

# ZTT GROUP

Established in 1992, ZTT started from optical fiber communications and was listed on Shanghai Stock Exchange (SSE) in 2002 (Stock Code in SSE: 600522). ZTT has pictured a diversified industrial portfolio for marine equipment, renewable energy, new materials, smart grid, optical communications and other diversified industrial products. ZTT Group is now hosting 80 subsidiary companies and over 16,000 employees, operating 5 overseas plants located in India, Brazil, Indonesia, Morocco and Turkey . ZTT owns more than 2500 patents with independent intellectual property rights, presided over or participated in more than 500 international and national industry standards. The products of ZTT are exported to 160 countries and regions .The company has ranked among the top 500 Chinese enterprises for consecutive years and broke through \$13.4 billion in sales revenue in 2022. ZTT follows the new economic model of fostering cleaner production and accelerating green and low-carbon development, works hard to serve as the pioneer of persistent endeavor to achieve national goal involving carbon dioxide emissions peaking by 2030 and carbon neutrality by 2060, emerging as a green manufacturing technology group assuming regional economy.



# FTTx ODN Solution Provider



Add: No.88 Qixin Road, NETDA, Nantong, Jiangsu, P.R. China, 226009

Tel: 86-0513-80100986 Email: sales@zttcable.com Http://www.zttcable.com





# COMPANY PROFILE

Zhongtian Broadband Technology Co., Ltd is a wholly-owned subsidiary by Jiangsu Zhongtian Technology Co., Ltd (ZTT)—a public company in China’s telecommunication industry. The company keeps pace with research and participates in various FTTx projects in domestic and overseas. From 2003, company specializes in producing a full range of ODN products and providing

comprehensive PON solutions. The products and solutions have been widely applied by China Telecom, China Mobile, China Unicom, and other overseas communication operators. The products have been sold to more than 50 countries and regions including Taiwan, Southeast Asia, Middle East and Africa. Zhongtian Broadband Technology Co., Ltd

commits to continuously reducing network deployment costs, and promoting development and wide application of optical communication technologies. Company has an excellent product quality with a number of certifications, such as ISO9001 quality management system certification, TL certification, radio and television certification etc. The company will make

unremitting efforts to become the best FTTx network supplier in China.



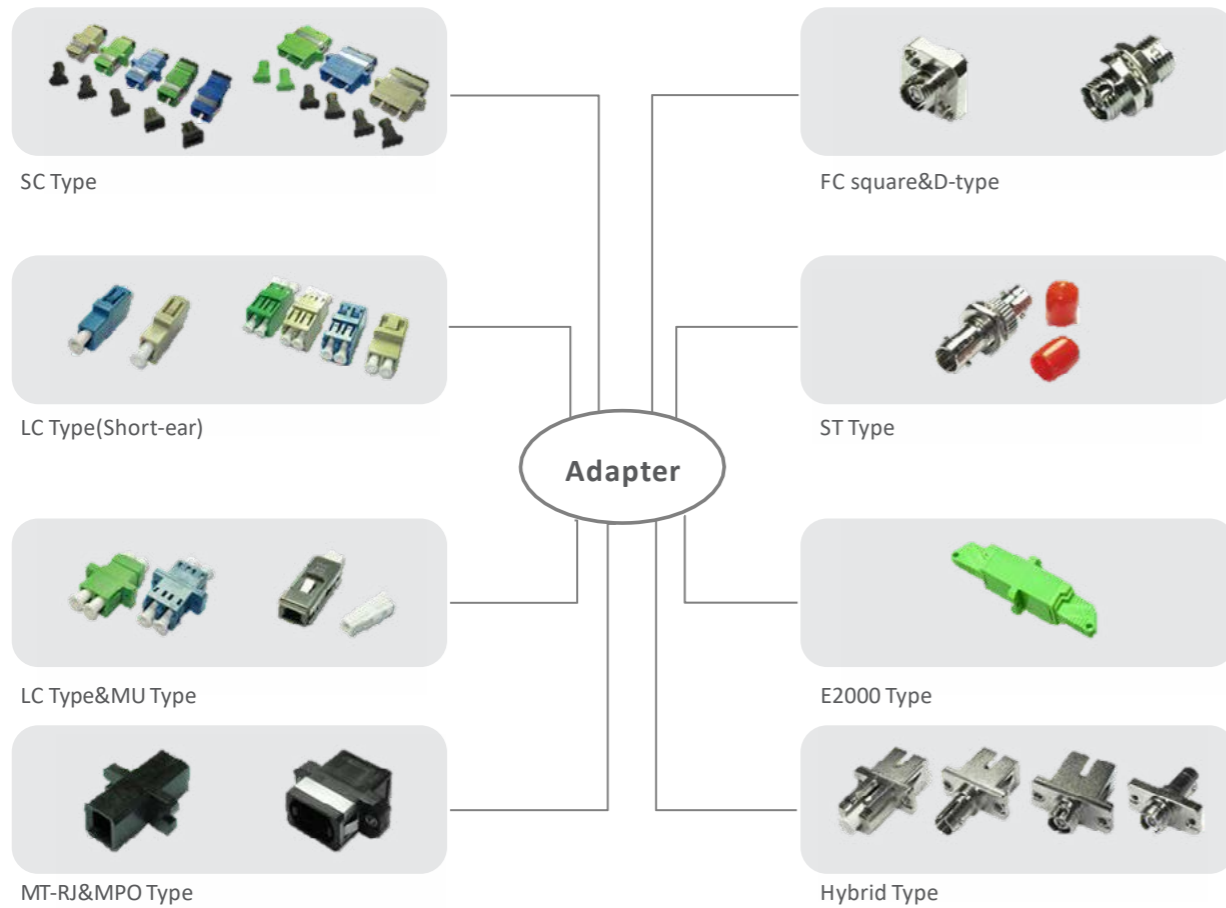


## Optical Accessories

### Adapter

#### Description:

Accomplish accurate and optical connection between connectors.



#### Technical Specification:

ITEM	Unit	Parameter
Type	--	FC , SC , ST , MU , E2000 , Hybrid
Polishing face	--	PC & UPC & APC
Material of sleeve	--	Ceramic
Insertion loss	(dB)	≤ 0.2
Interchangeability	(dB)	≤ 0.2( Connector Randomly )
Repeatability	(dB)	≤ 0.2
Operating Temperature	(°C)	-40 ~ 80°C
Industrial standard	--	IEC 61754

## Optical Accessories

### Pigtail and Patch Cord

#### Description:

Used in the fiber distribution system of communication network, accomplishes cable's termination, mutual connection between the optical interface.



#### Technical Specification:

Technical data				
Fiber type	SM			MM
Connector type	FC/SC/ST/LC			
Grinding type	PC	UPC	APC	≤0.2
Insertion loss(dB)	≤0.3	≤0.3	≤0.3	
Return loss(dB)	≥45	≥50	≥60	/
Operation temperature(°C)	-25°C to +70°C(for SC,ST,LC); -40°C to +80°C(for FC)			
Longevity	>500 times			
Standard	IEC61754-13,4,2,20			

## Optical Accessories

### MPO/MTP

#### Description:

MPO connector is a kind of pluggable connector with multi-core and multi-channel, which is widely used in the high-density integrated fiber line environment during wiring.



#### Features:

- High density, saving space: The 12-core MPO fast connector with high density is only equivalent to the size of an RJ45 connector, which is incomparable with the traditional wiring. With this connector, 1U and 4U optical fiber distribution frames combined with MPO modules achieve the highest installation density of 72 cores and 288 cores (LC) respectively, saving a lot of space to deploy as many devices as possible.
- Stable and reliable performance: Precision MT guide pin and guide hole ensure the accuracy of optical fiber alignment.
- Easy to deploy and upgrade: All connections are plug-and-play, and the number of cables is much smaller than the traditional wiring, so the construction efficiency is greatly improved. The amount of wiring used in a week can be completed in a few hours.
- Support for future network applications: Perfect support for 40G/100G network applications, avoiding the need for rewiring due to network equipment upgrades.
- The wiring is beautiful and the management is convenient: Shortening the space taken up by cables can reduce cable space under a bridge or floor by more than 40%, facilitating ventilation in the data center. It got rid of the phenomenon of numerous and disorderly cables brought by common optical fiber products before, which reduced the management difficulty of customers and beautified the space.

#### Technical Data:

Item		Optical Performance			
		SM		MM	
MTP/MPO Connector		Standard	Low Loss	Standard	Low Loss
Insertion Loss	Typical	0.50dB	0.20dB	0.50dB	0.20dB
	Maximum	0.70dB	0.35dB	0.60dB	0.35dB
Return Loss		≥60dB for APC ≥40dB for PC		≥20dB for PC /	
Male/Female		Male: With Pins, Female: Without Pins			
Tensile Strength		≤0.3dB (Max 66N)			
Vibration		≤0.3dB (10 ~ 55Hz)			
Thermal Cycle		≤0.3dB (-40 ~ 75°C, 21 Cycles)			

## Optical Accessories

### Fiber Outlet

#### Description:

Used to terminate the optical fiber, accomplishes the real FTTH.

#### ZTT-ATB-1W



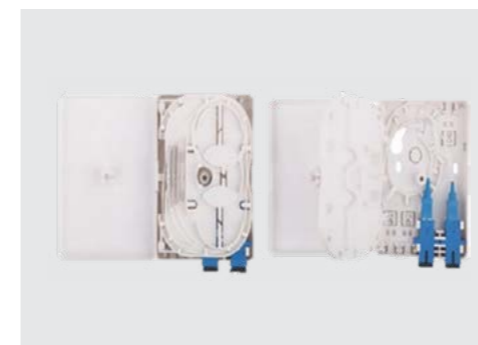
Type	ZTT-ATB-1W
Capacity	1 core
Size (L*W*H)	116*86*23mm
Installation method	Wall mount (indoor)
Configuration	Simplex SC or duplex LC adapter

#### ZTT-ATB-2H



Type	ZTT-ATB-2H
Capacity	2 core
Size (L*W*H)	130*84*24mm
Installation method	Wall mount (indoor)
Configuration	2 simplex SC or 2 duplex LC adapter

#### ZTT-ATB-2Q



Type	ZTT-ATB-2Q
Capacity	2 core
Size (L*W*H)	102*80*25mm
Installation method	Wall mount (indoor)
Configuration	2 simplex SC or 2 duplex LC adapter

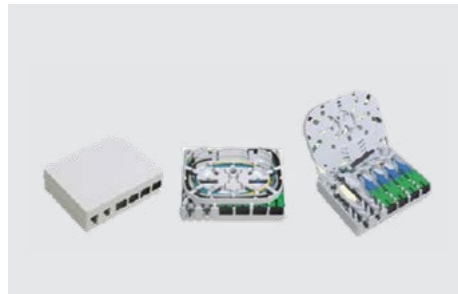
## Optical Accessories

### ZTT-ATB-2A



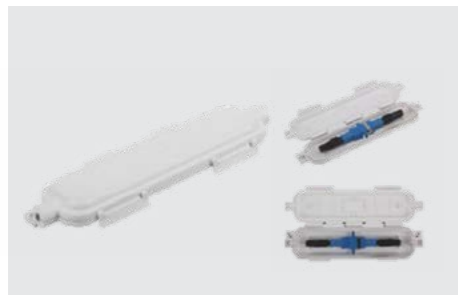
Type	ZTT-ATB-2A
Capacity	2 core
Size (L*W*H)	86*86*24mm
Installation method	Wall mount (indoor)
Configuration	2 simplex SC or 2 duplex LC adapter

### ZTT-ATB-4F



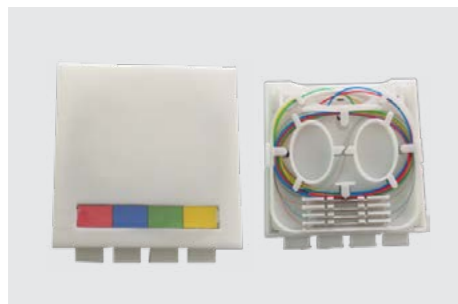
Type	ZTT-ATB-4F
Capacity	4 core
Size (L*W*H)	100.5*80.5*28.8mm
Installation method	Wall mount (indoor)
Configuration	4 simplex SC or 4 duplex LC adapter

### ZTT-ATB-1C



Type	ZTT-ATB-1C
Capacity	1 core
Size (L*W*H)	160*45*17mm
Installation method	Wall mount or Aerial (outdoor/indoor)
Configuration	1 simplex SC adapter

### ZTT-ATB-4D-DIN



Type	ZTT-ATB-4D-DIN
Capacity	4 core
Size (L*W*H)	80*80*25mm
Installation method	DIN rail
Configuration	4 simplex SC or 4 duplex LC adapter

## Optical Accessories

### Fast Connector

#### Description:

Fast connector provides another type detachable connection. It could be assembled on side, no need to polish the end face. The embedded technology ensures a good optical performance.

#### ZTT-FSC-SC/UPC



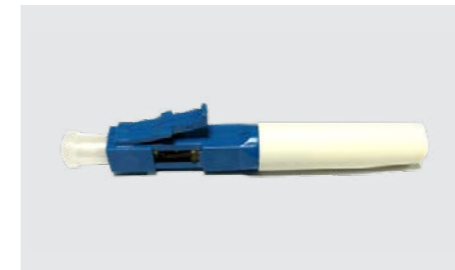
Type	ZTT-FSC-SC/UPC
Application scope	2.0x3.0mm drop cable
Size	51.5mm
Fiber Diameter	125μm
Coating Diameter	250μm
Insertion Loss	≤ 0.4dB (1310nm & 1550nm)
Return Loss	≥45dB for UPC

#### ZTT-FSC-SC/APC



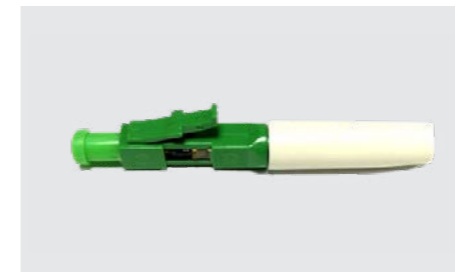
Type	ZTT-FSC-SC/APC
Application scope	2.0x3.0mm drop cable
Size	51.5mm
Fiber Diameter	125μm
Coating Diameter	250μm
Insertion Loss	≤ 0.4dB (1310nm & 1550nm)
Return Loss	≥50dB for APC

#### ZTT-FSC-LC/UPC



Type	ZTT-FSC-LC/UPC
Application scope	2.0x3.0mm drop cable
Size	45mm
Fiber Diameter	125μm
Coating Diameter	250μm
Insertion Loss	≤ 0.4dB (1310nm & 1550nm)
Return Loss	≥45dB for UPC

#### ZTT-FSC-LC/APC



Type	ZTT-FSC-LC/APC
Application scope	2.0x3.0mm drop cable
Size	45mm
Fiber Diameter	125μm
Coating Diameter	250μm
Insertion Loss	≤ 0.4dB (1310nm & 1550nm)
Return Loss	≥50dB for APC

## Optical Accessories

### Outdoor Waterproof Pre-Connectorized Connector

#### Product Features:

- Low Insertion loss and High Return Loss
- Plug and play
- Good Abrasion Resistance
- Good Interchangeability
- Excellent Temperature Performance
- Good Repeatability

#### Application:

- Wired TV Internet
- Local Area Network
- Optical Transmission System
- Test and Measurement System
- Optical Fiber Distribution Frame, Pre-Connectorized FAT, Joint Closure

#### Product Description:

Design is suitable for critical industrial environments and outdoor environments. The adapter is assembled on the box and the joint closure, and the connector is inserted into the adapt-

er to achieve quick connection. The seal between the adapter and the connector can reach the standard of IP68.

#### ZTKD-EJ-01:



#### Technical Data:

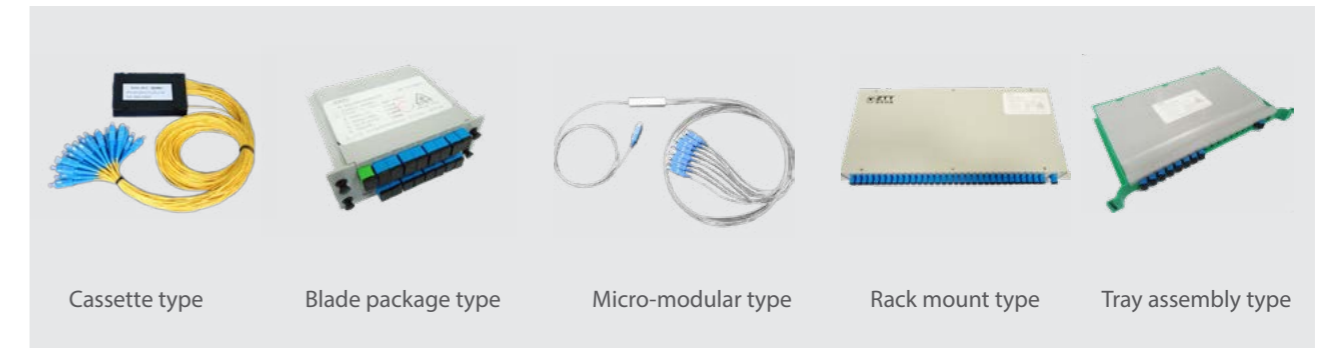
Items	Parameter	
	SC\UPC	SC\APC
Fiber Type	657A2 or Customized	
Cable Diameter	5.0±0.2mm	
Insert Loss (dB)	0.3	0.3
Return Loss (dB)	55	60
Application Temperature(°C)	-40~85	
Tensile Strength (N)	300	
Protection Level	IP68	

## Optical Accessories

### PLC Splitter

#### Description:

Suitable for products where space is relatively tight, such as optical cable Joint Closure, optical fiber splitting boxes, and can also be installed in tray-type and frame-type optical splitter assembly boxes.



#### Characteristic:

- Small size and aesthetic appearance.
- Installation quick, reliable performance, stability.
- Good uniformity, in particular the application of PON.
- Wide operating wavelength range.Low insertion loss, low polarization loss.
- Compact structure, easy installation; easy for wiring.

#### Specification :

Type	1x2	2x2	1x4	2x4	1x8	2x8	1x16	2x16	1x32	2x32	1x64	2x64
Channel wavelength(nm)	1260~1650nm											
Fiber type	G657 customized											
Max Insertion loss(dB)	4.1	4.4	7.4	7.7	10.5	10.8	13.8	14.1	17.1	17.4	20.4	20.7
Maximum channel uniformity(dB)	0.8	0.8	0.8	1.0	0.8	1.0	1.0	1.5	1.5	1.5	2.0	2.0
Return loss(dB)	≥50(UPC);≥60(APC)											
PDL(dB)	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.5	0.5
Directivity(dB)	≥55											
Operating temperature(°C)	-40~+85°C											
Storage temperature(°C)	-40~+85°C											



## Optical Accessories

### Splitter Closure

#### GJS1035-8P



Dimension	272*182*72 mm
Main Cable	4 Ports for 6.8-11.5 mm cable
Drop Cable	8 Ports for 2.0*3.0 mm drop cable
Splitter	1:2,1:4 or1:8 cassette type splitter
Mounting Method	Aerial

#### GJS1035-16P



Dimension	380*182*72 mm
Main Cable	4 Ports for 6.8-11.5 mm cable
Drop Cable	16 Ports for 2.0*3.0 mm drop cable
Splitter	1:16 cassette type splitter
Mounting Method	Aerial

#### GJS1036-16C



Dimension	306*203*85 mm
Main Cable	4 Ports for 7-11 mm cable
Drop Cable	16 Ports for 2.0*3.0 mm drop cable
Splitter	1pc 1x16 cassette type Splitter or 2 pcs 1x8/1x4/1x2
Mounting Method	Aerial

### Joint Closure

#### Description:

The joint closure is applied to aerial, duct, direct buried, straight through or branched jointing, protecting the fusion joints. Made in different materials to suit various environments, the boxes are designed to joint most types of fiber cables.

#### Inline type:



## Optical Accessories

### Dome type:



### Ordering information:

Type	Cable Ports	Entry&Exit	Max.Capacity	Dimension H*W*D(mm)
GJS1011	4	2 in 2 out	96 fibers(single fiber)	489*200*122
GJS1020	20	4 port for main cable 16 ports for drop cable	48 fibers(single fiber)	450*202*123
GJS1029	4	2 in 2 out	144 fibers(single fiber) 432 fibers(ribbon fiber)	452*221*136
GJS3010	6	3 in 3 out	144 fibers(single fiber) 288 fibers(ribbon fiber)	500*φ195
GJS3045	7	1 in 6 out	240 fibers(single fiber)	465*φ260
GJS2046	19	1 port for mid-span 2 port for branch 16 ports for drop cable	48 fibers(single fiber)	380*245*130
GJS3005	8	2in 6 out	384 fibers(single fiber)	284*507
GJS3008	8	2in 6 out	672 fibers(single fiber)	284*677
GJS8202	25	1 port uncut 24port out	96 fibers(single fiber)	380*245*130
GJS8203	9	1 port uncut 2ports for branch 6ports out	144 fibers(single fiber)	380*245*130
GJS8205	19	1 port uncut 2ports for branch 16ports out	96fibers(single fiber)	380*245*130
GJS-8206	27	1 port uncut 2ports for branch 24ports out	144 fibers(single fiber)	380*245*154
GJS-8207	18	1 port uncut 1port for branch 16ports out	96 fibers(single fiber)	370*210*124
GJS-8208	3	1 port uncut 2ports for branch	144 fibers(single fiber)	380*245*130

## Optical Accessories

### Pigtail and Patch Cord

#### Description:

Used in the fiber distribution system of communication network, accomplishes cable's termination, mutual connection between the optical interface.

#### Pigtail:



#### Ordering information:

OD	0.9mm	2.0mm		Customization			
Type	SC	LC	FC	ST	E2000		
Grinding	UPC	APC		PC			
Fiber type	SM			MM			
	G652D	G657A1	G657A2	OM1	OM2	OM3	OM4

## Optical Accessories

### Patch Cord:







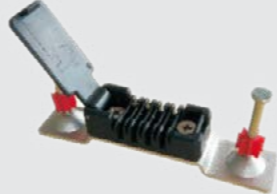


#### Ordering information:










OD	2.0mm	3.0mm		Customization			
Type	SC	LC	FC	ST	E2000		
Grinding	UPC	APC		PC			
Fiber type	SM			MM			
	G652D	G657A1	G657A2	OM1	OM2	OM3	OM4
Type	Simplex			Duplex(with clip)			
				Duplex(without clip)			



## Outdoor Installation Accessories

<p><b>Clip Wedge Clamp</b></p> <p><b>Function:</b> To connect the figure-8 drop cable and the anchor.</p>	
<p><b>Suspension Hang</b></p> <p><b>Function:</b> To form a strong point on suspension wires.</p>	
<p><b>Wall mounting Hang</b></p> <p><b>Function:</b> To set up strong points outside the wall of buildings.</p>	
<p><b>Adjustable Diameter Hold Hoop</b></p> <p><b>Function:</b> To form a fixture on the pole to make installation easy.</p>	
<p><b>Arc Clip I Type Riveting Pieces</b></p> <p><b>Function:</b> To connect one or two flat drop cable with anchoring point.</p>	
<p><b>Centre pole Cable Clamp</b></p> <p><b>Function:</b> It is applied for self-supporting drop cable and fixed in the middle of the rod line.</p>	
<p><b>Multiple card slot fixture</b></p> <p><b>Function:</b> To fix less than 4 cables on the wall when the span does not exceed 15 meters.</p>	

## Indoor Auxiliary Installation Accessories

<p><b>Groove for Holding Drop Cable</b></p> <p><b>Function:</b> To fasten the drop cable in the groove.</p>	
<p><b>Plastic Fastener</b></p> <p><b>Function:</b> To lay drop cables indoor with direct percussive nailed way.</p>	
<p><b>The Line Groove</b></p> <p><b>Function:</b> To lay drop cables in straight line.</p>	
<p><b>Screw Fastener</b></p> <p><b>Function:</b> To lay the figure-8 drop cable outside in screwing fasten way.</p>	
<p><b>Flexible Pipe</b></p> <p><b>Function:</b> Using when the cable lines go across the power line or the uneven wall surface.</p>	
<p><b>External Corner</b></p> <p><b>Function:</b> Using when the cable lines turn 90 degree externally.</p>	
<p><b>Ending Groove</b></p> <p><b>Function:</b> To protect the drop cable at the end of cable line.</p>	
<p><b>Wall bushing</b></p> <p><b>Function:</b> To protect drop cable when pass through the hole in the wall.</p>	
<p><b>Turning Groove</b></p> <p><b>Function:</b> Using when the cable line needs to turn a corner.</p>	

## Optical Cable Distribution Box

Cable distribution box series include optical distribution box, optical splitting box and optical termination box which are used for cables' splicing, storage, distribution, splitting and termination.

### Main parameters:

- Environment temperature:  $-25^{\circ}\text{C} \sim +55^{\circ}\text{C}$  (indoor),  $-40^{\circ}\text{C} \sim +60^{\circ}\text{C}$  (outdoor);
- Relative humidity:  $\leq 85\%$  ( $+30^{\circ}\text{C}$ );
- Air pressure: 70KPa  $\sim$  106Kpa ;
- Voltage Proof:  $\geq 3000\text{V}$ (DC);
- Insulating resistance between the metal parts of the body and grounding fitting:  $\geq 2 \times 10^3 \text{M}\Omega/500\text{V}$ (DC).

### Optical distribution & splitting box series

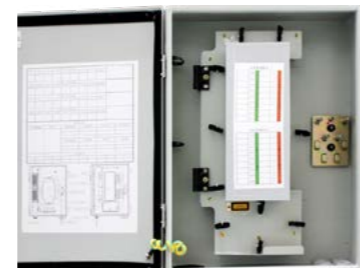
#### GF01-BJ12/24L (Indoor & Outdoor, splitter for option)

- Cold-rolled steel material, good appearance;
- Special fixture for butterfly cable;
- IP55 (Outdoor), IP53 (Indoor);
- 450\*300\*100mm.



#### GF03-BJ(16/32F) (Indoor & Outdoor, splitter for option)

- Cold-rolled steel material, good appearance;
- 4pcs1\*8 or 2pcs1\*16 blade package type splitter can be installed;
- IP55 (Outdoor), IP53 (Indoor);
- 460\*340\*105mm(Max size).



#### GFS03-GS24SC(Indoor & Outdoor,splitter for option)

- ABS+PC alloy material;
- Maximum Capacity:24 Cores;
- IP55 (Outdoor), IP53 (Indoor);
- 320\*235\*100mm.



## Optical Cable Distribution Box

### Optical Distribution Box(Plastic Material)

#### Description:

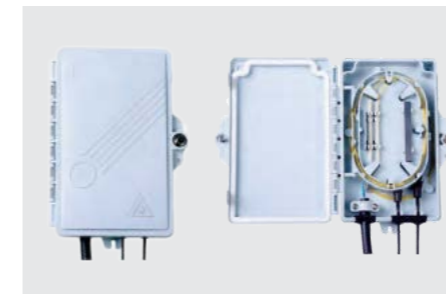
This box is used as a termination point for the feeder cable to connect with drop cable in FTTx communication network storage and cable connection in one unit. Meanwhile, it provides solid protection and management for the FTTx network building. It integrates fiber splicing, splitting, distribution,

#### ZTT-1312-2A



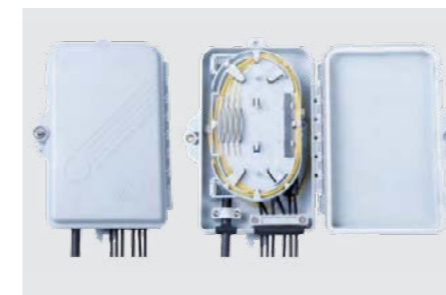
Type	ZTT-1312-2A
Inlet/Outlet ports	1/2
Max inlet cable diameter	10mm
Adaptor capacity	2
PLC Installation	support
Size (L*W*H)	168*102*32mm

#### ZTT-1314-4A



Type	ZTT-1314-4A
Inlet/Outlet ports	1/4
Max inlet cable diameter	10mm
Adaptor capacity	4
PLC Installation	support
Size (L*W*H)	186*116*41mm

#### ZTT-1314-6J



Type	ZTT-1314-6J
Inlet/Outlet ports	1/6
Max inlet cable diameter	10mm
Adaptor capacity	6
PLC Installation	support
Size (L*W*H)	186*116*41mm



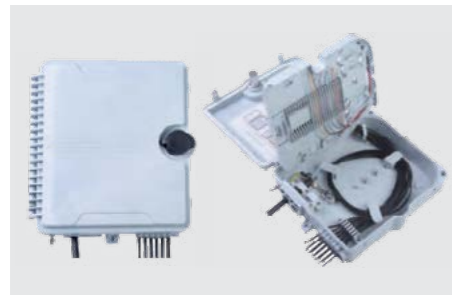
## Optical Cable Distribution Box

ZTT-1316-8E



Type	ZTT-1316-8E
Inlet/Outlet ports	3/8
Max inlet cable diameter	14mm
Adaptor capacity	8
PLC Installation	support
Size (L*W*H)	223*180*48mm

ZTT-1311-12C



Type	ZTT-1311-12C
Inlet/Outlet ports	2/12
Max inlet cable diameter	12
Adaptor capacity	Mid-span assess
PLC Installation	support
Size (L*W*H)	233*214*71mm

ZTT-1306-16J



Type	ZTT-1306-16J
Inlet/Outlet ports	2/16
Max inlet cable diameter	16
Adaptor capacity	Mid-span assess/gland
PLC Installation	support
Size (L*W*H)	301*224*73mm

ZTT-1361-16F



Type	ZTT-1361-16F
Inlet/Outlet ports	4/16
Max inlet cable diameter	16
Adaptor capacity	Mid-span assess + cable gland
PLC Installation	support
Size (L*W*H)	287*172*102mm

## Optical Cable Distribution Box

ZTT-1309-24A



Type	ZTT-1309-24A
Inlet/Outlet ports	2/24
Max inlet cable diameter	24
Adaptor capacity	Mid-span assess/gland
PLC Installation	support
Size (L*W*H)	317*237*101mm

ZTT-1366-24F



Type	ZTT-1366-24F
Inlet/Outlet ports	4/24
Max inlet cable diameter	Mid-span +cable gland
Adaptor capacity	Mid-span:16mm cable gland:12mm
PLC Installation	support
Size (L*W*H)	353*212*106mm

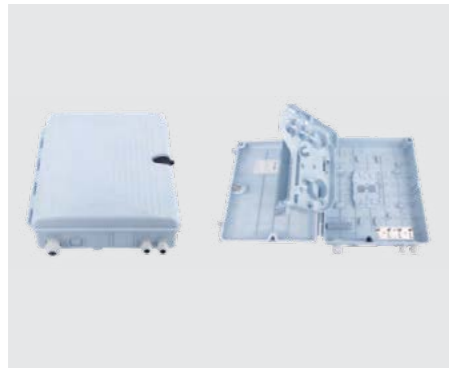
ZTT-1343-32K



Type	ZTT-1343-32K
Inlet/Outlet ports	4/2
Max inlet cable diameter	15/28mm
Adaptor capacity	36
PLC Installation	380*320*115mm
Size (L*W*H)	287*172*102mm

## Optical Cable Distribution Box

### ZTT-1341-48K



Type	ZTT-1341-48K
Inlet/Outlet ports	4/2
Max inlet cable diameter	15/28mm
Adaptor capacity	48
PLC Installation	380*320*115mm
Size (L*W*H)	287*172*102mm

### ZTT-1375-72C/96C



Type	ZTT-1375-72C/96C
Inlet/Outlet ports	30mm
Max inlet cable diameter	72/96
Adaptor capacity	3
PLC Installation	485*415*145mm
Size (L*W*H)	287*172*102mm

## Floor box

### Description:

For Indoor floor installation inside the building with fiber's splicing, distributing and protection.



Type	ZTT-1450-6D
Capacity	6 core
Size (L*W*H)	207*135*59mm
Installation method	Wall-mounted
Configuration	6 simplex SC
Applicable cable	Up to 6 pcs drop cable

## Outdoor Waterproof Pre-Connectorized FAT

### Product Code: ZTKD-EJ-02



### Product Features

- Factory pre-installed, quality assurance
- To solve the shortage of professional and technical personnel.
- It can be flexibly configured according to users, and the initial investment is small.

### Application

- Used for FTTH access in single-family community, suburb and rural area.
- Outdoor Wall hanging, pole mounting, hanging line, manhole.
- Improved Design for inner fiber routine of Easy maintenance.

## Product Description

This product design is used to connect the OCC with the full pre-connectorized FAT. It needs to support ordinary optical cable access into the box body, after splicing through the

pre-connectorized connector, and connecting the full pre-connectorized FAT. At the same time, it also needs to support mid-span or splicing function of ordinary optical cable.

## Technical Data

Items	Parameter
Size	240mm*330mm*120mm (W*H*D)
Splice capacity	Maximum 80 cores (splice trays 16 cores *5)
Pre-installed Adapter	16 ports
Splitter capacity	Supports 1x 1:16 or 2x 1:8 micro/bare fiber optical splitters
Cable port	Supports four optical cable enter in and out(6.5 mm to 16mm), including one oval port, support mid-span function.
Protection Level	IP65, IK10



## Indoor Waterproof Pre-Connectorized FAT

Product Code: ZTKD-EJ-03



### Product Features

- Factory pre-installed, quality assurance
- To solve the shortage of professional and technical personnel
- It can be flexibly configured according to users, and the initial investment is small

### Application

- Machine room.
- Indoor, and corridor environment.
- Indoor wall mounting.

### Product Description

It can be used in shelters with certain protective capabilities, such as the machine room, indoor, and corridor, to realize optical distribution and relay action from optical connecting cabinet or the machine room to the user end. At the same time, it also needs to support splicing function of ordinary optical cable.

### Technical Data

Items	Parameter
Size	230mm*150mm*55mm (W*H*D)
Splice capacity	16 cores
Mid-span	Yes
Adapter capacity	10 pcs
Drop Cable port	10 pcs
Pre-installed splitter	2 pcs (1:2/1:8)
Protection Level	IP43

## Optical Cable Distribution Box

### Optical Termination Box Series (Wall Mount Series)

#### GPF02-6/12R

- Cold-rolled steel material, compact structure;
- Direct fuse function;
- Special outlet for drop cable;
- 285\*130\*42mm.



#### GPF02-8/12/24R-2

- Cold-rolled steel material, compact structure;
- Special outlet for drop cable;
- Outlets are design on both sides, easy to operate;
- 300\*130\*45mm.



#### GPF02-12/24ZR

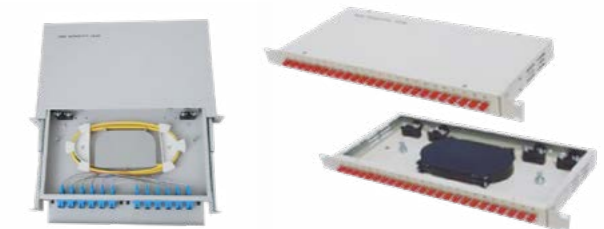
- Cold-rolled steel material, compact structure;
- Special outlet for drop cable;
- FC, SC, ST and LC adaptor are available;
- 300\*130\*88mm.



### Optical Termination Box Series (Rack Type Series)

#### GPF01-12/24ZR

- Cold-rolled steel material, compact structure;
- 19" rack installation;
- FC, SC, ST and LC adaptor are available;
- 483\*250\*44mm and 483\*200\*44mm



Note: above box size just for reference, and capacity and appearance could be customized.

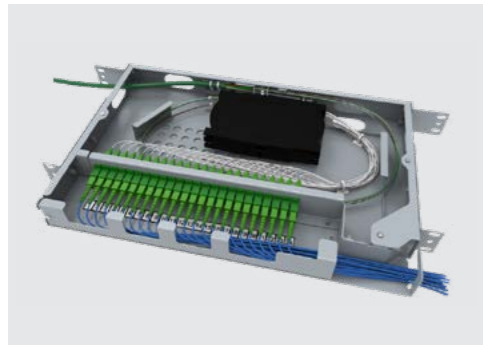
## Optical Cable Distribution Box

### Optical Termination Box (Patch Panel)

#### Description:

This product is applied to joint the optical cable and pigtails. It can realize the functions of optical fiber's welding, storage and line dispatching, etc.

#### ZTT-GPF-X01



Type	Cold-rolled steel
Material	12/24/48
Capacity	12/24/48/72/96
Size (W*D*H)	480*270*44mm
Operation method	Swing type
Installation method	Rack-mounted
Configuration	Up to 48pcs Simplex SC adapter

#### ZTT-GPF-C01



Type	ZTT-GPF-C01
Material	Cold-rolled steel
Capacity	Can be customized
Size (W*D*H)	Can be customized Normally 1U: 483*280*44mm
Operation method	Sliding type
Installation method	Rack-mounted
Configuration	SC/LC/FC/ST adapter

#### ZTT-GPF-X02



Type	ZTT-GPF-X02
Material	PC+GF
Capacity	48/144
Size (W*D*H)	482*256*44mm(48F) 482*256*132mm(144F)
Operation method	Swing type
Installation method	Rack-mounted
Configuration	Simplex SC adapter

## Optical Cross Connecting Cabinet(OCC Cabinet)

#### Description:

Operator basic network, FTTx transmission and other construction transformation, used for outdoor environment.



#### Characteristic:

- The distribution and scheduling of optical fibers are carried out on the front.
- The box body is made of SMC or double-layer stainless steel or Aluminium, and protection grade reaches IP65.
- Adopt 12-core fusion and integration module, each connecting module can be pulled out separately, easy to operate.
- A variety of adapters such as FC, SC and LC are installed inside. The adapters are inclined to the front of the chassis, which not only ensures the radius of curvature of the jumper, but also avoids arc burning eyes.

#### Specification:

Product Name	Product Size HxWxD (mm)	No. Of trays	Maximum Capacity	Remark
			(core)	
144 SMC	760×560×308 (Not including base)	12	144	Traditional single side operation
144 SMC	1025×560×308 (including base)	12	144	Traditional single side operation
288 SMC	1450×750×320 (including base)	24	288	Traditional single side operation
576 SMC	1460×750×540 (including base)	48	576	Traditional double side operation
576 SMC	1550×1460×360 (including base)	48	576	Traditional single side operation
1152 SMC	1550×1460×620 (including base)	96	1152	Traditional single side operation
144 Stainless Steel	770×580×320 (Not including base)	12	144	Traditional single side operation
144 Stainless Steel	1050×580×320 (including base)	12	144	Traditional single side operation
288 Stainless Steel	1460×750×320 (including base)	24	288	Traditional single side operation
576 Stainless Steel	1460×750×540 (including base)	48	576	Traditional double side operation
576 Stainless Steel	1490×1460×360 (including base)	48	576	Traditional single side operation
1152 Stainless Steel	1490×1460×600 (including base)	96	1152	Traditional single side operation



## Optical Distribution Frame

### Description:

It is suitable for all optical access points in central office, optical junction and user optical fiber access network engineering, to provide secure and reliable routing for connection, distribution and scheduling of optical network devices.



### Characteristic:

- Fully enclosed structure, single side operation.
- The frame is made of high-quality cold-rolled steel plate, with a whole welded structure, high strength and good rigidity;
- Surface coating using electrostatic spraying process, corrosion resistance, elegant appearance;
- Adopt modular structure, which can be flexibly configured and installed according to different requirements;
- Adopt 12-core fusion wiring integration module, each connecting module can be pulled out separately, easy to operate.

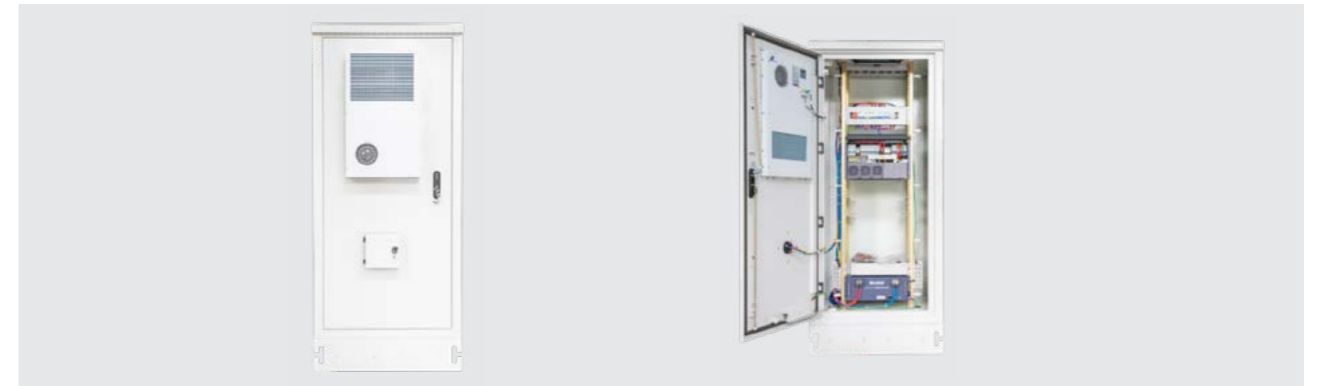
### Specification:

Model	HxWxD(mm)	Distribution capacity( core)	Storage Unit ( pcs )	Remark
GPX02-600Y1	2000x600x300	360	3	Max 30 pcs 12 core integrated trays
GPX02-600Y2	2200x600x300	504	3	Max 42 pcs 12 core integrated trays
GPX02-600Y3	2600x600x300	576	4	Max 48 pcs 12 core integrated trays
GPX02-840Y1	2000x840x300	576	/	Max 48 pcs 12 core integrated trays
GPX02-840Y2	2200x840x300	720	/	Max 60 pcs 12 core integrated trays
GPX02-840Y3	2600x840x300	864	/	Max 72 pcs 12 core integrated trays
GPX03-840Y1	2000x840x300	504	2	Max 7 pcs 72 core ODF module
GPX03-840Y2	2200x840x300	576	2	Max 8 pcs 72 core ODF module
GPX03-840Y3	2600x840x300	720	2	Max 10 pcs 72 core ODF module

## Outdoor Cabinet

### Description:

Its internal can be installed communication system equipment, power supply, battery, temperature control equipment and other supporting equipment, can provide reliable mechanical and environmental protection for the normal operation of internal equipment.



### Characteristic:

- High strength and corrosion resistance -- steel frame + composite sandwich wall panel cabin structure, good heat insulation and heat preservation performance;
- Subdivision temperature control, flexible choice, more convenient, more energy saving;
- Side or back two-way expansion to meet the requirements of upgrading and capacity expansion;
- The unique modular and assembled structure design facilitates production and is flexible and suitable for various complex and harsh environments.

### Specification:

No.	Product Name
1	Outdoor integrated cabinet - fixed configuration - integrated cabinet ( 1800,1500W Ac air conditioners )
2	Outdoor integrated cabinet - fixed configuration - integrated cabinet ( 1800,1500W Ac air conditionersx2 )
3	Outdoor integrated cabinet - fixed configuration - battery cabinet ( 1800,300W Dc air conditioners )
4	Outdoor integrated cabinet - fixed configuration - battery cabinet ( 1800,direct ventilation )
5	Outdoor integrated cabinet - fixed configuration - integrated cabinet ( 1400,1500W Ac air conditioners )
6	Outdoor integrated cabinet - fixed configuration - battery cabinet ( 1400,300W Dc air conditioners )
7	Outdoor integrated cabinet - fixed configuration - battery cabinet ( 1400,direct ventilation )
8	Outdoor integrated cabinet - fixed configuration - integrated cabinet ( 800,No heat preservation, direct ventilation )
9	Outdoor integrated cabinet-Optional configuration-1500W Ac compressor air conditioner
10	Outdoor integrated cabinet-Optional configuration-heater ( 500W )
11	Outdoor integrated cabinet-Optional configuration-heater ( 1000W )
12	Outdoor integrated cabinet-Optional configuration-Emergency ventilation assembly
13	Outdoor integrated cabinet-Optional configuration-Oil machine outlet
14	Outdoor integrated cabinet-Optional configuration-Outdoor earthing rack
15	Outdoor integrated cabinet-Optional configuration-Equipment bracket ( 50kg )
16	Outdoor integrated cabinet-Optional configuration-Battery bracket ( 100kg )

## ETC Integrated Cabinet

### Description:

The ETC integrated cabinet mainly provides integrated storage for the gantry lane control machine, industrial switchboard, toll system PC and other equipment, and provides reliable

power supply and standby for the gantry equipment to ensure the reliable operation of the key production equipment at the roadside. It is mainly used in smart cities and highways.



### Characteristic:

- Adopt integration of outdoor cabinet design, including but not limited to, cabinet put oneself in another's position, industrial monitoring system of air conditioning, ring, UPS host, backup batteries, industrial switches, optical terminal box, automatic reclosing, lightning protection device, diesel generator interface, etc.;
- To reserve enough space to place the ETC related server and the controller; satisfy standardization, prefabricated flexible, rapid deployment, safe and reliable, high efficiency and energy saving, maintenance requirements such as real-time management;
- Through intelligent comprehensive outdoor cabinet for outdoor front-end mains, communication link detection, as well

as the temperature and humidity, flooding, open closed ring detection, such as the external power supply and current/voltage detection equipment, peripheral business communication interface detection;

- Through the platform of center core switching equipment, core routing equipment, storage equipment, server, database, and the key application of testing;
- Through the platform to the summary of the information, monitor, display, alarm, operations, such as single, forming a one-stop IoT intelligence operations solutions, implementation from the "end" to the "nuclear" layers of perception and monitoring, to help customers quickly and effectively the problem of positioning and efficient operations and maintenance.

### Ordering guide:

- The whole size (external size) : 2160 \* 910 \* 910 mm / 1760 \* 910 \* 910 mm.
- The whole size (internal size) : 1800 \* 800 \* 800 mm / 1400 \* 800 \* 800 mm.
- Cabinet body structure: galvanized sheet/stainless steel.
- Protection level: IP55, compact structure, convenient installation, good sealed performance.
- Heat insulation performance is good, with foil PEF in flame

retardant insulation cotton, coefficient of thermal conductivity <0.472W/(m.k).

- Good anti-theft property: The door lock adopts the three-point structure of pull rod and lock piece, with the firm structure.
- Good heat dispersion property : the door half embedded 1500W industrial air conditioning+emergency ventilation fan.

## ETC Integrated Cabinet

No.	Part Name	Specification	Unit	Qty
1	Integrated cabinet	( External size ) : 2160*910*910mm/1760*910*910mm (Can be customized according to actual needs)  ( Internal size ) : 1800*800*800mm/1400*800*800mm the door half embedded 1500W industrial air conditioning + emergency ventilation fan.	pc	1
2	Lithium-iron battery	48V/100Ah	pc	4
3	UPS	XMI30R-48V	pc	1
4	Switching power supply	E4860R   1U	pc	1
5	Electronic lock	Support access control IC card unlock, network management remote unlock, key unlock	pc	1
6	Power distribution system	AC air switch 4P/63A*2, mechanical interlock, AC output 2P16A*5, 5-hole socket 3	pc	1
7	Dynamic environmental monitoring	/	pc	1
8	Temperature and humidity sensor	/	pc	1
9	Smoke detector	/	pc	1
10	Water sensor	/	pc	1
11	Door magnetic sensor	/	pc	1
12	Accessory	/	set	1

## 5G BBU Energy Saving Cabinet

### Description:

5G BBU energy-saving cabinets (hereinafter referred to as energy-saving cabinets) are used to install multiple 5G BBU cabinets in the centralized construction mode of 5G BBU. The 5G BBU energy-saving cabinet is made of metal or non-metal materials, and it can be equipped with 5G BBU equipment, power supply, battery, temperature control equipment and other supporting equipment, which can provide reliable mechanical and environmental protection for the normal work of internal equipment.

The energy-saving cabinet is suitable for the newly built station room or the room with poor resource conditions: 1. The cold source and supply and standby power are insufficient and it is not suitable to add precision air conditioning, switching power supply and battery; 2. There is sufficient power supply and standby, but the air conditioning is insufficient and not suitable for adding precision air conditioning, or the BBU installation area has poor refrigeration conditions.



### Characteristic:

- High efficiency and energy saving, efficiency more than 98% of acme energy-saving effect module, rectifier module have dormancy energy-saving function, improve the operation efficiency;
- Precision refrigeration: adopt variable frequency air cooling rack level air conditioning. Fully closed cold and hot channel isolation, to solve the BBU centralized deployment of hot issues, the emergency exhaust system has a self-sealing function, heat dissipation time to meet more than 3 hours;
- Rich power supply support HVDC / - 48 vi ac power supply a variety of ways, compatible computer room construction, expansion application such as scene;

- Intelligent monitoring: integrated smoke temperature, environment humidity, water entrance guard vibration, etc.; Support switching power supply, air conditioning and other equipment communication serial port interconnection, support data transparent transmission and forwarding;
- Highly integrated, prefabricated modular design, hoist house space utilization; high level of appearance: IT style design in the system, glass, metal door options; high protection: protection grade IP5X, adapt to the complex computer room environment.

## 5G BBU Energy Saving Cabinet

### Ordering guide:

No	Part Name	Parameter	Unit	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
				Quantity					
1	Cabinet	H2200*W800*D1000	pc	1	1	1			
		H2200*W800*D600					1	1	1
1.1	Cabinet body	H2200*W800*D1000	pc	1	1	2			
		H2200*W800*D600					1	1	2
1.2	Emergency exhaust system	Energy saving cabinets (48VDC)	pc	1	1	2	1	1	2
1.3	LED light	48VDC	pc	1	1	2	1	1	2
1.4	Cabinet side panel	Fit with 1000 depth cabinet	pc	1	1	2			
		Fit with 600 depth cabinet					1	1	2
1.5	Blind flange	1U	pc	10	5	25	10	10	10
1.6	Horizontal cable management unit	1U	pc	3	5	10	10	4	9
1.7	Horizontal wizard wind assembly	1U	pc	10	5	10	10	5	10
1.8	L type plate	Fit with the cabinet	pc	2	5	1	2	4	1
2	Rack type air conditioning	Cooling Capacity 6.5kW	pc	1		1	1		1
		Cooling Capacity 3.5kW			1			1	
3	Copper pipes and cables for air conditioning(I)	Φ9.52/Φ12.7	pc		15			15	
	Copper pipes and cables for air conditioning(II)	Φ6.0/Φ9.52		15		15	15		15
4	Switching power supply	48V/200A	pc		1			1	
		48V/400A				1			1
4.1	Switching power system	48V/200A	pc		1			1	
	Switching power system	48V/400A				1			1
4.2	Rectifier module	48V/50A	pc		4	8		4	8
5	Lithium iron batteries	48V/100Ah	set		3	6		2	6



## System Solutions for Backbone Network



## FTTx Solution for Multi-storey Dwelling Block





## FTTx Solution for High-storey Dwelling Block



### Indoor product



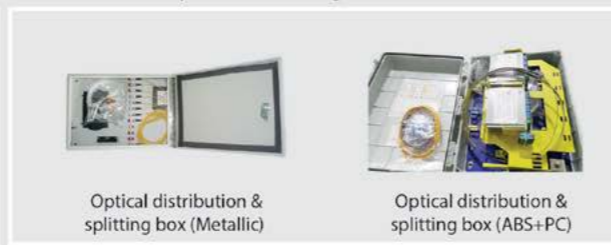
### User control room



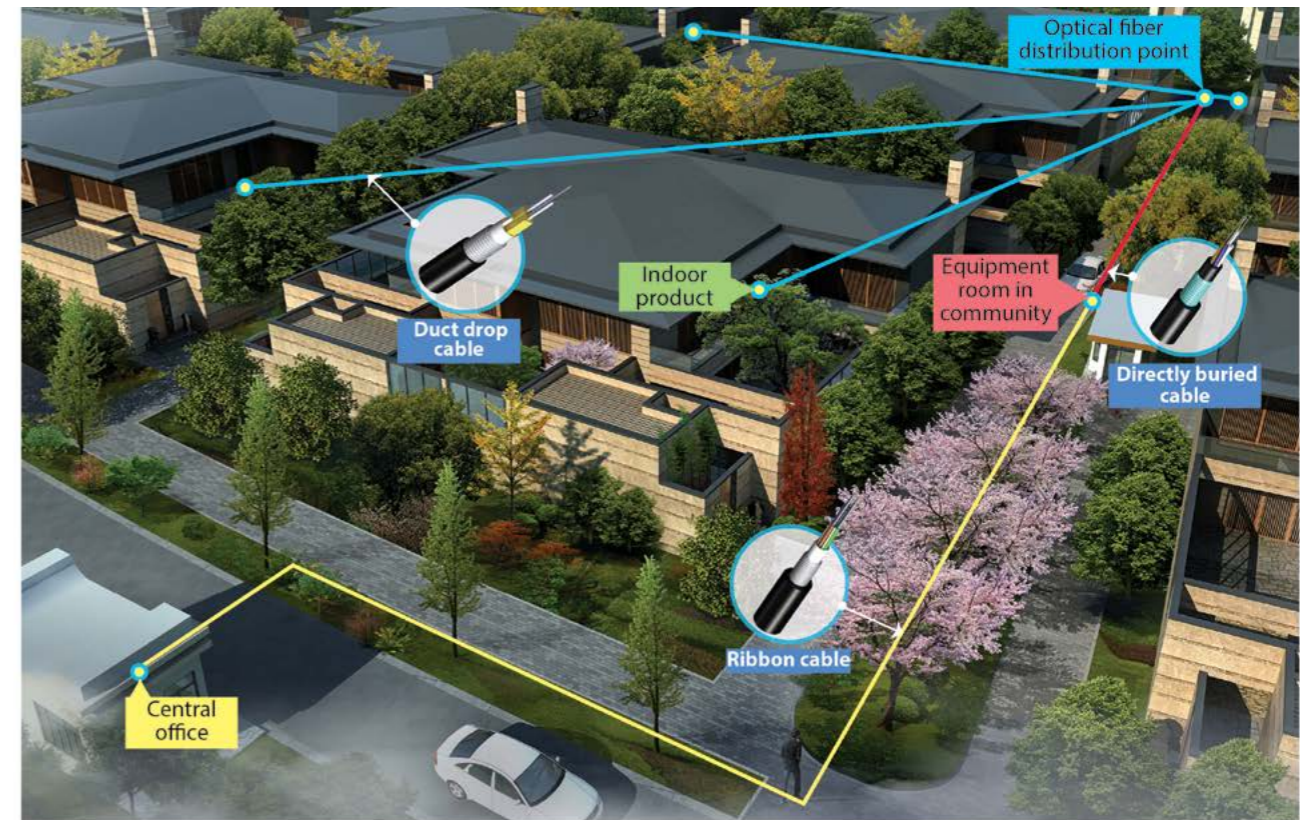
### Central office



### Network access point in building



## FTTx Solution for Villa Dwelling Block



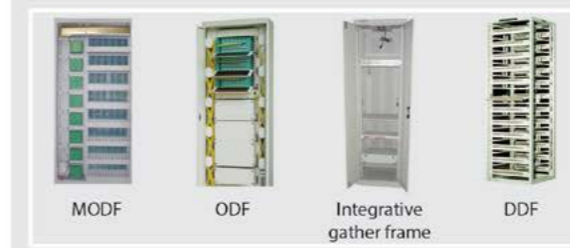
### Equipment room in community



### Indoor product



### Central office



### Optical fiber distribution point

