

Client



Outstanding Technology



**VISSEM VISSEM ELECTRONICS**

Headquarter <http://www.vissem.com>  
262-14, Guseong-ro, Giheung-gu, Yongin-si, Gyeonggi-do Korea Zip Code : 16914

Yongin Factory  
53-11, Eondong-ro, Giheung-gu, Yongin-si, Gyeonggi-do Korea Zip Code : 16914

Icheon Factory  
924, Deokpyeong-ro, Majang-myeon, Icheon-si, Gyeonggi-do Korea Zip Code : 17389 Tel. +82 31 288 3481 Fax. +82 31 283 7844  
E-mail : djkgang@vissem.com

**KOSDAQ**  
LISTED COMPANY

**Opticube**<sup>®</sup>  
www.vissem.com

# OPTICAL NETWORK SOLUTIONS

**VISSEM**  
Vissem Electronics Co., Ltd.



# Power of Challenge

Growth energy of enterprise development

VISSEM is constantly challenging and innovating in a spirit of research to create a hopeful future.

We are not satisfied with the present but will move forward to the future and take crisis as an opportunity.

The future is led by a dreaming human and a challenging enterprise.



Listed in KOSDAQ

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# The Leader of Network Technology

## Company Introduction

We do not settle down today but will constantly challenge and innovate in a spirit of research. As a company with differentiated product and with high trust for clients, we will do our best to satisfy clients today and tomorrow as well. We will lead the network technology and become a company moving beyond Korea to the world.

Since 1994, Our company has participated in major projects for nation-wide optical fiber network backbone construction and high-speed internet networks for FTTx.

To provide total solutions for fiber optical networks, we started R&D and manufacturing of passive optical components from 1998, as well as for expanding our business area in telecommunication business fields. as a result, we acquired and merged SAMJIN Information & Communication Co. in 2007, and Dongyang Telecom Co., a leading telecommunication equipment manufacturer in 2014.

Our products are recognized as an excellent product in convenience and reliability resulting of client's positive response to the rapidly changing technologies.

We have been expanding our markets and providing to not only 3 major Korean telecom companies, but also major telecom companies over 50 countries.

As a leading solution provider of optical fiber network, We, VISSEM will do our best to be loved by clients through technology innovation and enhanced reliability.

VISSEM Electronics Co., Ltd.  
CEO Man-Joon Kang / Myung-Goo Kang



## Company History

- 1998**
  - Spun off from Samsung SDI and set up VISSEM
- 1999**
  - Acquired ISO 9001 certification
  - Certified as promising venture enterprise
- 2000**
  - Established new headquarter and plant in Yongin
  - International patent registration for FICOC(Germany, Japan, China, USA)
- 2001**
  - Partnership with Korea Telecom on IMT-2000 business
  - Developed Dome Type fiber optic closure BS604A
  - Patent registration for FDF(Fiber Distribution Frame)
- 2002**
  - Developed BBC(Broad Band Cabinet) for Korea Telecom
- 2003**
  - Signed Supply contract with DCMNR in Ireland
- 2004**
  - Signed annual sales contract with KT & SK Networks
  - Started to supply fiber optic closure to MSO
- 2005**
  - Developed closure BS403A extension type for FTTx network
  - Patent registration for Opticube (No.0648362)
- 2006**
  - Started to supply closure BS403A and Splitter for FTTx network
  - Signed supply contract for Optical Cable with TAIHAN Electric wire
  - Acquisition of Samjin Information & Communications Co., Ltd.
- 2007**
  - Developed RN402A Closure for FTTH network
  - Developed In-line aerial type fiber optic splice closure BS603A
  - Developed large size fiber optic splice closure BS606R for ribbon cable.
- 2008**
  - Developed in-line aerial type small size fiber optic splice closure BS603B
  - Developed swing modules FDF for subscriber
  - Developed large size dome type fiber optic splice closure BS712A,BS604C
  - Awarded the 5 Million Dollar Export Tower (Korea International Trade Association)
- 2009**
  - Rated by KT-Excellent business partner in 2009
  - Signed supply contract with LG U+
- 2010**
  - Signed supply contract with Nexans
  - Rated by KT-Excellent business partner in 2010
  - Developed Centralized HUB Rack
- 2011**
  - Rated by KT-Excellent business partner in 2011
  - Acquired ISO14001 / ROHS certification
- 2012**
  - Listed in KOSDAQ(#072950)
  - Venture Business Award (premier Award)
- 2013**
  - Designated as a Promising Export Firm
  - Developed plastic 1U FDF
  - Developed LGU+ Optical TAP
- 2014**
  - Designated as a Model Taxpayer
  - Developed SK hybrid TAP
  - Acquisition of Dongyang Telecom co., Ltd
- 2015**
  - Developed Multi-core Dome Closures (BS712B, BS710B)
- 2016**
  - Signed supply contract of Splitter with VNPT in Vietnam
  - Designated as a Small Giant Company of Korea
  - Developed Cross Connect Closure CS603A for FTTx network
- 2017**
  - Acquired CE DoC certification (BS506A, BS603B, BS604A, BS712A)
  - Patent registration for Multi-core Dome Closure (No. 101777272)
- 2018**
  - Received a Performance Certificate (Ministry of SMEs and Startups)
  - Certified as an INNO-BIZ
- 2019**
  - Certified as an Excellent Company (Yongin-si)
- 2020**
  - Acquired B&F Materials Co., Ltd.
  - Confirmed as a venture firm (Korea Technology Finance Corporation)
  - Selected as the Promising Export SMB Firm (Ministry of SMEs and Startups)
- 2021**
  - Dongyang Telecom Co.,Ltd. merged with Vissem Co., Ltd
- 2023**
  - Awarded the Gyeonggi Province Governor



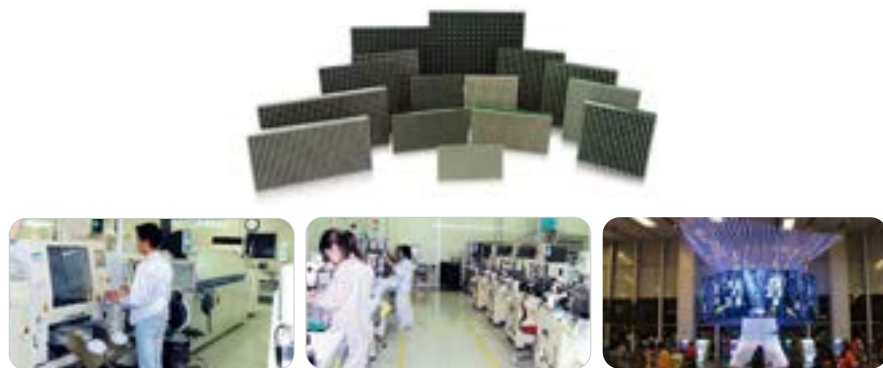


## Business Area, VISSEM

**ViTron**

### LED Business

- LED Display Board
- Display Board
  - LED Module
  - Display Unit



**Opticube**

### Fiber Optic Business

- Fiber Optic Splice Closure
- Fiber Distribution Frame
- Fiber Optic Accessories



### N/W Business

- MATV / SMATV Solution
- HFC Solution
  - RFoG / Rfoverlay Solution



### KTX Business

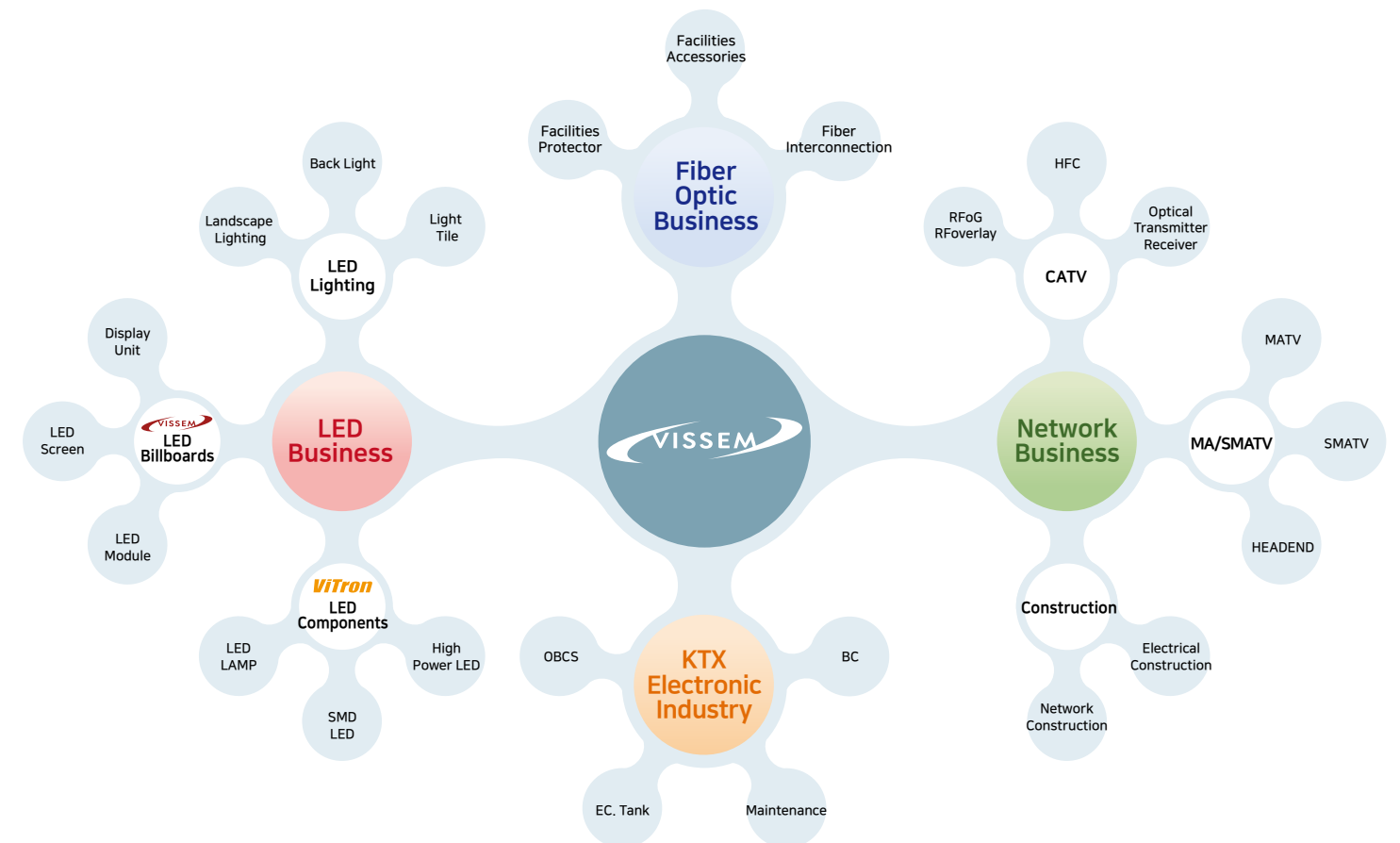
- OBCS (On Board Computerized System)
- Power/ Trailer Car Battery Charger
- Electronic Cooling Tank
- Maintenance



## Business Area

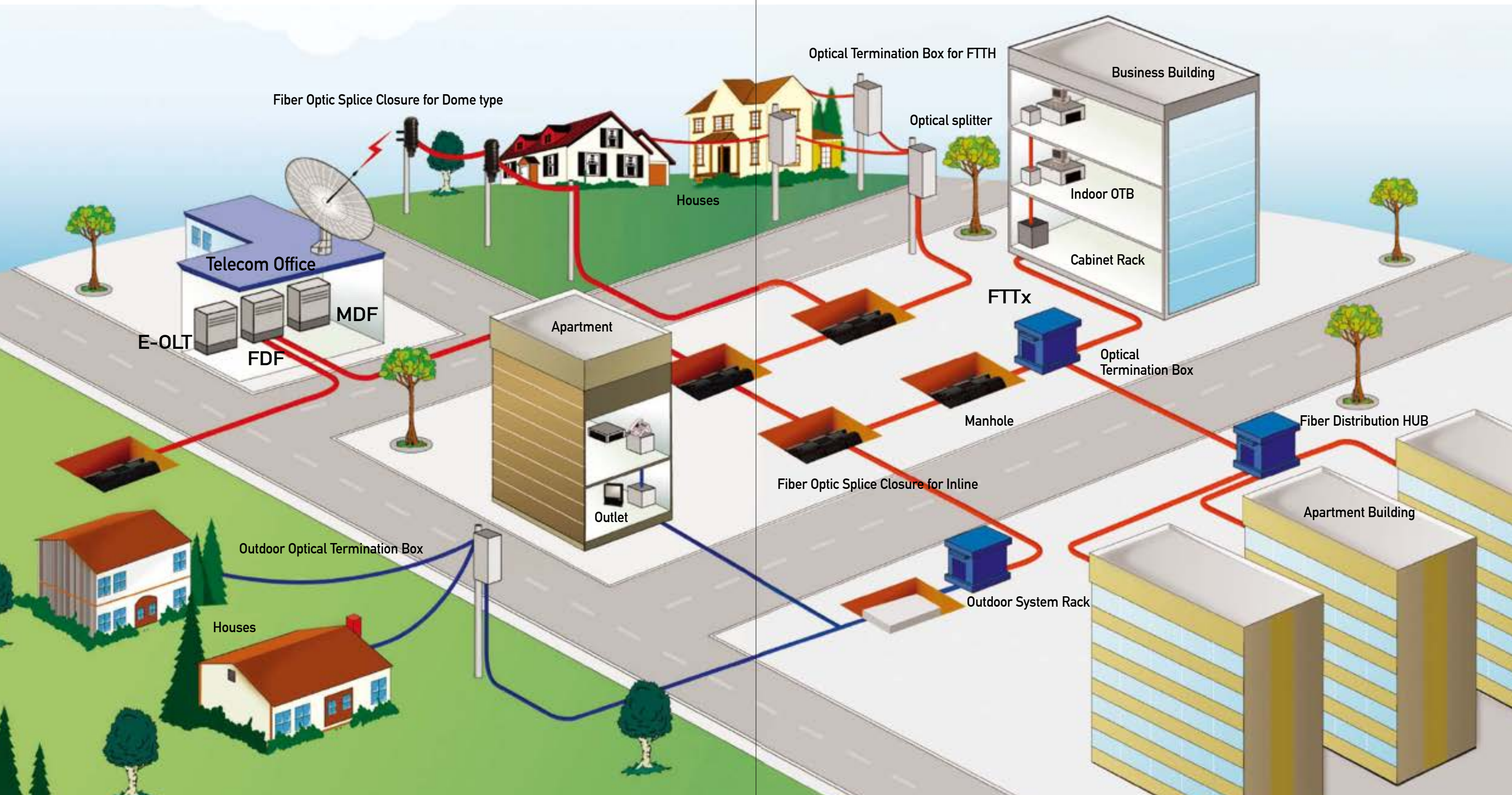
Optical Network Solutions

## Business Area, VISSEM



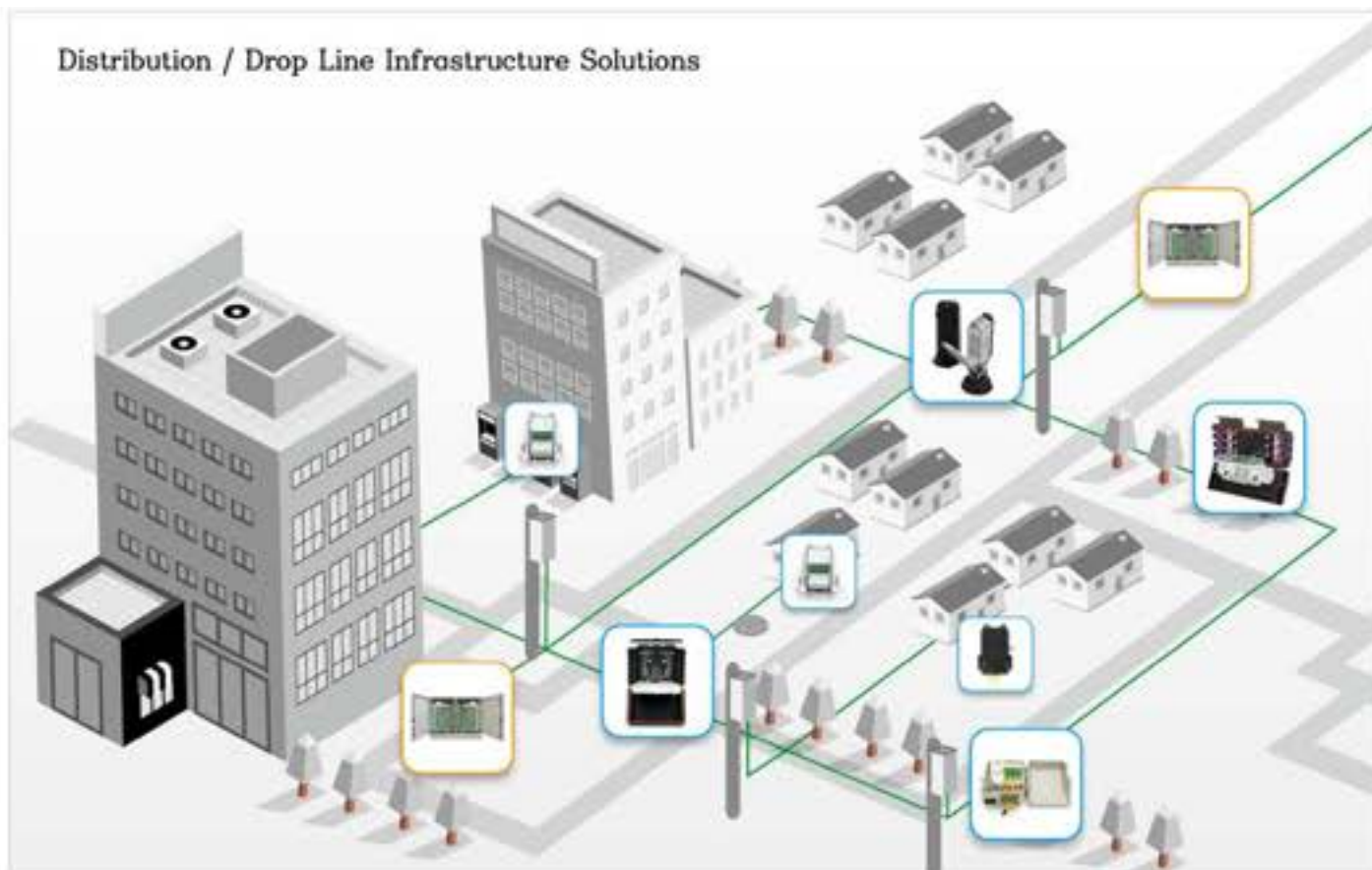
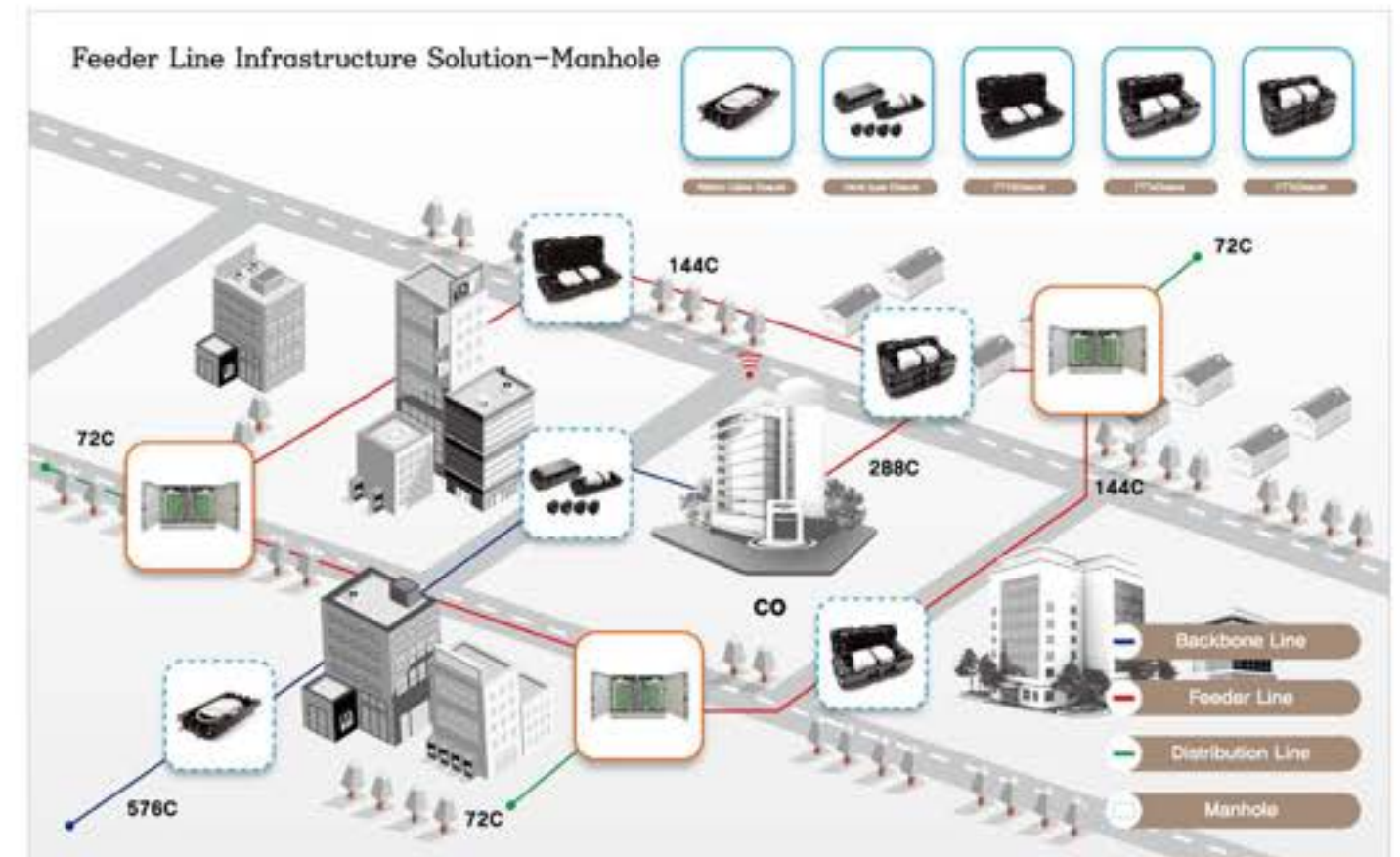
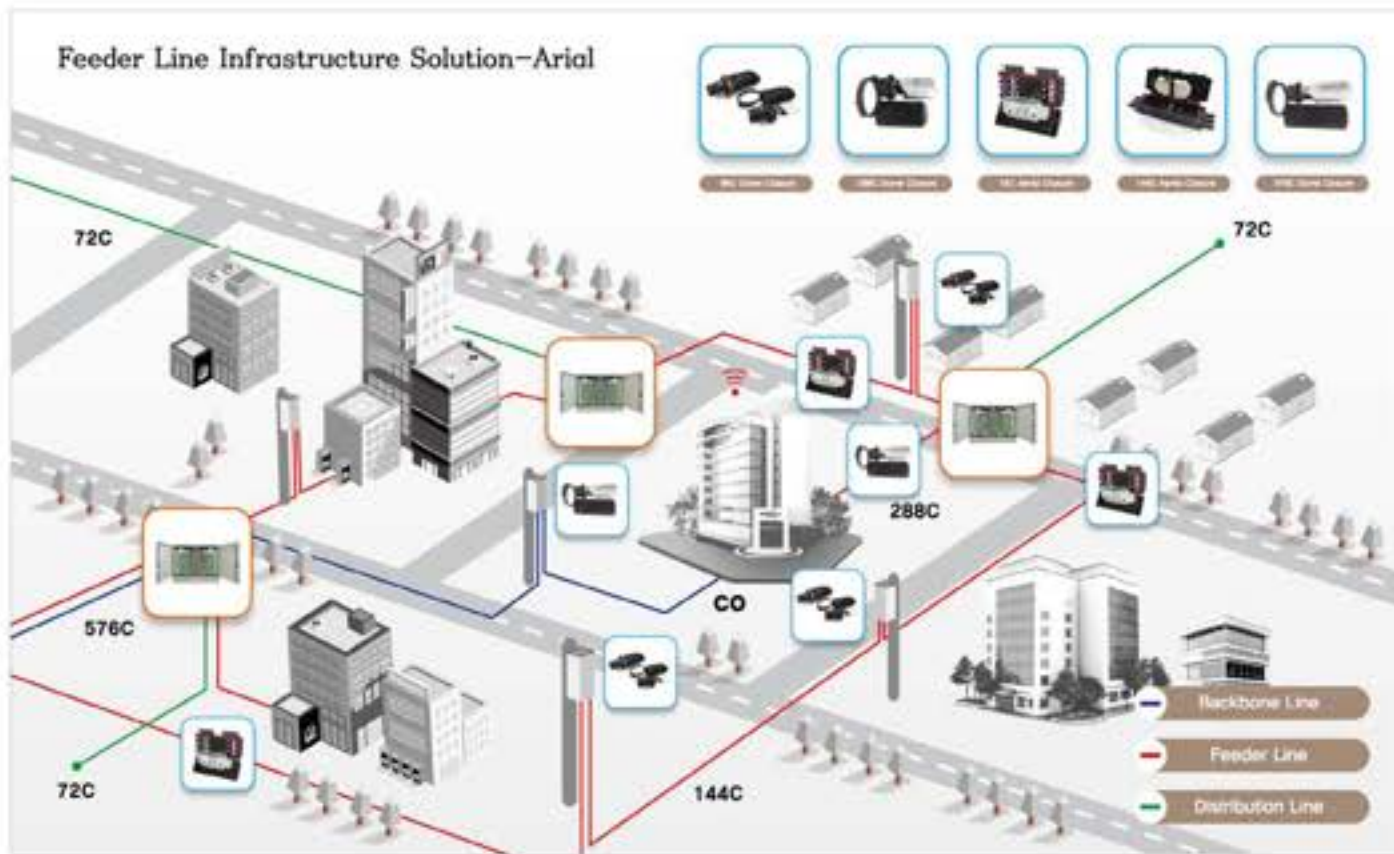


Physical Media Layer \_ Capabilities





# Infrastructure Solutions





## Fiber Optic Splice Closure (Inline)

MN401A protects fiber optic splicing joint in various installation conditions such as wires, manhole, ducts and direct buried. It is specially designed for FTTH network and applicable to multi branching installation meeting the requirements in each points of network. In addition, it provides with easy and reliable installation and high mechanical strength against any environmental conditions.

### MN401A

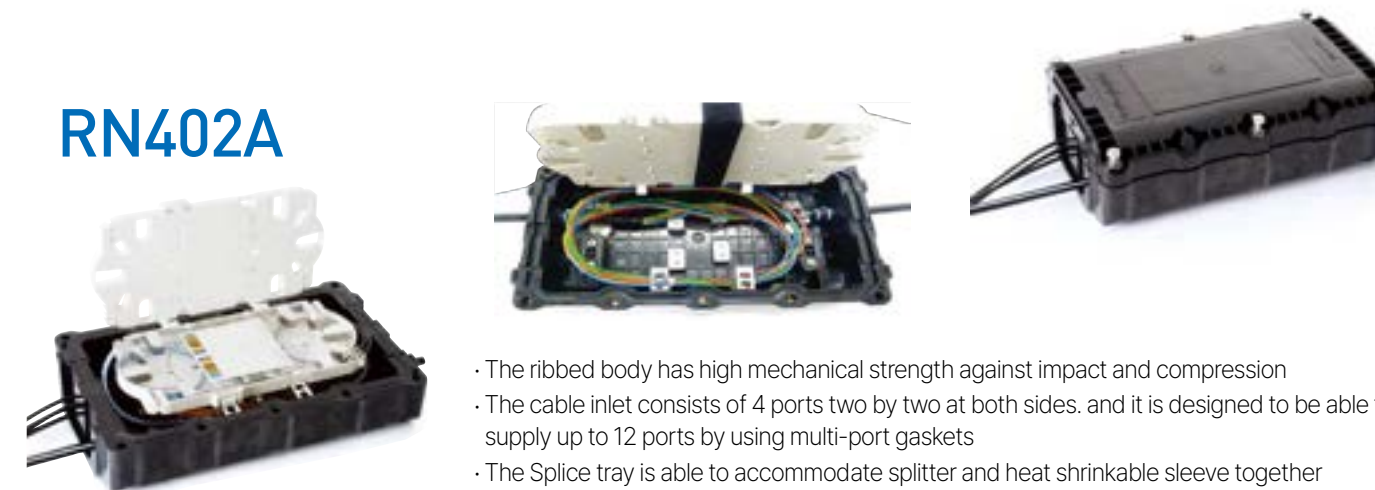


- The ribbed body has high mechanical strength against impact and compression
- Available to accommodate 8~10.5mm and 3.5mm drop cable
- 100% water-proof by using silicone gasket
- Light weight & Compact
- Available to install on pole, wall and underground

Model	Size (mm)	Weight (kg)	Cable Port (Entry/Exit)	Cable Dia. (mm) (Main/Drop)	No. of Splice Tray Tray Capacity (single/double)	Splice Capacity (single/double)	Splice Protector	Tension Member	IP Grade
MN401A	200 X 180 X 72	1.0 kg	4 (2/2)	Ø8 ~ Ø10 / Ø3.5	1 (8C / 16C)	8C / 16C	Heat shrinkable sleeve, Mechanical splice	Galvanized steel wire, FRP, Wire	IP 68

RN402A protects fiber optic splicing joint in various installation conditions such as wires, manhole, ducts and direct buried. It is specially designed for FTTH network and applicable to multi branching installation meeting the requirements in each point of network. In addition, it provides with easy and reliable installation and high mechanical strength against any environmental conditions.

### RN402A



- The ribbed body has high mechanical strength against impact and compression
- The cable inlet consists of 4 ports two by two at both sides. and it is designed to be able to supply up to 12 ports by using multi-port gaskets
- The Splice tray is able to accommodate splitter and heat shrinkable sleeve together
- The sealing gaskets and the external bolts provide with the excellent tightness reliability

Model	Size (mm)	Weight (kg)	Cable Port (Entry/Exit)	Cable Dia. (mm) (Main/Drop)	No. of Splice Tray Tray Capacity (single/double)	Splice Capacity (single/double)	Splice Protector	Tension Member	IP Grade
RN402A	270 X 160 X 80	2.0 kg	4 (2/2)	Ø8 ~ Ø14 / Ø3.5 ~ Ø8	2 (12C / 24C)	24C / 48C	Heat shrinkable sleeve, Mechanical splice	Galvanized steel wire, FRP, Wire	IP 68

## Fiber Optic Splice Closure

- Fiber Optic Splice Closure (Inline)
- Fiber Optic Splice Closure (Aerial Line)
- Cross Connect Closure
- Fiber Optic Splice Closure (Dome type)



## Fiber Optic Splice Closure (Inline)

K605A is specially designed for specific FTTx network environment and developed for multi-branch and multi-purpose and which is suitable for 8-branching or multi-branching installation by using multi-branching gaskets in case of FTTx network installation. Besides, it provides with easy and reliable installation and high mechanical strength against any environmental conditions.

### K605A



- The ribbed body has high mechanical strength against impact and compression
- Capability of multi-core management
- 100% water-proof by using silicone gasket
- Mechanically assembled by Bolt
- Available for various cable diameter, multi branching and various installation environments (Aerial, Duct, Manhole, Wall)

Model	Size (mm)	Weight (kg)	Cable Port (Entry/Exit)	Cable Dia. (mm) (Main/Drop)	No. of Splice Tray Tray Capacity (single/double)	Splice Capacity (single/double)	Splice Protector	Tension Member	IP Grade
K605A	320 X 195 X 120	2.5 kg	6 (3/3)	Ø6 ~ Ø16 / Ø3.5 ~ Ø8	5 (12C / 24C)	60C / 120C	Heat shrinkable sleeve, Mechanical splice	Galvanized steel wire, FRP, Wire	IP 68

BS603B consists of outer cases, gaskets, splice trays and inner kits, which has one entry port for main cable and two entry ports for drop cable at both sides. The outer case consists of the upper and lower body and constructed of highly chemical resistant material. and each splice tray is able to accommodate 24 individual fiber fusion splices.

### BS603B



- Easy open and close by using one touch clip
- The ribbed body has high mechanical strength against impact and compression
- The closure has 3 cable entry ports at both sides and 1 port gasket for main cable and 4 ports gasket for the drop cable are available
- The splice tray is applicable for both loose tube and ribbon fiber management
- The sealing gaskets and the external bolts provide with the excellent tightness reliability
- The cone type sealing gasket is adjustable to fit any cable diameter.
- Available to install on pole, wall and underground

Model	Size (mm)	Weight (kg)	Cable Port (Entry/Exit)	Cable Dia. (mm) (Main/Drop)	No. of Splice Tray Tray Capacity (single/double)	Splice Capacity (single/double)	IP Grade
BS603B	420 X 180 X 100	2.5 kg	6 (3/3)	Ø8 ~ Ø20 / Ø3 ~ Ø8	3 (24C / 48C)	72C / 144C	IP 68

## Fiber Optic Splice Closure (Inline)

Fiber Optic Splice Closure Inline types are engineered to meet common needs and field conditions, with different sizes to accommodate varying splice counts. Fiber Optic Closures are made of a tough chemical-resistant material and have a gasket seal, making them ideal for a wide variety of applications. All closures are designed to be easy to install, easy to use and easy to re-enter. In addition, the multiport grommet feature provides for simple, flexible and future-proof drop or small diameter branch cable additions.



BS403A-SD



BS403A-SS



BS403A-DD



MID-PLATE

### BS403A

- The closure has an air valve on its cover for checking air pressure drop
- The ribbed body has high mechanical strength against impact and compression
- The closure has 2 cable entry ports at both side and is available to make up to 12 cable entry ports by inserting mid plate
- The splice tray is applicable for both loose tube and ribbon fiber management
- The ground connector and wire are offered for grounding metallic OSP cables
- The sealing gaskets and the external bolts provide with the excellent tightness reliability
- The Cone type sealing gasket is adjustable to fit any cable diameter

Model	Size (mm)	Weight (kg)	Cable Port (Entry/Exit)	Cable Dia. (mm) (Main/Drop)	No. of Splice Tray Tray Capacity (single/double)	Splice Capacity (single/double)	IP Grade
BS403A-SS	435 X 205 X 113	2.8 kg	4 (2/2)	Ø6-Ø24 / Ø3.5 ~ Ø12	4 (24C / 48C)	96C / 192C	IP 68
BS403A-SD	435 X 205 X 167	3.8 kg	8 (4/4)	Ø6-Ø24 / Ø3.5 ~ Ø12	6 (24C / 48C)	144C / 288C	IP 68
BS403A-DD	435 X 205 X 221	4.8 kg	12 (6/6)	Ø6-Ø24 / Ø3.5 ~ Ø12	8 (24C / 48C)	192C / 384C	IP 68



Item	Mono-2	Mono	Di	Tetra	Octa
Cable Dia. (mm)	23 ~ 24	6 ~ 20	11 ~ 12	6 ~ 12	3.5 ~ 6



## Fiber Optic Splice Closure (Inline)

BS606G consists of outer cases, gaskets, splice trays and inner kits, which has three entry port for main cable at both sides. The outer case consists of the upper and lower body and constructed of highly chemical resistant material and each splice tray is able to accommodate 24 individual fiber fusion splices.

### BS606G



- The body has high mechanical strength against impact and compression
- The closure has 3 cable entry ports at both sides and 1 port gasket for main cable and 4 ports gasket for the drop cable are available
- The cone type sealing gasket is adjustable to fit any cable diameter
- Main gasket provides with the excellent tightness reliability
- Easy open and close by using one touch clip
- Tight jointed cable sheath for work efficiency
- Designed for the beauty of the town

Model	Size (mm)	Weight (kg)	Cable Port (Entry/Exit)	Cable Dia. (mm) (Main/Drop)	No. of Splice Tray Tray Capacity (single/double)	Splice Capacity (single/double)	Splice Protector	Tension Member	IP Grade
BS606G	500 X 202 X 145	4.4 kg	6 (3/3)	Ø8 ~ Ø20 / Ø3 ~ Ø8	6 (24C / 48C)	144C/288C	Heat shrinkable sleeve, Mechanical splice	Galvanized steel wire, FRP, Wire	IP 68

BS606A is multi-purpose closure to protect the connection part of optical cable and the splicing part of optical fiber from external circumstances. and it provides with the high working operation with the use of one touch clip and high convenience and reliability by the fixed gasket & sealing socket at same time. it is designed to have high-capability & high-interchangeable ability in multi-branch type with the concern of variety of optical network configuration and installation site.



### BS606A

- The main body has a valve to check the pressure inside closure and has a lot of rib on inside and outside of closure to protect optical cable from the external circumstances
- There are 6 cable entry ports which are divided by 3 each in both side. and it is optimized for the convenience of operation with the use of fixed sealing socket.
- The splice tray has 6 way inlet and is composed of the slot to use loose tube & ribbon cable and the transparent cover to record the state of fiber's connection
- 6 clips outside provide with high working speed, convenience and high reliability
- No Special tool required

Model	Size (mm)	Weight (kg)	Cable Port (Entry/Exit)	Cable Dia. (mm) (Main/Drop)	No. of Splice Tray Tray Capacity (single/double)	Splice Capacity (single/double)	Splice Protector	Tension Member	IP Grade
BS606A	542 X 243 X 150	4.5 kg	6 (3/3)	Ø6 ~ Ø29 / Ø6	6 (24C / 48C)	144C/288C	Heat shrinkable sleeve, Mechanical splice	Galvanized steel wire, FRP, Wire	IP 68

## Fiber Optic Splice Closure (Inline)

K806A is specially designed for specific FTTx network environment and developed for multi-branch and multi-purpose and which is suitable for 8-branching or multi-branching installation by using multi-branching gaskets in case of FTTx network installation. besides, it provides with easy and reliable installation and high mechanical strength against any environmental conditions.

### K806A



- The ribbed body has high mechanical strength against impact and compression
- Capability of multi-core management
- 100% water-proof by using silicone gasket
- Mechanically assembled by Bolt
- Available for various cable diameter, multi branching and various installation environments (Aerial, Duct, Manhole)

Model	Size (mm)	Weight (kg)	Cable Port (Entry/Exit)	Cable Dia. (mm) (Main/Drop)	No. of Splice Tray Tray Capacity (single/double)	Splice Capacity (single/double)	Splice Protector	Tension Member	IP Grade
K806A	559 X 242 X 135	4.5 kg	8 (4/4)	Ø8 ~ Ø24 / Ø3.5 ~ Ø8	6 (24C / 48C)	144C/288C	Heat shrinkable sleeve, Mechanical splice	Galvanized steel wire, FRP, Wire	IP 68

BS606R protects fiber optic splicing point in various installation conditions such as wires, manholes, ducts and direct buried. It is specially designed to accommodate a plenty of ribbon cable and applicable to multi branching installation and meeting the requirements in each point of network.



### BS606R

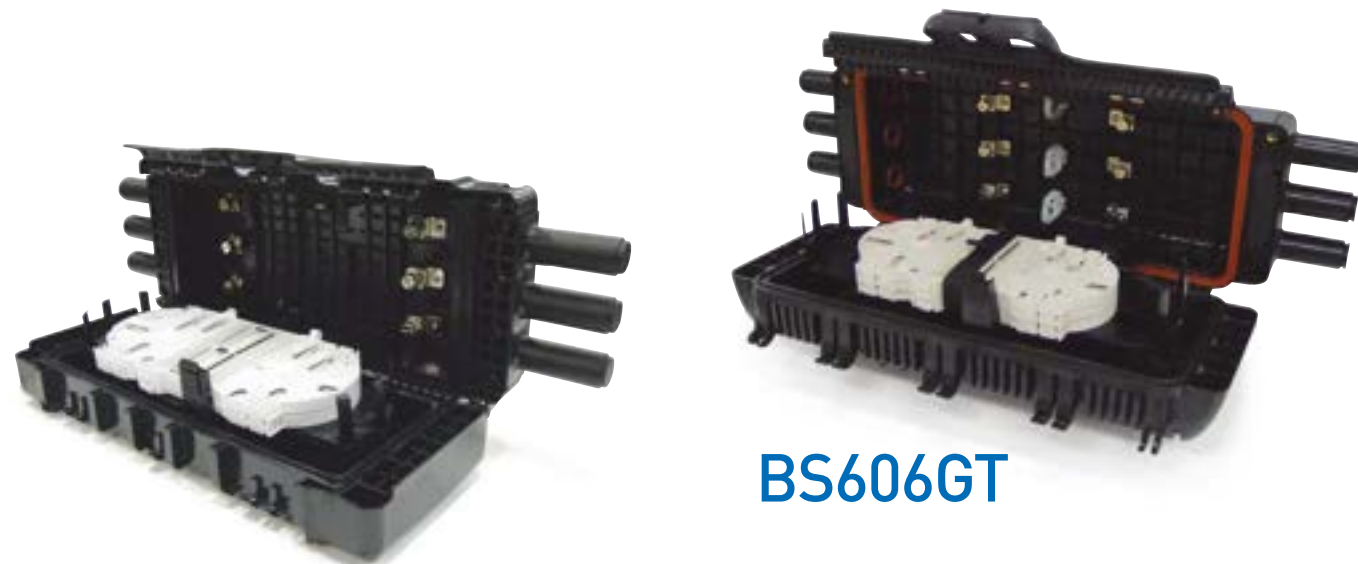
- High Reliability**
  - 100% water-proof by using silicone gasket
  - Tight gripped by double sheath holder
- Ease of Use**
  - Tight jointed cable sheath for work efficiency
  - Mechanically assembled by Bolt
  - No additional cost for fiber maintenance
- High Variety**
  - Various cable diameters available (8 ~ 27)
  - Multi branching and various installation environments (Aerial, Duct, Manhole)
  - Capability of multi-core management
- High capacity of Splicing**
  - 36F per Splice tray
  - Designed by stable fiber bending radius

Model	Size (mm)	Weight (kg)	Cable Port (Entry/Exit)	Cable Dia. (mm) (Main/Drop)	No. of Splice Tray	Tray Capacity (single/double)	Splice Capacity (single/double)	Splice Protector	Tension Member	IP Grade		
BS606R	Outer 600 X 325 X 225	10 kg	6 (3/3)	Ø8 ~ Ø27 / Ø8	6	Single/Double	Ribbon	Single/Double	Ribbon	Heat shrinkable sleeve	Galvanized steel wire, FRP	IP 68
	36F / 72F					324F (12F Ribbon)	216F / 432F	1944F (12F Ribbon)				



## Fiber Optic Splice Closure (Aerial line)

Fiber Optic Splice Closure for Aerial Line is one of the most popular ones specially designed for aerial-line and provides with easy and reliable installation and high mechanical strength against any environmental conditions. In addition, it provides with the optimal environment for maintenance and the beauty of the town with the suitable design with this closure, you can arrange cables neatly without a loop of cable around like Dome Closure. Also, our own designed Clip handle provide you with more convenient working during aerial installation working.



**BS606GT**

**BS604BT**



**BS806HT**

- Cable fixing with H/S Tube
- Designed for the beauty of the town
- Easy working and high safety by using one-touch clips
- Comply with IP65
- Fiber optic protection, prevention of tube-break off and assurance against risk of bend
- Double structure of sheath gasket and sheath holder
- Prevention from vibration, movement by using aerial hanger

Model	Size (mm)	Weight (kg)	Cable Port (Entry/Exit)	Cable Dia. (mm) (Main/Drop)	No. of Splice Tray Tray Capacity (single/double)	Splice Capacity (single/double)	IP Grade
BS604BT	558 X 180 X 110	2.5 kg	6 (3/3)	Ø8 ~ Ø18	3 (24C / 48C)	72C / 144C	IP 68
BS606GT	640 X 202 X 145	4.4 kg	6 (3/3)	Ø8 ~ Ø22	6 (24C / 48C)	144C / 288C	IP 68
BS806HT	714 X 225 X 177	6.3 kg	8 (4/4)	Ø8 ~ Ø24	6 (36C / 72C)	216C / 432C	IP 68

## Cross Connect Closure

Cross-Connect Closure was designed for applications requiring connectorization or cross connecting in the outside plant network. Additionally, it was configured to allow for convenient and safe storage of uncut buffer tubes in the feeder cable, while providing individual connectivity to the fibers of the drop cables.



**CS403A-SS**



**CS403A-SD**



**CS402A**

- The closure has an air valve on its cover for checking air pressure drop
- The ribbed body has high mechanical strength against impact and compression
- The splice tray is applicable for both loose tube and ribbon fiber management
- The sealing gaskets and the external bolts provide with the excellent tightness reliability
- The cone type sealing gasket is adjustable to fit any cable diameter
- The closure can accommodate pigtail, field-installation connector and drop cable

- The ribbed body has high mechanical strength against impact and compression
- Tight jointed cable sheath for work efficiency
- The closure can accommodate pigtail, field-installation connector and drop cable
- Easy working and high safety by using one-touch clips
- Capability of multi-core management
- Available for various cable diameter, multi branching and various installation environments

Model	Size (mm)	Weight (kg)	Cable Ports (Entry / Exit)	Cable Dia. (mm) (Main / Drop)	No. of Splice Tray	Connector Type / No. of Connection	Splitter	IP Grade
CS403A-SS	435 X 205 X 113	2.8 kg	4 (2/2)	Ø6 ~ Ø24 / Ø3.5 ~ Ø12	2	12 X SC Simplex = 12	1X4, 1X8	IP 68
CS403A-SD	435 X 208 X 154	3.8 kg	8 (4/4)	Ø6 ~ Ø24 / Ø3.5 ~ Ø12	2	24 X SC Simplex = 24	1X4, 1X8, 1X16	IP 68
CS402A	270 X 160 X 80	2.5 kg	4 (2/2)	Ø8 ~ Ø14 / Ø3.5 ~ Ø8	1	4 X SC Duplex = 8	1X4, 1X8	IP 68



## Cross Connect Closure

Cross-Connect Closure was designed for applications requiring connectorization or cross connecting in the outside plant network. Additionally, it was configured to allow for convenient and safe storage of uncut buffer tubes in the feeder cable, while providing individual connectivity to the fibers of the drop cables.



CS603A

- Enough space to accommodate various splitters in the splice tray
- Providing with two types of cable holder in accordance with the cable diameter
- Separation between main cable and drop cable installation part
- The cable entry port consists of main cable 6 ports and drop cable 16 ports
- Enough space to arrange surplus fibers
- Available for Mid-Span Branching

Model	CS603A
Size (mm)	300 X 210 X 140
Weight (kg)	2.2 kg
Cable Ports (Entry / Exit)	6 (3/3)
Cable dia. (mm) (Main / Drop)	Ø8 ~ Ø19 / Ø3 ~ Ø6
No. of splice tray	3
Tray Capacity	24C / 48C
Connector Type / No. of Connection	16 X SC Simplex = 16
Splicing Method	Fusion, Mechanical, Connector
Splitter	1X4, 1X8, 1X16
IP Grade	IP 68

## Cross Connect Closure

Cross-Connect Closure was designed for applications requiring connectorization or cross connecting in the outside plant network. Additionally, it was configured to allow for convenient and safe storage of uncut buffer tubes in the feeder cable, while providing individual connectivity to the fibers of the drop cables.

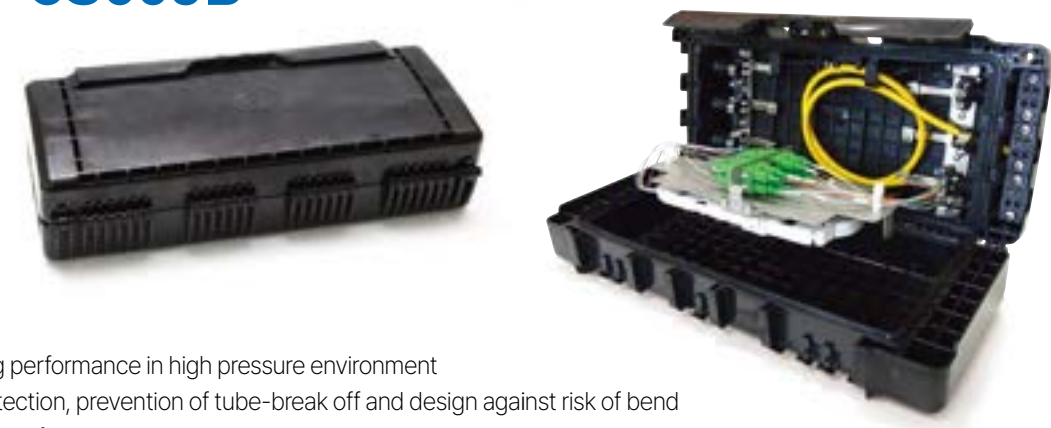


CS606G

- The body has high mechanical strength against impact and compression
- The closure has 3 cable entry ports at both sides and 1 port gasket for main cable and 4 ports gasket for the drop cable are available
- The cone type sealing gasket is adjustable to fit any cable diameter
- Main gasket provides with the excellent tightness reliability
- Easy open and close by using one touch clip
- Tight jointed cable sheath for work efficiency

Model	Size (mm)	Weight (kg)	Cable Port (Entry/Exit)	Cable Dia. (mm) (Main/Drop)	No. of Splice Tray	Connector Type / No. of Connection	IP Grade
CS606G	500 X 202 X 145	4.4 kg	6 (3/3)	Ø8 ~ Ø20 / Ø3 ~ Ø8	2	32 X SC Simplex = 32	IP 68

CS603B



- Reliable sealing performance in high pressure environment
- Fiber optic protection, prevention of tube-break off and design against risk of bend
- Double structure of sealing gasket and sheath holder
- Reduction of the working hour and the safety by using one-touch catch clips

Model	Size (mm)	Weight (kg)	Cable Port (Entry/Exit)	Cable Dia. (mm) (Main/Drop)	No. of Splice Tray	Connector Type / No. of Connection	IP Grade
CS606B	420 X 180 X 100	2.5 kg	6 (3/3)	Ø8 ~ Ø20 / Ø3 ~ Ø8	2	4 X SC Duplex = 8 16 X SC Simplex = 16	IP 68



## Cross Connect Closure

Cross-Connect Closure was designed for applications requiring connectorization or cross connecting in the outside plant network. Additionally, it was configured to allow for convenient and safe storage of uncut buffer tubes in the feeder cable, while providing individual connectivity to the fibers of the drop cables.

CS804A



CS1203A



- Enough space to accommodate various splitters in the splice tray
- Providing with three types of cable holder in accordance with the cable diameter
- Separation between main cable and drop cable installation part
- The cable entry port consists of main cable 12 ports and drop cable 8 ports
- Enough space to arrange surplus fibers
- Available for Mid-Span Branching

Model	Size (mm)	Weight (kg)	Cable Port (Entry/Exit)	Cable Dia. (mm) (Main/Drop)	No. of Splice Tray	Connector Type / No. of Connection	IP Grade
CS804A	330 X 220 X 139	2.3 kg	16 (8/8)	Ø6 ~ Ø13 / Ø1.8 ~ Ø3.5	3	16 X SC Simplex = 16	IP 65
CS1203A	290 X 200 X 130	1.9 kg	28 (12/16)	Ø7 ~ Ø13 / Ø 3.5	3	16 X SC Simplex = 16	IP 65

## Fiber Optic Splice Closure (Dome type)

Fiber Optic Splice Closure for Dome Type protects fiber optic cable and provides with fast and easy re-entry working. Aerial, manhole, ducts, wall, and pole installation are available and it provides with reliable sealing performance protected by a ribbed dome cover made of Polypropylene that has high mechanical and environmental features. With its 6~8ports, It is applicable for mid-span branching method.

BS604B



BS604A / MS604A



- The ribbed cover has an air valve on the top for tightness test and is sealed and clamped to the base by a gasket and band clamp respectively
- The splice tray has 4 entry/exit and is available for the management for both loose tube and ribbon
- The OSP cable is clamped by tension member gripper and central strength member and sealed by hot melted heat shrinkable tube for BS604A & MS604A but sealed by gasket for BS604B
- Providing with the ground connector and ground wire for grounding of OSP cables
- Available for various cable diameter, multi branching and various installation environments

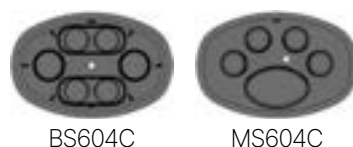
Model	Size (mm)	Weight (kg)	Cable Ports (Oval / Round)	Cable Dia. (mm)	No. of Splice Tray Tray Capacity (Single / Double)	Splicing Capacity (Single / Double)	Splice Protector	Sealing Method	IP Grade
BS604A	552 X 211 X 174	2.0 kg	6 (2/4)	Ø8 ~ Ø24	4 (12C / 24C)	48C / 96C	Heat shrinkable sleeve, Mechanical splice	Heat Shrinkable Tube	IP 68
MS604A	472 X 211 X 174	2.0 kg	5 (1/4)	Ø8 ~ Ø22	4 (12C / 24C)	48C / 96C	Heat shrinkable sleeve, Mechanical splice	Heat Shrinkable Tube	IP 68
BS604B	552 X 211 X 174	2.0 kg	6 (2/4)	Ø8 ~ Ø24	4 (12C / 24C)	48C / 96C	Heat shrinkable sleeve, Mechanical splice	Gasket	IP 68



## Fiber Optic Splice Closure (Dome type)

Fiber Optic Splice Closure for Dome Type protects fiber optic cable and provides with fast and easy re-entry working. Aerial, manhole, ducts, wall, and pole installation are available and it provides with reliable sealing performance protected by a ribbed dome cover made of Polypropylene that has high mechanical and environmental features. With its 6~8ports, It is applicable for mid-span branching method.

### BS604C / MS604C



- Reliable sealing system by hot-melted heat shrinkable tube
- The ribbed body has high mechanical strength against impact and compression
- Easy assembly and fiber management
- No additional cost for fiber maintenance

Model	Size (mm)	Weight (kg)	Cable Ports (Oval / Round)	Cable Dia. (mm)	No. of Splice Tray	Tray Capacity (Single / Double)	Splicing Capacity (Single / Double)	IP Grade
BS604C	577 X 211 X 174	2.5 kg	6 (2/4)	Ø8 ~ Ø24	4	12C / 24C	96C / 192C	IP 68
MS604C	527 X 211 X 174	2.5 kg	5 (1/4)	Ø8 ~ Ø22	4	12C / 24C	96C / 192C	IP 68

### BS506A / BS906A



- Reliable sealing system by hot-melted heat shrinkable tube
- The ribbed body has high mechanical strength against impact and compression
- Easy assembly and fiber management
- No additional cost for fiber maintenance
- Available to accommodate high capacity of fiber optic cable

Model	Size (mm)	Weight (kg)	Cable Ports (Oval / Round)	Cable Dia. (mm)	No. of Splice Tray	Tray Capacity (Single / Double)	Splicing Capacity (Single / Double)	IP Grade
BS506A	490 X 195	3.0 kg	5 (1/4)	Ø8 ~ Ø24	6	24C / 48C	144C / 288C	IP 68
BS906A	490 X 195	3.0 kg	9 (1/8)	Ø8 ~ Ø24	6	24C / 48C	144C / 288C	IP 68

## Fiber Optic Splice Closure (Dome type)

Fiber Optic Splice Closure for Dome Type protects fiber optic cable and provides with fast and easy re-entry working. Aerial, manhole, ducts, wall, and pole installation are available and it provides with reliable sealing performance protected by a ribbed dome cover made of Polypropylene that has high mechanical and environmental features. With its 7~9ports, It is applicable for mid-span branching method.

### BS712A / BS912B



- Reliable sealing system by hot-melted heat shrinkable tube
- The ribbed body has high mechanical strength against impact and compression
- Easy assembly and fiber management
- No additional cost for fiber maintenance
- Available to accommodate high capacity of fiber optic cable
- The ribbed cover has an air valve on the top for tightness test

### BS710A / BS910A



Model	Size (mm)	Weight (kg)	Cable Ports (Oval / Round)	Cable Dia. (mm)	No. of Splice Tray	Tray Capacity (Single / Double)	Splicing Capacity (Single / Double)	IP Grade
BS712A	268 X 534	5.5 kg	7 (1/6)	Ø8 ~ Ø29	12	24C / 48C	288C / 576C	IP 68
BS912B	268 X 534	5.5 kg	9 (1/8)	Ø8 ~ Ø29	12	24C / 48C	288C / 576C	IP 68
BS710A	268 X 695	9.0 kg	7 (1/6)	Ø8 ~ Ø29	10	60C / 120C	600C / 1200C	IP 68
BS910A	268 X 695	9.0 kg	9 (1/8)	Ø8 ~ Ø29	10	60C / 120C	600C / 1200C	IP 68



## Optical Termination Box (Outdoor-Metal)

Outdoor Optical Termination Box provides with the inter-connecting capabilities in the outside of optical environment. Featuring mechanical and environmental protection for both fiber and its components and it provides with a transition point between outside fiber cable and patch cords in fiber optic network and is designed to maintain the fiber bend radius. For convenient cable management, they provide with the termination, splicing and storage functions for fiber optic cable systems.

### Optical Termination Box

- Optical Termination Box (Outdoor-Metal)
- Optical Termination Box (Outdoor-Plastic)
- Optical Termination Box (Indoor)

#### OTB-B



- Simple and easy cable management
- Designed for stable fiber bending radius
- Built in half turn key lock for security
- Enough working space and high efficiency of splicing
- water-proof by using silicone gasket

#### OTB-D



Model	Size (mm)	Weight (kg)	Cable Ports (Entry / Exit)	Cable Dia. (mm) (Main / Drop)	No. of Splice Tray	Connector Type / No. of Connection	Spin-Off (port)	IP Grade
OTB-B	375 X 235 X 60	3.5 kg	5 (3/2)	Ø8 ~ Ø22	1	6 X SC Duplex = 12	-	IP 55
OTB-D	400 X 250 X 80	5.3 kg	35 (3/32)	Ø8 ~ Ø22 / Ø3.5 ~ Ø6	2	32 X SC Simplex = 32	24 / 48 / 72	IP 55



## Optical Termination Box (Outdoor-Plastic)

The termination box is designed and constructed to be suitable for outdoor installation. The housing is sufficiently sturdy to withstand typical handling and installation procedures. The design and layout of the cable guides promote an efficient and ordered positioning of the cable within the box. Placement of the incoming cables allow convenient access for installation, maintenance and subsequent termination of additional secondary cable.



- Comply with IP55
- Available to include the optical parts such as splitter, fan-out, heat shrinkable sleeve and connectors
- Available for SC/LC type fiber optic connectors and jumper cord
- Long-term reliability by high-power plastic material
- Cost effective

Model	Size (mm)	Weight (kg)	Cable Ports (Entry / Exit)	Cable Dia. (mm) (Main / Drop)	No. of Splice Tray	Connector Type / No. of Connection	IP Grade
OTB-P	193 X 226 X 62	1.5 kg	14 (2/12)	Ø8 ~ Ø13 / Ø3.5 ~ Ø6	1	12 X SC Simplex = 12	IP 55
OTB-PM	238 X 141 X 44.5	0.55 kg	10 (2/8)	Ø7 ~ Ø13 / Ø3.5	1	8 X SC Simplex = 8	IP 55
Outlet-A	108 X 163 X 35	0.3 kg	3 (1/2)	Ø5 / Ø3.5	-	2 X SC Simplex = 2	IP 55
OTB-PG	130 X 221 X 56.7	0.65 kg	10 (2/8)	Ø6 ~ Ø11 / Ø3	1	8 X SC Simplex = 8	IP 55

## Optical Termination Box (Indoor)

Optical Termination Box for indoor is designed to provide with the essential interface between fiber optic cables or between optical equipment installed on the customer's premises. The units offer networking and fiber distribution from the wiring closet or any suitable internal wall to the user's terminal equipment.

### OTB-J



- Simple and easy cable management
- Designed for stable fiber bending radius
- Built in half turn key lock for security
- Enough working space and high efficiency of splicing
- Separation between splicing part and distribution part

Model	Size (mm)	Weight (kg)	Cable Port (Entry / Exit)	Cable Dia. (mm) (Main / Drop)	No. of Splice Tray	Connector Type / No. of Connection	Spin-Off (port)	IP Grade
OTB-J	320 X 320 X 96	1.5 kg	4 (2/2)	Ø8 ~ Ø22	1	24 X SC Simplex = 24	32 / 48 / 72	IP 53

### OTB-M



- Compact size takes up less wall space for installation
- Available for SC/LC connector
- Removable sliding cover for easy access to complete Panel
- Protection of fiber connection from accidental contamination or long term movement
- Cost effective passive solution

Model	Size (mm)	Weight (kg)	Cable Port (Entry / Exit)	Cable Dia. (mm) (Main / Drop)	Material	Connector Type / No. of Connection	IP Grade
OTB-M	120 X 95 X 38	0.12 kg	6 (2/4)	Ø6 ~ Ø15	Plastic	4 X SC Simplex = 4	IP 53
OTP-M	190 X 140 X 35	0.7 kg	10 (2/8)	Ø6 ~ Ø15	Metal	8 X SC Simplex = 8	IP 53



## Fiber Distribution Frame (Rack Mounted)

Fiber Distribution Frame provides with a comprehensive solution for cable management and storage in the long-term success of the network. For convenient management, it provides with the termination, Splicing and storage functions in the fiber optic cable system. Featuring cable entries on each side and at the rear is optimized to arrange the cable in the frame. They are used for the central office, remote terminal locations and LANs and installed in the convenient point for interconnecting outside plant fiber optic cables with fiber optic equipments.

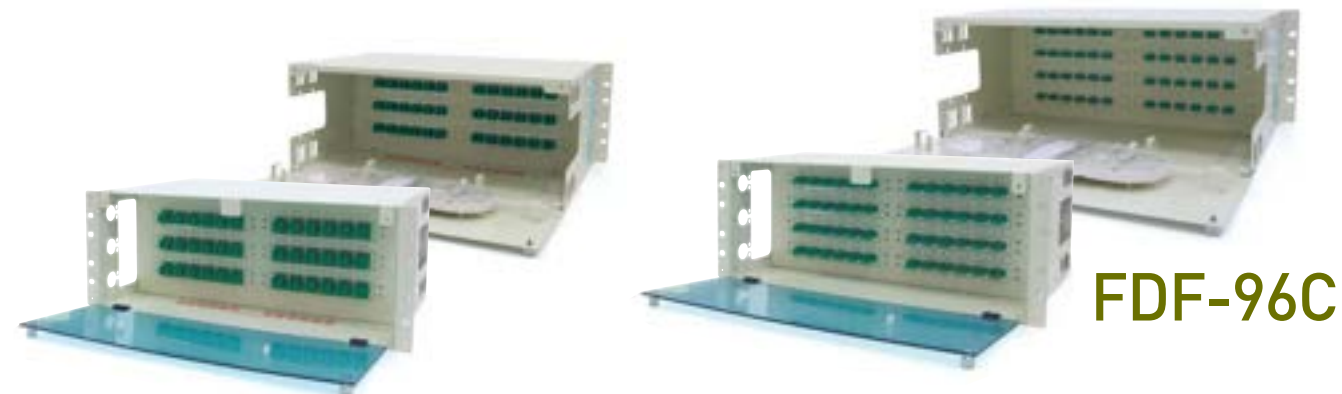
### Fiber Distribution Frame

- Fiber Distribution Frame (Rack Mounted)
- Fiber Distribution Frame (Swing Type)
- Fiber Distribution Frame (Sliding Type)
- Fiber Distribution Frame (Module Type)
- Fiber Optic Distribution HUB



FDF-24C

FDF-48C



FDF-72C

FDF-96C



FDF-144C

- Units can be stacked to accommodate future network growth
- All work can be done from the front of frame
- Provides fast-efficient installation in tight spaces
- Total radius control for maintaining transmission integrity
- The top cover is removable for easy installation
- Fully controlled loose tube and jumper cord service loops
- High quality, uniform rust-proof finish with no sharp edges

Model	Size (mm) / Unit	Weight (kg)	Cable Dia. (mm)	No. of Splice Tray	Connector type / No. of Connection	Spin-Off (LC/ FC)
FDF-24C	483 X 310 X 133 / 3U	7 kg	Ø8 ~ Ø32	1	24 X SC Simplex = 24	48 / 24
FDF-48C	483 X 310 X 222 / 5U	10 kg	Ø8 ~ Ø32	2	48 X SC Simplex = 48	96 / 48
FDF-72C	483 X 310 X 178 / 4U	8 kg	Ø8 ~ Ø32	3	72 X SC Simplex = 72	144 / 72
FDF-96C	483 X 310 X 178 / 4U	8.5 kg	Ø8 ~ Ø32	4	96 X SC Simplex = 96	192 / 96
FDF-144C	483 X 310 X 178 / 4U	9 kg	Ø8 ~ Ø32	6	144 X SC Simplex = 144	288 / 96



## Fiber Distribution Frame (Swing Type)

Fiber Distribution Frame provides with a comprehensive solution for cable management and storage in the long-term success of the network. For convenient management, it provides with the termination, Splicing and storage functions in the fiber optic cable system. Featuring cable entries on each side and at the rear is optimized to arrange the cable in the frame. They are used for the central office, remote terminal locations and LANs and installed in the convenient point for interconnecting outside plant fiber optic cables with fiber optic equipments.

### FDF-RM



- Units can be increased to accommodate future network growth
- Provides with fast-efficient installation in tight spaces
- The top cover is removable for easy installation

### FDF-PRM



- Easy to control the loose tube and jumper cord loops
- High quality & rust-proof with no sharp edges

Model	Size (mm) / Unit	Weight (kg)	Cable Dia. (mm)	No. of Splice Tray	Connector Type / No. of Connection	Spin-Off (Port)	Material
FDF-RM	483 X 310 X 44 / 1U	5 kg	Ø8 ~ Ø32	1	24 X SC Simplex = 24	36 / 48 / 72 / 96	Metal
FDF-PRM	483 X 310 X 44 / 1U	1.2 kg	Ø8 ~ Ø22	1	16 X SC Simplex = 16	12 / 24 / 32	Plastic

## Fiber Distribution Frame (Sliding Type)

### FDF-FCM



- Units can be increased to accommodate future network growth
- All work can be done from the front of frame
- Provides with fast-efficient installation in tight spaces

### FDF-SFCM



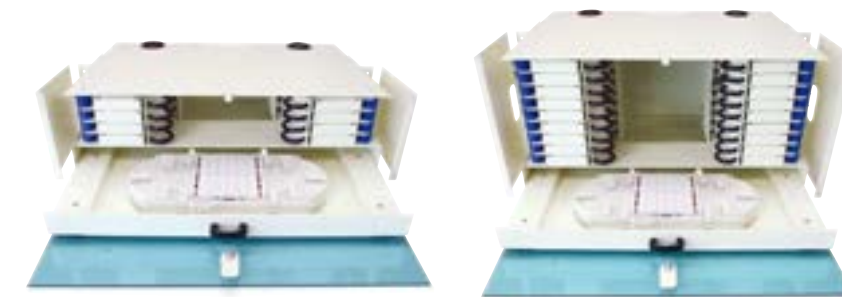
- The top cover is removable for easy installation
- Easy to control the loose tube and jumper cord loops
- High quality & rust-proof with no sharp edges

Model	Size (mm) / Unit	Weight (kg)	Cable Dia. (mm)	No. of Splice Tray	Connector type / No. of Connection	Spin-Off (Port)
FDF-FCM	483 X 310 X 44 / 1U	5 kg	Ø8 ~ Ø32	1	24 X SC Simplex = 24	36 / 48 / 72 / 96
FDF-SFCM	483 X 250 X 44 / 1U	4.5 kg	Ø8 ~ Ø32	1	24 X SC Simplex = 24	12 / 24 / 36 / 48

## Fiber Distribution Frame (Module Type)

Fiber Distribution Frame provide fiber optic cable cross-connection and interconnection between outside plant cables and opto-electronic equipment in central offices, LANs and remote terminals. The rounding / cassette module integrates connector mounting, splicing and fiber storage together. They are base on one unit modular and totally integrated design which allows users to expand and grow its fiber management system. Especially FTTx network is Designed for accommodating pre-connectorized termination cable and the sliding modules make it easy for connection and storage of the cable

### FDF-SM



Model	Size (mm)	No. of Splice Tray	Tray Capacity	Arrangement of Module	Module Capacity	Adapter Type	Adapter Capacity	Cable Diameter	Material
FDF-SM-12C/24C	483 X 310 X 133	1	24C (Max. 48C)	L : 4EA / R : 4EA	2 Port / 4 Port	SC Duplex / LC Quadplex	12 / 24	8 ~ 32	SPCC, AL
FDF-SM-36C	483 X 310 X 221	2		L : 5EA / R : 5EA	4 Port	SC Duplex	36		
FDF-SM-48C				L : 6EA / R : 6EA			48		
FDF-SM-48C				L : 9EA / R : 9EA			LC Quadplex		

### FDF-CMF



Model	Size (mm)	Splitter	No. of Module	Fiber Capacity	Adapter Type	Color	Material
FDF-CMF	483 X 310 X 178	1 X 2	Max. 14	28	SC, LC	Beige, Silver gray, Black	SPCC, AL
		1 X 4		56			
		1 X 8		112			



## Fiber Optic Distribution HUB

Fiber Optic Distribution Hub is designed for easy maintenance and provides High reliability on the various conditions. Fiber Optic distribution hub is used on termination of optical splitter between feeder cable and distribution cable in the outside plant environment. It is specially designed to accommodate a plenty of patch cord and applicable to various splitter typed installation and to comply with the requirements in each point of network. Easy routing scheme. 3Point locking system and long environmental reliability Can simplify FTTx network installation, maintenance and reworking with high stability.



### Fiber Optic Accessories

- Adapter, Pigtail, Patch Cord
- PLC Splitter
- Splice Tray

Model	Small	Medium	Large
Dimension (W*H*D)	600 X 800 X 460 mm	710 X 1050 X 480 mm	1350 X 950 X 480 mm
Distribution Capacity	48 ~ 144C	72 ~ 288C	72 ~ 576C
Access	All Front	All Front	All Front
Splice Tray	2ea	3ea	6ea
Splitter Slots	20	20	36
No of Inlet Port	Max 4port	Max 6port	Max 8port
No of Outlet Port	Max 16port	Max 20port	Max 24port
Adapter Type	SC, LC	SC, LC	SC, LC
Mounting Options	Ground , Pole, Wall		
Splitter type	1 X 32, 1 X 16, 1 X 8, 2 X 16, 2 X 8		
Material	AL, SUS		
Cable Dia. (mm)	Ø5 ~ Ø20		



## Adapter, Pigtail, Patch Cord

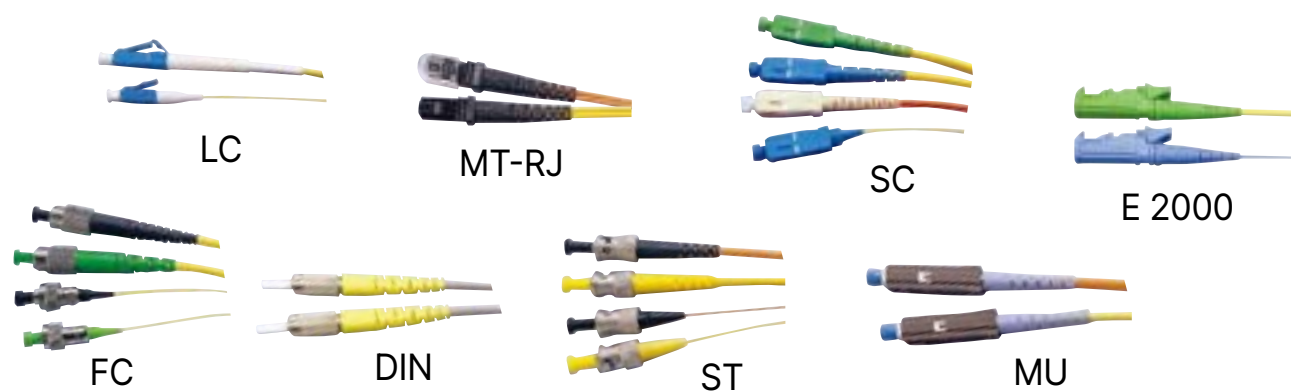
Fiber optic patch cords and adapters provide with interconnections between transmission equipment and distribution panels, equipment to equipment and distribution panels to OSP cables. Different optical connectors such as FC, SC, ST and LC can be assembled on specified fiber cables. Our products are manufactured under the strict quality standards through several inspections and testing processes for customer's satisfaction.

### Adapter



Characteristics	Insertion Loss	Mating Durability	Operation Temperature. Stability
Values	≤ 0.2 dB	≤ 0.2 dB (500times)	≤ 0.2 dB (-40C° ~ +85C°)

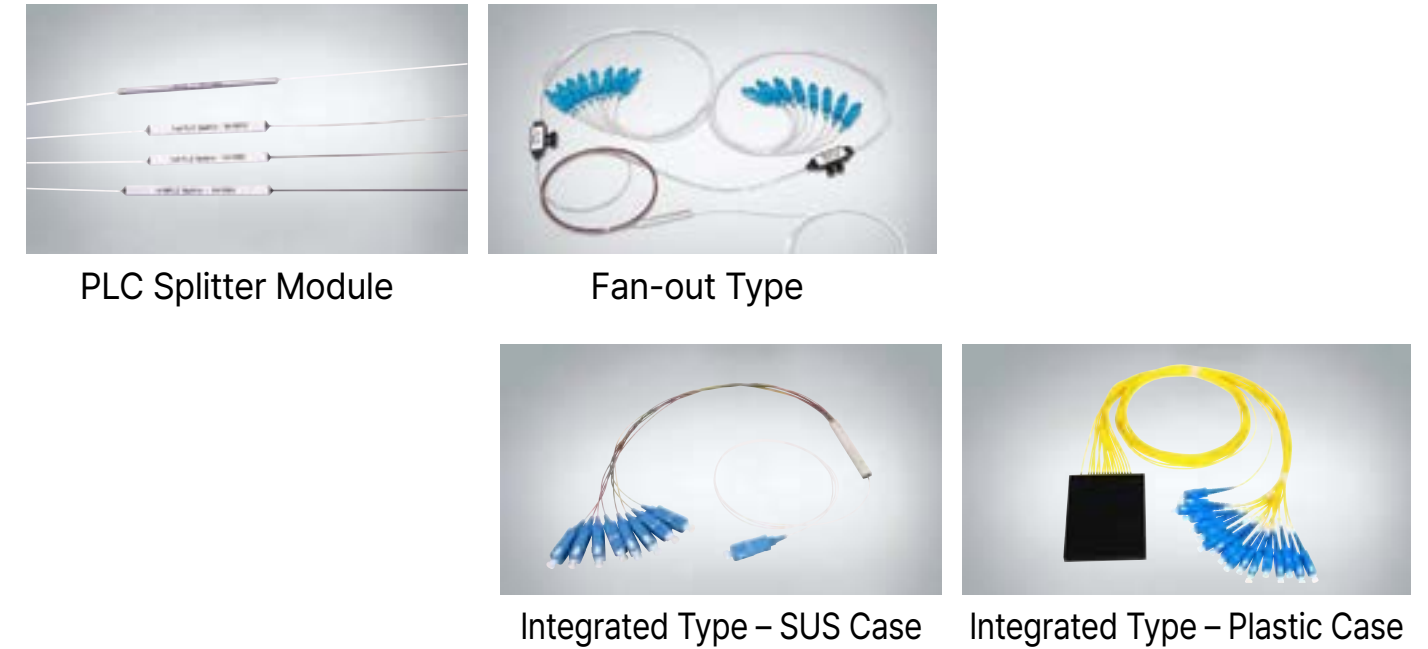
### Pigtail, Patch Cord



Characteristics	Fiber Type	Insertion Loss	Return Loss			Durability	Operation Temperature. Stability
			SPC	UPC	APC		
Values	SM(9/125), MM(52/125, 62.5/125)	≤ 0.2 dB	≤ 40 dB	≤ 55 dB	≤ 65 dB	≤ 0.2 dB (500 times)	≤ 0.2 dB (-40C° ~ +85C°)

## PLC Splitter

The 1XN Planar Splitter has high performance with very low insertion loss, excellent Uniformity, Low PDL and flat wavelength operation. The splitter is pigtailed with single mode Fibers and compact package. It's available in 2, 4, 8, 16, 32 and 64 channel configuration with connector type open to customer specifications.



Item	unit	Specifications					
		1X2	1X4	1X8	1X16	1X32	1X64
Insertion Loss @1,310/1,550nm (0.9mm with connector)	dB	≤ 4.0	≤ 7.5	≤ 10.9	≤ 14.5	≤ 18.1	≤ 21.5
Insertion Loss @1,310/1,550nm (0.9mm w/o connector)	dB	≤ 3.5	≤ 7.5	≤ 10.5	≤ 13.5	≤ 17.5	≤ 20.5
Uniformity @1,310/1,550nm (0.9mm with connector)	dB	≤ 0.6	≤ 1.0	≤ 1.3	≤ 1.7	≤ 2.4	≤ 2.6
Uniformity @1,310/1,550nm (0.9mm w/o connector)	dB	≤ 0.4	≤ 0.5	≤ 0.8	≤ 1.0	≤ 1.3	≤ 2.5
PDL @1,310/1,550nm (0.9mm with connector)	dB	≤ 0.2	≤ 0.2	≤ 0.25	≤ 0.3	≤ 0.4	≤ 0.4
PDL @1,310/1,550nm (0.9mm w/o connector)	dB	≤ 0.1	≤ 0.2	≤ 0.3	≤ 0.3	≤ 0.3	≤ 0.4
Return Loss @1,310/1,550nm	dB	≥ 50	≥ 50	≥ 50	≥ 50	≥ 50	≥ 50
Directivity @1,310/1,550nm	dB	≥ 55	≥ 55	≥ 55	≥ 55	≥ 55	≥ 55
Removable durability		1000 times : Insertion Loss Increase ≤ 0.1dB					
Operating Wavelength	nm	1260 ~ 1660					
Operating Temperature		-40 ~ +85					
Operating Humidity	°C	≤ 95%					
Fiber Length	%	120 ± 2 (or customized length)					
Input Fiber	Type	0.9mm tight buffered fiber, PVC/LSZH					
	Color	White or Customized					
Output Fiber Configurations	Type	With 0.9mm Loose tube, PVC/LSZH					
	Color	ISO standards or customized					
	Order	2-fiber X 1	4-fiber X 1	8-fiber X 1	8-fiber X 2	8-fiber X 4	8-fiber X 8
Package Size (L X W X H)	mm	55 X 7 X 4			60 X 20 X 4	80 X 23 X 4.5	120 X 43 X 5



# Splice Tray

## STI



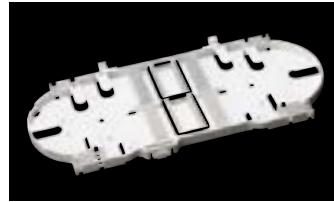
Item	STI 24-6
Splice Capacity	24C (Single)
	48C (Double)
Size (mm)	230 X 118 X 10.8

## STL



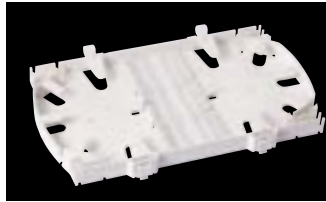
Item	STL 24-3
Splice Capacity	24C (Single)
	48C (Double)
Size (mm)	280 X 105 X 11

## STA



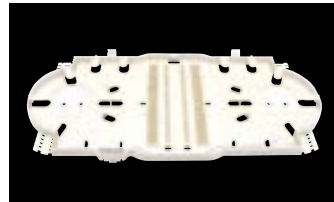
Item	STA 24-5
Splice Capacity	24C (Single)
	48C (Double)
Size (mm)	260 X 115 X 10.2

## STR



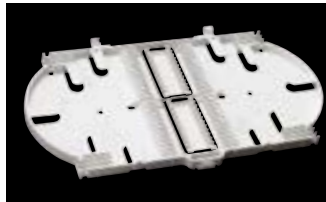
Item	STR 36-6
Splice Capacity	36C (Single)
	72C (Double)
Size (mm)	300 X 170 X 21

## STH



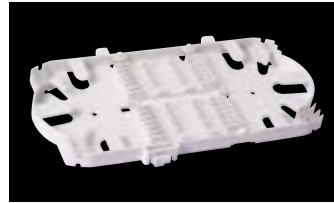
Item	STH 36-6
Splice Capacity	36C (Single)
	72C (Double)
Size (mm)	336 X 164 X 12.5

## STS



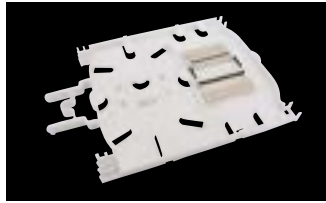
Item	STS 24-6
Splice Capacity	24C (Single)
	48C (Double)
Size (mm)	260 X 138 X 10.2

## STF



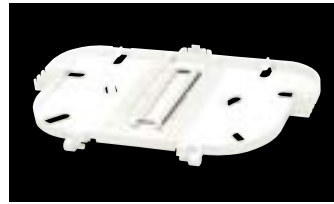
Item	STF 12-6
Splice Capacity	12C (Single)
	24C (Double)
Size (mm)	199 X 95 X 11

## STD



Item	STD 12-3
Splice Capacity	12C (Single)
	24C (Double)
Size (mm)	155 X 138 X 9.7

## STH



Item	STH 24-3
Splice Capacity	24C (Single)
	48C (Double)
Size (mm)	240 X 140 X 10.2

## STT



Item	STT 13-3
Splice Capacity	13C (Single)
	39C (Triple)
Size (mm)	205 X 128.5 X 10.2

## STC



Item	STC 24-3
Splice Capacity	24C (Single)
	48C (Double)
Size (mm)	240 X 140 X 10.2

## Tray Chip



Single

Ribbon

Splitter

Optical Network Solutions  
**World Wide Customers**

Opticube®

