



# **FTTx**Solutions

NEW BROCHURE

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#### **About Our Company**

Located in Unibuilt Science and Technological Industrial
Park in Dalang, Longhua district, Shenzhen KOC Communication Co. Ltd. (abbr.: KOC) was founded in 2001. It is one of the pioneer company engaged in fiber optical connector production business in China. With more than 20 years' development, it is a specialized manufacturer and sales company in ODN fiber connections, passive devices, IDC cabling and miro-connection, outdoor cables.

Nowadays, KOC products are extensively applied for telecom operators, fiber engineering projects, CATV, broadband networks, FTTH and data center constructions in Europe, South America, Mid-east, Asia Pacific regions. Under the concept of high quality principal, KOC provides reliable products and services to customers around the world.

KOC set up branches or representatives worldwide.

We invite local expatriates for business and cooperations. To establish customer relations and stabilize long term cooperation have always be our pursuit.

Total operational space: 15000<sup>m2</sup>.

Total Staff: 636 pax, overseas 49 pax.





#### Why to **Select KOC?**

- 20-year FO Telecom Industry Experiences
- Continuous Optimizing Costs for Customer Benefit Priority
- Honesty is Our First Business Principal
- Stable Personnel with Rich Experiences
- Capability to Provide Global Services
- Short Leadtime
- Fast Reasonable Logistics Network



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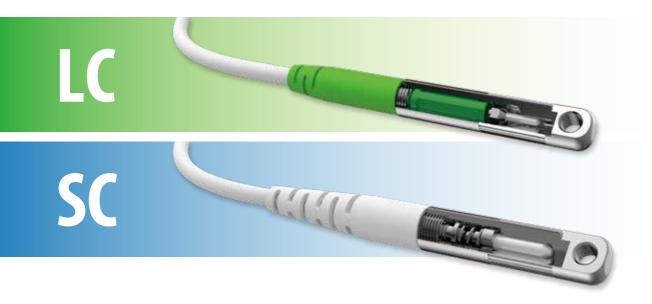
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#### **Fast Push Connector for FTTR**

## LC / SC

- Fast push through-wall LC connector is used for Ø3.0mm cable
- Fast push through-wall SC connector is used for Ø4.0mm cable
- PC&APC are available
- Fiber type(G652 or G657) are available
- Cable jacket material (PVC/LSZH/Riser...) are available
- Application in FTTR system



Item	PC	APC
Insertion Loss	≤0.30dB	≤0.30dB
Return Loss	≥50dB	≥60dB
Durability	≤0.2dB typical change, 1000 matings	≤0.2dB typical change, 1000 matings
Temperature	-20°C ~ 70°C	-20°C ~ 70°C
	125.0+1/-0μm, Concentricity: ≤1.0μm	125.0+1/-0μm, Concentricity: ≤0.5μm
Ferrule Hole Sizes	125.3+1/-0μm, Concentricity: ≤1.0μm	125.5+1/-0μm, Concentricity: ≤0.5μm
retruie riole sizes	125.5+1/-0μm, Concentricity: ≤1.0μm	126.0+1/-0μm, Concentricity: ≤0.5μm
	126.0+1/-0μm, Concentricity: ≤1.0μm	

#### **Fast-deploying FTTH Pre-termination Pigtail**

- Carton cable reel packing with PIZZA box
- Max. length of drop cable pigtail 100 meters
- Max. capacity of terminal box 4 SX-SC/DX-LC
- Pigtails pre-termination in the box, no need fusion splice
- Fast pulling out cable for installation
- Shutter adapter for laser protection available
- Wall mountable fiber terminal box
- Connector IL≤0.3dB, UPC RL≥50dB, APC RL≥60dB

Termina	l box		
Model	Dimension	Material	Max. Capacity
GPMB-L	100.5*80.5*29mm	ABS	4 SX-SC/DX-LC

#### **Packing**

Cable paper reel	Pizza Box	Max. Cable Length
Ф300*H45mm	320*300*60mm	100meters







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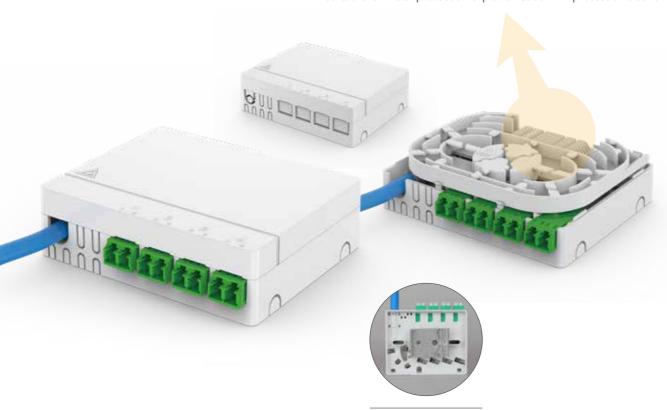
#### **FTTH/FTTR Fiber Optic Face Plate**

- Product Size: 100x80x29mm
- Made of ABS plastic material
- 4 duplex LC adapter ports, terminate max 8 optical fibers
- This face plate has a detachable rail slider that can be mounted on the rail or wall (remove the rail slider)
- Application in FTTH/FTTR system





Suitable for metal protection clip and heat-shrink protection sleeve



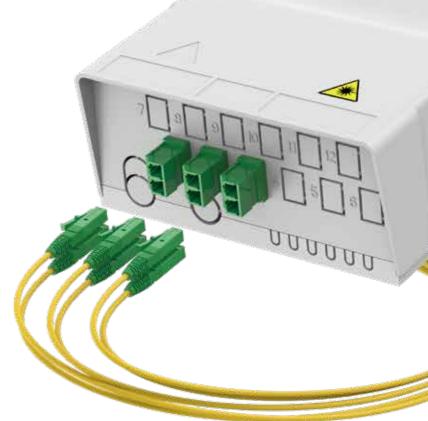
Detachable Rail Slider

#### **Flexible Distribution Boxes**

## IP54 Waterproof

SC Simplex Adapter / SC Duplex Adapter / LC Quad Adapter

- Multifunctional groundplate
- IP-classifcation IP 54
- Up to 24 fbers
- 12 adapters
- Splitterholders
- A long version cover and a short version (to ensure against unauthorized access)
- Option for a metal cylinder lock
- Put your logo on top of the cover
- All variants are preterminated available ready for splicing



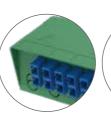




















Color Housing Optional

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#### **Fiber Optic Termination Box 1C**

This box is used as a termination point for the feeder cable to connect with drop cable in FTTx communication network system. It intergtates fiber splicing, splitting, distribution, storage and cable connection in one unit. Meanwhile, it provides solid protection and management for the FTTx network building.

- Nice shape and structure
- Protects and manages cable effectively
- Positive fiber management
- Standard size, light weight
- Can be wall mounted
- High quality material
- Easy to operate
- Suitable for indoor use
- Has the function of fiber storage, and the max storage length is 40m
- Telecommunication subscriber loop
- Fiber to the home(FTTH)
- · LAN/WAN







#### **Fiber Optic Termination Box 1R**

This box is used as a termination point for the feeder cable to connect with drop cable in FTTx communication network system. It intergtates fiber splicing, splitting, distribution, storage and cable connection in one unit. Meanwhile, it provides solid protection and management for the FTTx network building.

- Nice shape and structure
- Protects and manages cable effectively
- Positive fiber management
- · Standard size, light weight
- Can be wall mounted
- · High quality material
- Easy to operate
- Suitable for indoor use
- Telecommunication subscriber loop
- Fiber to the home(FTTH)
- · LAN/WAN







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#### **Fiber Optic Termination Box 4F**

This box is used as a termination point for the feeder cable to connect with drop cable in FTTx communication network system. It intergtates fiber splicing, splitting, distribution, storage and cable connection in one unit. Meanwhile, it provides solid protection and management for the FTTx network building.

- Nice shape and structure
- Protects and manages cable effectively
- Positive fiber management
- · Standard size, light weight
- Can be wall mounted
- · High quality material
- Easy to operate
- Suitable for indoor use
- Telecommunication subscriber loop
- Fiber to the home(FTTH)
- LAN/WAN







#### **Fiber Optic Termination Box 6R**

This box is used as a termination point for the feeder cable to connect with drop cable in FTTx communication network system. It intergtates fiber splicing, splitting, distribution, storage and cable connection in one unit. Meanwhile, it provides solid protection and management for the FTTx network building.

- Total enclosed structure, be in nice shape
- Protects and manages cable effectively
- Standard size, light weight
- · High quality ABS material
- Clamping for feeder cable and drop cable, fiber splicing, fixation, storage,...etc
- Suitable for SC and LC duplex adaptor and pigtail
- Easy to operate
- Telecommunication subscriber loop
- Fiber to the home(FTTH)
- LAN/WAN







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#### **FTTH Modular Box**





- Support for up to 2 ports SC Simplex Adapter
- Squeeze the edge of the box to easily separate the box
- Rail DIN installation

Item	Specifications
Cable Type	Indoor drop cable, max.OD 4.0mm
Pigtail Type	250μm or 900μm
Connector Type	SC/LC
Capacity	SC 2 fibers /LC 4 fibers
Operating Temperature	-40°C ~ 85°C
Installation	DIN rail
Insertion Loss	≤0.2dB (1310nm&1550nm)
Dimension	100×60×18mm

#### **Fiber Optic Termination Box 16I**

- Total enclosed structure, be in nice shape
- Protects and manages cable effectively
- Secured with anti-theft locking mechanism
- Standard size, light weight
- High quality PC + ABS material
- Good properties of dust, and moisture proofing, IP65
- Clamping for feeder cable and drop cable, fiber splicing, fixation, storage,
- distribution ... etc all in one
- Suitable for SC and LC duplex adaptor and pigtail
- Easy to operate
- Wall and pole mountable (accessories optional)
- Suitable for both outdoor and indoor use
- Telecommunication subscriber loop
- Fiber to the home(FTTH)
- LAN/WAN





Item	Specifications	
Work Temperature	-40 ~ 85°℃	•
Relative Humidity	≤85% (+30°C)	
Atmospheric Pressure	70Kpa ~ 106Kpa	-
Insert Loss	≤ 0.3dB	
UPC Return Loss	≥ 50dB	-
APC Return Loss	≥ 60dB	
Insert and Pull out Life	1000 times	-
Insulation	The grounding device is insulated with the Termination box, IR≥1000m Ω/500V (c	direct current)
Withstand Voltage	Between the grounding device and the box body, the withstand voltage is over 3000V/Min, no breakdown and flashover. U≥3000V(direct current)	-

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#### **Fiber Optic Termination Box 12L**

This box is used as a termination point for the feeder cable to connect with drop cable in FTTx communication network system. It intergtates fiber splicing, splitting, distribution, storage and cable connection in one unit., Meanwhile, it provides solid protection and management for the FTTx network building.

- Total enclosed structure, be in nice shape
- Protects and manages cable effectively
- Secured with anti-theft locking mechanism
- Standard size, light weight
- High quality PC + ABS material
- Good properties of dust, and moisture proofing, IP65
- Clamping for feeder cable and drop cable, fiber splicing, fixation, storage, distribution ... etc all in one
- Suitable for SC and LC duplex adaptor and pigtail
- Easy to operate
- Wall and pole mountable (accessories optional)
- Suitable for both outdoor and indoor use
- Telecommunication subscriber loop
- Fiber to the home(FTTH)
- LAN/WAN







#### **Indoor Cables for FTTH**

## Compliant to 305/2011/EU-CPR





#### **Cable Parameters**

Item	Specifications		
Fiber type			
Flame propagation	CPR B2ca s1a d0 a1 (EN 50575 :2014	/ A1 :2016)	
Loose tube	LSZH, White		
Fiber color	1F(Red) / 2F(Blue&Red) / 1F(Blue) / 2F(Blue&Orange) 4F(Blue&Red&Green&Yellow) 4F(Blue&Orange&Green&B		
Loose tube diameter	1.0±0.2mm (2.0±0.1)mm x (3.0±0.1)mm		
Strength Member	Aramid yarns 2x Ø 0.5mmFRP		
Outer sheath	LSZH, White		
Cable diameter	2.2±0.1mm		
Outer sheath thickness	0.3±0.05mm 250±15μm		
Attenuation	≤0.4dB/km@1310nm; ≤0.3dB/km@1550nm		

#### Mechanical and Environmental Characteristics

ltem	Specifications	
Tension(Long Term)	60N	40N
Tension(Short Term)	120N	80N
Crush(Long Term)	100N/100mm	1000N/10cm
Crush(Short Term)	500N/100mm	2200N/10cm
Min. Bend Radius(Dynamic)	20D mm	30D mm
Min. Bend Radius(Static)	10D mm	15D mm
Installation Temperature	-5 ~ 50°C	-5 ~ 60°C
Operating Temperature	-20 ~ 60°C	-20 ~ 70°C
Storage Temperature	-20 ~ 60°C	-20 ~ 70°C

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#### **DIN Rail Mounted Fiber Optic Terminal Box**

- Reasonable design, aluminum box, light weight
- Electrostatic powder painting, grey or black color
- ABS plastic blue splice tray, rotatable design, compact structure
- Max. 24 fibers capacity
- FC, ST, LC, SC ... different adapter port available
- DIN rail mounted application







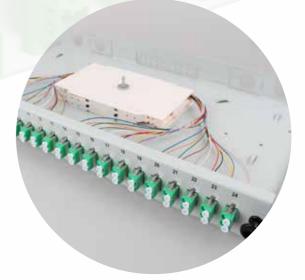
Item	Specifications
Material	Aluminum
Adapter port	12 SC Simplex
Splicing Capacity	Max. 24 Fibers
Cable Port	4 Ports
Application	DIN Rail Mounted
Operating Temperature	-40°C ~ 85°C
Dimension	133x136.6x35 mm

## 1U 24F/48F/96F Sliding Type Panel

Standard 19", 1U



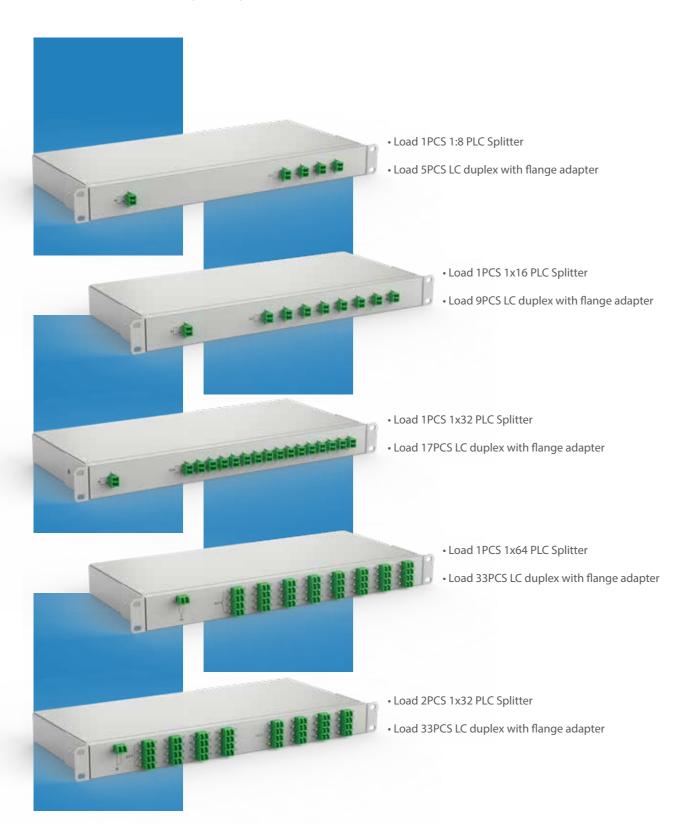
- 19" width, 1U height, 244.2mm depth
- Made of cold rolled steel
- Max. capacity up to 96F
- Suitable for inserting installation of SC/LC/FC adapters etc.
- Max. capacity up to 4x24F splice tray
- Fully loaded and checked by interferometer and endface control



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#### **1U Panel With PLC Splitter**

## Standard 19", 1U, Cold Rolled Steel



Port Configuration	1x8	1x16	1x32	1x64		
Operating Wavelength(nm)	1260 ~ 1650					
Fiber Type	G657A1					
Insertion Loss(dB)	≤10.5	≤13.5	≤16.8	≤20.5		
LOSS Uniformity(dB)	≤1.0	≤1.0 ≤1.2 ≤1.5 ≤2.0				
PDL(dB)	≤0.3	≤0.3	≤0.3	≤0.5		
Directivity(dB)	≥55					
Return Loss(dB)	Without Connecto	or≥55; APC≥55; UPC	2≥50			
Operation Temperature(°C)	-40 ~ 85°C					
Storage Temperature(°C)	-40 ~ 85°C					
Note	Optical specifications without connector loss. For pre-terminated splitters, IL values shall be increased by 0.3dB per connector					

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#### **Splitter Frame for PLC Modules**

## 1x2, 1x4, 1x8, 1x16, 1x32, 1x64



- 19" width,1U height, 2U height,118mm depth
- · Made of cold rolled steel
- With the dedicated PLC module, various PLC specifications are available(1:2/1:4/1:8/1:16/1:32/1:64)
- PLC module specification 120\*60\*10mm &120\*60\*20mm
- PLC module material aluminium alloy
- For 1U: Maximum loadable 8 PCS 120\*60\*10mm PLC module or 4PCS 120\*60\*20mm PLC module
- For 2U: Maximum loadable 42 PCS 120\*60\*10mm PLC module or 21PCS 120\*60\*20mm PLC module

Port Configuration	1x2	1x4	1x8	1x16	1x32	1x64
Operating Wavelength(nm)	1260 ~ 1650					
Fiber Type	G657A1					
Insertion Loss(dB)	≤3.8	≤7.4	≤10.5	≤13.5	≤16.8	≤20.5
LOSS Uniformity(dB)	≤0.6	≤0.7	≤1.0	≤1.2	≤1.5	≤2.0
PDL(dB)	≤0.2	≤0.2 ≤0.3			≤0.5	
Directivity(dB)	≥55					
Return Loss(dB)	Without Connector≥55; APC≥55; UPC≥50					
Operation Temperature(°C)	-40 ~ 85°C					
Storage Temperature(°C)	-40 ~ 85°C					
Note	Optical specifications without connector loss.  For pre-terminated splitters, IL values shall be increased by 0.3dB per connector					

#### **1U Splitters in LG4/LG8 Housing**

Standard 19", 1U, LG4, LG8, Cold Rolled Steel



Item	LG4 LG8		
Each PLC module include	8PCS 1x2 PLC	3PCS 1x4 PLC or 4PCS 1x2 PLC	
PLC module	213*20.2*150mm, Cold rolled steel	106.5*20.2*150mm, Cold rolled steel	
Maximum loadable	4 PCS PLC module Total 32PCS 1x2 PLC	8 PCS PLC module Total 24PCS 1x4 PLC or 32PCS 1x2 PLC	
Port Configuration	1x2	1x4	
Operating Wavelength(nm)	1260 ~ 1650		
Fiber Type	G657A1		
Insertion Loss(dB)	≤3.8	≤7.4	
LOSS Uniformity(dB)	≤0.6 ≤0.7		
PDL(dB)	≤0.2 ≤0.3		
Directivity(dB)	≥55		
Return Loss(dB)	Without Connector≥55; APC≥55; UPC≥50		
Operation Temperature(°C)	-40 ~ 85°C		
Storage Temperature(°C)	-40 ~ 85°C		
Note	Optical specifications without connector loss.  For pre-terminated splitters, IL values shall be increased by 0.3dB per connector		

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#### 1.5U 144F Rotation Panel

## 1.5U, 144F, Left And Right Rotation Panel

- 19" width,1.5U height,200mm depth, front cable management 70mm depth
- Made of aluminium alloy
- 3 layers of rotating trays, each layer 48F, max capacity 144F
- The per layer tray of panel can rotate up to 90 degrees
- Load 24 PCS LC duplex without flange adapter on each layer, total 72PCS adapters
- Load 1PCS 48F splice tray on each layer, total 3PCS 48F splice tray

#### **1U 96F Rotation Panel**

## Left And Right Rotation Type, 1U

- 19" width,1U height,200mm depth, front cable management 70mm depth
- Made of aluminium alloy
- 2 layers of rotating trays, each layer 48F, max capacity 96F
- •The per layer tray of panel can rotate up to 90 degrees
- Load 24 PCS LC duplex without flange adapter on each layer, total 48PCS adapters





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