATM)

- IPORT fiber solution supporting high bandwidth,
- Supports data center applications including 10/40/100 Gigabit Ethernet.
- Data Center Infrastructure
- Ethernet, fiber channel, ATM, LAN, MAN and WAN
- Options supporting high-speed Ethernet and Fiber Channel applications (OM3, OM4 and OS1/OS2 fibers)

Features

- High Temperature Stability
- Easy Interchangeability
- Good Durability
- Low Insertion Loss
- High Backscatter Loss
- Standard: Telcordia GR-1435-CORE
- Compatible
- Supports up to 12 x 24 fiber MPO Cassettes
- Multiple adapter options available
- Accepts loose tube, distribution cable and MPO Trunk Cable
- Standard 19 inch rack compatible

Features

- CATV and Multimedia
- Telecommunication Networks
- Active Device Termination
- Gigabit Ethernet
- Connection for O/E Modules

- Data Processing Networks
- Inter-Optical Switch Connection
- Premiz for Installations
- Asynchronous Transmission Mode (ATM) can be mounted in front of ODFs with cable management pieces.

Optical Performance				
Type	Single Mode (APC polish)		Multimode (PC /Flat Polish)	
Performance	Standard	Elite Low Loss	Standard	Elite Low Loss
Maximum Insertion Loss	≤ 0.70 dB	≤ 0.30dB	≤ 0.60 dB	≤ 0.35dB
Return Loss	≤ 50 dB		≤ 30dB	
Operating Temperature	-40℃ to 80℃		-40℃ to 80℃	
Test Wavelength	1310nm or 1550nm		850nm or 1300nm	
Durability (500times)	≤ 0.1 dB		≤ 0.1 dB	
Tensile Strength	> 15kg		> 15kg	

Optical Performance				
Type	Single Mode (APC polish)		Multimode (PC /Flat Polish)	
Performance	Standard	Elite Low Loss	Standard	Elite Low Loss
Maximum Insertion Loss	≤ 0.70 dB	≤ 0.30dB	≤ 0.60 dB	≤ 0.35dB
Return Loss	≤ 50 dB		≤ 30dB	
Operating Temperature	-40℃ to 80℃		-40℃ to 80℃	
Test Wavelength	1310nm or 1550nm		850nm or 1300nm	
Durability (500times)	≤ 0.1 dB		≤ 0.1 dB	
Tensile Strength	> 15kg		> 15kg	

FIBER OPTIC PATCHCORDS

Fiber Optik Special Patchcords | Armored & Fan-out Patchcords

FIBER OPTIC PATCHCORDS

Armored & Fan-out Patchcords | Fiber Optic Special Patchcords

Duplex armored cable OD 2.8mm

Simplex armored cable OD 3.4mm

4 core armored cable OD 3.3mm

Simplex armored cable OD 2.0mm

Simplex armored cable OD 2.0mm

Simplex armored cable OD 2.4mm

4 core armored tactical cable

Duplex armored cable OD 2.8mm
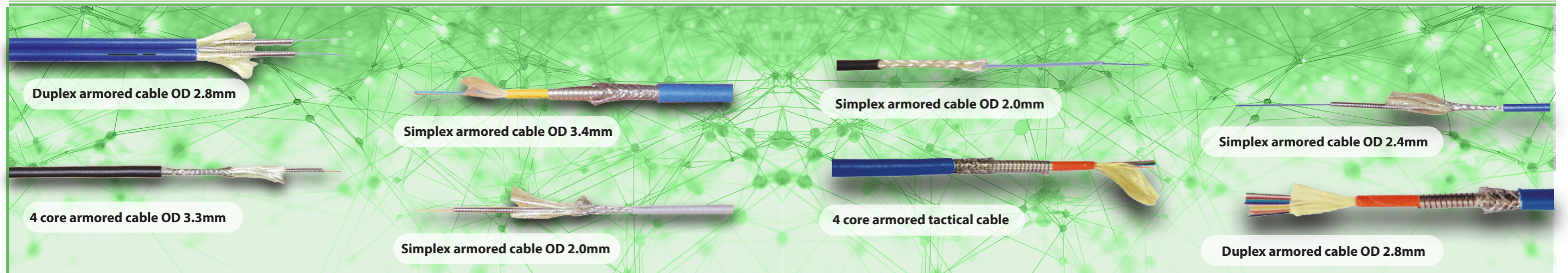
Special Patchcords

Thanks to the stainless steel tube inside the outer sheath, armored fiber optic patch cords are designed for use in harsh environments. These cables contain a stainless steel tube that provides protection to the cable center unit. In addition to being both strong and durable, they are also easy to use like electrical cables.

Armored fiber optic patch cords are strong yet retain all the features of standard patch cords. They won't get damaged even if stepped on by an adult, and they're also rodent-proof, so you don't have to worry about animals like mice biting and breaking the cables.

Although strong, armored fiber optic patch cords are actually just as flexible and bendable as standard patch cords. They have similar outer diameters to standard patch cords, which saves space. They are available with different sheath colors and sheath types like OFNR

and can be terminated with different connector types like SC, ST, FC, LC, MU, SC/APC, ST/APC, FC/APC, LC/APC.

IPORT's armored fiber optic patch cables are specifically designed for use in harsh environments where standard cables cannot perform well. It comes equipped with strong connectors and armored cables, protecting the cables from damage caused by bending, exposure to pressure, or rodent bites. It is also easy to install and maintain. It is an ideal option for those looking for lightweight, durable and protected fiber optic patch cables.

Fan-Out Patchcords

- 4, 8, 12, 24 and 48 fiber fan-out patchcords, SC, LC, FC etc. Available in all desired lengths with connectors.
- Pre-terminated multi-fiber cable helps speed installation and improve connection reliability.
- Field-mountable cable modules are easily mounted to the front of the ODFs via cable management pieces.

Type	Single Mode	Single Mode	Multi Mode
Insertion Loss	0.2 dB	0.2 dB	0.2 dB
Return Loss	55 dB	75 dB	45 dB
Storage Temperature	-40 C to +90 C	-40 C to +90 C	-40 C to +90 C
Operating Temperature	-40 C to +90 C	-40 C to +90 C	-40 C to +90 C
Reproducibility of IL		0.1 dB	
Service Life		1000 mate/match cycles	

- Any connector other than MTRJ, ESCON and FDDI can be used.
- Durability is 25 times stronger than standard patchcords.
- Ideal against mice.
- Simple cable thickness can be reduced to 2.8 mm.
- Full armor integrity is ensured for duplex and fan-out applications.
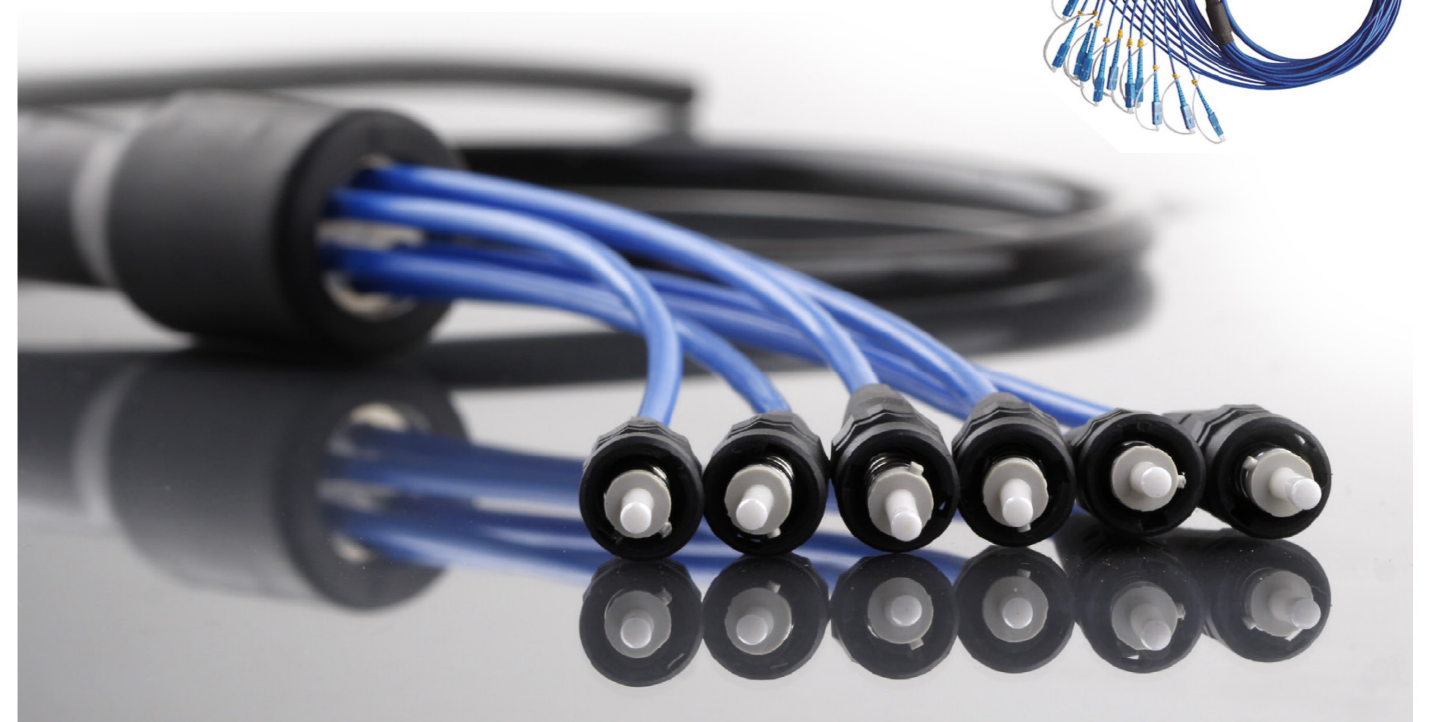
FIBER OPTIC PATCHCORDS
Fiber Optic Special Connection Cable | Armored Connection Cables

FIBER OPTIC PATCHCORDS
Multi Fiber Fan-Out Connection Cable | Fiber Optic Special Connection Cables
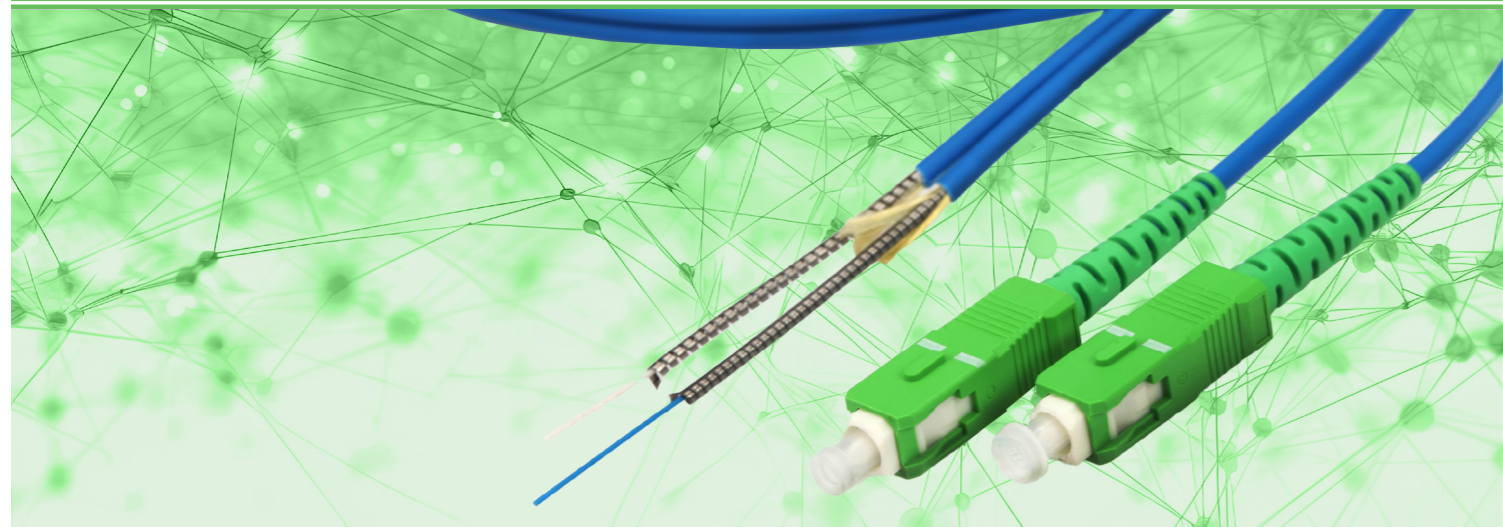
Features

- Made with armored optical cable, flexible metal tube protects the fiber optic cable.
- High pressure resistance, stamp durability and rat ant bite resistant.
- Small diameter, bending resistant and optimal flexibility.
- Aramid yarn reinforced optical cable has superior extension durability and is safe and reliable when connected with fiber optic connector.
- It can be used directly in various environments.
- In the indoor area, there is no need to use protection pipe and it is convenient for network operation and maintenance.

Features

- Number of fibers between 4 and 144
- Indoor and outdoor applications
- Single cable assembly with multi fiber termination
- Available in various connector types
- Custom configurations for cable and fan-out style/length
- Fan-out cable size: 0.9 mm, 2.00 mm and 3.00 mm

Features

- Telecommunication Networks
- Outdoor Plumbing
- Indoor Networks
- Overhead Distribution

Scope of Application

- Gigabit Ethernet
- Telecommunication Networks
- Active Device Termination
- Image

- Industrial
- Multimedia
- Military
- On-Site Installations

Optical Performance		
Type	Single Mode (APC polish)	Multimode (PC /Flat Polish)
Insertion Loss	≤ 0.2 db	≤ 0.2 db
Return Loss	PC > 45 dB UPC > 55 dB APC > 65 dB	UPC > 55 dB
Repeatability	≤ 0.1 db	≤ 0.1 db
Durability	≤ 0.2 dB	-≤ 0.2 dB
Interchangeability	≤ 0.1 dB	≤ 0.1 dB
Tensile Strenght	> 15 kg.	> 15 kg.
Operating Temperature	-40 ℃ to 85 ℃	-40 ℃ to 85 ℃
Storage Temperature	-40 ℃ to 85 ℃	-40 ℃ to 85 ℃

FIBER OPTIC PATCHCORDS

Fiber Optic Special Connection Cables | RRU Fiber / Branch Cable (Multi Mode)

RRU Branch Cable (50/125 Multi Mode)

Cable assembly designed for FTTA is suitable for indoor and outdoor use. The cable is terminated with LC duplex at both ends. Optical fiber cable type and specifications GYFJH 2a1a, (0.40dB/km at 850nm and 0.25dB/km at 1300nm). Cable sheath must be made of halogen-free flame retardant material, black, OD=7±0.2mm

Scope of Application

- 3G 4G base station usage
- Aviation and Defense
- Equipment diagnostics
- fiber optic sensor
- FTTA, FTTP, FTTX, WIMAX
- BBU, RRU, RRH, LTE
- Signal optical and remote fiber hunting etc. in outdoor RRU. The product used to transmit; secure screw connection
- Protection Level is IP67
- Low/add return loss, optically stable broadcast

Features

- Entrance Collar: Copper alloy
- Fiber Jacket: (FR) PE, LSZH
- Fiber Type: G.652D, G657, G657A2, G657A2/B2, Multimode
- 2 Fiber or 4 Fiber on request
- Water and dust proof, conforming to IP 67
- LC, SC, MU, etc. connector option
- Pulling force > 300N
- Insertion Loss: Typical 0.25 dB/km @1310 nm
- Return Loss (for single mode): > 50 dB for UPC, > 65 dB for APC
- Operating Temperature: -40 C / +80 C
- Minimum installation temperature: -20 C
- Storage temperature: -40 C / +70 C

Connector Features	Connector A	Connector B
• Insertion Loss	≤ 0.3 dB	≥ 0.3 dB
• Return Loss	45 dB	45 dB
• Durability	1000 times.	1000 times.
• Other parameters		
• Standard Fulfillment	GR326	GR326

Şekil Fiber Optik Kablo Düzeneği
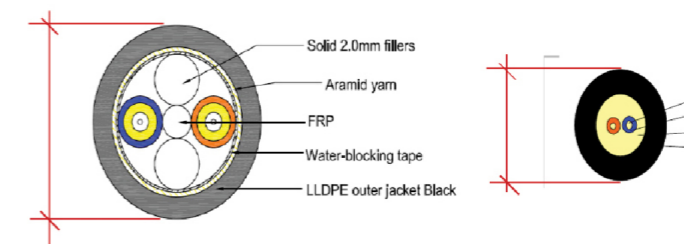
Product Code	Product Description
FO-05551PPDX70XXX	DLC/DLC 50/125 MM DX 7mm. L: x meter Patchcord
FO-05251PPDX70XXX	DSC/DLC 50/125 MM DX 7mm. L: x meter Patchcord
FO-05221PPDX70XXX	DSC/DSC 50/125 MM DX 7mm. L: x meter Patchcord

FIBER OPTIC PATCHCORDS

Fiber Optic Special Connection Cables | RRU Fiber / Branch Cable (Single Mode)

RRU Fiber / Branch Cable (Single Mode) | Fiber Optic Special Connection Cables
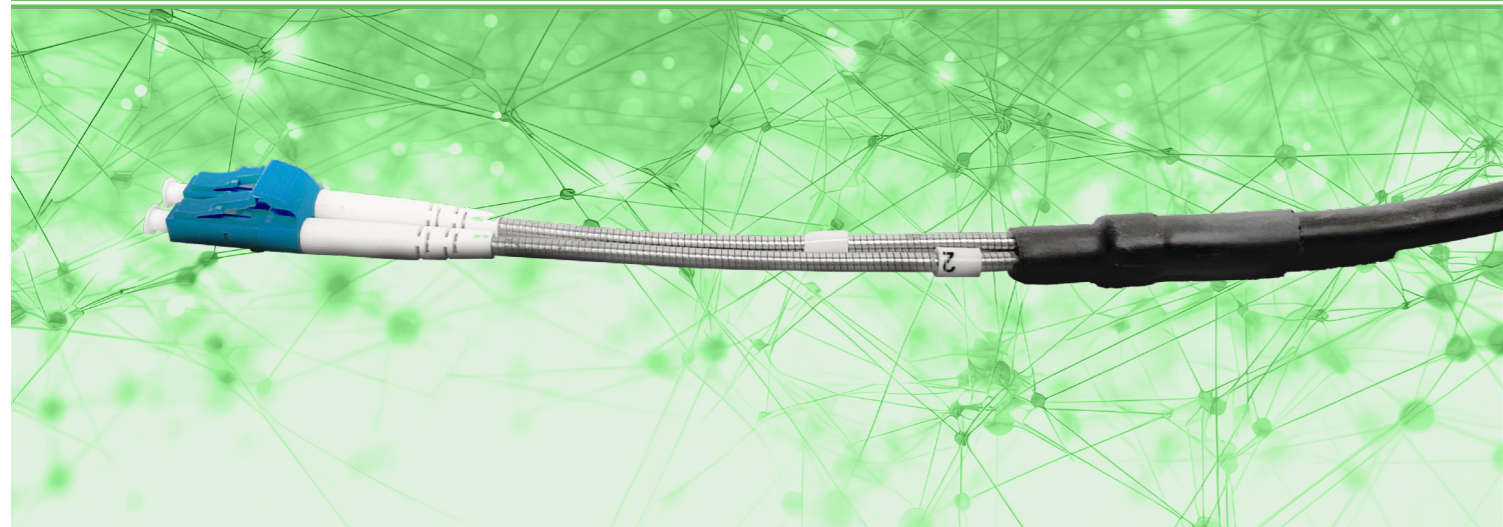
RRU Branch Cable (9/125 Multi Mode)

Cable assembly designed for FTTA is suitable for indoor and outdoor use. The cable is terminated with LC duplex at both ends. Optical fiber must comply with the ITU G.657A2 standard (0.40dB/km at 850nm and 0.25dB/km at 1550nm). The cable sheath must be made of halogen-free flame retardant material, black, OD=7±0.2mm.

Scope of Application

- 3G 4G base station usage
- Equipment diagnostics
- FTTA, FTTP, FTTX, WIMAX
- BBU, RRU, RRH, LTE
- Optical signal and remote fiber feeder etc. in outdoor RRU. The product used to transmit; secure screw connection
- Protection Level reaches IP67
- Low insertion/return loss, stable optical transmission

Features

- Fiber Jacket: (FR) PE, LSZH
- Fiber Type: G657A2/B2
- 2 Fiber or 4 Fiber Optionally
- Water and dust proof, conforming to IP 67
- LC, SC, MU etc. connector option
- Pulling force > 300N
- Insertion Loss: Typical 0.25 dB/km @1310 nm
- Return Loss (for single mode): > 50 dB for UPC, > 65 dB for APC
- Operating Temperature: -40 C / +85 C
- Minimum installation temperature: -15 C / +60 C
- Storage temperature: -40 C / +70 C

Connector Features	Connector A	Connector B
• Insertion Loss	≤ 0.2 dB	≥ 0.2 dB
• Return Loss	55 dB	55 dB
• Durability	1000 times.	1000 times.
• Other Parameters		
• Standard Fulfillment	GR326	GR326

Mandatory with Stand, +95°C   **Mandatory with Stand, +95°C**

Product Code	Product Description
FO-05554PPDX70XXX	DLC/DLC 9/125 SM DX 7mm. L: x meter Patchcord
FO-05254PPDX70XXX	DSC/DLC 9/125 SM DX 7mm. L: x meter Patchcord
FO-05224PPDX70XXX	DSC/DSC 9/125 SM DX 7mm. L: x meter Patchcord

FIBER OPTIC PATCHCORDS

Fiber Optic Special Connection Cables | RRU Fiber / Branch Cable (Single Mode)

RRU Branch Cablo (9/125 Multi Mode)

Cable assembly designed for FTTA is suitable for indoor and outdoor use. The cable is terminated with LC duplex at both ends. Optical fiber must comply with the ITU G.657A2 standard (0.40dB/km at 850nm and 0.25dB/km at 1550nm). The cable sheath must be made of halogen-free flame retardant material, black, OD=8.4±0.2mm

Scope of Application

- 3G 4G base station usage
- Equipment diagnostics
- FTTA, FTTP, FTTX, WIMAX
- BBU, RRU, RRH, LTE
- Optical signal and remote fiber feeder etc. in outdoor RRU. The product used to transmit; secure screw connection
- Protection Level reaches IP67
- Low insertion/return loss, stable optical transmission

Features

- Fiber Jacket: (FR) PE, LSZH
- Fiber Type: G657A2/B2
- 2 Fiber or 4 Fiber Optionally
- Water and dust proof, conforming to IP 67
- LC, SC, MU etc. connector option
- Pulling force > 300N
- Insertion Loss: Typical 0.25 dB/km @1310 nm
- Return Loss (for single mode): > 50 dB for UPC, > 65 dB for APC
- Operating Temperature: -20C~+85C
- Minimum installation temperature: -15 C / +60 C
- Storage temperature: -20C~+85C

Connector Features	Connector A	Connector B
• Insertion Loss	≤ 0.2 dB	≥ 0.2 dB
• Return Loss	55 dB	55 dB
• Durability	1000 times.	1000 times.
• Other parameters		
• Standard Fulfillment	GR326	GR326

Product Code	Product Description
FO-05554PPDX70XXX	DLC/DLC 9/125 SM DX 7mm. L: x meter Patchcord
FO-05254PPDX70XXX	DSC/DLC 9/125 SM DX 7mm. L: x meter Patchcord
FO-05224PPDX70XXX	DSC/DSC 9/125 SM DX 7mm. L: x meter Patchcord

FIBER OPTIC PATCHCORDS
Fiber Optic Special Patchcords | Loopback Connection Cables

FIBER OPTIC PATCHCORDS
Extended Beam Connection Cables | Fiber Optic Special Connection Cables
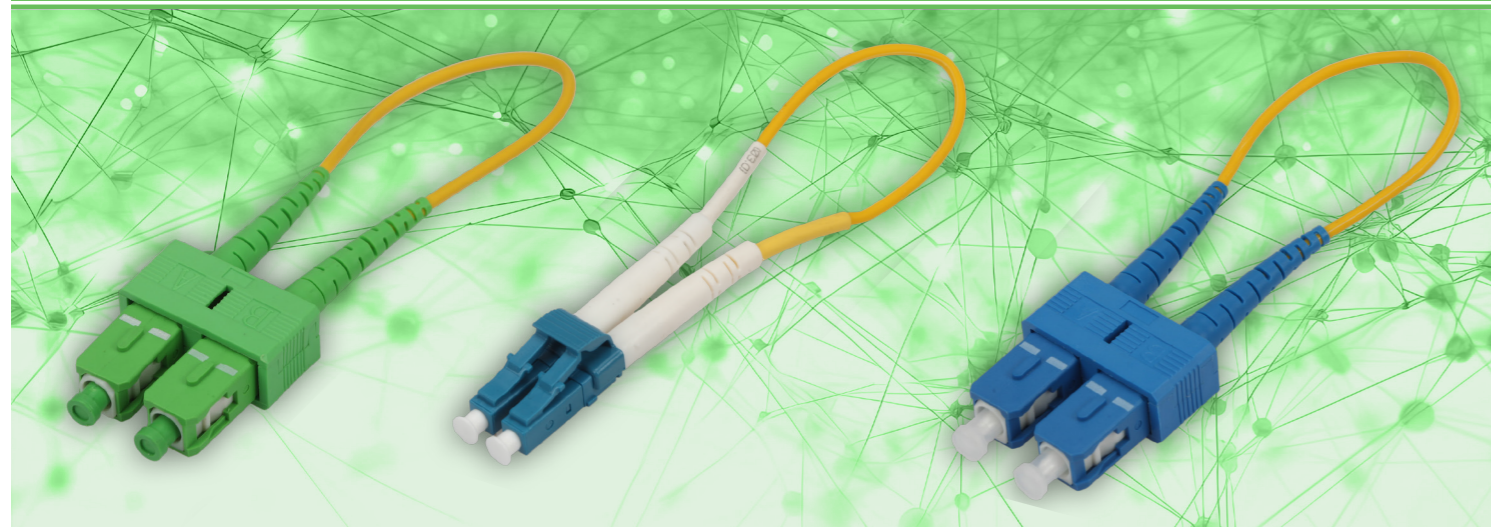
Features

- High temperature resistance
- Easy interchangeability
- high durability
- Low insertion loss
- High back reflection loss
- Standard:TIE/EIA 568-A Compliant
- Compatible with Fast Ethernet, Fiber
- Channel, Gigabit Ethernet etc.
- Custom mounts available

Scope of Application

- CATV and Multimedia
- Telecommunication Networks
- Connection for O/E Modules
- Data Processing Networks
- Optical Key Frame Connection
- Asynchronous Transmission Mode(ATM)
- Used in fiber optic tests
- network restorations

Extended Beam Connection Cables

EB connector systems are designed for military and industrial harsh environments. Fiber optic ferrules do not physically come into contact with their counterparts, thus preventing possible damage to the optical fiber surface. Instead of physical contact, the optical fiber is protected behind hard-coated extended beam lenses. Even if the connector falls into the mud, it is simply cleaned and then easily reconnected with the optical connection.

IPORT manufactures extended beam cable systems for the Turkish Army, Armed Forces and companies such as Aselsan for harsh environment areas around the world

Extended Beam Connection Cables

	Indoor	Outdoor
	Clean Environmental Conditions	Harsh Environmental conditions
	Temperature Control	Air Extremities
	Sparse Connection	Frequent Deployment

✔ PHYSICAL CONTACT ✘ ✔ EXPANDED BEAM ✔

- Physical contact connectors are where fibers are normally assembled in a cylindrical ferrule. This ferrule tip is then specially polished, allowing two ferrules to be joined together. This provides a fiber connection that is aligned using high precision components.

- Extended beam connectors are where a lens is placed in front of the fiber to expand the light beam. The expanded beam is then refocused on the fiber of the matching half. The distance between mating halves is variable

Specifications	
Typical Insertion Loss	≤ 0.70 dB
Connector Type	SC / LC / MU etc available
Maximum Insertion Loss	SM / MM available
Return Loss	0.9 mm / 2.0 mm / 3.0 mm / 0.25 mm Repeatability ≤ 0.2 (500 matings)

LAN CABLES

LAN Cables UTP Cat5e Stranded
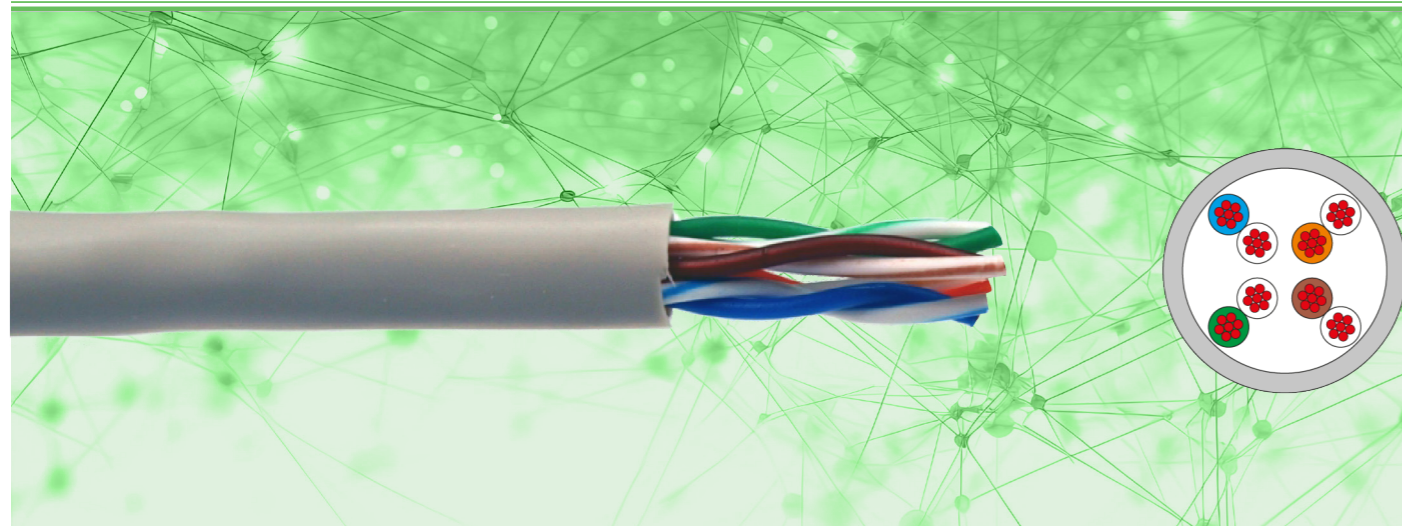
Features and Advantages

- It has CAT5e standard features
- Can be used for CAT5e patch cables
- Available in different colors on request.

Structure

Conductor (diameter mm): 26AWG Stranded BC
Insulation (diameter mm): HDPE
Sheath (diameter mm): PVC/LSZH 5.4
Number of pairs: 4

Technicial Specifications

- Temperature range(C°): -20 to 70
- Speed ratio (%): 66
- Linear resistance (max.): <170 Ohm/km
- Common capacitance (nom.): 50 pF/m
- Characteristic impedance:
- (1 to 100 MHz)100±15 Ohm
- Bending radius (min.): 8 x cable diameter
- Flame retardant: CMP, CMR, CMG, CM
- UL file number E334179

Conductivity Properties

Frequency (MHz)	Insertion Loss (dB/100m)	Next Loss (dB/100m)	Return Loss (dB/100m)
1 MHz	3.0	65.3	20.0
4 MHz	6.2	56.3	23.3
10 MHz	9.8	50.3	25.0
16 MHz	12.3	47.2	25.0
20 MHz	14.0	45.8	25.0
25 MHz	15.7	44.3	24.2
31.25 MHz	17.7	42.9	23.3
62.50 MHz	25.6	38.4	20.7
100 MHz	33.0	35.3	19.0

Standards And Performance

- CABLE: - IEC 61156
- EN 50288-3-2
- SYSTEM: - EIA/TIA 568-B.2 – CAT5e
- ISO 11801 Edition 2 - CLASS D
- EN 50173 Edition 2 – CLASS D

Network Applications

- ISDN - VoIP
- TOKEN RING 4/16 Mbits - 100 VGAnyLAN
- TP-PMD/TP-DDI - ATM 155, 622,1200 Mbits
- ETHERNET: 10 Base T, 100 Base Tx,
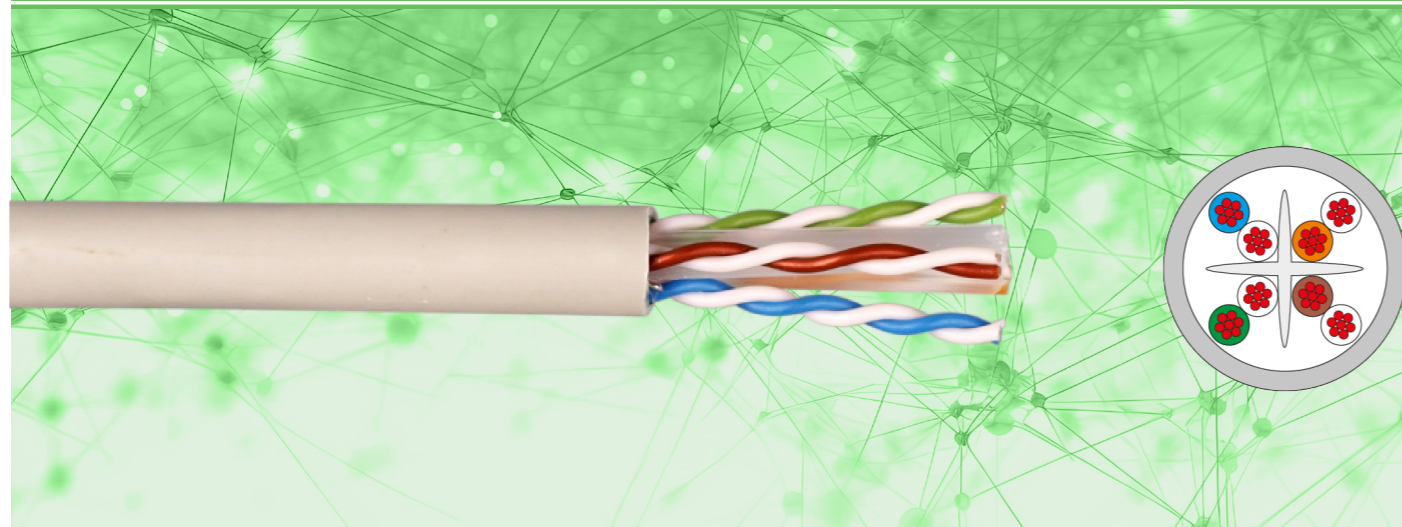- 100 Base T4, 1000 Base T

Product Code	Product Description
FO-LC5eS-UTPP	UTP CAT5e Stranded PVC Kablo
FO-LC5eS-UTPH	UTP CAT5e Stranded LSZH Kablo

Features and Advantages

- It has CAT5e standard features
- Can be used for CAT5e patch cables
- Available in different colors on request.

Structure

Conductor (diameter mm): 26AWG Stranded BC
Insulation (diameter mm): HDPE
Sheath (diameter mm): PVC/LSZH 5.6
Number of pairs: 4
Ground wire:26AWG TC
AI-PET protected: 110%

Technicial Specifications

- Temperature range(C°): -20 to 70
- Speed ratio (%): 66
- Linear resistance (max.): <170 Ohm/km
- Common capacitance (nom.): 50 pF/m
- Characteristic impedance:
- (1 to 100 MHz)100±15 Ohm
- Bending radius (min.): 8 x cable diameter
- Flame retardant: CMP, CMR, CMG, CM
- UL file number E334179

Conductivity Properties

Frequency (MHz)	Insertion Loss (dB/100m)	Next Loss (dB/100m)	Return Loss (dB/100m)
1 MHz	3.0	65.3	20.0
4 MHz	6.2	56.3	23.3
10 MHz	9.8	50.3	25.0
16 MHz	12.3	47.2	25.0
20 MHz	14.0	45.8	25.0
25 MHz	15.7	44.3	24.2
31.25 MHz	17.7	42.9	23.3
62.50 MHz	25.6	38.4	20.7
100 MHz	33.0	35.3	19.0

Standards And Performance

- CABLE: - IEC 61156
- EN 50288-3-2
- SYSTEM: - EIA/TIA 568-B.2 – CAT5e
- ISO 11801 Edition 2 - CLASS D
- EN 50173 Edition 2 – CLASS D

Network Applications

- ISDN - VoIP
- TOKEN RING 4/16 Mbits - 100 VGAnyLAN
- TP-PMD/TP-DDI - ATM 155, 622,1200 Mbits
- ETHERNET: 10 Base T, 100 Base Tx,
- 100 Base T4, 1000 Base T

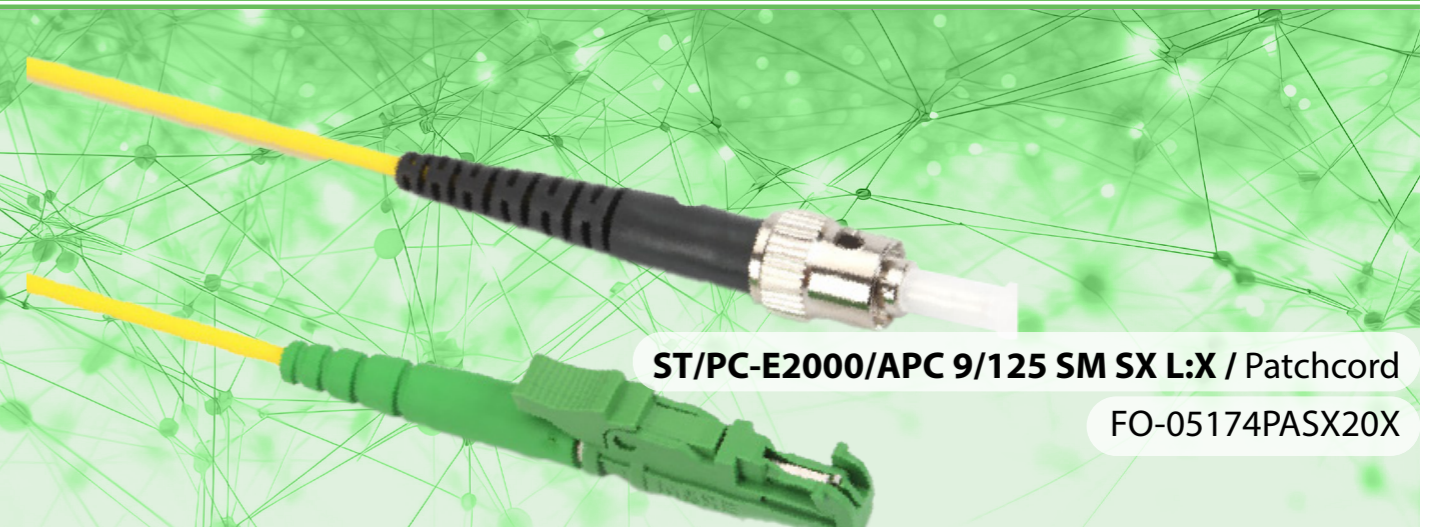| Product Code	Product Description
FO-LC5eS-FTPP	FTP CAT5e Stranded PVC Kablo
FO-LC5eS-FTPH	FTP CAT5e Stranded LSZH Kablo

LAN CABLES

LAN Cables UTP Cat6e Stranded
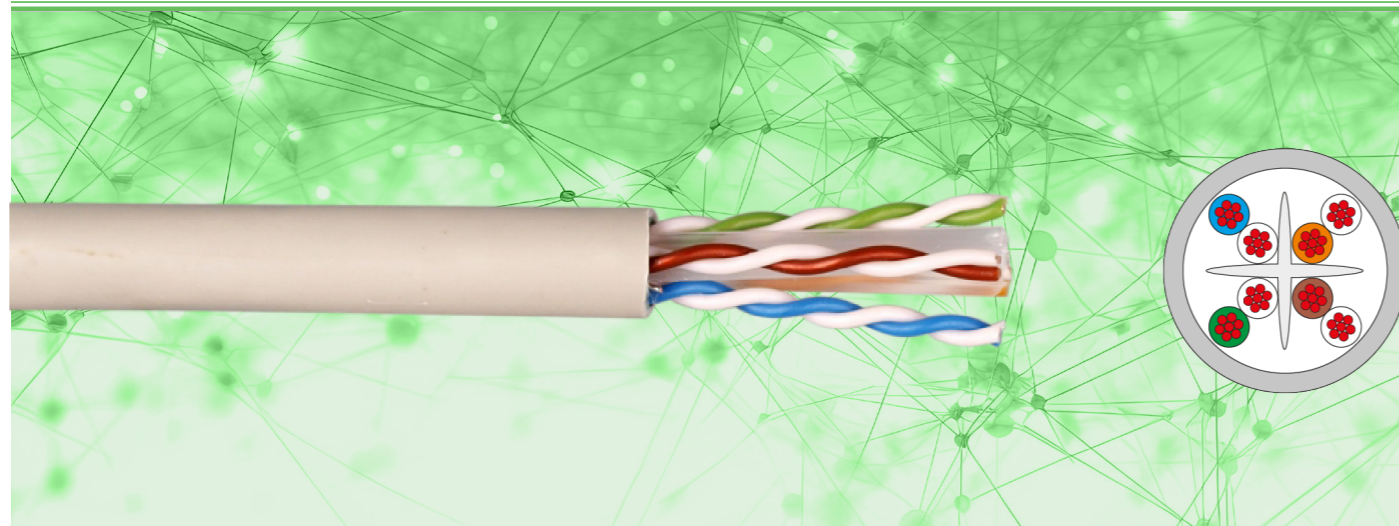
Features and Advantages

- It has CAT6e standard features
- Can be used for CAT6e UTP patch cables
- Available in different colors on request.

Structure

Conductor (diameter mm): 24AWG Stranded BC
Insulation (diameter mm): HDPE
Sheath (diameter mm): PVC/LSZH 5.7
Number of pairs: 4
Flat filter: Low Density PE

Technicial Specifications

- Temperature range(C°): -20 to 70
- Speed ratio (%): 66
- Linear resistance (max.): <154 Ohm/km
- Common capacitance (nom.): 42 pF/m
- Characteristic impedance:
- (1 to 100 MHz)100±15 Ohm
- Bending radius (min.): 8 x cable diameter
- Flame retardant: CMP, CMR, CMG, CM
- UL file number E334179

Conductivity Properties

Frequency (MHz)	Insertion Loss (dB/100m)	Next Loss (dB/100m)	Return Loss (dB/100m)
1 MHz	3.0	74.3	20.0
4 MHz	6.0	65.3	23.3
10 MHz	9.0	59.3	25.0
16 MHz	11.0	56.2	25.0
20 MHz	13.0	53.3	24.2
25 MHz	16.0	51.9	23.3
31.25 MHz	30.0	44.3	19.0
62.50 MHz	44.0	39.8	16.4
100 MHz	49.0	38.3	15.6

Standards And Performance

- CABLE: - IEC 61156
- EN 50288-3-2
- SYSTEM: - EIA/TIA 568-B.2 – CAT5e
- ISO 11801 Edition 2 - CLASS D
- EN 50173 Edition 2 – CLASS D

Network Applications

- ISDN - VoIP
- TOKEN RING 4/16 Mbits - 100 VGAnyLAN
- TP-PMD/TP-DDI - ATM 155, 622,1200 Mbits
- ETHERNET: 10 Base T, 100 Base Tx,
- 100 Base T4, 1000 Base T

Product Code	Product Description
FO-LC6S-UTPP	UTP CAT6 Stranded PVC Cable
FO-LC6S-UTPH	UTP CAT6 Stranded LSZH Cable

LAN CABLES

LAN Cables UTP Cat6e Stranded

Features and Advantages

- It has U/FTP Cat6 standard features
- Can be used for U/FTP Cat6 patch cables
- Available in different colors on request.

Structure

Conductor (diameter mm): 26AWG Stranded BC
Insulation (diameter mm): HDPE
Sheath (diameter mm): PVC/LSZH 5.6
Number of pairs: 4
Ground wire:26AWG TC
AI-PET protected: 110%

Technicial Specifications

- Temperature range(C°): -20 to 70
- Speed ratio (%): 66
- Linear resistance (max.): <154 Ohm/km
- Common capacitance (nom.): 42 pF/m
- Characteristic impedance:
- (1 to 100 MHz)100±15 Ohm
- Bending radius (min.): 8 x cable diameter
- Flame retardant: CMP, CMR, CMG, CM
- UL file number E334179

Conductivity Properties

Frequency (MHz)	Insertion Loss (dB/100m)	Next Loss (dB/100m)	Return Loss (dB/100m)
1 MHz	3.0	74.3	20.0
4 MHz	6.0	65.3	23.3
10 MHz	9.0	59.3	25.0
16 MHz	11.0	56.2	25.0
20 MHz	13.0	53.3	24.2
25 MHz	16.0	51.9	23.3
31.25 MHz	30.0	44.3	19.0
62.50 MHz	44.0	39.8	16.4
100 MHz	49.0	38.3	15.6

Standards And Performance

- CABLE: - IEC 61156
- EN 50288-3-2
- SYSTEM: - EIA/TIA 568-B.2 – CAT5e
- ISO 11801 Edition 2 - CLASS D
- EN 50173 Edition 2 – CLASS D

Network Applications

- ISDN - VoIP
- TOKEN RING 4/16 Mbits - 100 VGAnyLAN
- TP-PMD/TP-DDI - ATM 155, 622,1200 Mbits
- ETHERNET: 10 Base T, 100 Base Tx,
- 100 Base T4, 1000 Base T

Product Code	Product Description
FO-LC6S-UFTPP	U/FTP CAT6 Stranded PVC
FO-LC6S-UFTPH	U/FTP CAT6 Stranded LSZH Cable

LAN CABLES
LAN Cables UTP Cat6e Stranded

FIBER OPTIC PATCHCORDS
9/125 Single Mode Simplex Duplex Patchcords

ST/PC-E2000/APC 9/125 SM SX L:X / Patchcord

FO-05174PASX20X

Features and Advantages

- Exceeds CAT6a standard specifications
- Can be used for CAT6a patch cables
- Available in different colors on request.

Structure

Conductor (diameter mm): 24/26AWG Stranded BC
Insulation (diameter mm): Foamed PE
Sheath (diameter mm): PVC/LSZH 5.8
Number of pairs: 4
Ground wire: Solid TC AWG 26
Individual Protection: Al/Pet foil / 110% coverage
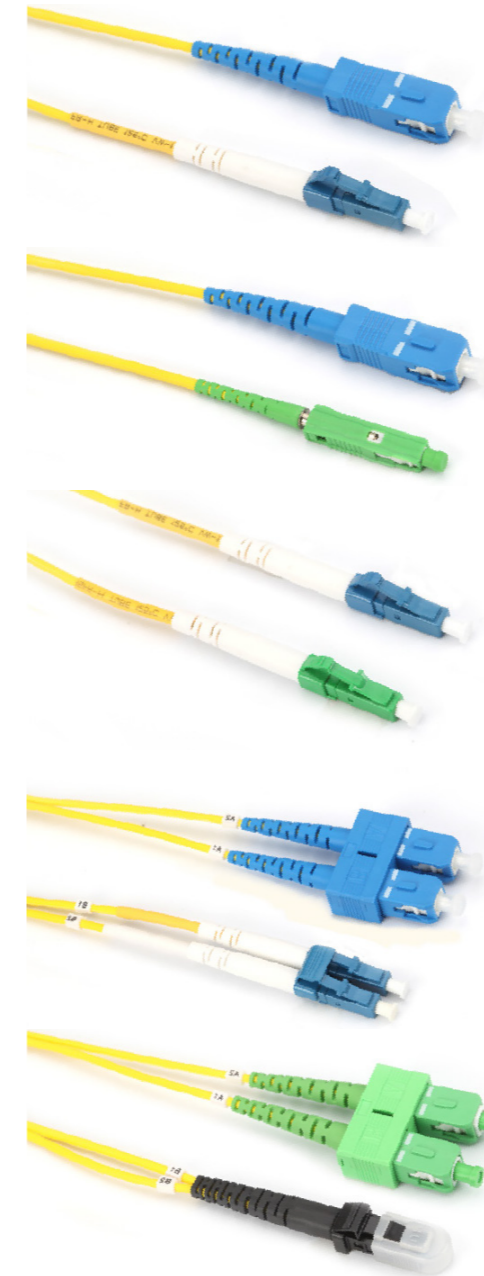
SC/PC-LC/PC 9/125 SM SX L:X Patchcord

FO-05244PPSX20X

Technicial Specifications

- Temperature range(C°): -20 to 70
- Speed ratio (%): 66
- Linear resistance (max.): <154 Ohm/km
- Common capacitance (nom.): 42 pF/m
- Characteristic impedance:
- (1 to 100 MHz)100±15 Ohm
- Bending radius (min.): 8 x cable diameter
- Flame retardant: CMP, CMR, CMG, CM
- UL file number E334179

Conductivity Properties

Frequency (MHz)	Insertion Loss (dB/100m)	Next Loss (dB/100m)	Return Loss (dB/100m)
1 MHz	3.0	74.3	20.0
4 MHz	6.0	65.3	23.3
10 MHz	9.0	59.3	25.0
16 MHz	11.0	56.2	25.0
20 MHz	13.0	53.3	24.2
25 MHz	16.0	51.9	23.3
31.25 MHz	30.0	44.3	19.0
62.50 MHz	44.0	39.8	16.4
100 MHz	49.0	38.3	15.6

SC/PC-MU/APC 9/125 SM SX L:X Patchcord

FO-05284PASX20X

LC/PC-LC/APC 9/125 SM SX L:X Patchcord

FO-05444PASX20X

Standards And Performance

- CABLE: - IEC 61156
- EN 50288-3-2
- SYSTEM: - EIA/TIA 568-B.2 – CAT5e
- ISO 11801 Edition 2 - CLASS D
- EN 50173 Edition 2 – CLASS D

Network Applications

- » ISDN - VoIP
- » TOKEN RING 4/16 Mbits - 100 VGAnyLAN
- » TP-PMD/TP-DDI - ATM 155, 622,1200 Mbits
- » ETHERNET: 10 Base T, 100 Base Tx,
- » 100 Base T4, 1000 Base T

SC/PC-LC/PC 9/125 SM DX L:X Patchcord

FO-05254PPDX20X

FC/APC-MU/PC 9/125 SM DX L:X Patchcord

FO-05264APX20X

Product Code	Product Description
FO-LC6S-UTPP	UTP CAT6 Stranded PVC Cable
FO-LC6S-UTPH	UTP CAT6 Stranded LSZH Cable
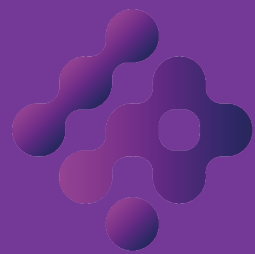
IPORT

NETWORK SYSTEMS

FIBER OPTIC ADAPTERS

FIBER OPTIC ADAPTERS

FIBER OPTIC ADAPTERS

Adapters

Fiber optic adapters are used in fiber optic connections, their typical use is to provide a cable to cable fiber connection. people sometimes They also call them matching sleeves and hybrid adapters, matching sleeves means this fiber optic adapter is used to connect the same type of fiber optic connectors while hybrid adapters are types of fiber optic adapters used to connect different types of fiber optic connectors. IPORT fiber optic adapters are known for their stability, providing reliable solutions for fiber connections, single mode fiber optic adapters and multimode fiber optic adapters are available on request. IPORT adapter uses high quality raw materials and this fiber optic produces the adapters strictly according to international standards, which makes our fiber optic adapters fully compatible with other manufacturers' products on the market.
IPORT fiber optic adapters are of high quality and there are many different types to meet different customer needs.

Scope of Application

- Telecommunication Networks
- CATV Networks
- Metro Networks
- Cable TV Applications
- Data Processing Networks
- LAN and WAN
- Industrial, Military and Medical Applications

- Broadband
- Multimedia
- Active Device Termination
- Measurement and Control Systems
- Telecommunications and Computer Networks
- FTTx, FTTH

Features

- Compliant with Telcordia, ANSI, TIA/EIA and ISO standards
- Highly stable pairing and separation properties
- Available with ST, SC, FC and LC connectors
- Standard products are available as pigtails
- Pre-installed tow eye kits available
- Low Insertion Loss and High Return Loss
- High Reliability and Stability
- Correct Dimensions

- Single and Double Panel cuts
- Available without flanges or with flanges for double, saving panel space
- Conforms to JIS5974 and bellcore GR-326 standard
- Compliant with IEC874-14 and IEC874-19
- RoHS compliant
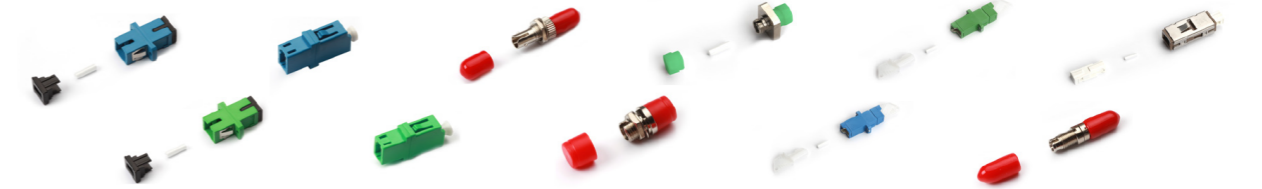
ADAPTER TYPE	SC	SC/APC	LC	LC/APC	ST	FC	FC/APC	e2000	e2000/APC	DIN	MU
Casing Color											
SM PC	blue		blue		metalic	metalic		blue		metalic	brown
SM APC		green		green			metalic		green		
MM	beige / turquoise	(OM3 / OM4)									brown
Fiber Type											
9/125				OS1/OS2				OS1/OS2			
50/125 / OM3				OM2/OM3/OM4				OM2/OM3/OM4			
62.5/125				OM1				OM1			
Features											
Automatic Shutter											
SX - simplex	*	*						*	*		
DX - duplex	*	*	*	*							
2xDX - 2x duplex (quad)			*	*							*
Transmission Parameters											
IL typical (dB) :	<0,1	<0,1	<0,1	<0,1	<0,2	<0,1	<0,1	<0,2	<0,2	<0,2	<0,2
IL maximum (dB) :	<0,2	<0,2	<0,2	<0,2	<0,3	<0,2	<0,2	<0,3	<0,3	<0,3	<0,3
Change of IL (dB) / 500 c. :	<0,2	<0,2	<0,15	<0,15	<0,1	<0,2	<0,2	<0,2	<0,1	<0,2	<0,2
Mechanical and Temperature Performance :											
Durability (cycle)				500 - 1000							
Operation temperature (°C) :				−40° to + 85°							
Storage temperature (°C) :				−40° to + 85°							
Combustibility											
UL 94 V-0	*	*	*	*				*	*		*

FIBER OPTIC ADAPTERS

ST Adapters

FIBER OPTIC ADAPTERS
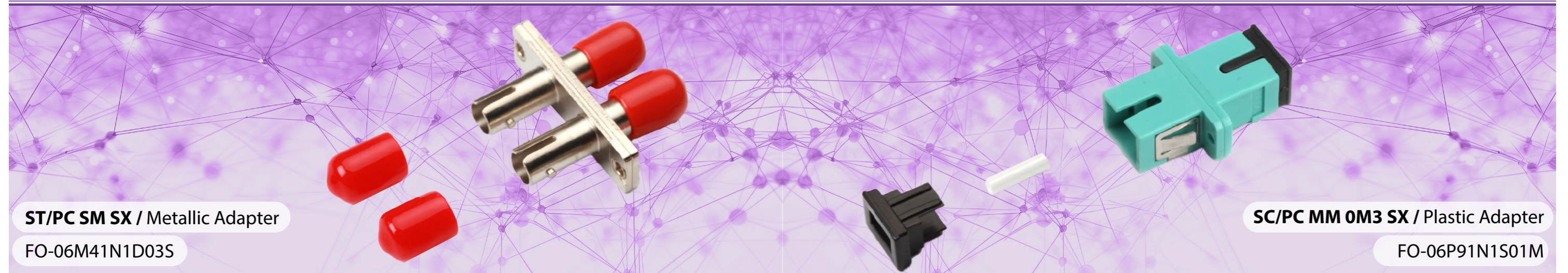
SC Adapters

ST/PC SM SX / Metallic Adapter

FO-06M41N1D03S

SC/PC MM 0M3 SX / Plastic Adapter

FO-06P91N1S01M

ST/PC SM SX / Metallic Adapter

FO-06M41N1S03S

SC/PC SM SX / Metallic Adapter

FO-06P11N1S01S

ST/PC MM SX / Metallic Adapter

FO-06M41N1S03M

SC/APC SM SX / Metallic Adapter

FO-06P31N1S01A

ST/PC SM SX / Metallic Adapter

FO-06P11N1D03S

SC/PC MM 0M4 SX / Metallic Adapter

FO-06P101N1S01M

ST/PC MM DX / Metallic Adapter

FO-06M41N1D03M

SC/PC MM SX / Metallic Adapter

FO-06P21N1S01M

SC/PC SM SX / Metallic Adapter

FO-06M11N1S01S

FIBER OPTIC ADAPTERS

FIBER OPTIC ADAPTERS

SC Adapter
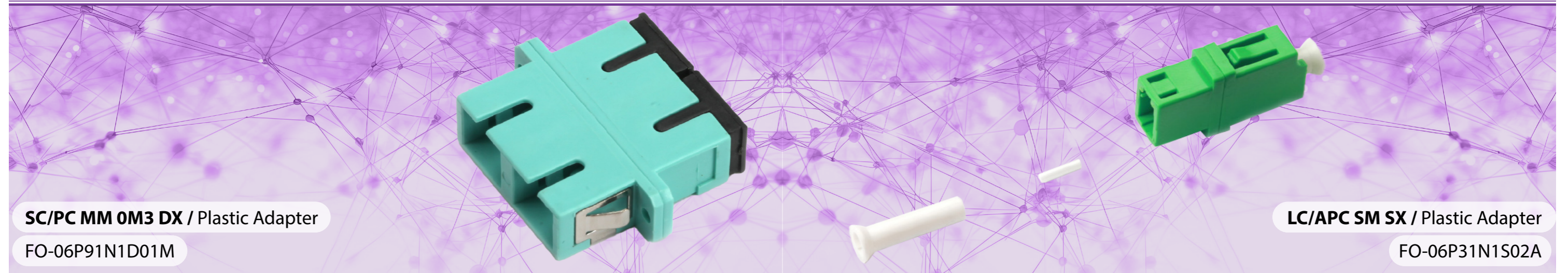
LC Adapters

SC/PC MM 0M3 DX / Plastic Adapter

FO-06P91N1D01M

LC/APC SM SX / Plastic Adapter

FO-06P31N1S02A

SC/PC SM DX / Plastic Adapter

FO-06P11N1D01S

LC/PC SM SX / Plastic Adapter

FO-06P11N1S02S

SC/APC SM DX / Plastic Adapter

FO-06P31N1D01A

LC/PC MM SX / Plastic Adapter

FO-06P21N1S02M

SC/PC MM 0M4 DX / Plastic Adapter

FO-06P101N1D01M

LC/PC SM DX / Plastic Adapter

FO-06P11N1D02S

SC/PC MM DX / Plastic Adapter

FO-06P21N1D01M

LC/APC SM DX / Plastic Adapter

FO-06P31N1D02A

LC/PC MM DX / Metallic Adapter

FO-06P21N1D02M

FIBER OPTIC ADAPTERS

LC Adapters
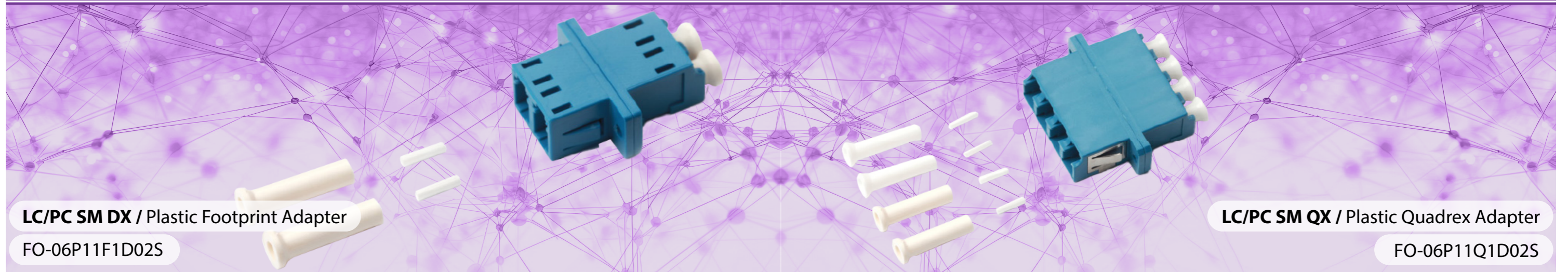
LC/PC SM DX / Plastic Footprint Adapter

FO-06P11F1D02S

LC/PC SM QX / Plastic Quadrex Adapter

FO-06P11Q1D02S

LC/APC SM DX / Plastic Footprint Adapter

FO-06P31F1D02A

LC/APC SM QX / Plastic Quadrex Adapter

FO-06P31Q1D02A

LC/PC MM 0M3 DX / Plastic Footprint Adapter

FO-06P91F1D02M

LC/PC MM QX / Plastic Quadrex Adapter

FO-06P21Q1D02M

LC/PC MM OM4 DX / Plastic Footprint Adaptr

FO-06P101F1D02M

LC/PC MM DX / Plastic Footprint Adapter

FO-06P21F1D02M

IPORT | TELECOMMUNICATION AND CABLE SYSTEMS

FIBER OPTIC ADAPTERS
FC Adapters

FIBER OPTIC ADAPTERS
Special Adapters
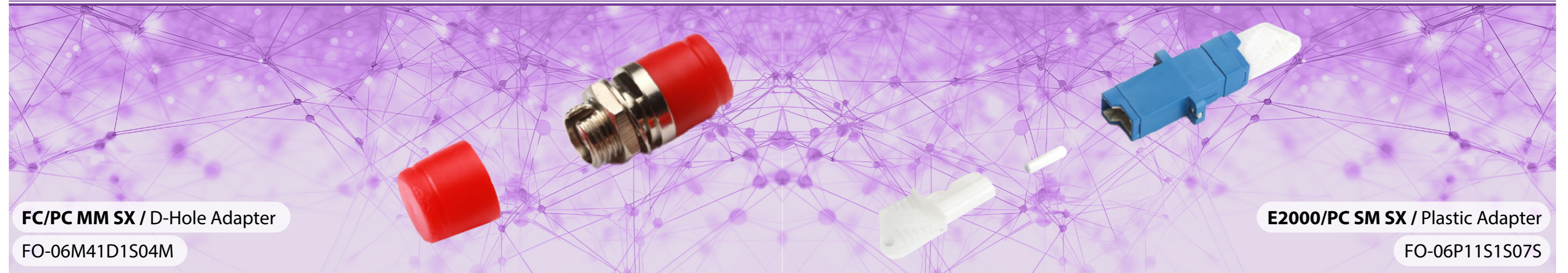
FC/PC MM SX / D-Hole Adapter
FO-06M41D1S04M

E2000/PC SM SX / Plastic Adapter
FO-06P11S1S07S

FC/PC SM SX / D-Hole Adapter
FO-06M41D1S04S

E2000/APC SM SX / Plastic Adapter
FO-06P31S1S07A

FC/APC SM SX / D-Hole Adaptr
FO-06M41D1S04A

MPO SM DX / Plastic Adapter
FO-06P51S1D11S

FC/PC SM SX / SQUARE Metallic Adapter
FO-06M41S1S05S

MPO MM DX / Plastic Adapter
FO-06P51S1D11M

FC/APC SM SX / SQUARE Metallic Adapter
FO-06M41S1S05A

FC/PC MM SX / SQUARE Metallic Adapter
FO-06M41S1S05M

FIBER OPTIC ADAPTERS

Hybrid Adapters

FIBER OPTIC ADAPTERS

LC
ADAPTERS

SC/PC-LC/PC SM SX / Metal Adapter

FO-06M41H1S16S

SC/PC-FC/PC SM SX / Metal Adapter

FO-06M41H1S13S

SC/PC-ST/PC SM SX / Metal Adapter

FO-06M41H1S14S

FC/PC-LC/PC SM SX / Metal Adapter

FO-06M41H1S17S

FC/PC-ST/PC SM SX / Plastic Adapter

FO-06P41H1S15S

ST/PC-LC/PC SM SX / Metal Adapter

FO-06M41H1S18S

FIBER OPTIC ADAPTERS
Locking Adapters

FIBER OPTIC ADAPTERS
Locking Adapters

SC/PC SM SX / Plastic Adapter
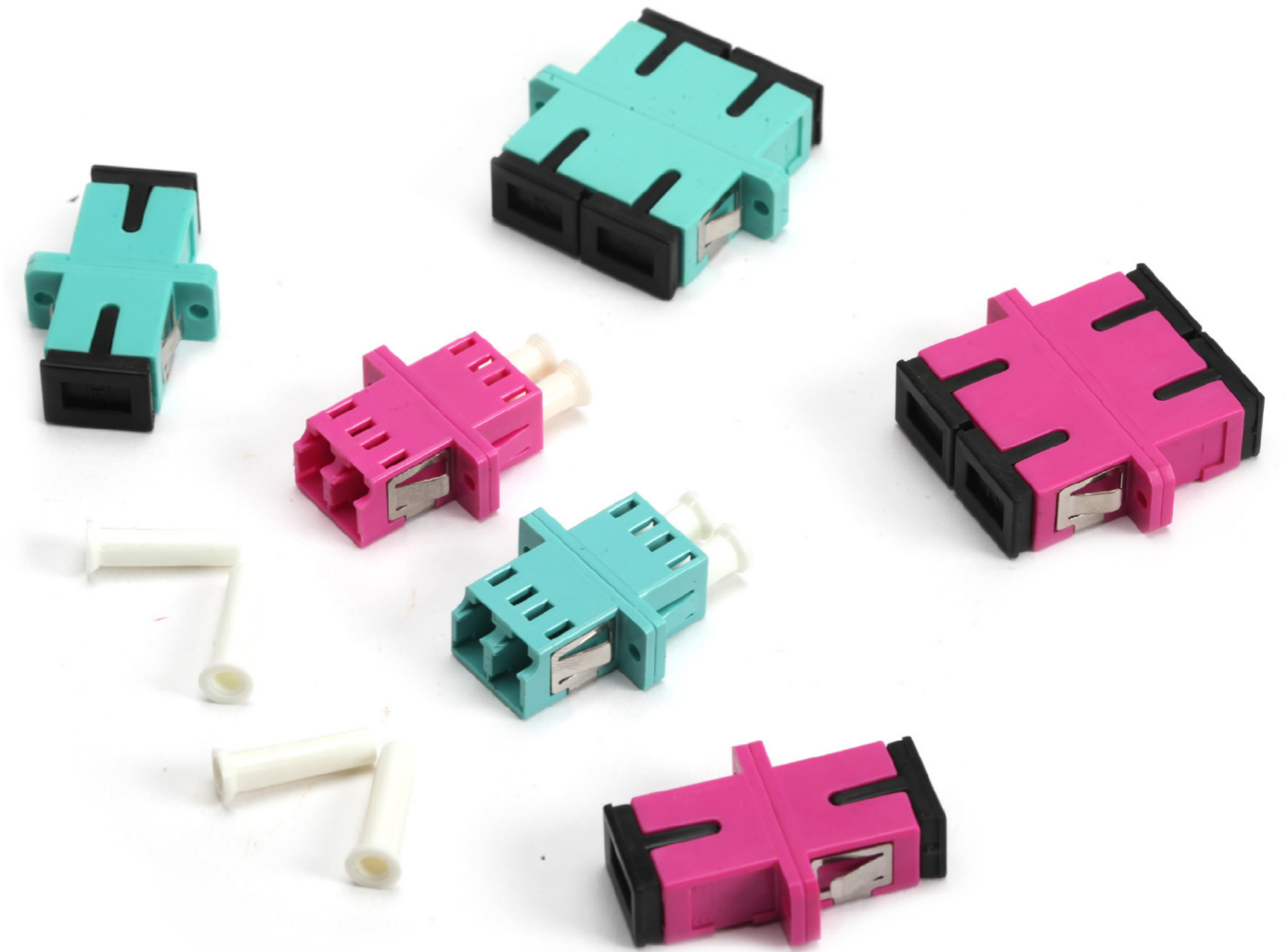
FO-06P12N1S01S

What are the advantages?

• Break traditions!
• Quick installation!
• Quick connection!
• Save your time!

External

Internal

• First, snap the headboard into place.

• Lock the metal parts on the side by squeezing them.
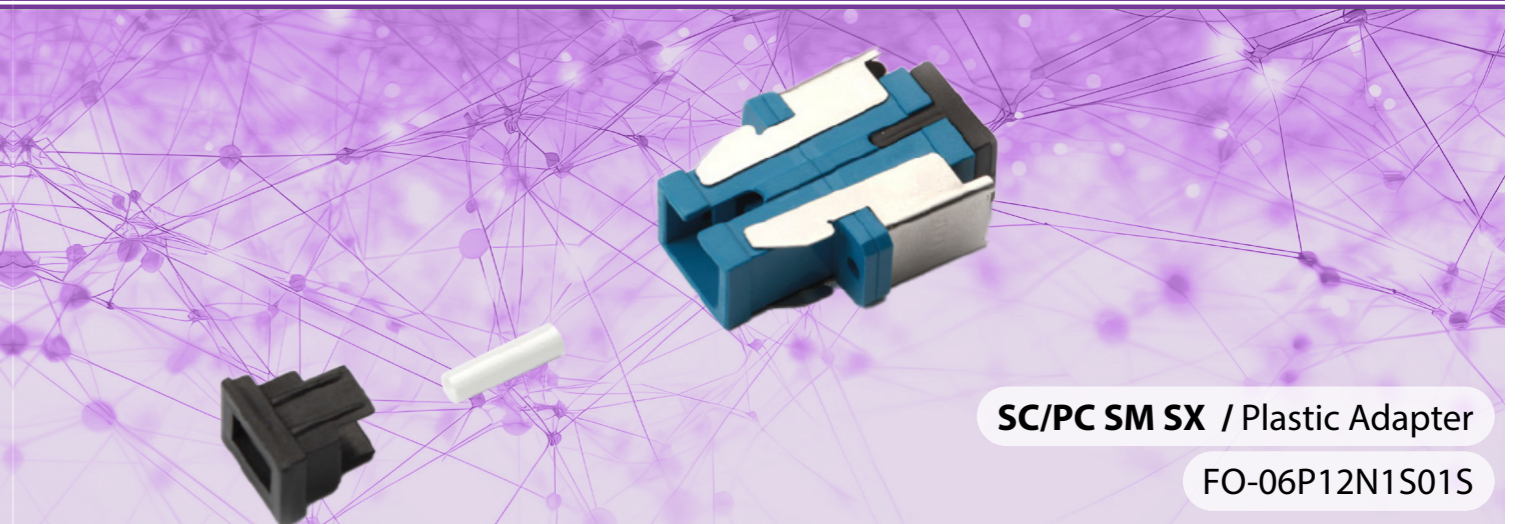
SC/APC SM SX / Plastic Adapter

FO-06P32N1S01A

SC/PC MM SX / Plastic Adapter

FO-06P22N1S01M

SC/PC SM DX / Plastic Adapter

FO-06P12N1D01S

SC/APC SM DX / Plastic Adapter

FO-06P32N1D01A

SC/PC MM DX / Plastic Adapter

FO-06P22N1D01M
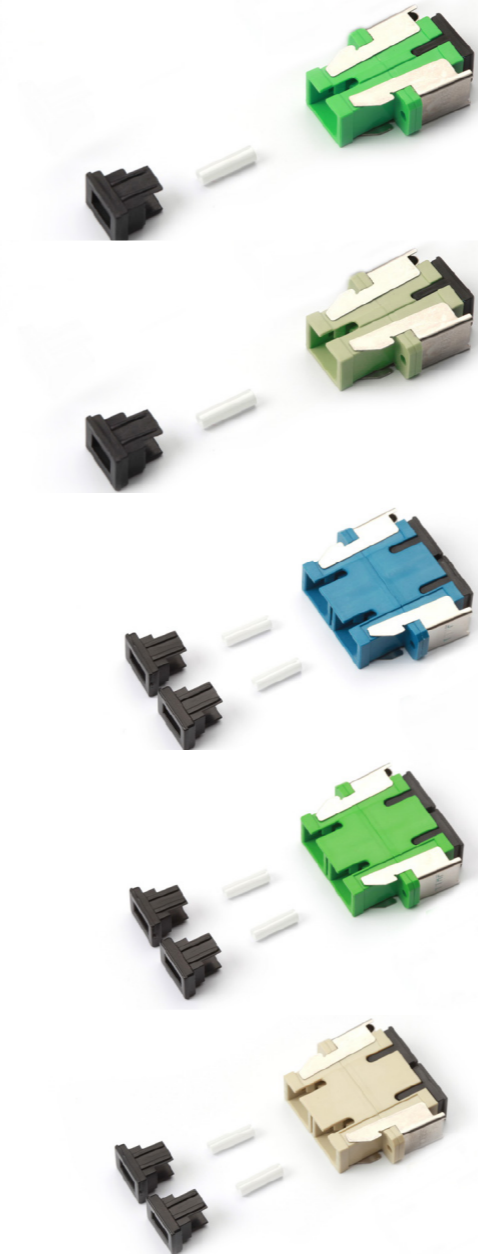
FIBER OPTIC ADAPTERS
Shutter Adapter
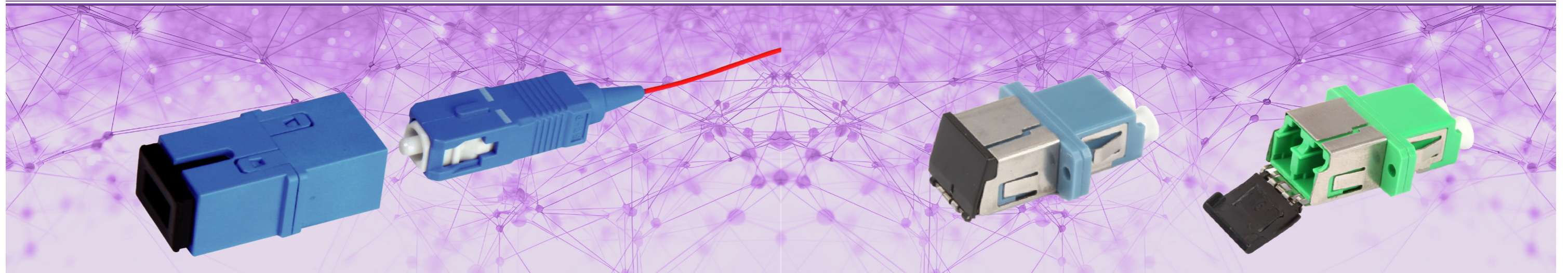
Shutter Adapter

- IPORT has released a curtain adapter with a special design that effectively protects the connector fereul from dust.
- IPORT is fully automatic and provides all the necessary eye protection from harmful light without the need for manual intervention.
- IPORT internal curtain adapters are available with zirconia or phosphor bronze alignment sleeves in SC simplex/duplex and LC duplex/quad designs and in flanged or flanged body types.

STEP1 STEP2 STEP3
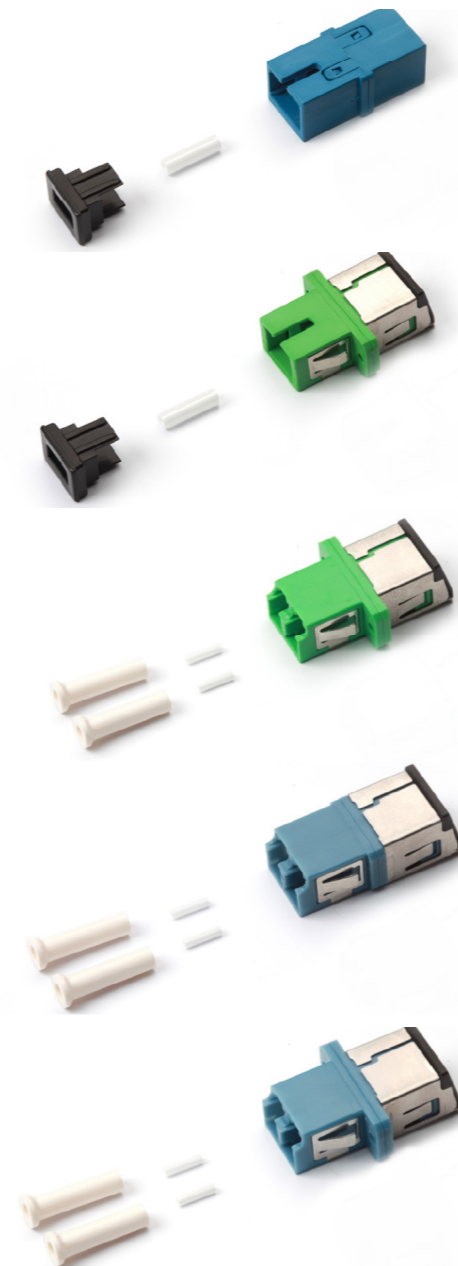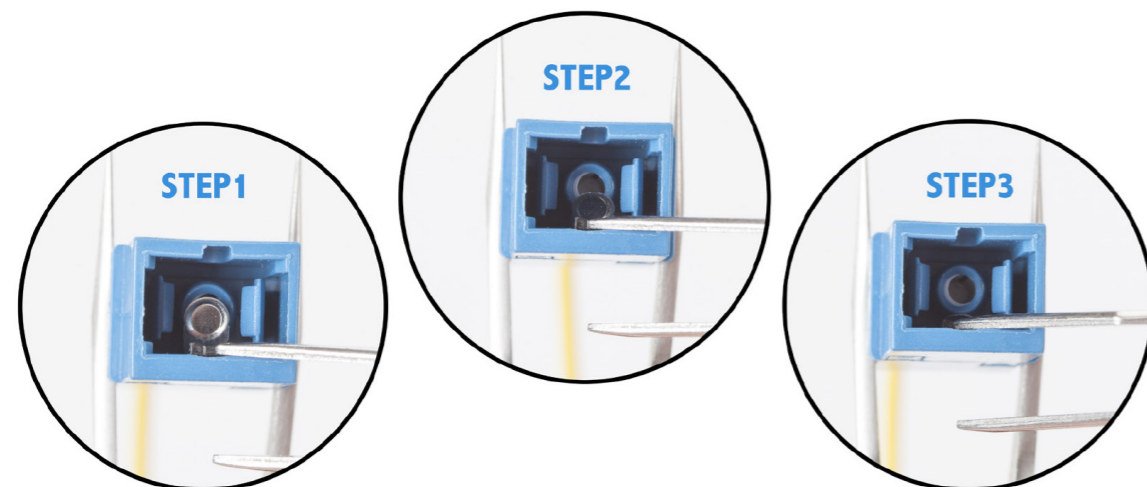
SC/PC SM SX / Shutter Adapter
FO-06P14N1S01S

SC/APC SM SX/ Shutter Adapter
FO-06P33N1S01A

LC/APC SM DX / Shutter Adapter
FO-06P33N1D02A

LC/PC SM DX / Shutter Adapter
FO-06P14N1D02S

LC/PC SM DX / Shutter Adapter
FO-06P13N1D02S

IPORT

NETWORK SYSTEMS

ATTENUATORS

ATTENUATORS
Fiber Optic Attenuators

ATTENUATORS
Fiber Optic Attenuators
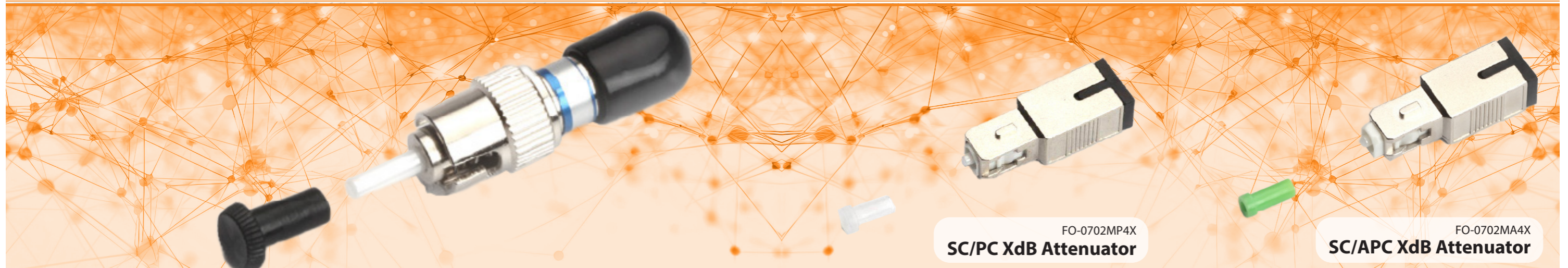
FO-0702MP4X
SC/PC XdB Attenuator

FO-0702MA4X
SC/APC XdB Attenuator

IPORT offers high quality build-out attenuators in the 1 to 30dB range. Each attenuator is made with continuous light-absorbing and metal-ion fiber, offering excellent environmental stability and low back reflection. The front of the attenuator is male plug connector style, allowing attenuators to be plugged directly into receiving equipment or adapters on the patch panel. The back side is a female socket adapter and allows a patch cable to be plugged into the back of the attenuator. The attenuator is available in SC, FC, ST, LC and MU types. In a fiber optic system, build out attenuators play an important role in controlling optical power levels in Telecommunications, CATV applications and other single-mode fiber optic communications applications. Therefore, it must deliver consistent performance over a range of operating conditions so that attenuation levels remain constant and predictable.

Features

- Insensitive to polarization
- Compact plug-style design fits easily into existing patch panels
- Attenuation values from 1 dB to 30 dB are available
- Low back reflection
- Wide wavelength range
- Designed to meet Telcordia requirements

Applications

- Instrumentation
- Telecom head office
- Telecommunication networks
- CATV headend, LAN networks
- Data communication networks
- Testing and Measurement
- Channel balancing for WDM systems
- Optical transmission systems
- Fiber optic distribution frame
- Fiber optic network system

FC/APC XdB Attenuator

FO-0703MA4X

FC/PC XdB Attenuator

FO-0703MP4X

Technicial Specifications

Back Reflection/Return Loss	Super polish : ≤-45 dB Ultra polish : ≤-55 dB Angle polish : ≤-65 dB
Operating Wavelengths	1310/1550nm (CenterWavelength)
Operating Bandpass	1260 to 1360nm and 1430 to 1580nm
Attenuation Level	1-9dB (±0.5dB);10-20dB (±5%)
Attenuation Tolerance	±0.5dB (1-9dB): 5±% (10-20dB)
Polarization Dependent Loss	≤0.5dB
Operating Temperature	-20⁰c ~70⁰c
Storage Temperature	-40⁰c ~80⁰c

ATTENUATORS

Fiber Optik Attenuators

UL 94 V-0   High quality

FO-0708MP4X
MU/PC XdB Attenuator

FO-0708PP6X
MU/PC XdB Attenuator

Optical Attenuators An optical attenuator is a device used to reduce the power level of an optical signal. They come with ceramic launchers and come in a variety of types to fit different types of fiber optic connectors. Fiber optic attenuator is divided into multi-mode and single-mode. IPORT offers all types of single-mode and multi-mode fiber optic attenuators, such as: FC/PC, FC/APC, SC/PC, SC/APC, LC/PC, LC/APC, ST, MU, E2000, Fixed Adapter Type Attenuators , Fixed Inline Type Attenuators, etc. all available.

ST XdB Attenuator

FO-0701MP4X

LC/PC XdB Attenuator

FO-0704PP1X

IPORT

NETWORK SYSTEMS

FIBER OPTIC SPLITTERS

FIBER OPTIC SPLITTERS
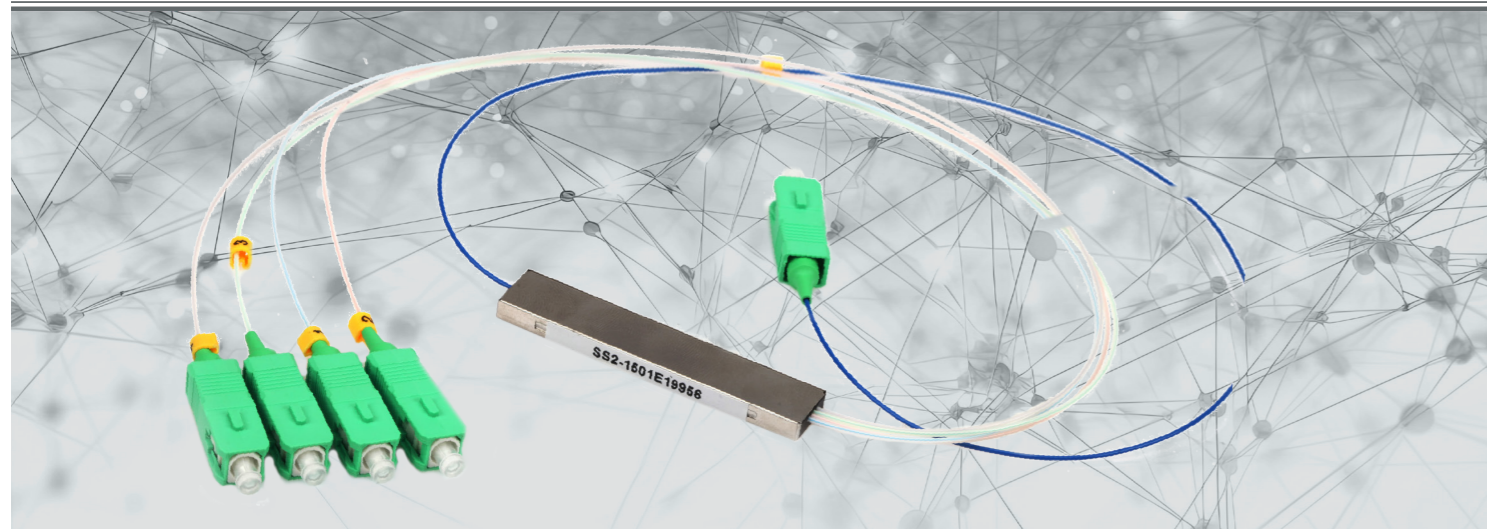
Features

IPORT couplers and splitters use precision technology to combine or distribute light from single/multiple inputs to single/multiple outputs. Most couplers and splitters are designed to be bi-directional, allowing the same product to be used as a coupler or splitter.

IPORT couplers and splitters are available in a variety of styles, sizes, splitting values and wavelength specifications, providing high flexibility to tailor the product exactly to your needs and application. High definable mating rates allow the product to meet precise needs. Multiple port configuration, connector and finish options make IPORT couplers and splitters an ideal option for

specific requirements and provide seamless integration into existing systems.

IPORT offers the full range of 1xN and 2xN plc splitters. It is available in a flexible 1U 19'' rack mount box and comes in Fan-out kits and blockless type with terminated, terminated or unterminated ends and small plastic ABS box and Standard LGX metal box for outdoor use.

Our plc splitter products are guaranteed of high quality and best price. We can customize Planar Lightwave Circuit Splitter (plc splitter) to fit your specific requirements.

Scope of Application

- Fiber to homes (FTTH)
- Local loop (Local loop)
- Passive optical networks (PON)
- Fiber communication systems
- Fiber optic test systems
- Fiber optic detection

- Local areas (LAN)
- Fiber in the loop
- Local area network (Local area network)
- Cable television (CATV)
- Fiber optic detection
- test equipment

Features

- Optical performance 100% factory tested
- UPC and APC finish types available for products with connectors
- Low Insertion Loss, Back Reflection and PDL
- Telcordia GR-CORE 1221 certified
- Working Window 1260~1650nm
- Polarization Stability (dB) ≤ 0.50dB
- Port Configuration 1X2,1x4, 1x8, 1x16, 1x32,1x64
- 2X2,2X4,2X8,2X16,2X32,2X64

- Back Reflection (dB) ≤ -55 UPC ≤ -65 APC
- Operating Temperature (°C) -20~+70
- Storage Temperature (°C) -40~+85
- Low excess loss
- Low PDL
- Hing versatility
- Long distance reliability
- Customer defined specifications

Technical Specifications

PARAMETERS		1X2	1X4	1X8	1X16	1X32	1X64
Fiber Type		SMF-28e or customer specified					
Operationg wavelength(nm)		1260-1675(1675 nm will be higher about 0.1 bB)					
Insertion Loss(dB)	Max(P/A)	3.8/4.0	7.2/7.4	10.5/10.7	13.5/13.7	16.5/16.9	21.0
Loss Uniformity(dB)	Max	0.6	0.6	0.8	1.2	1.7	2.5
Return Loss(dB)	Max(P/A)	50/55	50/55	50/55	50/55	50/55	50
PDL(dB)	Max	0.2	0.2	0.3	0.3	0.3	0.4
Directivity(dB)	Min	55	55	55	55	55	55
Wavelength Dependent lo	Max	0.5	0.5	0.5	0.8	0.8	0.8
Temperature Stability (-40~ 85ºC)(dB)	Max	0.5	0.5	0.5	0.8	0.8	1
Operating Temperature(ºC)		40 ~85					
Storage Temperature(ºC)		40 ~85					
Packaging Size (L*W*H) (mm)	Steel Pipe Bare Fiber	40*4*4	40*4*4	40*4*4	50*7*4	50*7*4	60*12*4
	0.9 Loose Tube	40*4*4	50*7*4	50*7*4	60*12*4	80*20*6	/
	ABS box 0.9 Loose Tube	90*20*10	100*80*10	100*80*10	120*80*18	120*80*18	140*115*18
	2.0/3.0 Loose Tube	90*20*10	100*80*10	100*80*10	120*80*18/140*115*18		/

| PARAMETERS		2X2	2X4	2X8	2X16	2X32	2X64
Fiber Type		SMF-28e or customer specified					
Operationg wavelength(nm)		1260-1675(1675 nm will be higher about 0.1 bB)					
Insertion Loss(dB)	Max	4.0	7.6	11.0	14.5	17.5	21.5
Loss Uniformity(dB)	Max	0.8	1.5	1.5	2.0	2.5	2.5
Return Loss(dB)	Min	50	50	50	50	50	50
PDL(dB)	Max	0.2	0.2	0.4	0.4	0.4	0.4
Directivity(dB)	Min	55	55	55	55	55	55
Wavelength Dependent lo	Max	0.6	0.6	0.6	0.8	1	1
Temperature Stability (-40~ 85ºC)(dB)	Max	0.6	0.6	0.6	0.8	1	1
Operating Temperature(ºC)		40 ~85					
Storage Temperature(ºC)		40 ~85					
Packaging Size (L*W*H) (mm)	Steel Pipe Bare Fiber	40*4*4	40*4*4	40*4*4	50*7*4	50*7*4	60*12*4
	0.9 Loose Tube	40*4*4	50*7*4	50*7*4	60*12*4	80*20*6	/
	ABS box 0.9 Loose Tube	90*20*10	100*80*10	100*80*10	120*80*18	120*80*18	140*115*18
	2.0/3.0 Loose Tube	90*20*10	100*80*10	100*80*10	120*80*18/140*115*18		/

FIBER OPTIC SPLITTERS

Fiber Optic Splitter Boxes | **Rack Type Splitter Boxes**

FIBER OPTIC SPLITTERS

Rack Type Splitter Boxes | **Fiber Optic Splitter Boxes**
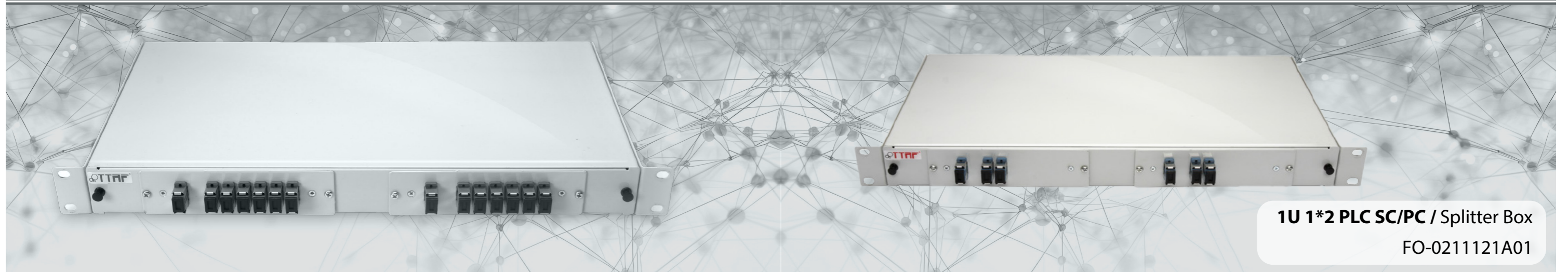
1U 1*2 PLC SC/PC / Splitter Box
FO-0211121A01

Features

1. Suitable for up to 12 Fo connections
2. Only available according to adapter type
3. You can apply ST/SC/FC/E2000/MU/MTRJ/LC
4. Can be used without rail
5. The design is suitable for the use of locking type adapters
6. Maintains bending radius for termination of optical fibers at 30mm

7. Units can be custom designed
8. Compatible with screw adapters and locking type adapters
9. Available with:
   10. Pigtail
   11. Special splice tape
   12. Hot shrink splice protectors

Technicial Specifications

Size (w:19",h:1U)	(w): 485mm x (d): 230mm x (h): 44,50mm
Weigth	Approx 3,20 kg
Fiber Capacity	2CH-16CH
Adaptor Type	ST, FC, SC, LC, E2000, MTRJ, MU
Color	Ral9005 Black, Ral7035
Mounting	19" / 21" Rack Type
Material	Mild Steel

1U 1*4 PLC SC/PC / Splitter Box
FO-0211141A01

1U 1*6 PLC SC/PC / Splitter Box
FO-0211161A01

1U 1*8 PLC SC/PC / Splitter Box
FO-0211181A01

1U 1*2 PLC SC/APC / Splitter Box
FO-0211121A02

FIBER OPTIC SPLITTERS

Fiber Optic Splitter Boxes │ Rack Type Splitter Boxes

1U 1*2 PLC SC/APC / Splitter Box
FO-0211141A02

1U 1*8 PLC SC/APC / Splitter Box
FO-0211181A02

1U 1*4 PLC LC/PC / Splitter Box
FO-0211141A03

1U 1*8 PLC LC/PC / Splitter Box
FO-0211181A03

IPORT

NETWORK SYSTEMS

FIBER OPTIC
PATCHPANEL

IPORT

NETWORK SYSTEMS

FIBER OPTIC PATCHPANEL
1U RACK TYPE
(UNLOADED)

FIBER OPTIC PATCHPANELS

Termination Boxes | 19" 1U 12 Port Slide-out, Railless Type Termination Box

| 1U | 19" | 12 PORT | WO RAIL |

| 1U | 19" | 12 PORT | WO RAIL |

FIBER OPTIC PATCHPANELS

19" 1U 12 Port Slide-out, Railless Type Termination Box | **Termination Boxes**

IPORT Fiber Optic Termination Boxes are used to terminate and distribute optical fiber cables. The termination box varies from 12 ports to 216 ports. It is suitable equipment for arranging and connecting fiber optic connections. Telecommunication networks, central office optical cable systems and in-building fiber networks

It is suitable for use. Each fiber optic termination box is fully equipped with adapters, welding trays and accessories and is ready for installation. IPORT offers varieties of slideable type fiber optic patch panels with different optical adapter interfaces.

Features

- Up to 12 Fo connections
- Only available to fit adapter type
- You can apply ST/SC/FC/E2000/MU/MTRJ/LC
- without rails
- Design suitable for use with lock type adapters
- Maintains fiber bend radius for optical fibers terminated at 30 mm
- Units can be custom design
- Compatible with screw adapters and lock type adapters
- Available with:
- pigtail
- Special splicing cassette
- Heat Shrink joint protectors
- Fiber Optic patch panel module -12 Port, 1U- (FO-1U-LC-DX-OM)

1U 19" 12 Port ST SX

FO-0111111A01

1U 19" 12 Port SC SX

FO-0111111A02

1U 19" 12 Port SC DX

FO-0111111A03

Technicial Specifications

Size (w:19 , h:1U)	(w):485mm x (d): 225mm x (h):44.50mm
Weight	Approx 2,10 kg
Fiber Capacity	0-48 port
Adaptor Capacity	ST, FC, SC,LC
Color	Ral9005,BlackRal7035 Grey
Mounting	19" / 21"Rack Type
Material	Mild Steel

1U 19" 12 Port FC(d) SX

FO-0111111A04

FIBER OPTIC PATCHPANELS

1U | 19" | 12 PORT | WO RAIL

Termination Boxes | 19" 1U 12 Port Slide-out, Railless Type Termination Box

1U 19" 12 Port LC QX
FO-0111111A08

1U 19" 12 Port LC QX
FO-0111111A08

1U 19" 12 Port E2000 SX
FO-0111111A09

1U 19" 12 Port MTRJ DX
FO-0111111A11

1U 19" 12 Port MU DX
FO-0111111A12

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iport.com.tr
iport.com.tr
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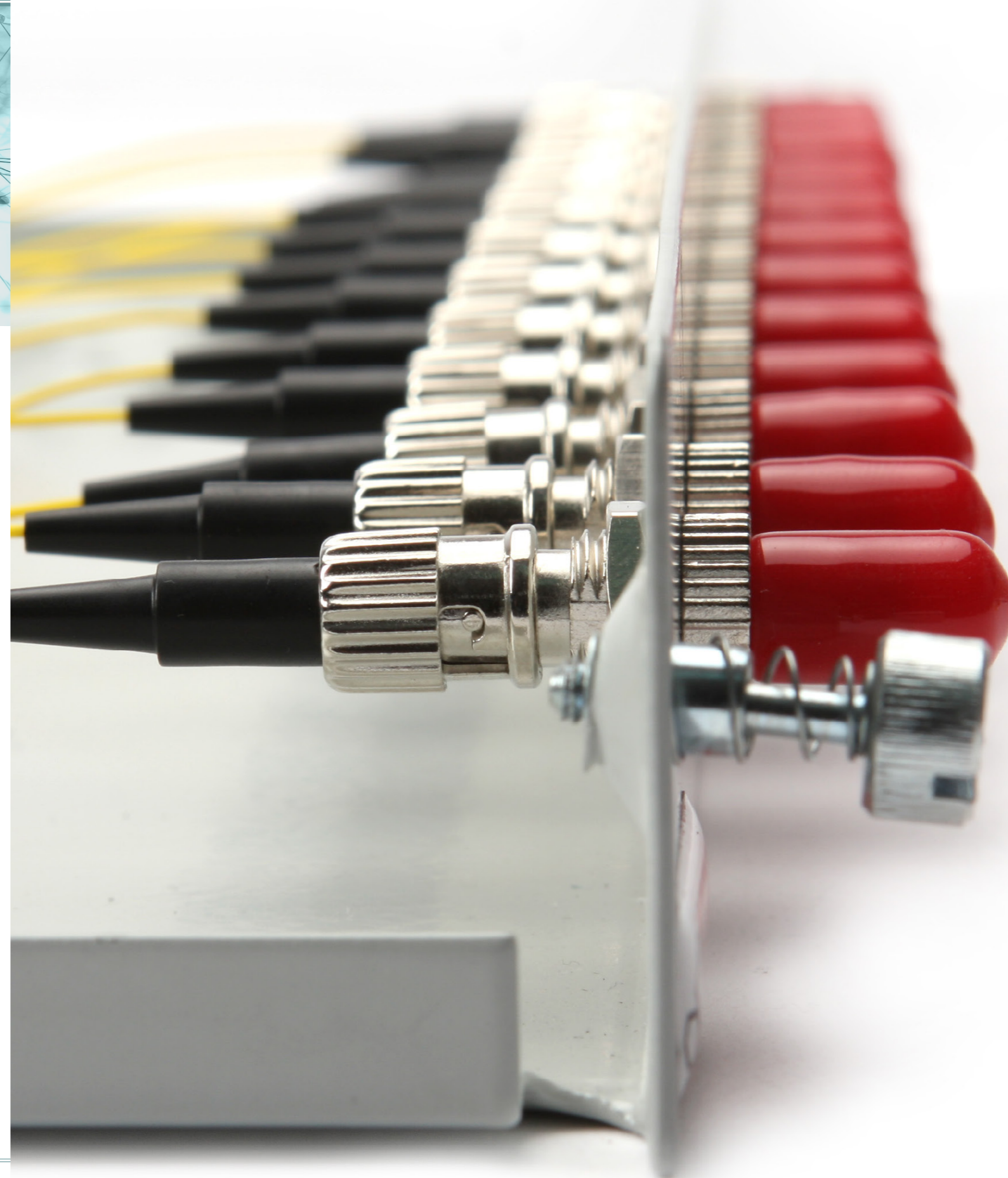
FIBER OPTIC PATCHPANELS

Exclusive Series Termination Boxes

| 1U | 19" | 12 PORT | W RAIL | P MODULE |

| 1U | 19" | 12 PORT | W RAIL | P MODULE |

FIBER OPTIC PATCHPANELS

19" 1U 12 Port Slide Telescopic Rail And Plastic Module Type
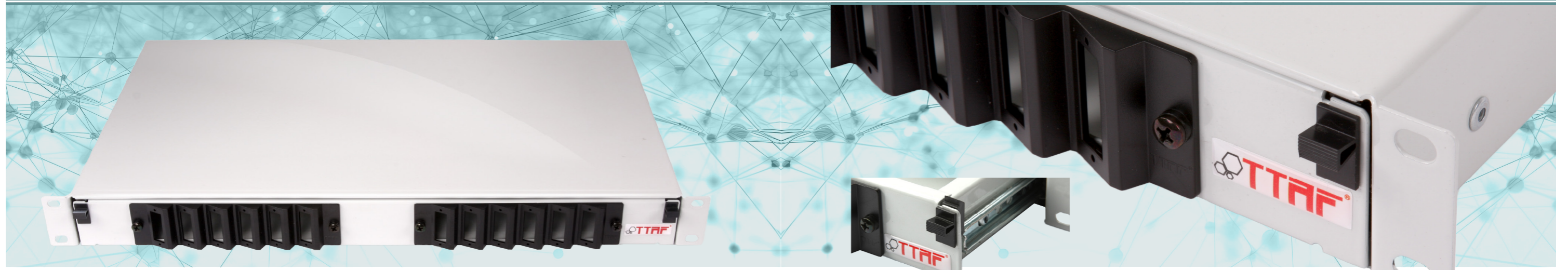
IPORT Fiber Optic Termination Boxes are used to terminate and distribute optical fiber cables. The termination box varies from 12 ports to 216 ports. It is suitable equipment for arranging and connecting fiber optic connections. Telecommunication networks, central office optical cable systems and in-building fiber networks

It is suitable for use. Each fiber optic termination box is fully equipped with adapters, welding trays and accessories and is ready for installation. IPORT offers varieties of slideable type fiber optic patch panels with different optical adapter interfaces.

Features

- Modular front panel and adapter holders
- Angle direction can be changed from left to right or mixed
- Includes central element management holder
- 1U-2U models available
- Up to 12 connections with 6-pack adapter structure
- Compatible with screw adapters and lock type adapters
- Can be mounted rear or front by arrangement of brackets
- Provides protection for the eyes
- Rail and plastic module mounted
- Can be supplied with
- pigtail
- Special splicing cassette
- Heat Shrink joint protectors

1U 19" 12 Port SC DX

FO-0111212A03

1U 19" 12 Port LC QX

FO-0111212A08

Technicial Specifications

Size (w:19 , h:1U)	(w):485mm x (d): 265mm x (h):44.50mm(1U)
Weight	Approx 2,40 kg
Fiber Capacity	0-48 port
Adaptor Capacity	SC(SX), SC(DX), LC(DX), LC(QX), E2000(SX), MU(DX)
Color	Ral9005 Black , Ral7035
Mounting	19"/ 21" Rack Type
Material	Mild Steel

FIBER OPTIC PATCHPANELS

19" 1U 12 Port Slide Telescopic Rail And Metal Module Type

| 1U | 19" | 12 PORT | W RAIL | M MODULE |

IPORT Fiber Optic Termination Boxes are used to terminate and distribute optical fiber cables. The termination box varies from 12 ports to 216 ports. It is suitable equipment for arranging and connecting fiber optic connections. Telecommunication networks, central office optical cable systems and in-building fiber networks

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Features

- Modular front panel and adapter holders
- Includes central element management holder
- 1U-2U models available
- Up to 12 connections with 6-pack adapter structure
- Compatible with screw adapters and lock type adapters
- Can be mounted rear or front by arrangement of brackets
- Provides protection for the eyes
- Rail and metal module mounted
- Can be supplied with
- pigtail
- Special splicing cassette
- Heat Shrink joint protectors

Technicial Specifications

Size (w:19 , h:1U)	(w):485mm x (d): 260mm x (h):44.50mm(1U)
Weight	Approx 4,80 kg
Fiber Capacity	0-48 port
Adaptor Capacity	SC(SX),SC(DX),LC(DX),LC(QX),E2000(SX),MU(DX)
Color	Ral9005 Black , Ral7035
Mounting	19" / 21" Rack Type
Material	Mild Steel

# FIBER OPTIC PATCHPANELS

19" 1U 48 PORT Slide Railless Type

| 1U | 19" | 24 PORT | WO RAIL |

FIBER OPTIC PATCHPANELS

19" 1U 48 PORT Slide Railless Type

IPORT Fiber Optic Termination Boxes are used to terminate and distribute optical fiber cables. The termination box varies from 12 ports to 216 ports. It is suitable equipment for arranging and connecting fiber optic connections. Telecommunication networks, central office optical cable systems and in-building fiber networks

It is suitable for use. Each fiber optic termination box is fully equipped with adapters, welding trays and accessories and is ready for installation. IPORT offers varieties of slideable type fiber optic patch panels with different optical adapter interfaces.

Özellikler

- Up to 24 Fo connections
- Available to fit single adapter type
- You can apply ST/SC/FC/E2000/MU/MTRJ/LC
- Without rails
- Design suitable for use with lock type adapters
- Maintains fiber bend radius for optical fibers terminated at 30 mm
- Units can be custom design
- Can be supplied with
- Pigtail
- Special splicing cassette
- Heat Shrink joint protectors

1U 19" 24 Port ST SX

FO-0111121A01

1U 19" 24 Port SC SX

FO-0111121A02

Teknik Özellikler

Size (w:19 , h:1U)	(w):485mm x (d): 225mm x (h):44.50mm(1U)
Weight	Approx 2,10 kg
Fiber Capacity	0-48 port
Adaptor Capacity	ST,FC,SC,LC,E2000,MTRJ,MU
Color	Ral9005 Black , Ral7035
Mounting	19"/ 21"Rack Type
Material	Mild Steel

1U 19" 24 Port FC(d) SX

FO-0111121A04

1U 19" 24 Port FC(s) SX

FO-0111121A05

FIBER OPTIC PATCHPANELS
19" 4U 96 PORT SC DX Balcony Rail

FIBER OPTIC PATCHPANELS
19" 3U 72 PORT SC DX Balcony Rail

IPORT Fiber Optic Termination Boxes are used to terminate and distribute optical fiber cables. The termination box varies from 12 ports to 216 ports. It is suitable equipment for arranging and connecting fiber optic connections. Telecommunication networks, central office optical cable systems and in-building fiber networks

It is suitable for use. Each fiber optic termination box is fully equipped with adapters, welding trays and accessories and is ready for installation. IPORT offers varieties of slideable type fiber optic patch panels with different optical adapter interfaces.

IPORT Fiber Optic Termination Boxes are used to terminate and distribute optical fiber cables. The termination box varies from 12 ports to 216 ports. It is suitable equipment for arranging and connecting fiber optic connections. Telecommunication networks, central office optical cable systems and in-building fiber networks

It is suitable for use. Each fiber optic termination box is fully equipped with adapters, welding trays and accessories and is ready for installation. IPORT offers varieties of slideable type fiber optic patch panels with different optical adapter interfaces.

Features

- Up to 96 Fo connections
- Available to fit single adapter type
- You can apply ST/SC/FC/E2000/MU/MTRJ/LC
- Without rails
- Design suitable for use with lock type adapters
- Maintains fiber bend radius for optical fibers terminated at 30 mm
- Units can be custom design
- Can be supplied with
- Pigtail
- Special splicing cassette
- Heat Shrink joint protectors
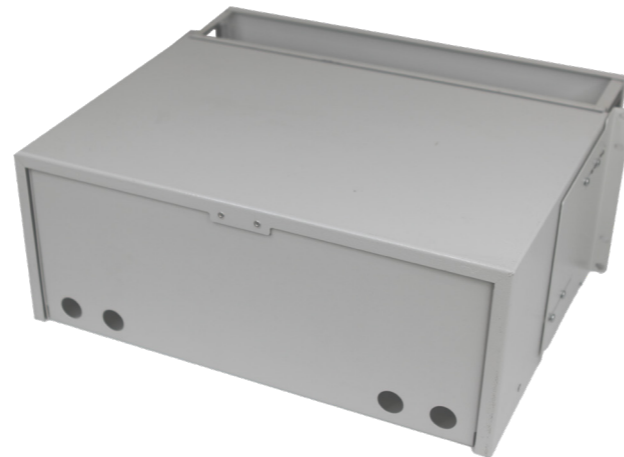
Features

- Up to 72 Fo connections
- Available to fit single adapter type
- You can apply ST/SC/FC/E2000/MU/MTRJ/LC
- Without rails
- Design suitable for use with lock type adapters
- Maintains fiber bend radius for optical fibers terminated at 30 mm
- Units can be custom design
- Can be supplied with
- Pigtail
- Special splicing cassette
- Heat Shrink joint protectors

Technicial Specifications

Size(w:19, h:1U)	(w): 430mm x (d): 310mm x (h): 175mm
Weight	Approx 2,10 kg
Fiber Capacity	0-192 Port
Adaptor Capacity	ST,FC,SC,LC,E2000,MTRJ,MU
Color	Ral9005 Black , Ral7035
Mounting	19"/ 21" Rack Type
Material	Yumuşak Çelik

Technicial Specifications

Size(w:19, h:1U)	(w): 480mm x (d): 280mm x (h): 130mm
Weight	Approx 2,10 kg
Fiber Capacity	0-144 Port
Adaptor Capacity	ST,FC,SC,LC,E2000,MTRJ,MU
Color	Ral9005 Black , Ral7035
Mounting	19"/ 21" Rack Type
Material	Mild Steel

IPORT

NETWORK SYSTEMS

FIBER OPTIC PATCHPANEL
1U RACK TYPE
(LOADED)

FIBER OPTIC PATCHPANELS
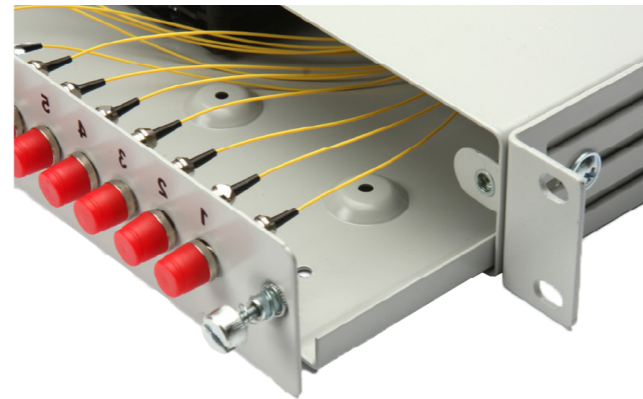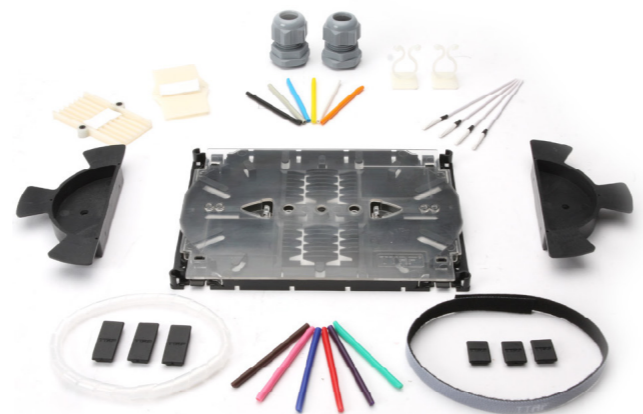
## 19" 1U 12 PORT Sliding Railless Type

| 1U | 19" | 12 PORT | WO RAIL |

FIBER OPTIC PATCHPANELS

19" 1U 12 PORT Sliding Railless Type

FULL LOADED
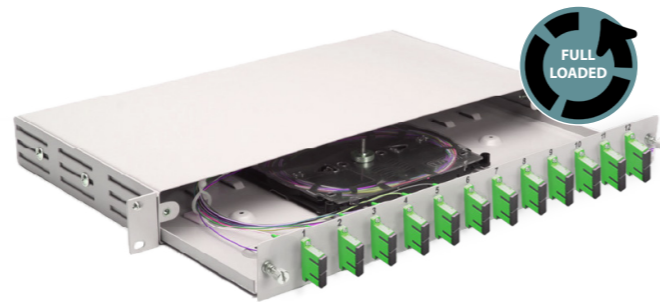
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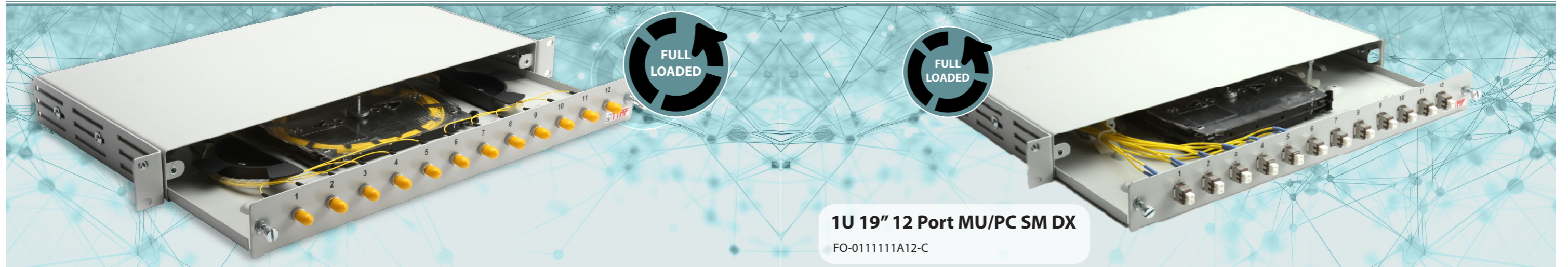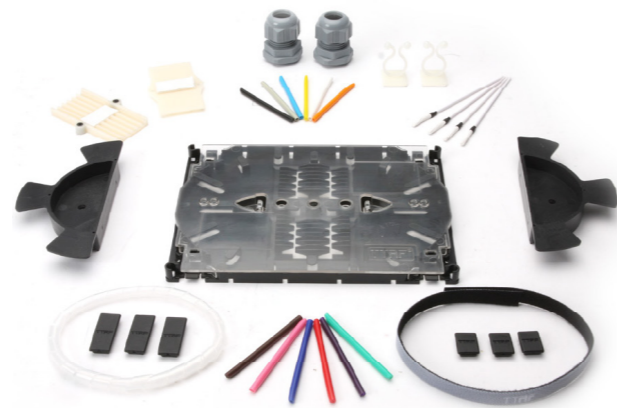
1U 19" 12 Port MU/PC SM DX

FO-0111111A12-C

Features

- Up to 12 Fo connections
- Only available to fit adapter type
- You can apply ST/SC/FC/E2000/MU/MTRJ/LC
- Without rails
- Maintains fiber bend radius for optical fibers terminated at 30 mm
- Units can be custom design
- Compatible with screw adapters and screwless type adapters
- Available with:
- Pigtail
- Special splicing cassette
- Heat Shrink joint protectors

FULL LOADED

1U 19" 12 Port ST/PC SM SX

FO-0111111A01-C

Technicial Specifications

Size (w:19 , h:1U)	(w):485mm x (d): 225mm x (h):44.50mm
Weight	Approx 2,50 kg
Fiber Capacity	0-24 Port
Adaptor Capacity	ST, FC, SC, LC, E2000, MTRJ, MU
Color	Ral9005 Black , Ral7035
Mounting	19" / 21" RackType
Material	Mild Steel

FULL LOADED

1U 19" 12 Port SC/APC SM SX

FO-0111111A02-E

FULL LOADED

1U 19" 12 Port SC/PC MM SX

FO-0111111A02-A

FIBER OPTIC PATCHPANELS

19" 1U 12/24 PORT Sliding Railless Type

| 1U | 19" | 12 PORT | WO RAIL | | 1U | 19" | 12 PORT | WO RAIL |
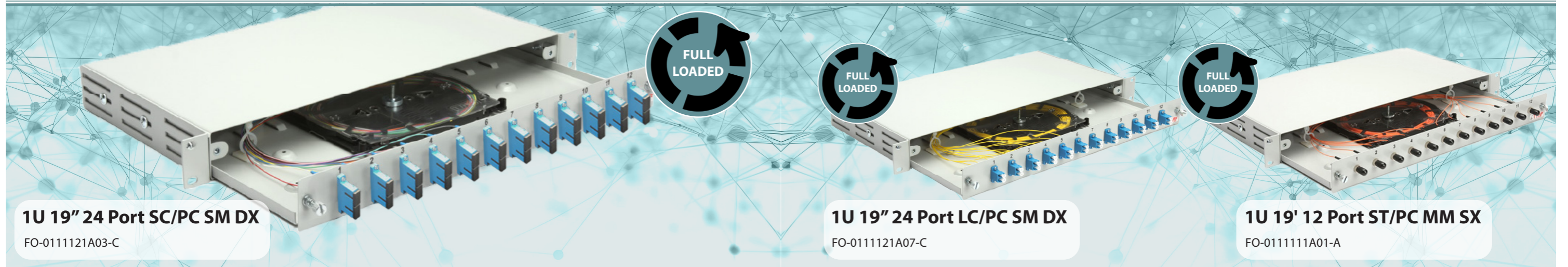
1U 19" 24 Port SC/PC SM DX
FO-0111121A03-C

1U 19" 24 Port LC/PC SM DX
FO-0111121A07-C

1U 19' 12 Port ST/PC MM SX
FO-0111111A01-A

1U 19" 24 Port SC/APC SM DX
FO-0111121A03-E

1U 19" 12 Port FC/PC(d) SM SX
FO-0111111A04-C

1U 19" 24 Port SC/PC MM DX
FO-0111121A03-A

1U 19" 24 Port LC/PC MM DX
FO-0111121A07-A

1U 19" 12 Port FC/PC(d) MM SX
FO-0111111A04-A

FIBER OPTIC PATCHPANELS

19" 1U 12 PORT Plastic Module Type with Slide and Telescopic Rail

| 1U | 19" | 12 PORT | W RAIL | P MODULE |

| 1U | 19" | 12 PORT | W RAIL | P MODULE |

FIBER OPTIC PATCHPANELS

19" 1U 12 PORT Plastic Module Type with Slide and Telescopic Rail

FULL LOADED

FULL LOADED

1U 19" 12 Port SC/PC SM SX

FO-0111212A02-C

FULL LOADED

1U 19" 12 Port SC/APC SM SX

FO-0111212A02-E

Features

- Up to 12 Fo connections
- Only available to fit adapter type
- You can apply ST/SC/FC/E2000/MU/MTRJ/LC
- Rail
- Maintains fiber bend radius for optical fibers terminated at 30 mm
- Units can be custom design
- Compatible with screw adapters and screwless type adapters
- Available with:
- Pigtail
- Special splicing cassette
- Heat Shrink joint protectors

FULL LOADED

1U 19" 12 Port SC/PC MM SX

FO-0111212A02-A

Technicial Specifications

Size (w:19 , h:1U)	(w):485mm x (d): 265mm x (h):44.50mm
Weight	Approx 2,80 kg
Fiber Capacity	0-48 port
Adaptor Capacity	ST, FC, SC,LC, E2000, MTRJ, MU
Color	Ral9005 Black,Ral7035
Mounting	19" / 21"Rack Type
Material	Mild Steel

FULL LOADED

1U 19" 12 Port SC/PC SM DX

FO-0111212A03-C

FULL LOADED

1U 19" 12 Port SC/APC SM DX

FO-0111212A03-E

FIBER OPTIC PATCHPANELS

19" 1U 12/24 PORT Plastic Module Type with Slide and Telescopic Rail

1U | 19" | 12 PORT | W RAIL | P MODULE

FULL LOADED

1U 19" 12 Port E2000/APC SM SX
FO-0111212A09-E

1U 19" 48 Port LC/PC SM QX
FO-0111232A08-C

FULL LOADED
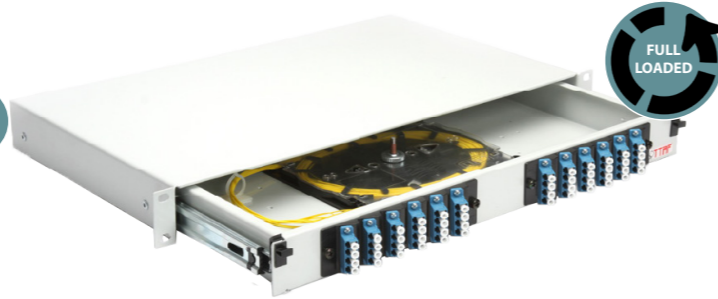
1U 19" 24 Port LC/PC MM DX
FO-0111222A07-A

FULL LOADED

1U 19" 24 Port LC/PC SM DX
FO-0111222A07-C

FULL LOADED

FIBER OPTIC PATCHPANELS

| 1U | 19" | 12 PORT | W RAIL | M MODULE |

19" 1U 12/48 PORT Metal Module Type with Slide and Telescopic Rail

FULL LOADED

Features

- Up to 12 Fo connections
- Only available to fit adapter type
- You can apply ST/SC/FC/E2000/MU/MTRJ/LC
- Rail
- Maintains fiber bend radius for optical fibers terminated at 30 mm
- Units can be custom design
- Compatible with screw adapters and screwless type adapters
- Available with:
- Pigtail
- Special splicing cassette
- Heat Shrink joint protectors

FULL LOADED

1U 19" 24 Port SC/PC SM DX

FO-0111223A03-C
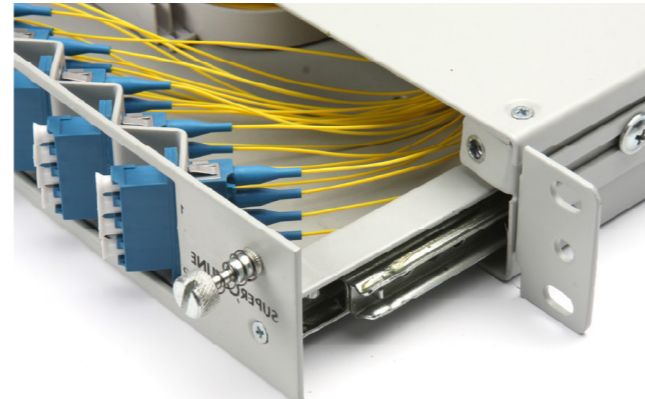
Technicial Specifications

Size (w:19 , h:1U)	(w):485mm x (d): 260mm x (h):44.50mm
Weight	Approx 5,10 kg
Fiber Capacity	0-48 port
Adaptor Capacity	ST, FC, SC,LC, E2000, MTRJ , MU
Color	Ral9005 Black,Ral7035
Mounting	19" / 21"Rack Type
Material	Mild Steel

FULL LOADED

1U 19" 24 Port SC/PC MM DX

FO-0111223A03-A

FULL LOADED

1U 19" 48 Port LC/PC SM QX

FO-0111233A08-C

FIBER OPTIC PATCHPANELS
19" 1U 24 PORT Sliding Railless Type

| 1U | 19" | 24 PORT | WO RAIL |

| 1U | 19" | 24 PORT | WO RAIL |

FIBER OPTIC PATCHPANELS
19" 1U 24 PORT Sliding Railless Type

FULL LOADED

FULL LOADED

FULL LOADED
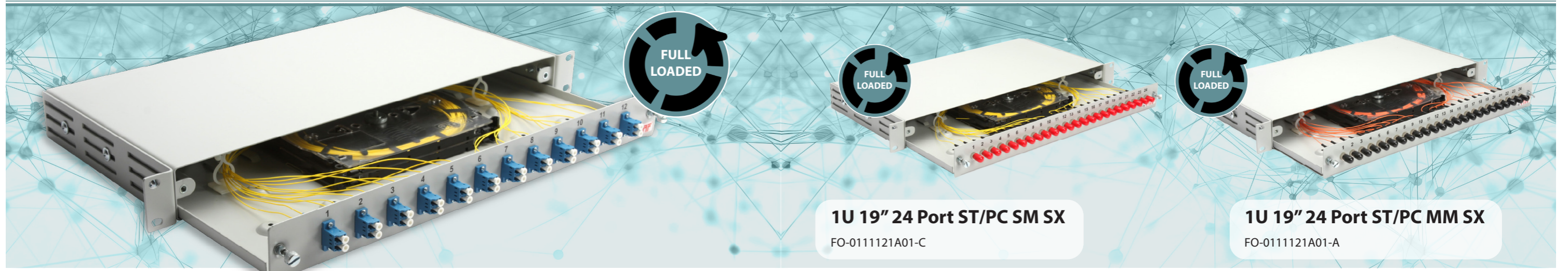
1U 19" 24 Port ST/PC SM SX
FO-0111121A01-C

### 1U 19" 24 Port ST/PC MM SX
FO-0111121A01-A

Features

- Up to 12 Fo connections
- Only available to fit adapter type
- You can apply ST/SC/FC/E2000/MU/MTRJ/LC
- Without rails
- Maintains fiber bend radius for optical fibers terminated at 30 mm
- Units can be custom design
- Compatible with screw adapters and screwless type adapters
- Available with:
- Pigtail
- Special splicing cassette
- Heat Shrink joint protectors

FULL LOADED

1U 19" 48 Port SC/PC SM DX
FO-0111131A03-C
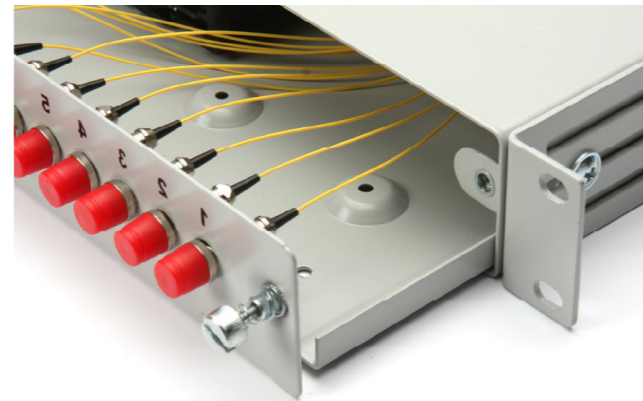
Technicial Specifications

Size (w:19 , h:1U)	(w):485mm x (d): 225mm x (h):44.50mm
Weight	Approx 2,95 kg
Fiber Capacity	0-24 Port
Adaptor Capacity	ST, FC, SC, LC, E2000, MTRJ, MU
Color	Ral9005 Black, Ral7035
Mounting	19" / 21"Rack Type
Material	Mild Steel

FULL LOADED

1U 19" 48 Port SC/APC SM DX
FO-0111131A03-E

FULL LOADED

1U 19" 48 Port SC/PC MM DX
FO-0111131A03-A

FIBER OPTIC PATCHPANELS

| 1U | 19" | 24 | WO | | 1U | 19" | 24 | WO |

19" 1U 12/24 PORT Plastic Module Type with Slide and Telescopic Rail

FIBER OPTIC PATCHPANELS

19" 1U 12/24 PORT Plastic Module Type with Slide and Telescopic Rail
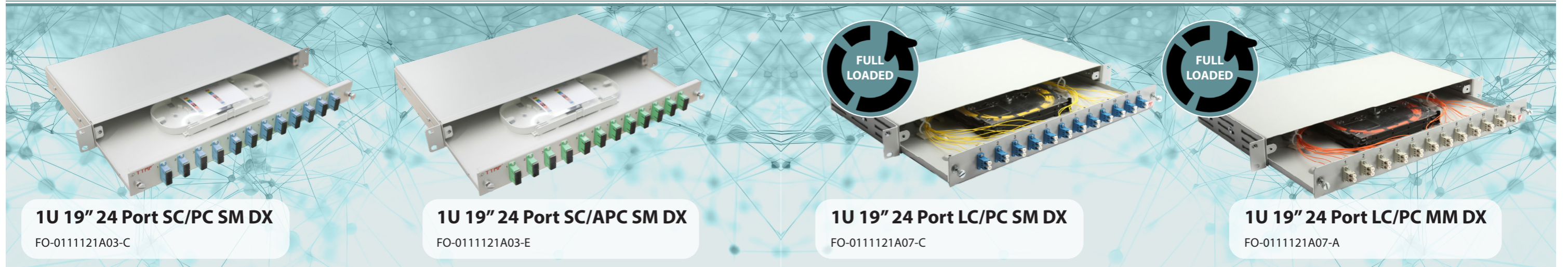
1U 19" 24 Port SC/PC SM DX
FO-0111121A03-C

1U 19" 24 Port SC/APC SM DX
FO-0111121A03-E

1U 19" 24 Port LC/PC SM DX
FO-0111121A07-C

1U 19" 24 Port LC/PC MM DX
FO-0111121A07-A

1U 19" 24 Port SC/PC MM DX
FO-0111121A03-A

1U 19" 48 Port LC/PC SM QX
FO-0111233A08-C

1U 19" 24 Port FC/PC (d) MM SX
FO-0111121A04-A

1U 19" 24 Port MTRJ MM DX
FO-0111121A11-A

1U 19" 24 Port MU/PC SM DX
FO-0111121A12-C

1U 19" 24 Port FC/PC (d) SM SX
FO-0111121A04-C

1U 19" 24 Port E2000/APC SM SX
FO-0111121A09-E

FIBER OPTIC PATCHPANELS

19" 2U 24 PORT Metal Module Type with Sliding and Telescopic Rail

FULL LOADED

Features

- Fo connection up to 24-48
- Only available to fit adapter type
- You can apply ST/SC/FC/E2000/MU/MTRJ/LC
- Rail
- Maintains fiber bend radius for optical fibers terminated at 30 mm
- Units can be custom design
- Compatible with screw adapters and screwless type adapters
- Available with:
- Pigtail
- Special splicing cassette
- Heat Shrink joint protectors

Technicial Specifications

Size (w:19 , h:2U)	(w):485mm x (d): 260mm x (h):44.50mm
Weight	Approx 5,50 kg
Fiber Capacity	0-48 port
Adaptor Capacity	ST, FC, SC, LC, E2000, MTRJ, MU
Color	Ral9005 Black, Ral7035
Mounting	19" / 21"Rack Type
Material	Mild Steel
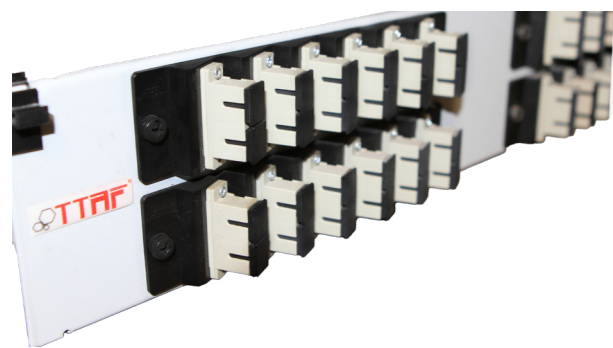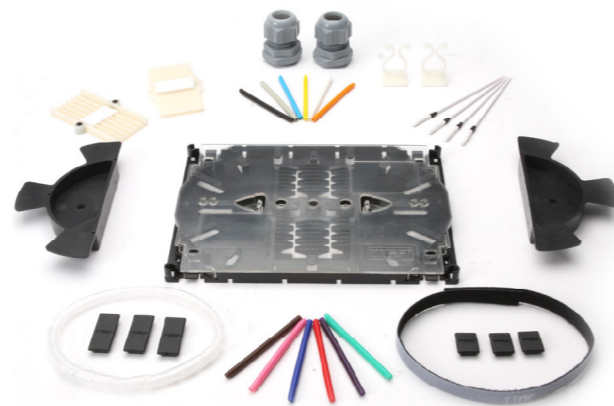
FIBER OPTIC PATCHPANELS
19" 1U 48 PORT Sliding Railless Type

| 1U | 19" | 48 PORT | WO RAIL |

| 1U | 19" | 48 PORT | WO RAIL |

FIBER OPTIC PATCHPANELS
19" 1U 48 PORT Sliding Railless Type

FULL LOADED

1U 19" 48 Port SC/PC SM DX
FO-0111131A03-C

1U 19" 48 Port SC/APC SM DX
FO-0111131A03-E

Features

- Fo connection up to 24-48
- Only available to fit adapter type
- You can apply ST/SC/FC/E2000/MU/MTRJ/LC
- Rail
- Maintains fiber bend radius for optical fibers terminated at 30 mm
- Units can be custom design
- Compatible with screw adapters and screwless type adapters
- Available with:
- Pigtail
- Special splicing cassette
- Heat Shrink joint protectors

1U 19" 48 Port SC/PC MM DX
FO-0111131A03-A

Technicial Specifications

Size (w:19 , h:1U)	(w):485mm x (d): 225mm x (h):44.50mm
Weight	Approx 3,10kg
Fiber Capacity	0-96 port
Adaptor Capacity	ST, FC, SC,LC, E2000, MTRJ, MU
Color	Ral9005 Black, Ral7035
Mounting	19" / 21"Rack Type
Material	Mild Steel
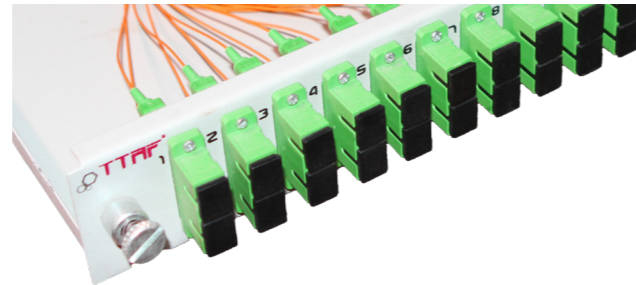
1U 19" 48 Port LC/PC SM DX
FO-0111131A07-C
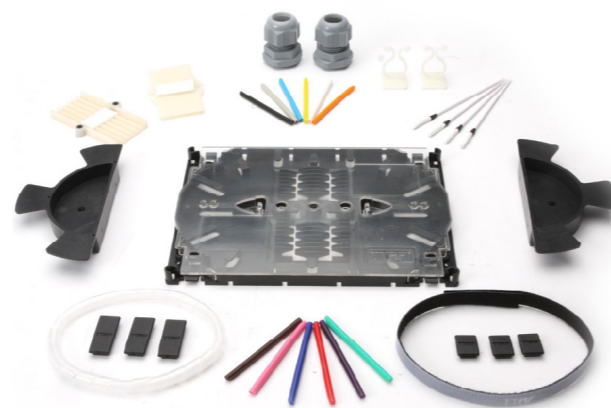
1U 19" 48 Port LC/PC MM DX
FO-0111131A07-A

FIBER OPTIC PATCHPANELS

| 1U | 19" | 48 PORT | WO RAIL |

19" 1U 48 PORT Sliding Railless Type

FULL LOADED

1U 19" 96 Port LC/PC SM QX

FO-0111161A08-C

FULL LOADED

1U 19" 48 Port MTRJ MM DX
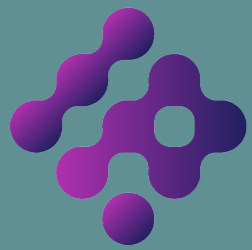
FO-0111131A11-A

FULL LOADED

1U 19" 48 Port MU/PC SM DX

FO-0111131A12-C

FULL LOADED

IPORT

NETWORK SYSTEMS

FIBER OPTIC PATCHPANEL
2U RACK TYPE
(UNLOADED)

FIBER OPTIC PATCHPANELS

| 2U | 19" | 48 PORT | WO RAIL | P MODULE |

19"2U 48 PORT Sliding, Railless Plastic Module Type

IPORT Fiber Optic Termination Boxes are used for termination and distribution of optical fiber cables. The termination box has a range from 12 ports to 216 ports. They are practical equipment for organizing and connecting fiber optic connections. Telecommunication network, central office optical cable system and building.

It is suitable for uses such as fiber networks.
Each fiber optic termination box is fully equipped with adapters, splice trays and accessories and is ready for installation.
IPORT offers kinds of sliding type fiber optic patch panels with different optical adapter interface.

Features

- Fo connection up to 24-96
- Only available to fit adapter type
- You can apply ST/SC/FC/E2000/MU/MTRJ/LC
- without rails
- Maintains fiber bend radius for optical fibers terminated at
- 30 mm
- Units can be custom design
- Compatible with screw adapters and screwless adapters
- Available with:
- Pigtail
- Special splicing cassette
- Heat Shrink joint protectors

Technicial Specifications

Size (w:19 , h:2U)	(w):485mm x (d): 265mm x (h): 90mm
Weight	Approx 3,85 kg
Fiber Capacity	0-96 port
Adaptor Capacity	ST, FC, SC,LC, E2000, MTRJ, MU
Color	Ral9005 Black, Ral7035
Mounting	19" / 21" Rack Type
Material	Soft Copper

2U 19" 48 Port SC DX

FO-0112132A03

2U 19" 96 Port LC QX

FO-0112162A08

FIBER OPTIC PATCHPANELS

19" 2U 48 PORT Metal Module Type with Slide and Telescopic Rail

| 2U | 19" | 48 PORT | W RAIL | M MODULE |

| 2U | 19" | 48 PORT | W RAIL | M MODULE |

FIBER OPTIC PATCHPANELS

19" 2U 48 PORT Metal Module Type with Slide and Telescopic Rail

IPORT Fiber Optic Termination Boxes are used to terminate and distribute optical fiber cables. Termination boxes range from 12 ports to 216 ports. They are practical equipment for arranging and connecting optical fiber connections. Telecommunication network, central office optical cable system and premise

Suitable for uses such as fiber network. Each fiber optic termination box is fully loaded with adapters, splice trays and accessories and ready for installation. IPORT offers varieties of sliding type fiber optic patch boards with different optical adapter interfaces.

Features

- Fo connection up to 48-96
- Only available to fit adapter type
- You can apply ST/SC/FC/E2000/MU/MTRJ/LC
- R ail
- Maintains fiber bend radius for optical fibers terminated at 30 mm
- Units can be custom design
- Compatible with screw adapters and screwless adapters
- Available with:
- Pigtail
- Special splicing cassette
- Heat Shrink joint protectors

2U 19" 48 Port SC DX

FO-0112233A03

Technicial Specifications

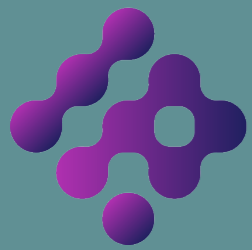| Size (w:19", h:2U)	(w):485mm x (d): 250mm x (h): 90mm
Weight	Approx 5,55 kg
Fiber Capacity	0-96 port
Adaptor Capacity	ST, FC, SC,LC, E2000, MTRJ, MU
Color	Ral9005 Black,Ral7035
Mounting	19" / 21" Rack Type
Material	Mild Steel

2U 19" 96 Port LC QX

FO-0112263A08

IPORT

NETWORK SYSTEMS

FIBER OPTIC PATCHPANEL

2U RACK TYPE

(LOADED)

FIBER OPTIC PATCHPANELS

| 2U | 19" | 48 PORT | W RAIL | P MODULE |

| 2U | 19" | 48 PORT | W RAIL | P MODULE |

19" 2U 48 PORT Plastic Module Type with Slide and Telescopic Rail
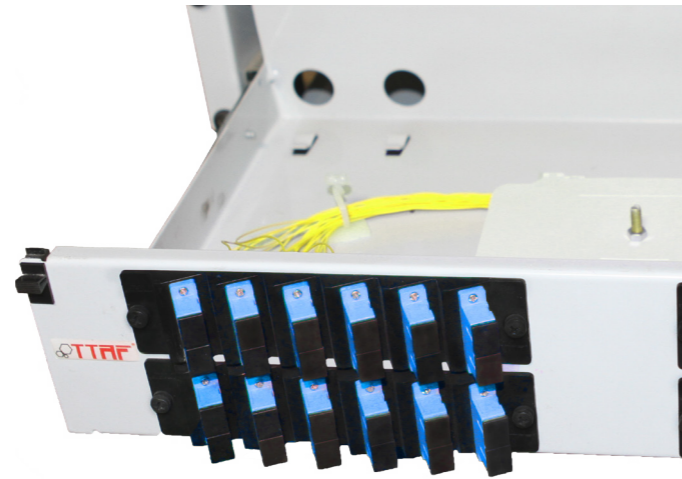
FIBER OPTIC PATCHPANELS

19" 2U 48/96 PORT Plastic Module Type with Slide and Telescopic Rail

FULL LOADED

FULL LOADED

Features

- Fo connection up to 24-96
- Only available to fit adapter type
- You can apply ST/SC/FC/E2000/MU/MTRJ/LC
- Rail
- Maintains fiber bend radius for optical fibers terminated at 30 mm
- Units can be custom design
- Compatible with screw adapters and screwless type adapters
- Available with:
- Pigtail
- Special splicing cassette
- Heat Shrink joint protectors

FULL LOADED

2U 19" 48 Port SC/PC SM DX

FO-0112132A03-C

FULL LOADED

2U 19" 48 Port SC/APC SM DX

FO-0112132A03-E

Technicial Specifications

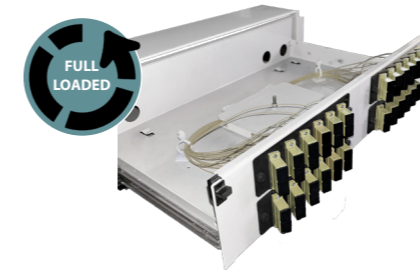| Size (w:19", h:2U)	(w):485mm x (d): 265mm x (h): 90mm
Weight	Approx 3,70 kg
Fiber Capacity	0-96 port
Adaptor Capacity	ST, FC, SC, LC, E2000, MTRJ, MU
Color	Ral9005 Black, Ral7035
Mounting	19" / 21" Rack Type
Material	Mild Steel

FULL LOADED
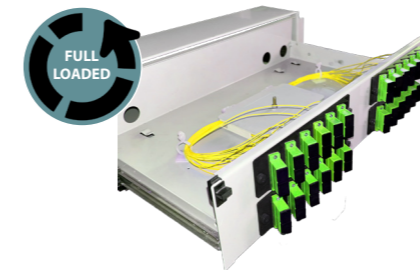
2U 19" 48 Port SC/PC MM DX

FO-0111132A03-A

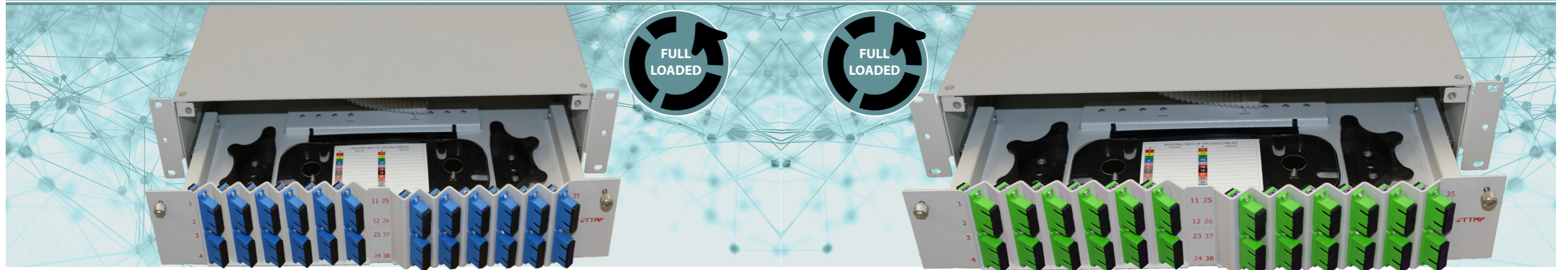FULL LOADED

2U 19" 96 Port LC SM QX

FO-0112162A08-C

FIBER OPTIC PATCHPANELS

19" 2U 48 PORT Metal Module Type with Slide and Telescopic Rail

FIBER OPTIC PATCHPANELS

19" 2U 48 PORT Metal Module Type with Slide and Telescopic Rail
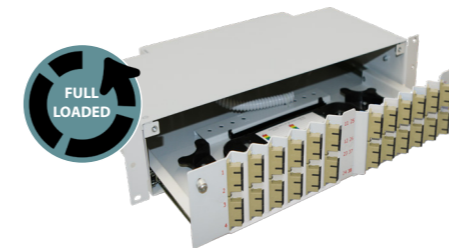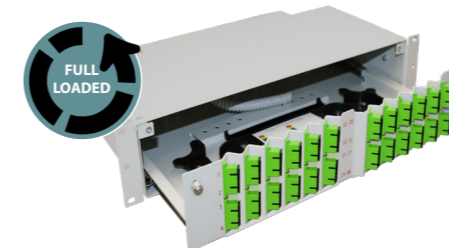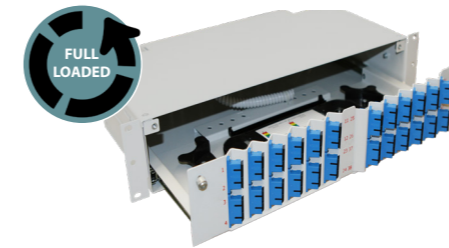
FULL LOADED

FULL LOADED

Features

- Fo connection up to 48-96
- Only available to fit adapter type
- You can apply ST/SC/FC/E2000/MU/MTRJ/LC
- Rail
- Maintains fiber bend radius for optical fibers terminated at 30 mm
- Units can be custom design
- Compatible with screw adapters and screwless type adapters
- Available with:
- Pigtail
- Special splicing cassette
- Heat Shrink joint protectors

FULL LOADED

2U 19" 48 Port SC/PC SM DX

FO-0112233A03-C

FULL LOADED

2U 19" 48 Port SC/APC SM DX

FO-0112233A03-E
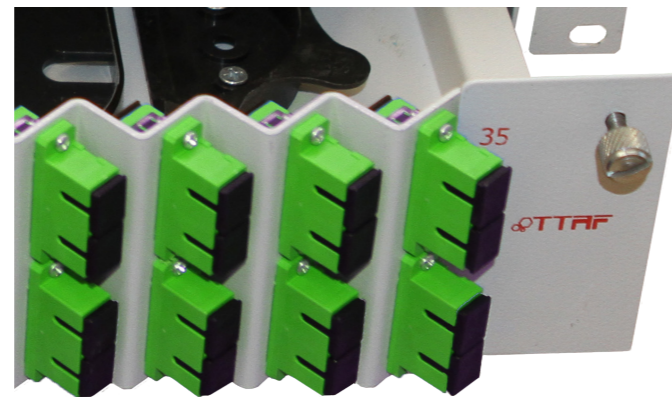
Technicial Specifications

Size (w:19", h:2U)	(w): 485mm x (d): 250mm x (h): 90mm
Weight	Approx 6,10kg
Fiber Capacity	0-96 port
Adaptor Capacity	ST, FC, SC, LC, E2000, MTRJ, MU
Color	Ral9005 Black, Ral7035
Mounting	19'' / 21"Rack Type
Material	Mild Steel

FULL LOADED

2U 19" 48 Port SC/PC MM DX

FO-0112233A03-A

FULL LOADED

2U 19" 96 Port LC/PC SM QX

FO-0112263A08-C

IPORT

FIBER OPTIC PATCHPANEL

3U RACK TYPE

FIBER OPTIC PATCHPANELS

19" 3U 96 PORT Sliding And Telescopic Rail

| 3U | 19" | 48 PORT | W RAIL | M MODULE |

| 3U | 19" | 48 PORT | W RAIL | M MODULE |

FIBER OPTIC PATCHPANELS

## 19" 3U 96 PORT Sliding And Telescopic Rail

FULL LOADED

Features

- Fo connection up to 96-192
- Only available to fit adapter type
- You can apply ST/SC/FC/E2000/MU/MTRJ/LC
- Rail
- Maintains fiber bend radius for optical fibers terminated at 30 mm
- Units can be custom design
- Compatible with screw adapters and screwless type adapters
- Available with:
- Pigtail
- Special splicing cassette
- Heat Shrink joint protectors
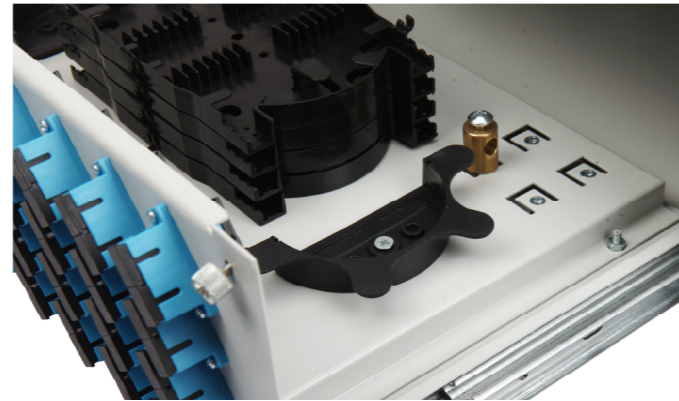
Technical Specifications

Size (w:19", h:3U)	(w): 480mm x (d): 280mm x (h): 130mm
Weight	Approx 6,66kg
Fiber Capacity	0-192 Port
Adaptor Capacity	ST, FC, SC, LC, E2000, MTRJ, MU
Color	Ral9005 Black, Ral7035
Mounting	19" / 21" Rack Type
Material	Mild Steel

FULL LOADED
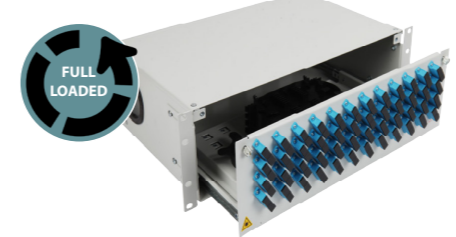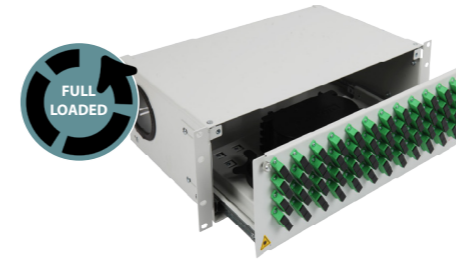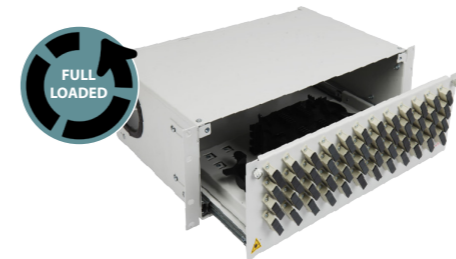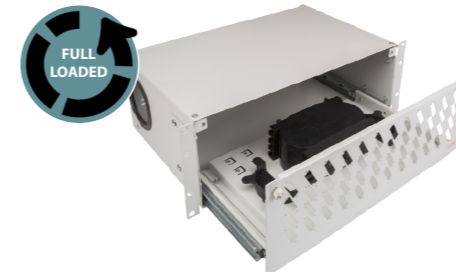
3U 19" 96 Port SC/LC DX

FO-0113261A03

FULL LOADED

3U 19" 96 Port SC/PC MM DX

FO-0113261A03-A

FULL LOADED

3U 19" 96 Port SC/APC SM DX

FO-0113261A03-E

FULL LOADED

3U 19" 96 Port SC/PC SM DX

FO-0113261A03-C

IPORT

NETWORK SYSTEMS

FIBER OPTIC PATCHPANEL

4U RACK TYPE

FIBER OPTIC PATCHPANELS

19" 4U 168/336 PORT Rail Type

| 4U | 19" | 168 PORT | W TRAY |

| 4U | 19" | 168 PORT | W TRAY |

FULL LOADED

IPORT Fiber Optic Termination Boxes are used to terminate and distribute optical fiber cables. Termination boxes have a range from 12 ports to 168 ports. It is suitable equipment for arranging and connecting fiber optic connections. Telecommunication network, central office optical cable system and built-in

Suitable for fiber network use. Each fiber optic termination box is fully loaded with adapters, splice trays and accessories and ready for installation. IPORT offers varieties of sliding type fiber optic patch panels with different optical adapter interfaces.

FULL LOADED

4U 19" 168 Port SC/PC DX

FO-01141141A03-C

Features

- Up to 168 Fo connections
- Only available to fit adapter type
- You can apply ST/SC/FC/E2000/MU/MTRJ/LC
- without rails
- Maintains fiber bend radius for optical fibers terminated at 30 mm
- Units can be custom design
- Compatible with screw adapters and screwless type adapters
- Available with:
- Pigtail
- Special splicing cassette
- Heat Shrink joint protectors

FULL LOADED

4U 19" 168 Port SC/APC DX

FO-01141141A03-E

Technicial Specifications

Size (w:19", h:3U)	(w): 430mm x (d): 310mm x (h): 175mm
Weight	Approx 6,45 kg
Fiber Capacity	0-168 port
Adapter Capacity	ST, FC, SC,LC, E2000, MTRJ, MU
Colour	Ral9005 Black,Ral7035
Assembly	19" / 21"Rack Type
Material	Mild Steel

FULL LOADED

4U 19" 336 Port LC/PC D

FO-01141211A07-C

FULL LOADED

4U 19" 336 Port LC/APC DX

FO-01141211A07-E

IPORT

NETWORK SYSTEMS

ACCESSORIES

FIBER OPTIC PATCHPANELS
Mounting Accessories

24-Port Splicing Cassette
FO-MA0013

12 Port Splicing Cassette
FO-MA0010
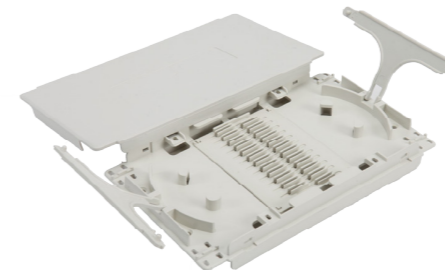
12 Port Splicing Cassette
FO-MA0009

16-Port Splicing Cassette
FO-MA0012

Cable Organizer for Panel
FO-YDP-81

Cable Organizer
FO-YDP-103

Cable Glands
FO-PG-13
FO-PG-16

Splicing Protector
FO-MA000X

FIBER OPTIC PATCHPANELS

12 Port Splicing Cassette
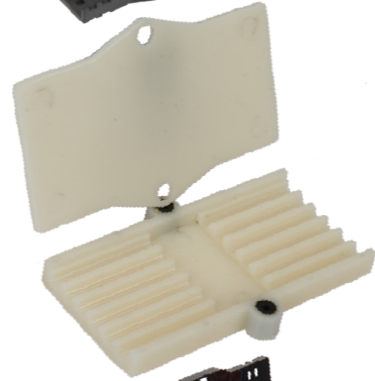
FO-MA0011

6-Port Insertion Cassette

FO-MA0014

12 Port Splicing Cassette

FO-MA0015

SC DX PANEL MODULE

FO-1U-SC-DX-OM

Frame

FO-FRP-2SCSX
FO-FRP-2LCDX
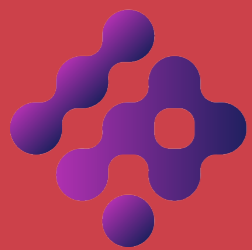
IPORT
NETWORK SYSTEMS

OPTICAL DISTRIBUTION
BOXES
METALLIC (LOADED)

OPTICAL DISTRIBUTION BOXES

Metallic ODB Boxes | 8/16 Port Wall Mount Type

| M METALİK | 8/16 PORT | F FULL | | M METALİK | 8/16 PORT | F FULL |

OPTICAL DISTRIBUTION BOXES

8/16 Port Wall Mount Type | **Metallic ODB Boxes**

FULL LOADED

FULL LOADED

FO-012SM5A03-A
8 Port SC/PC MM DX

FULL LOADED

FO-012SM5A03-C
8 Port SC/PC SM DX

Features

- Designed for wall mounting
- Up to 9 connections
- You can apply ST/SC/FC/LC
- Compatible with screw adapters and screwless type adapters
- Lockable front cover
- Available with:
- Pigtail
- Special insert holder
- Adapters
- Heat shrink splice protectors

Applications

- Telecommunications rooms or main distribution rooms
- Horizontal cabling transition points
- The panel supports interconnection and distribution applications.

Technical Specifications

Size	(w):170mm x (d): 210mm (h):45mm
Weight	Approx 1024 gr
Fiber Capacity	0-9 Port
Adaptor Capacity	ST,SC,FC,LC
Color	Ral 9005 Black-Ral 7035
Mounting	Wall Mount type
Material	Metallic

FULL LOADED

9 Port ST/PC SM SX

FO-012SM6A01-C

FULL LOADED

9 Port ST/PC MM SX

FO-012SM6A01-A

FULL LOADED

9 Port FC/PC SM SX

FO-012SM6A04-C

FULL LOADED

9 Port FC/PC MM SX

FO-012SM6A04-A

OPTICAL DISTRIBUTION BOXES

Metallic ODB Boxes | 12/24 Port Wall Mount Type

| M METALİK | 12/24 PORT | F FULL | | M METALİK | 12/24 PORT | F FULL |

OPTICAL DISTRIBUTION BOXES

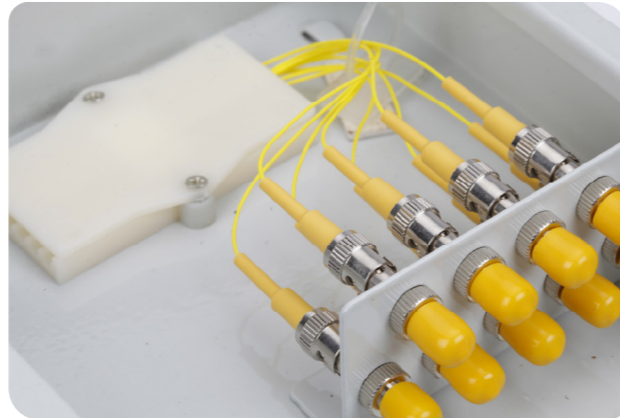12/24 Port Wall Mount Type | **Metallic ODB Boxes**

Features

- Designed for wall mounting
- up to 9 connections
- You can apply ST/SC/FC/LC
- Compatible with screw adapters and screwless type adapters
- Lockable front cover
- Available with:
- pigtails
- Special insert holder
- adapters
- heat shrink splice protectors

Applications

- Telecommunications rooms or main distribution rooms.
- Horizontol cabling transition points
- The panel supports interconnection and distribution applications.

Technicial Specifications

Size	(w):241mm x (d): 230mm (h):50mm
Weight	Approx 1460 gr empty / 1750 gr loaded
Fiber Capacity	12-24 Port
Adapter Capacity	ST, SC, FC, LC
Color	Ral 9005 Black-Ral 7035
Mounting	Wall Mount Type
Material	Metallic

FULL LOADED

24 Port ST/PC SM SX

FO-012XLM9B01-C

FULL LOADED

24 Port ST/PC MM SX

FO-012XLM9B01-A

FULL LOADED

24 Port SC/PC SM DX

FO-012XLM9B03-C

FULL LOADED

24 Port SC/PC MM DX

FO-012XLM9B03-A

OPTICAL DISTRIBUTION BOXES

Metallic ODB Boxes | 24/48 Port Wall Mount Type

OPTICAL DISTRIBUTION BOXES

24/48 Port Wall Mount Type | **Metallic ODB Boxes**
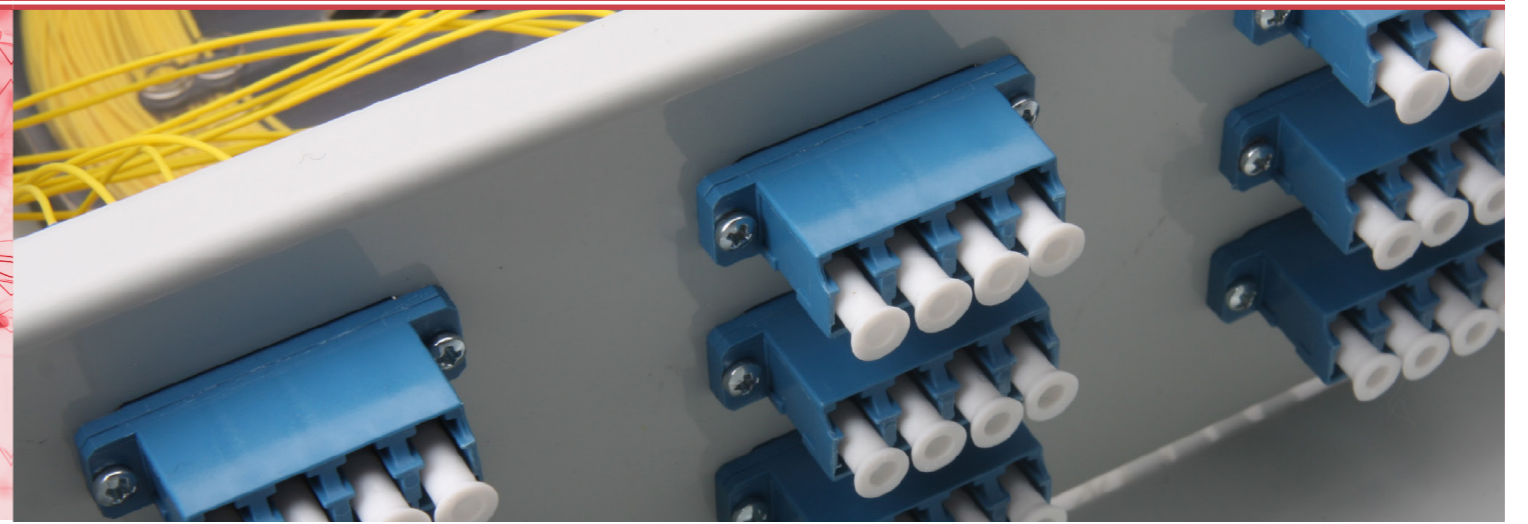
Features

- Designed for wall mounting
- Up to 48 connections
- You can apply ST/SC/FC/LC
- Compatible with screw adapters and screwless type adapters
- Lockable front cover
- Available with:
- pigtails
- Special insert holder
- adapters
- heat shrink splice protectors

Applications

- Telecommunications rooms or main distribution rooms.
- Horizontol cabling transition points
- Supports panel interconnect and distribution applications

Technicial Specifications

Size	(w):250mm x (d): 320mm (h):90mm
Weight	Approx 2,65 kg
Fiber Capacity	0-48 Port
Adaptor Capacity	ST, SC,FC,LC
Color	Ral 9005 Black-Ral 7035
Mounting	Wall Mount Type
Material	Metallic
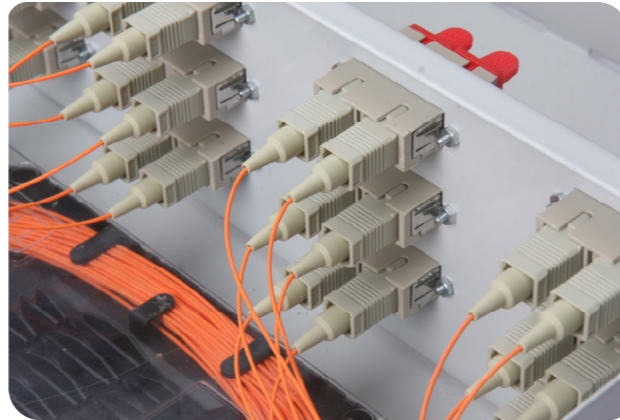
24 Port SC/PC SM DX
FO-012XLM9A03-C

24 Port SC/APC SM DX
FO-012XLM9A03-E

24 Port SC/PC MM DX
FO-012XLM9A03-A

48 Port LC/PC SM QX
FO-012XLM12A08-C

OPTICAL DISTRIBUTION BOXES

Metallic ODB Boxes |

| M METALİK | 48/96 PORT | F FULL | | M METALİK | 48/96 PORT | F FULL |

OPTICAL DISTRIBUTION BOXES

48/96 Port Wall Mount Type | Metallic ODB Boxes
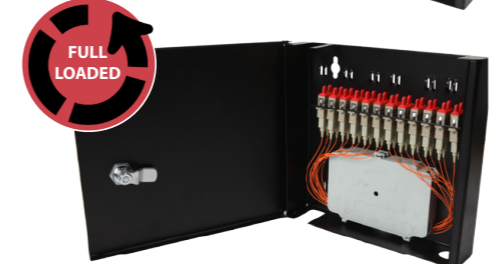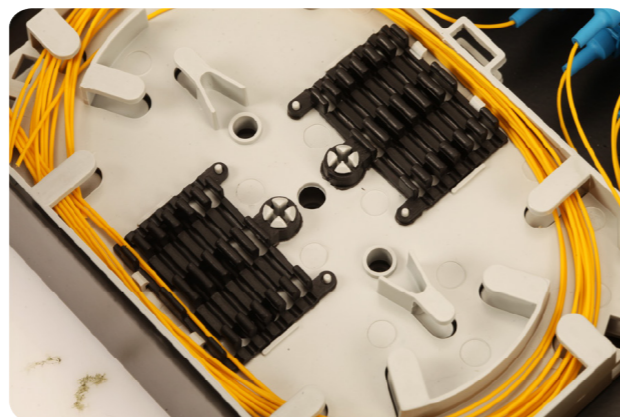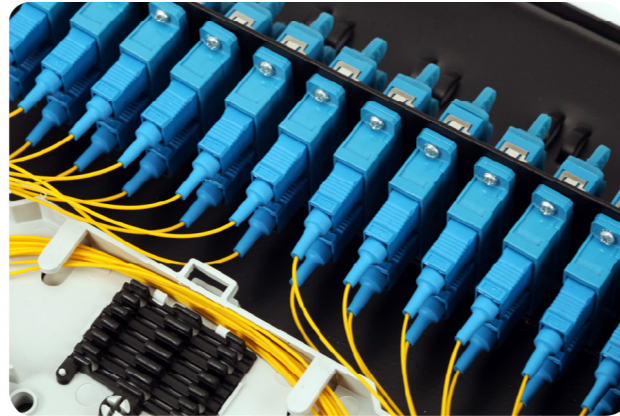

FULL LOADED

Features

- Designed for wall mounting
- Up to 96 connections
- You can apply ST/SC/FC/LC
- Compatible with screw adapters and screwless type adapters
- Lockable front cover
- Available with:
- pigtails
- Special insert holder
- adapters
- heat shrink splice protectors

Applications

- Telecommunications rooms or main distribution rooms.
- Horizontal cabling transition points
- The panel supports interconnection and distribution applications.

Technicial Specifications

Size	(w):290mm x (d): 320mm (h):90mm
Weight	Approx 3,55kg
Fiber Capacity	0-96 Port
Adaptor Capacity	ST,SC,FC,LC
Color	Ral 9005 BlackRal-7035
Mounting	Wall Mount Type
Material	Metallic

FULL LOADED
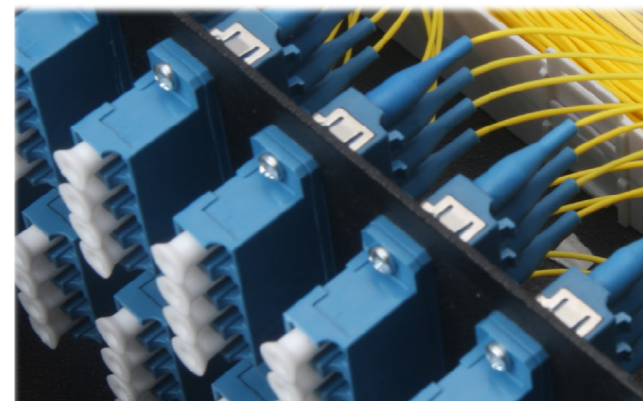
48 Port SC/PC SM DX

FO-012XXLM12B03-C

FULL LOADED

48 Port SC/APC SM DX

FO-012XXLM12B03-E

FULL LOADED

48 Port SC/PC MM DX

FO-012XXLM12B03-A

FULL LOADED

96 Port LC/PC SM QX

FO-012XXLM14B08-C

OPTICAL DISTRIBUTION BOXES

Plastic ODB Boxes | 1/2 Port Wall Mount Type

ROHS | P PLASTİK | 1/2 PORT | F FULL

OPTICAL DISTRIBUTION BOXES

1/2 Port Wall Mount Type | **Plastic ODB Boxes**

FULL LOADED

Overview

Multi-function fiber optic terminal box is a new product we designed for FTTH engineering.

The box is light and convenient, especially suitable for providing protection for cable and pigtail.

Universally usable with standard A86 splice box, particularly suitable for indoor wiring and rapid field installation. The mechanical connector is used to connect with indoor soft cable. Two cover designs meet different demands. Traditional box lid design can meet regular and new customer requirements. The new rotating shaft design makes it easier to use.

SC adapter and LC adapter are suitable.

Applications

- Optical Networks
- In-home applications
- Fiber to the home

Links

- Number of terminations 1 SC
- Simplex or 1 LC Duplex
- Termination types are SC,LC per BOX.
- Recommended patchable thickness 2-3 mm

Benefits

- Breakout cable entry
- SX/DX cable entry - Waterproof silicone seals
- cable fixing
- Plate fixing
- adapter holder
- safe lock
- ground pin
- Insertion tray location

Technicial Specifications

Item	Technical Parameters
Dimensions	8,5mm (w)X8,5mm(H)X2mm(D)
Weight	Approx 58 gr
Mounting	Wall mounted
Material	ABS
Operating Temperature	-40/+60
Operating Humidity	0 to 90%
Port output	1/2
Applicable for	3.1 x 2.0 mm Drop cable & indoor cable
Optical fiber diameter	125 µ m (652 & 657)
Tight buffer diameter(µ m)	250 µ m & 900 µ m
Fiber mode	Single & multi mode
Tensile strength	>50 N
Adaptor	SC/LC
Vibration	10 ~ 55 ~ 10HZ / 10 min in 2 hours

Kutu boyunca minimum bükülme yarıçapı 30 mm olup, lazer radyasyonu koruması sağlanmaktadır. Adaptör konumu, maruziyeti önler.

FULL LOADED

1 Port SC/PC SM SX   **2 Port LC/PC SM DX**

FO-012XSP11A02-C   FO-012XSP1A07-C

FULL LOADED

1 Port SC/APC SM SX   **2 Port LC/APC SM DX**

FO-012XSP11A02-E   FO-012XSP1A07-E

FULL LOADED

1 Port SC/PC OM3 SX   **2 Port LC/PC OM3 DX**

FO-012XSP11A02-D   FO-012XSP1A07-D

FULL LOADED

1 Port SC/PC OM4 SX   **2 Port LC/PC OM4 DX**

FO-012XSP11A02-F   FO-012XSP1A07-F

FULL LOADED

1 Port SC/PC MM SX   **2 Port LC/PC MM DX**

FO-012XSP11A02-A   FO-012XSP1A07-A

OPTICAL DISTRIBUTION BOXES

Plastic ODB Boxes | 3/6 Port Wall Mount Type

ROHS | IP53 | P | 3/6 PORT | F FULL

OPTICAL DISTRIBUTION BOXES

3/6 Port Wall Mount Type | **Plastic ODB Boxes**

FULL LOADED

Overview

Designed by IPORT for indoor use. It has ideal flexibility for fiber table applications.

Since it looks like a telephone box, it does not disturb you inside the house.

Benefits

- Easy to reach patch in an area.
- The separated joint in the upper position is preserved.
- The cable is simplified to facilitate installation routing.
- The slim splice cassette and mini splice guard provide easy finishing benefits.

Applications

- Optical Networks
- In-home applications
- Fiber to the table

Links

- Number of terminations 4 Poles
- Termination types are SC, LC, ST, FC per box.
- Recommended patchable thickness 2-3 mm

Technicial Specifications

Dimensions	120mm (w) X 80mm (H) X 25mm (D)
Weigth	Approx. 86g.
Mounting	On wall
Material	ABS
Operating Temperature	-40° to 60° C
Operating Humidity	0 to 90%
IP rating	IP53
Vibration	10~55~10Hz / 10 Min in 2 Hours

3 Port SC/PC SM
FO-012SP4A023-C

FULL LOADED

3 Port SC/APC SM
FO-012SP4A023-E

6 Port LC/PC SM
FO-012SP3A078-C

FULL LOADED

4 Port LC/APC
FO-012SP2A07-E

5 Port ST SM
FO-012SP13A01-C

FULL LOADED

4 Port FC/PC
FO-012SP2A04-C

The minimum bending radius along the box is 30 mm, providing laser radiation protection. Adapter location prevents exposure.

OPTICAL DISTRIBUTION BOXES

Plastic ODB Boxes | 4/8 Port Wall Mount Type

ROHS IP53 **P** Plastic **4/8** PORT **F** FULL

OPTICAL DISTRIBUTION BOXES

4/8 Port Wall Mount Type | **Plastic ODB Boxes**

FULL LOADED

Overview

Designed by IPORT for indoor use. It has ideal flexibility for applications up to fiber table.

Benefits

- Easy to reach patch in an area.
- The separated joint in the upper position is preserved.
- The cable is simplified to facilitate installation routing.
- Slim splice cassette and mini splice guard provide easy finishing benefits

Applications

- Optical Networks
- In-home applications
- Fiber to the table

Links

- Number of terminations 4 SC Simplex or 8 LC duplex.
- Termination types are SC,LC per box.
- Recommended patchable thickness 2-3 mm

Technicial Specifications

Dimensions	140mm (w) X 110mm (H) X 26mm (D)
Weigth	Approx. 100g.
Mounting	On wall
Material	ABS
Operating Temperature	-40° to 60° C
Operating Humidity	0 to 90%
IP rating	IP53
Vibration	10~55~10Hz / 10 Min in 2 Hours
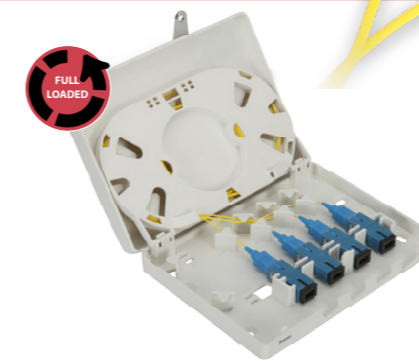
4 Port SC/PC SM SX

FO-012XSP2A02-C
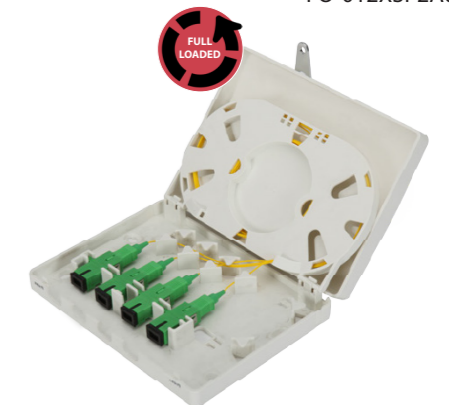
4 Port SC/APC SM SX

FO-012XSP2A02-E

8 Port LC/PC SM DX

FO-012XSP5A07-C

8 Port LC/APC SM DX

FO-012XSP5A07-E

The minimum bending radius along the box is 30 mm, providing laser radiation protection. Adapter location prevents exposure.
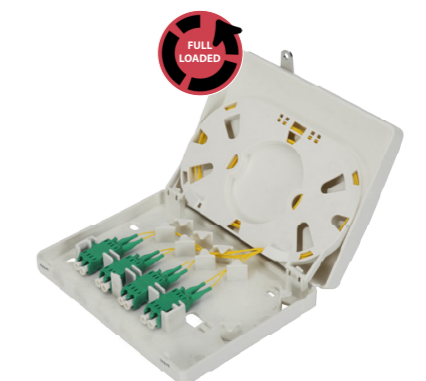
OPTICAL DISTRIBUTION BOXES

Plastic ODB Boxes | 8/16 Port Wall Mount Type

ROHS | IP65 | **P** Plastic | **8/16** PORT | **F** FULL

FULL LOADED

Overview

Designed by IPORT for indoor use. It has ideal flexibility for applications up to fiber table.

Technicial Specifications

Dimensions	160mm (w) X 200mm (H) X 46mm (D)
Weigth	Approx. 440 gr
Mounting	Wall Mounted
Material	ABS
Operating Temperature	-40/+60
Operating Humidity	0 to 90 %
IP rating	IP65
Vibration	10~55~10HZ / 10 min in 2 hours

Applications

- Optical Networks
- In-home applications
- Fiber to the table.

## Links

- Number of terminations 4 SC Simplex or 8 LC duplex.
- Termination types are SC,LC per box.
- Recommended patchable thickness 2-3 mm

FULL LOADED

8 Port SC/PC SM SX

FO-012SP5A02-C

FULL LOADED

8 Port SC/APC SM SX

FO-012SP5A02-E

FULL LOADED

16 Port LC/PC SM DX

FO-012SP8A07-C

FULL LOADED

16 Port LC/APC SM DX

FO-012SP8A07-E
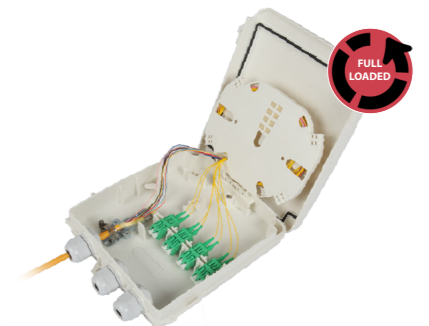
OPTICAL DISTRIBUTION BOXES

Plastic ODB Boxes iPlay Series | 12/24 Port Wall Mount Type

ROHS | IP67 | P PLASTİK | 12/24 PORT | F FULL

OPTICAL DISTRIBUTION BOXES

12/24 Port Wall Mount Type | **Plastic ODB Boxes iPlay Series**

FULL LOADED

Overview

IPORT's outdoor fiber wall mount distribution boxes are designed to offer the most flexible solution for all FTTx networks. A single flexible distribution box that can be pole or wall mounted, making it an ideal fit for today's FTTx networks.

All passive optical network components are housed in a single enclosure offering the highest level of cable management.

Benefits

• Breakout cable entry
• Sx/Dx cable entry - Waterproof silicone seals
• cable fixing
• Plate fixing
• adapter holder
• safe lock
• ground pin
• Insertion tray lock

Applications

• Optical networks
• Attempt
• FTTx

Links

• Number of terminations 12 SC Simplex or 24 LC Duplex
• Termination types are SC, LC per BOX.
• Recommended patchable thickness 2-3 mm

Technicial Specifications

Dimensions	210mm (w) X 150mm (H) X 50mm (D)
Weigth	Approx. 550 gr
Mounting	Wall Mounted
Material	ABS 757
Operating Temperature	- 40 / +60
Operating Humidity	0 to 90 %
IP rating	IP67
Vibration	10~55~10HZ / 10 min for 2 hours

12 Port SC/PC SM SX
FO-012MP7A02-C

12 Port SC/APC SM SX
FO-012MP7A02-E

24 Port LC/PC SM DX
FO-012MP9A07-C

24 Port LC/APC SM DX
FO-012MP9A07-E

The minimum bending radius across the box is 30mm and the box provides protection against laser radiation.
» Adapter location prevents exposure. The ODB box can be opened up to 270°.
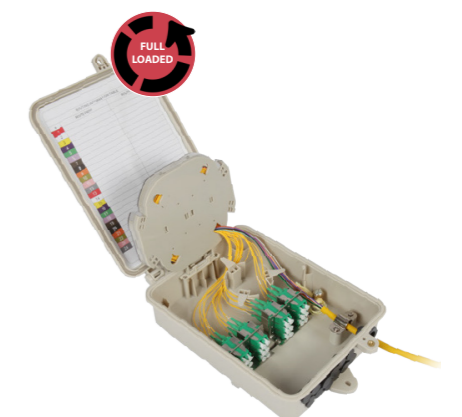
OPTICAL DISTRIBUTION BOXES

Plastic ODB Boxes iPlay Series | 16/32 Port Wall Mount Type

ROHS | IP65 | **P** PLASTİK | **16/32** PORT | **F** FULL

16/32 Port Wall Mount Type | **Plastic ODB Boxes iPlay Series**

OPTICAL DISTRIBUTION BOXES

FULL LOADED

Overview

IPORT'un iç/dış mekan duvara monte fiber dağıtım kutuları, tüm FTTx uygulamaları için en esnek çözümü sunmak üzere tasarlanmıştır. Direğe veya duvara monte edilebilen bu çok yönlü dağıtım kutusu, bugünün FTTx ağları için ideal bir uyum sağlar.

Tüm pasif optik ağ bileşenleri, en yüksek düzeyde kablo yönetimi sunan tek bir muhafazada yer almaktadır.

Benefits

• Hinged Patch Area for Custom Patch Area - Attachment is protected in a separate area below.
• Wide open circuit identification of all patch locations.
• Injection molded cable routing arrows to facilitate installation.
• Hinged Connection Tray protects PON Components and Splicing area
• Split Cable Grommets make it easy to install Pre-Terminated Cables
• The included universal cable clamp is supplied as standard, including the centre-strength member holder.
• Splicing Tray is supplied as a 2x16 splicing guard

Applications

• Optical networks
• Attempt
• FTTx

Links

• Number of terminations per box 16 for SC (Simplex) or 32 LC (Duplex)
• Termination type SC, LC
• Supported multi-fiber cables OSP and IFC (Max. 16 mm)
• Supported patch cords 2-3mm recommended

Technicial Specifications

Dimensions	255mm (w) X 310mm (H) X 100mm (D)
Weigth	1,2 kg
Mounting	Wall Mounted
Material	ABS
Operating Temperature	-40° to 60° C
Operating Humidity	0 to 90%, non-condensing
IP rating	IP 65 (IP 67 tests ongoing)
Vibration	10~55~10Hz / 10 min for 2 hours

The minimum bending radius across the box is 30mm and the box provides protection against laser radiation. Adapter location prevents exposure. The ODB box can be opened up to 270°.

16 Port SC/PC SM SX
FO-012LP8A02-C
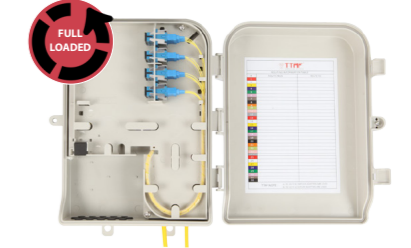
### 16 Port SC/APC SM SX
FO-012LP8A02-E
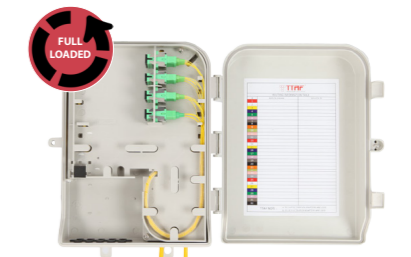
32 Port LC/PC SM DX
FO-012LP10A07-C
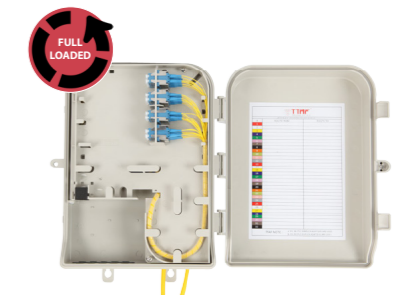
32 Port LC/APC SM DX
FO-012LP10A07-E
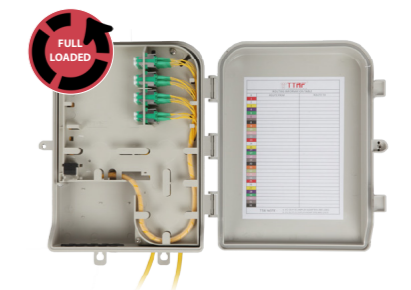
OPTICAL DISTRIBUTION BOXES

Plastic ODB Boxes iPlay Series | 32 Port ODB

OPTICAL DISTRIBUTION BOXES

16/32 Port Splitter Type | **Plastic ODB Boxes iPlay Series**

FULL LOADED

Benefits

- Easily accessible patch within the area.
- The reserved splice area is preserved in the upper position.
- Cable routing has been simplified to facilitate installation.
- Thin splice cassette and mini splice protector provide easy termination advantages.

Applications

- Optical Networks
- indoor applications
- Fiber to the table.
- Number of terminations: 16 SC Simplex or 32 LC duplex.
- SC, LC termination types per box.
- Recommended patch thickness is 2-3mm.

Benefits

Applied to optical access point, FTTX and GPON. It completes the entry and fixing of optical cables, provides splice operations, termination, storage and management of fibers, and fixes and cross-connects optical fibers. Optical partitioning and capacity expansion can be achieved by installing optical splitters. The main cable can be spliced or separated from it, which not only meets customer's needs but also improves production efficiency.

Applications

- High quality cold rolled steel sheet, excellent anti-corrosion ability
- Clear fiber connection and management labels, ease of use
- Applicable for 1(2)X8 or 1(2)X16 MINI packet separator
- Available in simplex SC/APC adapters.
- double swinging door

Technicial Specifications

- Operating temperature: -40℃ ~ +70℃
- Storage temperature: -30℃ ~ +60℃
- Relative humidity: ≤ 95% (+30℃)
- Atmospheric pressure: 70 Kpa ~ 106 Kpa
- Clear identification to avoid possible malfunctions caused by disassembly during maintenance
- Durability of adapter: 500 times
- Bending radius: 30mm
- Flammability: Compliance with GB5169.7 Test A
- Connector insertion loss: ≤ 0.20 dB
- Return loss: APC ≥ 60dB, UPC ≥ 50dB
- High voltage protection and grounding
- Insulation resistance: ≥ 1000MΩ/500VDC
- Withstand voltage: ≥ 3000VDC, no malfunction and electric arc within 1 minute

Technicial Specifications

Weigth	Approx. 100g.
Mounting	On wall
Material	ABS
Operating Temperature	-40° to 60° C
Operating Humidity	0 to 90%
IP rating	IP53
Vibration	10~55~10Hz / 10 Min in 2 Hours

Kutu boyunca minimum bükülme yarıçapı 30mm'dir ve kutu lazer radyasyonuna karşı koruma sağlar.
Adaptör konumu maruziyeti önler. ODB kutusu 270°'ye kadar açılabilir.

IPORT

NETWORK SYSTEMS

FIBER OPTIC ENCLOSURES

FIBER OPTIC ENCLOSURES

Fiber Optic Enclosures | Dome Type Closures

144 PORT 6 Cassette / Enclosures
FO-08D24M66T

288 PORT 12 Cassette / Enclosures
FO-08D24M1212T

144 PORT 12 Cassette / Enclosures
FO-08D12M1212T

FIBER OPTIC ENCLOSURES

Fiber Optic Enclosures | Dome Type Closures

FIBER OPTIC ENCLOSURES

Dome Type Closures | Fiber Optic Enclosures

12 PORT 1 Cassette / Enclosures
FO-08D12M61S

Advantages

It is a solution that provides quick and easy re-access while protecting fiber optic splices. It can be installed outdoors, in drains, canals and poles. The closure offers reliable sealing performance and protects the fiber joint within an embossed polypropylene dome with high mechanical and environmental properties. Having six input ports, the closure is suitable for inline or mid-point branching method.

24 Port 2 Cassette / Enclosures
FO-08D12M62S

36 Port 3 Cassette / Enclosures
FO-08D12M63S

Features

• Hot melt type maintains leak-proof, reliable, moisture-proof
• Embossed body structure provides protection against impact and pressure
• Efficient fiber management with Enclosures structure
• Ease of cover installation
• Voltage element and ground are easily clamped

48 Port 4 Cassette / Enclosures
FO-08D12M64S

Technicial Specifications

Size	522 × 211 × 174 mm
Weigth	2 kg
Inlet Ports	6 (2 oval)
Cable Diameter	8 - 24
No. of Splice Tray	4 (Max. 6)
Tray Capacity	12C (Max. 24C)
Splice Capacity	48C (Max. 48C)
Cable Clamp Method	Heat Shrinkable Tube
Splice Method	Fusion, Mechanical
Splice Protector	Heat Shrinkable Sleeve, Mechanical Splicer
Tension Member	(Galvanized Steel Wire), FRP

60 Port 5 Cassette / Enclosures
FO-08D12M65S

72 Port 6 Cassette / Enclosures
FO-08D12M66S

FIBER OPTIC ENCLOSURES

Fiber Optic Enclosures | Dome Type Closures

24 PORT 1 Cassette / Enclosures

FO-08D12M61S

Advantages

It is a solution that provides quick and easy re-access while protecting fiber optic splices. It can be installed outdoors, in drains, canals and poles. The closure offers reliable sealing performance and protects the fiber joint within an embossed polypropylene dome with high mechanical and environmental properties. Having six input ports, the closure is suitable for inline or mid-point branching method.

48 Port 2 Cassette / Enclosures

FO-08D12M62S

Features

- Hot melt type maintains leak-proof, reliable, moisture-proof
- Embossed body structure provides protection against impact and pressure
- Efficient fiber management with Enclosures structure
- Ease of cover installation
- Voltage element and ground are easily clamped

Technicial Specifications

Size	522 × 211 × 174 mm
Weigth	2 kg
Inlet Ports	6 (2 oval)
Cable Diameter	8 - 24
No. of Splice Tray	4 (Max. 6)
Tray Capacity	12C (Max. 24C)
Splice Capacity	48C (Max. 48C)
Cable Clamp Method	Heat Shrinkable Tube
Splice Method	Fusion, Mechanical
Splice Protector	Heat Shrinkable Sleeve, Mechanical Splicer
Tension Member	(Galvanized Steel Wire), FRP

72 Port 3 Cassette / Enclosures

FO-08D12M63S

96 Port 4 Cassette / Enclosures

FO-08D12M64S

FIBER OPTIC ENCLOSURES

Fiber Optic Enclosures | Dome Type Closures

FIBER OPTIC ENSURES

Dome Type Closures | **Fiber Optic Enclosures**

12 PORT 1 Cassette / Enclosures

FO-08D12M61S

Advantages

It is a solution that provides quick and easy re-access while protecting fiber optic splices. It can be installed outdoors, in drains, canals and poles. The closure offers reliable sealing performance and protects the fiber joint within an embossed polypropylene dome with high mechanical and environmental properties. Having six input ports, the closure is suitable for inline or mid-point branching method.

24 Port 2 Cassette / Enclosures

FO-08D12M62S

Features

- Reliable moisture-proof enclosure with hot melt type sealing
- Embossed body structure provides protection against impact and pressure
- Efficient fiber management with additional tray holding structure
- Ease of cover installation
- Voltage element and grounding are easily clamped

36 Port 3 Cassette / Enclosures

FO-08D12M63S

48 Port 4 Cassette / Enclosures

FO-08D12M64S

Technicial Specifications

Size	522 × 211 × 174 mm
Weigth	3,2 KG
Inlet Ports	6 (2 oval)
Cable Diameter	8 - 24
No. of Splice Tray	4 (Max. 6)
Tray Capacity	12C (Max. 24C)
Splice Capacity	48C (Max. 48C)
Cable Clamp Method	Heat Shrinkable Tube
Splice Method	Fusion, Mechanical
Splice Protector	Heat Shrinkable Sleeve, Mechanical Splicer
Tension Member	(Galvanized Steel Wire), FRP

60 Port 5 Cassette / Enclosures

FO-08D12M65S

72 Port 6 Cassette / Enclosures

FO-08D12M66S

FIBER OPTIC ENCLOSURES

Fiber Optic Enclosures | Dome Type OPGW Enclosures

Advantages

IPORT OPGW and ADSS fiber optic termination box is used to protect the fiber optic connection between two cables and reserve a fiber optic section for maintenance in the box. The box has good sealing, waterproof and moisture protection properties, and will not corrode on the power line. There are two types of junction boxes, central and terminal type. The central type is used in the central part of the line to protect two combined cables, while the terminal type is used at the end of the line to protect the branching or fiber optic connection and jumper in the cable line.

Features

- Sealing: After the can is closed, inflate the can to 100 kPa, and then observe the can immersed in the normal temperature water container for 15 minutes. No bubbles should escape.
- Insulation resistance: The insulation resistance between equipment and ground should be 2×10^4 MΩ or greater.
- Pressure resistance: There should be no distortion and no flashover between the equipment and ground for 15kV (DC) / 1 minute.
- Fiber optic bending radius: ≥30mm (less than 40mm) and there should be no additional attenuation in the fiber optic fusion splice protector.
- Tensile strength: It must withstand equal or greater axial tensile stress up to 1000N.
- Lifespan: 25 years.

Technicial Specifications

- Fiber curvature radius ≥ 43 mm.
- The fiber length of the plate remains ≥ 1500mm.
- Additional attenuation of optical discs shall remain at ≤ 0.01dB.
- Maximum fiber optic capacity≤ 144 core optical fiber.
- Suitable temperature range -40 ℃ ~ +80 ℃.
- Straightening performance 2000N/100mm.
- Weight 6.7 kg.
- Overall dimensions 480 mm (H) × 200 mm (φ).
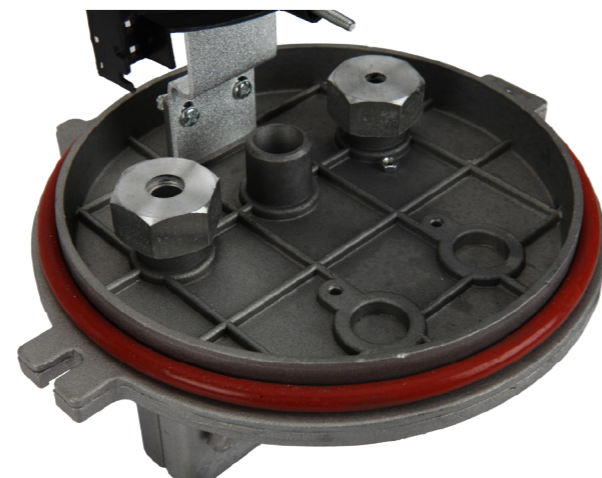
Accessory List

- 1 piece for hot expansion tube connection
- Fiber tube 2-5 meters
- Protective Optical Fiber Tube 2-6 sets
- Lashing strap 4-12 meters
- Anti-theft binding 1 roll
- Adhesive tape 1 roll
- 1 roll of electrical tape
- Small tire 1pc
- MDF pressure logo 1 set
- Sandpaper 1 piece
- Diameter Adjuster Gasket 1 set
- M12 center bolt 1 set special for the tower
- Logo mark and Coding 1 set
- Work Gloves 1 set
- Product qualification certificate 1 piece
- Product instruction 1pc

Product Code	Product Description
FO-08D24OPGW	OPGW Dome Enclosures

FIBER OPTIC ENCLOSURES

Fiber Optic Enclosures | **Wall Mounted Enclosures**

FIBER OPTIC ENCLOSURES

Wall Mounted Enclosures | Fiber Optic Enclosures

Wall Mounted Enclosures

Multifunctional Closures designed for fiber connection, branching and terminal connection.

Features

- Suitable for working in limited spaces.
- It is also suitable for underground use and aerial use.
- It can be easily mounted on a wall or pole.
- 3 single fiber ports, one for uncut cable use, one test port and 4 pigtail outputs.
- Up to 48 fiber connections in 4 cassettes.
- Provides easy access to cables and connection area during troubleshooting.

- It is suitable for those with limited work space.
- Suitable for underground use and aerial use.
- It can be easily mounted on a wall or pole.
- 2 14mm cable entries.
- Up to 48 fiber connections in 4 cassettes.
- Provides easy access to cables and connection area during troubleshooting.

12 Port 1 Cassette / Wall Mounted Enclosures

FO-08W12M11T

24 Port 1 Cassette / Wall Mounted Enclosures

FO-08W12M52T

72 Port 1 Cassette / Wall Mounted Enclosures

FO-08H24M32T

48 Port 1 Cassette / Wall Mounted Enclosures

FO-08H12M66T

IPORT

FIBER OPTIC TEST EQUIPMENT

FIBER OPTIC TEST EQUIPMENT
Fiber Optic Light Source

Fiber Optic Light Source
FO-TF1000

FIBER OPTIC TEST EQUIPMENT
Fiber Optic Power Meter

Fiber Optic Power Meter
FO-TF2000

Fiber Optic Light Source

FO-TF1000 Fiber optic light source is a fiber optic testing equipment used to measure fiber optic loss for both single mode fiber cables and multimode fiber cables; often used with fiber optic power meters. This fiber optic light source, 650nm LED source can provide wavelength output according to specific requirements, including 1310nm/1550nm wavelength for single-mode fiber and 850nm/1300nm wavelength for multi-mode fiber. When used in conjunction with our fiber optic power meter, they serve as an economical and efficient solution for fiber optic network work.

Features

- It optionally provides output from 1 to 6 wavelengths according to customers' needs.
- It provides CW, 2Hz modulation output at 650nm and CW, 270Hz, 1KHz, 2KHz modulation output at other wavelengths.
- High output power stability.
- Stable output wavelength.
- LCD screen with backlight, supporting night work.
- Low battery consumption.

Scope of Application

- Telecommunications maintenance
- CATV maintenance
- Fiber Optic Laboratory Tests
- Used for other Fiber Optic Measurements

Technicial Specifications

Wavelengths(nm)	Provides 1~6 Wavelengths according to needs
Emitter Type	FP-LD,LED
Typical Ouput Power(dBm)	0@650nm / -7 @1310nm,1550nm, -20dBm for LED
Spectral Width(nm)	≤10
Output Stability	±0.05dB/15mins; ±0.1dB/ 8hours
Modulation Frequencies	CW,2Hz@650nm / CW,270Hz,1KHz,2KHz@1310nm, 1550nm
Optical Connector	FC/PC(Other type adapters can be required)
Power Supply	Alkaline Battery(3 AA 1.5V batteries); AC Adaptor(9V)
Battery Operating Time(hour)	45
Operating Temperature (C°)	-10~+60
Storage Temperature (C°)	-25~+70
Dimension(mm)	190X100X50
Weight(g)	370

Fiber Optic Light Source

FO-TF2000 Fiber optic power meter is a tester used for absolute optical fiber power measurement as well as fiber optic loss related measurements. This handheld fiber optic test equipment has a stylish appearance and offers a wide power measurement range, high precision test accuracy and user automatic self-calibration. Fiber optic power meter is used for telecommunications and CATV networks.

Features

- Wide dynamic measurement range (up to 80dB)
- Reference power level storage (Ref Setting)
- User self-calibration function
- Comfortable LCD screen and backlight LCD screen support night work.
- Power measurements in dBm or mW and insertion loss measurements in dB
- The 10-minute auto shut-off function can be enabled or disabled. AA alkaline batteries last over 140 hours, AC adapter also available.
- Low battery warning

Scope of Application

- Telecommunications maintenance
- CATV maintenance
- Fiber Optic Laboratory Tests
- Used for other Fiber Optic Measurements

Technicial Specifications

Wavelengths(nm)	800nm~1700nm
Detector Type	InGaAs
Detector Size	Ø 1.0mm
Measurement Range (dBm)	-70~+10 | -50~+30
Uncertainty	±5%
Calibrated Wavelength(nm)	850,1300,1310,1490,1550,1625
Resolution(dB)	0.01
Optical Connector	FC(interchangeable SC,ST) / as well as 2.5mm universal
Power Supply	Alkaline Battery(3 AA 1.5V batteries); AC Adaptor(9V)
Battery Operating Time	140 h with 1.5V Battery(3pcs)
Operating Temperature (C°)	-10 ~ +60
Storage Temperature(C°)	-25 ~ +70
Relative Humidity	0 to 95% (non-condensing)
Dimension(mm)	190X100X50
Weight(g)	370

FIBER OPTIC TEST EQUIPMENT
Fiber Optic Handheld Power Meter

FIBER OPTIC TEST EQUIPMENT
Fiber Optic Ranger

Fiber Optic Handheld Power Meter

FO-TF6000

Fiber Optic Ranger

FO-TF4000

Fiber Optic Handheld Power Meter

FO-TF6000 Fiber Optic Handheld Power Meter is a newly designed fiber optic tester by IPORT. It is used for fiber network installation, fiber network engineering acceptance and fiber network maintenance. Compared to normal power meters, TF6000 features automatic wavelength recognition and switching and provides intelligent backlight control. Besides, TF6000 has good appearance, good touch feeling and thoughtful people-oriented design.

Features

- Wave ID - Automatic wavelength recognition and switching (when used with TF1000 light source)
- Frequency ID/Tone detection - Automatic frequency recognition
- Intelligent backlight control (light intensity can be appropriately adjusted according to the environmental light, greatly reducing power consumption)
- Data storage function, up to 1000 test records
- USB communication port for downloading saved test records
- Reference power level can be set and stored
- User self-calibration function
- Auto shut-off function can be enabled or disabled
- AA alkaline battery and AC adapter for power supply
- Low battery warning

Scope of Application

- Telecommunications maintenance
- CATV maintenance
- Fiber Optic Laboratory Tests
- Used for other Fiber Optic Measurements

Technicial Specifications

Calibrated (nm)	850,1300,1310,1490,1550,1625nm
Detector type	be required
Measurement Range (dBm)	-70~+6 | -50~+26
Detector Area	Ø1.0mm
Uncertainty (dB)	±0.15 (3.5%)
linearity (dB)	±0.02
Display resolution (dB)	0.01
Frequency ID (Hz)	270, 330, 1K, 2K
Wave ID (nm)	1310, 1490, 1550, 1625, 850, 1300
Communication Port	USB
Optical Connector type	FC, SC, ST interchangeable (LC, FC, SC, ST interchangeable can be
Alkaline battery	3*AA, 1.5V
Power Supply Adaptor (V)	8.4 V
Battery Operating Time (h)	200
Operation Temperature (C°)	-10~+60
Outline size (mm) / weight	175*90*44.5 (231g)
Dimensions	210X115X55
Weight	450g

Fiber Optic Ranger

FO-TF4000 Fiber Optic Ranger is a test equipment that works as an optical time-domain reflectometer. It is used in single mode fiber test applications. Fiber optic ranger has a much smaller size and lighter weight than fiber optic OTDR and is more economical in cost. They are used in troubleshooting, maintenance and testing of optical fiber connections.

Features

- It is portable, durable, lightweight and easy to use.
- Provides more accurate test results and better repeatability.
- A maximum of 8 fiber errors can be detected in each measurement.
- Automatic Pulse Width Control design provides easy-to-use operation.
- It is possible to easily determine the location of errors.
- There is a built-in visual fault finder (VFL) to find errors in dead zones.
- It is designed to be dust, water and shock resistant and is suitable for field use.
- It has a long battery life and 5000 measurements can be made.

Scope of Application

- Testing the distance of fiber and identifying fault location in fiber connection.
- It enables the detection of reflective and non-reflective breaks in the fiber network.
- Examination of fiber repair and maintenance.

Technicial Specifications

Operating Wavelength	1550nm (1310nm Optional)
Fiber Type	9/125um SM Fiber
Optical Connector Type	FC/PC
Detector Type	InGaAs
Peak Power of laser	≥60mW
Max. Displaying Distance	Reflection Event : 60km (≥1dB)
Reflection Event Dead Zone	15m
Distance Accuracy Reflection Event	± (2m+2*10 (- 4) *Distance)
Wavelength of VFL Option	650nm
Output Power of VFL Option	>=1mW
Power Supply	Alkaline Battery (3pcs AA 4.5V Batteries)
Battery Operating Time	≥5000 measurements
Battery Operating Time (C°)	-5~40
Storage Temperature (C°)	-10~60
Humidity	0~85% (Non-condensation)
Dimensions	190*100*50mm
Weight (g)	450

FIBER OPTIC TEST EQUIPMENT

Fiber Optic Variable Attenuator

FIBER OPTIC TEST EQUIPMENT

Visual Fault Indicator (VFL)

Fiber Optic Variable Attenuator
FO-TF8000

Visual Fault Indicator (VFL)
FO-TF105

Fiber Optic Variable Attenuator

FO-TF8000 handheld optical variable attenuator is used for continuous optical signal attenuation. The attenuator is used in laser systems for online testing. The JW3303 attenuator can be used in digital communication devices such as PHD and SDH and in systems using analog modulation such as CATV. This attenuator allows precise control of optical signal strength, making it convenient.

Features

- Step by step attenuation with rotating dial: Attenuates in 0.05dB steps.
- It has the ability to display dB and dBm attenuation value.
- The 10-minute auto shut-off feature can be enabled and disabled by turning on/off with the keyboard.
- After the device is turned off, it keeps the attenuation value and step in memory so that it can be used to return the device to the previous power-off state at the next power-up.
- It is portable, durable, lightweight and easy to use.

Scope of Application

- Telecommunications Maintenance
- CATV Maintenance
- Comprehensive cable construction system
- Optical devices research and development
- Optical communication training and laboratory tests
- Other optical projects

Technicial Specifications

Attenuating wavelength Range	1260nm~1650nm
Fiber Model	9/125um SM
Optical Connector	FC/PC
Calibrated wavelengths	1310/1490/1550/1625nm
Measurement Range	2.5~65dB
Resolution	0.05dB
Minimize Insertion Loss	<2.5dB
Linearity	±0.5dB
Repeating	±0.2dB
Attenuating Accuracy	±0.8dB
Return Loss at Input/ Output	>35dB (typical value40dB)
Max input	+20dBm
Rechargeable batteries	7.4V
Power supply adaptor	7~8.5V
Operation temperature (C°)	0~40
Dimensions	210X115X55
Weight	450g

Visual Fault Indicator (VFL)

- TF105 VFL is a basic fiber testing tool that is efficient and cost-effective. It provides a visible way to find fiber errors in an optical network and identify fibers during and after installation. It includes:
- Finding breakpoints, poor connections, kinks or cracks in fiber optic cables.
- Finding errors in the OTDR dead zone.
- End-to-end visual fiber identification.

Features

- Constant and stable output power
- The special laser driver circuit design ensures that the laser output power remains at a constant power level as long as the current battery voltage.
- Low battery alert reminds users to replace the battery in time.
- Long battery life (up to 40 hours with AAA batteries)
- Works in CW or Pulsed mode
- Pocket size and lightweight, easy to use

Technicial Specifications

Central Wavelength	650nm±10nm
Emitter Type	FP-LD
Output Power	1mw or 10mw
Optical Connector	FC/2.5mm universal connector For 1.25mm connectors, FC (Male)-LC (Female) convertor can be optional on customer requests
Operating Model	Both CW and Pulse(2Hz) available
Power Supply	Two AAA alkaline batteries
Battery Operating Time	40hours , Test with Panasonic LR6 AAA ALKALINE battery
Operating Temperature (C°)	-10~+60
Storage Temperature (C°)	-25~+70
Dimension (mm)	100*30*18
Weight	60g
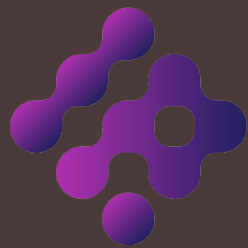
IPORT

NETWORK SYSTEMS

MEDIA & VIDEO
CONVERTERS

MEDIA & VIDEO CONVERTERS
10/100M Dual Fiber Media Converters
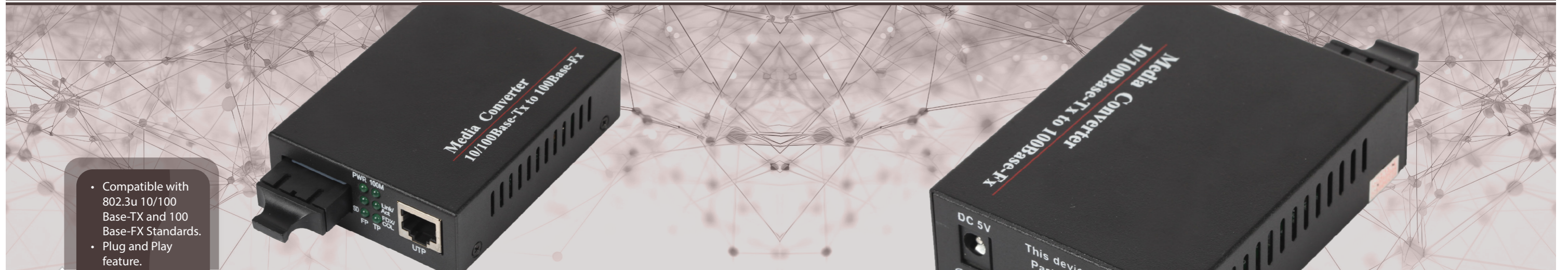
FEATURES

- Compatible with 802.3u 10/100 Base-TX and 100 Base-FX Standards.
- Plug and Play feature.
- Auto-detection half/full duplex transfer mode for TX port.
- Easy view LED's provide to check network activity.
- 1 RJ-45, 1 Duplex SC connector interface.
- External 5V DC power adapter.
- 2 year warranty.

Overview

10/100M Dual Fiber Media Converters comply with IEEE802.3 standards. Media converters support converting data signals between 10/100 Base-TX and 100 Base-FX.

They are connected between fiber optic cables and copper cables in the network. Media converters are transparently compatible with all protocols and can be used for many applications. (For example, Fiber to the Home, Fiber to the Building, Fiber to the Curb, Local Area Network and IP CCTV)

Technicial Specifications

MODELS	OPT-001	OPT-002	OPT-002-40	OPT-006
Access mode	10/100Mbps			
Standard	IEEE802.3 10Base-T Ethernet, IEEE802.3u, 100Base-TX/FX Fast Ethernet, IEEE802.3x Flow Control			
Wavelength	850 nm	1310 nm	1310 nm	1310 nm
Transmission distance	2 km	20 km	40 km	60 km
Flow Control	IEEE802.3x flow control for full-duplex model - Back-pressure flow control for half-duplex model			
BER	< 10⁻8			
MTBF	> 3 years			
Power Supply	5V DC / 1A external power supply			
Power Consumption	< 3W			
Operating Temperature	0 / +50℃			
Operating Humidity	5 – 90 % (non-condensing)			
Storage Temperature	-40 / +70℃			
Dimensions	95 × 70 × 26mm (external power)			

Product Code	Product Description
FO-OPT-001	10/100M Dual Fiber Multi Mode 850nm SC 2km External Media Converters
FO-OPT-001-ST	10/100M Dual Fiber Multi Mode 850nm ST 2km External Media Converters
FO-OPT-002	10/100M Dual Fiber Single Mode 1310nm SC 20km External Media Converters
FO-OPT-002-40	10/100M Dual Fiber Single Mode 1310nm SC 40km External Media Converters
FO-OPT-003	10/100M Dual Fiber Single Mode 1310nm SC 60km External Media Converters

MEDIA & VIDEO CONVERTERS
10/100/1000M Dual Fiber Media Converters
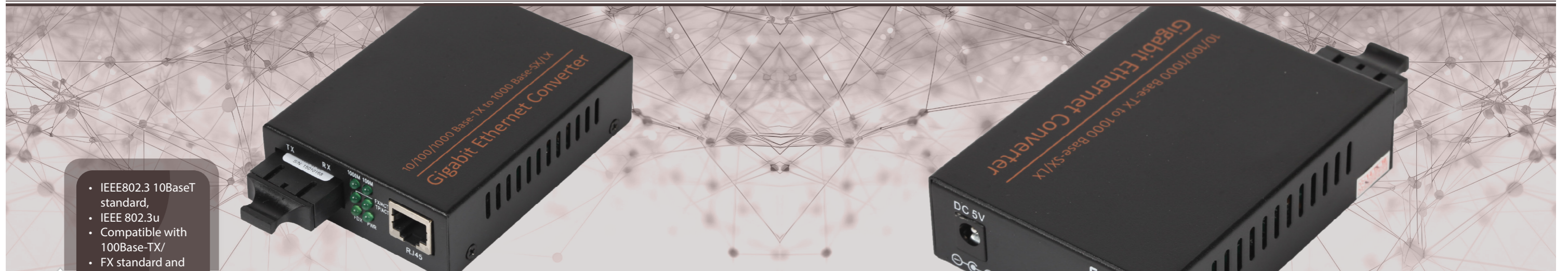
FEATURES

- IEEE802.3 10BaseT standard,
- IEEE 802.3u
- Compatible with 100Base-TX/
- FX standard and IEEE 802.3z/ab
- 1000Base-TX/FX standard.
- Plug and Play feature.
- Half/full duplex with auto-detection
- Transfer mode for TX port.
- Easy view allows controlling LEDs
- network activity.
- 1 RJ-45, 1 Duplex SC connector
- interface.
- External 5V DC power adapter.
- 2 years warranty.

Overview

10/100/1000M Dual Fiber Media Converters comply with IEEE802.3, IEEE802.3u, IEEE802.3z and IEEE802.3ab standards.

Media converters support converting data signals between 10/100/1000 Base-TX and 1000 Base-SX/LX. In the network, connection is made between fiber optic cables and copper cables.

Media converters are transparent to all protocols and can be used for many applications. (Such as Fiber to the House, Indoor Fiber, Curb Fiber, Local Network and IP CCTV).

Technicial Specifications

MODELS	OPT-007	OPT-008	OPT-008-40	OPT-008-60
Access mode	10/100/1000 Mbps			
Standard	IEEE802.3 (10 Base-T Ethernet), IEEE802.3u (100 Base-Tx/Fx Fast Ethernet), IEEE802.3ab (1000 Base-Tx), IEEE802.3z (1000 Base-SX/LX Gigabit Ethernet), IEEE802.3x (Flow Control)			
Wavelength	850 nm	1310 nm	1310 nm	1310 nm
Transmission distance	0.5 km	20 km	40 km	60 km
Flow Control	IEEE802.3x flow control for full-duplex model - Back-pressure flow control for half-duplex model			
BER	$< 10^{-8}$			
MTBF	> 3 years			
Power Supply	5V DC / 2A external power supply			
Power Consumption	< 5W			
Operating Temperature	0 / +50℃			
Operating Humidity	5 – 90 % (non-condensing)			
Storage Temperature	-40 / +70℃			
Dimensions	95 × 70 × 26mm (external power)			

| Product Code	Product Description
FO-OPT-007	10/100/1000M Dual Fiber Multi Mode 850nm SC 0.5km External Media Converters
FO-OPT-008	10/100/1000M Dual Fiber Single Mode 1310nm SC 20km External Media Converters
FO-OPT-008-40	10/100/1000M Dual Fiber Single Mode 1310nm SC 40km External Media Converters
FO-OPT-008-60	10/100/1000M Dual Fiber Single Mode 1310nm SC 60km External Media Converters

MEDIA & VIDEO CONVERTERS
10/100 Single Fiber Media Converters

MEDIA & VIDEO CONVERTERS
10/100 Single Fiber Media Converters
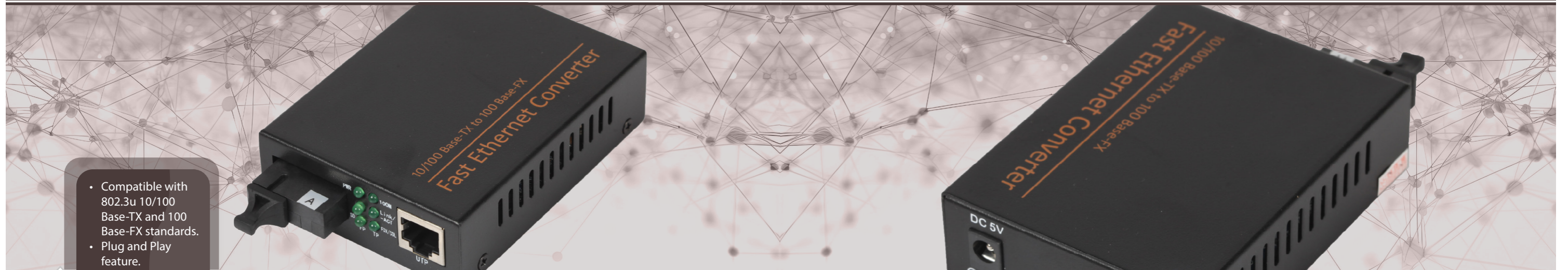
F E A T U R E S

- Compatible with 802.3u 10/100 Base-TX and 100 Base-FX standards.
- Plug and Play feature.
- Auto-sensing half/full duplex transfer mode for TX port.
- LEDs for easy viewing
- Check network activity.
- 1 RJ-45, 1 Simplex SC connector interface.
- External 5V DC power adapter.
- 2 years warranty

Overview

10/100M Single Fiber (WDM) Media Converters comply with IEEE802.3 standards. Single Fiber media converters provide data transmission over a single fiber optic core with WDM technology.

According to this technology, media converters use different wavelengths for Tx and Rx. Media converters support converting data signals between 10/100 Base-TX and 100 Base-FX.

In the network, connection is made between fiber optic cables and copper cables. Media converters are transparent to all protocols and can be used for many applications. (Such as Fiber to the House, Indoor Fiber, Curb Fiber, Local Network and IP CCTV).

Technicial Specifications

MODELS	OPT-010-A	OPT-010-B	OPT-011-A	OPT-011-B
Access mode	10/100/1000 Mbps			
Standard	IEEE802.3 (10 Base-T Ethernet), IEEE802.3u (100 Base-Tx/Fx Fast Ethernet), IEEE802.3x (Flow Control)			
Wavelength	Tx 1310nm / Rx 1550nm	Tx 1550nm / Rx 1310nm	Tx 1490nm / Rx 1550nm	Tx 1550nm / Rx 1490nm
Transmission distance	20 km	20 km	60 km	60 km
Flow Control	IEEE802.3x flow control for full-duplex model - Back-pressure flow control for half-duplex model			
BER	< 10⁻8			
MTBF	> 3 years			
Power Supply	5V DC / 1A external power supply			
Power Consumption	< 3W			
Operating Temperature	0 / +50℃			
Operating Humidity	5 – 90 % (non-condensing)			
Storage Temperature	-40 / +70℃			
Dimensions	95 × 70 × 26mm (external power)			

Product Code	Product Description
FO-OPT-010-A	10/100M Single Fiber WDM Single Mode Tx 1310nm / Rx 1550nm SC 20km External Media Converters
FO-OPT-010-B	10/100M Single Fiber WDM Single Mode Tx 1550nm / Rx 1310nm SC 20km External Media Converters
FO-OPT-011-A	10/100M Single Fiber WDM Single Mode Tx 1490nm / Rx 1550nm SC 60km External Media Converters
FO-OPT-011-B	10/100M Single Fiber WDM Single Mode Tx 1550nm / Rx 1490nm SC 60km External Media Converters

MEDIA & VIDEO CONVERTERS

10/100/1000M Single Fiber Media Converters

MEDIA & VIDEO CONVERTERS

10/100/1000 Single Fiber Media Converters

FEATURES

- Compatible with IEEE802.3 10 Base-T standard, IEEE 802.3u 100Base-TX/FX standard and IEEE 802.3z/ab 1000Base-TX/FX standard.
- Plug and Play feature.
- Auto-sensing half/full duplex transfer mode for TX port.
- Easy-view LEDs allow checking network activity.
- 1 RJ-45, 1 Simplex SC connector interface.
- External 5V DC power adapter.
- 2 years warranty.

Overview

10/100/1000M Single Fiber (WDM) Media Converters comply with IEEE802.3, IEEE802.3u, IEEE802.3z and IEEE802.3ab standards. Single Fiber media converters provide data transmission over a single fiber optic core with WDM technology. According to this technology, media converters use different wavelengths for Tx and Rx. Media converters support converting data signals between 10/100/1000 Base-TX and 1000 Base-SX/LX.

In the network, connection is made between fiber optic cables and copper cables.

Media converters transparently adapt to all protocols and can be used for many applications such as Fiber to the Home, Fiber to the Building, Fiber to the Curb, Local Area Network and IP CCTV.

Technicial Specifications

MODELS	OPT-013-A	OPT-013-B	OPT-014-A	OPT-014-B	OPT-015-A	OPT-015-B
Access mode	10/100/1000 Mbps					
Standard	IEEE802.3 (10 Base-T Ethernet), IEEE802.3u (100 Base-Tx/Fx Fast Ethernet), IEEE802.3ab (1000 Base-Tx), IEEE802.3z (1000 Base-SX/LX Gigabit Ethernet), IEEE802.3x (Flow Control)					
Wavelength	Tx 1310nm / Rx 1550nm	Tx 1550nm / Rx 1310nm	Tx 1310nm / Rx 1550nm	Tx 1550nm / Rx 1310nm	Tx 1310nm / Rx 1550nm	Tx 1550nm / Rx 1310nm
Transmission distance	20 km	20 km	40 km	40 km	60 km	60 km
Flow Control	IEEE802.3x flow control for full-duplex model - Back-pressure flow control for half-duplex model					
BER	< 10⁻8					
MTBF	> 3 years					
Power Supply	5V DC / 2A external power supply					
Power Consumption	< 5W					
Operating Temperature	0 / +50℃					
Operating Humidity	5 – 90 % (non-condensing)					
Storage Temperature	-40 / +70℃					
Dimensions	95 × 70 × 26mm (external power)					

Product Code	Product Description
FO-OPT-013-A	10/100/1000M Single Fiber WDM Single Mode Tx 1310 / Rx 1550nm SC 20km External Media Converters
FO-OPT-013-B	10/100/1000M Single Fiber WDM Single Mode Tx 1550 / Rx 1310nm SC 20km External Media Converters
FO-OPT-014-A	10/100/1000M Single Fiber WDM Single Mode Tx 1310 / Rx 1550nm SC 40km External Media Converters
FO-OPT-014-B	10/100/1000M Single Fiber WDM Single Mode Tx 1550 / Rx 1310nm SC 40km External Media Converters
FO-OPT-015-A	10/100/1000M Single Fiber WDM Single Mode Tx 1310 / Rx 1550nm SC 60km External Media Converters
FO-OPT-015-B	10/100/1000M Single Fiber WDM Single Mode Tx 1550 / Rx 1310nm SC 60km External Media Converters

MEDIA & VIDEO CONVERTERS
10/100M Smart Fiber Media Converters

MEDIA & VIDEO CONVERTERS
10/100M Smart Fiber Media Converters

FEATURES

- 10/100 Mbps adaptive for ease of network upgrade;
- Supports transparent transmission of extra long packets over VLAN.
- Efficient built-in switching core to implement flow control and reduce broadcast packets;
- Supporting full-duplex and half-duplex transmission modes and capable of auto-negotiation;
- Supporting automatic switching of twisted pair ports for ease of system debugging and installation;
- Support Link Failure Alert (LFA);
- Supports FX half duplex/full duplex transmission modes and link error warning function;
- Supports (unique) switch selection of 10/100Mbps storage and transmission mode and 100Mbps direct transmission mode;
- Support low latency transmission;
- Supporting the transfer of extra long packets (maximum length of 1600 bytes);
- Supporting the transmission of extra long packets over VLAN;
- Extremely low power consumption (less than 2W), low heat and stable working capacity for a long time;
- It supports multiple fiber port types such as dual-fiber multimode, dual-fiber single-mode and single-fiber single-mode to meet users' expanded requirements.

Applications

- Fast Ethernet long distance transmission network at 10/100 Mbps.

Overview

F0-IFE830A is an intelligent 10/100M adaptive fast Ethernet fiber media converter (also called optical-electric media converter). Featuring unique "connection error warning" function on optical and electrical ends, this fast Ethernet fiber converter can completely replace Network Management System (NMS) type fiber converter and greatly reduce system cost.

The F0-IFE830A can interconvert between 10Base-T/100Base-TX copper wire electrical signals and 100Base-FX optical signals.

F0-IFE830A extends the transmission distance of a network from 100 meters to 120 km on copper wires and uses two network transmission technologies to realize data transmission between optical and electrical network connection media (i.e. data link layer 2 storage and transmission mode and physical layer 1 pass-through mode). F0-IFE830A fiber converter supports transmission on dual fiber multimode, dual fiber single mode and single fiber single mode fibers.

Technicial Specifications

PARAMETERS	SPECIFICATIONS
Access mode	10/100Mbps
Standard	IEEE802.3 10Base-T Ethernet, IEEE802.3u, 100Base-TX/FX Fast Ethernet, IEEE802.3x Flow control
Wavelength	850nm/1310nm/1550nm
Transmission distance	Dual-fiber multi-mode: 2Km; dual-fiber single-mode: 25/40/60/80/100/120Km;single-fiber single-mode: 25/40/60/80/100Km Category-5 twisted pairs: 100m
Port	One RJ45 port: Connected to STP/UTP category-5 twisted pairs / One fiber port: Multi-mode – SC or ST (fiber size: 50,62.5/125μm) Single mode – SC/FC fiber port (fiber size: 9/125μm) / Single-fiber single-mode – SC/FC fiber port (fiber size: 9/125 μm)
Conversion mode	Medium conversion, storing and forwarding/straight-through
MAC address table	I K
Buffer space	1Mbit
Flow control	Full duplex state: flow control; half-duplex state: back pressure mode
Delay	Storing & forwarding: 9.6 μ s; straight-through: 0.9 μ s;
Bit error rate	<1/1000000000
MTBF	100,000 hours
LED	POWER (power), FX LINK/ACT (fiber link/action) / FDX (FX full-duplex mode), TP LINK/ACT (twisted pair link/action) TP 100 (twisted pair: transmission rate of 100M); FX 100 (fiber: transmission rate of 100M) (external power)
Power	DC5V 1A (external), AC220 0.5A/DC-48 (built-in)
Power consumption	<2W
Operating temperature	-10~55℃
Operating humidity	5%~90%
Storage temperature	-40~70℃
Storage humidity	5%~90% (non-condensing)
Dimensions	26mm(H)*71mm(W)*95mm(D) (height * width * depth) (external power) / 26mm(H)*85mm(W)*135mm(D) (height * width * depth) (built-in power) 110mm(H)*22mm(W)*81mm(D) /(height * width * depth) (module card)

Product Code	Product Description
FO-IFE830APS-80120-SC/FC	10/100M Intelligent Fiber Media Converters (Dual-Fiber Single Mode, 1550, 80/100/120)
FO-IFE830APS-2560-SC/FC	10/100M Intelligent Fiber Media Converters (Dual-Fiber Single Mode, 1310, 25/40/60)
FO-IFE830ACS-80120-SC/FC	10/100M Intelligent Fiber Media Converters (Dual-Fiber Single Mode, 1550, 80/100/120, WM Card)
FO-IFE830ASS-25100-SC	10/100M Intelligent Fiber Media Converters (Single-Fiber Single Mode, WDM 1310/1550, 25/40/60/80/100 WM Card)
FO-IFE830APSS-25100-SC	10/100M Intelligent Fiber Media Converters (Single-Fiber Single Mode, WDM 1310/1550, 25/40/60/80/100 External)
FO-IFE830ACSS-25100-SC	10/100M Intelligent Fiber Media Converters (Single-Fiber Single Mode, WDM 1310/1550, 25/40/60/80/100 Built-in)

IPORT | TELECOMMUNICATION AND CABLE SYSTEMS

MEDIA & VIDEO CONVERTERS
4 Port 10/100m + 100m Fiber Media Converters

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4 Port 10/100m + 100m Fiber Media Converters
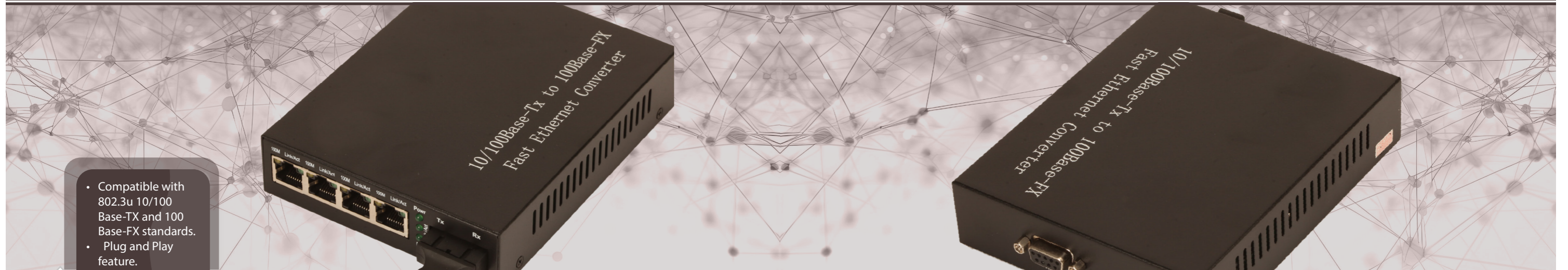
FEATURES

- Compatible with 802.3u 10/100 Base-TX and 100 Base-FX standards.
- Plug and Play feature.
- Auto-sensing half/full duplex transfer mode for TX port.
- Easy-view LEDs allow checking network activity.
- External 5V DC power adapter.
- 2 years warranty.

Overview

4-port 10/100 Base-TX + 1-port 100Base-FX Fiber Media Converters comply with IEEE802.3 standards. Media converters support converting data signals between 10/100 Base-TX and 100 Base-FX.

In the network, connection is made between fiber optic cables and copper cables.

Media converters transparently adapt to all protocols and can be used for many applications such as Fiber to the Home, Fiber to the Building, Fiber to the Curb, Local Area Network and IP CCTV.

Technicial Specifications

MODELS	OPT-060	OPT-061	OPT-062
Access mode	10/100/1000 Mbps		
Standard	IEEE802.3 (10 Base-T Ethernet), IEEE802.3u (100 Base-Tx/Fx Fast Ethernet), IEEE802.3x (Flow Control)		
Wavelength	850nm	1310nm	1310nm
Transmission distance	2 km	25 km	20 km
Copper Ports	4xRJ45	4xRJ45	4xRJ45
Fiber Optic Ports	1xSC Duplex	1xSC Duplex	1xSC Simplex
Flow Control	IEEE802.3x flow control for full-duplex model - Back-pressure flow control for half-duplex model		
BER	< 10ˉ8		
MTBF	> 3 years		
Power Supply	5V DC / 1A external power supply		
Power Consumption	< 5W		
Operating Temperature	0 / +50℃		
Operating Humidity	5 – 90 % (non-condensing)		
Storage Temperature	-40 / +70℃		
Dimensions	140 × 110 × 29mm (external power)		

Product Code	Product Description
FO-OPT-060	4 Port 10/100M + 100M Dual Fiber Multi Mode 850nm SC 2km External Media Converters
FO-OPT-061	4 Port 10/100M + 100M Dual Fiber Single Mode 1350nm SC 25km External Media Converters
FO-OPT-062	4 Port 10/100M + 100M Single Fiber Single Mode 1310nm SC 20km External Media Converters

MEDIA & VIDEO CONVERTERS

4 Ports 10/100/1000m + 2 Port SFP Fiber Media Converter

FEATURES

- IEEE802.3 10 Base-T standard,
- IEEE 802.3u
- Compatible with 100Base-TX/FX standard and IEEE 802.3z/ab 1000Base-TX/FX standard.
- Plug and Play feature.
- Auto-sensing half/full duplex transfer mode for TX port.
- Easy-view LEDs allow checking network activity.
- External 5V DC power adapter.
- 2 years warranty.

Overview

4 Port 10/100/1000M + 2 Port SFP Fiber Media Converters are designed to comply with IEEE802.3, IEEE802.3u, IEEE802.3z and IEEE802.3ab standards. Media converters support converting data signals between 10/100/1000 Base-TX and 1000 Base-SX/LX.

These media converters act as a bridge between fiber optic cables and straight pair copper cables and are used in networking.

Media converters transparently support all protocols and include Fiber to the Home, Fiber to the Building, Fiber to the Curb, Local Area Network and IP CCTV. It can be used in many applications such as (Closed Circuit Television).

Technicial Specifications

MODELS	OPT-065
Access mode	10/100/1000 Mbps
Standard	IEEE802.3 (10 Base-T Ethernet), IEEE802.3u (100 Base-Tx/Fx Fast Ethernet), IEEE802.3ab (1000 Base-Tx), IEEE802.3z (1000 Base-SX/LX Gigabit Ethernet), IEEE802.3x (Flow Control)
Wavelength	Transmission distance depends on the SFP module used with the media converter
Transmission distance	Transmission distance depends on the SFP module used with the media converter
Flow Control	IEEE802.3x flow control for full-duplex model Back-pressure flow control for half-duplex model
BER	< 10⁻8
MTBF	> 3 years
Power Supply	5V DC / 3A external power supply
Power Consumption	< 5W
Operating Temperature	0 / +50℃
Operating Humidity	5 – 90 % (non-condensing)
Storage Temperature	-40 / +70℃
Dimensions	140 × 110 × 29mm (external power)

Product Code	Product Description
FO-OPT-065	4 Port 10/100/1000M + 2 Port SFP Module External Fiber Media Converters

MEDIA & VIDEO CONVERTERS

8 Port 10/100m + 1 Port 100m Fiber Media Converters

FEATURES

- Adaptive 10Mbps and 100Mbps environments for ease of network upgrades;
- Supports transparent transmission of extra long packets over VLAN.
- Efficient built-in switching core to implement flow control and reduce broadcast packets;
- Provides eight independent 10/100Mbps adaptive switching type twisted pair ports to implement electrical interface redundancy and multi-user access;
- Provide eight electrical interfaces based on VLAN switch setting and support the connection of users from different units;
- Supporting full-duplex and half-duplex transmission modes and capable of auto-negotiation;
- Supporting automatic switching of twisted pair ports for ease of system debugging and installation;
- Supporting the transfer of extra long packets (maximum length of 1552 bytes);
- Low power consumption, low heat and stable working capacity for a long time;
- It expands users' requirements by supporting multiple types of fiber ports, such as dual-fiber multimode, dual-fiber single-mode and single-fiber single-mode;

Applications

- Fast Ethernet long distance transmission network at 10/100 Mbps.

Overview

FO-FC650A is a type of 10/100Mbps adaptive fast Ethernet fiber media converter (also called optical-electric media converter). It comes with a built-in eight-port 10M/100Mbps adaptive switch and can achieve mutual conversion between four independent 10Base-T/100Base-TX straight-pair electrical signals and 100Base-FX optical signals.

FO-FC650A can extend the transmission distance of a network from 100m (in single-mode full-duplex mode) to 120Km over copper wires. It supports two different types of network connection media: 10/100Base-TX and 100Base-FX.

With the application of switching technology and store and forward technology, FO-FC650A can realize data transmission between two types of network connection media. This type of converter supports transmission on dual fiber multimode, dual fiber single mode and single fiber single mode fibers.

Technicial Specifications

PARAMETERS	SPECIFICATIONS
Access mode	10/100Mbps
Standard	IEEE802.3 10Base-T Ethernet, IEEE802.3u, 100Base-TX/FX Fast Ethernet, IEEE802.3x Flow control
Wavelength	850nm/1310nm/1550nm
Transmission distance	Dual-fiber multi-mode: 2Km; / Dual-fiber single-mode: 25/40/60/80/100/120Km; / Single-fiber single-mode: 25/40/60/80/100Km Category-5 twisted pair: 100m
Port	Eight RJ45 interfaces: connected to STP/UTP category-5 twisted pair / One fiber port: Multi-mode - SC or ST (fiber size: 50,62.5/125μm) Single mode - SC/FC fiber port (fiber size: 9/125μm) / Single-fiber single-mode - SC/FC fiber port (fiber size: 9/125μm)
Conversion mode	Medium conversion, storing and forwarding mode
MAC address table	I K
Buffer space	1Mbit
Flow control	Full duplex state: flow control; half duplex state: back pressure mode
Delay	9.6us
Bit error rate	<1/1000000000
MTBF	100,000 hours
LED	POWER (power), FX LINK/ACT (fiber connection/action) / FDX (FX full duplex mode), FX100 (Fiber, with a transmission rate of 100M) TP1/2/3/4/5/6/7/8 LINK/ACT (1/2/3/4/5/6/7/8-port twisted pairs connection action) TP1/2/3/4/5/6/7/8 100 (1/2/3/4/5/6/7/8-port twisted pairs, with a transmission rate of 100M)
Power	DC5V/1A (external)
Power consumption	5W
Operating temperature	-10~55℃
Operating humidity	5%~90%
Storage temperature	-40~70℃
Storage humidity	5%~90% (non-condensing)
Dimensions	38mm(Height)*118mm(Width)*152mm(Depth) (external power)

Product Code	Product Description
FO-FC650AM-2SC/ST	8 Port 10/100M + 1 Port 100M Fiber Media Converters (Dual-Fiber Multi Mode, 1310, 2, External)
FO-FC650AS-2560-SC/ST	8 Port 10/100M + 1 Port 100M Fiber Media Converters (Dual-Fiber Single Mode, 1310, 25/40/60, External)
FO-FC650AS-80120-SC/FC	8 Port 10/100M + 1 Port 100M Fiber Media Converters (Dual-Fiber Single Mode, 1310, 80/100/120, External)
FO-FC650ASS-2560-SC	8 Port 10/100M + 1 Port 100M Fiber Media Converters (Single-Fiber Single Mode, 1310/1550, 25/40/60, External)
FO-FC650ASS-80100-SC	8 Port 10/100M + 1 Port 100M Fiber Media Converters (Single-Fiber Single Mode, 1310/1550, 80/100/120, External)

MEDIA & VIDEO CONVERTERS
Single Mode/Multimode Converters

FEATURES

- Plug and Play feature.
- Support full-duplex and half-duplex networking with auto-negotiation feature.
- Support transmission of extra long packets over VLAN.
- Support Quality of Service (QoS) and ensure the transmission of VoIP packets.
- Support Spanning Tree Protocol (STP) to create a redundant network.
- Easy-view LEDs allow checking network activity.
- External 5V DC power adapter.
- 2 years warranty

Overview

Single Mode/Multimode Fiber optic media converters are applied to data networks with mixed cable connections of single mode and multimode fibers.
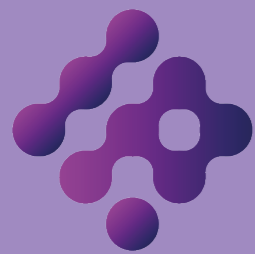
Single Mode/Multimode converters can realize mutual conversion between single mode and multimode 1310nm wavelength, and also can achieve mutual conversion between 850nm, 1310nm and 1550nm wavelengths.

It can also realize the signal combining function, further extending the transmission distance in multi-mode fiber. This kind of converter supports dual fiber multimode and dual fiber single mode transmission.

Technicial Specifications

MODELS	OPT-050	OPT-051
Access mode	10/100 Mbps	10/100/1000 Mbps
Standard	IEEE802.3 (10 Base-T Ethernet), IEEE802.3u (100 Base-Tx/Fx Fast Ethernet), IEEE802.3x (Flow Control)	IEEE802.3 (10 Base-T Ethernet), IEEE802.3u (100 Base-Tx/Fx Fast Ethernet), IEEE802.3ab (1000 Base-Tx), IEEE802.3z (1000 Base-SX/LX Gigabit Ethernet), IEEE802.3x (Flow Control)
Wavelength	850nm / 1310nm	
Transmission distance	2 km (MM) / 25 km (SM)	0,5 km (MM) / 20 km (SM)
BER	< 10⁻9	
MTBF	> 100.000 hours	
Power Supply	5V DC / 1A external power supply	5V DC / 2A external power supply
Power Consumption	< 3.5W	
Operating Temperature	0 / +50℃	
Operating Humidity	5 – 90 % (non-condensing)	
Storage Temperature	-40 / +70℃	
Dimensions	95 × 70 × 26mm (external power)	

Product Code	Product Description
FO-FC650AM-2SC/ST	8 Port 10/100M + 1 Port 100M Fiber Media Converters (Dual-Fiber Multi Mode, 1310, 2, External)
FO-FC650AS-2560-SC/ST	8 Port 10/100M + 1 Port 100M Fiber Media Converters (Dual-Fiber Single Mode, 1310, 25/40/60, External)
FO-FC650AS-80120-SC/FC	8 Port 10/100M + 1 Port 100M Fiber Media Converters (Dual-Fiber Single Mode, 1310, 80/100/120, External)
FO-FC650ASS-2560-SC	8 Port 10/100M + 1 Port 100M Fiber Media Converters (Single-Fiber Single Mode, 1310/1550, 25/40/60, External)
FO-FC650ASS-80100-SC	8 Port 10/100M + 1 Port 100M Fiber Media Converters (Single-Fiber Single Mode, 1310/1550, 80/100/120, External)

IPORT

NETWORK SYSTEMS

FIBER OPTIC
CLEANING ELEMENTS

FIBER OPTIC CLEANING MATERIALS

FO Connectors Maintenance and Cleaning Tools

ONE-CLICK CLEANER FOR 2.5MM THIMBERS

- Cleans 2.5mm ferrules (SC, ST, FC and E2000)
- Simple push motion for driving
- Audible CLICK sound to alert the operator when the vehicle is fully used
- Provides over 525 uses per unit
- Dry cleaning thread eliminates the need for solvents to be effective
- Crush resistant over 250N
- Withstands drops from more than 1.5 meters

Care and Cleaning Products

A properly functioning fiber optic network requires clinical cleaning of all fiber optic connections. A dust particle or fingerprint can dissipate enough optical power from the core and disable the entire connection. When not in use, all fiber connector ends should be covered with dust caps to prevent scratches and dents from forming on the connector ends. Dents and scratches on the surface of one connector can migrate when mated to another connector, ultimately propagating damage and requiring re-termination of both fibers.

Fiber Optic Connector Cleaner

- Cleans all standard 2.5mm and 1.25mm connectors (including SC, FC, ST, MU, LC)
- Specially formulated antistatic microfiber cloth
- Portable size, suitable for handheld use
- Best cleaning effect at once
- Saves cleaning time
- Dry special antistatic microfiber fabric that does not contain residue and fiber
- Easily replaceable reel
- Dust/oil/particle/alcohol etc. for cleaning

One Click Cleaner 1.25mm

- Cleans 1.25mm ferrules (LC, MU)
- Simple push motion for driving
- Audible CLICK sound to alert the operator when the vehicle is fully used
- Provides over 525 uses per unit
- Dry cleaning thread eliminates the need for solvents to be effective
- Crush resistant over 250N
- Resistant to drops greater than 1.5M
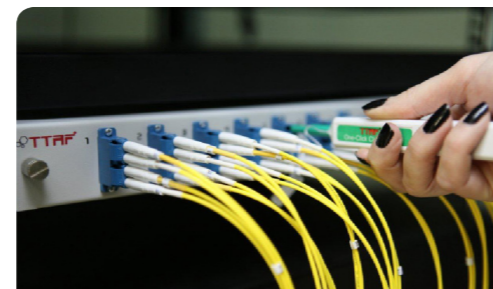
2.5mm Fiber Rod

Fiber Sticks are ideal consumables for cleaning bulkheads after installation. These are used to clean the end faces of connectors inserted through the container. The tight fit of the foam cap also ensures that any contaminants inside the adapter are removed.
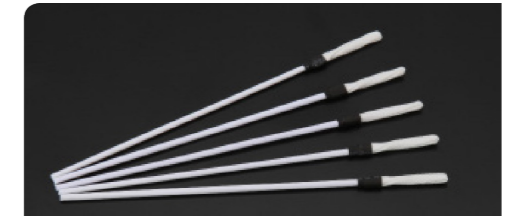
1.25mm Fiber Rod

Fiber sticks are ideal consumables for cleaning 1.25mm bulkheads after installation. These can be used to clean the end faces of connectors inserted through the container. Cleaning is accomplished by inserting the fiber tip into the opening of the adapter and turning it once. The fiber stick material allows the user to clean the installed connector ends without scratching the surface and provides excellent cleaning.

Cleaning Wipes

- For Professional and Industrial use only.
- Open the package and clean the surface with a pre-saturated cleaning cloth.
- Do not reuse, safe for plastics.
- It evaporates quickly.
- Leaves zero residue.
- It is not corrosive.
- It is made of lint-free fabric.

Product Code	Product Description
FO-TK0001	Fiber Optik Konnektör Temizleyici
FO-TK0002	One Click Cleaner for 1.25mm Ferrules

Product Code	Product Description	Product Code	Product Description
FO-TK0003	One Click Cleaner for 2.25mm Ferrules	FO-TK0001	1.25mm Fiber Çubuk
FO-TK0004	2.5mm Fiber Çubuk	FO-TK0002	Temizleme Mendili

FIBER OPTIC CLEANING MATERIALS

FO Connectors Maintenance and Cleaning Tools

Alcohol

- Lock-in pump does not leak when in use - suitable for travel
- Made from high density polyethylene material suitable for many solvents
- Square shape provides stability and saves storage space
- Large opening that can be easily filled
- Transparent - contents are easily visible
- Dispenses approximately 2 cc of fluid with each pump
- Filled with alcohol and ready for immediate use

KIMWIPES

- Absorbent and contains little lint
- 280 cleaning cloths per box
- Gentle on delicate surfaces
- Controlled single sheet distribution
- Low extractable substance content

QbE

- Full Fiber Optic Cleaning System
- The platen side of the box provides surface for cleaning
- Effective "Wet" or "Dry" cleaning
- Offers an excellent Cleaning System or for field or OEM applications
- Convenient Size - Portable system fits easily into tool bags and is practical for use on workbenches.

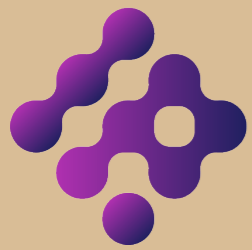| Product Code	Product description
FO-TK0007	Kimwipes
FO-TK0008	Kimwipes
FO-TK0009	Alcohol Bottle

IPORT

NETWORK SYSTEMS

RF & COAX
SOLUTIONS

RF & COAX Solutions
N Connectors & DIN Connectors

RF & COAX Solutions
Cable Assembly & RF Adapter

N Connectors

N Connectors
Technicial Specifications

- Connector Interface   N
- Gender   Male or Female
- Connector Impedance   50 ohms
- VSWR   ≥1.15 (0-3GHz)
- External Contact Plating   Trimetal or Nickel
- Internal Contact Plating   Silver or Gold
- Interface Durability   500 cycles
- Operating temperature   -40 ℃ to +85 ℃

N female for 1/2" S   N female for 1/2"   N female for 7/8"

N male for 1/2"   N male for 1/2" S   N male for 7/8"

N male for LMR400   N male R/A for 1/2"   N male for RG402

DIN Connectors

DIN Connectors
Technicial Specifications

- Connector Interface   7-16 DIN
- Gender   Male or Female
- Connector Impedance   50 ohms
- VSWR   ≥1.15 (0-3GHz)
- External Contact Plating   Trimetal or Nickel
- Internal Contact Plating   Silver or Gold
- Interface Durability   500 cycles
- Operating temperature   -40 ℃ to +85 ℃

DIN female for 1/2" S   DIN female for 1/2"   DIN female for 7/8"

DIN female for RG402   DIN female for RG401   DIN male for 1/2" S

DIN male for 1/2"   DIN male for 7/8"   DIN male R/A for 1/2" S

Cable Assembly

Cable Assembly
Technicial Specifications

- Cable Type   On request
- Cable Length   On request
- Connector Interface   7-16 DIN
- Gender   Male or Female
- Connector Impedance   50 ohms
- VSWR   ≥1.15 (0-3GHz)
- External Contact Plating   Trimetal or Nickel
- Internal Contact Plating   Silver and Gold

1/2" Jumper NM-NM   1/2 Jumper DM-DM

RG401 Jumper DF-DF   RG401 Jumper NM-NM   RG402 Jumper DF-DF

RG402 Jumper DF-DF   RG402 Jumper NF-NF   RG402 Jumper NF-NF

RF & Adapter

RF & Adapter
Technicial Specifications

- Brand   ACONN
- Connector Interface   N or DIN
- Body Style   Straight or Right Angle
- Connector Interface   7-16 DIN
- Gender   Male or Female
- Connector Impedance   50 ohms
- VSWR   ≥1.15 (0-3GHz)
- External Contact Plating   Trimetal or Nickel
- Internal Contact Plating   Silver or Gold
- Interface Durability   500 cycles
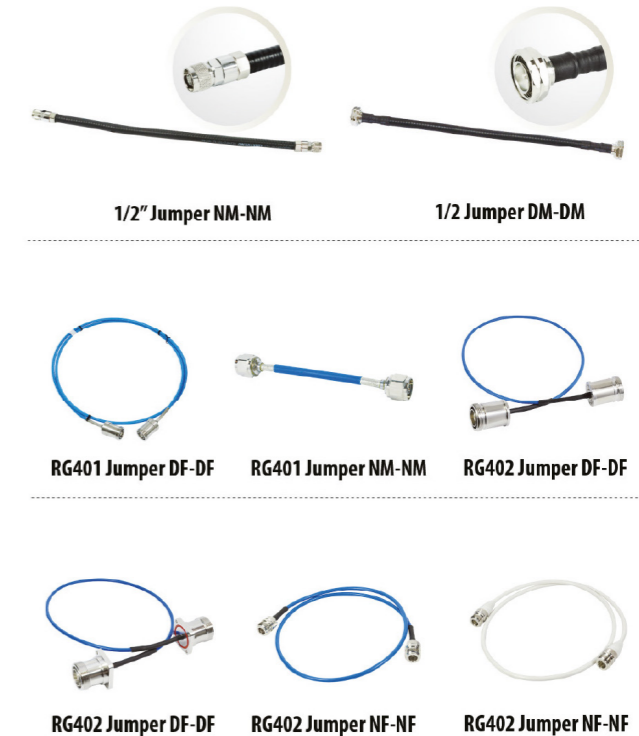- Operating temperature   -40 ℃ to +85 ℃

Adaptor DIN Female to DIN Female   Adaptor DIN Male to N Female   Adaptor DIN Male to DIN Male

Adaptor N Female to N Female   Right Angle Adaptor N Male to N Female   Adaptor N Male to N Male

RF & COAX Solutions
1/4 Wavelength Surge Arrester & Gas Cylinder Surge Arrester

RF & COAX Solutions
Grounding Kit & Feed Clamp

1/4 Wavelength Surge Arrester

1/4 Wavelength Surge Arrester
Technicial Specifications

- Connector Interface   DIN or N
- Connector Impedance   50 ohms
- Frequency range   800-2500MHz, 750-2000 MHz / DC-2500 MHz, 5752-5850 MHz, 380-512MHz
- VSWR   ≥1.20
- Insertion Loss   ≥0.15 (dB)
- Discharge Current   30
- RoHS Compliant   ✅

Surge Arrestor N Female to N Male Bulkhead

Hybrid Surge Arrestor DIN Female to DIN Female Bulkhead

Surge Arrestor DIN Female to DIN Female Bulkhead

Surge Arrestor DIN Male to DIN Female

Surge Arrestor N Male to N Female

Surge Arrestor DIN Male to DIN Female

Grounding Kit

Grounding Kit
Technicial Specifications

- Brand: ACONN
- It is used as grounding protector of feeder cables.
- We produce clip-on grounding kit, standard grounding kit, frame grounding kit.
- 1/4'', 1/2'', 3/8'', 1-1/4'', 1-5/8'', RGB cable etc. Suitable for.
- 16mm² or 25mm² cable according to customer demand.
- Cable length (0.6m, 0.8m, 1m) upon customers' request
- Easy installation with good performance.
- RoHS compliant

Outdoor Grounding Kit

Outdoor Grounding Kit

Indoor Grounding Kit

Gas Tube Surge Arrester

Gas Tube Surge Arrester
Technicial Specifications

- Brand   ACONN
- Connector Interface   DIN or N
- Connector Internal resistance 50 ohms
- Frequency range   DC-3GHz
- VSWR   ≥1.20
- Insertion Loss   ≥0.5
- Peak Discharge Current(KA)   10/20
- Initial Discharge Voltage   75/90/150/230/350(V)
- RoHS Compliant   ✅

Surge Arrestor N Female to N Female Bulkhead

Surge Arrestor N Male to N Female Bulkhead

Surge Arrestor N Male to N Female Bulkhead

Surge Arrestor N Male to N Female Bulkhead

Surge Arrestor N Female to N Female Bulkhead

Surge Arrestor DIN Male to DIN Female

Feed Clamp

Feed Clamp
Technicial Specifications

- Brand: ACONN
- Applicable for fixing feeders for microwave and mobile systems.
- Suitable for 1/2'', 3/8'', 7/8'', 1-1/4'', 1-5/8'', LMR400, LMR600, RG214 cables.
- It should be made of high quality SUS304 and PP.
- Salt spray test: 48 HOURS, No rust
- Temperature Range: -40 °C to +75 °C
- Easy installation with good performance.
- RoHS compliant

Cable Clamp with 1 run

Cable Clamp with 4 run

Cable Clamp with 2 run

Cable Clamp for 7mm & 10-12 mm Cable

Cable Clamp for 7/8" RF with 3 run

Cable Clamp for1/2" Coaxial Feeder 3+3 run

RF & COAX Solutions

1/4 Wavelength Surge Arrester & Gas Cylinder Surge Arrester

RRU-RCU Connection Cable

Technicial Specifications

- AISG Connector A 8 pin DIN Female
- AISG Connector A Body Style Straight
- AISG Connector A Standard IEC 60130-9
- Connector B 9-pin D-sub Male
- Data Conductor Type 0.20 mm² (24 AWG) twisted pair
- Power Conductor Type 0.82 mm² (18 AWG) stranded black color

RCU-RCU Connection Cable

Technicial Specifications

- AISG Connector A 8 pin DIN Female
- AISG Connector A Body Style Straight
- AISG Connector A Standard IEC 60130-9
- AISG Connector B 8-pin DIN Male
- AISG Connector B Body Style Straight
- AISG Connector B Standard IEC 60130-9
- Data Conductor Type 0.20 mm² (24 AWG) twisted pair
- Power Conductor Type 0.82 mm² (18 AWG) stranded
- Total Conductors, quantity 6 black color

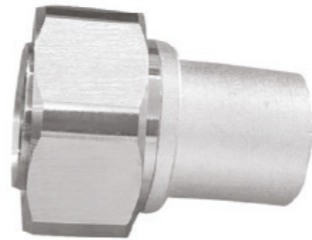| Product Code	Product Description
FO-SFTP-CAT7a-XYZZZ	SFTP Cat7a Patchcord L: x meter.
FO-SFTP-CAT7-XYZZZ	SFTP Cat7 Patchcord L: x meter.

RF & COAX Solutions

Microwave Passive Component

RF & COAX Solutions

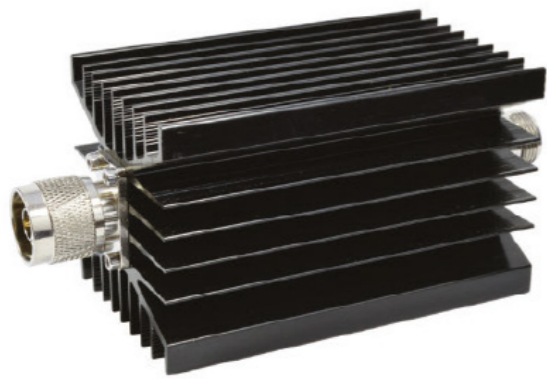**Microwave Passive Component**

Microwave Passive Component

Attenuator 5dB

Load 5W

Load 2W

Attenuator 40dB

Load 25W

Splitter

Microwave Passive Component

IPORT

NETWORK SYSTEMS
TELECOMMUNICATION
CABLING SYSTEMS

KUANTUM HOLDING

Group Company

2024 v.1