FTTx Solution

Fibernet offers FTTx solutions for single home residences (FTTH), buildings (FTTB) and offices (FTTO), that provide less provisioning, reduced maintenance and low operating costs. The solutions implement important functions such as optical cable fixing, fiber preservation during winding, holding & positioning, grounding protection, connector protection, fiber distribution, fiber combination and connector deployment.

Fibernet offers a complete end-to-end GPON (Giga-Passive-Optical-Network) solution, including all FTTx components along the fibers route – from the central office to the end user:

- Optical Cables – outdoor and indoor, Underground and Aerial (including on electric power lines).
- Optical Closures – a wide range of Dome or in-line configuration, supporting all mounting options: Direct buried, Below Grade, Pole or wall mounted and Aerial.
- Optical Distribution Frame (ODF) – modular patch panels for installation in 19”/21”/23” cabinets (Node/Curb) enabling both adapters and splice connectivity.
- Optical Distribution Boxes (ODB) – outdoor and indoor boxes (for Building and Street) housing various tailor-made solutions for organizing, splicing, splitting and interconnecting fibers.
- End User Outlets and Accessories – compact home/office sockets and durable cords.

Fibernet offers installers a wide range of tools and equipment required for the implementation and installation such as Fusion Splice Machines, installation and cleaning tools and test equipment (OTDR, Power Meter & Light Source).
Optical Distribution Boxes

Our optical distribution boxes provide a flexible fiber management system for transitioning from outdoor cable to indoor cables and connected assemblies. Our unique products are based on field-engineers experience and the need of fast installation, yet easy to use system.

Fibernet solutions provide compact and versatile method of splicing and patching up to 144 fibers, offering fiber routing and slack storage, cable termination and splice trays for high quality fiber management. Standard package solutions are available in unloaded versions or loaded version according to customer request with splice trays, adapters and splitters. Our flexible design gives the customer a robust termination point for safe splicing and patching option.

Features

- Both Outdoor and Indoor compatibility
- Wall/Pedestal/Pole mount
- Individual splice holding
- Special Fiber Storage Units (FSU) provide bending protection
- High Splice capability
- Extended routing guides
- Standard IP rating: IP55 or Higher
- Re-Entry plugs
- Versatility
- UV resistance
- Compact size
- Up to 144-fiber joints

ODU: Optical Distribution Unit

- Large outdoor box which enables tailor made solutions including Panel Adapters, Pigtails, Splitter and Fusion Splice Trays – All together
- Flexible grommet sealing and split screw caps enable quick re-entry (without heat shrink or materials)
- Up to 48 SC/APC Pigtails, for quick and high quality connection (optional)
- Different types of PLC splitters (optional)
- Different Panel Adaptors (optional)
- 8 entry ports Ø 2-21mm
- 48 exit ports Ø 2-21mm
- Wall mount
- IP67
- Size [mm] 410x360x100
**FIB FTTH 244B-144**
- High splice capacity – up to 144 splices
- Up to 6 booklet splice trays
- Pole/Wall mount
- IP55
- 2 oval ports Ø 17mm
- 12 exit ports Ø 10mm
- Size [mm] 244x286x191

**FIB-FDB-4261**
- Accommodates both Splitter holder and 24 panel adapters
- Pole/Wall mounted
- IP55
- 2 oval ports Ø 14mm
- 24 drops Ø 5mm
- Size [mm] 240x320x100

**FIB- FDB-6621**
- Splitter holder at the back of the tray
- Up to 12 simplex adapters
- Pole/Wall mount + Double lock mechanism
- IP55
- 2 oval ports Ø 15mm
- 16 exit ports Ø 15mm
- 16 splices.
- Size [mm] 305x230x100

**MPAF0188**
- Approved by BT (British Telecom) for FTTH installations
- Pole/Wall mount + Slide Cover opening
- IP55
- 2 oval ports Ø 15mm
- 12 exit ports Ø 5mm
- 36 splices
- Size [mm] 106x205x55
End User Outlets
Fibernet Indoor Fiber Wall Plates are compact fiber organizers used to create a fiber demarcation point inside the home or office. Internal fiber routing features control bend radius and allows for slack storage outside of the wall cavity. Specific designs also provide for splicing inside the wall plate. The wall plate consists of flame retardant compounds, easy to install and is capable of being mounted directly to a standard electrical junction box or a wall.

Fibernet Indoor Optical Outlet Key Features:
- Designed to store a pre-terminated pigtail for connection to a mating adapter
- Accommodates 1-4 fiber adapters (SC/APC or LC/APC)
- Mounts to Standard Electrical Junction Boxes or wall
- Internal Fiber routing provides bend radius control
- Flame Retardant
- Tool-less sliding door provides easy access for fiber connection or removal
- Internal adapter with automatic shutter covering laser light output

Optical Outlet 1 Port
Dimensions (mm) 110 x 80 x 36 Cable diameter Ф5~Ф10

Optical Outlet 2 Ports
Dimensions (mm) 140 x 130 x 36 Cable diameter Ф5~Ф10

Optical Outlet 4 Ports
Dimensions (mm) 102 mm x 152 mm x 25 mm
ODF – Optical Distribution Frames

Fibernet Type P and Type F are Optical Distribution Frames (ODF) for installation in 19”/21”/23” cabinets.

Fibernet Sub Rack series is a modular rack mount ODF system, forming a high quality fiber optic connectivity solution, offering top flexibility using different adapter modules (LC/SC, MM/SM) in the same chassis.

Support any fiber type
- Modes: Single-Mode / Multi Mode
- Core diameters: 9/62.5/50 µm
- Graded index fibers: OM3/OM4 Bend-Insensitive (MM), G.657 (SM)

Support any connector type
- LC (Quad/Duplex/Simplex), SC (Duplex/Simplex) and others (FC/ST etc.)
- Connector polishing types: UPC/APC

<table>
<thead>
<tr>
<th>Sub-Racks</th>
<th>Capacity</th>
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<tbody>
<tr>
<td>4U</td>
<td>14 4 288</td>
</tr>
<tr>
<td></td>
<td>SC LC</td>
</tr>
<tr>
<td>1U</td>
<td>36 72</td>
</tr>
<tr>
<td></td>
<td>SC LC</td>
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- Splice Module based
- A module can contain up to 24 fiber adapters.
- 3 Modules in 1U
- 12 Modules in 4U

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<thead>
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<th>Type F</th>
<th>Capacity</th>
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<tbody>
<tr>
<td>1U</td>
<td>24 48</td>
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<tr>
<td></td>
<td>SC LC</td>
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<tr>
<td>2U</td>
<td>48 96</td>
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<td>SC LC</td>
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- Retractable
- Tilted connectors
- Front cover & label

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<tr>
<td>1U</td>
<td>24 48</td>
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<td>SC LC</td>
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<td>2U</td>
<td>48 96</td>
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<td>SC LC</td>
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- One-row design
- Min. Complexity
- Max. Durability
Optical Closures

Optical closures are used to protect pass-through branched connection points of optical cables in outdoor environment, while storing fiber connections and the excess fibers safely and efficiently. Fibernet offers closures that feature mid-span branching, built-in optical splitters and drop cables.

Features
- Flexible grommet sealing technology supports a wide range of flat or round cable profiles
- Collar system allows quick re-entry
- independent access to each cable

FiberGuard Dome Closures – High fiber count series
- FibreGuard 500 – Up to 96 fibers
- FibreGuard 650 – Up to 288 fibers
- FibreGuard 800 – Up to 576 fibers
- For harsh environments, Air & Water tight + Sealed air valve.
- Split screw caps allow re-entry without cutting existing cables
- Oval port allows express uncut cable entry
- Designed for cables: Unitube, loose fiber, buffer/ribbon, ADSS, OPGW underground.
- Accommodates fusion, mechanical and ribbon splicing. Fits different fiber management system and maintains bend radius.

RUNT – In Line
- Up to 96 fusion splices
- Compact size 47.7x25.6x94 cm
- Both butt/in-line design – Two ports are located on both ends
- Fits any mounting: Aerial, Pole/Wall, manhole or direct buried
- Mainly used for Fiber-To-The-Curb installations

Low Count Closure (LCC)
- Up to 24 fusion splices
- Compact size: 43 x 18 x 7 cm
- In-Line design – one port on each end
- Fits any mounting: Aerial, Pole/Wall, manhole or direct buried

Drop Termination Closure (DTC)
- Up to 16 fusion splices
- Compact size: 23.1 x 18.8 x 4.3 cm
- Both butt/in-line design – Two ports are located on each ends
- 7.6 mm diameter Round or flat cables sealing (No Grommets)
- Flat design very suitable for wall mounted drop connections
Fiber Optic Cables

Outdoor cables

- **Underground cables** are offered in Loose-Tube structure, but of rigid and durable type.
- **Aerial cables:**
  - Aerial Loose-Tube – in any required design parameter (Attenuation, Dispersion, Pulling tension).
  - ADSS – All-Dielectric-Self-Supporting – No steel wires or external carriers needed.
  - OPGW – Optical-Ground-Wire – Fibers are installed inside the core of power line ground/earth wire.
  - SkyWrap® – Can be installed on high voltage ground wires or phase conductors by a helicopter.
  - AccessWrap® – Can be wrapped on existing power lines, intended for “Last Mile” installations.
  - Aerial Drop Cable – For the last link (Drop) into the building.

Indoor Cables

- Loose-Tube – for duct installation of multi-fiber cables.
- Toneable Flat Drop Cable for Duct Applications – can be toned/shaped for easy insertion.
- Low Friction Indoor Cable – smooth and compact profile for push installation in congested ducts.

**Loose Tube Cable**

A complete line of high-quality loose tube cables for lashed aerial, duct and direct-buried applications.

**ADSS**

Ideal for placement on overhead transmission towers, impervious to ice, wind, moisture, corrosion and electromagnetic interference (EMI). Fitted with specifically-designed armored jackets to withstand high mechanical stress. Commonly used in cross-country applications where extra high voltage is present.

**Optical Ground Wire (OPGW)**

OPGW, or static wire, performs the duties of a ground wire, and also provides a path for voice, video or data signal transmission by incorporating optical fibers into the design of the cable. Easily integrates into a new or established high voltage system.
AccessWrap®
AccessWrap provides a sustainable solution to take fiber optic connections to the last mile on distribution power lines.

Aerial Drop Cable
Specifically designed for Fiber-to-the-Subscriber applications. It is a round, all dielectric cable ideally suited for self-supporting drop-type installations as well as in lashed or conduit builds.

Toneable Flat Drop Cable for Duct Applications
Designed for quick installation and ease of handling, Flat Drop Cable serves as the last link for the FTTx networks of today. The design is constructed utilizing proven buffer tube technology with a single tube containing up to twelve fibers.

Low Friction Indoor Cable
Designed for premise application in the FTTx network especially where the duct is loaded with existing cable, Enabling pushing installation directly into congested ducts.

- Over 40% size reduction and over 75% better “Friction coefficient” comparing to standard indoor cables
  (up to 30 cables in a single 22mm diameter duct)
- Easy jacket removal without special tools
- Time proven technologies and proven history
Accessories

Field Assembly Optical Connector
The FAST connector series enables fiber field-termination in less than 90 seconds, in a range of UPC/APC connectors using standard tools. These connectors have been factory-polished, eliminating the need for any polishing materials, thereby enabling the preparation and termination of optical fibers in a fraction of the time comparing to conventional methods. The connector also uses V-groove mechanical splice principals and therefore the use of an epoxy is not required. The FAST series connectors are a common solution for optical wiring inside buildings and floors for LAN & CCTV applications and with the expansion of FTTH, it has already proven to be the chosen connector of large scale installation companies, municipalities, carriers etc.

Advantages
- Connector termination in less than 90 seconds
- Termination to both 0.25mm & 0.9mm Ø fiber
- Variants available for >2.0mm & >3.0mm Ø fiber
- Improves flexibility and saves design time
- Low Insertion Loss & Back Reflection
- No special training required
- No special tools required
- No messy epoxy

Ultra-Flexible Patch Cord
The most suitable cable for cable installation in homes and enterprises
- Suitable for extension optical cord
- Single mode bend insensitive fiber 7.5mm in radius compliance to G.657-A2
- Highly elastic, flexible and withstands drastic cable bends during installation
- High crush, impact, and abrasion resistance
- Free and ease winding/unwinding without twisting
About Fibernet

Since its establishment in 1993, Fibernet has developed a name as a leading manufacturer and distributor of fiber optic solutions, serving clients worldwide from the company’s headquarters and production facility in Yokneam, Israel.

From development, design and manufacture of optic and electronic integrated systems, to marketing, installation and support, Fibernet offers a complete and comprehensive solution for a range of industries, including telecommunications, the financial sector, hi tech, medical and many more.


Fibernet faces the future with dedication to excellence and welcomes new challenges and partnerships.