



FIBER OPTIC SYSTEM  
COPPER NETWORK SYSTEM

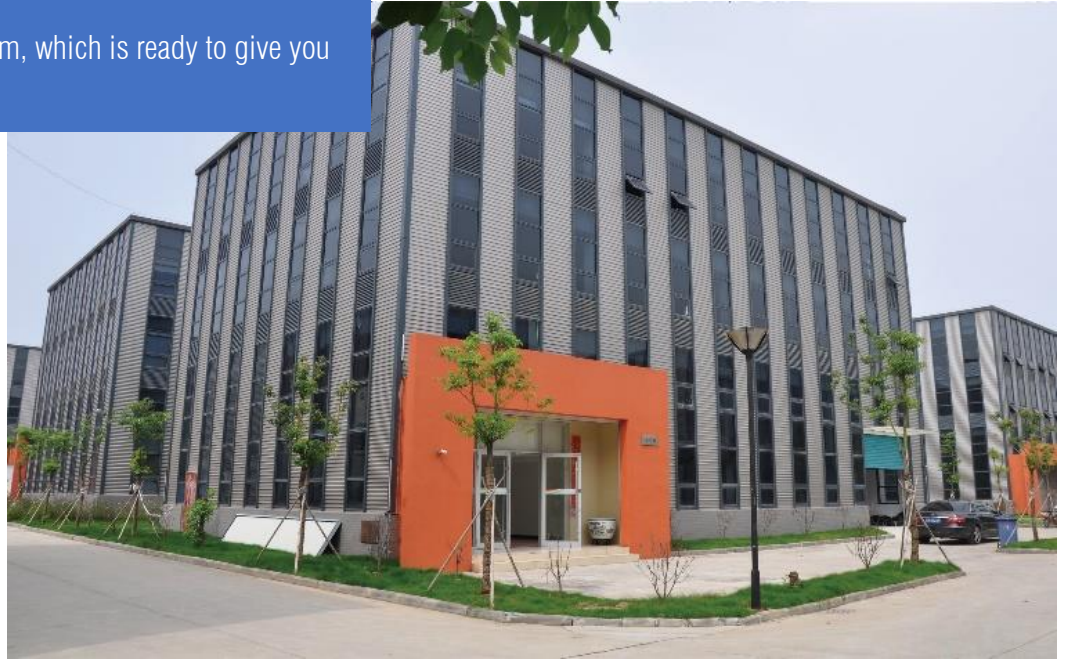
***Giga-Maxx***

**CATALOGUE**

Welcome to Gigalight!

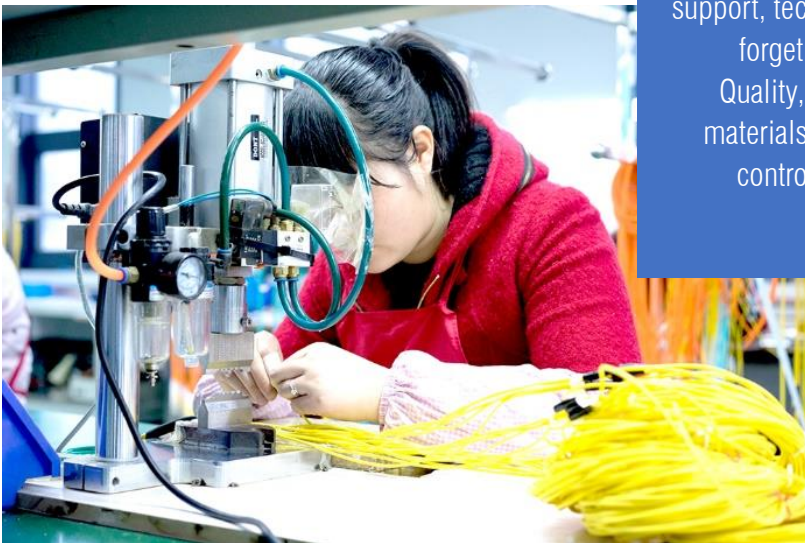
Established in 2012, a manufacturer specialized in research, development and production of Fiber Optic System and Copper Network System products. All products comply with international quality standards and are greatly appreciated in a variety of different markets through the world.

We have a very dynamic team, which is ready to give you the support you need.

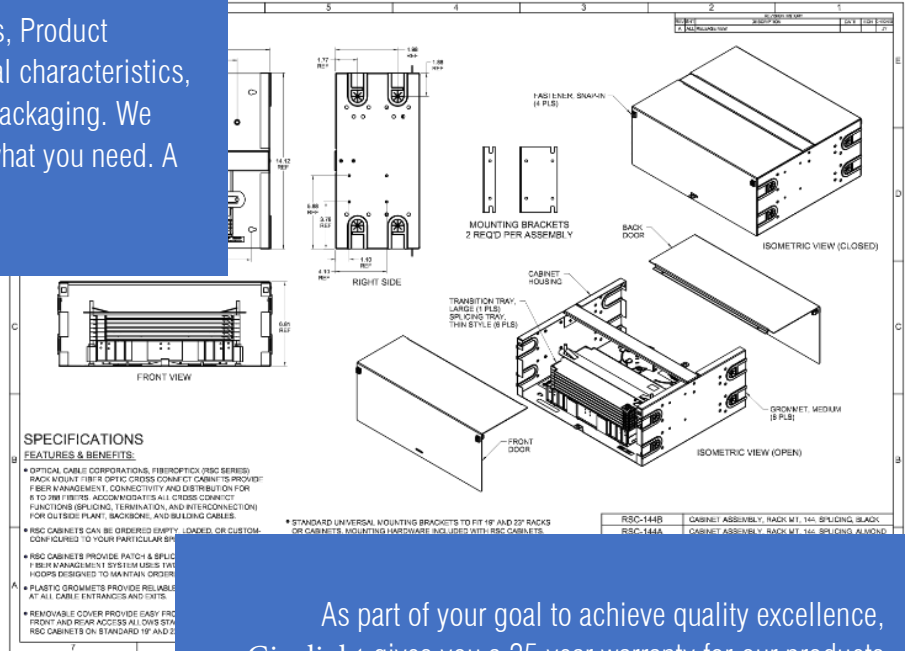


We believe Value From Quality.

The customer is our focus, so we do everything for our customers. We always want to be with you, give you our best support, technical guiding, open information and so on. Never forget this, if you need anything from us, please contact. Quality, not only in the products, but also in the marketing materials. Our well-equipped facilities and excellent quality control throughout all stages of production enables us to guarantee total customer satisfaction.



Each product has a specific technical datasheet. You can find them in our website. Each datasheet contains a more detailed analysis of the product, such as: Product description, Certifications, Product images, Product features, Electrical, Optical and Mechanical characteristics, Performance, Product specifications and Packaging. We hope the datasheet will help you choose what you need. A direct contact from you is also welcome.



As part of your goal to achieve quality excellence, Gigalight gives you a 25 year warranty for our products and applications. The warranty is applicable to all products and starts at the date of the invoicing. The products must furthermore be certified for compliance to manufacture standards specified by Gigalight. The warranty is granted to the entity which is specified on the warranty certificate. This certificate will be registered in the system and will remain there until the end of the warranty.





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# FIBER OPTIC SYSTEM

With Gigalight fiber optic you can find the complete solution to your network system. Tight Buffer cables are perfect to make backbone connections and patch cords. The solution of loose tube cables are very complete, for less to high demanding environments. To use with the cables, you have the full range of patch cords, pigtails and adapters. .

01. FIBER CABLE
02. FIBER OPTIC PATCH CORD
03. FIBER OPTIC PIGTAIL
04. MPO/MTP CABLE
05. ARMORED PATCH CORD
06. FIBER OPTIC ADAPTER



# FIBER OPTIC

## GENERAL SPECIFICATIONS

The tables below describe all the technical specifications for Cenyrak fiber. Complies the standards ISO11801 and EN50173-1. If you have any special request for fiber, we are glad to find a solution for your needs.

### SINGLE MODE

Optical Performance	Conditions (nm)	G652D	G657A2	G657B3
Attenuation (dB/KM)	1310	≤0.34	≤0.35	
	1380	≤0.34	≤0.35	
	1550	≤0.20	≤0.22	≤0.21
	1652	≤0.24	≤0.23	
Dispersion Coefficient	1285 or 1340	--	≤3.5	
	1550	≤18.00		
Mode Field Diameter (μm)	1310	9.20±0.40	8.80~9.30±0.40	8.40~9.30±0.40
	1550	10.40±0.50	8.80±0.50	9.30~10.30±0.50
Effective Group Index of Refractive	1310	1.4683	1.466	1.468
	1550	1.4688	1.467	1.469
<b>Geometrical Data</b>				
Core Diameter (μm)	--	9.00±0.05		
Cladding Diameter (μm)	--	124.80±0.70	125.00±0.70	
Coating Diameter (μm)	--	245.00±5.00		
Coating/Cladding Concentricity error (μm)	--	≤12.00		
Core/Cladding Concentricity error (μm)	--	≤0.50		

### MULTIMODE

Optical Performance	Conditions (nm)	OM2	OM3	OM4
Attenuation (dB/KM)	850	≤2.20~≤2.40	≤2.40	≤2.20~≤2.40
	--	≤0.60~≤0.70	≤0.70	≤0.60
Bandwidth (MHz.KM)	850	≥400.00~≥750.00	≥750.00	≥3500.00
	1300	≥500.00		
Numerical Aperture	--	0.20±0.02		
Effective Group Index of Refractive	850	1.483		
	1300	1.478		
<b>Geometrical Data</b>				
Core Diameter (μm)	--	50.00±2.50		
Cladding Diameter (μm)	--	125.00±1.00		
Overall Coating Diameter (μm)	--	247.00±7.00		
Coating/Cladding Concentricity error (μm)	--	≤10.00		
Core/Cladding Concentricity error (μm)	--	≤1.00	≤1.50	≤1.00

# FIBER OPTIC

## HOW TO CHOOSE ADEQUATE FIBER TYPE?

### FIBER TYPE

Optical Performance	Conditions (nm)	G652D	G657A2	G657B3
Attenuation (dB/KM)	1310	≤0.34	≤0.35	
	1380	≤0.34	≤0.35	
	1550	≤0.20	≤0.22	≤0.21
	1652	≤0.24	≤0.23	
Dispersion Coefficient	1285 or 1340	--	≤3.5	
	1550	≤18.00		
Mode Field Diameter (μm)	1310	9.20±0.40	8.80~9.30±0.40	8.40~9.30±0.40
	1550	10.40±0.50	8.80±0.50	9.30~10.30±0.50
Effective Group Index of Refractive	1310	1.4683	1.466	1.468
	1550	1.4688	1.467	1.469
<b>Geometrical Data</b>				
Core Diameter (μm)	--	9.00±0.05		
Cladding Diameter (μm)	--	124.80±0.70	125.00±0.70	
Coating Diameter (μm)	--	245.00±5.00		
Coating/Cladding Concentricity error (μm)	--	≤12.00		
Core/Cladding Concentricity error (μm)	--	≤0.50		

### MULTIMODE

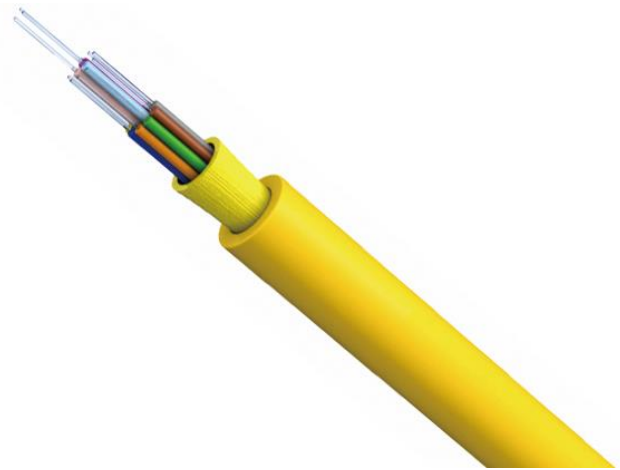
Optical Performance	Conditions (nm)	OM2	OM3	OM4
Attenuation (dB/KM)	850	≤2.20~≤2.40	≤2.40	≤2.20~≤2.40
	--	≤0.60~≤0.70	≤0.70	≤0.60
Bandwidth (MHz.KM)	850	≥400.00~≥750.00	≥750.00	≥3500.00
	1300	≥500.00		
Numerical Aperture	--	0.20±0.02		
Effective Group Index of Refractive	850	1.483		
	1300	1.478		
<b>Geometrical Data</b>				
Core Diameter (μm)	--	50.00±2.50		
Cladding Diameter (μm)	--	125.00±1.00		
Overall Coating Diameter (μm)	--	247.00±7.00		
Coating/Cladding Concentricity error (μm)	--	≤10.00		
Core/Cladding Concentricity error (μm)	--	≤1.00	≤1.50	≤1.00



# FIBER OPTIC

DISTRIBUTION GJPFJV

## TIGHT BUFFER CABLE



### DESCRIPTION

This tight buffer distribution cables are perfect for building backbone and horizontal distribution applications. With a coating diameter of 900 $\mu$ m this cable is used in structured cabling installations: data centers, LANs, SANs and longer length backbones.



### Applicable Standards

ISO/IEC 11801; IEC 60793-2-10; IEC 60793-2-50 ; ANSI/TIA-568-C

### SPECIFICATION

Fiber Core	OM1: 62.5/125 $\mu$ m	OM2/OM3/OM4: 50/125 $\mu$ m	OS2/G652D/G657: 9/125 $\mu$ m
Coating	250 $\mu$ m PMMA & 900 $\mu$ m colored (Following IEC 304) thermoplastic		
Assembly	Tight buffered fibers enclosed in a PVC/LSZH sheath		
Protection	Aramid yarn		
Bending Radius	20x outer diameter		
Tensile Load (Permanent)	600N		
Crush Resistance	600N		
Operation Temperature	-20°C to +50° C		

### ORDER INFORMATION

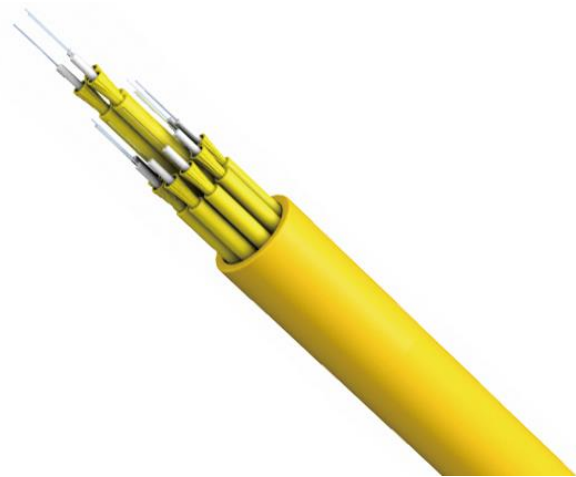
ITEMS	FIBERS	SHEATH	OUTER DIAMETER (MM)		PACKAGING (M)
			2-12 Fibers	24 Fibers	
GJPFJV-XXA1b	OM1	Orange	5.0	8.0	3000m/reel
GJPFJV-XXA1a	OM2	Orange	5.0	8.0	3000m/reel
GJPFJV-XXA1a-OM3	OM3	Aqua	5.0	8.0	3000m/reel
GJPFJV-XXA1a-OM4	OM4	Aqua	5.0	8.0	3000m/reel
GJPFJV-XXB1	OS2	Yellow	5.0	8.0	3000m/reel
GJPFJV-XXB1-G657	G657	Yellow	5.0	8.0	3000m/reel



# FIBER OPTIC

INDOOR GJBFJV

## TIGHT BUFFER CABLE



### DESCRIPTION

Indoor tight buffer distribution cables are perfect for building backbone and horizontal distribution applications. With a coating diameter of 900 $\mu$ m this cable is used in structured cabling installations: data centers, LANs, SANs and longer length backbones.



### Applicable Standards

ISO/IEC 11801; IEC 60793-2-10; IEC 60793-2-50 ; ANSI/TIA-568-C

### SPECIFICATION

Fiber Core	OM1: 62.5/125 $\mu$ m	OM2/OM3/OM4: 50/125 $\mu$ m	OS2/G652D/G657: 9/125 $\mu$ m
Coating	250 $\mu$ m PMMA & 900 $\mu$ m colored (Following IEC 304) thermoplastic		
Assembly	Each tight buffered fibers enclosed in a PVC/LSZH sheath, total enclosed in a outer sheath		
Protection	Aramid yarn		
Bending Radius	20x outer diameter		
Tensile Load (Permanent)	2&4 fibers: 600N	6&8 fibers: 800N	12 fibers: 1000N      24 fibers: 1400N
Crush Resistance	600N		
Operation Temperature	-20°C to +50° C		

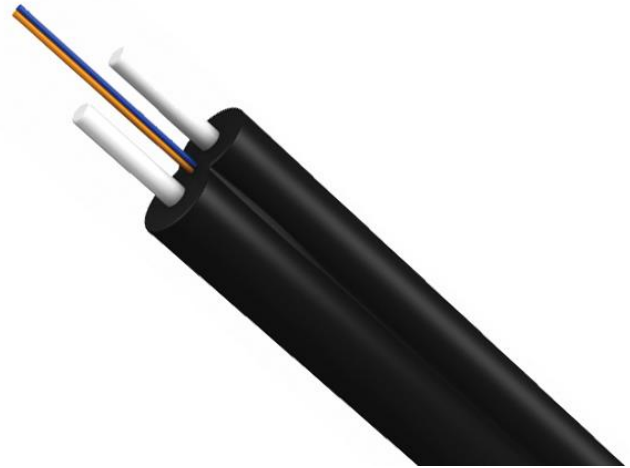
### ORDER INFORMATION

ITEMS	FIBERS	SHEATH	OUTER DIAMETER (MM)						PACKAGING (M)
			2 FO	4 FO	6 FO	8 FO	12 FO	24 FO	
GJBFJV-XXA1b	OM1	Orange	5.0	5.6	6.3	7.1	7.6	13.0	3000m/reel
GJBFJV-XXA1a	OM2	Orange	5.0	5.6	6.3	7.1	7.6	13.0	3000m/reel
GJBFJV-XXA1a-OM3	OM3	Aqua	5.0	5.6	6.3	7.1	7.6	13.0	3000m/reel
GJBFJV-XXA1a-OM4	OM4	Aqua	5.0	5.6	6.3	7.1	7.6	13.0	3000m/reel
GJBFJV-XXB1	OS2	Yellow	5.0	5.6	6.3	7.1	7.6	13.0	3000m/reel
GJBFJV-XXB1-G657	G657	Yellow	5.0	5.6	6.3	7.1	7.6	13.0	3000m/reel

# FIBER OPTIC

INDOOR GJFXH

## SUBSCRIBER CABLE



### DESCRIPTION

Indoor fiber optic cables for subscriber are design for fiber to the home (FTTH or FTTX) application. The cable contains one or two G657 single mode optical fiber, which has low bending radius, and two fiber reinforced plastic (FRP) strength members and Low Smoke Zero Halogen (LSZH) jacket with nominal dimension 2 x 3 mm.



### Applicable Standards

ISO/IEC 11801; IEC 60793-2-10; IEC 60793-2-50 ; ANSI/TIA-568-C

### SPECIFICATION

Fiber Core	G657A: 9/125 $\mu$ m glass fiber
Coating	250 $\mu$ m PMMA & 900 $\mu$ m colored (Following IEC 304) thermoplastic
Assembly	Central position
Protection	2 aramid reinforced plastic strength members, LSZH sheath
Bending Radius	20x outer diameter
Tensile Load (Permanent)	50N
Crush Resistance	300N
Operation Temperature	-20°C to +60° C

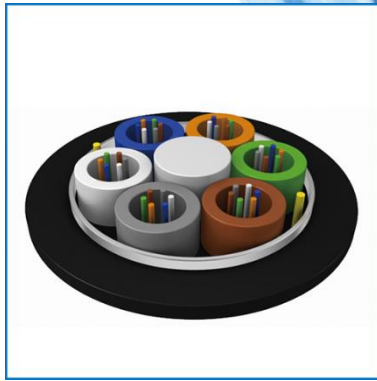
### ORDER INFORMATION

ITEMS	FIBERS	SHEATH	OUTER DIAMETER (MM)	PACKAGING (M)
GJFXH-1B1-G657	G657	Black	2.0 x 3.1	5000m/reel
GJFXH-2B1-G657	G657	Black	2.0 x 3.1	5000m/reel

# FIBER OPTIC

MULTI TUBERS GYTA

## LOOSE TUBE CABLE



### DESCRIPTION

Multitube Cable has been designed to offer a robust solution. Offering up to 144 fibers it is mostly used in building and campus backbone applications where a higher load tension is required. Corrugated steel tape armor provides an additional crush resistance to the cable. LSZH or PE jacket available.



### Applicable Standards

ISO/IEC 11801; IEC 60793-2-10; IEC 60793-2-50 ; ANSI/TIA-568-C

### SPECIFICATION

Fiber Core	OM1: 62.5/125 $\mu$ m	OM2/OM3/OM4: 50/125 $\mu$ m	OS2/G652D/G657: 9/125 $\mu$ m
Coating	250 $\mu$ m PMMA & 900 $\mu$ m colored (Following IEC 304) thermoplastic		
Assembly	Multi tube PBT filled with Gel around a central strength member		
Protection	Corrugated steel tape, UV Resistant PEHD Black RAL 9005		
Bending Radius	20x outer diameter		
Tensile Load (Permanent)	1600N		
Crush Resistance	4000N		
Operation Temperature	-40°C to +70° C		

### ORDER INFORMATION

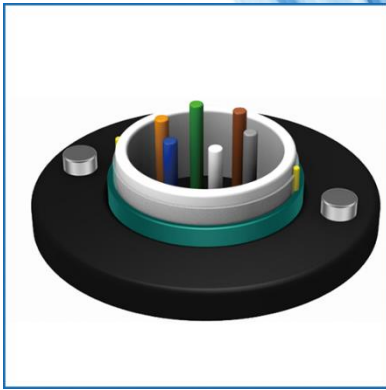
ITEMS	FIBERS	SHEATH	OUTER DIAMETER (MM)				PACKAGING (M)
			24-48 FO	60-72 FO	96 FO	144 FO	
GYTA-XXA1b	OM1	Black	8.6	9.9	11.8	15.3	3000m/reel
GYTA-XXA1a	OM2	Black	8.6	9.9	11.8	15.3	3000m/reel
GYTA-XXA1a-OM3	OM3	Black	8.6	9.9	11.8	15.3	3000m/reel
GYTA-XXA1a-OM4	OM4	Black	8.6	9.9	11.8	15.3	3000m/reel
GYTA-XXB1	OS2	Black	8.6	9.9	11.8	15.3	3000m/reel
GYTA-XXB1-G657	G657	Black	8.6	9.9	11.8	15.3	3000m/reel



# FIBER OPTIC

CENTRAL TUBE GYXTW

## LOOSE TUBE CABLE



### DESCRIPTION

Central tube Cable has been designed to offer a robust solution. Offering up to 24 fibers it is mostly used in building and campus backbone applications where a higher load tension is required. Corrugated steel tape armor provides an additional crush resistance to the cable. LSZH or PE jacket available.



### Applicable Standards

ISO/IEC 11801; IEC 60793-2-10; IEC 60793-2-50 ; ANSI/TIA-568-C

### SPECIFICATION

Fiber Core	OM1: 62.5/125 $\mu$ m	OM2/OM3/OM4: 50/125 $\mu$ m	OS2/G652D/G657: 9/125 $\mu$ m
Coating	250 $\mu$ m PMMA & 900 $\mu$ m colored (Following IEC 304) thermoplastic		
Assembly	Central tube PBT filled with Gel around a central strength member		
Protection	Corrugated steel tape, UV Resistant PEHD Black RAL 9005		
Bending Radius	20x outer diameter		
Tensile Load (Permanent)	1500N		
Crush Resistance	4000N		
Operation Temperature	-40°C to +70° C		

### ORDER INFORMATION

ITEMS	FIBERS	SHEATH	OUTER DIAMETER (MM)		PACKAGING (M)
			2-12 FO	12-24 FO	
GYXTW-XXA1b	OM1	Black	7.4	9.0	3000m/reel
GYXTW-XXA1a	OM2	Black	7.4	9.0	3000m/reel
GYXTW-XXA1a-OM3	OM3	Black	7.4	9.0	3000m/reel
GYXTW-XXA1a-OM4	OM4	Black	7.4	9.0	3000m/reel
GYXTW-XXB1	OS2	Black	7.4	9.0	3000m/reel
GYXTW-XXB1-G657	G657	Black	7.4	9.0	3000m/reel

# FIBER OPTIC

OM1 62.5/125

## PATCH CORD



### DESCRIPTION

Multimode OM1 (62.5/125) fiber optic patch cords are manufactured for indoor applications. Produced from the highest quality optical fiber using PVC cable jacket, terminated with ceramic ferrule connectors assuring a high transmission quality. is constructed with OM1 glass to support Gigabit Ethernet networks applications.



### Applicable Standards

ISO/IEC 11801; EN 50173-1; IEC 61754-1; IEC61300

### SPECIFICATION

	PC	UPC	APC	Multimode
Insertion Loss	≤ 0.5dB	≤ 0.2dB	≤ 0.3dB	≤ 0.3dB
Return Loss	≥ 45dB	≥ 50dB	≥ 60dB	-----
Durability	≥ 1000 times			
Tensile Strength	0~15 Kgs			
Vibration Test	<0.1dB (@5~50Hz, amplitude 1.5mm)			
Outer Diameter	2.0 mm			
Outer Sheath Color	Orange			
Operation Temperature	-25°C~+70°C			

### ORDER INFORMATION

Type	Fiber Mode	Connector A	Connector B	Cable Length	Jacket Material	Jacket O.D.
MFD	OM1 62.5/125	LC	LC	01 Meter	PVC	0.9 mm
MFS		SC	SC	02 Meter	LSZH	2.0 mm
		FC	FC	03 Meter		3.0 mm
		ST	ST	04 Meter		

MFD: multimode duplex MFS: multimode simplex

# FIBER OPTIC

OM2 50/125

## PATCH CORD



### DESCRIPTION

Multimode OM2 (50/125) fiber optic patch cords are manufactured for indoor applications. Produced from the highest quality optical fiber using PVC cable jacket, terminated with ceramic ferrule connectors assuring a high transmission quality. is constructed with OM2 glass to support Gigabit Ethernet network applications.



### Applicable Standards

ISO/IEC 11801; EN 50173-1; IEC 61754-1; IEC61300

### SPECIFICATION

	PC	UPC	APC	Multimode
Insertion Loss	≤ 0.5dB	≤ 0.2dB	≤ 0.3dB	≤ 0.3dB
Return Loss	≥ 45dB	≥ 50dB	≥ 60dB	-----
Durability	≥ 1000 times			
Tensile Strength	0~15 Kgs			
Vibration Test	<0.1dB (@5~50Hz, amplitude 1.5mm)			
Outer Diameter	3.0 mm			
Outer Sheath Color	Orange			
Operation Temperature	-25°C~+70°C			

### ORDER INFORMATION

Type	Fiber Mode	Connector A	Connector B	Cable Length	Jacket Material	Jacket O.D.
MFD	OM2 50/125	LC	LC	01 Meter	PVC	0.9 mm
MFS		SC	SC	02 Meter	LSZH	2.0 mm
		FC	FC	03 Meter		3.0 mm
		ST	ST	04 Meter		

MFD: multimode duplex MFS: multimode simplex



# FIBER OPTIC

OM3 50/125

## PATCH CORD



### DESCRIPTION

Multimode OM3 fiber optic patch cords are manufactured for indoor applications. Produced from the highest quality optical fiber using PVC cable jacket, terminated with ceramic ferrule connectors assuring a high transmission quality. is constructed with OM3 glass to support high speed 10G cabling networks



### Applicable Standards

ISO/IEC 11801; EN 50173-1; IEC 61754-1; IEC61300

### SPECIFICATION

	PC	UPC	APC	Multimode
Insertion Loss	≤ 0.5dB	≤ 0.2dB	≤ 0.3dB	≤ 0.3dB
Return Loss	≥ 45dB	≥ 50dB	≥ 60dB	-----
Durability	≥ 1000 times			
Tensile Strength	0~15 Kgs			
Vibration Test	<0.1dB (@5~50Hz, amplitude 1.5mm)			
Outer Diameter	3.0 mm			
Outer Sheath Color	Aqua			
Operation Temperature	-25°C~+70°C			

### ORDER INFORMATION

Type	Fiber Mode	Connector A	Connector B	Cable Length	Jacket Material	Jacket O.D.
MFD	OM4 50/125	LC	LC	01 Meter	PVC	0.9 mm
MFS		SC	SC	02 Meter	LSZH	2.0 mm
		FC	FC	03 Meter		3.0 mm
		ST	ST	04 Meter		

MFD: multimode duplex MFS: multimode simplex

# FIBER OPTIC

OM4 50/125

## PATCH CORD



### DESCRIPTION

Multimode OM4 fiber optic patch cords are manufactured for indoor applications. Produced from the highest quality optical fiber using PVC cable jacket, terminated with ceramic ferrule connectors assuring a high transmission quality. is constructed with OM4 glass to support high speed 10G cabling networks



### Applicable Standards

ISO/IEC 11801; EN 50173-1; IEC 61754-1; IEC61300

### SPECIFICATION

	PC	UPC	APC	Multimode
Insertion Loss	≤ 0.5dB	≤ 0.2dB	≤ 0.3dB	≤ 0.3dB
Return Loss	≥ 45dB	≥ 50dB	≥ 60dB	-----
Durability	≥ 1000 times			
Tensile Strength	0~15 Kgs			
Vibration Test	<0.1dB (@5~50Hz, amplitude 1.5mm)			
Outer Diameter	3.0 mm			
Outer Sheath Color	Aqua			
Operation Temperature	-25°C~+70°C			

### ORDER INFORMATION

Type	Fiber Mode	Connector A	Connector B	Cable Length	Jacket Material	Jacket O.D.
MFD	OM4 50/125	LC	LC	01 Meter	PVC	0.9 mm
MFS		SC	SC	02 Meter	LSZH	2.0 mm
		FC	FC	03 Meter		3.0 mm
		ST	ST	04 Meter		

MFD: multimode duplex MFS: multimode simplex

# FIBER OPTIC

OS2 9/125

## PATCH CORD



### DESCRIPTION

Single mode OS2 (9/125) fiber optic patch cords are manufactured for indoor applications. Produced from the highest quality optical fiber using PVC cable jacket, terminated with ceramic ferrule connectors assuring a high transmission quality. is constructed with OS2 glass to support Gigabit Ethernet networks applications.



### Applicable Standards

ISO/IEC 11801; EN 50173-1; IEC 61754-1; IEC61300

### SPECIFICATION

	PC	UPC	APC	Multimode
Insertion Loss	≤ 0.5dB	≤ 0.2dB	≤ 0.3dB	≤ 0.3dB
Return Loss	≥ 45dB	≥ 50dB	≥ 60dB	-----
Durability	≥ 1000 times			
Tensile Strength	0~15 Kgs			
Vibration Test	<0.1dB (@5~50Hz, amplitude 1.5mm)			
Outer Diameter	2.0 mm			
Outer Sheath Color	Yellow			
Operation Temperature	-25°C~+70°C			

### ORDER INFORMATION

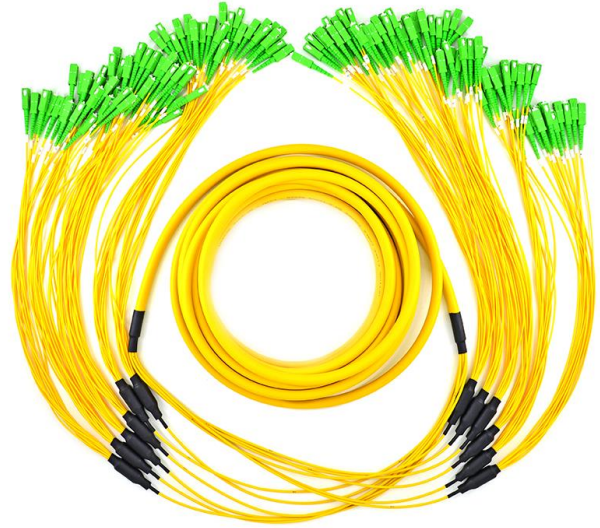
Type	Fiber Mode	Connector A	Connector B	Cable Length	Jacket Material	Jacket O.D.
SFD	OM1 62.5/125	LC	LC	01 Meter	PVC	0.9 mm
SFS		SC	SC	02 Meter	LSZH	2.0 mm
		FC	FC	03 Meter		3.0 mm
		ST	ST	04 Meter		

SFD: multimode duplex SFS: multimode simplex



# FIBER OPTIC

## Multi Pre-Terminated Patch Cord



### DESCRIPTION

Single mode OS2 (9/125) fiber optic patch cords are manufactured for indoor applications. Produced from the highest quality optical fiber using PVC cable jacket, terminated with ceramic ferrule connectors assuring a high transmission quality. is constructed with OS2 glass to support Gigabit Ethernet networks applications.



### Applicable Standards

ISO/IEC 11801; EN 50173-1; IEC 61754-1; IEC61300

### SPECIFICATION

	PC	UPC	APC	Multimode
Insertion Loss	≤ 0.5dB	≤ 0.2dB	≤ 0.3dB	≤ 0.3dB
Return Loss	≥ 45dB	≥ 50dB	≥ 60dB	-----
Durability	≥ 1000 times			
Tensile Strength	0~15 Kgs			
Vibration Test	<0.1dB (@5~50Hz, amplitude 1.5mm)			
Outer Sheath Color	Yellow			
Operation Temperature	-25°C~+70°C			

### ORDER INFORMATION

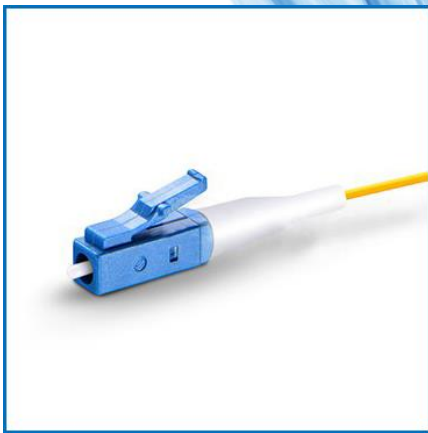
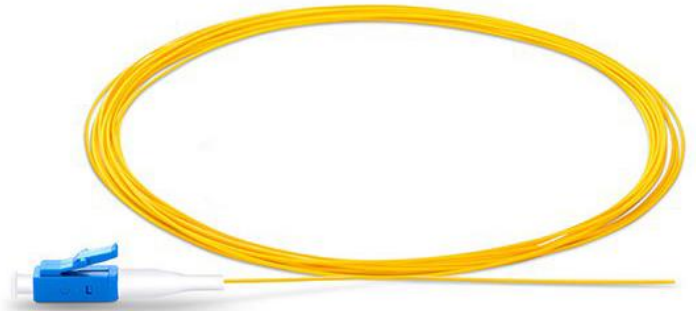
Type	Fiber Mode	Connector A	Connector B	Cable Length	Jacket Material	Jacket O.D.
Pre-XXXD	OM1 62.5/125	LC	LC	01 Meter	PVC	0.9 mm
Pre-XXXS	OM2 50/125	SC	SC	02 Meter	LSZH	2.0 mm
	OM3 50/125	FC	FC	03 Meter		3.0 mm
	OS2 9/125	ST	ST	05 Meter		

D: duplex connector    S: simplex connector

# FIBER OPTIC

Single Fiber

## PIGTAIL



### DESCRIPTION

Single count fiber optic pigtail provides a fast way to make factory terminations in the field, which can easily be fusion or mechanically spliced in a protective case to an existing fiber. Produced from the highest quality optical fiber, terminated with ceramic ferrule connector assuring a high transmission quality.



### Applicable Standards

ISO/IEC 11801; EN 50173-1; IEC 61754-1; IEC61300

### SPECIFICATION

	PC	UPC	APC	Multimode
Insertion Loss	≤ 0.5dB	≤ 0.2dB	≤ 0.3dB	≤ 0.3dB
Return Loss	≥ 45dB	≥ 50dB	≥ 60dB	-----
Vibration Test	< 0.1dB (@5~50Hz, amplitude 1.5mm)			
Outer Diameter	-----			
Outer Sheath Color	-----			
Operation Temperature	-25°C ~ +70°C			

### ORDER INFORMATION

Type	Fiber Mode	Connector A	Polishing	Cable Length	Jacket Material	Fiber O.D.
SFS	OS2 9/125	LC	PC	01 Meter	PVC	0.9 mm
MFS	OM1 62.5/125	SC	UPC	02 Meter	LSZH	2.0 mm
	OM2 50/125	FC	APC	03 Meter		3.0 mm
	OM3 50/125	ST		05 Meter		
		E2000				

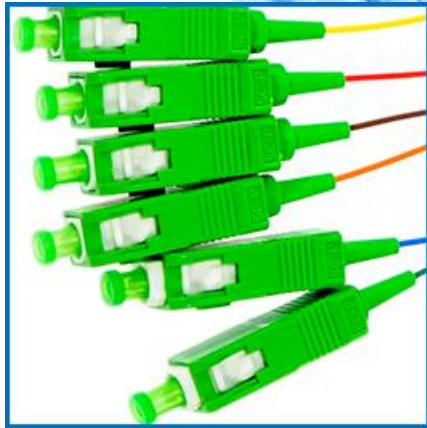
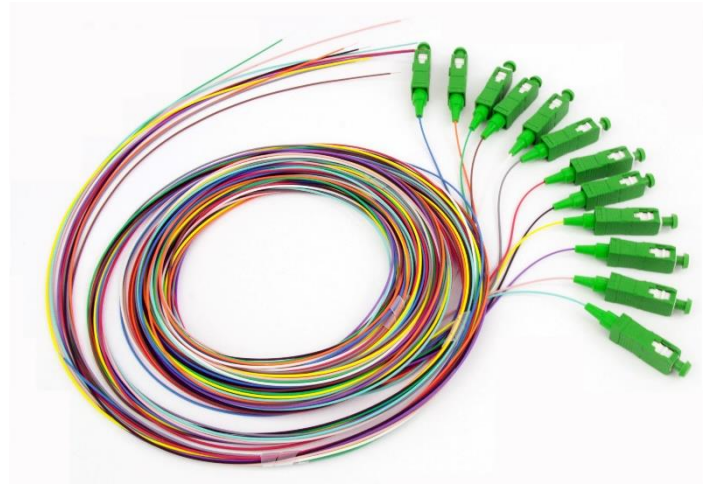
SFS: Single Mode Fiber Simplex

MFS: Multimode Fiber Simplex

# FIBER OPTIC

Color-Coded

## PIGTAIL



### DESCRIPTION

6~12 color coded fiber optic pigtail provides a fast way to make factory terminations in the field, which can easily be fusion or mechanically spliced in a protective case to an existing fiber. Produced from the highest quality optical fiber, terminated with ceramic ferrule connector assuring a high transmission quality.



### Applicable Standards

ISO/IEC 11801; EN 50173-1; IEC 61754-1; IEC61300

SPECIFICATION				
	PC	UPC	APC	Multimode
Insertion Loss	≤ 0.5dB	≤ 0.2dB	≤ 0.3dB	≤ 0.3dB
Return Loss	≥ 45dB	≥ 50dB	≥ 60dB	-----
Vibration Test	< 0.1dB (@5~50Hz, amplitude 1.5mm)			
Outer Diameter	-----			
Outer Sheath Color	-----			
Operation Temperature	-25°C ~ +70°C			

### ORDER INFORMATION

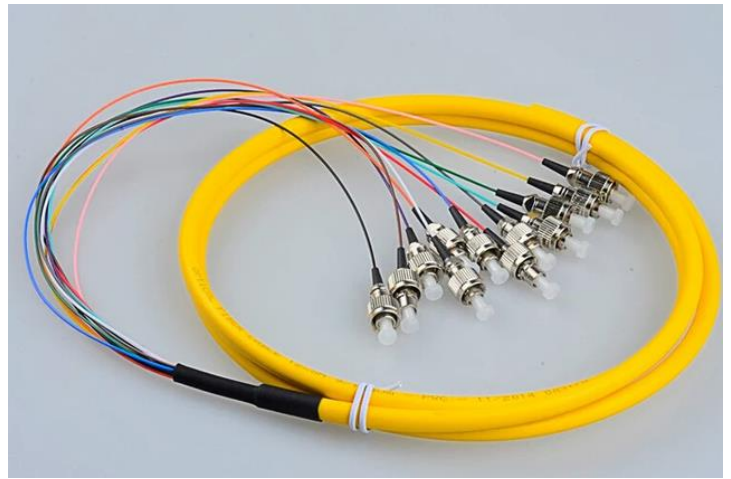
Type	Fiber Mode	Connector A	Polishing	Cable Length	Jacket Material	Fiber O.D.
6 Fibers	OS2 9/125	LC	PC	01 Meter	PVC	0.9 mm
8 Fibers		SC	UPC	02 Meter	LSZH	
12 Fibers		FC	APC	03 Meter		
	ST		05 Meter			
	E2000					



# FIBER OPTIC

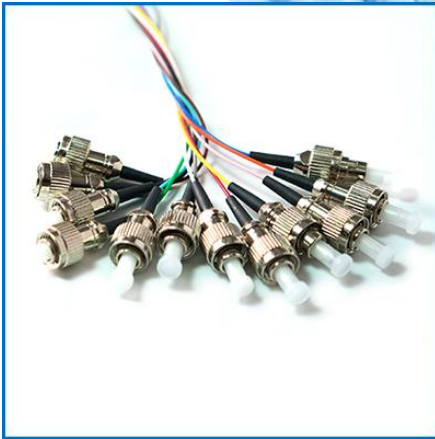
Bunch Fiber

## PIGTAIL



### DESCRIPTION

6~12 color coded fiber optic pigtail with jacket provides a fast way to make factory terminations in the field, which can easily be fusion or mechanically spliced in a protective case to an existing fiber. Produced from the highest quality optical fiber, terminated with ceramic ferrule connector assuring a high transmission quality.



### Applicable Standards

ISO/IEC 11801; EN 50173-1; IEC 61754-1; IEC61300

### SPECIFICATION

	PC	UPC	APC	Multimode
Insertion Loss	≤ 0.5dB	≤ 0.2dB	≤ 0.3dB	≤ 0.3dB
Return Loss	≥ 45dB	≥ 50dB	≥ 60dB	-----
Vibration Test	< 0.1dB (@5~50Hz, amplitude 1.5mm)			
Outer Diameter	6.0 mm			
Outer Sheath Color	Yellow/Orange/Aqua			
Operation Temperature	-25°C ~ +70°C			

### ORDER INFORMATION

Type	Fiber Mode	Connector A	Polishing	Cable Length	Jacket Material	Fiber O.D.
6 Bunch	OS2 9/125	LC	PC	01 Meter	PVC	0.9 mm
8 Bunch	OM1 62.5/125	SC	UPC	02 Meter	LSZH	
12 Bunch	OM2 50/125	FC	APC	03 Meter		
	OM3 50/125	ST		05 Meter		
		E2000				



# FIBER OPTIC

Trunk Bunch

## MPO CABLE



### DESCRIPTION

MTP/MPO trunk cable, a cost-effective alternative to time-consuming field termination, is designed for high-density fiber patching in data centers which need space saving and reduce cable management troubles. It supports up to 24 fiber application.



### Applicable Standards

ISO/IEC 11801; EN 50173-1; IEC 61754-1; IEC61300

### SPECIFICATION

	PC	UPC	APC	Multimode
Insertion Loss	≤ 0.5dB	≤ 0.2dB	≤ 0.3dB	≤ 0.3dB
Return Loss	≥ 45dB	≥ 50dB	≥ 60dB	-----
Durability	≥ 1000 times			
Tensile Strength	0~10 Kgs			
Vibration Test	<0.1dB (@5~50Hz, amplitude 1.5mm)			
Outer Sheath Color	Aqua			
Operation Temperature	-25°C~+70°C			

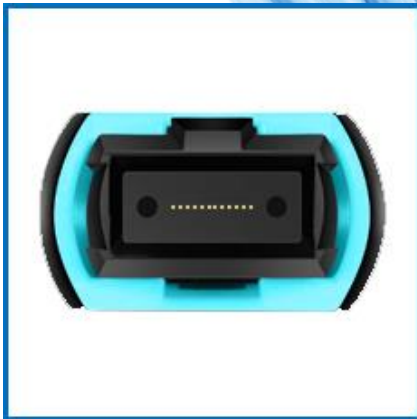
### ORDER INFORMATION

Type	Fiber Mode	Connector A	Connector B	Cable Length	Jacket Material	Jacket O.D.
6Trunk	OS2 9/125	MPO/Female	MPO/Female	01 Meter	PVC	3.0 mm
8Trunk	OM2 50/125	MPO/Male	MPO/Male	02 Meter	LSZH	
12Trunk	OM3 50/125	MTP/Female	MTP/Female	03 Meter		
		MTP/Male	MTP/Male	05 Meter		

# FIBER OPTIC

Harness Bunch

## MPO CABLE



### DESCRIPTION

MPO cables are your best choice for high density fiber networks. It's specifically designed for fast ethernet, fiber channel, data center and gigabit ethernet applications. This 12 Fiber harness cable is used for a direct connection between QSFP+ to (4) SFP+ ports with no patch panels or intermediate trunks in between.



### Applicable Standards

ISO/IEC 11801; EN 50173-1; IEC 61754-1; IEC61300

### SPECIFICATION

	PC	UPC	APC	Multimode
Insertion Loss	≤ 0.5dB	≤ 0.2dB	≤ 0.3dB	≤ 0.3dB
Return Loss	≥ 45dB	≥ 50dB	≥ 60dB	-----
Durability	≥ 1000 times			
Tensile Strength	0~10 Kgs			
Vibration Test	<0.1dB (@5~50Hz, amplitude 1.5mm)			
Outer Sheath Color	Aqua			
Operation Temperature	-25°C~+70°C			

### ORDER INFORMATION

Type	Fiber Mode	Connector A	Connector B	Cable Length	Jacket Material	Jacket O.D.
8Harness	OS2 9/125	MPO/Female	LC Duplex	01 Meter	PVC	3.0 mm
12Harness	OM2 50/125	MPO/Male	LC Simplex	02 Meter	LSZH	
		MTP/Female		03 Meter		
		MTP/Male		05 Meter		

# FIBER OPTIC

Armored OM1

## PATCH CORD



### DESCRIPTION

Armored fiber optic cable with built-in metal armor can provide stronger protection of the optical fibers than standards fiber optic cables. The rugged armored cables allow optical fiber to be installed in the most hazardous areas, including environments with excessive dust, oil, gas, moisture, or even damage-causing rodents.



### Applicable Standards

ISO/IEC 11801; EN 50173-1; IEC 61754-1; IEC61300

### SPECIFICATION

	PC	UPC	APC	Multimode
Insertion Loss	≤ 0.5dB	≤ 0.2dB	≤ 0.3dB	≤ 0.3dB
Return Loss	≥ 45dB	≥ 50dB	≥ 60dB	-----
Durability	≥ 1000 times			
Tensile Strength	0~20 Kgs			
Vibration Test	<0.1dB (@5~50Hz, amplitude 1.5mm)			
Outer Diameter	3.0 mm			
Armored Jacket	Stainless Steel Spring			
Operation Temperature	-25°C~+70°C			

### ORDER INFORMATION

Type	Fiber Mode	Connector A	Connector B	Cable Length	Jacket Material	Jacket O.D.
AMFD	OM1 62.5/125	LC	LC	01 Meter	PVC	3.0 mm
AMFS		SC	SC	02 Meter	LSZH	
		FC	FC	03 Meter		
		ST	ST	04 Meter		

AMFD/S: armored multimode duplex/simplex

# FIBER OPTIC

Armored OM2

## PATCH CORD



### DESCRIPTION

Armored fiber optic cable with build-in metal armor can provide stronger protection of the optical fibers than standards fiber optic cables. The rugged armored cables allow optical fiber to be installed in the most hazardous areas, including environments with excessive dust, oil, gas, moisture, or even damage-causing rodents.



### Applicable Standards

ISO/IEC 11801; EN 50173-1; IEC 61754-1; IEC61300

### SPECIFICATION

	PC	UPC	APC	Multimode
Insertion Loss	≤ 0.5dB	≤ 0.2dB	≤ 0.3dB	≤ 0.3dB
Return Loss	≥ 45dB	≥ 50dB	≥ 60dB	-----
Durability	≥ 1000 times			
Tensile Strength	0~20 Kgs			
Vibration Test	<0.1dB (@5~50Hz, amplitude 1.5mm)			
Outer Diameter	3.0 mm			
Armored Jacket	Stainless Steel Spring			
Operation Temperature	-25°C~+70°C			

### ORDER INFORMATION

Type	Fiber Mode	Connector A	Connector B	Cable Length	Jacket Material	Jacket O.D.
AMFD	OM2 50/125	LC	LC	01 Meter	PVC	3.0 mm
AMFS		SC	SC	02 Meter	LSZH	
		FC	FC	03 Meter		
		ST	ST	04 Meter		

AMFD/S: armored multimode duplex/simplex



# FIBER OPTIC

Armored OM3

## PATCH CORD



### DESCRIPTION

Armored fiber optic cable with built-in metal armor can provide stronger protection of the optical fibers than standard fiber optic cables. The rugged armored cables allow optical fiber to be installed in the most hazardous areas, including environments with excessive dust, oil, gas, moisture, or even damage-causing rodents.



### Applicable Standards

ISO/IEC 11801; EN 50173-1; IEC 61754-1; IEC61300

### SPECIFICATION

	PC	UPC	APC	Multimode
Insertion Loss	≤ 0.5dB	≤ 0.2dB	≤ 0.3dB	≤ 0.3dB
Return Loss	≥ 45dB	≥ 50dB	≥ 60dB	-----
Durability	≥ 1000 times			
Tensile Strength	0~20 Kgs			
Vibration Test	<0.1dB (@5~50Hz, amplitude 1.5mm)			
Outer Diameter	3.0 mm			
Armored Jacket	Stainless Steel Spring			
Operation Temperature	-25°C~+70°C			

### ORDER INFORMATION

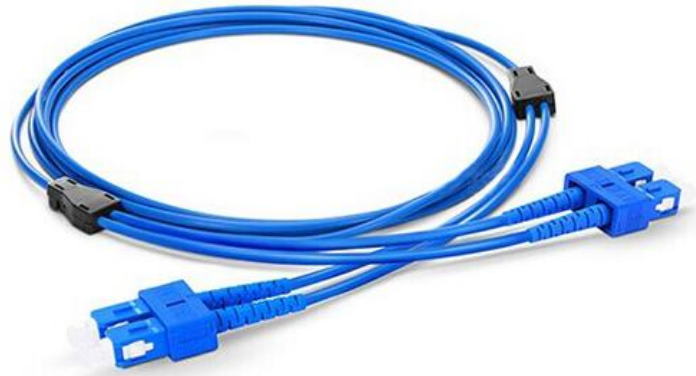
Type	Fiber Mode	Connector A	Connector B	Cable Length	Jacket Material	Jacket O.D.
AMFD	OM3 50/125	LC	LC	01 Meter	PVC	3.0 mm
AMFS		SC	SC	02 Meter	LSZH	
		FC	FC	03 Meter		
		ST	ST	04 Meter		

AMFD/S: armored multimode duplex/simplex

# FIBER OPTIC

Armored OS2

## PATCH CORD



### DESCRIPTION

Armored fiber optic cable with build-in metal armor can provide stronger protection of the optical fibers than standards fiber optic cables. The rugged armored cables allow optical fiber to be installed in the most hazardous areas, including environments with excessive dust, oil, gas, moisture, or even damage-causing rodents.



### Applicable Standards

ISO/IEC 11801; EN 50173-1; IEC 61754-1; IEC61300

### SPECIFICATION

	PC	UPC	APC	Multimode
Insertion Loss	≤ 0.5dB	≤ 0.2dB	≤ 0.3dB	≤ 0.3dB
Return Loss	≥ 45dB	≥ 50dB	≥ 60dB	-----
Durability	≥ 1000 times			
Tensile Strength	0~20 Kgs			
Vibration Test	<0.1dB (@5~50Hz, amplitude 1.5mm)			
Outer Diameter	3.0 mm			
Armored Jacket	Stainless Steel Spring			
Operation Temperature	-25°C~+70°C			

### ORDER INFORMATION

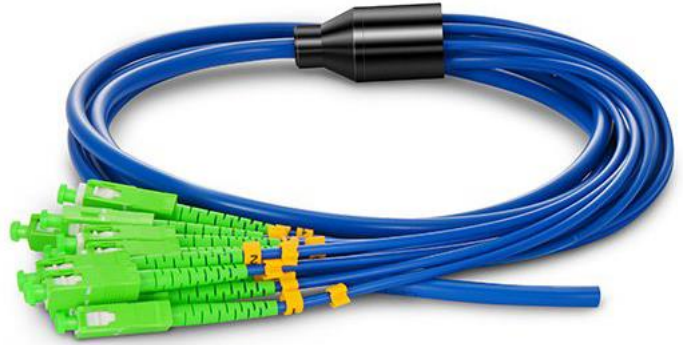
Type	Fiber Mode	Connector A	Connector B	Cable Length	Jacket Material	Jacket O.D.
ASFD	OS2 9/125	LC	LC	01 Meter	PVC	3.0 mm
ASFS		SC	SC	02 Meter	LSZH	
		FC	FC	03 Meter		
		ST	ST	04 Meter		

ASFD/S: armored single mode duplex/simplex

# FIBER OPTIC

Armored

## PIGTAIL



### DESCRIPTION

Enclosed with stainless steel tube or other strong steel inside the outer jacket, armored fiber optic pigtails could provide extra protection for the optical fiber and added reliability for the network and reduce the unnecessary damage due to rodents, construction work, weight of other cables and other factors.



### Applicable Standards

ISO/IEC 11801; EN 50173-1; IEC 61754-1; IEC61300

### SPECIFICATION

	PC	UPC	APC	Multimode
Insertion Loss	≤ 0.5dB	≤ 0.2dB	≤ 0.3dB	≤ 0.3dB
Return Loss	≥ 45dB	≥ 50dB	≥ 60dB	-----
Vibration Test	< 0.1dB (@5~50Hz, amplitude 1.5mm)			
Outer Diameter	3.0 mm			
Armored Jacket	Stainless Steel Spring			
Operation Temperature	-25°C ~ +70°C			

### ORDER INFORMATION

Type	Fiber Mode	Connector A	Polishing	Cable Length	Jacket Material	Fiber O.D.
6 Fibers	OS2 9/125	LC	PC	01 Meter	PVC	3.0 mm
8 Fibers	OM1 62.5/125	SC	UPC	02 Meter	LSZH	
12 Fibers	OM2 50/125	FC	APC	03 Meter		
	OM3 50/125	ST		05 Meter		
		E2000				



# FIBER OPTIC

LC

## ADAPTER



### DESCRIPTION

Fiber optic adapters have been designed to be compact and flexible making it suitable for the interconnection between optical fiber in optical patching panels. With dust protection caps included, the combination of a unique ferrule polishing and a precision metal or plastic housing provides a consistent performance.



### Applicable Standards

ISO/IEC 11801; EN 50173-1; IEC 61754-1; IEC61300

### SPECIFICATION

Sleeve Alignment	Zirconia ceramic, UPC (Ultra Polished) & APC (Angle Polished)		
Housing	UPC: blue	APC: green	Multimode: beige
Mating Cycles	1000		
Vibration	10-55 Hz, 0.7.5 mm P/P = 0.2 dB		
Insertion Loss	Single mode: ≤ 0.20dB	Multimode: ≤ 0.30dB	
Operation Temperature:	-40°C to +85°C		

### ORDER INFORMATION

Type	Description	PACKAGING
MMTLCD	LC duplex multimode adapter, beige	20 PCS
SMTLCD	LC duplex single mode ultra polished adapter, blue	20 PCS
SMTLCAD	LC duplex single mode angle polished adapter, green	20 PCS
MMTLCQ	LC quad multimode adapter, beige	20 PCS
SMTLCQ	LC quad single mode ultra polished adapter, blue	20 PCS
SMTLCAQ	LC quad single mode angle polished adapter, blue	20 PCS

Note: For flangeless versions of the adapter please add FL after part numbers.



# FIBER OPTIC

SC

## ADAPTER



### DESCRIPTION

Fiber optic adapters have been designed to be compact and flexible making it suitable for the interconnection between optical fiber in optical patching panels. With dust protection caps included, the combination of a unique ferrule polishing and a precision metal or plastic housing provides a consistent performance.



### Applicable Standards

ISO/IEC 11801; EN 50173-1; IEC 61754-1; IEC61300

### SPECIFICATION

Sleeve Alignment	Zirconia ceramic, UPC (Ultra Polished) & APC (Angle Polished)		
Housing	UPC: blue	APC: green	Multimode: beige
Mating Cycles	1000		
Vibration	10-55 Hz, 0.7.5 mm P/P = 0.2 dB		
Insertion Loss	Single mode: ≤ 0.20dB	Multimode: ≤ 0.30dB	
Operation Temperature:	-40°C to +85°C		

### ORDER INFORMATION

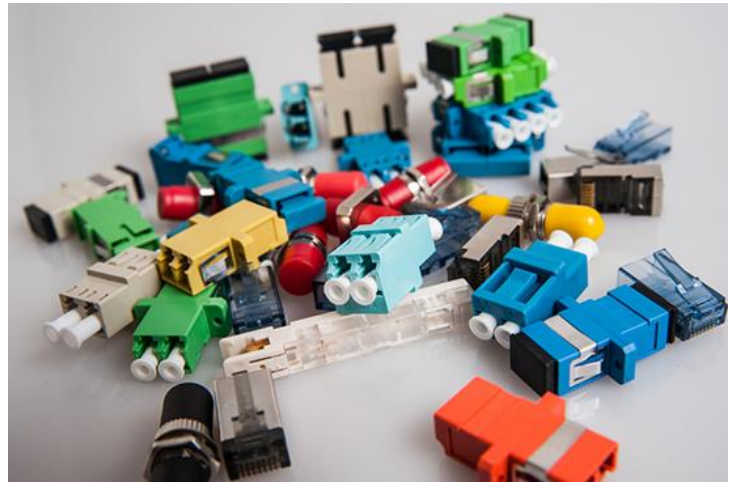
Type	Description	PACKAGING
MMTSCD	SC duplex multimode adapter, beige	20 PCS
SMTSCD	SC duplex single mode ultra polished adapter, blue	20 PCS
SMTSCAD	SC duplex single mode angle polished adapter, green	20 PCS
MMTSCS	SC simplex multimode adapter, beige	20 PCS
SMTSCS	SC simplex single mode ultra polished adapter, blue	20 PCS
SMTSCAS	SC simplex single mode angle polished adapter, blue	20 PCS

Note: For flangeless versions of the adapter please add FL after part numbers.

# FIBER OPTIC

FC

## ADAPTER



### DESCRIPTION

Fiber optic adapters have been designed to be compact and flexible making it suitable for the interconnection between optical fiber in optical patching panels. With dust protection caps included, the combination of a unique ferrule polishing and a precision metal or plastic housing provides a consistent performance.



### Applicable Standards

ISO/IEC 11801; EN 50173-1; IEC 61754-1; IEC61300



### SPECIFICATION

Sleeve Alignment	Zirconia ceramic, UPC (Ultra Polished) & APC (Angle Polished)		
Housing	UPC: blue	APC: green	Multimode: beige
Mating Cycles	1000		
Vibration	10-55 Hz, 0.7.5 mm P/P = 0.2 dB		
Insertion Loss	Single mode: ≤ 0.20dB	Multimode: ≤ 0.30dB	
Operation Temperature:	-40°C to +85°C		

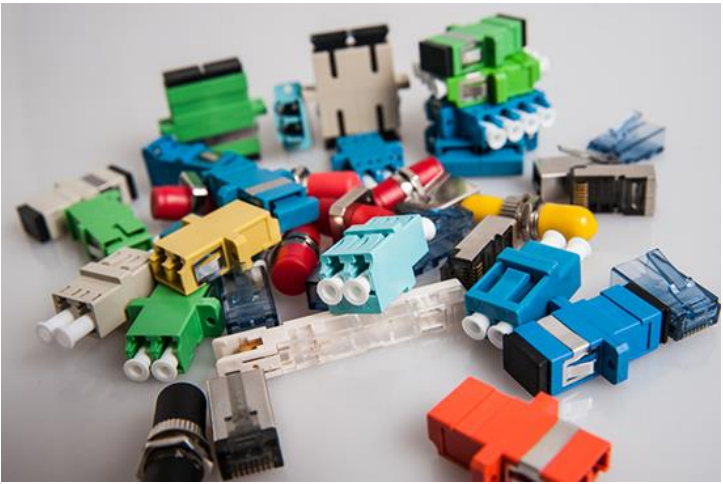
### ORDER INFORMATION

Type	Description	PACKAGING
MMTFCSQ	FC simplex multimode adapter, square solid	20 PCS
SMTFCSQ	FC simplex single mode ultra polished adapter, square solid	20 PCS
SMTFCSQA	FC simplex single mode angle polished adapter, square solid	20 PCS
MMTFCRD	FC simplex multimode adapter, round big D	20 PCS
SMTFCRD	FC simplex single mode ultra polished adapter, round big D	20 PCS
SMTFCRDA	FC simplex single mode angle polished adapter, round big D	20 PCS

Note: For plastic versions of the adapter please add PL after part numbers.

# FIBER OPTIC

## ST ADAPTER



### DESCRIPTION

Fiber optic adapters have been designed to be compact and flexible making it suitable for the interconnection between optical fiber in optical patching panels. With dust protection caps included, the combination of a unique ferrule polishing and a precision metal or plastic housing provides a consistent performance.



**Applicable Standards**  
ISO/IEC 11801; EN 50173-1; IEC 61754-1; IEC61300

SPECIFICATION			
Sleeve Alignment	Zirconia ceramic, UPC (Ultra Polished) & APC (Angle Polished)		
Housing	UPC: blue	APC: green	Multimode: beige
Mating Cycles	1000		
Vibration	10-55 Hz, 0.7.5 mm P/P = 0.2 dB		
Insertion Loss	Single mode: ≤ 0.20dB	Multimode: ≤ 0.30dB	
Operation Temperature:	-40°C to +85°C		

### ORDER INFORMATION

Type	Description	PACKAGING
MMTSTD	ST duplex multimode adapter	20 PCS
SMTSTD	ST duplex single mode ultra polished adapter	20 PCS
SMTSTDA	ST duplex single mode angle polished adapter	20 PCS
MMTSTS	ST simplex multimode adapter	20 PCS
SMTSTS	ST simplex single mode ultra polished adapter	20 PCS
SMTSTSA	ST simplex single mode angle polished adapter	20 PCS

Note: For plastic versions of the adapter please add PL after part numbers.



# FIBER OPTIC

HYBRID

## ADAPTER



### DESCRIPTION

Fiber optic adapters have been designed to be compact and flexible making it suitable for the interconnection between optical fiber in optical patching panels. With dust protection caps included, the combination of a unique ferrule polishing and a precision metal or plastic housing provides a consistent performance.



### Applicable Standards

ISO/IEC 11801; EN 50173-1; IEC 61754-1; IEC61300

### SPECIFICATION

Sleeve Alignment	Zirconia ceramic, UPC (Ultra Polished) & APC (Angle Polished)		
Housing	UPC: blue	APC: green	Multimode: beige
Mating Cycles	1000		
Vibration	10-55 Hz, 0.7.5 mm P/P = 0.2 dB		
Insertion Loss	Single mode: ≤ 0.20dB	Multimode: ≤ 0.30dB	
Operation Temperature:	-40°C to +85°C		

### ORDER INFORMATION

Type	Description	PACKAGING
HTLCSCD	Hybrid LC to SC duplex adapter	20 PCS
HTLCFCS	Hybrid LC to FC simplex adapter	20 PCS
HTLCSTS	Hybrid LC to ST simplex adapter	20 PCS
HTSCE2000S	Hybrid SC to E2000 simplex adapter	20 PCS
HTFCSTD	Hybrid FC to ST duplex adapter	20 PCS
HTLCMSCD	Hybrid LC male to SC female duplex adapter	20 PCS

Note: For more versions of the hybrid adapter please contact our sales.



# COPPER NETWORK SYSTEM

With Gigalight copper network you can find the complete solution to your network system. Cat7A to Cat5e, SFTP to UTP, indoor to outdoor, you choose the best cable. The solution of network patch cable are very complete, for less to high demanding environments. To use with the cables, you have the full range of patch cords, keystone jacks and patch panels.

01 COPPER CABLE  
02 COPPER PATCH CORD

# COPPER NETWORK

## HOW TO CHOOSE ADEQUATE CATEGORY CABLE?

### CATEGORY OF NETWORK CABLE

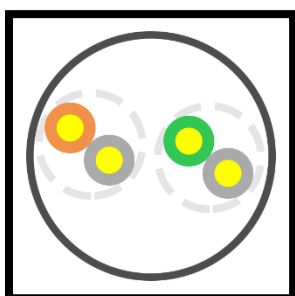
Network cable, used to transfer data from one network device (for example computer) to another network device (for example router), is a basic unit in network system. There are different categories of network cable in local area network, but we usually use the same category in one local area network.

Network cable are divided into seven categories according to internationally recognized standards. The detail information please see the table below:

CATEGORY	FREQUENCY	BANDWIDTH	STRUCTURE	DISTANCE	APPLICATION	STANDARDS
CATEGORY 3	16Mhz	10Mbps	2 pairs 4c twisted pair cable	100m	4Mbit/s token ring network, 10Mbit/s ethernet, and voice transmission	TIA/EIA
CATEGORY 5	100Mhz	100Mbps	4 pairs 8c twisted pair cable	100m	voice transmission, data transmission up to 100Mbps	TIA/EIA
CATEGORY 5E	100Mhz	1000Mbps	4 pairs 8c twisted pair cable	100m	high speed ethernet, Gigabit ethernet	TIA/EIA
CATEGORY 6	250Mhz	1000Mbps	4 pairs 8c twisted pair cable with cross separator	100m	application for transmission rate 1Gbps	TIA/EIA
CATEGORY 6A	500Mhz	10Gbps	4 pairs 8c twisted pair cable with cross separator sawtooth sheath	100m	application for transmission rate 10Gbps	TIA/EIA
CATEGORY 7	600Mhz	10Gbps	4 pairs 8c twisted pair cable with cross separator shield foiled cable	100m	application for transmission rate higher than 10Gbps	ISO/IEC

### STRUCTURE DRAWING

#### Category 3:



Commonly known as cat 3 or station wire, is an unshielded twisted pair (UTP) cable used in telephone wiring.

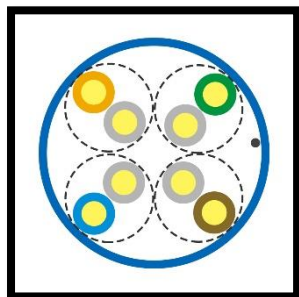
It is defined jointly by the Electronic Industries Alliance and the Telecommunications Industry Association and defined in TIA/EIA-568-B. Although designed to reliably carry data up to 10Mbit/s.

# COPPER NETWORK

## HOW TO CHOOSE ADEQUATE CATEGORY CABLE?

### STRUCTURE DRAWING

#### Category 5e:

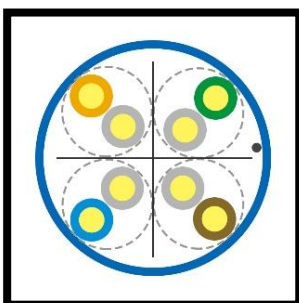


Commonly referred to as cat 5e, is a twisted pair cable for computer networks.

The cable standard provides performance of up to 100 MHz and is suitable for most varieties of Ethernet over twisted pair. Cat 5e is also used to carry other signals such as telephony and video.

This type of cable is used in structured cabling for computer networks such as Ethernet over twisted pair. The cable standard provides performance of up to 100MHz and is suitable for 10BASE-T, 100BASE-TX (Fast Ethernet), and 1000BASE-T (Gigabit Ethernet). 10BASE-T and 100BASE-TX Ethernet connections require two wire pairs. 1000BASE-T Ethernet connections require four wire pairs. Through the use of power over Ethernet (PoE), up to 25 watts of power can be carried over the cable in addition to Ethernet data.

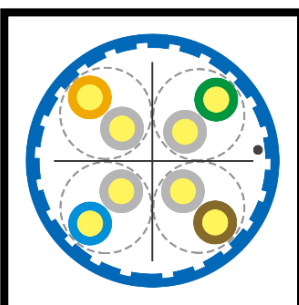
#### Category 6:



Commonly referred to as cat6, is a standardized twisted pair cable for ethernet and other network physical layers that is backward compatible with the Category 5/5e and Category 3 cable standards. Compared with cat5 and cat5e, cat6 features more stringent specifications for crosstalk and system noise. The cable standard specifies performance of up to 250MHz. When used for 10/100/1000BASE-T, the maximum allowed length of a cat 6 cable is up to 100 meters (328feet). This consists of 90 meters (295feet) of solid "horizontal" cabling between the patch panel and the wall jack, plus 5 meters (16feet) of stranded patch cable between each jack and the attached device.

For 10GBASE-T, an unshielded cat6 cable should not exceed 55 meters.

#### Category 6A:



The standard for Category 6A is ANSI/TIA-568-C.1, defined by the TIA for enhanced performance standards for twisted pair cable systems. It was defined in 2009. Category 6A is defined at frequencies up to 500MHz—twice that of cat 6.

Category 6A performs at improved specifications, in particular in the area of alien crosstalk as compared to cat6 UTP (unshielded twisted pair), which exhibited high alien noise in high frequencies.

The most important point is a performance difference between ISO/IEC and EIA/TIA component specifications for the NEXT transmission parameter. At a frequency of 500MHz, an ISO/IEC cat 6a connector performs 3dB better than a cat6a connector that conforms with the EIA/TIA specification. 3dB equals 50% reduction of near-end crosstalk noise signal power.



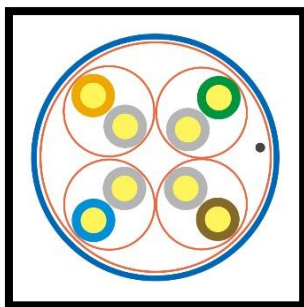
# COPPER NETWORK

## HOW TO CHOOSE ADEQUATE CATEGORY CABLE?

### STRUCTURE DRAWING

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#### Category 7:



The Category 7 cable standard has been ratified in 2002 to allow 10 Gigabit Ethernet over 100m of copper cabling.

Class F channel and Category 7 cable are backward compatible with Class D/Category 5e and Class E/Category 6. Class F features even stricter specifications for crosstalk and system noise than Class E. To achieve this, shielding has been added for individual wire pairs and the cable as a whole. Unshielded cables rely on the quality of the twists to protect from EMI. This involves a tight twist and carefully controlled design. Cables with individual shielding per pair such as category 7 rely mostly on the shield and therefore have pairs with longer

twists. Category 7 is not recognized by the TIA/EIA.

### DIFFERENT BETWEEN NETWORK CABLE AND NETWORK PATCH CORD

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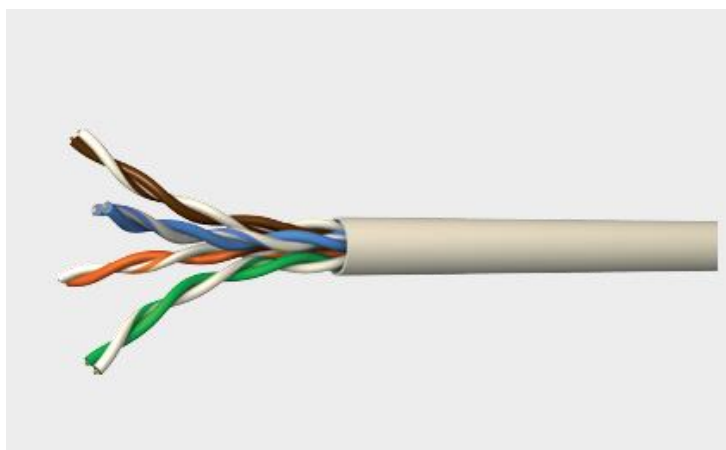
A network patch cable or patch cord or patch lead is an electrical cable or optical cable used to connect ("patch-in") one electronic device to another. Patch cords are usually produced in many different colors so as to be easily distinguishable. Each end of the cable is attached to a connector so that the cord may be plugged in.

Except the connectors in each ends, the biggest different between patch cord and cable is structure of conductor. When network cable uses solid copper conductor, the patch cord usually uses stranded copper conductor. Because stranded copper will offer better flexibility, durability, and is resistant to break.

# COPPER SYSTEM

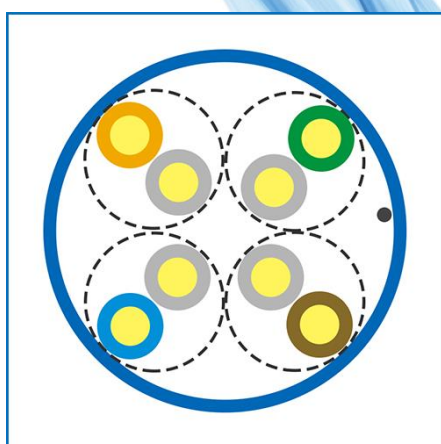
CAT5E U/UTP

## SOLID CABLE



### DESCRIPTION

Cat5e Twisted Pair Unshielded network cable in PVC jacket is used for less demanding environments. This cable is designed to Support PoE, voice, video and Gigabit Ethernet, with a performance up to 155MHz.



### Applicable Standards

ANSI/TIA-568-C.2; ISO/IEC 11801; EN 50173-1; IEC 61156-5

### SPECIFICATION

Linear Resistance	95Ω/km	Frequency	Up to 155Mhz
Characteristic Impedance	100Ω	Bandwidth	1000Mbps
Nominal velocity propagation	69%	1-100MHz - Impedance	100±15Ω
Conductor	4 Pair Bare Copper, Oxygen Free (99%), Solid 0.57mm <sup>2</sup> , 24AWG		
Jacket	RoHS Complied PVC, Unshielded, Grey and Blue Optional		
Insulation	HDPE Solid		
Outer Diameter	5.7 mm		
Banding Radius	8 X Cable Diameter		
Operation Temperature	-25°C~ +70°C		

### ORDER INFORMATION

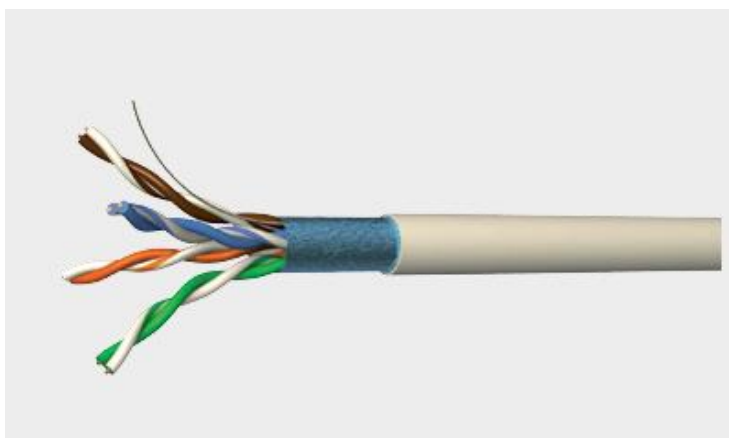
Type	Category	Jacket Color	Jacket Material	Packaging
NTC	5E	GY -Grey	PVC	305m/Box
		BU -Blue	LSZH	1000m/Drum

NTC: Network Cable UTP

# COPPER SYSTEM

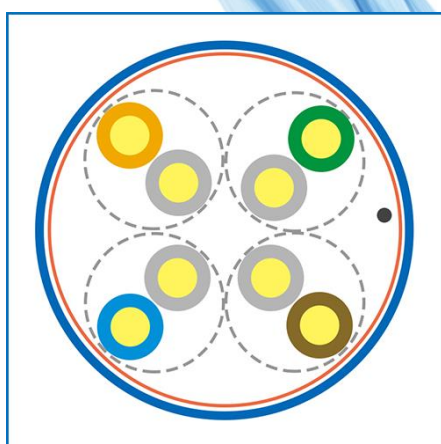
CAT5E U/FTP

## SOLID CABLE



### DESCRIPTION

Cat5e Twisted Pair Shielded network cable in PVC jacket with foiled is used for 1000BASE-T application, providing secure data transmission environment. This cable is designed to Support PoE, voice, video and Gigabit Ethernet, with a performance up to 155MHz.



### Applicable Standards

ANSI/TIA-568-C.2; ISO/IEC 11801; EN 50173-1; IEC 61156-5

### SPECIFICATION

Linear Resistance	95Ω/km	Frequency	Up to 155Mhz
Characteristic Impedance	100Ω	Bandwidth	1000Mbps
Nominal velocity propagation	69%	1-100MHz - Impedance	100±15Ω
Conductor	4 Pair Bare Copper, Oxygen Free (99%), Solid 0.57mm <sup>2</sup> , 24AWG		
Jacket	RoHS Complied PVC, Unshielded, Grey and Blue Optional		
Insulation	HDPE Solid		
Outer Diameter	5.7 mm		
Banding Radius	8 X Cable Diameter		
Operation Temperature	-25°C~ +70°C		

### ORDER INFORMATION

Type	Category	Jacket Color	Jacket Material	Packaging
NTCF	5E	GY -Grey	PVC	305m/Box
		BU -Blue	LSZH	1000m/Drum

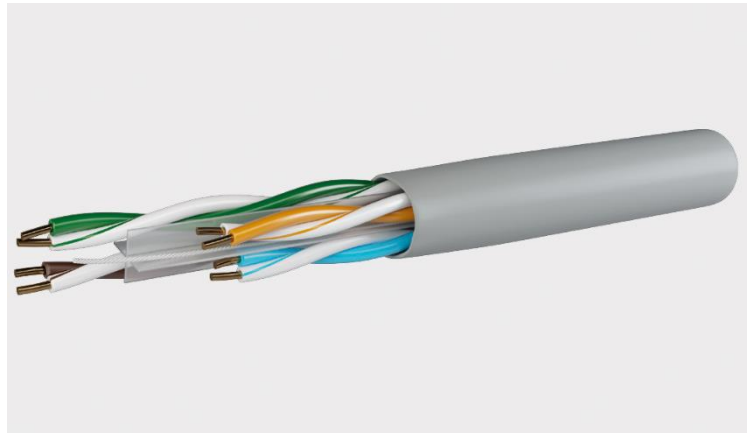
NTCF: Network Cable FTP



# COPPER SYSTEM

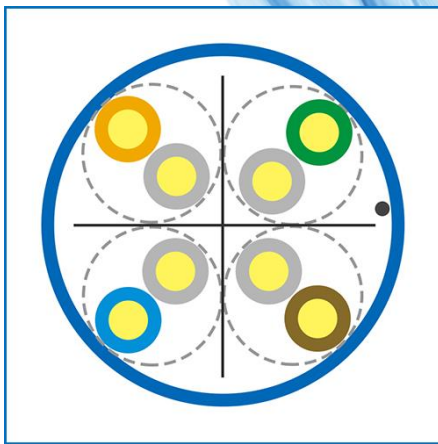
CAT6 U/UTP

## SOLID CABLE



### DESCRIPTION

Cat6 Twisted Pair Unshielded network cable in PVC jacket with foiled is used for 1000BASE-TX, 1000BASE-T application. This cable is designed to Support PoE, voice, video and Gigabit Ethernet, with a performance up to 250MHz.



### Applicable Standards

ANSI/TIA-568-C.2; ISO/IEC 11801; EN 50173-1; IEC 61156-5

### SPECIFICATION

Linear Resistance	95Ω/km	Frequency	250Mhz
Characteristic Impedance	100Ω	Bandwidth	1000Mbps
Nominal velocity propagation	69%	1-250MHz - Impedance	100±15Ω
Conductor	4 Pair Bare Copper, Oxygen Free (99%), Solid 0.63mm <sup>2</sup> , 23AWG		
Jacket	RoHS Complied PVC, Unshielded, Blue		
Insulation	HDPE Solid		
Outer Diameter	6.0 mm		
Banding Radius	8 X Cable Diameter		
Operation Temperature	-25°C~ +70°C		

### ORDER INFORMATION

Type	Category	Jacket Color	Jacket Material	Packaging
NTC	6	BU -Blue	PVC	305m/Box
			LSZH	1000m/Drum

NTC: Network Cable UTP

# COPPER SYSTEM

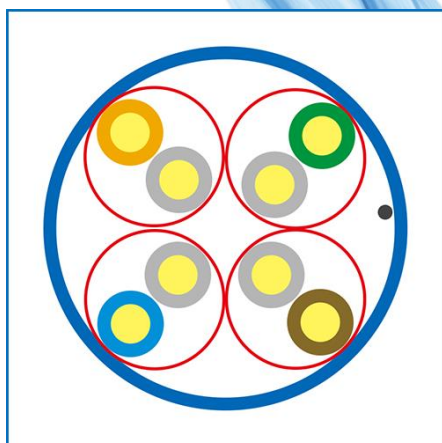
CAT6 U/FTP

## SOLID CABLE



### DESCRIPTION

Cat6 Twisted Pair U/FTP network cable in PVC jacket with individual foiled for each pair to improve the permanent link or channel quality, is used for 1000BASE-T application. This cable is designed to Support PoE, voice, video and Gigabit Ethernet, with a performance up to 250MHz.



### Applicable Standards

ANSI/TIA-568-C.2; ISO/IEC 11801; EN 50173-1; IEC 61156-5

### SPECIFICATION

Linear Resistance	95Ω/km	Frequency	250Mhz
Characteristic Impedance	100Ω	Bandwidth	1000Mbps
Nominal velocity propagation	69%	1-100MHz - Impedance	100±15Ω
Conductor	4 Pair Bare Copper, Oxygen Free (99%), Solid 0.63mm <sup>2</sup> , 23AWG		
Jacket	RoHS Complied PVC, Unshielded, Blue		
Insulation	HDPE Solid		
Outer Diameter	6.0 mm		
Banding Radius	8 X Cable Diameter		
Operation Temperature	-25°C~ +70°C		

### ORDER INFORMATION

Type	Category	Jacket Color	Jacket Material	Packaging
NTCUF	6	VT -Violet	PVC	305m/Box
		BU -Blue	LSZH	1000m/Drum

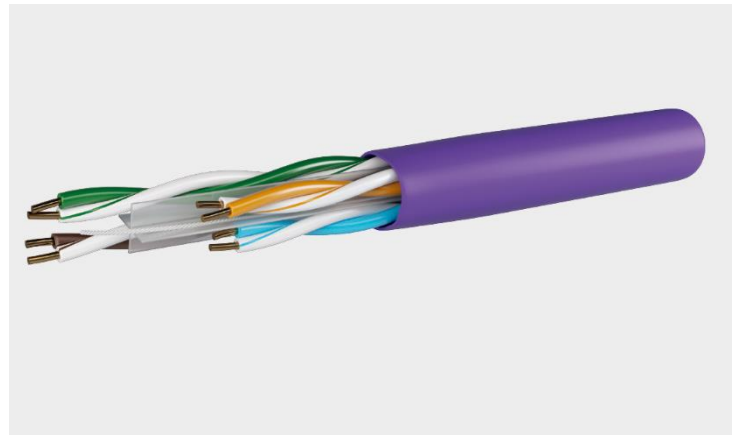
Example: NTCUF6-VTPVC-Box

NTCUF: Network Cable U/FTP

# COPPER SYSTEM

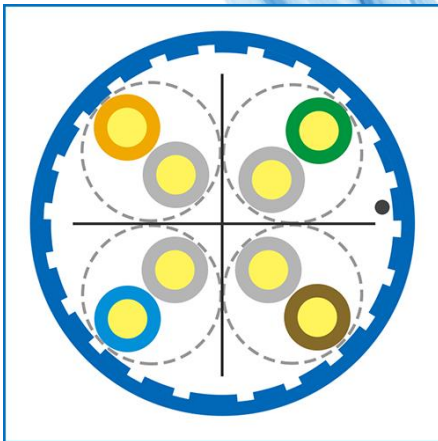
CAT6A U/UTP

## SOLID CABLE



### DESCRIPTION

Cat6A Twisted Pair Unshielded network cable has a high performance for your permanent-link or channel. The cable in slot jacket is used for 10GBASE-T application, supporting all Class F protocols, with a performance up to 500MHz.



### Applicable Standards

ANSI/TIA-568-C.2; ISO/IEC 11801; EN 50173-1; IEC 61156-5

### SPECIFICATION

Linear Resistance	95Ω/km	Frequency	500Mhz
Characteristic Impedance	100Ω	Bandwidth	10GMbps
Nominal velocity propagation	74%	1-500MHz - Impedance	100±15Ω
Conductor	4 Pair Bare Copper, Oxygen Free (99%), Solid 0.63mm <sup>2</sup> , 23AWG		
Jacket	RoHS Complied PVC, Unshielded, Violet and Blue Optional		
Insulation	HDPE Solid		
Outer Diameter	7.2 mm		
Banding Radius	8 X Cable Diameter		
Operation Temperature	-25°C~ +70°C		

### ORDER INFORMATION

Type	Category	Jacket Color	Jacket Material	Packaging
NTC	6A	BU- Blue	PVC	305m/Box
		VT- Violet	LSZH	1000m/Drum

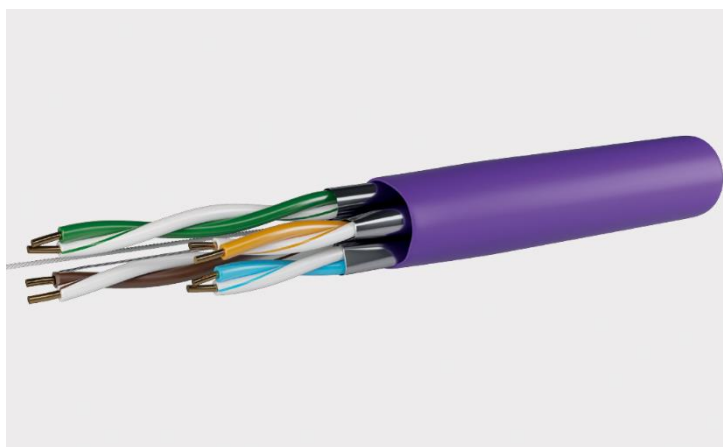
NTC: Network Cable UTP



# COPPER SYSTEM

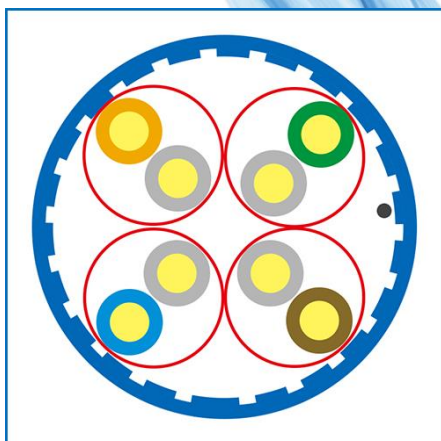
CAT6A U/FTP

## SOLID CABLE



### DESCRIPTION

Cat6A Twisted Pair U/FTP network cable has a high performance for your permanent-link or channel. The cable is individual shielded for each pair and total in a slot jacket. It is used for 10GBASE-T application, supporting all Class F protocols, with a performance up to 500MHz.



### Applicable Standards

ANSI/TIA-568-C.2; ISO/IEC 11801; EN 50173-1; IEC 61156-5

### SPECIFICATION

Linear Resistance	95Ω/km	Frequency	500Mhz
Characteristic Impedance	100Ω	Bandwidth	10GMbps
Nominal velocity propagation	74%	1-500MHz - Impedance	100±15Ω
Conductor	4 Pair Bare Copper, Oxygen Free (99%), Solid 0.63mm <sup>2</sup> , 23AWG		
Jacket	RoHS Complied PVC, Unshielded, Violet and Blue Optional		
Insulation	HDPE Solid		
Outer Diameter	7.4 mm		
Banding Radius	8 X Cable Diameter		
Operation Temperature	-25°C~ +70°C		

### ORDER INFORMATION

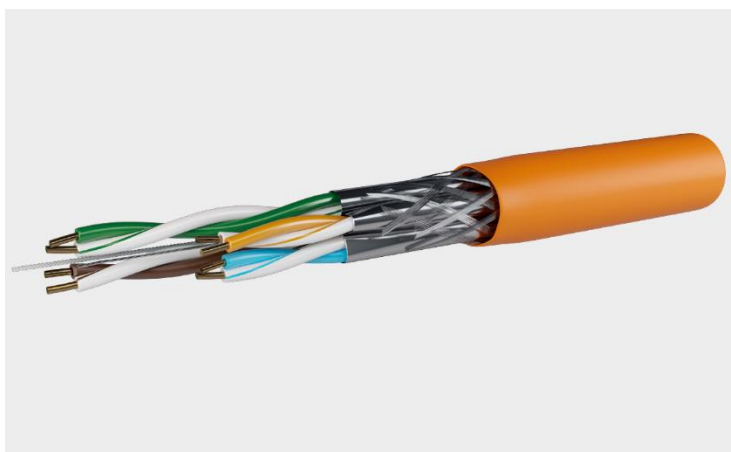
Type	Category	Jacket Color	Jacket Material	Packaging
NTCUF	6A	BU- Blue	PVC	305m/Box
		VT- Violet	LSZH	1000m/Drum

NTCUF: Network Cable U/FTP

# COPPER SYSTEM

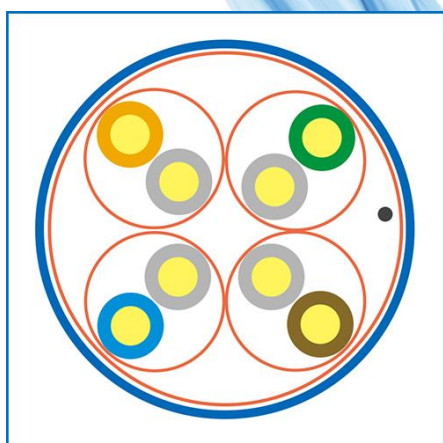
CAT7 S/FTP

## SOLID CABLE



### DESCRIPTION

Cat7 cable is individual shielded for each pair and then overall braid screen to improve the quality of the transmission. This cable is designed to Support all Class F protocols including 10GBASE-T, with a performance up to 600MHz. It's used to horizontal and



### Applicable Standards

ISO/IEC 24702; ISO/IEC 11801; EN 50173-3; IEC 61156-5

### SPECIFICATION

Linear Resistance	73Ω/km	Frequency	600Mhz
Characteristic Impedance	100Ω	Bandwidth	10GMbps
Nominal velocity propagation	78%	1-600MHz - Impedance	74Ω
Conductor	4 Pair Bare Copper, Oxygen Free (99%), Solid 0.63mm <sup>2</sup> , 23AWG		
Jacket	RoHS Complied PVC, Unshielded, Grey and Blue Optional		
Insulation	HDPE Solid		
Outer Diameter	7.8 mm		
Banding Radius	8 X Cable Diameter		
Operation Temperature	-25°C~ +70°C		

### ORDER INFORMATION

Type	Category	Jacket Color	Jacket Material	Packaging
NTCSF	7	OG- Orange	PVC	305m/Box
			LSZH	1000m/Drum

NTCSF: Network Cable S/FTP

# COPPER SYSTEM

CAT5E U/UTP

## PATCH CORD



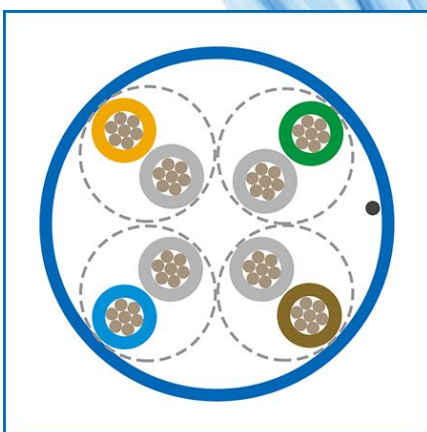
### DESCRIPTION

CAT5e patch cables are made from a 24 AWG stranded bare copper conductors consisting of an RJ-45 8P8C. CAT 5e Ethernet RJ45 patch cables are wired to T568B and rated at 100MHz supporting 100/1000Base-T Ethernet network applications, exceeding the requirements of ANSI/TIA Category 5e standards for balanced twisted pair and telecommunications cabling and components standard.



### Applicable Standards

ANSI/TIA-568-C.2; ISO/IEC 11801; EN 50173; IEC 61935-2



### SPECIFICATION

	Cat5e	Cat6	Cat6A	Cat7
Frequency	100Mhz	250Mhz	500Mhz	600Mhz
Bandwidth	1000Mbps	1000Mbps	10Gbps	10Gbps
Conductor	4 Pair Bare Copper, Oxygen Free (99%), Stranded 7*0.18 mm, 24AWG			
Jacket	Clean, Frap, Satiation PVC, Different Color Optional			
Connector	Clear Polycarbonate Crystal Head, Phosphor bronze with 3~50U gold plating			
Outer Diameter	5.6 mm			
Snagless Boot	Integral Injection Molding, Different Style Optional			
Operation Temperature	-25°C~ +70°C			

### ORDER INFORMATION

Type	Category	Jacket Color		Cable Length	Jacket Material	Gold Plated
JPU	5E	RD -Red	OG -Orange	01 Meter	PVC	03U
	6	YE -Yellow	PK -Pink	02 Meter	LSZH	15U
	6A	BU -Blue	WH -White	03 Meter		50U
	7	GN -Green	VT -Violet	05 Meter		

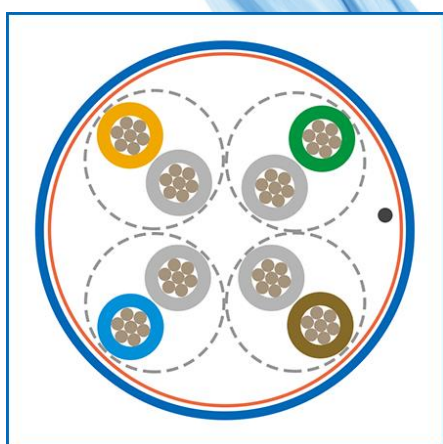
JPU: Unshielded Patch Cord



# COPPER SYSTEM

CAT5E U/FTP

## PATCH CORD



### DESCRIPTION

CAT5e patch cables are made from a 24 AWG stranded bare copper conductors consisting of an RJ-45 8P8C. CAT 5e Ethernet RJ45 patch cables are wired to T568B and rated at 100MHz supporting 100/1000Base-T Ethernet network applications, exceeding the requirements of ANSI/TIA Category 5e standards for balanced twisted pair and telecommunications cabling and components standard.



### Applicable Standards

ANSI/TIA-568-C.2; ISO/IEC 11801; EN 50173; IEC 61935-2

### SPECIFICATION

	Cat5e	Cat6	Cat6A	Cat7
Frequency	100Mhz	250Mhz	500Mhz	600Mhz
Bandwidth	1000Mbps	1000Mbps	10Gbps	10Gbps
Conductor	4 Pair Bare Copper, Oxygen Free (99%), Stranded 7*0.18 mm, 24AWG			
Jacket	Clean, Frap, Satiation PVC, Foiled Shielded, Different Color Optional			
Connector	Clear Polycarbonate Crystal Head, Phosphor bronze with 3~50U gold plating			
Outer Diameter	5.6 mm			
Snagless Boot	Integral Injection Molding, Different Style Optional			
Operation Temperature	-25°C~ +70°C			

### ORDER INFORMATION

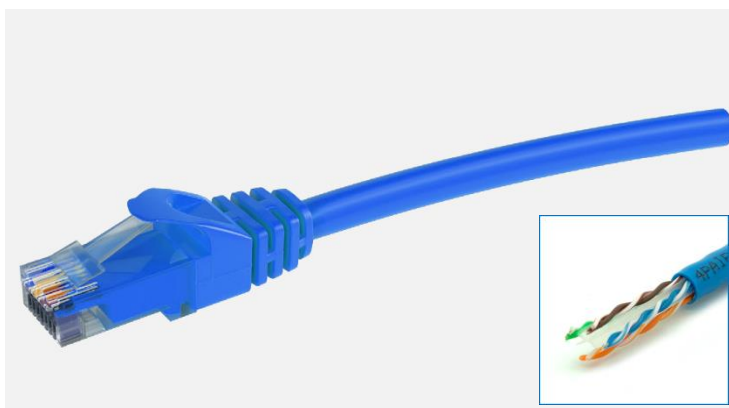
Type	Category	Jacket Color		Cable Length	Jacket Material	Gold Plated
JPF	5E	RD -Red	OG -Orange	01 Meter	PVC	3U
	6	YE -Yellow	PK -Pink	02 Meter	LSZH	15U
	6A	BU -Blue	WH -White	03 Meter		50U
		GN -Green	VT -Violet	05 Meter		

JPF: Foiled Patch Cord

# COPPER SYSTEM

CAT6 U/UTP

## PATCH CORD



### DESCRIPTION

CAT6 patch cables are made from a 24 AWG stranded bare copper conductors consisting of an RJ-45 8P8C. CAT 6 Ethernet RJ45 patch cables are wired to T568B and rated at 250MHz supporting 1000Base-T Ethernet network applications, exceeding the requirements of ANSI/TIA Category 6 standards for balanced twisted pair and telecommunications cabling and components standard.



### Applicable Standards

ANSI/TIA-568-C.2; ISO/IEC 11801; EN 50173; IEC 61935-2

### SPECIFICATION

	Cat5e	Cat6	Cat6A	Cat7
Frequency	100Mhz	250Mhz	500Mhz	600Mhz
Bandwidth	1000Mbps	1000Mbps	10Gbps	10Gbps
Conductor	4 Pair Bare Copper, Oxygen Free (99%), Stranded 7*0.18 mm, 24AWG			
Jacket	Clean, Frap, Satiation PVC, Different Color Optional			
Connector	Clear Polycarbonate Crystal Head, Phosphor bronze with 3~50U gold plating			
Outer Diameter	6.3 mm			
Snagless Boot	Integral Injection Molding, Different Style Optional			
Operation Temperature	-25°C~ +70°C			

### ORDER INFORMATION

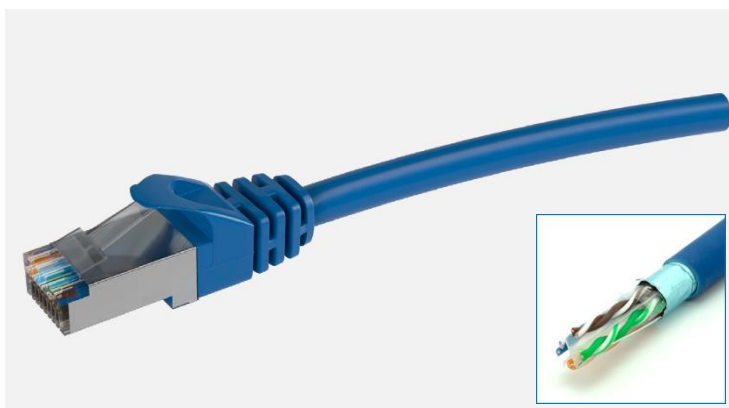
Type	Category	Jacket Color		Cable Length	Jacket Material	Gold Plated
JPU	5E	RD -Red	OG -Orange	01 Meter	PVC	3U
	6	YE -Yellow	PK -Pink	02 Meter	LSZH	15U
	6A	BU -Blue	WH -White	03 Meter		50U
		GN -Green	VT -Violet	05 Meter		

JPU: Unshielded Patch Cord

# COPPER SYSTEM

CAT6 U/FTP

## PATCH CORD



### DESCRIPTION

CAT6 patch cables are made from a 24 AWG stranded bare copper conductors consisting of an RJ-45 8P8C. CAT 6 Ethernet RJ45 patch cables are wired to T568B and rated at 250MHz supporting 1000Base-T Ethernet network applications, exceeding the requirements of ANSI/TIA Category 6 standards for balanced twisted pair and telecommunications cabling and components standard.



### Applicable Standards

ANSI/TIA-568-C.2; ISO/IEC 11801; EN 50173; IEC 61935-2

### SPECIFICATION

	Cat5e	Cat6	Cat6A	Cat7
Frequency	100Mhz	250Mhz	500Mhz	600Mhz
Bandwidth	1000Mbps	1000Mbps	10Gbps	10Gbps
Conductor	4 Pair Bare Copper, Oxygen Free (99%), Stranded 7*0.18 mm, 24AWG			
Jacket	Clean, Frap, Satiation PVC, Foiled Shielded, Different Color Optional			
Connector	Clear Polycarbonate Crystal Head, Phosphor bronze with 3~50U gold plating			
Outer Diameter	6.3 mm			
Snagless Boot	Integral Injection Molding, Different Style Optional			
Operation Temperature	-25°C~ +70°C			

### ORDER INFORMATION

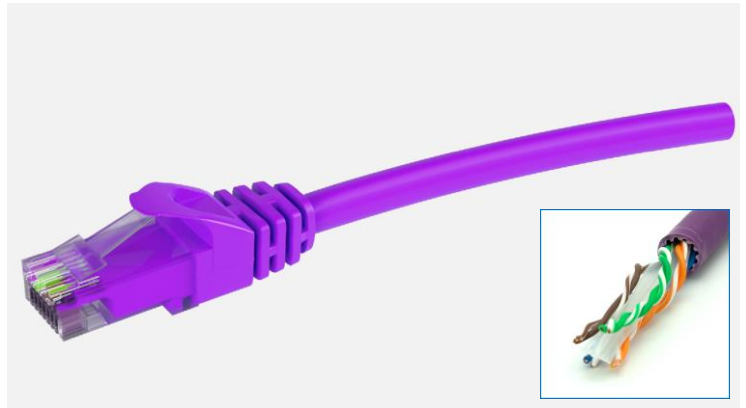
Type	Category	Jacket Color		Cable Length	Jacket Material	Gold Plated
JPF	5E	RD -Red	OG -Orange	01 Meter	PVC	3U
	6	YE -Yellow	PK -Pink	02 Meter	LSZH	15U
		6A	BU -Blue	WH -White		03 Meter
			GN -Green	VT -Violet	05 Meter	

JPF: Foiled Patch Cord

# COPPER SYSTEM

CAT6A U/UTP

## PATCH CORD



### DESCRIPTION

CAT6A patch cables are made from a 24 AWG stranded bare copper conductors consisting of an RJ-45 8P8C. CAT 6 Ethernet RJ45 patch cables are wired to T568B and rated at 500MHz supporting 10GBase-T Ethernet network applications, exceeding the requirements of ANSI/TIA Category 6A standards for balanced twisted pair and telecommunications cabling and components standard.



### Applicable Standards

ANSI/TIA-568-C.2; ISO/IEC 11801; EN 50173; IEC 61935-2

### SPECIFICATION

	Cat5e	Cat6	Cat6A	Cat7
Frequency	100Mhz	250Mhz	500Mhz	600Mhz
Bandwidth	1000Mbps	1000Mbps	10Gbps	10Gbps
Conductor	4 Pair Bare Copper, Oxygen Free (99%), Stranded 7*0.18 mm, 24AWG			
Jacket	Clean, Frap, Satiation PVC, Different Color Optional			
Connector	Clear Polycarbonate Crystal Head, Phosphor bronze with 3~50U gold plating			
Outer Diameter	6.3 mm			
Snagless Boot	Integral Injection Molding, Different Style Optional			
Operation Temperature	-25°C~ +70°C			

### ORDER INFORMATION

Type	Category	Jacket Color		Cable Length	Jacket Material	Gold Plated
JPU	5E	RD -Red	OG -Orange	01 Meter	PVC	3U
	6	YE -Yellow	PK -Pink	02 Meter	LSZH	15U
	6A	BU -Blue	WH -White	03 Meter		50U
	7	GN -Green	VT -Violet	05 Meter		

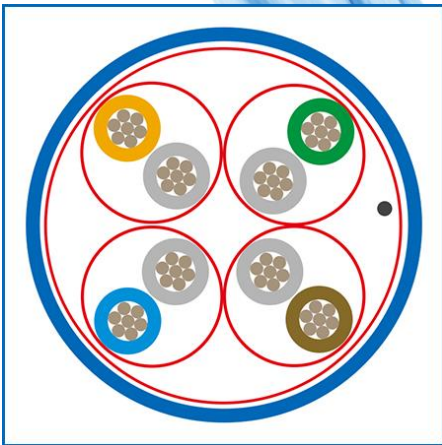
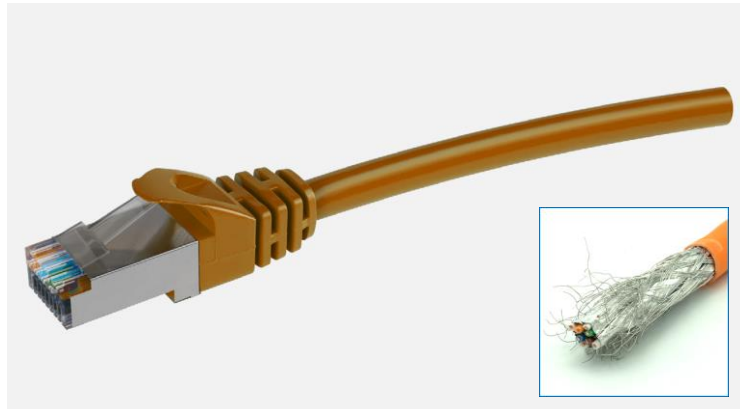
JPU: Unshielded Patch Cord



# COPPER SYSTEM

CAT7 S/FTP

## PATCH CORD



### DESCRIPTION

Cat7 (ISO/IEC 11801) cable specifications require transmission frequencies of up to 600 MHz over 100 meters of fully shielded copper cabling. CAT7 cable consists of four individually shielded pairs inside an overall braided shield, is designed specifically for Gigabit Ethernet applications. (Gigabit over copper).



### Applicable Standards

ANSI/TIA-568-C.2; ISO/IEC 11801; EN 50173; IEC 61935-2

### SPECIFICATION

	Cat5e	Cat6	Cat6A	Cat7
Frequency	100Mhz	250Mhz	500Mhz	600Mhz
Bandwidth	1000Mbps	1000Mbps	10Gbps	10Gbps
Conductor	4 Pair Bare Copper, Oxygen Free (99%), Stranded 7*0.16 mm, 26AWG			
Jacket	Clean, Frap, Satiation PVC, Different Color Optional			
Connector	Clear Polycarbonate Crystal Head, Phosphor bronze with 3~50U gold plating			
Outer Diameter	6.5 mm			
Snagless Boot	Integral Injection Molding, Different Style Optional			
Operation Temperature	-25°C~ +70°C			

### ORDER INFORMATION

Type	Category	Jacket Color		Cable Length	Jacket Material	Gold Plated
JPS	6A	RD -Red	OG -Orange	01 Meter	PVC	3U
		YE -Yellow	PK -Pink	02 Meter	LSZH	15U
	BU -Blue	WH -White	03 Meter	50U		
	GN -Green	VT -Violet	05 Meter			
		7				

JPS: Shielded Patch Cord