MULTICOM
GPON/XPON
SOLUTIONS

Tecnología Americana
• USA Lasers
• USA IC Chipsets
• USA Amplifiers
• USA Fiber Optics
• USA Engineering & Designs
• USA Quality Assurance / Quality Control
DZS MXK-F SERIES OF GPON OLTs - DELUXE SERIES

The MXK-F™ Chassis architecture is designed around a dual star design with redundant ultra high-speed links to each subscriber line card slot for future-proof support of today's and tomorrow's bandwidth-hungry fiber-based subscriber services.

**MXK-F1419**
Serving over 32 thousand GPON subscribers, the MXK F1421 offers growth potential at 128 GPON splits per OLT port and 2 x Terabit switching fabric.

**MXK-F219**
Serving over four thousand subscribers, the MXK F219 2RU OLT offers growth potential up to 4,096 customers at 128 GPON splits per OLT port.

**MXK-F108**
The MXK-F108 high throughput, small form factor OLT serves 512 GPON customers at 64 Optical Split Per OLT Port.

DZS ZNID SERIES OF GPON ONTs - DELUXE SERIES

**ZNID-GPON-2301**
- Indoor Residential HSI Desktop ONT
- Built-in WAN transceiver, 1 RJ45 GE, ships with AC power supply, OMCI management
- Optional wall mount
- Indoor HSI Voice RF BGNAC WiFi RG GPON ONT
- Built-in WAN transceiver, 4 RJ45 GE, 2 RJ11 POTS, 1 BNC RF coax, 2x2 b/g/n (600mW) 3x3 a/n/ac (400mW), 1 USB, UPS, standup table top with wall mount, ships with AC power supply, ZNID RG software.

**ZNID-GPON-2424A1**
- Indoor HSI Voice RG GPON ONT
- Built-in WAN transceiver, 4 RJ45 GE, 2 RJ11 POTS, 1 USB, UPS, desktop, ships with AC power supply, ZNID RG software
- Optional wall mount, BBU wall mount cradle, desktop dock.

**ZNID-GPON-2726A1**
- Indoor HSI Voice RF RG GPON ONT
- Built-in WAN transceiver, 4 RJ45 GE, 2 RJ11 POTS, 1 BNC RF coax, 1 USB, UPS, ships with AC power supply, ZNID RG software
- Optional desktop, wall mount.

**ZNID-GPON-2425A1**
- Indoor HSI Voice RG GPON ONT
- Built-in WAN transceiver, 4 RJ45 GE, 2 RJ11 POTS, 1 BNC RF coax, 1 USB, UPS, ships with AC power supply, ZNID RG software
- Optional desktop, wall mount.

Typical GPON Network with RF Overlay
Advantages of GPON Networks: The most obvious advantage of PON networks is that a single shared optical fiber can support multiple users through the use of inexpensive passive optical splitters. In GPON networks, up to 64 ONTs can share one fiber connection to the OLT. This makes Gigabit Passive Optical Network an attractive option for service providers wanting to replace copper networks with fiber, particularly in high-density urban areas.

V8102 is a mid-size OLT for small and medium sized networks. It provides connection of up to 4,096 subscribers with 32 GPON ports (split ratio 1:128) with a 2x 320 Gbps non-blocking switch fabric.

V5816 is a compact mini V-5816 GPON OLT provides 16 GPON ports and enables network operators to provide optical fiber-based broadband services in low density areas with a minimum of investment.

V5808 is a compact mini GPON OLT providing 8 GPON ports. It enables network operators to provide optical fiber-based broadband services in low density areas with a minimum of investment.

H665
- Supports the ITU-T G.984 standard
- Uplink interface with 2.5 Gbs downstream and 1.25 Gbs upstream
- GbE LAN interfaces
- Supports IGMP snooping for IPTV applications

H662
- Supports the ITU-T G.984 standard
- Uplink interface with 2.5 Gbs downstream and 1.25 Gbs upstream
- 4 GbE LAN interfaces
- High-Speed WLAN according to IEEE802.11b/g/n/ac
- Supports IGMP snooping for IPTV applications

H660GM
- Fully ITU-T G.984 compliant framing
- Support Multiple T-CONTs mode
- FEC (Forward Error Correction)
- Support for Multicast GEM Port for IPTV services
- Dying gasp
- ITU-T G.984.x compliant
- 128MB Flash Memory, 128MB SDRAM, USB Interface
- GPON Interface Capacity:
  - Up 1.25Gbps / Down 2.5Gbps
- Bidirectional Optical Sub Assembly (BOSA) type module Receiving optical sensitivity:
  - Better than -28dBm

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Multicom OLTs meet ITU-T G.984/G.988 standards, support OMCI remote management for ONTs & ONUs, are compatible with ITU-T G.984.4/G.988 OMCI Protocol, and incorporate Layer 2 Switching Functioning.

**MUL-GPON-OLT-800 Features:**
- 8 PON ports in 1RU GPON OLT
- 1 USB interface
- 2 x 10 Gigabit Uplink SFP slots
- 4 Uplink GE Optical SFP ports
- 4 Uplink GE RJ45 copper ports
- 8 GPON SFP Ports for downstream
- Can support 1,024 ONUs with 1:128 Splitter
- Downstream bandwidth of 2.5Gbps
- Upstream bandwidth of 1.25Gbps
- Dual 220VAC or -48VDC redundancy power supplies

**MUL-GPON-OLT-1600 Features:**
- 16 PON ports in 1RU GPON OLT
- 1 USB interface
- 2 x 10 Gigabit Uplink SFP slots
- 4 Uplink GE Optical SFP ports
- 4 Uplink GE RJ45 copper ports
- 16 GPON SFP Ports for downstream
- Can support 2,048 ONUs with 1:128 Splitter
- Downstream bandwidth of 2.5Gbps
- Upstream bandwidth of 1.25Gbps
- Dual 220VAC or -48VDC redundancy power supplies

Multicom ONTs meet ITU-T G.984/G.988 standards, support OMCI remote management for ONTs & ONUs, are compatible with ITU-T G.984.4/G.988 OMCI Protocol, and incorporate Layer 2 Switching Functioning.

**MUL-XPON-ONT100-S-W Features:**
- Dual Mode - Can be used with GPON & EPON OLTs
- Designed for FTTH services
- Integrated auto-detecting
- Auto configuration capabilities
- WiFi: Dual Antenna with IEEE802.11b/g/n

**MUL-XPON-ONT200-S-WR Features:**
- Dual Mode - Can be used with GPON & EPON OLTs
- Designed for FTTH services
- Integrated auto-detecting
- Auto configuration capabilities
- WiFi: Dual Antenna with IEEE802.11b/g

**MUL-XPON-ONT200D Features:**
- Dual Mode - Can be used with GPON & EPON OLTs
- Designed for FTTH services
- Integrated auto-detecting
- Auto configuration capabilities
- WiFi: Dual Antenna with IEEE802.11b/g/n/ac
MULTICOM EPON OLTs - ECONOMY SERIES - LATAM ONLY

**MUL-EPON-OLT-800**

**Features:**
- 8 PON ports in 1RU EPON OLT
- 8 Uplink GE optical SFP ports
- 8 Uplink GE RJ45 copper ports
- 8 EPON ports for downstream
- Can support 512 ONUs with 1:64 Splitter
- Dual 220VAC or -48VDC redundancy power supplies

**MUL-EPON-OLT-1600**

**Features:**
- 16 PON ports in 1RU EPON OLT
- 1 USB interface
- 2 x 10 Gigabit uplink SFP slots
- 4 Uplink GE optical SFP ports
- 4 Uplink GE RJ45 copper ports
- 16 EPON Ports for downstream
- Can support 1,024 ONUs with 1:64 Splitter
- Dual 220VAC or -48VDC redundancy power supplies

SFP/SFP+/XFP OPTICAL TRANSCEIVER MODULES

**For Use as PON Downlink:**
- **MSFP-EPON-OLT-T-PX20**
  Use with **MUL-EPON-OLT800/OLT1600**
- **MSFP-GPON-OLT-T-C**
  Use with **MUL-GPON-OLT800/OLT1600**

MULTICOM EOC SERIES - ECONOMY SERIES - LATAM ONLY

The Multicom EOC Master is designed to provide broadband Internet service to the subscriber’s home through the existing coaxial access network. With X Pon (EPON/GPON compatible), EOC and HFC technology, the EOC Master meets the CATV broadcasting, VOD and Internet service requirement of cable operators for FTTB & FTTC.

**Features:**
- Modular for easy maintenance and upgrades
- 1 XPON (EPON/GPON compatible) ONU module
- 2 HomePlug AV EOC Master modules with 2 masters per module (4 total EOC Masters)
- 1 CATV Optical Receiver module
- Available option with WDM

**MUL-EOCM400-T**

**Features:**
- RF output configuration with 4 outputs
- Power Module: Line Power (from 90 to 264 VAC) or Cable Line Power (60VAC) optional
- 35/47, 42/54, 65/87 band High/Low Filter options to work in your network

**MUL-EOCS-400**

The Multicom MUL-EOCM-400 is an EOC slave A/V solution for Ethernet access over coax. It works together with EOC Master to provide an Ethernet data transmission channel over coax cable, using the existing coax cable networking to enable Ethernet, WiFi, and CATV capabilities.

**Features:**
- RF Interface:
  - 1 x TV (RF signal) F-connector Output
  - 1 x Cable Input, F-connector
  - 4 Ethernet - 10/100M, auto-negotiation
  - WiFi
  - 12VDC Power Supply
The Multicom High Power 1550nm EDFA with built-in CWDM is a low noise high-performance Er Yb co-doped fiber amplifier. Each output includes a built-in CWDM (1310/1490/1550) wavelength division multiplexer. It multiplexes the data stream of the OLT and ONUs to the fiber amplifier output using 1310nm and 1490nm optical connectors. This configuration reduces the equipment and connections needed, improving the system loss budget and reliability. It is ideal for FTTx networks, providing a flexible and low cost solution for the integration of these networks and FTTH.

Multicom also stocks 8/16/32 Port High Power 1550nm Erbium Doped EDFA is a low noise 1550nm optical amplifier designed to amplify 1550nm optical signals to increase the optical transmission distance over fiber, and can be used in conjunction with the Multicom

**16/32 PORT HIGH POWER 1550nm EDFA (WDM OPTION)**

Multicom stocks a wide variety of 1 & 2RU EDFA configurations, with Output Power from 25 to 37 dBm, and 1, 4, 8, 16 and 32 Output Ports.

### 1550nm FIBER OPTIC TRANSMITTER

The MUL-1550TX-V-1-X intelligent directly modulated optical transmitter is used in 1550nm optical fiber transmission systems. It uses a U.S. made EMCORE ORTEL DFB laser with an optical output power of up to 10dBm, and advanced intelligent electronic predistortion compensation technology.

**Features:**
- High linearity, optically isolated, distributed AM feedback EMCORE ORTEL DFB laser with an optical output power of 6dBm
- DOCSIS 3.1
- Transmits NTSC, PAL, ATSC, and related digital information for CATV and/or telephony applications
- 47-1200 MHz RF input bandwidth
- Front panel RF test point
- Automatic Gain Control (AGC) and Manual Gain Control (MGC) override
- Integrated SNMP network interface
- Dual hot-pluggable redundant power supplies

**Optical Parameter** | **Unit** | **Specification**
--- | --- | ---
Optical output power | dBm | 6, 7, 8, 9, 10
Optical wavelength | nm | 1550 ±10
Laser type | | EMCORE ORTEL DFB
Optical modulation type | | Direct, Externally Modulated
Frequency range | MHz | 47-750/862/1003/1200
RF input level | dBmV | +12 - +28

Multicom stocks a wide variety of Externally and Directly Modulated Transmitters with both 1 & 2 Output Ports, and 6 to 10dBm Output Power.

**NEW! 1.2 GHz DOCSIS 3.1 USA LASERS**

**DID YOU KNOW?**

Don't Settle for Less than the Highest Quality - We Use Only Corning Fiber in our Fiber Optic Jumpers and Pigtails

**MUL-1550TX-V-1-X**

<table>
<thead>
<tr>
<th>Output Power (dBm)</th>
<th>6, 7, 8, 9, 10</th>
</tr>
</thead>
<tbody>
<tr>
<td>Output Port</td>
<td>1, 2</td>
</tr>
</tbody>
</table>
The rugged Multicom Fiber Optic Network Enclosure Series is designed for flexibility and ease of use when splicing in aerial, pole, or wall mount applications. The Enclosure Product Line is constructed of durable and impact resistant materials specifically formulated for reliability and performance in outside plant environments.

Fiber Network Access Points (FNAP)
- Back of FNAP provides for multiple mounting configurations
- Front & rear fiber or splice storage
- Environmental Seal - Heavy duty latches, hinges and gaskets
- Mid-span Access and Cable Glands included
- Sealed secure access lock
- Options: 2 In ports, 8, 12, 16 Out ports

Options:
- LGX Cassette
- Tube PLC Splitter
- Mating Sleeves
- Pigtailed

Shown:
M-FNAP-A-B/P-16T-SC/APC

Inline Enclosure
- Capacity: Up to 96 single core or ribbon fibers
- Splice Tray: Up to 6 trays
- Housing Material: High Grade PP/PC, with rubber gasket
- Tray Material: ABS
- Ports: 2 In, 2 Out
- Installation: Aerial, Underground, Wall Mount, Pole Mount

Example Part#:
M-FILC-A-B/P-24-NA

Dome Enclosure
- Capacity: Up to 144 single core or ribbon fibers
- Splice Tray: Up to 12 trays
- Housing Material: High Grade PP/PC, with rubber gasket
- Ports: 1 In, 4 Out
- Installation: Aerial, Pole Mount

Example Part#:
M-FDOME-A-B/P-48-B

FTTH TERMINAL BOX
- Capacity: Up to 4 single core or ribbon fibers
- Applicable: Singlemode or Multi-mode fiber
- Housing Material: ABS
- Ports: 1 In, up to 4 Out
- Installation: Wall

Example Part#:
M-FTERM-B-W/P-1/2B-SC/APC
FIBER OPTIC CABLE

Future-proof fiber optic cable engineered for today's super high-speed and high-performance networks

Easy Cable Entry & Preparation
- 12 fibers per tube construction up to 144 fiber designs allow easy termination and mid-span fiber access
- Flexible buffer tubes enhance mid-entry

Versatile Installation & Use
- Tailored designs span distances
- Easy mid-entry is ideal for FTTx distribution applications

Flexible Routing & Customization
- Flexible buffer tubes simplify routing, storage and prep
- Available in Singlemode & Multi-mode fiber, loose tube

Reliable Lifetime Performance
- Custom engineered for operation under full load
- Guaranteed standards-based performance

Fiber Optic Cable - Variations to Suit Your Needs
Multicom stocks a warehouse full of Fiber Optic Cable in an endless variety of characteristics. Loose tube gel-free riser cables, indoor & outdoor cables - with UV-resistant, flame-retardant or waterblocking jackets that are rugged, durable and easy to strip. Our cables are designed in singlemode and multi-mode and from 2 to 144 fiber counts, Multicom has the fiber optic cable you need - in stock.

ADSS
Multicom’s All-Dielectric Self-Supporting (ADSS) Loose Tube Fiber Optic Cable is the best choice for aerial cable spans. This cable’s low-cost installation, compact size and specialized design make it the ideal, cost-effective cabling solution for Fiber-to-the-Home (FTTH) and self-supporting aerial applications.

Armored
Highly durable and reliable for underground and lashed aerial installations as well as general outside plant installations, including direct buried in harsh environments.

Aerial Self-Supported ASU Fiber Optic Cable - Light Wind Load
Multicom’s Light Wind Load Aerial Self-Supported ASU Fiber Optic Cable has a loose tube structure and water-resistant gel compound to provide crucial protection for the fiber. Over the tube, water-blocking material is applied to keep the cable watertight. Two parallel fiber reinforced plastic (FRP) elements are placed on the two sides. The cable is covered with a single PE outer sheath. It is especially suitable for installation in aerial for long-distance communication.

Fiber Optic Drop Cable - With / Without Messenger
Multicom’s Fiber Optic Drop Cable uses special low-bend-sensitivity fiber B6 (G.657A1), providing greater bandwidth and excellent communication transmission properties. Two parallel strength members (non-metallic FRP), ensures the optical fibers are protected. The low smoke zero halogen (LSZH) flame-retardant jacket allows for safety and environmental protection. The cable is light weight with a flute design which can be easily stripped and spliced, simplifying installation and maintenance. Multicom’s Fiber Optic Drop Cable is available both with and without the Messenger, which enhances the overall tensile strength of the cable.

Available in 1 to 6 centrally located optical fibers.
FIBER OPTIC JUMPERS & PIGTAILS

Features:
- Corning fiber used in all jumpers and pigtails
- LSZH Jacket on all fiber varieties
- G.657.A2 Certified
- 2mm jacket for more flexibility and capacity in tight spaces
- Custom lengths and colors
- Meets all standard panel interfaces
- All cables serialized and test results are recorded
- High bandwidth, high tensile strength, small bend radius

DID YOU KNOW?

CORNING
Don't Settle for Less than the Highest Quality - We Use Only Corning Fiber in our Fiber Optic Jumpers and Pigtails

FIBER OPTIC PLC SPLITTERS

Features:
- Corning fiber
- Low insertion Loss
- Even or various splitting ratios
- 1x2 through 1x64 configurations
- Bidirectional, compact
- Environmentally stable
- Wide wavelength range
- High uniformity
- Telcordia GR-1221-CORE compliant

Applications:
- Long-haul tele/data communications
- Fiber optic equipment and systems
- CATV systems
- Local Area Network, PON, and FTTH

FIELD-INSTALLABLE FIBER OPTIC CONNECTORS

Features:
- No epoxy, fiber polishing, special tools or fusion splicer required
- Quick and easy fiber termination in less than two minutes
- Precision mechanical alignment insures low insertion loss
- Superior optical performance
- Durable components design for convenience and reusability
- Pre-installed fiber in ferrule for on-site assembly
- Uses proven, molded v-groove technologies
- Allow optical continuity to be verified by use of Visual Fault Locator (VFL)

The Multicom Field-installable Fiber Optic Connectors feature a pre-polished ferrule (UPC/APC), that couples to the fiber being terminated by precision mechanical alignment, insuring low loss with a proprietary gel.
Today's FTTH systems demand innovative products for a variety of applications. The Multicom WDM (Wavelength Division Multiplexor), supports any 2-way RFoG/GPON services operating with a 1550/1490nm Forward Path and 1310/1590/1610nm Return Path - over a single fiber - for seamless integration of video, voice, and data services.

**Features:**
- Standard LGX form factor
- Mounts in a standard LGX chassis
- Low insertion loss
- Ultra-high isolation
- Wide operating temperature range
- Telcordia GR-1221-Core compliant
- Front-located ports for easy access
- All connectors are SC/APC design for optimal power and reliability

**MUL-WDM-F-S-1310/1550-SC/APC**

**Connector Type**
- Wavelength/s, Application (GPON, FTTH, RFOG)
- S=Single, D=Dual Port

Multicom's Rack-Mounted LGX Cassette Chassis is designed for use with any standard plug-and-play single, double and triple wide LGX 2 to 32 port cassette splitter modules in FTTX networks.

These chassis are designed for use in mid-rise and high-rise Multiple Dwelling Unit (MDU) equipment rooms suited for centralized Optical Network Terminal (ONT) applications.

**Features:**
- Complies with all LGX Form Factor Cassette Splitter Modules
- 4 RU
- Transparent dust cover on front hinge

**MUL-FOCH-CASS**

Multicom Fiber Optic Mating Sleeves, also known as Adapters or Couplers, are used to provide a cable to cable or cable to equipment fiber optic connection. We supply a wide range of mating sleeves and hybrid adapters, including special male to female hybrid fiber optic mating sleeves.

**Features:**
- Used in Singlemode applications
- Free-hanging or panel-mount design
- Dust caps protect against debris and contamination
- RoHS, Telcordia GR-20-CORE, GR-326 and TIA/EIA 568C Compliant

**FOMS-XX/YYY-XX/YYY**

Second Connector Type
First Connector Type
The Multicom 1 RU Patch & Splice Enclosure is designed to accept up to 3 LGX Adapter Panels with the ability to use a full array of connector types. This enclosure offers a flexible solution, enabling the incorporation of a multi-functional chassis that allows easy access during installation or re-work with no disturbance of the existing fiber cable - making this one of the most flexible enclosures on the market.

This Patch & Splice Enclosure can be custom loaded with the exact Adapter Panels and Pigtails needed for your specific application, or the chassis can be purchased empty.

**Features:**
- Custom loaded to your specific configuration
- 1.5M Pigtails included in loaded enclosures
- Splice tray and cable management spools included
- Hinged front and rear Plexiglass doors
- Side patch and exit ports
- Fully removable sliding-out tray for easy access
- Assorted strain relief and fiber accessories included
- Provides higher patch field density in fewer rack units saving valuable rack space

**Parameter** | **Specification**
---|---
Suitable for module type | LGX Adapter Panels
Number of Adapter Panel positions | 3 - can be simplex or duplex
Material | 16 gauge, cold-rolled steel
Material finish | Black, powder coated

**MUL-RM-XF-PS**
- Chassis only

**MUL-RM-8F-PS-SC/APC-5**
- S = Simplex, D = Duplex
- F/O Connector Type
- PS = Patch and Splice, PO = Patch Only
- XF - x = Number of Fibers
- RM = Rack Mount, WM = Wall Mount

Multicom's Fiber Optic Adapter Panels are compatible with all LGX style rack and wall fiber distribution units. Panels are available in Simplex and Duplex adapter formats.

**Features:**
- LGX form factor compatible with Multilink, AFL, Wirewerks, FIS, and other rack and wall fiber distribution units
- RoHS Compliant
- Loaded with TIA/EIA-604 FOCIS-3/10 compliant adapters
- Built with ceramic split sleeves to fit specific network requirements
- 18-gauge cold rolled, electrostatic polyester powder coated steel
- All panels are pre-loaded for quick deployment

**FOAP-6-SM-SC/APC**
- Connector Type
- SM = Singlemode, MM = Multi-mode
- Number of Adapters (6, 8)

**ATTENUATORS**

Fixed-value Attenuators reduce the signal level without appreciably distorting the waveform. Available in 1dB increments. All connector types available.
**Fiber Optic Fusion Splicer Kit**

The tough and rugged Multicom MUL-FSPLICE-300 Core-to-Core Alignment Fiber Optic Fusion Splicer is drop/impact, dirt/dust and water resistant. Multicom is proud to provide a Year International Warranty, and all USA Service and Support.

The Fusion Splicer employs high-speed image processing and special positioning technology allowing the fusion splicing to be completed in as little as a FAST 7 seconds and can heat shrink in as little as an ULTRA-FAST 9 seconds. The splicer is compact in size, lightweight, and is ideal to work just about anywhere including harsh outdoor environments, dark and remote worksites.

**Features:**
- FAST 7 Second Splicing (optional)
- ULTRA-FAST 9 Second Heat Shrinking (optional)
- Drop/Impact, Dirt/Dust and Water Resistant
- 1 Year International Warranty
- Quick-change Rechargeable Lithium Battery
- State-of-the-Art Core-to-Core fiber Profile Alignment System (PAS)
- German Design, USA & Japanese Technology
- Titanium Alloy Body/Frame
- High Performance Processor Board
- 5-direction Anti-shock
- 6 Motor Precision Mechanism
- Fully-automatic, semi-automatic and manual operating modes
- Automatic detection of fiber cleaved face quality
- Automatic display of cleaved fiber and the offset angles
- Automatic analysis and estimation of splice loss
- Automatic detection of bad/faulty splice
- Automatic detailed data report record and memory storage for each splice (up to 10,000 splices)
- Automated 2N splice tension test
- Handy, easy-to-carry, solid and durable with shock-resistant design Enhanced windproof fusion area cover
- Color HD 5” LCD display and graphical interface
- English, Spanish and French languages, user-selectable
- Single X or Y view, or X and Y simultaneously
- Up to 400x magnification
- High quality electrodes with up to 3,500+ splicing cycles
- Easy user-replaceable electrodes design (set of spares is included)
- Wide range of fusion and heating parameter defaults and options
- Built-in temperature, humidity, air pressure sensors and automatic arc correction
- Intelligent power indicator, auto power-off and quick-change battery
- Built-in heat shrink heater: Easy to use, quick, customizable parameters
- Data reports can be downloaded to PC and system upgrades can be uploaded via USB port and cable
- Built-in work lights make optical-fiber placement easier and more accurate, even at night or in dark work areas

**The MUL-FSPLICE-300 Kit includes:**

- Operating Manual
- Cleaning Alcohol Dispenser
- AC Adapter
- Cleaning Bulb
- Heat Shrink Cooling Tray
- Work Shelf
- Nonconductive Tweezers
- Sheathing Stripper
- Spare Electrodes
- 3-Hole Fiber Stripper
- USB Thumb Drive with Operating Manual
- Heavy Duty Carrying Case
- MUL-FSPLICE-300 Fiber Optic Fusion Splicer with Universal Fiber Holder
- Quick-change Rechargeable Lithium Battery
- Precision Optical Fiber Cleaver
- Splice-on Connector Adapter
- Power Cord
MINI OPTICAL TIME DOMAIN REFLECTOMETER (OTDR)

The MUL-OTDR-500 is a handheld Optical Time Domain Reflectometer (OTDR) with an ergonomic design that uses the latest technology in the optic fiber field. The Multicom OTDR provides outstanding functionality and durability with high precision, high sensitivity, easy operation and very light weight.

The MUL-OTDR-500 includes multiple functions all in one instrument making it the ultimate tool for fiber network construction and maintenance. The Multicom OTDR is perfect for technicians working with FTTX testing in PON networks, CATV and access network testing, and fiber system troubleshooting. The OTDR function supports real, average, and auto mode test with 1310 & 1550nm wavelengths, while allowing the user to save the results in an SOR file format. There is also an event map function to show the length and information for each link in the system.

The MUL-OTDR-500 Comes Equipped with:
- Optical Power Meter (OPM): -50dBm to +26dBm range for 850, 980, 1300, 1310, 1490, 1550 & 1625nm wavelengths
- Visual Fault Locator (VFL): 10mW output power to help the user visually find fiber faults like breaks & bad splices
- Optical Light Source (OLS): 1310 & 1550nm wavelengths with CW, 270 & 330 Hz, 1 & 2 kHz modulation frequencies
- RJ-45 cable line sequence measurement, line length, and wire/cable tracing/tracking
- LED Flashlight to help technicians in locations with low lighting conditions

The MUL-OTDR-500 Kit Includes:
- MUL-OTDR-500
- MUL-OTDR-500-WT - Wire Tracker
- SC Adapter (pre-installed on OTDR)
- ST Adapter
- Protective case
- USB charging cable
- USB flash drive
- Cleaning Alcohol Wipes
- AC/DC USB charging adapter
- 2x AAA batteries
- Calibration Certificate

OPTICAL TIME DOMAIN REFLECTOMETER (OTDR)

The hand-held Optical Time Domain Reflectometer MUL-OTDR-1000 and MUL-OTDR-1100 are a new generation of intelligent optical-fiber test equipment. Multicom’s OTDRs are specially designed for tough outdoor jobs. Lightweight, easy operation, low-reflection LCD and 12 hours of battery life make it perfect for testing fiber optic cable in the field.

Features:
- Auto/manual testing
- Integrated design with long battery life
- Outdoor enhanced, smart and rugged
- 7” anti-reflection LCD touch screen
- Support multi-language display and input
- Visual Fault Locator (VFL)
- The MUL-OTDR-1100 includes Light Source, Power Meter & Smart Network Analysis

Features:
- Fine focus control for easy inspection of any fiber connector
- 5 interchangeable precision stainless-steel adapters
- USB connection to an OTDR or PC/laptop to display, capture and record the fiber end-faces

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The Multicom MUL-OPM-PON-VFL-300 PON Optical Power Meter is connected between the OLT and ONT, and is especially designed for PON network construction and maintenance. The voice, data, video signal (1310nm/1490nm/1550nm), can be measured synchronously and the corresponding optical power value can be displayed with this meter. The meter is also capable of measuring and storing test results for downloading to a PC.

**Features:**
- Tests 3 PON wavelengths synchronously: 1490nm, 1550nm & 1310nm, and stores the results for downloading
- Power Meter is capable of testing 850, 1300, 1310, 1490, 1550 & 1625nm
- 10mW Visual Fault Locator
- Tests the burst mode RFoG upstream wavelength signal of 1310nm
- Handheld, easy to operate
- Save and upload 1,000 records through USB to management software
- 3.7V, 6600mAh rechargeable Lithium battery

The Multicom MUL-OPM-XGPON-VFL-400 XGPON Optical Power Meter is connected between the OLT and ONT, and is especially designed for XGPON network construction and maintenance. The voice, data, video signal (1270/1310/1490/1550/1577nm), can be measured synchronously and the corresponding optical power value can be displayed with this meter. The meter is also capable of measuring and storing test results for downloading to a PC.

**Features:**
- Tests 5 XGPON wavelengths synchronously: 1270, 1310, 1490, 1550, & 1577nm, and stores the results for downloading
- Capability of end face fiber inspection with optional video fiber inspection microscope
- Power Meter is capable of testing 850, 1300, 1310, 1490, 1550 & 1625nm
- 10mW Visual Fault Locator
- Tests the burst mode RFoG upstream wavelength signal of 1310nm

### Features
- **For use with** 850, 980, 1300, 1310, 1490, 1550nm
- **Simultaneously display of Absolute & Relative power**
- **SC, FC, 2.5mm Universal Connector**
- **200 hours of operation (typical)**
- **Standard AA alkaline batteries (provided)**
- **Rugged and weather resistant**

**OPTICAL POWER METER**

**Features:**
- **High stability of the output power and stable output wavelength**
- **Supports 2 or 4 output wavelengths**
- **MUL-OLS-100 - Singlemode - 1310/1550nm**
- **MUL-OLS-200 - Multi-mode - 850/1300nm**
- **MUL-OLS-300 - Singlemode & Multi-mode - 850/1300 & 1310/1550nm**

**OPTICAL LIGHT SOURCE**

**Features:**
- **For use with** 850, 980, 1300, 1310, 1490, 1550nm
- **Simultaneously display of Absolute & Relative power**
- **SC, FC, 2.5mm Universal Connector**
- **200 hours of operation (typical)**
- **Standard AA alkaline batteries (provided)**
- **Rugged and weather resistant**

**MUL-OPM-100**

**MUL-OLS-100/200/300**
**OPTICAL FIBER IDENTIFIER**

**Features:**
- Indicates the signal direction and power in optical fiber
- Indicates signal presence or absence (live or dark fiber)
- Efficiently identifies the traffic direction and frequency tone (270Hz, 1kHz, 2kHz) with audible warning
- Built in VFL function

**VISUAL FAULT LOCATOR**

**Features:**
- Bright red laser at 650 ±10nm
- Continuous Wave (CW)/Off/Pulse operation
- Batteries last 50 hours (typical)
- Standard AAA alkaline batteries
- Rugged and weatherproof
- 2.5mm universal connector
- Available in 1, 10, 20, 30 and 50mW

**HIGH PRECISION FIBER OPTIC CLEavers**

**MUL-FO-CLEAV-200**

**Features:**
- Compact body and high precision design
- Applicable for single fiber and up to 12-count fiber ribbon (-200 only)
- For use on Singlemode and Multi-mode fiber
- 36,000+ fiber cleaves life (1,000 cleaves x 3 heights (-200 only) x 12/16 positions)
- Includes hard carrying case and additional accessories

**MUL-FO-CLEAV-150**

**MUL-FO-CLEAV-100**

**HANDHELD FIBER INSPECTION MICROSCOPE**

**Features:**
- Portable and easy to use, ideal for field use
- 400X magnification
- For inspection of singlemode and multi-mode fibers
- Optical Connector: 1.25 & 2.5mm universal adapter
- Color: Black
- Power Supply: 3 x AAA batteries
- Battery Life: 40 hours
- Specialized eyepiece design

**OTDR LAUNCH CABLE BOX**

**Features:**
- Ruggedized Case
- Singlemode
- 150 Meters / 500 Meters / 1 KM
- SC/UPC to SC/UPC Connectors (others available on request)
- Robust carabiner clip
- Built-in cable management
- Compound latch with locking feature
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- Pole Line Hardware
- Fiber Distribution
- Fiber Optic Headend & Termination
- Video Encoders & Modulators
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