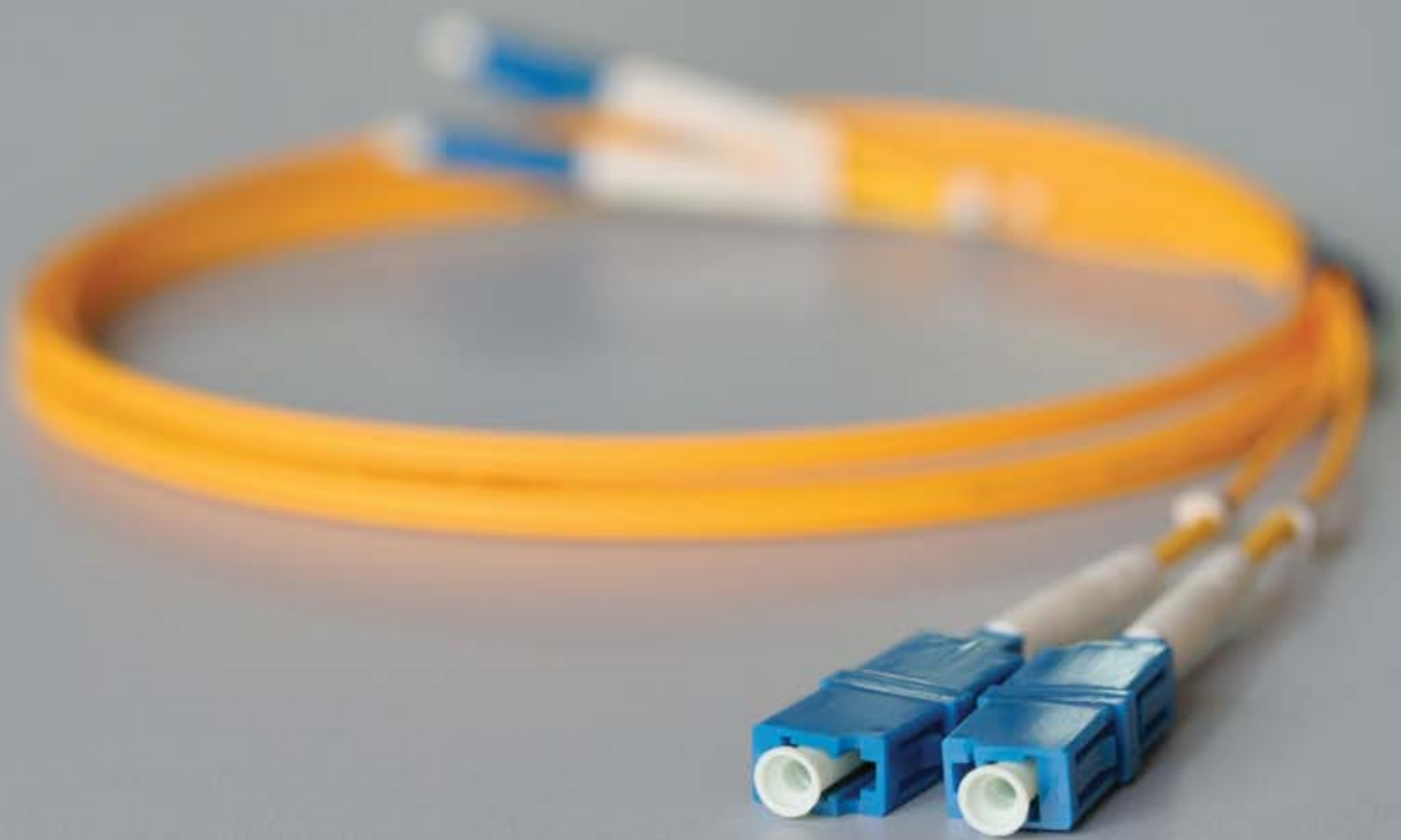


143/1 New Baily Road  
Dhaka-1000, Bangladesh  
Phone: 8802 934 6654, 831 9328  
Fax: 8802 831 2928  
Email: [sales@fonsbd.com](mailto:sales@fonsbd.com)  
Web: [www.fonsbd.com](http://www.fonsbd.com)

*Your Full Network Solutions*





**Fons Bangladesh Ltd**  
is the **Only Manufacturer** in **Bangladesh**  
to **Export Fiber Optic Products**  
since **1996**

# FONSBD

## Profile

**FONSBD** (Fibe Optic Network Solutions Bangladesh Ltd) is the only manufacturer in Bangladesh to export Fiber Optic Products for last 15 years. It's a Joint Venture with USA & Danish Fiber Company. It is Located at 143/1 New Baily Road, Dhaka-1000, Bangladesh. The Company website is [www.fonsbd.com](http://www.fonsbd.com)

**FONSBD** Specializes with the Following Network Products and Components:

- Fiber Optic Patch Cords and Pigtails
- All Type Fiber Optic Connectors and Adapters
- Fiber Optic Cables
- ISP, NTTN, FTTX, FTTB Products
- Cable Managment Products
- CATV Product
- Wireless & Wi-fi Products
- All Types of Switches & Routers
- OPGW Cable for Power sector
- Fiber Optic Signaling Products for Rail road
- After Sales Service
- Service & Installation
- LAN & WAN Products
- Test Equipments and tools (Splice machine, OTDR, Analizyers, Monitoring Systems, etc)

Member of:



Foreign Investors  
Chamber of Commerce



American Chamber of  
Commerce in Bangladesh

**FONSBD** emphasizes to PDCA (Plan, Do, Correct & Act) System to ensure all customers get the products with optimum cost effecincy and on time solutions of the highest quality of international standard by achieving zero defect in quality. It is an **ISO9001:2004** certified company for Quality and Environmental Management.

**FONSBD** is exporting products to Australia, Denmark, France, Germany, Ireland, the Netherland, USA and other Countries.

Manufacturing capacity	FC/LC/MTRJ/SC/ST/E2000/ Lx, 5 Termination/year 850 000 pcs
	Connector (ST/SC) Assembly/ year 2,184 000 pcs
	Adapter (ST) Asembly/year 1248 000 ocs
	Adapter (ST) Asembly/year 168 480 pcs
	Light Guide/year 40000 pcs



# Patch Cord & Pigtail

## Patch Cord & Pigtail

*24-hour delivery on custom orders*  
**Made in Bangladesh**

**FONSBD** Patchcords and Pigtails are delivered with Ceramic Zirconia Ferrules and high quality houses. The cables are tested and manufactured according to the ITU and Bell Core Standards and are delivered with all test reports. All common Patchcords and Pigtails are on stock and can be delivered as needed. All cables are made from PVC/LSZH materials or as required.

**FONSBD** assembles multiple varieties of Fiber Optical Patchcords and Pigtails.

### Features:

- Single-mode & Multi-mode (50/1125, 62.5/125, OM3)
- Core Type : G 652D & G 657A
- LSHZ Cable
- Standard & custom configurations
- Precision end face geometry testing
- UPC/APC polished connector
- High density packaging, reliability and efficiency

### Performance Specification:

- MMIL <0.30 dB
- SM IL <0.20 dB
- RL>55 dB & 65 dB

### Benefits:

- Excellent side load performance
- Easy installation
- Environmentally stable
- Factory terminated & tested
- Customized for unique application
- High strength relief
- Low insertion loss
- Ultra low return loss



# Patchcord

24-hour delivery on custom orders  
**Made in Bangladesh**

## Features

- No minimum quantity required: we take orders, with even 1 piece at any customized lengths, any connectors or any polishing.
- Instant delivery: the lead-time is only 24 hours upon receipt of your orders.
- Each single piece is strictly inspected: both insertion loss and return Loss are hand-written on the label for individual package.
- Each individual cord is packed with bubble pack first and re-packed with another layer of PE pack first and re-packed with another layer of PE plastic bag to ensure the securest protections.



SC-SC(SM)



SC/APC/APC(SM)



SC-SC(MM)



ST-S(MM)



FC-FC(SM)



FC-FC(MM)



LC-LC MM)



LC-LC MM)

# Why is FONSD is a Leading Supplier of Custom Fiber Optic Assemblies...

## 1. Flexibility

- Wide Selection of components from leading manufacturers
- Ability to build to Engineering specifications or drawings
- From a quantity of 1 or 1,000 FONSD can deliver

## 2. Fast Delivery / High Quality

- Cables are ready to ship nationwide and internationally in as little as 2-3 days
- 100% inspection and tested to industry standards
- ISO 9001-2008 Certified
- Over 15 years of cable assembly experience

## 3. Additional Services

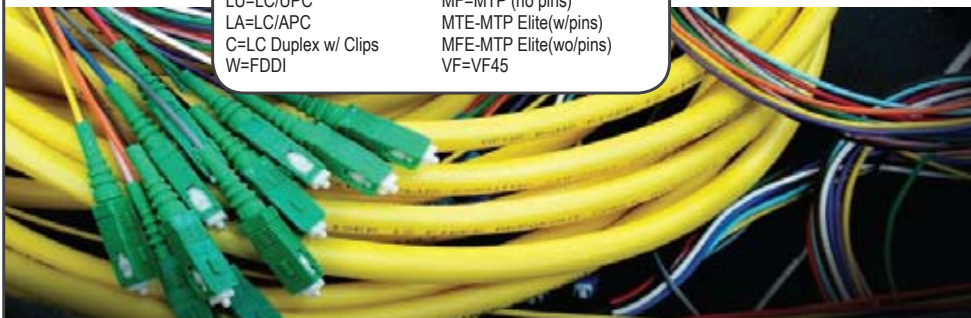
- Termination of Customer Supplied Materials
- Creation of Engineer drawings of assemblies
- Custom packaging, labeling
- Experienced engineering team to help design an assembly for any application

Our goal is to provide our customers exactly what they need and when they need it, just provide our sales representative a description, engineering specification, or even a drawing on a napkin and we will do the rest!!

### CUSTOM FIBER OPTIC CABLE ASSEMBLY CONFIGURATOR:

Use this chart to build cable you need to your exact specifications.

CABLE TYPE	FIBER TYPE	CONNECTOR SIDE A	CONNECTOR SIDE B	CONNECTOR MFG
S	3	7A	8U	
S=Simplex 3.0mm D=Duplex 3.0mm B=Breakout C=Distribution G=GGP Fiber Cable L=Loose Tube I=Indoor/Outdoor R=Ribbon x=Duplex 1.6mm E=250µm Bare Fiber y=Simplex 1.6mm T=Simplex 2.0mm V=Duplex 2.0mm LA=Loosetube Armored A=Armored Cable PM=Polarization Maintaining RF=Ribbon Fan-Out ENC=Epoxy Node Cable N=900µm Buffered Fiber DB=Dry Block Cable Specialty MD=Micro-Distribution IG= Indoor/Outdoor Rated (250µm) BA=Breakout Cable w/Interlocking Armor TB= Tactical/Broadcast Cable DA= Outdoor Gel Free Armored Cable LZ=LSZH Cable RA=Ribbon Interlocking Armored Cable AER=Aerial RD= Round Duplex F= 1.8mm Simplex H= 1.8mm Duplex	1=50/125µm - OM2 2=62.5/125µm - OM1 3=8-9/125µm - OS2 4=Other 5=100/140µm 6=200/230µm 7=960/1000µm (plastic) 8=BI 50µm 10Gig - OM3 9=BI Singlemode 10=BI 50µm 10Gig - OM4 11=x B-SM-Bend Optimized 12=ZBL-SM-Zero Bend Loss 13=LBL-SM-Low Bend Loss	1=SMA905 2=SMA906 3=Biconic 4=FC/Stainless Alloy 5=ST/Stainless Alloy 6=D4 7=FC/PC 7U=FC/UPC 7A=FC/APC 8=ST/PC 8=ST/APC 8U=ST/UPC Y=SC/PC YU=SC/UPC YA=SC/APC D=SC Duplex w/ Clips L=LC/PC LU=LC/UPC LA=LC/APC C=LC Duplex w/ Clips W=FDDI	x=Escon F=Ferrule Only M=MU/PC MU=MU/UPC 9A=PM-FC/APC 9U=PM-FC/UPC P=Pigtail AU=High Performance FC/UPC AA=High Performance FC/APC BU=High Performance SC/UPC BA=High Performance SC/APC EU=E2000/UPC EA=E2000/APC MJ=MTRJ (no pins) MT=MTP (w/pins) MP=MTRJ (w/pins) MF=MTP (no pins) MTE-MTP Elite(w/pins) MFE-MTP Elite(wo/pins) VF=VF45	NP= No Preference FONSD= FONSD M= 3M MO= Molex S= Seikoh Giken CCS= Corning U= USConec CUS= Customer Supplied



# DID YOU KNOW

In order to share our knowledge we have included a technical terms glossary for reference when constructing custom assemblies.

## CONNECTOR POLISH TYPES

- **PC** - Physical Contact. The connector end face has a low radius of curvature and offers good basic performance. Typical performance is  $< -30\text{dB}$ .
- **UPC** - Ultra Physical Contact. The connector end face has a higher radius of curvature, which aids in the reduction of back reflection into an optical system. Typical performance is  $< -55\text{dB}$  and often is identified by a blue strain relief boot or connector body.
- **APC** - Angled Physical Contact. The connector end face is angled at 8 degrees to achieve maximum reduction of back reflection. Typical performance is  $< -65\text{dB}$  and often is identified by a green strain relief boot or connector body. Often used with singlemode fiber in long haul applications and can only be mated to another APC connector.

## JACKET TYPES

- **PLENMm (OFNP)** - refers to a specific fire code rating of cables that are resistant to fire and do not emit toxic fumes or smoke when burned. Plenum-rated cables are primarily used in pathways for either heated, cooled or return airflows.
- **RISER (OFNR)** - is constructed of PVC and may emit toxic fumes when burned and is to be run in non-plenum areas. Plenum cable can always replace riser cable, but riser cable cannot replace plenum cable in plenum spaces.

## CABLE CONSTRUCTION TYPES

- **BARE FIBER** - A single glass fiber typically consisting of a core, cladding and 250 $\mu\text{m}$  acrylate coating.
- **TIGHT BUFFER** - A single bare fiber with an outer coating that is typical 900 $\mu\text{m}$  in diameter.
- **SIMPLEX** - A single fiber cable that may consist of a 900 $\mu\text{m}$  coated fiber or a combination of a 900 $\mu\text{m}$  coated fiber surrounded by an aramid yarn strength member with an outer jacket diameter varying from 3, 2, 1.8 and 1.6mm.
- **DUPLEX** - A two-fiber cable that consists of a combination of two 900 $\mu\text{m}$  coated fibers surrounded by an aramid yarn strength member with an outer jacket diameter varying from 3, 2, 1.8 and 1.6mm. Also can choose 900 $\mu\text{m}$  duplex cable where the two 900 $\mu\text{m}$  buffers are joined together (limited offering from manufacturers)

• **BREAKOUT** - Packages multiple 2.5-3.0mm jacketed fibers and surrounds these sub-units with an aramid yarn strength member and outer jacket. Fiber counts typically are 2-24 fibers. Primarily used in application where a rugged or robust cable is required.

• **DISTRIBUTION** - Packages multiple 900 $\mu\text{m}$  tight buffered fibers, surrounded by aramid yarn strength member, in a larger outer jacket. Fiber counts typically range from 2 – 144 fibers. Primarily used indoors and popular with interlocking armor for extra protection. Often referred to as MIC cable construction by other manufacturers.

• **MICRO-DISTRIBUTION** - Packages multiple 250 $\mu\text{m}$  buffered bare fibers of different colors within sub-units to minimize the outer jacket size. Fan-out kits or furcation tube often required to terminate connectors. Popular for indoor use with MTP/MPO connector and Fan-out assemblies in Data Center applications.

• **LOOSE TUBE** - Packages 250 $\mu\text{m}$  buffered fibers amongst each other in gel filled sub units typically 2.0-2.5mm. The gel filled tubes provide superior protection against changing temperatures and water filled conduits. Outer jacket is UV and moisture resistant.

• **LOOSE TUBE ARMORED** - Packages 250 $\mu\text{m}$  buffered fibers amongst each other in gel filled sub units typically 2.0-2.5mm. The gel filled tubes provide superior protection against changing temperatures and water filled conduits. The outer jacket is extruded over corrugated coated steel tape offering rodent proof protection, the jacket is UV and moisture resistant.

• **OUTDOOR DRY (GEL FREE) CABLE** - Packages 250 $\mu\text{m}$  buffered fibers within super absorbent polymer or water treated blocking aramid yarn. Dry loose tube design improves ease of termination without gel filled tubes. Recommended for installation in ducts, underground conduit or aerial/lashing applications not intended for direct burial. Armored version of cable utilizes corrugated coated steel tape for rodent protection, with extruded UV resistant jacket.

• **DISTRIBUTION INTERLOCKING ARMORED** - Available with Riser or Plenum rated outer jacket this cable houses 900 $\mu\text{m}$  buffered fibers surrounded by aramid yarn with interlocking aluminum armor then extruded outer flame resistant jacket. Intended for harsh indoor environments requiring heavy duty protection.

• **TACTICAL CABLE** - Packages typically multiple 2.0-2.5mm jacketed subunits surrounded by aramid yarn with epoxy/fiberglass strength member. Rugged design for heavy duty applications such as TV cameras, mining/harsh environments and military/commercial field re-deployable communications. Tactical Distribution packages 900 $\mu\text{m}$  fiber rather than larger subunits.



# Fiber Optic Connectors



FONSBD can supply a variety of Fiber Optic Connectors (FC, LC, and ST). We have all common generic types on stock. Additionally a number of special connectors (E200, Lx.5, MTR) are on stock. The connectors are produced according to the ITU and Bellcore Standard with Ceramic Ferrule.

Most connectors are in Simplex versions and SC & LC are also available in Duplex versions.

## Following standard color code is used:

- Beige for Multimode Connector
- Blue for Singlemode Connector
- Green for Angled Connectors

## Features:

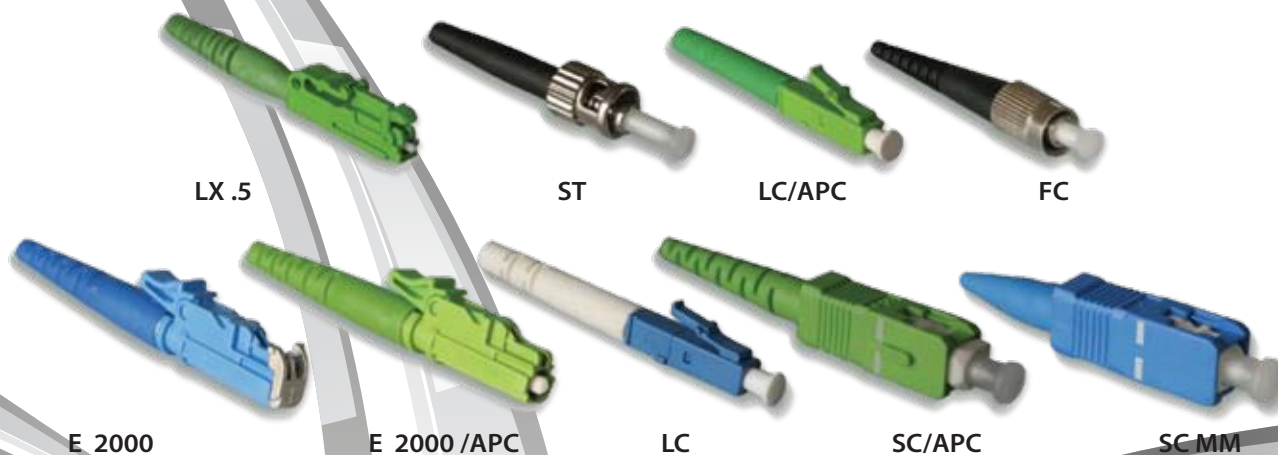
- Low insertion loss
- Low back reflection loss
- Easy to handle
- Customer defined specification
- Environmentally stable

## Applications:

- Telecommunications
- Local area network
- Fiber to the home
- Fiber optic sensors
- Testing instruments
- CATV

## Applications:

	Single-mode	Multi-mode
• Tmode type		
• Typical Insertion Loss, dB	0.15	0.3
• Typical Return Loss (*), dB	-50	-
• Operating Temperature, °C		-40~+75
• Storage Temperature, °C		-55~+85





# Fiber Optic Connectors

*24-hour delivery on custom orders*



Multi-mode SC/PC-Duplex



Multi-mode SC/PC-Simplex



Single-mode SC/PC-Duplex



Multi-mode SC/PC-Simplex



Single-mode SC/APC-Simplex



Multi-mode LC/PC-Duplex



Multi-mode LC/PC-Simplex



Single-mode LC/PC-Duplex



Multi-mode FC/PC-Duplex



Multi-mode FC/PC-Simplex



Single-mode FC/PC-Duplex



Single-mode FC/PC-Simplex



Single-mode FC/PC-Simplex



Multi-mode ST/PC-Duplex



Multi-mode ST/PC-Simplex



Single-mode MU-Duplex



Single-mode SC/APC-Duplex



Single-mode LC/PC-Simplex



Single-mode FC/APC-Duplex



Multi-mode MTRJ

# Adaptors



**FONSBD** can supply variety of Fiber Optic Adaptors and have common types in stock. Also a number of special Adaptors are Available in stock. The Adaptors are produced according to the ITU and Bellcore Standard with either Ceramic Zirconia or Metal Sleeve. Most Adaptors are produced in Simplex and Duplex versions.

## Following standard codes are used:

- Beige for Multi-mode Fiber
- Blue for Single-mode Fiber
- Green for Angled Fiber Connectors

## Features:

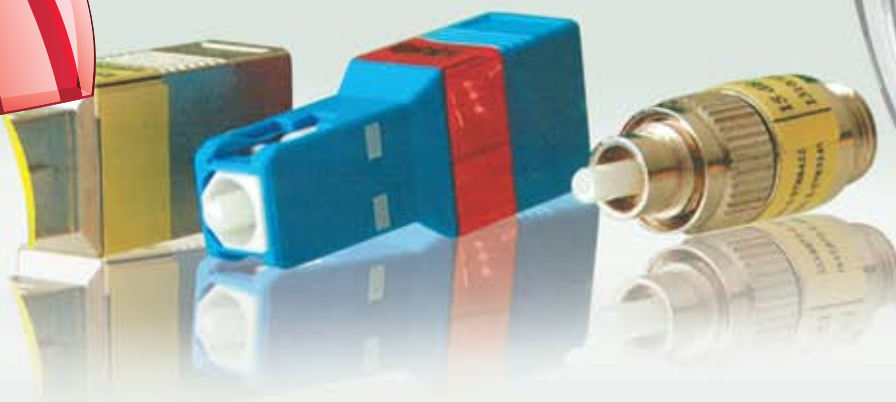
- Low insertion loss
- Low back reflection loss
- Easy installation
- Environmentally stable

## Applications:

- FTTX, Gpon, Epon Technologie
- Telecommunication Networks
- CATV Networks
- Active Device Termination
- Local Area Networks
- Fiber to the home



# Attenuators



**FONSBD** can supply a variety of fiber optic attenuators. The attenuators are produced according to the ITU & Bellcore Standard with Ceramic Zirconia sleeve. Different values attenuators are available with **FONSBD**.

## Fixed/Variable Type Attenuators Features:

- Hight Durability
- Attenuators Levels ringing from 1to 30dB
- Metal-ion doped Fiber
- Compliance with TIA/IEA, IEC, Rohs
- Precise Attenuations value
- Environmentally stable
- Excellent return less
- Bi-directional
- Air Gap or Doped Fiber Type

## Applications:

- FTTX, Gpon, Epon
- EDFA, DWDM, Long -Haul
- Telecommunication Networks
- CATV
- Subscriber Loop
- Local Area Network
- Gigbit Applications (ATM, Ethernet)



**SM Fixed - Attenuators  
SC/APC Male - Female**



**SM Fixed - Attenuators  
SC/PC Male - Female**



**SM Fixed - Attenuators  
ST/PC Male - Female**



**SM Fixed - Attenuators  
SU/PC Male - Female**



**SM Fixed - Attenuators  
LC/PC Male - Female**



**SM Fixed - Attenuators  
FC/APC Male - Female**



**SM Fixed - Attenuators  
FC/PC Male - Female**



# Copper Items

Combining innovation with technological leadership. **FONSBD** people are service and customer-driven and believe in acting locally. FonsBD has what it takes to handle large projects, while being versatile and flexible enough to do much more than simple supply cables. How can we be of service to you?

Here you will find all kinds of copper cables for telecommunication networks. If you cannot find the right proper cables, please contact **FONSBD**.

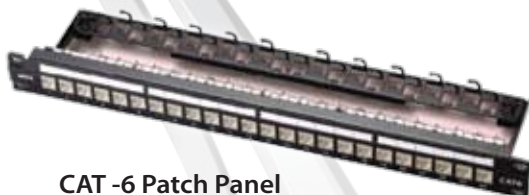
**FONSBD** offers exclusive brands as Draka for quality copper cables that on one else can provide with such accuracy that is customized for your needs.

UT-EFMA

Pairs in bundle, Jelly filled, PE sheath, Fig.-construction, 10-000 pairs



CAT -6 Patch Panel



CAT -6 Patch Cord



RJ- 45 Connector



CAT -5 Moduler



CAT -6 Moduler



Cable Manager

# Cable Management



Close Cabinet



Open Rack



Close Cabinet

Different types of cable management system are available from **FONSBD** for making your network standard

## Open Rack

Size 3', 4' & 7'

The 19" format open frame rack and rack floor mount products are available in 3, 4 and 7 feet height and in natural black electrostatic powder coat finish. The rails are tapped # 12-24 front and rear in EIA Compliant spacing. They are designed with mounting holes which allow anchoring to the floor.

### Features:

"U" shaped rails 3" x 3/16" tapered both front  
Complete with assembly hardware and set of # 12-24 tapped equipment screws  
Mounting rails on front of enclosure only  
Open frame rack meets or exceeds EIA-310D standards  
Base with perforated holes for floor anchoring  
Easy to assemble  
Laminated Steel 14 AWG rack floor mount brackets

### Wall Mount Close Cabinet

Size; 19" (w) x 15 U, 12 U, 9 U, 6 U (H) x 450 mm (D)

- Opening direction Front Glass Door
- Adjustable Mounting Depth
- Lockable Doors and Side Panels
- Marked U Position
- Optimized Width-19" Standard
- Powder Coat Paint finish
- Quick release Front and Back doors
- Opening of Side Panels
- 4 Point Power-AC
- 1 Cooling Fan hidden in the top
- Cage, Nuts & Screws

### Close Cabinet

Size; 19" (w) x 42 U, 32 U, 9 U, 6 U (H) x 800 mm (D)

- Opening direction Front Glass Door
- Vented Back Door For efficient Cooling effect
- Adjustable Mounting Depth
- Lockable Doors and side panels
- Marked U Position
- Powder Coat Painted finish
- Easy Opening of Side Panels
- 5 Point Position
- Cable Arrangement Holder
- 4 Cooling Fan hidden in the top
- 2 Sliding Rail Tray Cage, Nuts & Screws
- 1 Sliding Rail Tray Cage, Nuts & screws

# Patch Panel & ODF



## Modular Adapter Panels

Modular adapter panels are ideal for LAN applications, providing easy configuration of any compatible patch panel. Adapter panels are available with most common single-mode and multi-mode adapter types including: SCSC duplex, FCLC duplex, and MT-RJ. They are also available in a variety of configurations.

## Wall Mount Patch Panels

The Wall Mount Patch Panels are ideal for LAN applications requiring a fully enclosed and lockable wall mount enclosure. The cabinets are one or two door direct termination and splice solutions. These enclosures are designed to support up to four modular 8 port adapter panels. For splicing applications, the enclosures supply with FONSBD Splice module and up to four 8inch 12 fiber splice trays. This enclosure is available preloaded with any industry standard adapter.

## Rack Mount Patch Panel and ODF

The Rack Mount Patch Panels are ideal direct termination and splice solutions for LAN applications requiring enclosures capable of supporting up to 144 fibers. The Rack Mount enclosures allow mounting using only 1U or 2U of rack space, depending on the unit chosen. The Rack Mount enclosures support all type modular adapter panels with any industry standard adapter. For splicing applications, up to six splice trays can be easily mountable.

## Horizontal Cable Manager

Lightweight plastic construction provides durability and easy installation. Patented dual hinged cover allows cable access without removing cover. Rounded edges on fingers protect cables from snags and damage to cable. Flexible fingers allow easy installation and removal of cables increased finger spacing provides larger area for high performance Category 6 cables. Pass through holes allow to rear cabling. Mounts to standard 19" EIA racks and cabinets. Covers 12-24 and M6 mounting screws included.



Rack Mount Patch Panel



Wall Patch Panel



ODF





# FTTX & HSHD

## Solutions

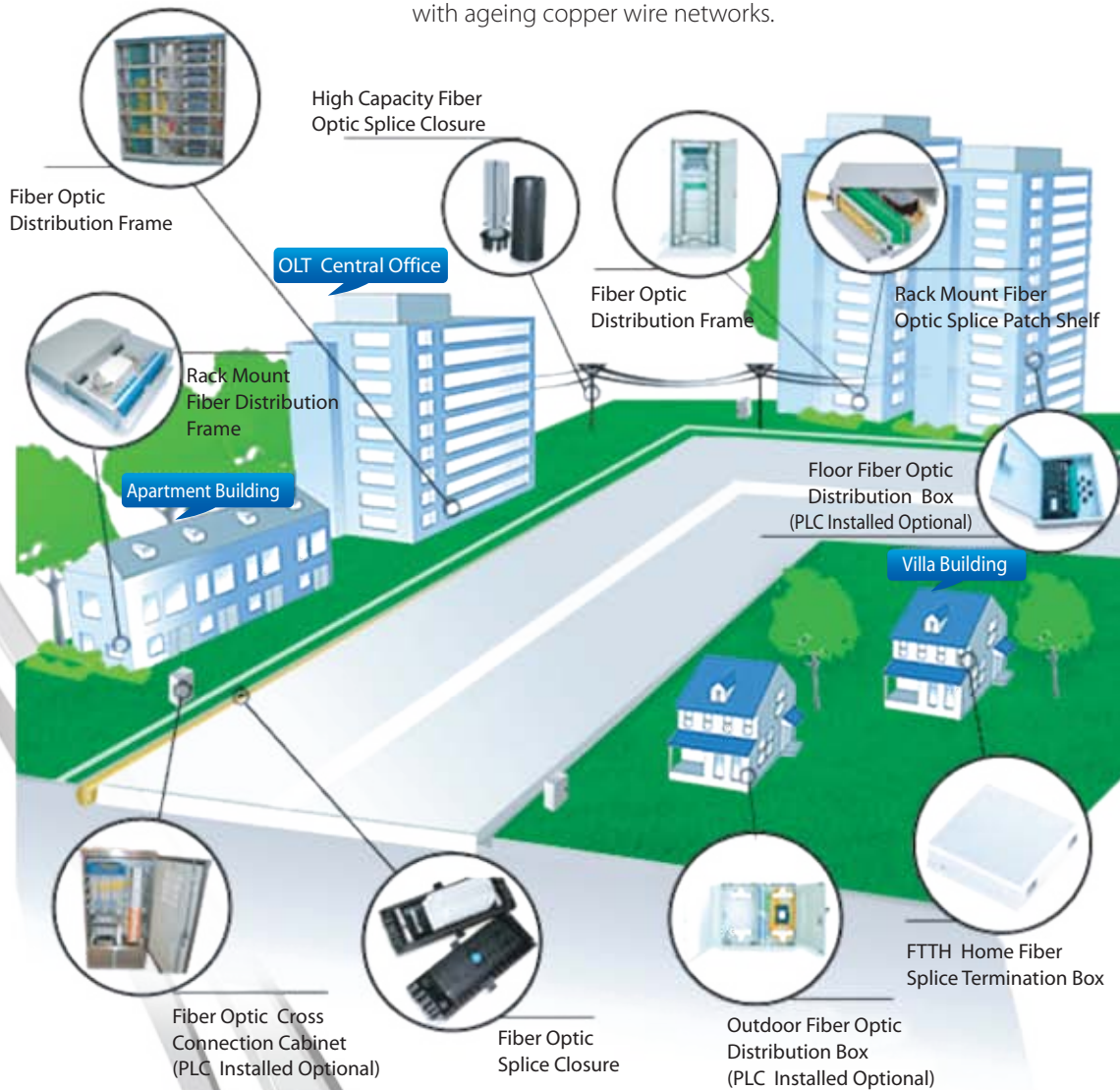


# FTTX & HSHD Solutions



FTTH (Fiber To The Home) + HSHD (High Speed, High Definition) Ready Home allows you to distribute, share and enjoy ultra-high quality voice, data and video at the fastest speed possible today in your home.

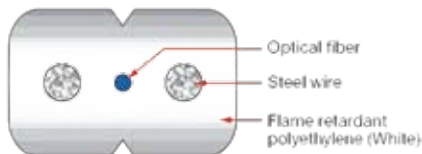
FTTH (Fiber To The Home) is a 100% optical connection between you and the service provider. FTTH delivers High Speed Broadband connections that carry high-bandwidth voice, data and video at the same time. This cannot be done with ageing copper wire networks.



- Uses compact PLC splitter technology
- Quick provision of circuits with SCA connectors
- Minimal cable management from use of optimized splitter cable lengths
- Up to four 1x32 splitter modules, 144 ports per FDH.

## 1. Fiber Distribution HUB (FDH) & Splitter





## 2. Low Friction Cable

- Very low coefficient of friction that makes installation extremely easier
- Low friction cables with metallic strength members.
- Helps to build fast and simple FTTH networks with reduced CAPEX.
- Indoor/Outdoor cable is UV resistant, alkaline & acidic environments and flame retardant as per IEC 60332-1



## 3. Indoor Type Splicing Box

- Provides distribution points for terminating, splitting and cross-connecting fibers.
- Various configurations of pre-installed splitters, and centralized splitting.
- Secured with a key.



## 4. ONU

- Maximum distance: 20km; Maximum splitting Ratio:1:64(10km)
- Support various service, such as Data, VoIP and IPTV
- Support Dynamic Bandwidth Allocation technology
- Support optical power real-time detection(optional)
- Support PPPoE, DHCP, static IP



## 5. PoE Media Converter

- Combine data received over a fiber optic link with -48VDC power;
- Providing power to Data Terminal Equipment (DTE) Power Devices (PD) over unshielded twisted pair cable.
- Transition's PoE media converters come in 10, 100, or 10/100 PoE.



## 6. Industrial Networking Switches

- A complete range of Industrial Networking Switches covering from Rack Mount Switches for back bone and control room, DIN-Rail, modular, Open rail switches and IP67 switches
- Complete network solution for Industrial, Hospitality, Education, Healthcare, Government and critical application.



## 7. SFP Media Converter

- Conversion between different transmission speeds and media types
- Standalone and compact hardware design
- Auto-negotiating Ethernet port (Speed and Half/Full Duplex)
- Auto-crossover Ethernet port (Supports Auto MDI/MDI-X)
- Built-in Link Loss Forwarding Technology

### Features:

- High precision ceramic ferrules insure fiber alignment and repeatable performance
- Rugged metal connector bodies provide sturdy cable terminations
- Industry standard interfaces allow interoperability with media equipment
- Meets EIA/TIA 568B performance requirements
- Field proven crimp technology improves connector/cable tensile performance

### Applications

- Premise environments
- Desk for LAN environments
- Patch panels
- Direct equipment termination
- Fiber to the Subscriber (FTTx) applications
- Repair/replace men requirement



## 8. Field Installable Connector



## 9. Media Converter Chassis

- Detailed Product Description
- Support 14 & 16 slots
- 10/100M MC or 10/100/1000 MC both support (Card also)
- Remote manageable fiber media converters
- Non-manageable fiber media converter including variety of data rate
- SM/MM, single fiber and double fiber





## 10. Optical Fiber Media Converter

### Main features:

- Auto negotiation function allows UTP ports to auto select 10/100/1000M
- Full Duplex or Half Duplex.
- The UTP port supports the connection of MDI/MDI-X auto crossover.
- Multimode Fiber: the max distance up to 224m/ 550m Single-mode Fiber: The max distance up to 100km
- Supporting the max 1536 byte Ethernet packet



## 11. OLT

- FTTH access for Telecom Operator. Compared with other GEAPON products.
- High integration, reliability, flexibility but also with QoS control, manageability and expandability for the network.

### Application:

- FTTH/FTTB/FTTC fiber optical network.



## 12. Splitter

### Features:

- High channel count
- Superior uniformity
- Low polarization dependent loss (PDL)
- 19" Rack mount
- Protection and coiling for the input patch cord/fiber pigtail

### Application:

- FTTH, PON, and CATV systems
- Redundant network paths for protection and security



## 13. DWDM SFP Transceiver

### Features:

- Up to 1.25Gb/s bi-directional data links
- Hot-pluggable SFP footprint
- 1550nm DFB laser transmitter
- Single LC connector
- Very low jitter
- Up to 9/125 SMF
- Single 3.3V power supply

### Applications:

- Gigabit Ethernet
- Switch to Switch interface
- Router/Server interface



## 14. E1 to Ethernet Protocol Converter

### Key Features :

- Up to 10Gb/s data links
- L+c band wavelength
- Compliant with SFP MSA and SFF-8472 with duplex LC receptacle
- Digital Diagnostic Monitoring:
- Internal Calibration or External Calibration
- Compatible with RoHS
- +3.3V single power supply
- Operating case temperature:
- Standard : 0 to + 70 °C
- Industrial : -40 to + 85 °C

### Applications :

- SDH system
- OC series system
- Router/Server interface
- Switched backplane applications
- Switch to Switch interface
- Other optical transmission systems



## 15. Optical Fiber Amplifier(OFA)

### Product characteristic:

- Based on self-copyright IC.
- Half/full duplex self adaptable.
- Supporting VLAN.
- RJ45 interface supports AUTO-MDIX; provides 2 clock types: E1 master clock, E1 line clock.
- Provides 3 kinds of loop-return function, namely E1 self-looping at local end, Ethernet self-looping at local end, and Ethernet being ordered to self-loop at remote end.
- Supports 75 unbalanced and 120 balanced impedance at the same time.



## 16. EDFA

### Features:

- High output power
- Flexible and precise setting
- Low noise figure
- Wide operation temperature range: -15 °C to +65 °C

### Applications:

- Single channel amplification
- Long distance networks
- intracity networks and access
- SDH/PDH optical transmission system



## 17. Under Ground Joint Closer

**Purpose:** aerial, direct-burying, wall-mounting, Pipeline laying way

**Structure:** open structure / Split Type (quick installation type)

**Components:** Seal tape, Insulation tape, Nylon tie, optical cable heat shrinkable sleeve, mental hook, seal fittings, numeral bar, retaining ring

**Optic property:** The spare fiber coiled in the fiber emplacing device;

### Application:

- It is widely used for communication,
- Network system, cabled T.V. of CATV, the fiber optic cable by network



## 18. ODF

### Features of the structure:

- 19" standard mounting
- Metal, static electric plastic sprayed, neat appearance, reasonable structure
- Flexible installation, convenient for operation and maintenance
- Designed as a drawer & Suitable for both ribbon & bunch fiber cables
- Every tray can be clamped with 12 FC, FC (Duplex), SC or ST adaptors



### Key Features:

- Low Insertion loss & High Return Loss
- Option Coupling Ratio
- Wide Operating Temperature
- Qualified Under Telcordia GR-1221

### Applications:

- FTTX (FTTP, FTTH, FTTN, FTTC)
- Passive Optical Networks (PON)
- Local Area Networks (LAN)
- EDFA systems
- Test Equipment

## 19. Splitter

### Benefits of FONSBD FTTH:

- Structured cabling system
- Easy to manage wiring system
- Moving services from one room to other quickly and without breaking and wiring
- No multiple cables entering into the premise
- The Interior decoration is not disturbed
- Switch from one service provider to another without changing any equipment
- Dealing with one centre for all your service provider co-ordinations
- End-to-End FTTx Solutions for centralized and decentralized deployments
- Supports infrastructure serving residential and commercial customers
- Operational experience delivered (planning, deployment, support)
- Pre-integrated hardware and software packages are designed for rapid turn-up
- High-quality products with competitive pricing to fit every business case
- Low OPEX



# CATV Products

**FONSBD** is a well known brand in CATV industry. FONS targets emerging technology applications in CATV with a complete line of RF and fiber distribution, video, data, IP, HDTV active products and Passive Optical LAN GPON Solutions. FONS systems integration provides Turn-Key solutions for CATV, CMTS and VoIP deployment, as well as design and on-site Technical Support & solution.

## FONS CATV Products

1. Coaxial Cable
2. Nods
3. Channel Combiner
4. Demodulator
5. Amplifier
6. Splitter
7. Fiber Optic Transmitter
8. Optical Receiver
1. Transmitter 9DB
2. EDFA With Glass Door
3. Splitter 50:50,40:60,1:2:4:6 With Double Window
4. Node Optical to Coaxial
5. Fiber Optic Amplifier-EDFA
6. Nods and Transmitter
7. RF Single Level Meter



Nods



Coupler



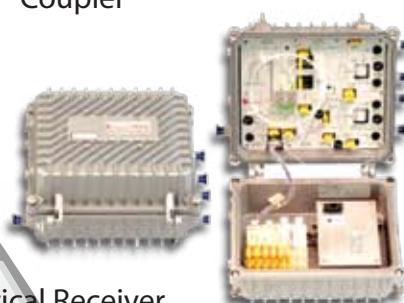
Amplifier



RF Cable



Media Converter



Optical Receiver



EDFA/Transmitter



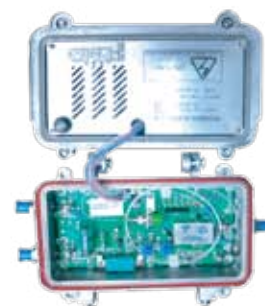
RF Cable



Optical Receiver



Splitter/TAP



Power Supply



# OPTICAL FIBER Cable

Optical Fiber Cable

# Fiber Optic Cable



## Lifetime Guarantee

**FONSBD is the exclusive authorized dealer for Optical Fiber Cable and FTTX Products of world renowned brand, Fujikura, Japan.**

The important objective for optical cable design is to protect fibers so that they can be operated safely in a complicated environment for long period of time. FONSBD has been trying to provides all kinds of optical cables to their clients with protected but precise construct design, state of art process control and high quality material, and the cable lifetime is guaranteed.

### Type of Fiber Optic Cable:

- Duct, Direct Burial, Aerial, Indoor, Figure-8
- Single & Multi-mode Fiber
- Low Friction Cable
- Central Loose tube & Multi loose tube designs
- Single & Double Armoured
- Loose Tube & Tight Buffer design
- PVC & LSZH outer jacket

### Typical Optical Fiber Cable Specification:

Parameter	Value
Type of Cable	Duct, Direct Burial, Aerial, Indoor
Number of Fiber	1 to144, 216, 496, 1000 (Microduct Optical Fiber)
Fiber Type G 6527A	IUT-T G 652, G 652 D,G 653, G 654
Loose tube Material	PBTP, Nylon, High Modular Plastic
Water Resistance	Thixotropic Jelly
Strength Members	FRP, Aramid Yarn, Glass Fiber Reinforcements, Steel Wire
Moisture Barrier	Water Swellable tape, Flooding Jelly
Armouring Material	Copolymer Coated S.S tape, Copolymer Coated ECCS tape
Sheath/Jacket Compound	PVC, HDPE, LSZH
Attenuation at 1310 nm dB/km	<0.36 for G 562
Att enuation at 1550 nm dB/km	<0.25 for G 562
Temperature of Operation	-40 ?c+70?c
Tensile Strength (N)	As per IEC 794-1-E1
Crush Resistance (N)	As per IEC 794-1-E1
Minimum Bending Radius (mm)	As per IEC 794-1-E11



**Tube Outdoor Cable**

### Model Aluminum Tape Layer Loose Tube Outdoor Cable

#### Application:

- Adopted to outdoor distribution.
- Suitable for aerial pipeline laying method.
- Long distance and local area network communication.

#### Characteristics:

- Steel wire strength filler protect tube fiber. Aluminum tape armored.
- Good ultra violet radiation resistant property.
- Good moisture-resistance.



**GYTA 48 to 144 Core**

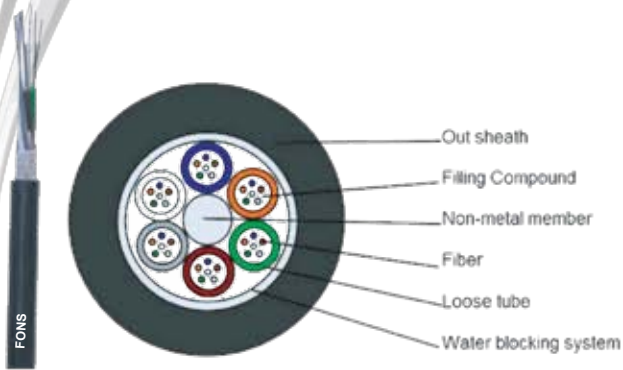
### Steel Tape Layer Loose Tube Outdoor Cable

#### Application:

- Adopted to outdoor distribution.
- Suitable for aerial pipeline laying method.
- Long distance and local area network communication.

#### Characteristics:

- Steel wire strength filler protect tube fiber steel tape armored.
- Good ultra violet radiation resistant property.
- Good moisture-resistance.



## Application:

- Adopted to Outdoor distribution.
- Adopted to trunk power transmission system.
- Access network and local network in high electromagnetic interfering places.

## Characteristics:

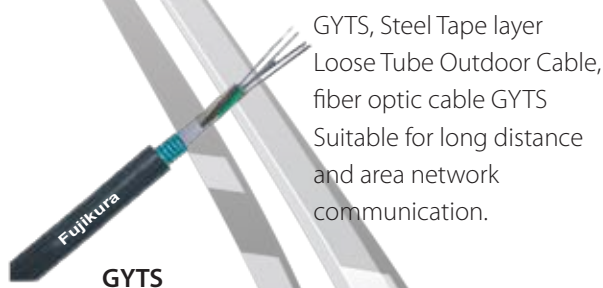
- Non-metal strength member.
- Filler protect loose tube fiber.
- Non-metal strength has an excellent anti-electromagnet ability.



Central Loose Tube Outdoor Cable, GYXTW Fiber optic GYXTW cable is an outdoor use optical fiber cable suitable for duct and arial applications.



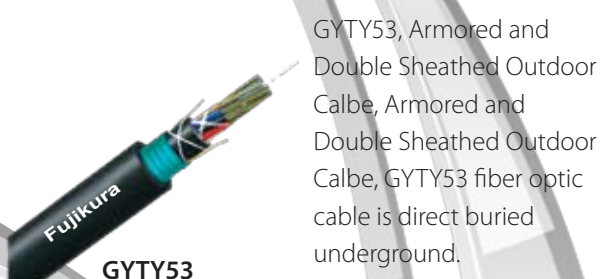
GYTA, Aluminum Longitudinal Layer Stranded Optic Cable, fiber optic cable GYTA is Adopted to Outdoor distribution, long distance and local area network.



GYTS, Steel Tape layer Loose Tube Outdoor Cable, fiber optic cable GYTS Suitable for long distance and area network communication.



Dielectric Loose Tube Cable, fiber optic cable GYFTY is adopted to Outdoor distribution. Suitable for Aerial, trunk power transmission system. Access network.

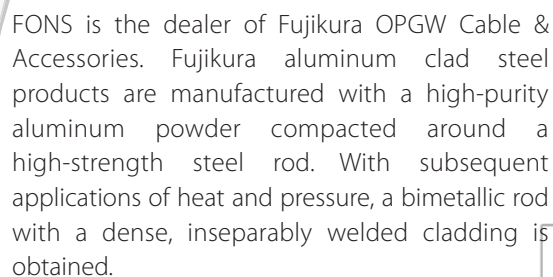


GYTY53, Armored and Double Sheathed Outdoor Calbe, Armored and Double Sheathed Outdoor Calbe, GYTY53 fiber optic cable is direct buried underground.



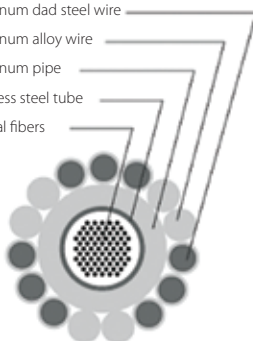
GYFTY53, China optical fiber cable GYFTY53 Manufacturers, China optical fiber cable GYFTY53 Suppliers, offer quality optical fiber cable GYFTY53 .

High strength and  
lightweight for superior quality

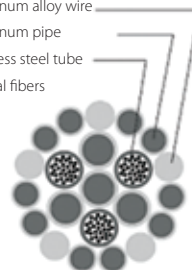


- " Industrial, semi-industrial and marine environments
- " Superior to aluminized steel
- " Lightweight Extra high strength steel but weighs 15% less
- " Fiber counts up to 432 or custom designs
- " High load, long span capability.

- aluminum dad steel wire
- aluminum alloy wire
- aluminum pipe
- stainless steel tube
- optical fibers



- aluminum alloy wire
- aluminum pipe
- stainless steel tube
- optical fibers



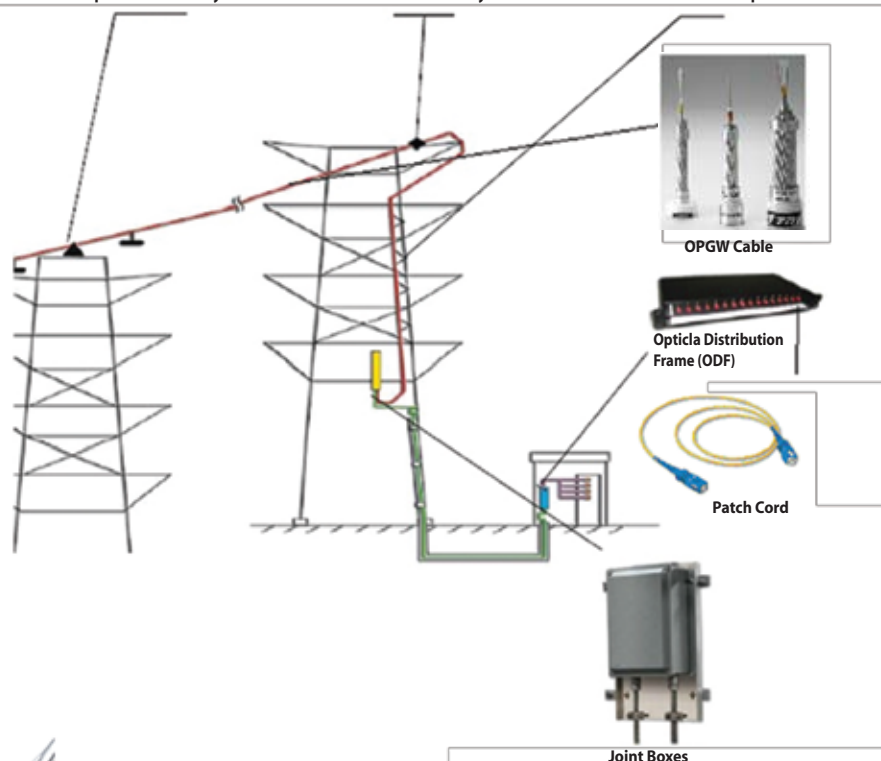
### Suspension assembly



### Tension assembly



### Down lead clamp





# FONS OEM Optical Fiber Cable

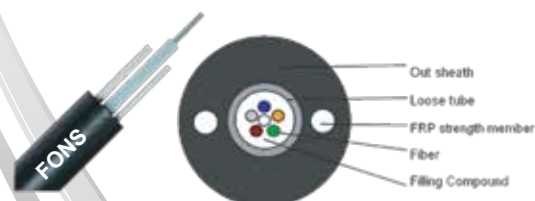


**Low CAPEX**

FONSBD is a professional OEM/ODM manufacturer of optic fiber cables. We are the first optical fiber cable OEM in Bangladesh with more than 15 years experience. Famous worldwide companies and local telecom are our main customers. We provide durable and stable products to customers with reasonable Optical Cable price.

Optical Characteristics				
Fiber Sort	Multimode	G.651	A1a:50/125	Duct, Direct Burial, Figure-8, Aerial & Indoor
			A1b:62.5/125	
	Singlemode	G.652D		Loose tube material PBTP, Nylon, HMP
		Cladding Diameter-125+ 1 $\mu\text{m}$		Cut-off wavelength shifted
		Core concentricity error $\leq 0.6 \mu\text{m}$		Zero dispersion shifted
		Cladding non-circularity $\leq 1.0\%$		Strength member's: FRP, Aramid Yarn, Glass Fiber Reinforcements, Steel Wire

## Unarmored Optical Fiber ( 4F/6F/12F)



### Non-metal Central Loose Tube Out Cable, GYFXTY, Characteristics:

- Non-metal strength member.
- Filler protect loose tuber fiber.
- Non-metal strength has an excellent anti-electromagnet ability.

**Application:** Adopted to Outdoor distribution.

- Adopted to trunk power transmission system.
- Access network and local network.

## Figure-8 Cable

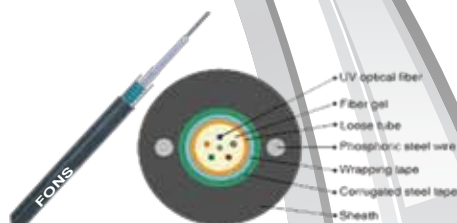


- Model Figure 8 self-supporting cable.
- Adopted to Outdoor distribution.
- Suitable for aerial duct and buried method.
- Long distance and local area network communication.

### Characteristics:

- Stainless steel or galvanized steel self-supporting.
- Excellent mechanical and environmental performance.

## Armored ( 4/6/12/48 up to 144)



### GYXTW, Central Loose Tube Outdoor Cable, GYXTW, Fiber Optic Application:

Adopted to Outdoor distribution.

- Suitable for aerial pipeline laying method.
- Long distance and local area network communication.

**Characteristics:** Steel-wire parallel memberfiller

- protect tube fiber steel tape armored.

# Test Equipments



Test Equipments

# Fujikura Splice Machine



**FONSBD is the only Authorised Distributor in Bangladesh.**  
**We also provide after sales service.**



**Splice Machine 60S**

## Features:

- Highly durable - designed for tough environments
- World's most compact & lightest of its class
- Core alignment with auto-fibre identification (PAS)
- 9 sec. splice time & 30 sec. tube-heat time
- Auto-start tube heater
- Optional fibre clamping methods
- Splice image capture facility
- Software upgrade via Internet
- Includes multi-function worktable



**Reborn Fiber Splicer**

## Model: FSM-60R (Reborn Fiber Splicer)

- Up to 12-fiber ribbon splicing.
- Cladding alignment with fixed v-grooves
- Environmental resistant features.
- Arc calibration-free system.
- 4.1" TFT color LCD monitor.
- Dual directional operation system.
- Long life battery.
- Fiber Count Single, 2, 4, 5, 6, 8, 10 and 12



**CT-05 Cleaver**

## The CT-05 series is an inexpensive alternative to CT-30

- Features [CT-05, CT-05A and CT-05B]
- Dedicated for single fiber cleaving.
- Circular blade system.
- Compact and light weight.
- Conventional Circular blade life up to 48000 cleaves.
- Detachable fiber plate AD-10 / AD-30B available.
- Fiber collector may be later designed as a different model.

## FUJIKURA mechanical splice kit ( Without Splice Machine)



- A single tool for 250 and 900  $\mu$ m coatings
  - A single consumable for 250 and 900  $\mu$ m coatings
  - Easy to grip and use
  - Use of fiber holders for easy handling
  - Uses the FUJIKURA CT-30A fiber optic cleaver
  - Hard, compact carry case
  - Alcohol cleaning solution dispenser and wipes included
- No Need Splice Machine**

# Anritsu Test Tools

**Anritsu**

FONSBD is the only Authorised Distributor in Bangladesh.  
We also provide after sales service.

## Optical Measuring Instruments

- Network Master Series
  - μOTDR Module
  - Drop Cable Fault Locator Module
  - Optical Channel Analyzer Module
- ACCESS Master
- Coherent OTDR
- OTDR Module
- Multi-Layer Network Test Platform
  - Optical Time Domain Reflectometer
  - OTDR/Chromatic Dispersion Application
  - Polarization Mode Dispersion Analyzer
  - Optical Spectrum Analyzer
- Optical Loss Test Set/Optical Power Meter
- Light Source/Optical Power Meter
- Optical Spectrum Analyzer
- Optical Fiber Identifier
- Visual Fault Locator
- Bare Fiber Adapter



MT9083A

The ACCESS Master MT9083 Series is designed to be the perfect tool for any application - from 50ft fiber drops to 60 mile backbone cables, single mode to multimode. All models feature 0.8m dead zones (typ), standard light source, connector inspection microscope support, USB data storage, long battery life and an enhanced indoor/outdoor display for direct sunlight viewing.

**Each Unit Includes:** Enhanced display, rugged display cover and softcase. Deluxe kits also include PM, VFL and NETWORKS PC software. Please specify adapter.



CMA5000A

### ANRITSU MT9083A/B/C FEATURES

- Larger (7 inch), higher resolution (800x480) display with LED backlight
- Longer battery operation time: Up to 10 hours
- Wider operating temperature range: -10 to 50°C
- New shortcut keys to simplify operation: quickly change between trace and event table or access set-ups and mass storage
- Lighter – now only 5.7lbs!

### ANRITSU CMA5000A

A powerful Windows-based unit, with large 10.4" color display, 40GB hard drive, touch screen and hard key user interfaces has several optics options to cover any testing needs from single-mode to multimode, from 24 to 50dB. Includes Windows® XP Pro Desktop and built-in DVD/CD-RW drive. Additional OTDR packages available.

### FEATURES

- Modular, Multi-layer Test & Measurement Platform
- 10.4" LCD touch screen
- Full Range of Modules: OTDR, PMD, CD, Ethernet, SONET, OSA
- Dedicated Testing Modes Simplify OTDR Operation



Medium Bay



Small Bay



## ANRITSU MT9090 HANDHELD NETWORK MASTER $\mu$ OTDR MODULE - MU909014B

When configured with a  $\mu$ OTDR module, the Network Master MT9090A creates a new class of test instruments. Its performance rivals traditional OTDRs that are four times the size and more than double the price. It features 5 cm resolution for accurate mapping of events, dead zones of less than 1 meter (3 feet) and a dynamic range of up to 37dB – enough to test over 150km (90+ miles) or PON-based FTTX networks featuring up to a 1x64 split. The MT9090A  $\mu$ OTDR also takes portability to a new level by being the first handheld OTDR that truly fits in the palm of your hand

PART #	DESCRIPTION
Z1489A	MT9090A Mainframe, 1310/1550 (37/36dB) OTDR, VFL
Z1490A	MT9090A Mainframe, 1310/1550 (32/31dB) OTDR, VFL



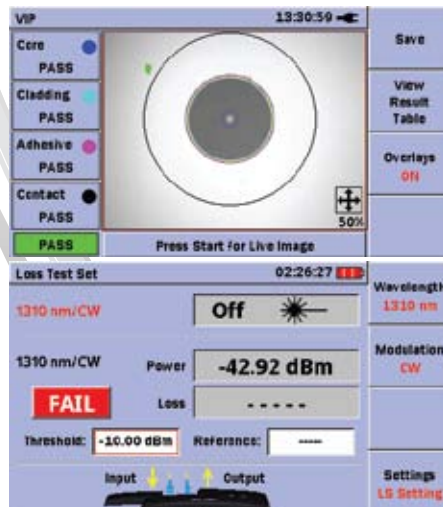
MT9090A



MT9090 with a protector boot



Main Frame



Z1383A



Network Master Module

## Bit Error Rate Tester (BERT)/Oscilloscope

- Signal Quality Analyzer
- 50G/56 Gbit/s MUX, 50G/56 Gbit/s DEMUX
- 4Tap Emphasis
- BERTWave

## IP/Network Measuring Instruments

- Data Quality Analyzer
- 40/100G Ethernet Analyzer
- Network Performance Tester
- 40G SDH/SONET Analyzer
- Network Master Series Gigabit Ethernet Module
- Multi-Layer Network Test Platform
- SDH/SONET/PDH/T-Carrier Analyzer

- 10 GigE/SDH/SONET/OTN Ethernet Test Set
- All-in-one Field Tester
- Ethernet Tester

## Monitoring/Service Assurance

- Integrated OSS Service Assurance Solutions MasterClaw

## Mobile/Wireless Communications Measuring Instruments

- Signalling Testers
- Fading Simulator
- W-CDMA Signalling Tester
- Protocol Test System (PTS)/Protocol Conformance Test Toolkit
- Rapid Test Designer (RTD)
- SUPL Simulation Server
- Log to Scenario Converter
- UTRAN/LTE Mobile Device Test Platform
- LTE RF Conformance Test System
- W-CDMA TRX/Performance Test System/ W-CDMA RRM Test System
- Modular Application Test Environment (MATE)
- CDMA2000 Scenario Composer
- Radio Communication Analyzer
- Service Tester
- Shield Box
- Vector Signal Generator
- Digital Mobile Radio Transmitter Testers
- Digital Broadcast Signal Analyzer
- High Performance Handheld Spectrum Analyzer
- Spectrum Master
- Cell Master
- BTS Master
- Bluetooth Test Set
- Bluetooth Audio Test Set
- WLAN Test Set
- High-Performance Passive Intermodulation Analyzer
- Air Interface Logging and Analysis Tools



S361E

Touch Screen

### ANRITSU SITE MASTER - S361E

Site Master S361E, covering 2MHz to 6GHz is designed to accurately locate and identify RF cable feed-line and antenna system faults. Model is suited for any experience level user for installing, commissioning, troubleshooting and maintaining today's wireless systems. Features: Superior immunity to RF interference, locate long range problems with 517 data points, saves up to 25 measurement test set-ups, saves up to 200 measurement traces.

**Each Unit Includes:** Site Master User Guide, Soft Carrying Case, MST CD: Master Software Tools, User/ Measurement Guides, Programming Manual, Troubleshooting Guides, Application Notes, Rechargeable Li-Ion Battery, AC-DC Adapter, Automotive Cigarette Lighter 12 VDC Adapter, USB A/5-pin Mini-B Cable.

### Anritsu Wireless Network Testing Selection Guide

	MT8212E	MS2712E	MT9090A	MT8221B	S331D/E	S332D/E	S361E/ S362E	MS2721B
Spectrum Analysis RF	•	•		•		•	•	•
Cable & Antenna Analysis				•	•		•	
Base Station Analysis	•	•		•				
Optical Cable Fault Location			•				•	
Optical Connector Surface Inspection			•					
Cable Sweeps	•	•		•	•	•	•	•
Interference Analysis	•	•		•		•	•	•
OTA (Over the Air) Comms Standards	•	•		•				•
Power Measurements	•	•		•	•	•	•	•
Signal Quality Measurements 3G/4G Comms	•	•		•				•
Wi-Fi WLAN Signal Quality and Spectrum Analysis		•						•

## Signal Analyzers/Spectrum Analyzers

- Signal Analyzers
- Spectrum Analyzer
- Spectrum Master
- High Performance Handheld Spectrum Analyzer
- VNA Master
- Web-Based Line Sweep and Document Tracking Tools



MS2721B

### ANRITSU SPECTRUM MASTER - MS2721B

Spectrum Master model MS2721B is an entirely new instrument for deploying, maintaining and troubleshooting wireless base stations and Wi-Fi (802.11a,b and g) systems. The first fully-functional handheld spectrum analyzer designed to conduct highly accurate analysis on the new wave of wireless signals, including 802.11a, 3G, ultra-wideband, and WiMax. Weighing in at less than 7 pounds, it is equally at home on the engineering bench and in the field. Typical Applications: Field and interference analysis of 3G, 802.11a/b/g and other emerging signal types. Features: Measure capability for applications up to 7.1 GHz, Handheld, battery-operated design, built in pre-amplifier, Quick zoom-in, zoom-out display in 1-2-5 sequence, dedicated one-button measurements, store up to 2000 measurement test set-ups, Save up to 2000 measurement traces, RJ45 Ethernet 10/100 Base T and USB 2.0 interfaces, Handheld (12" x 8" x 3") 6.4 lbs.

**Each Unit Includes:** User's Guide, a Soft Carrying Case, an AC - DC Adapter, an Automotive Cigarette Lighter/12 Volt DC Adapter, a CD ROM containing Master Software Tools and USB driver, a USB A-Mini B cable, an Ethernet Cable, a Rechargeable Li-Ion Battery Pack, a 2 GB USB Flash drive, a Type-N Male to SMA Female Adapter, a Type-N Male to BNC Female Adapter.

## Vector Network Analyzers

- Microwave Vector Network Analyzer
- Vector Network Analyzer
- Broadband Vector Network Analyzer
- VNA Masters
- Site Master
- LMR Master
- Cable and Antenna Analyzer
- Web-Based Line Sweep and Document Tracking Tools
- VNA Calibration Kits
- VNA Verification Kits
- Network Analyzer
- Reflection Bridges/Transformers

## Signal Generators

- RF/Microwave Signal Generators
- Fast Switching Microwave Signal Generator

## RF Microwave Measuring Instruments

- Microwave Frequency Counter
- Wideband Peak Power Meters
- Power Meter
- Inline Peak Power Sensor
- USB Power Sensor
- Resistance Attenuator
- Programmable Attenuator
- Pre-Amplifier
- EMI Probe
- Dipole Antenna
- Log-Periodic Antenna
- Biconical Antenna
- Rod Antenna
- Loop Antenna
- Standard Dipole Antenna
- Microwave Repeater Checker
- Signal Generator



S412D

### LMR TESTER

The LMR Master is the ideal instrument for technicians and engineers testing the RF performance of P25 and NXDN radios in the VHF/UHF, 400 MHz, 700 MHz, and 800 MHz bands. It can be configured to be equipped with a cable & antenna analyzer, spectrum analyzer, interference analyzer, channel scanner, RSSI, AM/FM demodulation, RF power meter, GPS receiver, and P25 Tx Signal Analyzer, P25 RF measurements, P25 Talk-Out Coverage Measurements, and NXDN Signal Analyzer. The high performance 500 kHz to 1600 MHz cable & antenna analyzer can be used to sweep cables and antenna systems.

## Components

- Fixed Attenuator
- Fixed Attenuator for High Power Measurement
- Termination
- 50Ω ↔ 75Ω Impedance Transformer
- Bias Tee
- Phase Shifter
- T-Pad
- Four-port Junction Pad
- CM Directional Coupler
- Directional Coupler
- 50Ω Coaxial Switch
- High-pass Filter
- Band Pass Filter
- RF Fuse Holder
- Fuse Element
- 32 Gbps LN Driver
- 9.5 - 11.5 GHz × 4 Frequency Multiplier
- 50 Gb/s EA Driver Module
- High Speed Digital ICs
- Precision RF & Microwave Components

## Peripheral Equipment

- Coaxial Cords, Adapters
- Dimensions of Waveguide Flanges
- Portable Test Rack
- F-series Cabinets
- E-series Cabinets

## Optical Devices

- 1.31/1.55 μm LD Module
- 1.48 μm LD Module
- 1.48 μm Cylindrical Module
- 1.55 μm SLD Module



# EXFO Analyzers & Monitoring

EXFO

FONSBD is the only Authorised Distributor in Bangladesh.  
We also provide after sales service.

## Transport & Datacom Product



### Ethernet Analyzer ETS-1000

- Two 10/100/1000BaseT and GigE
- Up to layer 4 traffic generation and analysis
- Three MPLS Level route prioritization validation & Cable diagnostics
- TCP/IP, DNS lookup and ARP monitor



Ethernet Tester

### AXS-200 Handheld Modular Platform

- DSL Triple Play
- One-touch test start/stop
- A single user interface for all SharpTESTER module series



### FTB-880 NetBlazer Multiservice Tester

- Comprehensive testing for DSx/PDH
- SONET/SDH and Ethernet interfaces up to 10 Gbit/s
- Simplified BER testing with pass/fail indicators
- Ether SAM (ITU-T Y.1564)
- RFC 2544 test suites
- Through mode bit-error-rate (BER) testing



### CWDM Analyzer: FOT-5200

- Installation, maintenance, repair of any CWDM network
- Cellular backhaul activation for telco and CATV operators
- Up to 16 CWDM channels



ROADM/POTS and  
40 Gbit/s testing

### EXFO FTB-500 4-Slot Platform

- Full fiber characterization: industry-renowned OTDRs combined with the most advanced dispersion analyzers
- Industry-exclusive: distributed PMD analysis
- 10G, 40G and 100G-ready
- Most compact and powerful Ethernet, SONET/SDH, OTN and Fiber Channel analyzers



### Fiber Identifier

- Live network maintenance and troubleshooting
- Detects if a fiber is active or not. Induces minimal loss: 0.1 dB
- Locates a particular dark fiber using tone recognition (270 Hz, 1 kHz, 2 kHz)
- Identifies traffic direction on a live fiber

## Network Analysis and Monitoring Family

Scalable solutions for multiple network testing use-cases

Higher subscriber satisfaction, lower churn. Lower investment, higher revenue.

### Main Benefits

- > Better network QoS and QoE
- > Cost-effective quality assurance of mobile network
- > Quicker error-locating for engineers
- > Faster mobile network development

### OPEX Reduction

- > Quick resolution of errors = less testing time
- > Intuitive, easy-to-use GUI = less testing
- > Spare network-capacity identification = maximized network

### CAPEX Reduction

- > Bottleneck identification = minimized network HW investment
- > Seamless scalability = investment re-use
- > One analyzer for 2G/3G/LTE testing = lower cost

Research and development (functional testing)

Operation and maintenance (verification, live testing)

### SoftHawk Software Analyzer



- > Easily install M5 Analyzer software on any windows PC
- > Troubleshooting and functional testing of Ethernet-based interfaces
- > Effortless remote use

### PowerHawk Multi-User Analyzer



- > Server for up to 10 simultaneous users
- > For IOT, verification and functional testing
- > Powerful solution to enable high-volume testing

### BrixHawk DA Distributed Analyzer



- > Probe-based system for automated real-time analysis
- > Network troubleshooting and mobile network optimization
- > Powerful KPIs available in real time, with detailed user-plane analysis including DPI and diagnostics

### BrixHawk SA Service Assurance Solution



- > Network-wide monitoring system with report generation
- > 24/7/365 live network monitoring
- > Statistical network view via Web interface also allowing drill-down from reporting to protocol analyzer

### TravelHawk Portable Analyzer



- > Briefcase-size, PC-based unit for lab and field testing
- > On-site troubleshooting, IOT, verification and functional testing
- > Only portable multitechnology analyzer on the market

## Analysis Applications



- Diagnostics Suite gives information to determine QoE:** See network KPIs, subscriber and application-level QoS, call and IP session data and wide range of network statistics.
- Call and Session Analysis for troubleshooting:** See how individual calls or sessions evolve over multiple interfaces with detailed phase information and other parameters.
- Protocol Monitor enables root-cause analysis:** See how the elements communicate with each other by following the sequence of messages with full details.



# EXFO OTDR



## DEDICATED



### AXS-100 SERIES

Cost-effective,  
lightweight field  
test set

## MODULAR



### FTB-1\*

Small, yet  
powerful frontline  
platform

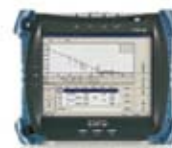
## MODULAR



### FTB-200\*

Compact,  
multi-application  
platform

## MODULAR



### FTB-500\*

Boundless capabilities,  
testing unlimited



Power Meter  
EPM 53

### Type Fiber Optic :

Measurements Units dB, dBm, watt  
Low end wavelength limit 850 nm  
High end wavelength limit 1550 nm  
Power Range EPM-53: 10 to -60 dBm  
Accuracy Power uncertainty is 5%



Power Meter  
EPM 300

### EXFO Power Meter- EPM-300

FTTX , GPON, EPON  
Passive optical networks (PONs) at  
1310 nm, 1490 nm and 1550 nm  
Power autonomy of 300 hours

# EXFO SLA Monitoring System

EXFO

Low CAPEX

## Brix Service Assurance Service Lifecycle



# FONS OEM Test Equipments



FONSBD is a professional OEM/ODM manufacturer of test equipment. We are the first test equipment OEM in Bangladesh with more than 15 years experience. Famous worldwide companies and local telecom are our main customers. We provide durable and stable products to customers with reasonable Optical Cable price



**Optical Power Meter**

#### Features:

- Auto-wavelength identification
- Intelligent backlight
- 1000 records storage
- Reference power level can be set up and stored
- Operator self-calibration function
- Auto-power off function
- Up to 200hrs battery life, forget about charging the battery

#### Applications:

- Manufacture and research of optical components
- Teaching and experiment in optical communications
- Testing and maintenance of optical equipment and optical networks

#### Features:

- Used for locating broken point in fibers
- Equipped with a 650nm visible laser diode
- Operated in continuous or pulse modes for clear noticeable results
- Operating mode shown by the Status LED indicator
- Battery power turned on/off by the power switch on the end
- Clip pocket-size pen design

#### Applications:

- Maintenance in Telecom
- Maintenance in CATV
- Test Lab of optical fibers
- Other fiber optic measurements



**Visual Fault Locator**



**Fiber Identifier**

#### Applications:

- Maintenance in Telecom
- Maintenance CATV
- Test Lab of optical fibers
- Other Fiber Optic Measurements

#### Features:

- Efficiently identifies the traffic direction and frequency tone (270Hz, 1KHz, 2KHz) without any damage of the fibers
- Displays the core power of the fibers (-50~0dBm)
- Low bending loss and highly efficient output
- Easy-to-replace adaptors (0.25mm, 0.9mm, 2.0mm, 3.0mm to match various optical cables)
- Mechanical damp design of adapter heads to ensure the fiber without damage



**Light Source**

#### Features:

- High stable output power
- Low power indication
- Backlight for field work
- Auto-power off function
- Large LCD screen
- Compact size, rugged, and light weight

#### Applications:

- Maintenance in Telecom
- Maintenance in CATV
- Test Lab of optical fibers
- Other Fiber Optic Measurements

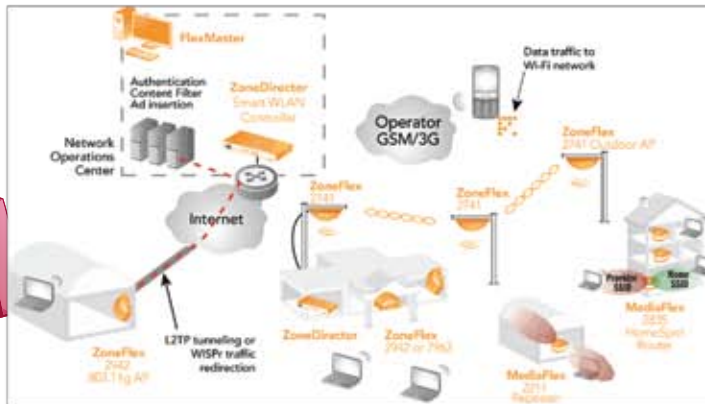


# Active Products

The background is a solid red color. A large, white, curved shape, resembling a stylized 'C' or a swoosh, dominates the lower half of the image. This shape has a grey inner section and a red outer edge. On the right side, there is a red, mechanical-looking component with a ladder-like structure. The overall design is modern and abstract.

Active Products

# Ruckus Wireless Wireless Solutions



**FONSBD is the only Authorised Distributor in Bangladesh.**  
**We also provide after sales service.**

FONSBD provide Faster, more reliable Wi-Fi services at a lower overall cost of ownership. FONSBD represents world class & effective range Wi-Fi products from Ruckus.

## We Provide Wireless & Network solution For

- Mobile Carriers (3G/4G offload)
- Enterprise WLANs
- SME/Branch Office SME
- Hospitality
- Education
- Healthcare
- Retail
- Warehousing

## Our Products

- Low CAPEX & Low OPEX
- Wi-Fi access points and BRIDGES
- Wi-Fi Controllers
- Wi-Fi centralized management

Get wired speed  
with wireless solutions  
100 MBPS or more  
and get coverage  
of 13 km.



**ZoneFlex 7962**  
Indoor dual-band, two-port 802.11n AP with integrated smart antenna array and PoE (802.3af) support



**ZoneFlex 7300**  
Indoor single- and dual-band, three-port 802.11n AP with integrated smart antenna array and PoE (802.3af) support



**ZoneFlex 2942**  
Indoor single-band, two-port 802.11b/g AP with integrated smart antenna array and PoE (802.3af) support



**ZoneFlex 7762**  
Outdoor dual-band, two-port 802.11b/g AP with integrated smart antenna array and PoE (802.3af/af) support



**ZoneFlex 2741**  
Outdoor single-band, One-port 802.11b/g AP with integrated smart antenna array on PoE (802.3af) support



**ZoneFlex 7731**  
Outdoor long-range, point-to-point/multipoint 802.11n 5GHz bridge



**ZoneFlex 7025**  
Indoor 802.11n wall jack with five ports of Ethernet



**MediaFlex 802.11n Adapter**  
One port 802.11n (5GHz) Wi-Fi to Ethernet bridge



**MediaFlex 7200 Series**  
802.11n smart Wi-Fi Gateway for Wireless Broadband Access



**ZoneDirector Controllers**  
Central wireless LAN controllers supporting from 6 to 500 Ruckus APs



**ZoneSwitch 4224**  
Fully Managed 24 port Layer 2 Gigabit Smart Switches with 802.3at PoE



**FlexMaster**  
Linux-based remote Wi-Fi system management software

# Transition Switch & Router



## PoE Industrial Switch & Router

**FONSBD is the only Authorised Distributor in Bangladesh.**  
**We also provide after sales service.**

FONSBD brings the most reliable & smarter solution for your enterprise & industrial network.

"Transition" products are manufactured in USA.

### The key advantages you tell your customer (versus Cisco) is:

- "Cheaper cost
- "you offer 5 years warranty
- "Can upgrade to 10 Gigabit uplink in future
- "Easy to install and operate
- "both AC and DC models available
- "Better tolerance of temperature
- "and power fluctuations
- "USA manufacturer

### Our Products

- "Transition have All kinds of Managed & unmanaged Switch.
- "Transition have All kinds of indoor & outdoor router:
- "Low CAPEX & High OPEX
- "Total network solution.
- "Management Software solution for Hotels.
- "Centralized Wi-Fi Management

## Industrial media conversion Managed & unmanaged switches

 <b>(Unmanageable Switch)</b> 48-port 10/100BASE-TX switch Plus (2) Gigabit ports (1) 10/100/1000 RJ-45 and (1) Giga SFP port Includes 19" Rack Mount ears	 <b>Transition Networks CWD media converters are</b> available for the managed, Point System TM chassis based platform or stand-alone models covering various protocols including: Fast Ethernet, Gigabit Ethernet, T1/E1, T3/E3/DS3, RS232, RS422, RS485, SONET and ATM.
 <b>(Layer 2 Gigabit Metro Ethernet Switch)</b> 10G XFP ports and 2 expansion slots for modules -Includes 19" Rack mount kit and Fan module.  <b>MIL-SM8TXAF2GPA</b>	 <b>8 Port 10/100 Managed POE Switch</b> Auto-sensing 10/100 ports (2) SFP/RJ-45 combo ports Dual speed SFP ports 100/1000 Full POE functionality AC and DC input for full redundancy and power options
<b>4xT1/E1/J1 + 10/100 Ethernet to Fiber Transport Mux</b>  Combining T1, Ethernet and RS 232 over one fiber, the Fiber Transport Mux allows service providers to manage fiber networks and reduce costs by offering multiple connections over a single fiber interface  	 <b>Industrial Power-over-Ethernet (PoE) Switches</b>  SISPM1040-182D-LRT (8) 10/100Base-TX PoE Ports + (2) 10/100/1000Base-T or 100/1000Base-X SFP Combo Ports
<b>9 Port 10/100/1000 Managed Switch (MIL-SM8002TG)</b> Auto-sensing 10/100/1000 Ports 2 Gigabit SFP/RJ45 Combo Ports Indoor/Outdoor installation up to 60°C (140°F)  	 <b>Power-over-Ethernet (PoE) Media Converters &amp; Injector</b>  (10/100 & 10/100/1000 options) SPOEB10(xx)-1(xx) SGPOE1040  
<b>Power-over-Ethernet (PoE) Remotely Managed Switches</b>	
 (24) 10/100BASE-TX Ports+ (2) RJ-45/SFP  (8) 10/100 Ports + (1) RJ-45/SFP Combo Port	 (8) 10/100BASE-TX Ports + (2) RJ-45/SFP  (7) 10/100/1000BASE-TX Ports + (1) RJ-45/SFP Combo Port Fan less

# Symmetricom Time Synchronization Solutions

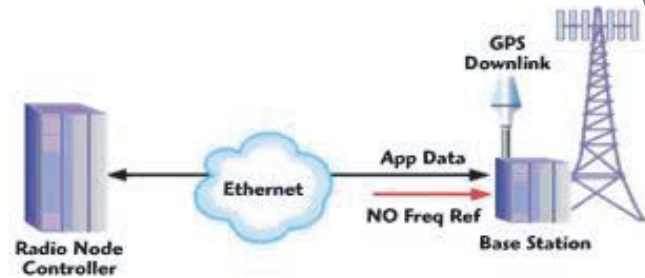


**FONSBD is the only Authorised Distributor in Bangladesh.**  
**We also provide after sales service.**

Now **FONSBD** provide "Time and Frequency Synchronization Solutions" from Symmetricom which has the broadest range of time, frequency and synchronization products in the world.

Our team of professional specialists can provide daily service and support solutions for:

- Time and frequency solutions for Aerospace and Defense applications
- Synchronization for Global Telecommunications Networks
- High precision frequency standards, including Cesium atomic clocks, Hydrogen Masers, Rubidium & Quartz
- Time and frequency generators for public utilities and energy management
- Network time servers and other synchronization and timing solutions for enterprise networks



## IEEE 1588 PTP Solutions



IEEE 1588 (also known as Precision Time Protocol or PTP) is the emerging standard for providing precise timing and synchronization over packet-based, Ethernet networks. Symmetricom's best-in-class IEEE 1588 solutions address a wide variety of applications ranging from precise carrier class synchronization and precise time stamping to the test and measurement of PTP networks. These solutions enable Symmetricom customers to directly benefit from lower-cost, higher-capacity packet-over-Ethernet network infrastructures without sacrificing precise timing and synchronization requirements.

## GPS Solutions



Symmetricom GPS solutions provide the highest level of time and frequency accuracy with our primary reference sources, time and frequency generators, receivers, and other GPS related instrumentation. Our GPS and time code instrumentation solutions support multiple applications and a wide customer base, from assuring wide availability of precision time and frequency throughout a telecom network to securing critical satellite and ground based instrumentation with the world's most powerful, accurate and versatile Selective Availability Anti-Spoofing Module (SAASM) based GPS time and frequency receiver.

## Time Provider 500 (Translator)

### IEEE 1588 v2 Translator System

Designed to deliver cost effective frequency synchronization for Next-Generation Networks, the TimeProvider 500 (Translator) is a compact and easy way to provide synchronization in the Metropolitan Area Network or Access network. The TimeProvider 500 translates Precision Time Protocol IEEE 1588-2008 to traditional T1/E1 synchronization signals complying with ITU G.8261 & G.823/G.824.

### IEEE 1588/PTP

### IEEE 1588 Blades - Server

With the introduction of new IEEE 1588 Blades, the SSU 2000 systems can be expanded to provide full carrier class IEEE 1588 grandmaster support for NGN networks. The blade form factor allows for ease of integration into existing synchronization infrastructure with superior scalability.





# Service

FONS have more than 17 years experience in telecom field. Due to our vast experience, we are confident in your optical test results which is a key concern of ours, and we want to help ease your mind with our calibration and repair services. Our customers in the Telecom Industries are more than satisfied with the premium calibrations and high quality repairs that we have provided them for every type of fiber optical test equipment they requested. If a model or service is not listed, please contact us for availability.

## Field Work

01. On-side Field work
02. Termination & ODF Installation
03. Testing Service( OTDR, Power Meter, Light Source, VFL)
04. Optical Cable Laying ( Boring Machine, Road Cutter etc)
05. WI-FI design, Solution & Installation.

## Servicing

01. Repair Fujikura Splice Machine (50S, 60S, CT-30 Cleaver)
02. Repair Exfo OTDR( FTB-1, FTB-200)
03. FTTX, FTTB services
04. Infrastructure Based Services



# Our Client



and many more...