

MULTICOM PRODUCT CATALOG



Multicom Products Incorporate
Leading Edge USA Technology:

- USA Lasers
- USA IC Chipsets
- USA Amplifiers
- USA Fiber Optics
- USA Engineering & Designs

"After spending decades with Fortune 500 companies, I decided to become an entrepreneur. It started in my garage in the fall of 1982. Over the years Multicom has matured into a multi-faceted corporation bringing the latest technology to diversified geographic and vertical markets. Global locations and markets served include the United States, its territories and 34 foreign countries. The future is exciting. The ability to add new communication products from our manufacturing facilities domestically and overseas has received enthusiastic acceptance. Hundreds of new state-of-the-art SKUs have recently been added to our over 19,000 products in stock, and more are in process. We are proud to display our current family of products with this product catalog."

Sherman Miller, Multicom Founder, President and CEO



WELCOME

1982 was a significant year for Sherman Miller, Multicom's founder and president. It was that year that he started Multicom, Inc. – an event marked by the opening of the garage door of his home.



Entrepreneurs understand that unless you know your clients' problems, unless you identify their pain, you can't provide viable, desirable solutions.

Multicom, a Service-Disabled, Veteran-owned, Small Business (SDVOSB), now reaches around the world providing innovative solutions since 1982.

Since that time, Multicom has grown to be a cohesive team of experienced technicians, engineers, administrators, and sales people with decades of experience under their belt – many of our staff today are original hires and have worked at Multicom for more than a decade.

From the Orange County Convention Center and the Gaylord Palms Hotel/Convention Center in Orlando to the José Miguel Agrelot Coliseum in San Juan, Puerto Rico, Multicom's products and expertise help make these venues the world-class destinations that they are.

Winner of the U.S. President's 'E' Award for outstanding contributions to the country's export expansion program, Multicom is a manufacturer and stocking distributor of over 19,000 products from more than 300 manufacturers. This enables us to facilitate data, video and voice transmission over fiber optics, coax, ethernet and WiFi - to every conceivable mode of reception, as well as traffic control systems that enable your commute to and from work.

Multicom strives not only to develop and deliver the latest technology, but our products are designed to accommodate the constant evolution of new technology. Multicom offers from one source, multiple lines of products to completely build and maintain communication systems at cost effective prices.

At Multicom, we strive to not only provide you with the highest-quality products needed for the end-to-end integration of fiber optic, coax and Ethernet distribution systems. But most importantly, we stress 'personal service' in order to understand your goals and implement the most efficient solution.

When you call us a real person answers the phone! You will be then be transferred to a qualified sales or application engineer with the experience and expertise to provide the products and service you need, or answer your questions. We have been an industry and resource leader for nearly 40 years and we value the relationships we have built over that time.

Since 1982, Multicom has grown to be a cohesive team of experienced technicians, engineers, administrators, and sales people with decades of experience under our collective belts – many of our staff today are original hires and have worked at Multicom since its inception. We look forward to serving you.

Multicom is the Proud Recipient of the President's 'E' Award for Outstanding Contributions to the Export Expansion Program of the U.S.A.



The President's 'E' Award was created by Executive Order of the President on December 5, 1961, to afford suitable recognition to persons, firms, or organizations which contribute significantly in the effort to increase United States exports.



Multicom is a sustaining member of the U.S. District Export Council. The District Export Council encourages and supports the export of goods and services that strengthen individual companies, stimulate U.S. economic growth and create jobs.



Sherman Miller, President and CEO of Multicom, is an executive board member of the Orlando Regional Chamber of Commerce - a 5-Star Chamber. The ORCC is specifically focused on regional entrepreneurship, serving the growing needs of businesses and entrepreneurs by 'Connecting our Members to Success', throughout Central Florida.

Multicom is also a sustaining member and/or affiliated with multiple associations and communities in the industry including these, and more:



Society of Cable
Telecommunications
Engineers



National Cable
Television Cooperative



National Systems
Contractors Association



Satellite Broadcasting and
Communications Association



International Municipal
Signal Association



WORLD TRADE CENTER®
ORLANDO

Sherman Miller is on the
Board of Directors



TABLE OF CONTENTS

1. OUTSIDE PLANT	Page 5
Fiber Optic Cable - ADSS, Armored	6
Fiber Optic Cable - Armored & Drop	7
Fiber Optic Network Access Point (NAP)	8
Fiber Optic Network Access Point	9
Outdoor 4-Port Node	10
Node Service Cable	10
Drop Coax Cable	11
Trunk Cable	12
Heat Shrink Tubing	12
Trunk Connectors & Accessories	13
Outdoor Power-Passing Taps - 1 GHz	16
Outdoor Power-Passing Taps - 1.2 GHz	18
Outdoor Passives	20
Plug-in Tap Series	21
High-Pass Filter	22
Outdoor Balun	22
F-Port Terminator	22
OUTSIDE PLANT - POLE LINE HARDWARE	Page 23
QuickVise & QuickSplice for Messenger/Strand	23
Formed Wire Dead-End for ADSS	24
Guy Wire Deadend for Strand	24
Suspension Clamps for ADSS	25
Deadend Clamps	26
Pole Line Hardware	27
2. FIBER DISTRIBUTION	Page 29
Jumpers & Pigtails	30
Pigtails	31
Variable Attenuators	32
Mating Sleeves	32
PLC Optical Splitters	33
Attenuators	33
WDMs	34
LGX Cassette Chassis	34
Patch & Splice Enclosure	35
Adapter Panels	35
3. FIBER OPTIC HEADEND & TERMINATION	Page 36
1310nm Direct Modulated Transmitter	37
1550nm 6dB Direct Modulated Transmitter	37
1550nm 10dB Direct Modulated Transmitter	38
1550nm Externally Modulated Transmitter	38
1550nm EDFA	39
8 Port High Power 1550nm EDFAs	39
16/32 Port High Power 1550nm EDFAs	40
Headend Return Path Receiver	41
Optical Transport Chassis	41
Optical Transport Modules	42
High Power Micro-Node	43
Micro-Node	44
Nano-Node	44
RFoG Micro-Node	45
Micro-Node Receiver	45
Field-Installable Fiber Optic Connectors	46

4. VIDEO ENCODERS & MODULATORS	Page 47
High Bandwidth Agile Modulator	48
Agile Modulator	49
HD Encoder - 1CH	50
HD Encoder Deluxe	51
HD Encoder Rack Shelf Kit	52
Digital A/V Modulator 3-Channel Input	52
HD Encoder-DVB-T - 4CH	53
Encoder / Modulator with IP Streaming - 8CH	54
SD Streaming Encoder - 8CH	55
5. TOOLS & TEST EQUIPMENT	Page 56
Optical Time Domain Reflectometer	57
OTDR Fiber Optic Microscope Probe	57
Fusion Splicer	58
Optical Power Meter	60
Optical Light Source	60
Optical Fiber Identifier & Visual Fault Locator	61
Visual Fault Locator	61
OTDR Launch Cable Box	62
Handheld Fiber Inspection Microscope	62
Fiber Optic Cleaner Cassette	63
Fiber Optic Shears	63
Fiber Optic Cleavers	64
6. IT / DATA	Page 65
Gigabit Ethernet Media Converter	66
Fiber Optic Media Converter	66
SFP/SFP+/XFP Optical Transceiver Modules	67
Media Converter Chassis	67
7. INDOOR	Page 68
Forward & Reverse Distribution Amplifier	69
Headend Passive Combiner	69
MS Series 1GH Premium Digital CATV Splitters	70
Digital 1-Port Tap	71
AC Power Adapters	72
High Speed HDMI Cables V1.3 & V1.4	73
High Speed HDMI Cable V2.0	74
CAT5E Patch Cable	75
RCA Audio/Video Patchcords	75
RJ-11 Modular Flat Telephone Cables	76
Refurbished Cable Modems	76
8. SATELLITE DISHES & LNBFS	Page 77
Satellite Dishes	78
LNBFS	79
3x4 Satellite IF Multiswitch	80
Non-Penetrating Roof Mount	81
Analog Satellite Finder	81
9. RESOURCES	Page 82
www.multicomstore.com	82
www.mconnect	83
Line Card	84
Freq. Allocation Charts - J.83B, ATSC, DVB-T & ISDB-Tb	85
Loss Budget Chart for Singlemode Fiber	89



OUTSIDE PLANT

Bring your network on-line quickly and efficiently while protecting your investments against the elements

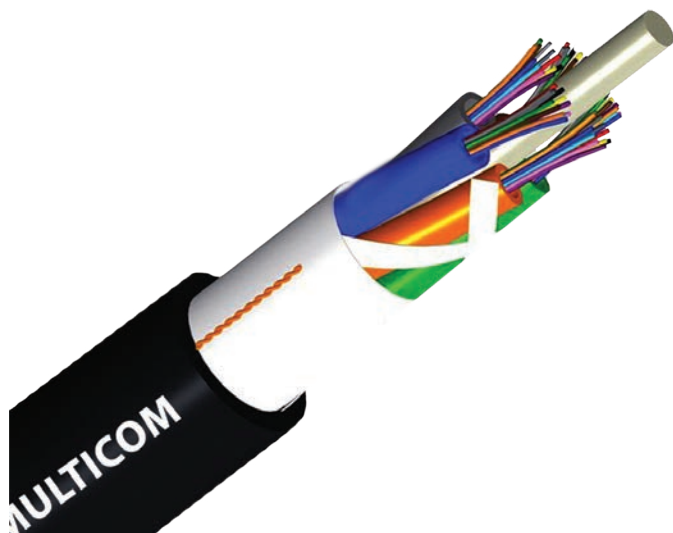
With this, our fifth issue of the Multicom Product Catalog, we are excited to introduce our new Fiber Optic Network Access Points (NAPs) and fiber enclosures, and expanded line of Pole Line Hardware in a big way. These new products enhance our ability to be your one-stop provider of more products you need in even more of your applications. This is just the beginning. We plan on enhancing these new product lines extensively going forward.

Our outside plant portfolio is a perfect example of an extended family of CATV and fiber-rich solutions for every environment. These new solutions exceed industry standards for aerial, underground, commercial and side-of-home applications, and delivers rapid deployment and operational efficiency, superior mechanical and RF/optical performance, even in the harshest environments. With a broad and deep portfolio that includes high-capacity fiber and hybrid fiber coaxial systems — plus the networking expertise to help support all your applications.

NEW IN THIS ISSUE: MULTICOM IS INTRODUCING A HUGE ARRAY OF POLE LINE HARDWARE - SEE PAGE 23

FIBER OPTIC CABLE - ADSS

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 FTTH 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

Multicom's All-Dielectric Self-Supporting (ADSS) fiber optic cable is designed for outside plant aerial applications in local and campus network architectures. As the ADSS cabling concept implies, a separate messenger support wire hanging system is not required, greatly reducing installation time and improving upfront and maintenance labor costs. From pole-to-build to town-to-town installations,

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 FTTH and self-supporting aerial applications.

MADSS012SM-XXX

- Length: 350 or 600 Ft. Span (or 100 & 200 Meters)
- SM: Single Mode, MM: Multimode
- Fiber Count: 12, 24, 48, 96, 144

Multicom stocks a wide variety of proven, high-reliability aerial cable with fiber counts from 12 - 144, for above ground fiber cabling as well as the **essential supporting products including:** (Our Pole Line Hardware section starts on Page 23)



Suspension Clamps

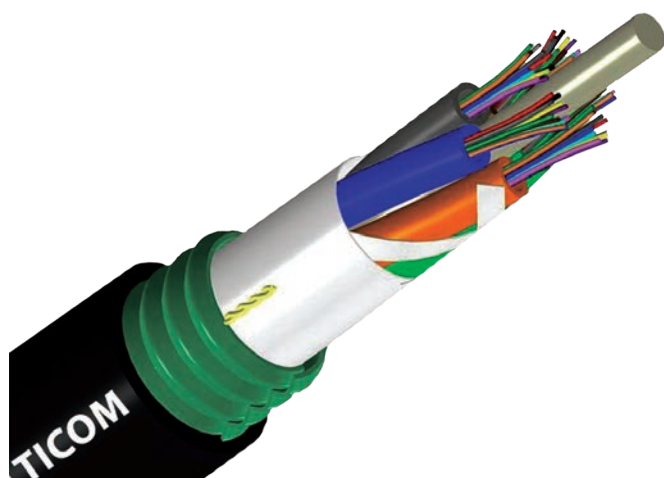
Formed Wired
Deadend

Deadend Clamps

FIBER OPTIC CABLE - ARMORED

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

Multicom's armored fiber optic cable has a build-in metal armor inside the outer jacket, armored cable provides extra protection for fiber optic cable, without sacrificing flexibility or functionality within fiber networks. Armored fiber cable is more robust and reliable when encountered with rodent, moisture and other issues that may cause damage. The superior features make armored fiber cable a perfect fit for campus & building backbones, data centers and industrial applications.



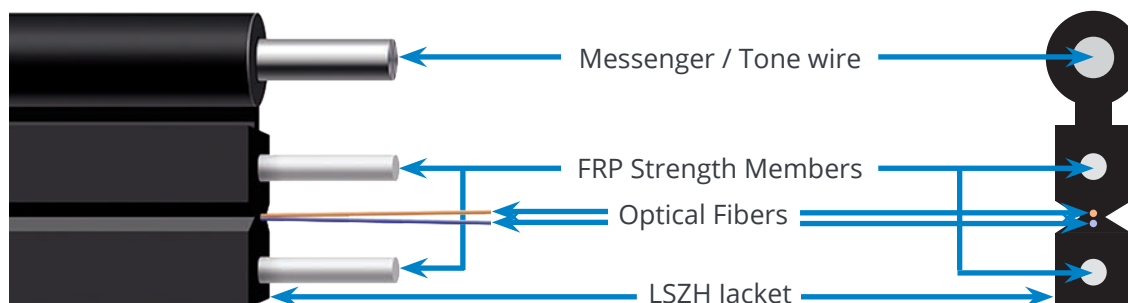
Features:

- Loose tube
- Singlemode and Multi-mode
- Fiber counts from 4 to 144
- Smaller, more flexible tubes for easier installation and routing
- On 5,000 meter reels
- Rural Utilities Services (RUS) listed
- PE coated armor offers additional crush resistance and protection from rodent attack

MARMLT012SM

SM: Single Mode
Fiber Count: 12, 24, 48, 96, 144

FIBER OPTIC DROP CABLE



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. The messenger enhances the overall tensile strength of the cable.

MFTTX-A-2-SMA-B-M

Features:

- Figure-eight construction for use with standard messenger clamping and support hardware
- FRP strength members
- LSZH outer cable jacket for excellent UV and weather resistance
- Tight-buffered fiber optic cables meet all functional requirements

M=Messenger/Tone Wire
Sheath Color: B-Black, W-White, G-Gray, U-Blue
Quality Designation
Type: SM: G.657A1 Singlemode, MM: Multi-mode
Number of Fibers (1-6)
Cfg A: Fiber(s) center, 2 FRP strength members (1@side, 0.5mm diameter)
Cfg B: Fiber(s) center, 2 Steel strength members (1@side)
Cfg C: Fiber(s) center, Armored

NEW!

FIBER OPTIC NETWORK ACCESS POINT (FNAP)

The rugged Multicom Fiber Optic Network Access Point (FNAP) Series is designed for flexibility and ease of use when splicing in aerial, pole, or wall mount applications. The FNAP is constructed of a durable and impact resistant material specifically formulated for reliability and performance in outside plant environments. The FNAP can accommodate express cabling as well as the addition of branch or lateral cabling.

The FNAP supports a variety of drop designs and environmental sealing and strain relief. The enclosure is supplied with all of the hardware required to seal and secure the feeder and distribution cables, back-to-back fiber splice trays, and the desired splitter type and configuration.

Options:

- LGX Cassette
- Tube PLC Splitter
- Mating Sleeves
- Pigtails

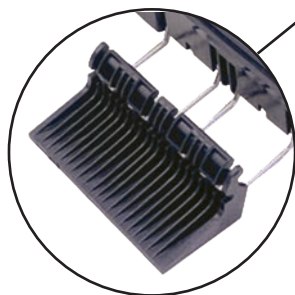
Sealed
secure
access
lock

Front & rear fiber
or splice storage

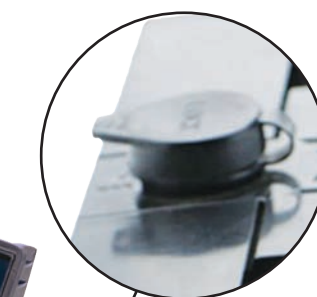
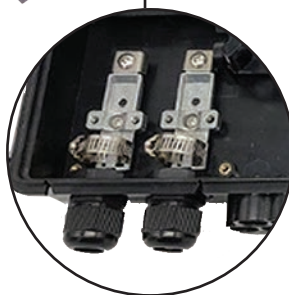


Back of FNAP provides for multiple
mounting configurations

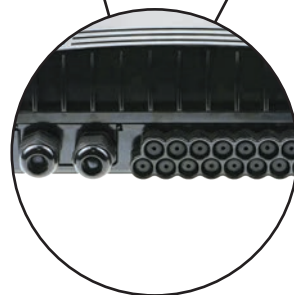
Environmental Seal
- Heavy duty latches,
hinges and gaskets



Mid-span Access and
Cable Glands included



Options:
2 In ports,
8, 12, 16
Out ports



Shown above:

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

NEW!

FIBER OPTIC NETWORK ACCESS POINT (FNAP)

Fiber Optic splice closures are used to distribute, splice, and store the outdoor optical cables which enter and exit from the ends of the optical fiber cable enclosure. Multicom offers IP68 Closures which allows our product to withstand all environmental hazards including dust, dirt, sand, rain and any other intrusion factors.

Made from polycarbonate (PC), they can be used with both aerial cable and armored cable. Waterproof GPON FTTH Horizontal 2 In 2 Out ABS Fiber Optic Splice Closure has several fiber cable in-out round or oval ports for the cable. These enclosures are widely applied to the splicing and distribution various optical cables. The fastening components are made of the high-quality steel allowing for secure sealing and protecting the interior of the enclosure.



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



Detail

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

M-TYPE-SPCONFIG-COLORMTL-PORTS-EQUIPPED-CONN (-AM)

TYPE- FNAP=outdoor network access point, FILC=inline closure, FDOME=dome closure, FTERM="rosetta"

SPCONFIG- A to Z, specific config to each design, including: cable entrance/exit config, latching/locking, splice trays, IP65/66/68,etc.

COLORMTL- B/P=Black Plastic, G/P=Gray Plastic, W/P=White Plastic, B/M=Black Metal, G/M=Gray Metal, W/M=White Metal

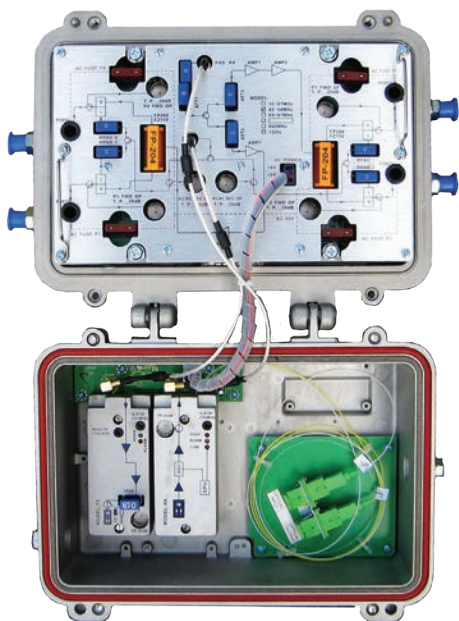
PORTS- 02/04/08/12/16/24/36/48/72/96/144/etc Ports. If subequipped then use "/" to specify equipped

EQUIPPED- B=Not loaded, C= Cassette splitter, T=Tube splitter, P=Pigtails

CONN- Connectors: SC/APC, SC/UPC, LC/APC, LC/UPC, or NA=not applicable, etc.

(-AM)- "-AM" option is used when the package kit includes aerial brackets and mounting hardware

OUTDOOR 4-PORT NODE



The Multicom MUL-OFN-V-M-FP-4-M 4-Port Outdoor Optical Node is a bi-directional node specifically developed for HFC broadband networks. It accommodates the fiber backbone to the node, while addressing the issues of CATV bi-directional return channel noise and high reliability network security transmission requirements of modern CATV networks.

This Outdoor 4-Port Optical Node uses a modular architecture allowing fast, easy servicing, a variety of configurations, and easy upgrading. The RF amplifier section and the switching power supply module are in one modular unit in the bottom cover. The top cover can be populated with 1 forward optical receiver module, 1 reverse optical transmitter module and 1 optional Ethernet transponder/Network Management module.

Forward Optical Receiver	Specification
Optical Receive Power (dBm)	-6 ~ +2
Optical Return Loss (dB)	> 45
Optical RX Wavelength (nm)	1100 ~ 1600
Forward RF Parameters	Specification
Frequency Range (MHz)	54 ~ 1003
Rated Output Level (dBmV)	≥ +46 (≥ 106 dBμV)
Output Return Loss (dB)	≥ 16
Return Optical Transmitter	Specification
Optical TX Wavelength (nm)	1310 ±10
Laser Type	FP (DFB optional)
Optical Output Power (mW)	1
Return RF Parameters	Specification
Frequency Range (MHz)	5 ~ 42
Rated Input Level (dBmV)	+15 ~ +25 (75 ~ 85 dBμV)
Input Return Loss (dB)	≥ 16

MUL-OFN-V-M-FP-4-M

NODE SERVICE CABLE



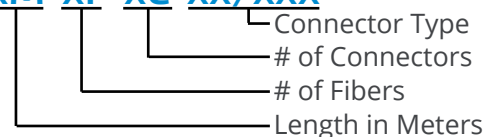
Multicom Node Service Cable utilizes a specialized 5/8"-24 feed-through adapter, featuring an anti-twist coupling. The anti-twist feature allows the coupling body of the service cable to be secured to the housing of the outdoor fiber node, without twisting the cable.

Assemblies come standard in 16.5' (5m) lengths with six fibers and six SC/APC connectors, but can be custom built to specifications with all variation of lengths and connector options available.

Features:

- Corning fiber
- Armored
- Loose tube
- Fully water blocked

MNSC-xM-xF-xC-xx/xxx



Parameter	Specification
Insertion Loss	≤ 0.30dB
Return Loss	≥ 60dB
Max Attenuation	1310nm ≤ 0.4dB/km
	1550nm ≤ 0.3dB/km

DROP COAX CABLE

High-performance coaxial cable engineered for today's high-performance, high speed networks

Multicom has been a leader in the development and manufacturing of the coaxial cable that keeps residential and commercial structures connected to today's advanced communications networks - whether they are suspended in the air or buried underground.

Every foot of cable we produce is manufactured to our strictest specifications and quality-control tested every step of the way. The result is a cable that can reliably carry more bandwidth over longer distances, with unsurpassed signal clarity.



DID YOU KNOW?

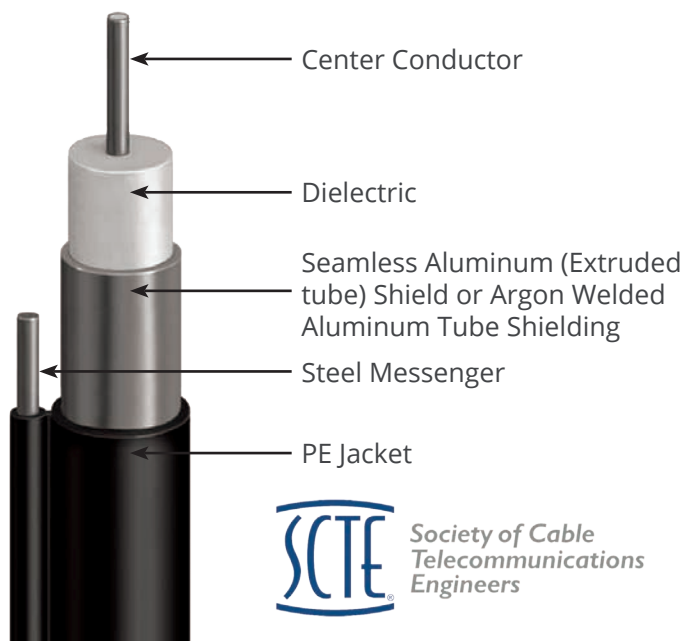


Society of Cable
Telecommunications
Engineers

Multicom's Premium Coaxial product line meets or surpasses the latest SCTE requirements. These products have successfully passed extensive SCTE 15 and 74 evaluation testing in an independent US laboratory.

Cable Type	Part #	Braid %	Color / Description
RG-59	M5960-BV	60%	Black
RG-59	M5960-BVV	60%	Black, CATV UL Listed
RG-59	M5995C-BVRS	95%	Black, CMR UL. Solid Copper Center Conductor
RG-59	M5995C-BVRDS 18/2	95%	Black, CMR UL. Solid Copper Center Conductor, Two 18 Gauge Copper Wires, 500' Reel
RG-6	M660-BV	60%	Black
RG-6	M660-BVW	60%	White
RG-6	M660-BVV	60%	Black, CATV UL Listed
RG-6	M660-BVWV	60%	White, CATV UL Listed
RG-6	M660-BVM	60%	Black, Messenger
RG-6	M660-BEF	60%	Black, Flooded
RG-6	M6Q-BVV	60%	Quad Shield, CATV UL Listed
RG-6	M690-BV	90%	Black
RG-6	M690-BVW	90%	White
RG-6	M690-BVV	90%	Black, CATV UL Listed
RG-6	M690-BVWV	90%	White, CATV UL Listed
RG-6	M690-BVM	90%	Black, Messenger
RG-6	M660T-BVS	90%	SCTE Compliant / Tri-shield, Premium
RG-6	M660-BVXS	60%	CMX UL, Solid Copper Center Conductor
RG-6	M660-BVXDS	60%	CMX UL, Black, Dual Solid Copper Center Conductor, 500' Reel
RG-11	M1160-BV	60%	Black
RG-11	M1160-BVV	60%	Black, CATV UL Listed
RG-11	M1160-BVM	60%	Black, Messenger
RG-11	M1160-BVF	60%	Black, Flooded
RG-11	M1190-BV	90%	Black
RG-11	M1190-BVV	90%	Black, CATV UL Listed
RG-11	M1190-BVM	90%	Black, Messenger
RG-11	M1160T-BVS	90%	SCTE Compliant / Tri-shield, Premium

.500 & .540 TRUNK CABLE



Multicom Premium Trunk Cable

The .500 trunk cable, M500-JCAM109-S, provides the exceptional performance of premium SCTE 15 - compliant product also at Multicom's popular pricing.

Part #	Description
M500-JCAM109	.500 / Extruded
M500-JCAM109W	.500 / Argon Welded
M500-JCAM109S	.500 / SCTE Compliant, Premium
M540-JCAM109	.540 / Argon Welded
M540-JCA-W	.540 (no messenger)

Multicom's Extruded and Welded .500, and .540 Messenger Trunk Cable are manufactured in an ISO 9001 Certified facility and has specifications that exceed industry standards - with low attenuation and inherent strength. Its proven performance and reliability make it the right choice for distribution applications.

Multicom stocks a variety of proven, high-reliability Messenger Trunk for above ground fiber cabling as well as the **essential supporting products including:** (Our Pole Line Hardware section starts on Page 23)



Quickvise



QuicksplICE



Pole Brackets



Wall Brackets



Cable Brackets & Hooks

HEAT SHRINK TUBING



Multicom's heavy-duty heat shrinkable tubing is ideal for mechanical and environmental protection of CATV cable and is designed for aerial and direct burial connections. It is a medium-wall tubing with a halogen-free, radiation cross-linked polyolefin outer layer and heat-melt adhesive inner layer.

When heating the tubing with either a heat gun or torch, the tubing can shrink down from 40mm (1.5in) to 12mm (.47in), and the lining of adhesive sealant will flow for easy sealing and bonding.

Features:

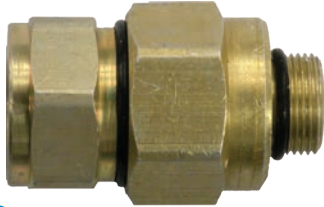
- Moisture/waterproof
- High resistance to impact, abrasion and UV
- Flame retardant
- Fungus resistant
- Halogen free, environmentally friendly
- Meets ASTM standards

Min. inner dia. before shrink	Max inner dia. after shrink	Min. thickness after shrink	Normal length/pc
40 mm (1.5 inch)	12 mm (.47 inch)	2 mm (.08 inch)	1.22 M (48 inch)
75 mm (3 inch)	22mm (.86 inch)	4 mm (.16 inch)	1.22 M (48 inch)
95 mm (3.74 inch)	29mm (1.14 inch)	4.1 mm (.161 inch)	1.22 M (48 inch)

M-HST-1500
M-HST-3000
M-HST-3740

TRUNK CONNECTORS

FEED THRU

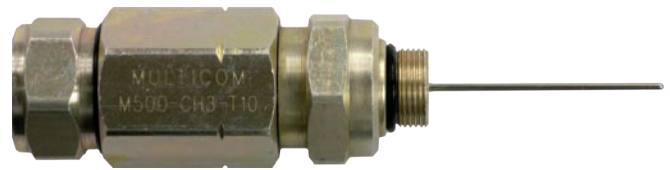


M500B-T10

The 500 Feed Thru Connector seizes the outer and center conductor of the coaxial cable. The cable center conductor extends thru this type of connector and is retained within the equipment housing.

- Aluminum Alloy with Chromate Finish
- High RF performance in pedestal or straight through configurations • "O" Ring Seals

PIN



M500-CH3-T10

M540-CH3-T10

M625-CH3-T10

M750-CH3-T10

M875-CH3-T10

The three-piece Pin Type Connector seizes the outer and center conductor of the coaxial cable. A solid brass pin seizes and retains the cable center conductor. The pin then extends thru the body and is retained within the equipment housing.

SPLICE



M500-SP-T10

M540-SP-T10

M625-SP-T10

M750-SP-T10

M875-SP-T10

The 500 Splice Connector is used to join together two cables. It also seizes the outer and center conductors of the cable.

RG-11 PIN



M-11-CH3-T10

Multicom's 3-piece RG-11 Pin Type Connector seizes the outer and center conductor of the coaxial cable. It has an additional feature not found in the feed thru type consisting of a solid brass pin which seizes and retains the cable center conductor. The pin then extends thru the body and is retained within the equipment housing.

KS MALE TO F-FEMALE



MF-625-CH

The KS Male to F-Female adapter is used to change from Housing to F-Female Connector.

HOUSING TO HOUSING

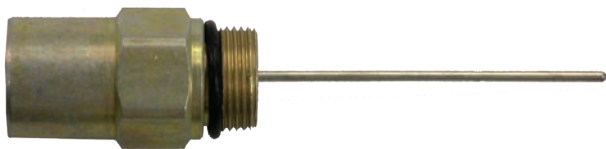


M-HSG-HSG

The Housing to Housing Connector eliminates the need for jumpers and allows the connection of equipment without cable.

TRUNK CONNECTORS

HOUSING TERMINATOR



M-TRM

The Housing Terminator Connector is used in cable systems where it becomes necessary to terminate the RF signal.

HOUSING TERMINATOR-6KV



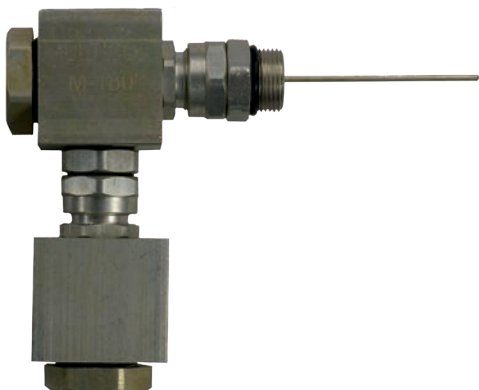
M-TRM6KV

Multicom's Housing Terminator is used in cable systems where it becomes necessary to terminate RF signal power. It seizes the outer and center conductors of the cable.

Features:

- Can accommodate 6KV surge
- Aluminum alloy with chromate finish
- "O" Ring seals
- Bandwidth: 5 MHz to 1 GHz
- Nominal impedance: 75 ohms

180° ADAPTER



M-180

The 180° Adaptor provides the connection between the amplifier and cable connector in a restricted space.

Adapters are essential components for flexible and unique aerial and underground applications.

SPLICE BLOCK

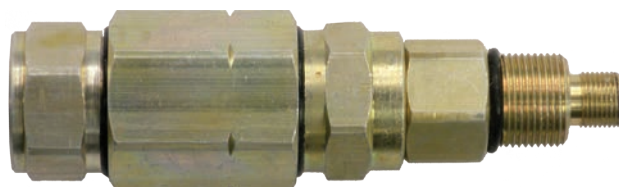


M-SPB

The Multicom Splice Block has been designed with superior electrical performance characteristics. The one-piece body is machined from an aluminum alloy. This product is designed to give high RF performance in pedestal or straight through configurations.

Part #	Description
M-SPB-2	2" Splice Block
M-SPB-3	2.75" Splice Block

500 TO F-FEMALE



M500-BAFF-T10
M540-BAFF-T10
M625-BAFF-T10
M750-BAFF-T10

M875-BAFF-T10
M750-BAFF-T10
M875-BAFF-T10

The 500 to F-Female Connector is used when an F-Female port is required at the end of a cable. It also seizes the outer and center conductors of the cable.

90° ADAPTER

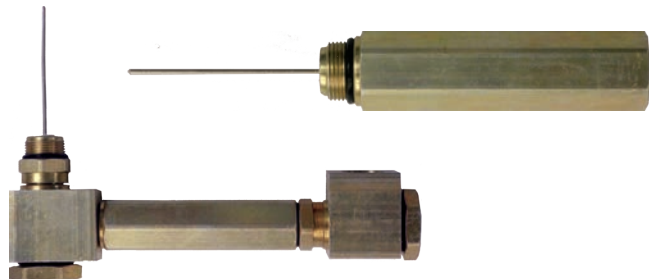


M-90

The 90° Adaptor is designed for pedestal type installations where space restrictions require a right-angle connection between equipment and coaxial cables.

TRUNK CONNECTORS

180° ADAPTER & EXTENSION

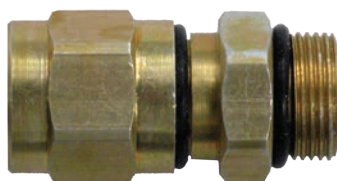


MP-PA & M-EXT

Multicom's 180° Adapter designed for applications where space limitations require a 180 degree connection between cable and equipment. The design provides high current carrying capacity and exceptional return and insertion loss characteristics through 1 GHz.

Part #	Description
MP-PA-3.0-T	180° with 3" Extension
MP-PA-4.5-T	180° with 4.5" Extension
MP-PA-6-T	180° with 6" Extension
M-EXT-3	3" Extension
M-EXT-4.5	4.5" Extension
M-EXT-6	6" Extension

RG-11 FEED-THRU



MCON-11

Multicom's Housing to RG-11 Feed-Thru Connector

- Aluminum Alloy with Chromate Finish
- "O" Ring Seals
- Bandwidth: 5 MHz to 1 GHz
- Nominal Impedance: 75 ohms

Adapters are used to change the direction of the cable where space is limited or where tight bends are required.

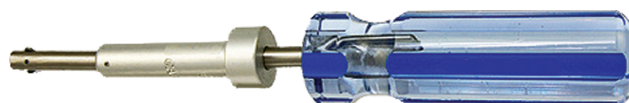
LOCKING TERMINATOR



MLT-1

Multicom's Theft Deterrent Locking Terminators are designed to provide optimal performance in typical field installations. They provide a weather-resistant, high performance termination when installed in less than optimal environments.

LOCKING TERMINATOR TOOL



MLTL-1

Universal Install Removing Theft Proof Termination Security Tool for use with the MLT-1. It features solid spring steel ears with a length of the plunger diameter is .245". It is durable, long lasting and easy to use.

OUTDOOR POWER PASSING TAPS - 1 GHz

Multicom stocks a complete line of quality outdoor taps with frequency coverage to 1 GHz. Available in two, four and eight port models that are capable of both strand and pedestal mounting.

These taps are constructed with the circuitry on a removable faceplate for ease in changing tap values. Separate gaskets are used to provide weatherproofing and RFI integrity.

All taps feature nickel-plated brass F connectors on the tap ports, and 5/8" entry fittings on input and output ports. The housings are made with powder-coated 360 aluminum alloy with a polyurethane coating to ensure maximum corrosion resistance.

Features:

- 1GHz
- Power Passing - Uninterrupted service when faceplate is removed
- Nickel-plated brass F connectors
- 120 dB RFI shielding
- Epoxy sealed with weather-proof gaskets
- Swivel-entry blocks for easy installation of connectors
- Frequency range 5-1,000 MHz
- 15 amp current capacity, 60-90VAC
- Powder-coated 360 aluminum alloy die-cast housing
- Aerial or pedestal mounting
- Printed circuit board
- Blocking capacitors on the F ports for surge resistance

Common Specifications:

Tap Loss Tolerance (dB)	
5-10 MHz	±1.5
10-550 MHz	±1.0
550-1000 MHz	±1.5
Tap to Tap Isolation (dB)	
5-10 MHz	24
10-550 MHz	27
550-600 MHz	24
600-1000 MHz	23
Return Loss (dB)	
@5-10 MHz	16
@10-400 MHz	26
@400-550 MHz	18
@550-870 MHz	16
@870-1000	17
Impedance	
All Ports	75 Ohm
Power	
Power Passing (AC/DC)	6A

2-Port Outdoor Power Passing Tap



Insertion Loss (dB)	4	8	11	14	17	20	23	26	29	32	35
5-10 MHz	T	3.6	1.8	1.3	1.0	0.8	0.8	0.8	0.8	0.8	0.8
10-450 MHz	T	3.8	1.8	1.5	1.4	1.0	1.0	1.0	1.0	0.8	0.8
450-550 MHz	T	4.2	2.2	1.7	1.5	1.2	1.2	1.2	1.2	1.2	1.2
550-750 MHz	T	4.5	2.8	1.8	1.8	1.4	1.4	1.4	1.4	1.4	1.4
750-1000 MHz	T	4.8	3.8	2.4	2.2	1.7	1.7	1.5	1.5	1.5	1.5
Isolation Between Tap-Port & Thru-Port	4	8	11	14	17	20	23	26	29	32	35
5-10 MHz	-	21	21	22	25	26	29	32	32	32	33
10-450 MHz	-	26	26	26	31	33	35	36	40	42	46
450-550 MHz	-	32	25	25	30	33	35	38	40	42	45
550-750 MHz	-	22	23	25	28	30	32	36	37	40	42
750-1000 MHz	-	22	23	25	28	30	32	36	37	40	42

OUTDOOR POWER PASSING TAPS - 1GHz

4-Port Outdoor Power Passing Tap



Insertion Loss (dB)	8	11	14	17	20	23	26	29	32	35
5-10 MHz	T	3.2	1.8	1.3	1.0	0.8	0.8	0.8	0.8	0.8
10-450 MHz	T	3.5	1.8	1.4	1.2	0.8	0.8	0.8	0.8	0.8
450-550 MHz	T	4.0	2.3	1.6	1.4	1.2	1.0	1.0	1.0	1.0
550-750 MHz	T	4.4	3.0	1.8	1.6	1.4	1.2	1.2	1.2	1.2
750-1000 MHz	T	4.8	3.7	2.2	2.0	1.8	1.5	1.5	1.5	1.5
Isolation Between Tap-Port & Thru-Port	8	11	14	17	20	23	26	29	32	35
5-10 MHz	-	22	22	25	30	30	30	32	32	33
10-450 MHz	-	26	27	30	36	36	38	40	42	44
450-550 MHz	-	24	28	30	35	35	35	40	42	42
550-750 MHz	-	23	24	27	32	32	34	35	38	40
750-1000 MHz	-	23	24	27	32	32	34	35	38	40

8-Port Outdoor Power Passing Tap



Insertion Loss (dB)	11	14	17	20	23	26	29	32	35
5-10 MHz	T	3.6	1.8	1.4	1.0	1.0	1.0	1.0	1.0
10-450 MHz	T	4.2	2.2	1.6	1.1	1.1	1.1	1.1	1.1
450-550 MHz	T	4.5	2.5	2.0	1.5	1.2	1.2	1.2	1.2
550-750 MHz	T	4.6	3.0	2.2	1.8	1.3	1.3	1.3	1.3
750-1000 MHz	T	4.9	3.2	2.6	2.2	1.5	1.5	1.5	1.5
Isolation Between Tap-Port & Thru-Port	11	14	17	20	23	26	29	32	35
5-10 MHz	-	23	24	27	28	30	32	34	36
10-450 MHz	-	24	25	28	30	32	34	35	38
450-550 MHz	-	27	27	30	34	38	40	42	42
550-750 MHz	-	25	27	30	33	33	35	38	40
750-1000 MHz	-	25	27	30	33	33	35	38	40

MTSAG-204P

Tap Value (8, 11, 14, 17, 20, 23, 26, 29, 32, 35)
of Ports (2, 4, 8)

NEW!

OUTDOOR POWER PASSING TAPS - 1.2 GHz

Multicom stocks a complete line of quality outdoor taps with frequency coverage to 1.2 GHz. Available in two, four and eight port models that are capable of both strand and pedestal mounting. These taps are constructed with the circuitry on a removable faceplate for ease in changing tap values. Separate gaskets are used to provide weatherproofing and RFI integrity.

All taps feature nickel-plated brass F connectors on the tap ports, and 5/8" entry fittings on input and output ports. The housings are made with powder-coated 360 aluminum alloy with a polyurethane coating to ensure maximum corrosion resistance.

Features:

- Frequency range 5-1,218 MHz (1.2GHz)
- Power Passing - Uninterrupted service when faceplate is removed
- Nickel-plated brass F connectors
- 120 dB RFI shielding
- Epoxy sealed with weather-proof gaskets
- Swivel-entry blocks for easy installation of connectors
- 15 amp current capacity, 60-90VAC
- Powder-coated 360 aluminum alloy die-cast housing
- Aerial or pedestal mounting
- Printed circuit board
- Blocking capacitors on the F ports for surge resistance

Common Specifications:

Return Loss (dB)	
5-950	18
950-1218	10
Impedance	75 Ohm
Power	60-90 VAC 50/60MHz

2-Port Outdoor Power Passing Tap



Insertion Loss	4	8	11	14	17	20	23	26	29	32	35
5-10	T	3.6	2.0	1.1	1.0	0.7	0.7	0.7	0.7	0.7	0.7
10-65	T	3.6	1.9	1.1	1.0	0.7	0.7	0.7	0.7	0.7	0.7
65-300	T	4.2	2.0	1.3	1.1	0.9	0.9	0.9	0.8	0.8	0.8
300-550	T	4.7	2.7	1.8	1.6	1.3	1.3	1.3	1.2	1.2	1.2
550-750	T	5.0	2.9	2.0	1.7	1.5	1.5	1.4	1.4	1.4	1.4
750-862	T	5.0	3.0	2.2	1.9	1.7	1.7	1.7	1.5	1.5	1.5
862-1000	T	5.1	3.1	2.3	2.0	1.8	1.8	1.8	1.6	1.6	1.6
1000-1218	T	5.2	3.4	2.5	2.2	2.1	1.9	1.9	1.7	1.7	1.7
Isolation Between Tap-Port & Thru-Port	4	8	11	14	17	20	23	26	29	32	35
5-10	T	26	26	27	31	33	35	36	38	40	43
10-65	T	26	27	30	32	33	35	36	38	40	45
65-300	T	25	28	32	35	35	37	37	40	45	48
300-550	T	22	28	30	32	32	35	36	39	42	46
550-750	T	22	28	28	30	32	35	35	38	40	44
750-862	T	22	27	28	30	31	33	34	37	38	42
862-1000	T	22	25	26	28	29	31	33	35	36	38
1000-1218	T	22	24	25	26	27	28	30	31	33	35
Tap-to-Tap Isolation	4	8	11	14	17	20	23	26	29	32	35
5-65	26	26	26	26	26	26	26	26	26	26	26
65-300	27	27	28	28	28	28	30	30	30	30	30
300-550	25	25	25	25	25	25	26	26	26	26	26
550-862	24	24	24	24	24	24	24	24	24	24	24
862-1218	22	22	22	22	22	22	22	22	22	22	22

NEW!

OUTDOOR POWER PASSING TAPS - 1.2 GHZ

4-Port Outdoor Power Passing Tap



Insertion Loss (dB)	8	11	14	17	20	23	26	29	32	35
5-10	T	3.6	2.0	1.1	0.9	0.8	0.8	0.7	0.7	0.7
10-65	T	3.6	1.8	1.1	0.9	0.8	0.8	0.7	0.7	0.7
65-300	T	4.0	2.0	1.3	1.0	0.9	0.9	0.9	0.8	0.8
300-550	T	4.7	2.7	1.8	1.5	1.3	1.3	1.3	1.2	1.2
550-750	T	5.0	2.8	2.0	1.8	1.5	1.5	1.5	1.5	1.5
750-862	T	5.0	3.0	2.1	1.8	1.7	1.7	1.7	1.6	1.6
862-1000	T	5.1	3.1	2.2	2.0	1.8	1.8	1.8	1.6	1.6
1000-1218	T	5.3	3.3	2.5	2.1	2.0	2.0	1.9	1.7	1.7
Isolation Between Tap-Port & Thru-Port	8	11	14	17	20	23	26	29	32	35
5-10	T	29	30	32	33	35	38	40	42	44
10-65	T	26	30	32	35	35	38	45	47	49
65-300	T	30	30	32	40	38	40	42	44	46
300-550	T	27	28	30	36	36	38	40	42	44
550-750	T	27	28	30	32	35	36	38	40	42
750-862	T	26	28	30	31	33	35	36	38	40
862-1000	T	25	26	28	29	31	33	34	36	38
1000-1218	T	23	24	24	25	28	31	31	32	35
Tap-to-Tap Isolation	8	11	14	17	20	23	26	29	32	35
5-65	26	26	26	26	26	26	26	26	26	26
65-300	30	30	30	30	30	30	30	30	30	30
300-550	26	26	26	26	26	26	26	26	26	26
550-862	24	24	24	24	24	24	24	24	24	24
862-1218	22	22	22	22	22	22	22	22	22	22

8-Port Outdoor Power Passing Tap



Insertion Loss (dB)	11	14	17	20	23	26	29	32	35
5-10	T	3.5	2.0	1.1	1.0	0.7	0.7	0.7	0.7
10-65	T	3.5	1.8	1.1	1.0	0.7	0.7	0.7	0.7
65-300	T	4.0	2.0	1.3	1.1	0.9	0.9	0.9	0.8
300-550	T	4.5	2.7	1.8	1.5	1.3	1.3	1.3	1.2
550-750	T	5.0	2.8	2.0	1.7	1.4	1.4	1.4	1.3
750-862	T	5.0	3.0	2.2	2.0	1.7	1.6	1.6	1.4
862-1000	T	5.1	3.4	2.5	2.1	1.8	1.8	1.8	1.7
1000-1218	T	5.2	3.8	2.7	2.6	2.0	2.0	2.0	2.0
Isolation Between Tap-Port & Thru-Port	11	14	17	20	23	26	29	32	35
5-10	T	30	32	33	35	38	40	43	50
10-65	T	30	32	33	35	38	40	43	50
65-300	T	32	32	35	38	35	38	40	45
300-550	T	28	32	35	38	35	38	40	43
550-750	T	26	32	35	35	35	38	40	41
750-862	T	26	32	35	35	35	38	40	40
862-1000	T	26	30	31	31	33	35	40	40
1000-1218	T	26	27	27	28	32	32	38	39
Tap-to-Tap Isolation	Same Specifications as 4-Port Tap (above)								

MTSAG-204P-1.2

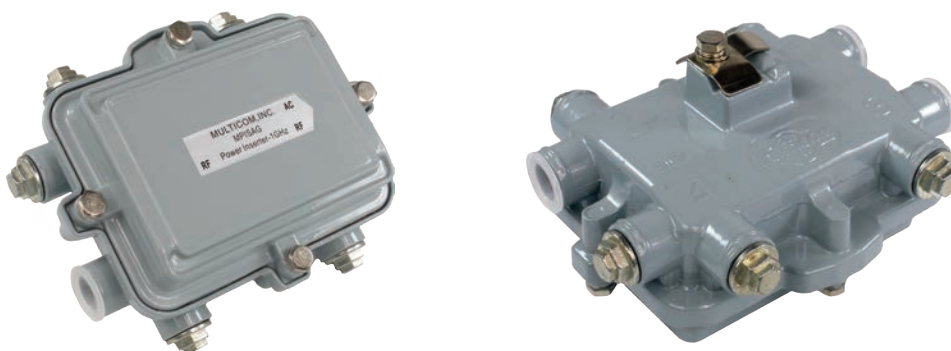
1.2 Ghz
 Tap Value (4, 8, 11, 14, 17, 20, 23, 26, 29, 32, 35)
 # of Ports (2, 4, 8)

OUTDOOR PASSIVES—SPLITTERS, POWER INSERTERS & DIRECTIONAL COUPLERS

Multicom's line of trunk line Splitters are available in 2 and 3 way versions as well as single port Directional Coupler models with values of 8, 12 and 16dB. A Power Inserter model rounds out the series. All Splitter, Directional Coupler and Power Inserter housings have 5/8-24 entry fittings on all ports and are made with the same corrosion resistant powder coated 360 aluminum alloy die-cast casting materials as the outdoor taps.

Features:

- 1 and 1.2 GHz versions
- 120 dB RFI shielding
- Weather-proof gaskets
- Powder-coated 360 aluminum alloy die-cast housing
- 5/8" Entry fittings and are available in 2 and 3 Way
- Splitters and 8, 12 and 16dB Directional Coupler



Part#	MPISAG	MDCSA8G	MDCSA12G	MDCSA16G	MSSA2G	MSSA3G
Product	Power Inserter	8dB Directional Coupler	12dB Directional Coupler	16dB Directional Coupler	2-Way Splitter	3-Way Splitter
Tap Loss						
5-300 MHz	-	±1.0	±1.0	±1.0	-	-
300-500 MHz	-	±1.0	±1.0	±1.0	-	-
500-1000 MHz	-	±1.5	±1.5	±1.5	-	-
Insertion Loss						
5-300 MHz	1.0	2.4	1.0	1.0	4.2	7.0
300-500 MHz	1.2	3.0	1.2	1.2	4.6	8.5
500-1000 MHz	1.4	3.2	2.2	2.2	5.2	9.0
Isolation Loss						
5-300 MHz	-	22	25	27	25	20
300-500 MHz	-	25	28	25	25	19
500-1000 MHz	-	22	20	22	20	18
Return Loss						
5-300 MHz	19	19	19	19	18	18
300-500 MHz	19	19	18	19	18	17
500-1000 MHz	17	17	17	17	17	17
Power Passing	10A	10A	10A	10A	10A	10A

1.2 GHZ PLUG-IN TAP SERIES

The Multicom MTAR*-*Q Series Equalizable Taps offer improved return path performance for advanced two-way HFC systems while maintaining backward compatibility with the legacy installed base. Multicom offers faceplate-only options for upgrades allowing the technician to easily upgrade an existing location with a simple faceplate change.

Features:

- Support DOCSIS® 3.1 expanded bandwidth up to 1.2GHz
- Improve network performance with subscriber line signal conditioning plug-ins: Equalizer, Return Path Attenuator, Cable Simulator
- Faceplates and Plug-Ins compatible and interchangeable with leading manufacturer legacy housings
- 6 kV surge resistance on feederline and F-ports
- Aluminum alloy housing • RF shielding gasket
- Weather gasket • Rotating seizure mechanisms
- Uninterrupted power and RF passing feature
- Rotating seizure mechanisms • 5-1218 MHz bandwidth



Plug-ins:

MTAR-PI-CS-XX – Cable Simulator Plug-In

Maintains low loss in the return drop path, while attenuating the forward drop signals to the proper system levels.

MTAR-PI-EQ-XX – Cable Equalizer Plug-In

Attenuates the return path signal from the customer premise, thus reducing the effects of system ingress. In addition, tightens the window of return path signal variation allowing for efficient operation of an optical nodes' return transmitter.

MTAR-PI-RPA-XX-X – Return Path Attenuator Plug-In

Similar to MTRG-PI-EQ, except is split dependent and provides less impact on the forward drop signal.

All subscriber-line conditioning plug-ins are available options in a variety of values and functions.

Plug-In	Part #	Description	Value
Cable Simulator	M-CS-*Q	Maintains low loss in the return drop path, while attenuating the forward drop signals to the proper system levels	2, 4, 6, 8, 10, 12, 15, 18, 21
Cable Equalizer	M-EQ-*Q	Attenuates the return path signal from the customer premise, thus reducing the effects of system ingress. In addition, tightens the window of return path signal variation allowing for efficient operation of an optical node's return transmitter.	2, 4, 6, 8, 10, 12, 14, 16
Return Path Attenuator	M-RPA-*Q	Similar to MUL-PI-EQ, except is split dependent and provides less impact on the forward drop signal	2, 4, 6, 8, 10, 12, 14, 16, 18

MTAR*-*Q

Tap Value, 2 to 21
of Ports

HIGH-PASS FILTER



M-HPF-54M
M-HPF-54S
M-HPF-50S

The Multicom High-Pass Filter prevents TV interference from cable-modem output signals. For indoor and outdoor use, the High-Pass Filter has an internal O-ring and is made with nickel-plated precision machined brass for rugged weather-proof construction.

Features:

- Prevents TV interference from cable-modem output signals
- Blocks ingress into upstream low-frequency (5~40MHz) path
- Frequency range 1~1218MHz
- High sub-band rejection >-40dB
- High return loss
- Insertion loss ≤0.3dB
- Rugged weather proof construction
- Nickel plated precision machined brass

Parameter		Specification							
Bandwidth (MHz)		5-15	5-40	54-100	101-550	551-750	751-860	861-1000	1001-1218
Insertion Loss (MHz)									
M-HPF-54M	Band Pass	NA	NA	54-100MHz - 1.2	0.3	0.3	0.3	0.3	0.3
	Band Stop	5-37MHz - 43	38-40MHz - 40	NA	NA	NA	NA	NA	NA
M-HPF-54S	Band Pass	NA	NA	54-100MHz - 1.2	0.3	0.3	0.3	0.3	0.3
	Band Stop	5-37MHz - 45	38-40MHz - 40	NA	NA	NA	NA	NA	NA
M-HPF-50S	Band Pass	NA	NA	50-100MHz - 1.2	0.3	0.3	0.3	0.3	0.3
	Band Stop	5-30MHz - 55	31-40MHz - 47	NA	NA	NA	NA	NA	NA
Return Loss (dB)									
M-HPF-54M	Band Pass	NA	NA	16	20	20	20	20	16
M-HPF-54S	Band Pass	NA	NA	18	20	20	20	20	18
M-HPF-50S	Band Pass	NA	NA	50-100MHz - 18	20	20	20	20	18

F-PORT TERMINATOR



MUL-F59T

Features:

- Used to terminate unused ports reducing reflections
- Versions available to meet every requirement
- Prevents signal ingress and egress
- Reduces the possibility of water migration into open port

Parameter	Specification
Bandwidth	DC to 1GHz
Insertion Loss	0.5 dB
Return Loss	30 dB
Impedence	75 Ohms
Material	Zinc / Nickel Plated

OUTDOOR BALUN



MUL-OB-1

Features:

- Connector 1: F-Type Female
- Connector 2: Two Spade Terminals - Male
- AC/DC Blocking
- Shielded and Balanced
- Minimal Direct Pick-up

Multicom's MUL-OB-1 is an Outdoor Balun or Outdoor Matching Transformer. It is used to convert 300 Ohm connections into 75 Ohm connections. This two-piece Outdoor Balun comes with a protective boot and is made with plastic molded construction making it completely weather-proof.

OUTSIDE PLANT - POLE LINE HARDWARE

NEW!

QUICKWISE & QUICKSPICE FOR MESSENGER

The Multicom **QUICKWISE** is used to deadend galvanized steel messenger mid-span of a service drop. The QuickVise is designed to support both ends of self supporting multi-pair drop wire that uses a solid galvanized steel messenger wire.

Features:

- Rated to hold a minimum of 90% of Rated Breaking Strength (RBS) of the messenger wire
- Recommended for use with coaxial cable with messenger wire
- Used for deadend or mid-span applications
- Also known as an Automatic Deadend



QUICKWISE
MESSENGER



QUICKSPICE
MESSENGER

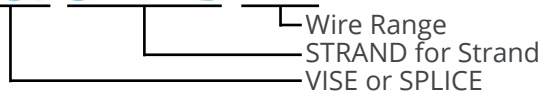
The double-sided Multicom **QUICKSPICE** is used to splice galvanized steel messenger mid-span of a service drop. It will also support both ends of self supporting messenger wire that is integrated into the jacket in a figure 8 configuration.

Features:

- Rated to hold a minimum of 90% of Rated Breaking Strength (RBS) of the messenger wire
- Recommended for use with RG-11, RG-6 and .500 coaxial cable with messenger wire

Part Number	Wire Range		Tensile Strength	
	Inches	MM	Kgs	Lbs
MUL-QUICKWISE-043	0.043-0.059	1.1-1.5	300	660
MUL-QUICKWISE-062	0.055-0.078	1.3-1.9	400	880
MUL-QUICKWISE-094	0.071-0.100	1.8-2.5	700	1545
MUL-QUICKWISE-109	0.102-0.114	2.3-3.0	700	1545
MUL-QUICKWISE-125	0.102-0.125	2.6-3.2	700	1545
MUL-QUICKSPICE-043	0.043-0.059	1.1-1.5	300	660
MUL-QUICKSPICE-062	0.055-0.078	1.3-1.9	400	880
MUL-QUICKSPICE-094	0.071-0.100	1.8-2.5	700	1545
MUL-QUICKSPICE-109	0.102-0.114	2.3-3.0	700	1545
MUL-QUICKSPICE-125	0.102-0.125	2.3-3.2	700	1545

MUL-QUICKWISE-STRAND-XXX



NEW!

QUICKWISE & QUICKSPICE FOR STRAND

The Multicom **QUICKWISE for STRAND WIRE** is for deadend applications with down guy wire.

Features:

- Rated to hold a minimum of 90% of Rated Breaking Strength (RBS) of the strand wire
- Recommended for use with common grade, high strength utility grade, aluminized and galvanized steel strand
- Used for deadend or mid-span applications

Features:

The double-sided Multicom **QUICK SPLICE for STRAND WIRE** is used for splicing applications with down guy wire.

- Rated to hold a minimum of 90% of Rated Breaking Strength (RBS) of the strand wire
- Recommended for use with common grade, high strength utility grade, aluminized and galvanized steel strand



QUICKWISE
STRAND



QUICKSPICE
STRAND

Part Number	Typical Strand Cable Size	Bail Dia. (mm)	Dimensions (mm)			Wire Range		Tensile Strength		Weight (g)
			X	Y	Z	inches	mm	kgs	lbs	
MUL-QUICKWISE-STRAND-187	3/16"	4.1	244	121	20.5	.138-.217	3.5-5.5	2000	4400	166
MUL-QUICKWISE-STRAND-250	1/4"	5.2	233	101	26	.240-.272	6.1-6.9	2700	6000	162
MUL-QUICKWISE-STRAND-312	5/16"	6.8	234	113	37.2	.307-.343	7.8-8.7	4500	10080	305
MUL-QUICKWISE-STRAND-375	3/8"	8	294	132	42	.360-.378	9.1-9.6	6300	13860	481
MUL-QUICKWISE-STRAND-437	7/16"	10	375	170	54	.413-.449	10.5-11.4	8600	18720	874

NEW!

FORMED WIRE DEAD-END FOR ADSS



The Multicom Formed Wire Dead-end is a dielectric Dead-end designed to terminate short span, low tension ADSS fiber optic cables in low voltage environments.

This Dead-end is a single component that offers an economical solution for very light loads. The product effectively transfers the low axial load on the cable at the end of the Dead-end legs to low uniform radial compression near the Dead-end loop.

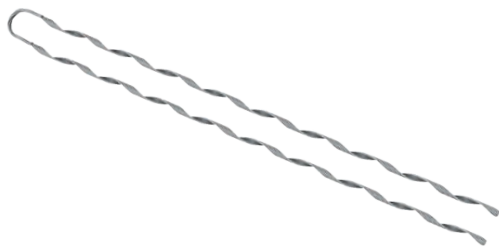
Part Number	Supported Round Cable Diameters		Length		Color Code Marking
	Max / Min (inch)	Max / Min (mm)	Inch	M	
MUL-ADSSDE-8.9/9.1	0.351 / 0.36	8.9 / 9.1	24	0.61	Black
MUL-ADSSDE-9.5/10.5	0.375 / 0.414	9.5 / 10.5	28	0.71	Red
MUL-ADSSDE-10.6/11.6	0.415 / 0.459	10.6 / 11.6	31	0.79	Orange
MUL-ADSSDE-11.7/12.8	0.46 / 0.505	11.7 / 12.8	33	.084	Green
MUL-ADSSDE-12.9/14.1	0.507 / 0.555	12.9 / 14.1	37	0.94	Pink
MUL-ADSSDE-14.2/15.6	0.559 / 0.614	14.2 / 15.6	42	1.07	Yellow
MUL-ADSSDE-15.7/17.3	0.616 / 0.68	5.7 / 17.3	45	1.14	Blue
MUL-ADSSDE-17.4/19.1	0.685 / 0.751	17.4 / 19.1	49	1.24	Brown

Features:

- Standard design parameters
- Broad cable OD ranges, listed on ID tags
- Economical single component design
- Optimized compact length
- Fast easy installation
- Accepts standard pole line fittings
- Latex coated with flared ends
- Uniform pressure design
- Superior fatigue strength wire design

NEW!

GUY WIRE DEAD-END FOR STRAND



The Multicom Guy Wire Dead-end is made of galvanized steel wire with B class Coating for use with high strength Class A strands. The Dead-end is made with the same material as the strand to which it will be applied.

Can be used to retain, anchor and connect the end of a steel cable for Telecomm, CATV and Energy Industries. Use with down guy wire, not for overhead strands.

Features:

- Color Coded to easily identify the part needed for each job
- Cross Over marks to indicate the starting point for small and large diameter fittings
- Identification Tag Catalog Number & Guy size
- Offset Tips for easy application of the strand start with the short leg

Part Number	Strand			Diameter (Inches)	Length (Inches)	Color Code
	Size	Construction	Weight (Lbs)			
MUL-GWDE-3/16	3/16	4W	0.176	0.070	20	Red
MUL-GWDE-7/32	7/32	5W	0.265	0.070	24	Green
MUL-GWDE-1/4	1/4	5W	0.463	0.086	25	Yellow
MUL-GWDE-9/32	9/32	5W	0.683	0.086	28	Blue
MUL-GWDE-5/16	5/16	5W	0.772	0.100	31	Black
MUL-GWDE-3/8	3/8	5W	1.213	0.119	35	Orange
MUL-GWDE-7/16	7/16	5W	1.940	0.138	38	Green

NEW!

PLASTIC SUSPENSION CLAMP FOR ADSS

The Multicom MUL-FOSCLAMP-ADSS1 is a high quality UV resistant High-Strength Plastic Clamp to support ADSS cable on the pole. The design of this clamp makes installation fast and easy while providing bolt and strap mounting options. Ideal for use with short spans.



Features:

- Made from UV resistant, high-strength plastic
- UV resistant neoprene sleeve inserts
- Small, compact design
- Includes stainless steel bolt and locking washer to lock the clamp
- No special tools needed

Part Number	ADSS Cable Range	
	Min (in/mm)	Max (in/mm)
MUL-FOSCLAMP-ADSS1-.315/.394	0.315/8.00	0.394/10.00
MUL-FOSCLAMP-ADSS1-.394/.433	0.394/10.00	0.433/11.00
MUL-FOSCLAMP-ADSS1-.433/.512	0.433/11.00	0.512/13.00
MUL-FOSCLAMP-ADSS1-.512/.591	0.512/13.00	0.591/15.00
MUL-FOSCLAMP-ADSS1-.591/.669	0.591/15.00	0.669/17.00
MUL-FOSCLAMP-ADSS1-.669/.748	0.669/17.00	0.748/19.00

NEW!

SUSPENSION CLAMP FOR ADSS

The high-quality Multicom MUL-FOSCLAMP-ADSS2 aluminum Suspension Clamp is used to gently, but firmly support ADSS fiber securely onto the side of a pole or vertical surface. The special design includes an integrated bolt or band mount design, hinged keeper and base with single-bolt clamping, making installation fast and easy while providing several mounting options to choose from.



Features:

- Base is connected by a rear hinge to provide quick and easy installation of ADSS cable
- Cushion Inserts made of UV resistant neoprene sleeve insert to gently hold the ADSS cable in place
- Includes stainless steel bolt and locking washer to lock the clamp

Part Number	ADSS Cable Range	
	Min (in/mm)	Max (in/mm)
MUL-FOSCLAMP-ADSS2-.356/.460	0.356/9.05	0.460/11.68
MUL-FOSCLAMP-ADSS2-.459/.555	0.459/11.66	0.555/14.10
MUL-FOSCLAMP-ADSS2-.551/.650	0.551/14.00	0.650/16.50
MUL-FOSCLAMP-ADSS2-.650/.748	0.650/16.50	0.748/19.00

NEW!

SUSPENSION CLAMP FOR ADSS

The heavy-duty Multicom MUL-FOSCLAMP-ADSS3 suspension clamp is a versatile, and reliable solution for securing and suspending ADSS cable up to 150 meters. The versatility of the clamp allows the installer to either fix the clamp to the pole using a through bolt or band.



Features:

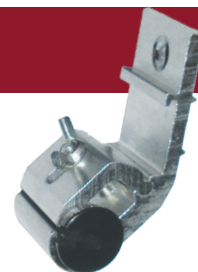
- Galvanized steel clamp
- UV resistant neoprene sleeve insert
- For suspension spans up to 150 meters
- Versatile with multiple installation options
- No special tools needed

Part Number	ADSS Cable Range	
	Min (in/mm)	Max (in/mm)
MUL-FOSCLAMP-ADSS3-.394/.591	0.394/10.00	0.591/15.00
MUL-FOSCLAMP-ADSS3-.591/.787	0.591/15.00	0.787/20.00

NEW!

MINI-SUSPENSION CLAMP FOR ADSS

The heavy-duty Multicom MUL-FOSCLAMP-ADSS4 mini-suspension clamp is a versatile, and reliable solution for securing and suspending short and medium span ADSS cable. The versatility of the clamp allows the installer to either fix the clamp to the pole using a through bolt or band.



Features:

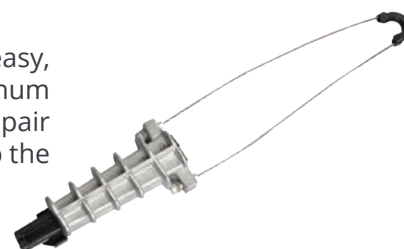
- Aluminum clamp
- UV resistant neoprene sleeve insert
- For suspension spans up to 150 meters
- Versatile with multiple installation options
- No special tools needed
- Additional cable ranges available

Part Number	ADSS Cable Range	
	Min (in/mm)	Max (in/mm)
MUL-FOSCLAMP-ADSS4-.315/.394	0.315/8.00	0.394/10.00
MUL-FOSCLAMP-ADSS4-.394/.472	0.394/10.00	0.472/12.00
MUL-FOSCLAMP-ADSS4-.472/.551	0.472/12.00	0.551/14.00
MUL-FOSCLAMP-ADSS4-.472/.551	0.551/14.00	0.630/16.00
MUL-FOSCLAMP-ADSS4-.630/.709	0.630/16.00	0.709/18.00
MUL-FOSCLAMP-ADSS4-.709/.787	0.709/18.00	0.787/20.00

NEW!

DEAD-END CLAMP FOR ADSS

The Multicom MUL-ADSSDE-WEDGE1 Wedge-style Deadend is designed for fast, easy, and reliable installation of ADSS aerial fiber optic cable from 8 to 20mm. The aluminum deadends are designed for higher load applications. The conical body contains a pair of sliding wedges that mechanically couple to the cable without causing damage to the sheath or fibers, providing a secure grip without fear of signal loss.



Features:

- Galvanized steel cable
- Tool free installation with sliding wedges inside the body
- Easy-open bail permits fixing to brackets and pigtails
- Quick and easy adjustable bail length
- Versatile with multiple installation options
- Additional cable ranges available

Part Number	ADSS Cable Range	
	Min (in/mm)	Max (in/mm)
MUL-ADSSDE-WEDGE1-.354/.472	0.354/9.00	0.472/12.00

NEW!

DEAD-END CLAMP FOR ADSS

The Multicom MUL-ADSSDE-WEDGE2 Wedge-style Deadend is designed for fast, easy, and reliable installation of ADSS aerial fiber optic cable from 8 to 20mm. The deadends are designed with a thermo-plastic material that provides UV protection without the extra weight. The conical body contains a pair of sliding wedges that mechanically couple to the cable without causing damage to the sheath or fibers, providing a secure grip without fear of signal loss.



Features:

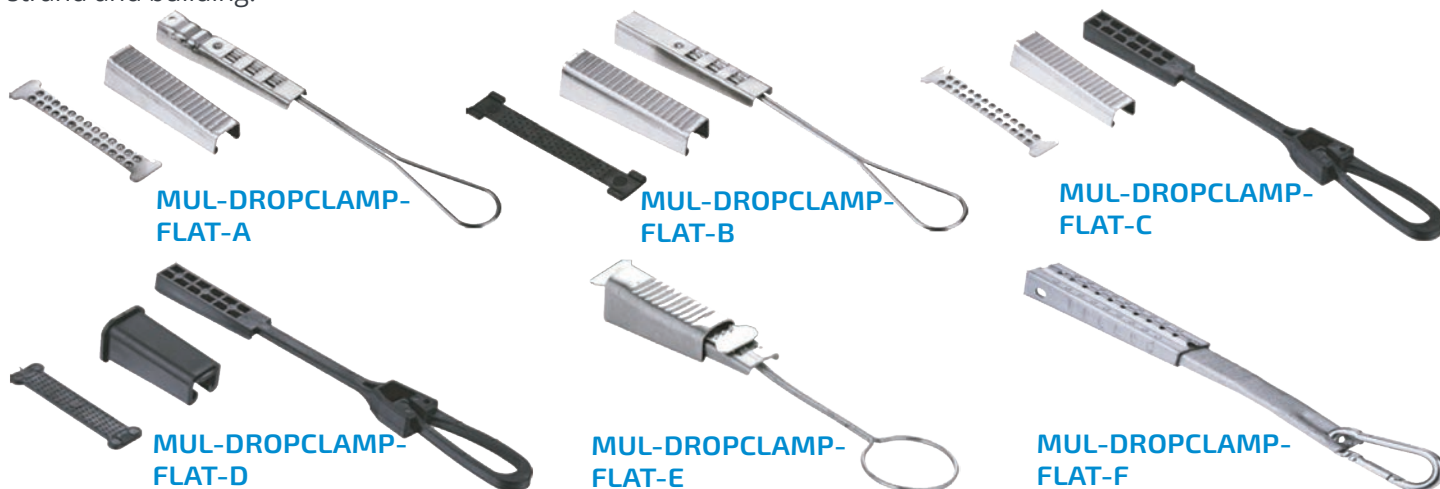
- Galvanized steel cable
- UV resistant neoprene sleeve insert
- For suspension spans up to 600 feet
- Versatile with multiple installation options
- No special tool needed

Part Number	ADSS Cable Range	
	Min (in/mm)	Max (in/mm)
MUL-ADSSDE-WEDGE2-.315/.394	0.315/8.00	0.394/10.00
MUL-ADSSDE-WEDGE2-.394/.472	0.394/10.00	0.472/12.00
MUL-ADSSDE-WEDGE2-.472/.551	0.472/12.00	0.551/14.00
MUL-ADSSDE-WEDGE2-.472/.551	0.551/14.00	0.630/16.00
MUL-ADSSDE-WEDGE2-.630/.709	0.630/16.00	0.709/18.00
MUL-ADSSDE-WEDGE2-.709/.787	0.709/18.00	0.787/20.00

NEW!

POLE LINE HARDWARE

Drop Clamps for FTTH Flat Drop Cable are used to support both ends of an aerial service drop span at the messenger strand and building.



Part Number	Description	Shell	Shim	Wedge	Loop
MUL-DROPCLAMP-FLAT-A	FTTH Flat Drop Clamp	Stainless Steel	Stainless Steel	Stainless Steel	Stainless Steel
MUL-DROPCLAMP-FLAT-B	FTTH Flat Drop Clamp	Stainless Steel	UV Resistant Plastic	Stainless Steel	Stainless Steel
MUL-DROPCLAMP-FLAT-C	FTTH Flat Drop Clamp	Stainless Steel	Stainless Steel	UV Resistant Plastic	UV Resistant Plastic
MUL-DROPCLAMP-FLAT-D	FTTH Flat Drop Clamp	UV Resistant Plastic	UV Resistant Plastic	UV Resistant Plastic	UV Resistant Plastic
MUL-DROPCLAMP-FLAT-E	FTTH Flat Drop Clamp	Stainless Steel	Stainless Steel	Stainless Steel	Stainless Steel
MUL-DROPCLAMP-FLAT-F	FTTH Flat Drop Clamp	Galvanized Steel	-	Galvanized Steel	Locking Ring Stainless Steel

Drop Clamps for FTTH Round Drop Cable are used to support both ends of an aerial service drop span at the messenger strand and building.



Part Number	Description	Clamp	Loop / Bracket
MUL-DROPCLAMP-RND-A	FTTH Round Drop Wire Clamp	UV Resistant Plastic	Stainless Steel
MUL-DROPCLAMP-RND-B	FTTH Round Drop Wire Clamp	UV Resistant Plastic	Stainless Steel
MUL-DROPCLAMP-RND-C	FTTH Round Drop Wire Clamp	UV Resistant Plastic	Stainless Steel
MUL-DROPCLAMP-RND-D	Single Layer Round Drop Wire Clamp	UV Resistant Plastic	Stainless Steel
MUL-DROPCLAMP-RND-E	Double Layer Round Drop Wire Clamp	UV Resistant Plastic	Stainless Steel
MUL-DROPCLAMP-RND-F	Four Layer Round Drop Wire Clamp	UV Resistant Plastic	Stainless Steel
MUL-DROPCLAMP-RND-G	Four Layer Round Drop Wire Clamp	Stainless Steel	Stainless Steel

NEW!

POLE LINE HARDWARE

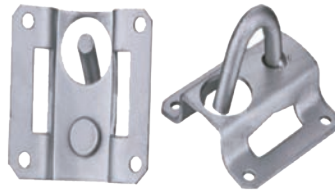
Multicom offers a full line of Pole Line Hardware that is designed to withstand the test of time. Our choice of material and finish combinations ensures maximum environmental protection, regardless of location.



MUL-POLE-BRACK-A



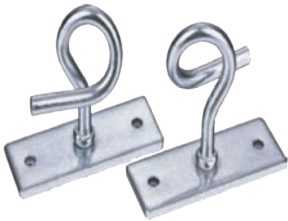
MUL-POLE-HOOK-A-X



MUL-POLE-BRACK-B



MUL-WALL-BRACK-A



MUL-WALL-BRACK-B



MUL-POLE-BRACK-C



MUL-CABLE-BRACK-A



MUL-STRAND-HOOK-A

Part Number	Description	Clamp
MUL-POLE-BRACK-A	Universal Pole Bracket	Aluminum Alloy
MUL-POLE-HOOK-A-X	Pole Hook	Steel
MUL-POLE-BRACK-B	Pole Bracket	Steel
MUL-WALL-BRACK-A, B	Wall Bracket A, B	Steel
MUL-POLE-BRACK-C	Pole Bracket for Anchoring Clamp	Steel
MUL-CABLE-BRACK-A	Cable Management Pole Bracket	Steel
MUL-STRAND-HOOK-A	Drop Cable Hook Clamp	Aluminum Alloy / Steel

MUL-BAND-TOTE



MUL-BAND-BUCK



MUL-BAND-T201 / T316



MUL-BAND-TOOL



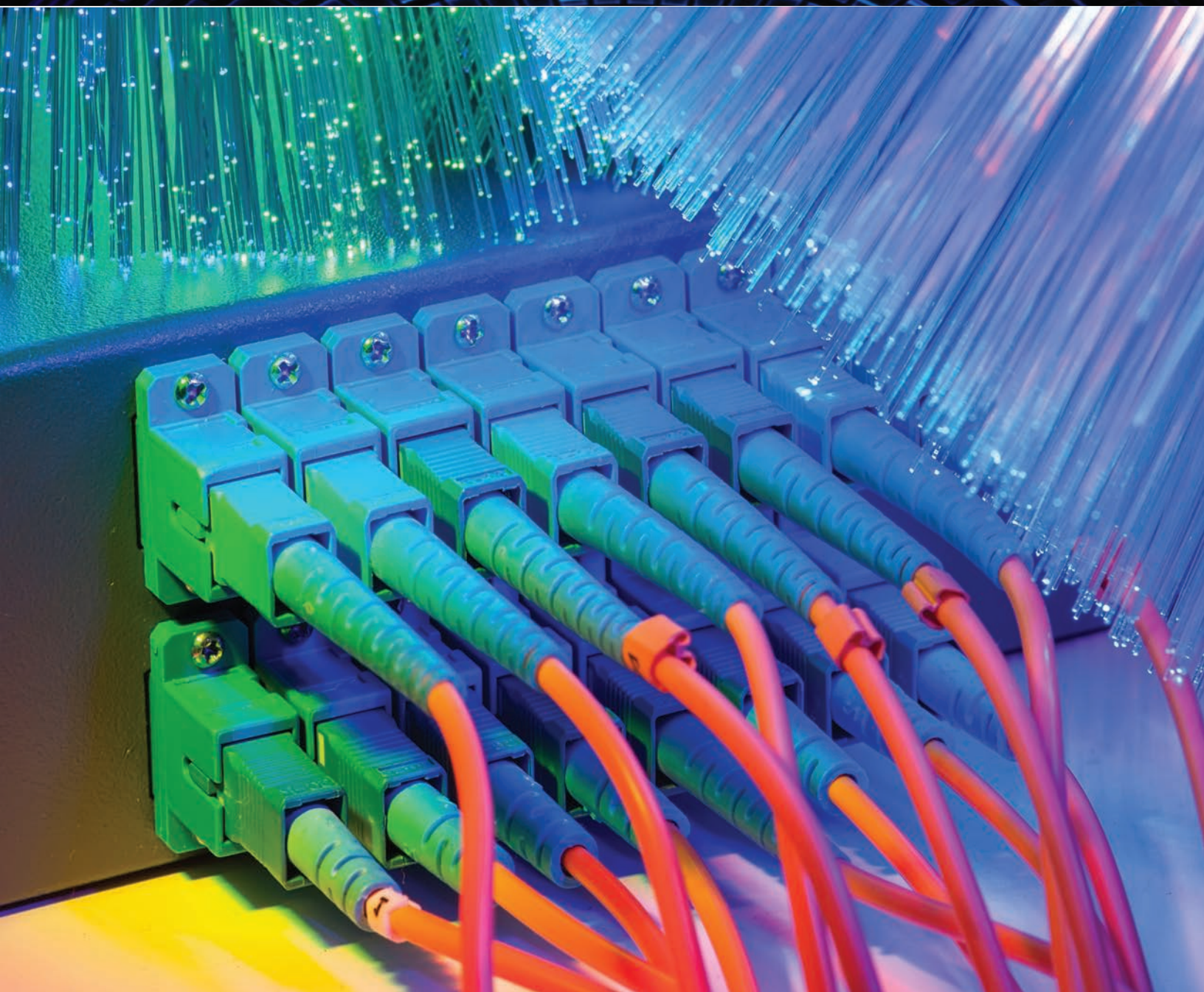
MUL-BAND-POLE-A



MUL-BAND-POLE-B

Part Number	Category	Description
MUL-BAND-TOTE	Bands & Buckles	Adjustable Banding in Tote
MUL-BAND-BUCK	Bands & Buckles	Stainless Steel Buckle
MUL-BAND-T201 -X/ T316-X	Bands & Buckles	Stainless Steel Band - Type T201 or Type T316 - 1/4" to 3/4"
MUL-BAND TOOL	Bands & Buckles	Banding Tool
MUL-BAND-POLE-A	Bands & Buckles	Adjustable Pole Band
MUL-BAND-POLE-B	Bands & Buckles	Adjustable Pole Band

The Multicom Pole Line Hardware shown in this catalog is just the tip of the iceberg. We have two warehouses stocking Pole Line Hardware with nearly unlimited resources. If you don't see what you're looking for - ask!

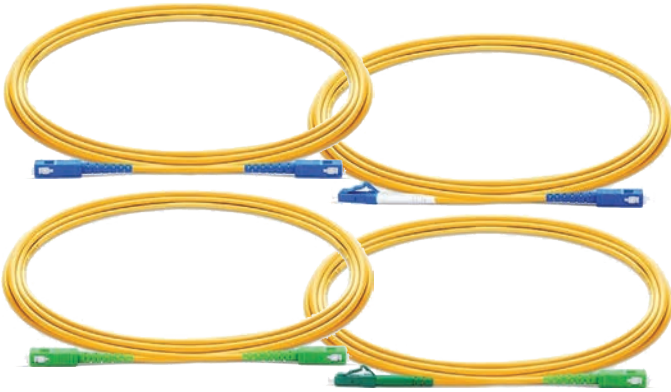


FIBER DISTRIBUTION

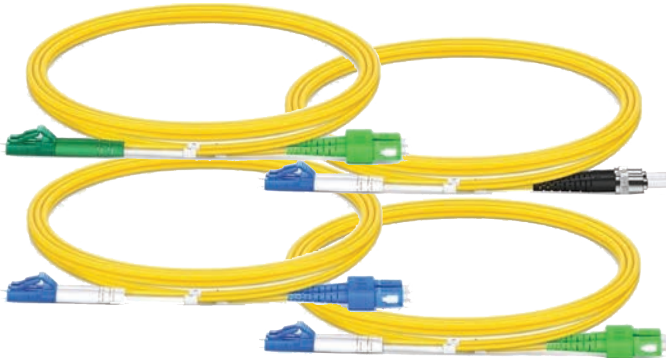
Multicom fiber optic systems meet today's requirements and provide a migration path for tomorrow's applications

Multicom provides the high bandwidth physical infrastructure needed for data center, enterprise, and campus networks with comprehensive fiber optic systems that deliver high performance, reliability and scalability. Our secret? We leverage our experience with innovative design and cable management expertise. These critical components provide complete solutions for today's high data rate fiber networks and Ethernet applications, and support future readiness for 40 Gb/s and 100 Gb/s data rates, maximizing physical infrastructure performance, modularity, and scalability.

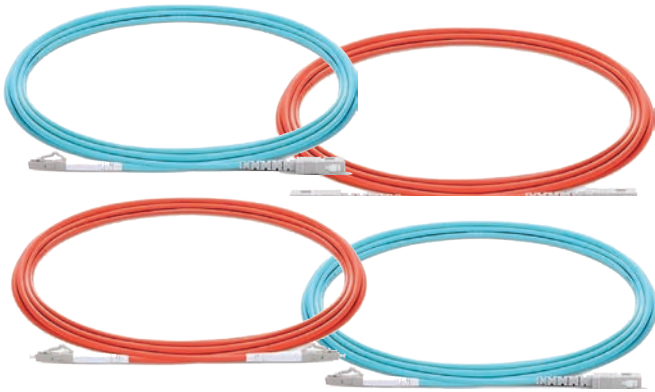
JUMPER CABLES



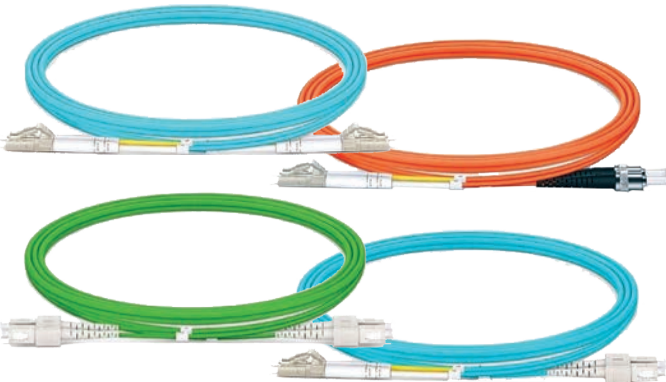
Singlemode Simplex



Singlemode Duplex



Multi-mode Simplex



Multi-mode Duplex

Singlemode fiber optic jumpers, or patch cables, come with a 9 micron diameter glass core. With the cladding layer, they are 125 micron, and with the buffer layer they are 250 micron.

All Multicom fiber optic jumpers have a LSZH (Low Smoke Zero Halogen) jacket instead of PVC, which is a commonly used but lower quality jacket.

Singlemode cables have a smaller glass core than multimode cables and because there is less dispersion of the light signal in the fiber, they can transmit the signal a greater distance.

Multicom's Fiber Optic Jumpers are manufactured using either singlemode or multi-mode fiber and terminated with a range of connectors including SC/UPC, SC/APC, LC/UPC, LC/APC, FC/UPC, FC/APC, and ST/UPC. Other connector types are also available upon request.

**DID
YOU
KNOW?**

CORNING

Multicom uses only Corning fiber-based fiber optic passives

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

Applications:

- Trunking lines direct to telecommunication closets
- Fiber patch panel within communication closets
- Links between electronic equipment and adapter panel

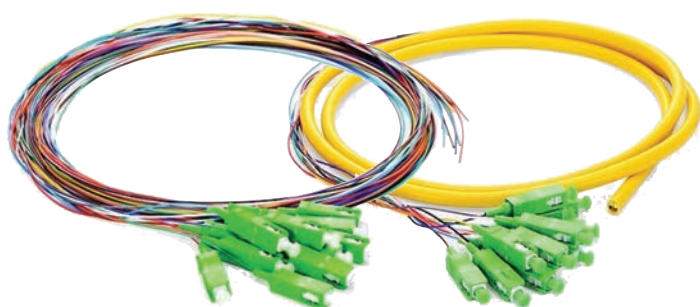
PIGTAILS



Singlemode



Multi-mode



Jacketed & Unjacketed

Features:

- Machine polishing ensures highest quality connector terminations and performance
- LSZH Jacket on all fiber varieties
- Bundled with connector ends as required
- Low insertion and return loss
- Traceable, standards-based testing procedures
- Geometry compliant connector endfaces that are defect and contamination free

Applications:

- Termination of optical networks via fusion or mechanical splicing
- Testing of optical devices
- Cable acceptance testing

Parameter	Specification
Connector	SC/FC/LC to SC/FC/LC, and as required
Fiber Mode	Singlemode: G.652D, G.657A2, OS1, OS2 Multi-Mode: 62.5/125µm OM1, OM2, OM3
Polish	APC, UPC
Fiber Type	Simplex, Duplex
Insertion Loss	Singlemode: ≤0.2dB Multi-mode: ≤0.3dB
Return Loss	Singlemode: ≥50dB UPC, ≥60dB APC Multi-mode: ≥35
Wavelength	Singlemode: 1310 - 1550nm Multi-mode: 850 - 1310nm
Jacket Material	LSZH - IEC60332-3, IEC60754-2, IEC61034-2 Compliant
Jacket Outside Diameter	2.0mm, 3.0mm
Operating, Storage Temp	-40 ~ 75°C, -45 ~ 85°C
Compliance	Telcordia GR-20-CORE, GR-326 and TIA/EIA 568C, RoHS

Multicom's Fiber Optic Pigtails are manufactured using either singlemode or multi-mode fiber and terminated with a range of single connectors including SC/UPC, SC/APC, LC/UPC, LC/APC, FC/UPC, FC/APC, and ST/UPC. Other connector types are also available upon request.

FOJ-2M-SM-SC/APC-S-SC/APC

- Second Connector Type
- S = Simplex, D = Duplex
- First Connector Type
- SM = Singlemode, MM = Multi-Mode
- xM = Length in Meters, xFT = Length in Feet
- FOJ = Fiber Optic Jumper, FOPF = Fiber Optic Pigtail

NEW!

VARIABLE ATTENUATORS



Features:

- High precision attenuation value
- Wide attenuation range 0 to 60dB
- Low insertion loss
- High environmental stability and reliability
- Easy installation
- RoHS compliant

The Multicom Variable Attenuator are designed to give the accurate attenuation required by the connected device and are available in a wide range from 0dB to 60dB of attenuation levels by turning the thumb screw.

With excellent characteristics, variable fiber optic in-line attenuators can be used in fiber optical telecommunication system and optical transmission systems. These attenuators can be applied in FTTH, CATV, LAN, fiber optical sensor and subscriber loops.

Parameter	Specification
Transfer Mode	Singlemode (SM) & Multi-Mode (MM)
Operating Wavelength(nm)	1310~1550 (SM), 850~1300(MM)
Fiber Connector	LC/SC/FC/ST
Attenuation	0~60dB
Attenuation Accuracy	±0.8dB
Polarization Dependent Loss	≤0.2dB
Minimal Insertion Loss	<2.5dB
Maximum Optical Input Power	200mW
Ferrule Type	Zirconia Ceramic
Cable Lengths	2 Meters
Operating Temperature	-40 ~ 80°C
Storage Temperature	-40 ~ 85°C
Humidity	95% RH

FOVATT-SM-XX/UPC

Connector Type
SM - Singlemode, MM - Multi-mode

MATING SLEEVES



SC/UPC to SC/UPC



SC/APC to SC/APC



LC/UPC to LC/UPC



FC/APC to SC/APC



LC Female to SC Male



FC/UPC to FC/UPC



E2000/APC to E2000/APC

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:

- Use in Singlemode applications
- Free-hanging or panel-mount design
- Dust caps protect against debris and contamination
- RoHS Compliant

Functions:

- A cable to cable fiber optic connection
- Cable to equipment fiber optic connection

Compliance	Telcordia GR-20-CORE, GR-326 and TIA/EIA 568C, RoHS
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FOMS-XX/YYY-XX/YYY

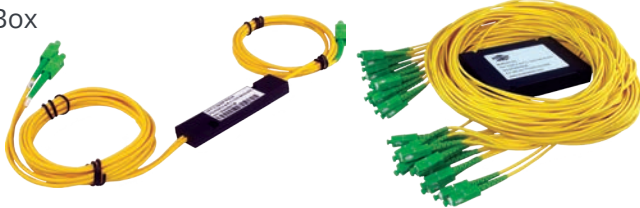
Second Connector Type
First Connector Type

PLC OPTICAL SPLITTERS

Tube



Box



LGX Cassette



Rack Mount



The Multicom fiber optic line of PLC Splitters include Tube, Box, LGX Cassette and Rack Mount configurations. They offer superior performance and field-proven reliability in harsh environments.

Our Planar Lightwave Circuit (PLC) splitters are fabricated using silica optical waveguide technology. Features include small size, high reliability and a wide operating wavelength. The PLC splitter is widely used in all fiber optic networks to realize optical signal power splitting. All products are GR-1221-CORE compliant.

Features:

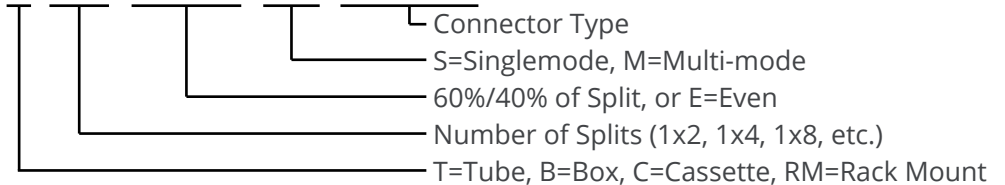
- Corning fiber
- Low insertion Loss
- Even or various splitting ratios
- 1x2 through 1x64 configurations
- Bidirectional, compact
- Environmentally stable
- Wide wavelength range
- High uniformity
- Telcordia GR-1221-CORE compliant

Applications:

- Long-haul tele/data communications
- Fiber optic equipment and systems
- CATV systems
- Local Area Network, PON, and FTTH
- Fiber sensors
- DWDM networks

Parameter	1x2	1x4	1x8	1x16	1x32	1x64
Operating Wavelength (nm)	1260-1650					
Insertion Loss Typical/Max (dB)	<4.0/4.2	<7.2/7.5	<10.5/11	<13.5/14	<16.5/17.5	<19.5/21
Loss rimity (dB)	<0.4	<0.6	<0.8	<1.2	<1.7	<2.0
Return Loss (dB)	>50Z					
Polarization Dependent Loss (dB)	<0.3					
Directivity (dB)	>55					
Wavelength Dependent Loss (dB)	0.3	0.3	0.3	0.5	0.5	0.5
Operating/Storage Temperature (°C)	-40 to 85					

FOSPLF-C-1/8-60/40-SM-SC/APC

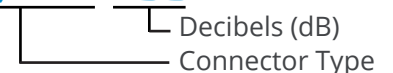


ATTENUATORS



Fixed-value Attenuators reduce the signal level without appreciably distorting the waveform. Available in 1dB increments. All connector types available.

FOATT-XX/XXX-XDB



WDM



Parameter	Specification
Wavelength Range - 1310nm (nm max/min)	1270/1350
Wavelength Range - 1490nm (nm max/min)	1480/1500
Wavelength Range - 1550nm (nm max/min)	1550/1560
Wavelength Range - 1590/1610nm (nm max/min)	1580/1620
Insertion Loss (dB - typical/max)	17.5/18.0
Insertion Loss Uniformity (dB - max)	2.0
Band Isolation (dB)	30
Directivity (dB)	50
Return Loss (dB)	50
Optical Power Handling (mW)	300

Today's FTTH systems demand innovative products for a variety of applications. The Multicom WDM (Wavelength Division Multiplexor), supports any 2-way RFOG/PON 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.

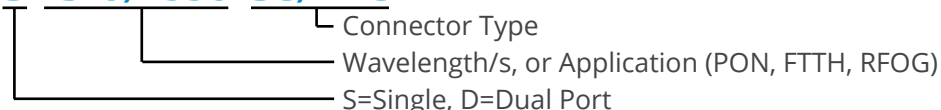
Features:

- 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

Applications:

The WDM is ideally suited for use in two-way and high density MDU, CATV, PON, FTTH and RFOG applications, as well as in many other fiber optic-based data, video, and voice networks.

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



LGX CASSETTE CHASSIS



Capacity:

- 12 - Single wide LGX cassettes
- 6 - Double wide LGX cassettes
- 4 - Triple wide LGX cassettes

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:

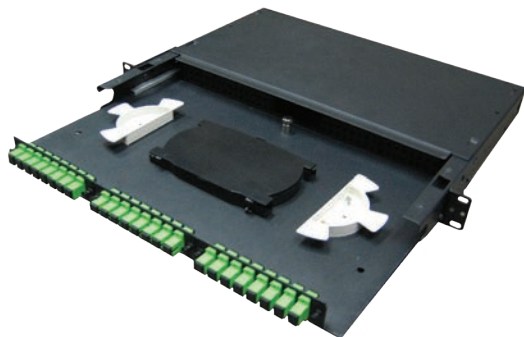
- Complies with all LGX Form Factor Cassette Splitter Modules
- 4 RU
- Transparent dust cover on front hinge

Applications:

Optical Access Network, WAN, LAN, CATV Systems

MUL-FOCH-CASS

PATCH & SPLICE ENCLOSURE



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

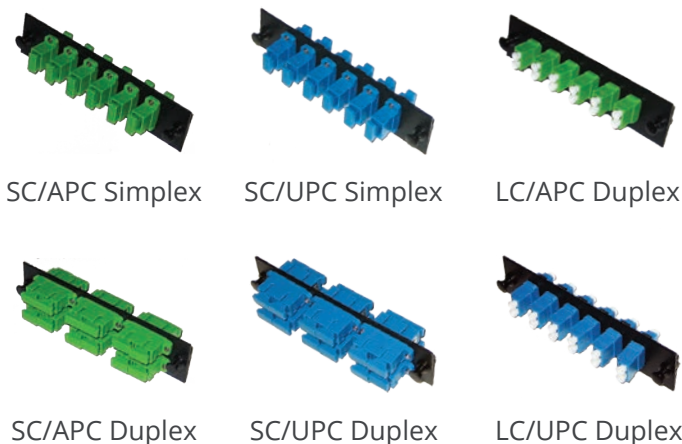
Parameter	Specification
Suitable for module type	LGX Adapter Panels
Number of Adapter Panel positions	3 - can be simplex or duplex
Material	16 gauge, cold-rolled steel
Material finish	Black, powder coated

MUL-RM-XF-PS
Chassis only

MUL-RM-8F-PS-SC/APC-S

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

ADAPTER PANELS



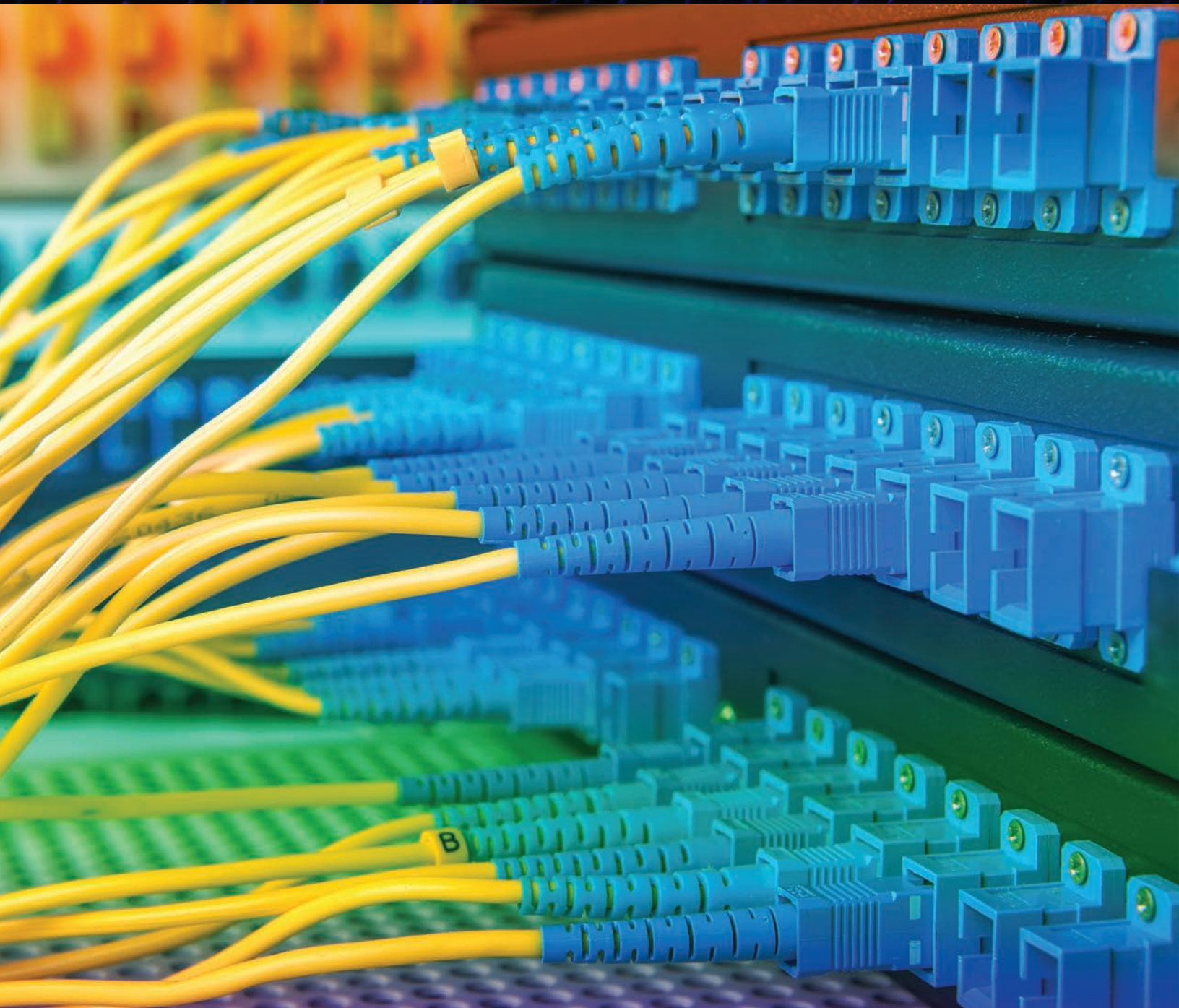
Multicom's Fiber Optic Adapter Panels are compatible with all LGX style rack and wall fiber distribution units. Panels are available in Simplex and Duplex adapter formats.

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)



FIBER OPTIC HEADEND & TERMINATION

Today's ultra-high tech headends provide the foundation necessary for delivering a wide spectrum of advanced interactive services to consumers. Multicom's USA-made, fiber optic headend products offer flexibility, scalability and manageability, making them cost-effective to adapt to an evolving market.



Public networks for video, data and voice are using more and more optical fiber. Fiber-based communications networks have clear advantages over other media in cost, reliability, and capacity, spurring increased deployment on high-capacity networks. All public network applications are making wide-spread and growing use of fiber optics. This growth means that thousands of fibers are terminating in Central Offices (COs) and cable-TV headends. Multicom stocks a full line of fiber optic headend and termination products for every network - large or small.

NEW!
1.2 GHz
DOCSIS 3.1
USA LASERS

1310nm DIRECT MODULATED TRANSMITTER



The MUL-1310TX-V-1-X intelligent directly modulated optical transmitter is used in 1310nm optical fiber transmission systems. It uses a U.S. made EMCORE ORTEL DFB laser with optional optical output powers of 7.7, 10, 12, 14 and 14.9 dBm, and advanced intelligent electronic predistortion compensation technology.

Features:

- High linearity, optically isolated, distributed AM feedback EMCORE ORTEL DFB laser
- DOCSIS 3.1
- Transmits NTSC, PAL, ATSC, and related digital information for CATV and/or telephony applications
- 47-1200MHz 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	7.7, 10, 12, 14, 14.9
Optical wavelength	nm	1310 ±20
Laser type		EMCORE ORTEL DFB
Optical modulation type		Direct
Frequency range	MHz	47-750/862/1003/1200
RF input level	dBmV	+12 - +28

MUL-1310TX-V-1-10

Output Power (dBm) - 7.7, 10, 12, 14, 14.9
Output Port

NEW!
1.2 GHz
DOCSIS 3.1
USA LASERS

1550nm 6dB DIRECT MODULATED TRANSMITTER



The MUL-1550TX-V-1-6 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 6dBm, 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
Optical wavelength	nm	1550 ±10
Laser type		EMCORE ORTEL DFB
Optical modulation type		Direct
Frequency range	MHz	47-750/862/1003/1200
RF input level	dBmV	+12 - +28

MUL-1550TX-V-1-6

Output Power (dBm) - 6
Output Port

**DID
YOU
KNOW?**

CORNING

Multicom uses only Corning
fiber-based fiber optic products

NEW!
1.2 GHz
DOCSIS 3.1
USA LASERS

1550nm 10dB DIRECT MODULATED TRANSMITTER



The MUL-1550TX-V-1-10 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 10dBm, and advanced intelligent electronic predistortion compensation technology (adjustable up to 50km in 1km steps).

Features:

- High linearity, optically isolated, distributed AM feedback EMCORE ORTEL DFB laser with an optical output power of 10dBm
- 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	10
Optical wavelength	nm	1550 ±10
Laser type		EMCORE ORTEL DFB
Dispersion compensation distance	Km	≤50
Optical modulation type		Direct
Frequency range	MHz	47-862/1003/1200
RF input level	dBmV	+15 - +25

MUL-1550TX-V-1-10

Output Power (dBm) - 10
Output Port

NEW!
1.2 GHz
DOCSIS 3.1
USA LASERS

1550nm EXTERNALLY MODULATED TRANSMITTER



The MUL-1550TXEM-V-2 Externally Modulated Optical Transmitter is a state-of-the-art high-performance fiber optic transmitter specially developed for CATV signal distribution in HFC networks, and the long-distance transmission of cable phone and cable data. Optimized for a variety of network applications, this two-port EMCORE ORTEL DFB laser transmitter couples the optical output powers of 2 x 7, 8, 9 or 10dBm each, with low optical linewidth resulting in unmatched performance.

Features:

- Two port high linearity, optically isolated, distributed AM feedback EMCORE ORTEL DFB lasers
- 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
- Integrated SNMP network interface
- Dual hot-pluggable redundant power supplies

Optical Parameter	Unit	Specification
Optical output power	dBm	2 x (7, 8, 9, 10)
Optical wavelength	nm	1545 ~ 1560
Laser type		2 Port, EMCORE ORTEL DFB
Optical modulation type		External
Wavelength adjustment range	GHz	± -50
Relative intensity noise	dB/Hz	< -160
Frequency range	MHz	47 ~1200
RF input level	dBmV	+20

MUL-1550TXEM-V-2-10

Output Power (dBm) - 7, 8, 9, 10
Output Ports



Optical Parameter	Unit	Specification
Operating bandwidth	nm	1535 - 1565
Optical input power	dBm	-5 ~ +10
Optical output power	dBm	18 or 24
Output power stability	dBm	± 0.2
Return loss - Input port	dB	≥ 45
Return loss - Output port	dB	≥ 45

The MUL-EDFA-V-1 1550nm Erbium Doped Fiber Amplifier (EDFA) is a low noise 1550nm optical amplifier, designed using advanced optical principles. The hot pluggable, redundant power EDFA is flexible enough to perform in numerous upstream and downstream applications, including supertrunk transmission, hub interconnects and 1550nm overlays.

Features:

- JDSU laser
- Automatic control of the output optical power
- Output optical power attenuation is adjustable
- High-performance erbium doped fiber amplifier, high efficiency energy conversion
- Advanced 32 bit processor, with automatic monitoring circuitry. Accurately monitors and controls the optical output power and various parameters of the pump laser, ensures stable optical output power and can effectively extend the working life of the pump laser.

MUL-EDFA-V-1-18(-48VDC) - Optional
 └─ Output Power (dBm) - 18, 24
 └─ Output Port



Model #	Total Output Power (dBm)	Output Ports	Output Power/Port (dBm)
MUL-EDFA-V-4-25	25	4	18
MUL-EDFA-V-4-26	26	4	19
MUL-EDFA-V-4-27	27	4	20
MUL-EDFA-V-4-28	28	4	21
MUL-EDFA-V-4-29	29	4	22
MUL-EDFA-V-4-30	30	4	23
MUL-EDFA-V-4-31	31	4	24
MUL-EDFA-V-8-26	26	8	15
MUL-EDFA-V-8-27	27	8	16
MUL-EDFA-V-8-28	28	8	17
MUL-EDFA-V-8-29	29	8	18
MUL-EDFA-V-8-30	30	8	19
MUL-EDFA-V-8-31	31	8	20
MUL-EDFA-V-8-32	32	8	21
MUL-EDFA-V-8-33	33	8	22
MUL-EDFA-V-8-34	34	8	23
MUL-EDFA-V-8-35	35	8	24

The Multicom High Power 1550nm Erbium Doped Fiber Amplifier (EDFA) is equipped with up to eight output ports, and with low noise and high linearity, this High Power EDFA can be used in the transmission of video, voice and data signals making it the ideal optical amplification solutions for long links, redundant rings, blast and split, and other applications. It offers a flexible and low-cost solution for CATV large area coverage of metropolitan and medium-sized cities.

Features:

- JDSU laser
- Uses Er Yb co-doped double-clad fiber technology
- Output ports: 8 (1 to 8, optionally)
- Optional: Internal WDM port configurations for GPON
- Total Output Power from 25 to 35dBm
- Output Power/Port from 18 to 24dBm
- Advanced 32 bit processor, with automatic monitoring circuit. Accurately monitors and controls the optical output power and various parameters of the laser, ensures stable optical output power and can effectively extend the working life of the laser
- See Specs - Next page

MUL-EDFA-V-X-XX
 └─ Output Power/Port (dBm) - chart
 └─ Output Ports - 1-8

16/32 PORT HIGH POWER 1550nm EDFA



The Multicom 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 1550nm optical transmitters.

Equipped with up to 32 output ports and the option of internal GPON WDM ports, this EDFA provides low noise and high linearity. The MUL-EDFA-V-XX-XX can be used in the transmission of video, voice and data signals making it the ideal optical amplification solutions for long links, redundant rings, blast and split, and other applications. It offers a flexible and low-cost solution for CATV large area coverage of metropolitan and medium-sized cities.

Features:

- JDSU laser
- Uses Er Yb co-doped double-clad fiber technology
- Output ports: 16/32
- Total Output Power from 29 to 37dBm
- Output Power/Port from 15 to 20dBm
- Available with optional internal GPON WDM ports
- Low noise figure: <5dB when input is 0dBm
- Advanced 32 bit processor, with automatic monitoring circuit. Accurately monitors and controls the optical output power and various parameters of the laser, ensures stable optical output power and can effectively extend the working life of the laser.
- Front panel LCD Status Display shows all status parameters and provides ability to set parameters on the EDFA
- 2RU standard 19" rackmount cabinet, equipped with standard IEEE802.3 10Base-T Ethernet interface and RS232 interface, for network management monitoring and control console

8 Port & 16/32 Port Optical Parameter	Unit	Specification
Operating bandwidth	nm	1545 - 1565
Optical input power	dBm	-5 ~ +10
Optical output power	dBm	See charts (pgs 29 & below)
Output power stability	dBm	± 0.5
Return loss - Input port	dB	≥ 45
Return loss - Output port	dB	≥ 45

Model #	Total Output Power (dBm)	Output Ports	Output Power/Port (dBm)
MUL-EDFA-V-16-29	29	16	15
MUL-EDFA-V-16-30	30	16	16
MUL-EDFA-V-16-31	31	16	17
MUL-EDFA-V-16-32	32	16	18
MUL-EDFA-V-16-33	33	16	19
MUL-EDFA-V-16-34	34	16	20
MUL-EDFA-V-16-35	35	16	21
MUL-EDFA-V-16-36	36	16	22
MUL-EDFA-V-32-33	33	32	16
MUL-EDFA-V-32-34	34	32	17
MUL-EDFA-V-32-35	35	32	18
MUL-EDFA-V-32-36	36	32	19
MUL-EDFA-V-32-37	37	32	20

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

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.



Perfect for GPON Applications

MUL-EDFA-V-XX-XX (-WDM) - Optional

Output Power/Port (dBm) - see chart
Output Ports - 12, 16, 32

HEADEND RETURN PATH RECEIVER - HFC & RFOG



The Multicom MUL-HRPR-V-4 Optical Return Path Receiver is ideally suited for use in optical headends and many other fiber optic-based data, video, and voice networks. With dual redundant power supplies, SNMP, excellent AGC characteristics and a unique Burst Mode, this return path receiver provides a cost effective solution for HFC, RFOG and FTTH networks.

The HRPR's state-of-the-art features include an industry-leading 4 port, 45dBmV individually adjustable RF outputs, 5 - 200MHz return bandwidth, wide optical input range down to -10dBm, and a unique backlit front panel control display.

Features:

- Four receivers in 1RU unit with Dual Redundant Power Supplies and SNMP
- Wide optical Input Range 1100 - 1600nm
- 45dBmV typical RF output for each of the 4 individually adjustable ports
- Normal and RFOG modes
- 5 - 200MHz return bandwidth
- Wide optical input range and low noise design allows error free detection down to -10dBm
- Configuration and status monitoring on the easy-to-view backlit front panel display

MUL-HRPR-V-4(-48V)

OPTICAL TRANSPORT CHASSIS



The MUL-OTC-CH-V is an Optical Transport Chassis with universal CATV applications, high density, and powerful functionality and flexibility.

The 4RU module shelf, CMM Display and Control Module, and Plug-in Power Modules are the backbone of this product. The standard 19 inch shelf has 16 universal slots and fan cooling. The plug-in CMM Status Display and Control Module has a LCD status display and front panel pushbutton operation. Installing the Plug-in Application Modules into the shelf and putting the shelf into the cabinet creates an entire HFC headend in very little space.

Plug-in Application Modules

Depending on optical fiber network design requirements, users can select the following optional Application Modules:

- MUL-OTC-1310TX-V-X - 1310nm Optical Transmitter Module
- MUL-OTC-1550TX-V-X - 1550nm Optical Transmitter Module
- MUL-OTC-EDFA-V-X - EDFA Optical Amplifier Module
- MUL-OTC-RPR4-V - 4 Channel Return Path Optical Receiver Module

MUL-OTC-CH-V

1310nm OPTICAL TRANSMITTER MODULE



The MUL-OTC-1310TX-V Intelligent Directly Modulated Optical Transmitter Module is designed to be used in the Multicom Optical Transport Chassis MUL-OTC-CH-V, and is mainly used in 1310nm optical fiber transmission systems. This 1310nm Module uses an EMCORE ORTEL DFB laser with an optical output power options of 3, 6, 7.8, 10, 12 and 14.2dBm, and advanced intelligent electronic predistortion compensation technology.

MUL-OTC-1310TX-V-X

Output Power (dBm) - 3, 6, 7.8, 10, 12, 14.2

1550nm OPTICAL TRANSMITTER MODULE



The MUL-OTC-1550TX-V Intelligent Directly Modulated Optical Transmitter Module is designed to be used in the Multicom Optical Transport Chassis MUL-OTC-CH-V, and is mainly used in 1550nm optical fiber transmission systems. This 1550nm Module uses an EMCORE ORTEL DFB laser with optical output power options of 3, 6, 7.8, 10, 12 and 14.2dBm, and advanced intelligent electronic predistortion compensation technology.

MUL-OTC-1550TX-V-X

Output Power (dBm) - 3, 6, 7.8, 10, 12, 14.2

EDFA OPTICAL AMPLIFIER MODULE



The MUL-OTC-EDFA-V-X 1550nm Erbium Doped Fiber Amplifier (EDFA) Module is a low noise 1550nm optical amplifier designed to be used in the Multicom Optical Transport Chassis MUL-OTC-CH-V. Available optical output levels range from 13 to 24dBm.

The EDFA Module includes input and output optical power detection to adjust the JDSU laser pump automatically and keep the output optical power of the EDFA module constant. Internal control circuitry accurately maintains the output power and temperature of the laser.

MUL-OTC-EDFA-V-X

Output Power (dBm) - 13 - 24

4-CHANNEL RETURN PATH OPTICAL RECEIVER MODULE



The MUL-OTC-RPR4-V Four-channel Return Path Optical Receiver Module uses E-O optical receiving devices and the signal amplifier incorporates a low noise GaAs module to ensure a high quality signal output. Each RPR4 Module includes four optical receivers to receive four optical inputs and convert them into CATV RF, and then pre-amplify them independently.

MUL-OTC-RPR4-V

NEW!

HIGH-POWER MICRO-NODE



Features:

- Uses an advanced optical AGC circuit design, with an optical AGC control range of: +2dBm ~ -9/-8/-7/-6/-5/-4dBm adjustable
- Features the high quality, high reliability DFB laser
- Forward operating frequency up to 1GHz, RF amplifier uses a high performance low power consumption GaAs amplifier, maximum output level up to 52dBmV
- EQ and ATT both use an advanced electric control circuit for setting the operating parameters, making the setup easier and more accurate
- Internal power supply

The MUL-MN-V-TR-HP-AC optical receiver is a bi-directional receiver specifically developed for HFC broadband networks. It accommodates the FTTH network topology, while addressing the issues of CATV bidirectional return channel noise and the high reliability network security transmission requirements of modern CATV networks.

Forward Optical Receiver Parameters	Unit	Technical Parameter
Optical Receiving Power	dBm	-9 ~ +2
Optical AGC Range	dBm	+2 ~ -9/-8/-7/-6/-5/-4 (adjustable)
Optical Return Loss	dB	> 45
Optical Receiving Wavelength	nm	1260 ~ 1620
Optical Connector Type		SC/APC
Fiber Type		Single Mode
Link Performance		
C/N, C/CTB, C/CSO	dB	≥ 51, ≥ 60, ≥ 60
RF Parameters		
Frequency Range	MHz	54 ~ 1000
Flatness in Band	dB	± 0.75
Test Port	dB	-20
Rated Output Level	dBmV	≥ 108 dBμV (≥ +48 dBmV)
Max Output Level	dBmV	+49 (≥ 109 dBμV) (when input optical power -9 ~ +2dBm) +52 (≥ 112 dBμV) (when input optical power -7 ~ +2dBm)
Output Return Loss	dB	≥ 16
Output Impedance	Ω	75
Electrical Control EQ Range, ATT Range	dB	0 ~ 15
Return Optical Transmitter Parameters	Unit	Technical Parameter
Optical Transmit Wavelength	nm	1310 ±10
Laser Type		DFB
Optical Output Power	mW	1 ± 0.5
Optical Connector Type		SC/APC
RF Parameters		
Frequency Range	MHz	5 ~ 42
Flatness in Band	dB	±1
Input Level	dBmV	+15 ~ +25 (75 ~ 85 dBμV)
Output Impedance	Ω	75
NPR Dynamic Range	dB	≥15 (NPR ≥30 dB) Using DFB Laser

MUL-MN-V-TR-HP-AC

└─ TR = Transmit and Receive, R = Receive Only

MICRO-NODE



Features:

- The laser control circuit uses advanced circuit design, insuring reliable and stable operation
- Provides excellent AGC characteristics, when the input optical power range is within -7 ~ +2dBm, the RF output level remains unchanged, CTB and CSO basically remain unchanged
- High quality and efficient RF attenuator circuit with excellent linear attenuation and high precision
- GaAs amplifier device, with good index, low distortion, and high reliability

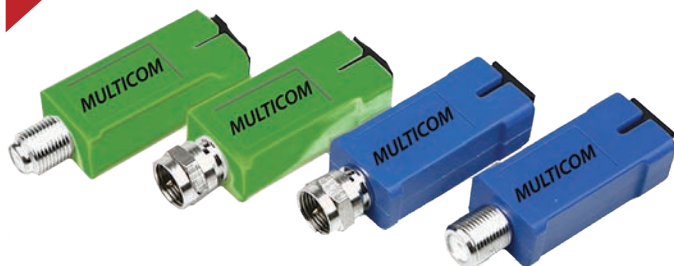
The MUL-MN-V-TR optical node was specially developed for HFC broadband networks, accommodates FTTH (Fiber to the Home) network topology, and while addressing the issues of return channel noise and high reliability network security transmission requirements of modern CATV networks.

Forward Optical Receiver	Unit	Specification
Optical Receiving Power	dBm	-7 ~ +2
Optical Return Loss	dB	> 45
Optical Receiving Wavelength	nm	1260 ~ 1620
Forward RF Parameters		
Frequency Range	MHz	54 ~ 1000
Flatness in Band	dB	± 0.75
Rated Output Level	dBmV	≥ +32
Output Return Loss	dB	≥ 16
Return Optical Transmitter	Unit	Specification
Optical Transmit Wavelength	nm	1310 ±10
Laser Type		FP
Optical Output Power	mW	1 ± 0.5
Return RF Parameters		
Frequency Range	MHz	5 ~ 42
Flatness in Band	dB	±0.75
Input Level	dBmV	+15 ~ +25

MUL-MN-V-TR

NEW!

NANO-NODE



The Multicom MUL-NN-Y-R Optical Nano-Node Receiver family of Optical Nano-Node products was specifically developed for HFC broadband networks, accommodating FTTH (Fiber to the Home) network topology and providing a coaxial consumer connection, all without external AC adapters or power supplies. The Multicom Nano-node does the optical to RF conversion using circuitry all powered simply by the incoming optical signal.

Features:

- Passive, no AC Adapter needed
- Mini size
- Easy to install
- No setup
- High quality plastic or aluminum case
- Multiple coax and fiber connector options available

Parameter	Specification
Material	Plastic case
Wavelength	1100 ~ 1600nm & 1550nm
Input Optical Power	0dBm ~ -7dBm (Analog Signal) 0dBm ~ -10dBm (Digital Signal)
Return Loss	>45dB
Optical Connector	SC/APC, FC/APC, SC/UPC, FC/UPC
Bandwidth	40~862MHz
Flatness	±0.75dB @ 40~862 MHz & 1006MHz
RF Output Level	≥16dB @ 40~550 MHz ≥14dB @ 550~862 & 1006MHz
Output Port Level	>68dBuV (0dBm test)
CNR	≥51dB
CTB	≥65dB
CSO	≥62dB
Working Temperature	-25°C ~ +45°C
Output Port	1
RF Output Impedence	75 Ohm

MUL-NN-Y-R-F-XX-YYY

└── Fiber Connector: SC, FC/APC, UPC
└── RF Connector: M-Male, F-Female

RFOG MICRO-NODE



Features:

- The laser control circuit uses advanced circuit design, insuring reliable and stable operation
- Provides excellent AGC characteristics, when the input optical power range is within -7 ~ +2dBm, the RF output level remains unchanged, CTB and CSO basically remain unchanged
- High quality and efficient RF attenuator circuit with excellent linear attenuation and high precision
- GaAs amplifier device, with good index, low distortion, and high reliability
- Aluminum die casting for efficient cooling, and reliable, stable performance.

The Multicom MUL-MN-V-RFOG-1310/1610 RFOG Optical Network Unit is bi-directional and specially developed for HFC broadband networks while accommodating all FTTH (Fiber to the Home) network topologies

This RFOG Micro-Node addresses the issues of return channel noise and high reliability network security transmission requirements of modern CATV networks.

Forward Optical Receiver	Unit	Specification
Optical Receiving Power	dBm	-7 ~ +2
Optical Return Loss	dB	>45
Optical Receiving Wavelength	nm	1100 ~ 1600
Forward RF Parameters		
Frequency Range	MHz	54 ~ 1003
Flatness in Band	dB	±0.75
Rated Output Level	dBmV	≥32
Output Return Loss	dB	≥16
Return Optical Transmitter	Unit	Specification
Optical Transmit Wavelength	nm	1310 ±10, 1610 ±10
Optical Output Power	mW	0.5 ~ 2
Laser		DFB
Optical Connector Type		SC/APC
Return RF Parameters		
Frequency Range	MHz	5 ~ 42
Flatness in Band	dB	±0.75
Input Level	dBmV	+15 ~ +25
Input Return Loss	dB	≥16

MUL-MN-V-RFOG-XXXX

Upstream Wavelength - 1310nm, 1610nm

MICRO-NODE RECEIVER



Features:

- Receive only
- Mini-size, easy to install
- Operating frequency up to 1GHz
- RF amplifier uses a high performance low power consumption GaAs amplifier
- 12VDC power supply

The MUL-MN-V-R Optical Micro-Node Receiver is equipment that was specially developed for HFC broadband networks, accommodating FTTH (Fiber to the Home) network topology.

Optical Parameters	Unit	Specification
Optical Receiving Power	dBm	-15 ~ +2
AGC Range	dBm	-7 ~ +2
Optical Return Loss	dB	> 45
Optical Receiving Wavelength	nm	1100 ~ 1600
RF Parameters		
Frequency Range	MHz	45 ~ 1003
Flatness in Band	dB	± 0.75
Rated Output Level	dBmV	≥ +28 (≤88 dBμV)
Output Return Loss	dB	≥ 16

MUL-MN-V-R

FIELD-INSTALLABLE FIBER OPTIC CONNECTORS



Features:

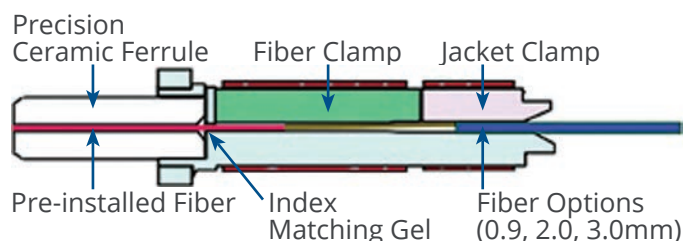
- No epoxy, fiber polishing, special tools or fusion splicer required
- Quick and easy fiber termination in less than two minutes
- Precision mechanical alignment insures low insertion loss
- Superior optical performance
- Durable components design for convenience and reusability
- Pre-installed fiber 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)

Parameter	Specification
Connector Type	SC/LC/FC, Simplex
Cable Diameters	0.9, 2.0, 3.0mm
Fiber Mode	Singlemode / Multi-Mode
Polish	UPC / APC
Insertion Loss	UPC: $\leq 0.35\text{dB}$, APC: $\leq 0.35\text{dB}$
Return Loss	UPC: $\geq 45\text{dB}$, APC: $\geq 50\text{dB}$
Tension Test	$\geq 50\text{N}$
Operating Temperature	$-40^{\circ}\text{C} \sim +75^{\circ}\text{C}$
Compliance	Designed to Telcordia GR-20-CORE, GR-326 and TIA/EIA 568C, RoHS

Easy install in less than 2 minutes by a technician with any level of expertise!

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.

Offering convenience and stability, the assembly of the connector requires only normal fiber preparation tools and minimal space, making them easy to prepare in the field in minutes. Just strip the buffer, cleave and clean the fiber, and then insert the fixed-length fiber through the ferrule of the connector.



Installation Example:

1. Insert the retention cap on to the end of the cable



2. Insert the fiber into the connector until it stops and arches up slightly



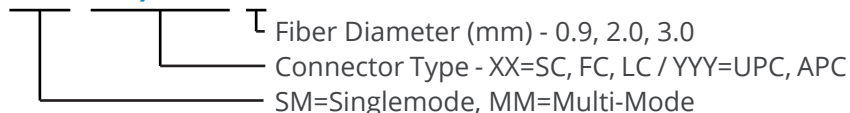
3. Push the fiber clamp slider forward, push down the jacket clamp



4. Screw on the retention cap and add the connector cover. Clean the ferrule. The connector is complete.



M-FOCON-FI-SM-XX/YYY-F





NEW IN THIS ISSUE!

VIDEO ENCODERS & MODULATORS

Encoders and Modulators for Video/Audio distribution over coax, IP and networking applications

Does your installation require a video modulator or HD Encoder? It does if you need to distribute composite and component or HDMI video sources such as DVD players, Digital Signage Media Players, Security Cameras, computers, and more - live over coax or IP.

Multicom's constantly growing line of high-quality Modulators and Encoders has been a primary focus recently. Whether it's one channel, eight channels, or more - we have the products you need at the price you want.

Instead of having a rack full of fixed-channel modulators, you can now have the efficiency, economy and redundancy of agile modulators. Agile modulators gives the ability to change the output channel whenever needed - and Multicom's price point has come down to such a level that fixed-channel modulators can be a thing of the past.

NEW!
CH 2-135

HIGH BANDWIDTH AGILE MODULATOR



The Multicom MUL-AMOD860-K is a commercial-grade, SAW filtered, frequency agile analog modulator that offers the same high quality as fixed analog modulators but with the freedom and flexibility of changing the output channel from CH 2 through 135. It provides system operators the engineering ease and flexibility required with new headend deployments, upgrades, and system maintenance.

The modulator is used to convert a single composite AV input from any of a variety of sources into an RF output.

The Multicom MUL-AMOD860-K is flexible, user friendly, and is easy to use for both Residential and Commercial applications. The engineers behind the technology of this Modulator made sure that the design will perform with long term stable operation, reliability, and high quality video output.

The Multicom MUL-AMOD860-K can be used for composite Audio/Video sources such as Satellite Receivers, DVD players, Digital Signage Media Players, Security Cameras, computers, and more. Plug in the composite video and audio source and select the output channel desired.

Features:

- **Channels 2-135, fully agile modulator**
- SAW filtered for maintenance/interference-free adjacent channel placement
- 53dBmV RF output level, typical
- Phase lock loop frequency control
- Non-volatile memory maintains channel selection in event of power loss
- Three-digit red LED display and controls for convenient monitoring and operation
- Switching power supply for installation flexibility and precise voltage regulation
- Designed to fit in a standard 19" rack

	Parameter	Specification MUL-AMOD860-K
Audio / Video Input	Video Connector	Yellow female RCA
	Video Input Level	0.6-1.5Vp-p (87.5% Modulation)
	Video C/N	≥55dB
	Audio Connector	White female RCA
	Audio Input Level	0.8Vp-p (25KHz Peak Deviation)
RF	Connector	'F' Female
	Frequency Range	54 – 860 MHz (Select Ch2 to Ch135)
	Channel Type	CATV
	Output Level	53dBmV Typical (adjustable)
	Test Point	-20 dB (±3dB)
	A / V Ratio	-11 ~ -18 dB (adjustable)
	Frequency Stability	± 10KHz
	Impedance	75 Ohms
General	Power Supply	110 ~ 220 VAC, 50-60Hz
	Power Consumption	10 Watts
	Operating Temperature	0 ~ 45°C
	Storage Temperature	-20 ~ 70°C
	Humidity	<95%
	Dimensions	19" x 1.75" x 6.6"
	Weight	1.7 Kgs (3.7 lbs.)

MUL-AMOD860-K

NEW!
CH 2-118

AGILE MODULATOR



Features:

- **Channels 2-118, fully agile modulator**
- SAW filtered for maintenance/interference-free adjacent channel placement
- 55dBmV RF output level, typical
- Phase lock loop frequency control
- None-volatile memory maintains channel selection in event of power loss
- Two-digit red LED display and control for convenient monitoring and operation
- Switching power supply for installation flexibility and precise voltage regulation
- Designed to fit in a standard 19" rack

The Multicom MUL-AMOD750 is a commercial-grade, SAW filtered, frequency agile analog modulator that offers the same high quality as fixed analog modulators but with the freedom and flexibility of changing the output channel from CH 2 through 118. It provides system operators the engineering ease and flexibility required with new headend deployments, upgrades, and system maintenance.

The modulator is used to convert a single composite AV input from any of a variety of sources into an RF output. The Multicom MUL-AMOD750 is flexible, user friendly, and is easy to use for both Residential and Commercial applications. The engineers behind the technology of this Modulator made sure that the design will perform with long term stable operation, reliability, and high quality video output.

The Multicom MUL-AMOD750 can be used for composite Audio/Video sources such as Satellite Receivers, DVD players, Digital Signage Media Players, Security Cameras, computers, and more. Plug in the composite video and audio source and select the output channel desired.

	Parameter	Specification MUL-AMOD750
Audio / Video Input	Video Connector	Yellow female RCA
	Video Input Level	0.5-1.5Vp-p (87.5% Modulation)
	Video C/N	55dB
	Audio Connector	Red female RCA
	Audio Input Level	0.4Vp-p (25KHz Peak Deviation)
RF	Connector	'F' Female
	Frequency Range	54 – 750 MHz (Select Ch2 to Ch118)
	Channel Type	CATV
	Output Level	55dBmV Typical (adjustable)
	Test Point	-30 dB (± 3 dB)
	A / V Ratio	-15 dB
	Frequency Stability	± 5 KHz (meets FCC Docket 21006)
	Impedance	75 Ohms
General	Power Supply	80 ~ 260 VAC, 50-60Hz
	Power Consumption	7 Watts
	Operating Temperature	0 ~ 50°C
	Storage Temperature	-20 ~ 70°C
	Humidity	<95%
	Dimensions	19" x 1.75" x 3"
	Weight	1.58 Kgs (3.5 lbs.)

MUL-AMOD750

NEW!

HD ENCODER - 1 CHANNEL

Broadcast HD Content to an Unlimited number of TVs



Multicom's MUL-HDENC-C-100 delivers crystal-clear digital HD video distribution over your existing coax cabling from your unencrypted HDMI sources.

This single channel QAM, MPEG2, Encoder/Modulator unit allows you to easily distribute customized SD and Full HDTV content, up to 1080p resolution, on any of 134 channels – to an unlimited number of displays, using the TV's built in QAM tuner, eliminating the need for cumbersome, expensive set-top-boxes or media players at each display.

This Encoder/Modulator is perfect for multi-video distribution in the commercial and institutional markets, and existing networks can easily and inexpensively include Full HDTV content. Regardless if you are moving HD content around a hotel, sports bar, senior living facility, convention center, student-housing complex, apartment building, stadium, or arena, the compact and economical Multicom MUL-HDENC-C-100 HD Digital Encoder has the powerful features you need.

Features:

- HDMI input, RF QAM output
- Adjustable Attenuation
- RJ-45 port for web configuration
- Video resolution up to 1080p
- Perfect, clean, and clear picture on high motion video, sports, text crawls/rolls, etc.
- Front panel LCD for easy setup
- Cool and silent operation



Parameter	Specification
Inputs	
HDMI	1.4v
Audio Inputs	
Audio Input	HDMI Embedded
Video Encoder	
Video Codecs	MPEG-2 VBR
Video Resolutions	1080p, 1080i, 720p, 480p, 480i
Audio Encoder	
Audio Compression	MPEG-1 Layer II, AAC
RF QAM Support	
Frequency	J.83B: 57-861 MHz (CH 2-CH 135) ATSC: 57- 803 MHz (CH2 - CH 69)
RF Channel Output (Programs / QAM)	1 Program / 1 QAM
Constellation	J.83B: 64 QAM/ 256 QAM (STC/HRC/IRC) ATSC: 8-VSB
Bandwidth	6 MHz
RF Level Output	+38dBmV Typical
MER	>37dB (38 dB Typical)
Interleaver	Supported (12 presets)
Channel Type	STD, HRC, IRC / ATSC
VCN	VCN Auto, VCN Manual, VCN 1-Part
Attenuation	0 – 20dB (manual)
RF Output	"F"- Female 75Ω
Management / Control	
GUI Supported	IE9, FireFox, Chrome, Safari
GUI Control	RJ45 10/100
Password Protected	Front Panel, Web Interface
General	
Dimensions	7.5" x 5.25" x 1.75"
Front Panel	LCD Front Panel Control/Status
Power Supply	12VDC, 1.5Amp

MUL-HDENC-C-100-NA

NA = USA: QAM
MX = Mexico: ATSC

NEW!

HD ENCODER - DELUXE - 1 CHANNEL

Broadcast HD Content to an Unlimited number of TVs

Multicom's MUL-HDENC-C-200 delivers crystal-clear digital HD video distribution over your existing coax cabling from your HDMI, component, and composite video sources. User may select output as QAM, ATSC, ISDB-Tb, or DVB-T.

This single channel QAM, MPEG2, Encoder/Modulator unit allows you to easily distribute customized SD and Full HDTV content, up to 1080p resolution, on any of 134 channels - to an unlimited number of displays, using the TV's built in tuner, eliminating the need for cumbersome, expensive set-top-boxes or media players at each display.

This Encoder/Modulator is perfect for multi-video distribution in the commercial and institutional markets, and existing networks can easily and inexpensively include Full HDTV content. Regardless if you are moving HD content around a hotel, sports bar, senior living facility, convention center, student-housing complex, apartment building, stadium, or arena, the compact and economical Multicom MUL-HDENC-C-200 HD Digital Encoder has the powerful features you need.

Features:

- HDMI, component, and composite input, RF QAM, ATSC, ISDB-Tb, and DVB-T user selectable output
- Closed captioning on ATSC and QAM
- Adjustable Attenuation
- RJ-45 port for web configuration
- Video resolution up to 1080p
- Perfect, clean, and clear picture on high motion video, sports, text crawls/rolls, etc.
- Front panel LCD for easy setup
- Cool and silent operation



Inputs	Specifications
HDMI, Component, Composite	HDMI 1.4
EAS	RCA 3.5mm, 5-12VDC & Dry Contact Closure
Audio Inputs	
Audio Input	HDMI Embedded, Analog
Video Encoder	
Video Codecs	MPEG-2 VBR
Video Resolutions	1080p, 1080i, 720p, 480p, 480i
Audio Encoder	
Audio Compression	MPEG-1 Layer II, MPEG-4 AAC
RF QAM Support	
Frequency	J.83B: 57-861 MHz (CH 2-CH 135) ATSC: 57- 803 MHz (CH2 - CH 69) ISDB-Tb: 177-803 Mhz (CH7 - CH 69) DVB-T: 6MHz: CH: 2-69, 57-803MHz 7MHz: CH: 6-9, 9A, 10-12, S11-S45, 21-69 8MHz: CH: E2-E4, X-Z, Z1, Z2, S1-S10, E5-E12, S11-S41, E21-E69
RF CH Out(Programs / QAM)	1 Program / 1 QAM
Constellation	J.83B: 64 QAM/ 256 QAM (STD/HRC/IRC) ATSC: 8-VSB ISDB-Tb: 16 QAM/64 QAM DVB-T: 16 QAM/64 QAM
RF Level Output	+35dBmV Typical
MER	>37dB (38dB Typical)
Interleaver	Supported
Modulator Modes	J.83B, ATSC, ISDB-Tb, DVB-T , user selectable
VCN	VCN Auto, VCN Manual, VCN 1-Part
Attenuation	0 - 20dB (manual)
RF Output	"F"- Female 75Ω
Management / Control	
GUI Supported	FireFox, Chrome, Safari, EDGE
Languages	English, Spanish (Web GUI)
Closed Caption (J.38B & ATSC)	EIS-608
Password Protected	Front Panel, Web Interface
General	
Dimensions	9.3" x 5.75" x 1.3"
Front Panel	LCD Front Panel Control/Status
Power Supply	12VDC, 1.5Amp, 100-240VAC 50/60Hz, US Plug



19" Rack Mount Bracket Kit
& Wall Mount Accessories Included

MUL-HDENC-C-200-NA

NA = Default USA: QAM
MX = Default Mexico: ATSC
CO = Default Columbia: DVB-T
LA = Default Latin America: ISDB-Tb

NEW!

HD ENCODER RACK SHELF KIT



The Multicom MUL-HDENC-SHELFKIT-10 is used for rack-mounting Multicom Encoders into a 19" rack. The kit includes one 4RU Shelf (minimum), and all of the screws, washers necessary for mounting. The Rack Shelf Kit can accommodate up to ten MUL-HDENC-C-100 and/or MUL-HDENC-C-200 HD Digital Encoder Deluxe units.

The kit includes the top and bottom shelving units, cross bar for securing the encoders, and 10 protective pads.

MUL-HDENC-SHELFKIT-10



The MUL-HDENC-SHELFKIT-PWR is a single AC adapter that feeds up to 10 HD Encoders. This octopus cable saves space and eliminates cable clutter.

MUL-HDENC-SHELFKIT-PWR

NEW!

DIGITAL A/V MODULATOR 3-CHANNEL INPUT



The Multicom MUL-ARMOD-3 is a consumer-grade 3-channel input Mono modulator capable of modulating a video and left/right audio signal of satellite receivers, security camera, home A/V equipment, etc. to 3 user selected TV channels.

This Modulator incorporates a commercial grade design intended for non-adjacent placement of the modulated channels in any free area of UHF band or the CATV ULTRA band. The channel selection of UHF or CATV ULTRA channels can quickly and easily be done by front panel buttons, and the channel is digitally displayed on channel indicator. This agile design provides maximum flexibility.

Features:

- Converts 3 composite A/V inputs to 3 user selectable TV channels on a coax output
- Covers UHF Channels 14-74 & CATV ULTRA Channels 65-135
- LED channel display
- Output channels easily selected by frontpanel buttons
- Compact design for easy installation
- Combined Stereo input to Mono
- Excellent picture quality
- Multiple TV distribution
- FCC approved

Parameter	Specification
Output Frequency Range:	470 - 860 MHz
UHF Channels:	Ch. 14-83
CATV Channels:	Ch. 65-135
Video Freq. Response:	±1 dB
Noise Figure:	6 dB
Aural Intercarrier Stability:	4.5 MHz ±10 KHz
Frequency Accuracy:	±20KHz
Video Input Level:	1V p-p
Audio THD:	0.4%
Output Level:	+15 dBmV
Audio / Video S/N Ratio:	50 / 52 dB
Power Requirement:	117 VAC / 60Hz
Antenna input:	Yes

MUL-ARMOD-3

NEW!

HIGH DEFINITION DIGITAL ENCODER - DVB-T - 4 CH



The Multicom MUL-HDENC-C-400-DVB-T is a quad input, High Definition Agile Digital Encoder/Modulator used to convert up to four HDMI video-audio input of up to 1080i/1080p into a DVB-T QAM64 RF output. Its feature rich, high quality, high performance makes it suitable for Commercial and Residential use in Colombia and other countries using the DVB-T standard.

The MUL-HDENC-C-400-DVBT is a 1RU DVB-T HD Encoder making it ideal for any Commercial RF Network integration. The high-quality HD design allows for watching action packed movies and sports channels on any HDTV. The space saving design enables up to 4 High Quality HD/SD DVB-T channels in a single 1RU space.

Features:

- USA technology for high performance, high quality, high reliability
- High Resolution output
- HD/SD Video Bitrate Control
- 4 HDMI inputs / H.264 CBR Output
- Intuitive GUI for fast installation and deployment
- Advanced System Parameters with external SMTP Server functionality Support
- Dual Language (English/Spanish) GUI
- LCN Channel Control
- MP2 / AAC Audio
- PID Control: PMT | Video | Audio | PCR
- Rack mountable 1RU height



General	
Local Monitoring	LCD
SMTP Alarms	Embedded
Web GUI Supported	Firefox, Chrome, Safari, Edge
Password Protected	GUI: User Settable
Redundant PSU	Yes, 2 Power Supplies (Main & Standby)
Power Supply	12 VDC 4A
Consumption	26 Watts
Operational Temperature	0°C - +55°C
Storage Temperature	-20°C - +70°C
Dimensions	438mm x 206mm x 44mm
Weight	2.5 KG
Language	English
Firmware Version	20191101, or later
Net Version	2.1.10, or later
Output	
COFDM	
Standard	DVB-T
Connector	1 x "F" Female
Frequency Range	177.000 MHz to 803.000 MHz (Channel 7 to Channel 69) Independent RF Frequencies
Output Level	85 dBμV Typical
Flatness Across Full Band	± 2 dB
MER	38 dB Minimum, 39 dB Typical
Carrier (OFDM Mode)	2k, 8k
Guard Interval	1/32
Code Rate (FEC)	7/8
Constellation	64-QAM (23.751Mbps)
Output Impedance	75 Ohm
RF Output Return Loss	10dB Typical
LCN	Colombia Standard
Video / Audio Input	
HDMI 1.4	
Connectors	Quad
Audio	Embedded PCM
Video	
Video Codecs	H.264
Resolution Output	1080p/ 1080i/ 720p/ 576p/ 576i/ 480p/ 480i
Audio	
Audio Codecs	MPEG1 Layer II / MPEG4 AAC

MUL-HDENC-C-400-DVB-T

NEW!

ENCODER / MODULATOR WITH IP STREAMING - 8CH



The Multicom MUL-HDENC-IP-C-8000 outputs 8 video streams in either MPEG-2 or MPEG-4 / H.264. Integrators can tailor each channel for the most demanding applications by utilizing the full bandwidth, while still providing the highest quality video resolution.



Features:

- 4x QAM • 8x IP • 1 ASI
- Remote Monitoring and Control
- High Density Headend Installations
- System Control of Encoder(s) via GUI
- IPTV System Capable
- EAS Functionality
- Compact 1RU Design for Encoder
- MPEG-2/H.264

Video / Audio Inputs	
HDMI 1.4v	8
Component & Composite Video / Audio Input (Combined) with Closed Captioning Support	8 via DIN Connectors, cables included
EAS Input	1
Outputs	
ASI	Single Output (1 MPTS Stream Carrying 8 Programs)
IP (GigE)	RTP / UDP Multicasting, RTP / UDP Unicast
Video Formats	
Resolution	1080p (H.264 Only), 1080i, 720p, 480p, 576i, 480i
Video / Audio Compression	
Video Codecs	MPEG-2, MP@HL/H.264
Audio Codecs	MPEG-1 Layer II / AAC / AC-3 Pass Through AC-3 Encode (Optional)
RF Output	
Channel Plan	57-861 MHz (Channels #2-135)
Output Level	+45 dBmV
Output Impedance	75 ohm
Level Adjustment	1-20 dB
Modulation Modes	QAM 256
QAM Type	J.83B
VCN	3 Modes Available
MER	42dB Minimum, 43dB Typical
Closed Caption	Supported
General	
GUI Supported	IE, Firefox, Chrome, Safari
Password Protected	Default Setting (Changeable Setting)
Firmware Upgradeable	Contact Multicom
Fan Cooled	Internal
Power Supply	12VDC 6.66 Amp
Consumption	4050mA
Language	English

MUL-HDENC-IP-C-8000

NEW!

SD STREAMING ENCODER - 8 CHANNEL



The economical Multicom MUL-SDENC-IP-C-800 outputs high quality SD QAM or IP streams from 8 composite inputs, all in a 1RU unit. Provides virtual channel mapping for flexibility and a front panel display and buttons for quick and easy setup.



Features:

- 8 Composite A/V Inputs
- IP/QAM Output
- Virtual Channel Mapping
- Remote Monitoring and Control
- System Control of Encoder(s) via GUI
- IPTV System Capable
- Compact 1RU Design for Encoder

Video / Audio Inputs	
Composite Video / Audio	8 inputs
Outputs	
IP (GigE)	RTP/UDP Multicasting, RTP/UDP Unicasting (Optional)
Video Formats	
Resolution	NTSC 720x480 @30fps
Video / Audio Compression	
Video Codecs	MPEG-2, MP@ML
Audio Codecs	MPEG-1 Layer II
RF Output	
Channel Plan	Varies by Country
Output Level	+47 dBmV Typical
Output Impedance	75 ohm
Level Adjustment	1-20 dB
Modulation Modes	QAM 64/256
QAM Type	ATSC / DVB-T / DVB-C / J.83B
LCN	Embedded
MER	42dB Minimum, 43dB Typical
General	
IP Management Port 10Mbps	Single
LCD Front Panel	Dual line, Scrolling display
GUI Supported	IE, Firefox, Chrome, Safari
Password Protected	Default Setting (Changeable Setting)
Firmware Upgradeable	Contact Multicom
Fan Cooled	Internal
Power Supply	12VDC 4 Amp
Consumption	2050mA (24.6W)
Language	English

MUL-SDENC-IP-C-800



TOOLS & TEST EQUIPMENT

Fiber optic installers in the field need a complete set of high quality fiber optic tools and reliable test equipment which give them both the ability to splice and terminate fiber optic cables, and to test and troubleshoot the installation.

For decades, fiber optics have been inspected and cleaned to ensure the proper passage of light. While this process is not new, it is growing in importance as our dependence on the capacity and other benefits of fiber optics surge.

Multicom manufactures and stocks only the highest-quality and most cost-effective products. Whether you're working in a local area network (LAN), data center, or office, we've got the tools you need to clean, cut, inspect, measure, strip and terminate your fiber cables.

OPTICAL TIME DOMAIN REFLECTOMETER



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

The hand-held Optical Time Domain Reflectometer MUL-OTDR-1000 and MUL-OTDR-1100 are a new generation of intelligent optical-fiber test equipment. OTDRs are widely used in the construction, maintenance, measurement, and emergency repair of optical-fiber communication networks as well as the development, manufacturing and measurement of optical fibers and optical cables.

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.

Applications:

- FTTX test with PON networks
- CATV network testing
- Access network testing
- Live fiber troubleshooting

MUL-OTDR-1000
MUL-OTDR-1100

Specification	MUL-OTDR-1100	MUL-OTDR-1000
Wavelengths	1310 / 1550nm Singlemode	
Dynamic Range	35 / 33 dB	26 / 24 dB
Event Dead Zone	0.8m/1.5m (Typ)	
Attenuation Dead Zone	4m	
Distance Resolution	0.01m	
Testing Distance	100m, 500m, 2km, 5km, 10km, 20km, 40km, 80km, 120km, 160km, 200km	100m, 500m, 2km, 5km, 10km, 20km, 40km, 80km, 120km, 160km
Pulse Width	3ns, 5ns, 10ns, 20ns, 50ns, 100ns, 200ns, 500ns, 1μs, 2μs, 5μs, 10μs, 20μs	
Sampling Points (max)	128,000	
Distance Accuracy	± (1m + measuring distance x 3 x 10 ⁻⁵ + sampling resolution)M	
Visual Fault Locator	Included, 650nm, 10mW, Class III B	
Optical Light Source	1310nm, 1550nm	Not Included
Optical Power Meter	850, 1300, 1310, 1490, 1550, 1625, and 1650nm, input -60dBm to +5dBm	Not Included
Smart Network Analysis	Included	Not Included
Fiber Inspection	Software included, probe purchase required	
Display	7" TFT Touch Screen	
Languages	User-selectable English / Spanish / Portuguese / Others	
Bellcore SOR File Output	Yes (Issue 2, SR-4731)	
Data Storage	Internal memory: 4GB (about 40,000 test traces)	
Battery Life	~ 12 Hours	

NEW!

OTDR FIBER OPTIC MICROSCOPE PROBE



The Multicom Fiber Microscope Probe features a USB function to connect to the Multicom OTDR, laptop or PC directly. The image sensor inside the probe allows for real-time inspection without the need of additional power. All spots, scratches and defects on the end face can be easily measured and counted.

Features:

- Zoomable lens
- High alignment accuracy
- 400X magnification
- Adapters for different kinds of terminal

MUL-OTDR-PROBE

FUSION SPLICER KIT

USA
TECHNOLOGY

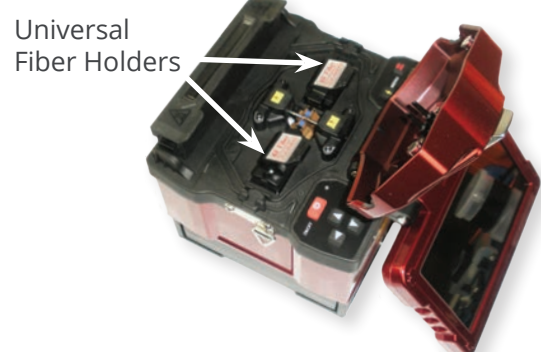
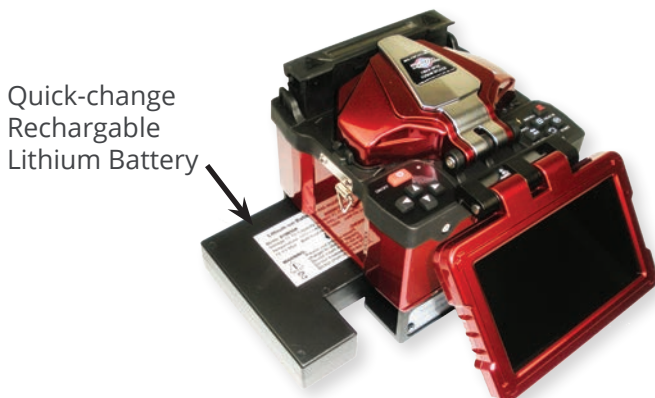


The tough and rugged Multicom MUL-FSPLICE-200 Core-to-Core Alignment Fiber Optic Fusion Splicer is drop/impact, dirt/dust and water resistant. Multicom is proud to provide a **3 Year Domestic / 1 Year International Warranty**, and all **USA Service and Support**.

With **German design and USA / Japanese technology**, this 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**
- **3 Year Domestic / 1 Year International Warranty**
- **Quick-change Rechargeable Lithium Battery**
- **State-of-the-art core-to-core fiber Profile Alignment System (PAS)**
- 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
- 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
- High precision 4 motor drive design



MUL-FSPLICE-200

FUSION SPLICER KIT

Fiber Optic Fusion Splicer Kit Includes:



Parameter	Specification
Applicable Optical Fiber Types	SM (G.652/G.657), MM (G.651), DS (G.653), NZD S (G.655), EDF,BIF/UBIF
Applicable Optical Fiber Core Number	Single Core
Applicable Optical Fiber Diameter	Cladding Diameter: 90-150μm, Coating Diameter: 125-1000μm
Fusion Splice Model	Factory: 40 Groups, User Defined: 80 Groups
Average Fusion Splice Loss	0.02dB (SM), 0.01dB (MM), 0.04dB (DS), 0.04dB (NZDS)
Return Loss	Better than 60dB
Fusion Splice Time	9 Sec (Typical Mode), 7 Sec (Fast Mode)
Fusion Splice Loss Estimate	Displayed at completion of splice process
Heat Shrinking Time	2mm Heating Sleeve (9-15s Adjustable) 4mm Heating Sleeve (14-19s Adjustable) 6mm Heating Sleeve (17-23s Adjustable)
Heating Temperature	Below 300°C (customizable)
Automatic Heating Mode	Automatic fiber identification & heat shrinking when cover is closed
Alignment Modes	Core alignment , Cladding alignment, Fine alignment
Applicable Optical Fiber Cable Diameter	2mm, 3mm, 4mm, 6mm
Applicable Sleeve Length	60mm, 45mm, 40mm (FP-03)
Tension Test	≥2N
General	
Display	5 inch Color LCD
Optical Fiber Magnification	X/Y: 200 times, X or Y: 400 times
Data Storage	10,000 Records
Image Storage	10 Images
Data Interface	USB 2.0
Power Supply	11.1V Lithium Battery, 13.5V/5A AC Power Adapter
Battery	Model 200: Typically 260 Cycles (Splicing / Heating), Full charge: 3 Hours Recharge Cycle: 500 Times, Quick-change, Plug-in, 6800mA Li-battery
Operating Environment	Elevation: 0 ~ 5000m, Relative humidity: 0 ~ 95% Temperature: -20°C ~ 55°C, Maximum wind speed: 15m/s
Weight	1.56kg / 3.4lb (without battery), 1.81kg / 4.0lb (with battery)
Corrosion Resistance	Equipment components, parts and materials meet composite anti-corrosion requirements, liquid/spill resistance
Size	158L x 138W x 138H (mm), 6.2L x 5.4W x 5.4H (in)
Warranty	3 Year - Domestic, 1 Year - International

NEW!

OPTICAL POWER METER



MUL-OPM-100

The MUL-OPM-100 is a handheld Optical Power Meter with an ergonomic design that uses the latest technology in the Optic Fiber field. The Multicom Optical Power Meter provides outstanding functionality and durability with a broad power measurement range, high precision, and high sensitivity.

The OPM is feature rich with a very user friendly interface. The OPM can be used to measure the absolute power of CATV, Telecom single mode or a LAN multi-mode fiber system, also the Multicom Optical Power Meter has the capability to measure relative power by displaying Absolute & Relative power simultaneously, as well as Optic Fiber Link Loss Management.

Features:

- For use with a wide variety of wavelengths from 850 to 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
- Auto-shutoff
- Backlight

Parameter	Specification
Standard Wavelength	850, 980, 1300, 1310, 1490, 1550nm
Measurement Range	-50dBm ~ +26dBm
Detector Type	InGaAs
Uncertainty	±0.15dB
Linear Accuracy	0.1%
Nonlinear Accuracy	0.01dBm
Automatic Shutoff	10 min (this option can be turned off)
Operating Temperature	-10°C ~ +60°C
Storage Temperature	-25°C ~ +70°C
Operating Time	≥200h
Power Supply	3AA 1.5V (provided with the meter)

NEW!

OPTICAL LIGHT SOURCE



MUL-OLS-100

For Singlemode

MUL-OLS-200

For Multi-mode

MUL-OLS-300

For Singlemode & Multi-mode

The MUL-OLS-100/200/300 is a handheld Optical Light Source with an ergonomic design that uses the latest technology in the Optic Fiber field. The Multicom Optical light source provides outstanding functionality, durability and is suitable for field use.

The OLS is feature rich with a user-friendly interface. The Multicom OLS is the perfect match for every technician in performing high precision and sensitive insertion loss measurement and link loss of installed cables. It's continuous wave and the four different modulated modes will help in identifying loss in the system.

Features:

- High stability of the output power and stable output wavelength
- Support 1 to 4 output wavelengths to meet specific requirement
- CW, 270Hz, 1KHz, 2KHz modulation output at 1310/1550nm wavelengths
- Dustproof Button Design
- Membrane touch buttons prevent dust from entering the device
- Durable shatter-resistant bumper sleeve protects the OLS from falls, shocks and wear

Parameter	Specification
Singlemode Wavelength	MUL-OLS-100: 1310/1550 nm
Multi-Mode Wavelength	MUL-OLS-200: 850/1300 nm
Single/Multi-mode Wavelength	MUL-OLS-300: 850, 1300, 1310, 1550nm
Emitter Type	Fabry-Perot Laser Diode
Typical Power Output	-7 dBm
Spectral Width	≤ 10 nm
Modulation	0 Hz (continuous wave) / 270 Hz / 1000 Hz / 2000 Hz
Output Stability	± 0.05dB / 15 mins or ± 0.1dB / 8 hours
Automatic Shutoff	10 min (this option can be turned off)
Operating Temperature	-10°C ~ +60°C
Storage Temperature	-25°C ~ +70°C
Operating Time	≥60h
Power Supply	3AA 1.5V (provided with the OLS)
Dimensions	152 x 74 x 25 mm
Weight	180g

NEW!

OPTICAL FIBER IDENTIFIER & VISUAL FAULT LOCATOR



Ideal for online testing, the Multicom MUL-OFI-VFL-1MW Optical Fiber Identifier is used for nondestructive fiber identification. It is capable of detecting signal presence and direction in any location of both Singlemode and Multi-mode fiber. It also incorporates a Visual Fault Locator module with fault location function.

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
- Displays the relative core power
- Lower power indication
- Build in VFL function

MUL-OFI-VFL-10MW

Parameter	Specification
Identified Wavelength Range	750-1700nm
Insertion Loss	1.0 dB
Fiber Type	<3mm fiber
Identified Signal Type	270Hz / 1KHz / 2KHz
Display Type	LED
Detector Type	1mm InGaAs
Minimum detection power	-35dBm (1550nm)
	-30dBm (1310nm)
Center Wavelength	650nm
Output Power	10 mW
Alkaline Battery	2 x AA
Battery Life	> 60H
Operating Temperature	0 ~ +50°C
Storage Temperature	-20 ~ +60°C
Weight	200g
Dimension (mm)	230 x 43 x 36
VFL Specifications	
Wavelength	650±10nm
Output Power	10mW
Fiber Port	FC/PC

VISUAL FAULT LOCATOR



The Multicom MUL-VFL is the easiest way to identify fibers from end to end and locate polished connector endfaces. The red laser shines through most yellow-jacketed fibers to help you precisely identify breaks, bends, faulty connectors, splices and other causes of signal loss. The MUL-VFL locates faults visually by creating a bright red glow at the exact location of the fault on both singlemode or multi-mode fibers.

Robust design: Due to its small size and durable yet lightweight design, this handy tool can accompany you to the most demanding environments. To ensure ruggedness, it features rubber seals, a fully enclosed laser head and a long-lasting operations switch. It has been tested to provide reliable operation under intensive use and harsh conditions.

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
- 1mW, 10mW, 30mW or 50mW

Parameter	Specification
Operation	2 to 4Hz
Wavelength	650 ±10nm
Power output	0.6mW typical
Distance range	5Km
Operation modes	Continuous Wave (CW)/Off/Pulse
Laser class	1

MUL-VFL-10MW

LMW: 1, 10, 30, 50

NEW!

HANDHELD FIBER INSPECTION MICROSCOPE



Focal Adjustment Dial

The Multicom MUL-FSCOPE-400 Handheld Fiber Microscope is a low cost and high quality fiber inspection tool for inspecting fiber terminations in the field.

With 400X magnification, excellent optical performance and integrated laser safety filters, it provides the most critical view of fiber end faces. The white LED light provides coaxial illumination to connector end-faces. This illumination method produces high-resolution detail of end-face scratches, defects and contamination.

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

MUL-FSCOPE-400

NEW!

OTDR LAUNCH CABLE BOX



The Multicom MUL-OTDR-LCB OTDR Launch Cable Box, connects the OTDR to the link-under-test, enabling measurement of the insertion loss and reflectance of the near-end connection. The Launch Box creates the proper conditions for testing another similar optical fiber for faults. This method avoids undesirable variations in loss and distance measurements. A launch fiber helps to overcome the blind spot or 'Dead Zone' of an OTDR brought about by high launch power or faults near the launch end of the fiber.

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

Parameter	Specifications
Fiber Type	9/125 Singlemode G652D fiber
Length	1 KM / 150 Meters
Connector 1	Simplex SC/UPC with dust cap
Connector 2	Simplex SC/UPC with dust cap
Typical Loss	< 0.5dB@1310nm for 1000 Meters
Material	SR Polypropylene
Operating Temperature	-40 ~ +55° C (-40 ~ 131°F)
Dimensions	238 x 141 x 66mm (9.3" x 5.5" x 3")

MUL-OTDR-LCB-X

L150M, 500M, 1 KM

FIBER OPTIC CLEANER - CASSETTE



The MUL-FO-CLEAN-CASS Fiber Optic Cleaner Cassette is the most effective high-end cleaning solution available. This cassette cleaner features a 25 foot densely-woven dry cloth reel which provides superior cleaning performance while minimizing static charge. The 25 feet cloth can be used over 500 times.

Features:

- Minimizes static attraction
- Ultra clean micro-fiber cloth captures debris and other contamination
- The cloth is robust, it does not fray or leave any fibrous materials behind

MUL-FO-CLEAN-CASS

FIBER SHEARS



The MUL-FO-SHEAR-K Fiber Optic Kevlar Cutters, or Shears, are specifically designed for cutting fiber optic kevlar. The cutting blades are micro-serrated, especially designed to avoid sliding or slipping when cutting kevlar. The handle is made from molded and durable plastic making these shears easy to grip and operate.

Features:

- Made of carbon steel
- Ergonomic handle

MUL-FO-SHEAR-K

NEW!

HIGH PRECISION FIBER OPTIC CLEAVERS



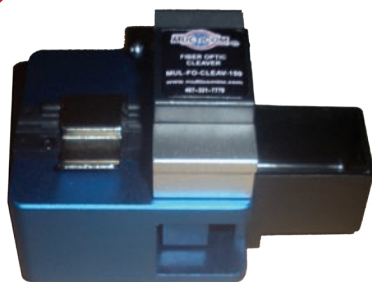
MUL-FO-CLEAV-200-F

The High Precision MUL-FO-CLEAV-200 is ideal for single fiber and ribbon fiber FTTx applications. The 16-position blade yields 48,000 single-fiber cleaves, or 4,000 12-fiber ribbon cleaves before requiring replacement. The easy-to-use precision cleaver provides reliable, repeatable results and includes safety features to protect the operator and extend the life of the tool.

Features:

- **NOW FEATURING FUJIKURA™ BLADE FROM JAPAN**
- Compact body and high precision design
- Applicable for single fiber and up to 12-count fiber ribbon
- For use on Singlemode and Multi-mode fiber
- 48,000 fiber cleaves life (1,000 cleaves x 3 heights x 16 positions)
- Includes hard carrying case and additional fiber holder

NEW!



MUL-FO-CLEAV-150

The MUL-FO-CLEAV-150 is ideal for single fiber FTTx applications. The 16-position blade yields 48,000 single-fiber cleaves before requiring replacement. The easy-to-use precision cleaver provides reliable, repeatable results and includes safety features to protect the operator and extend the life of the tool.

Features:

- Compact body and high precision design
- Applicable for single fiber
- For use on Singlemode and Multi-mode fiber
- 48,000 fiber cleaves life (1,000 cleaves x 3 heights x 16 positions)
- Includes carrying case, fiber guide, hex tool, and fiber refuse collection bin

NEW!



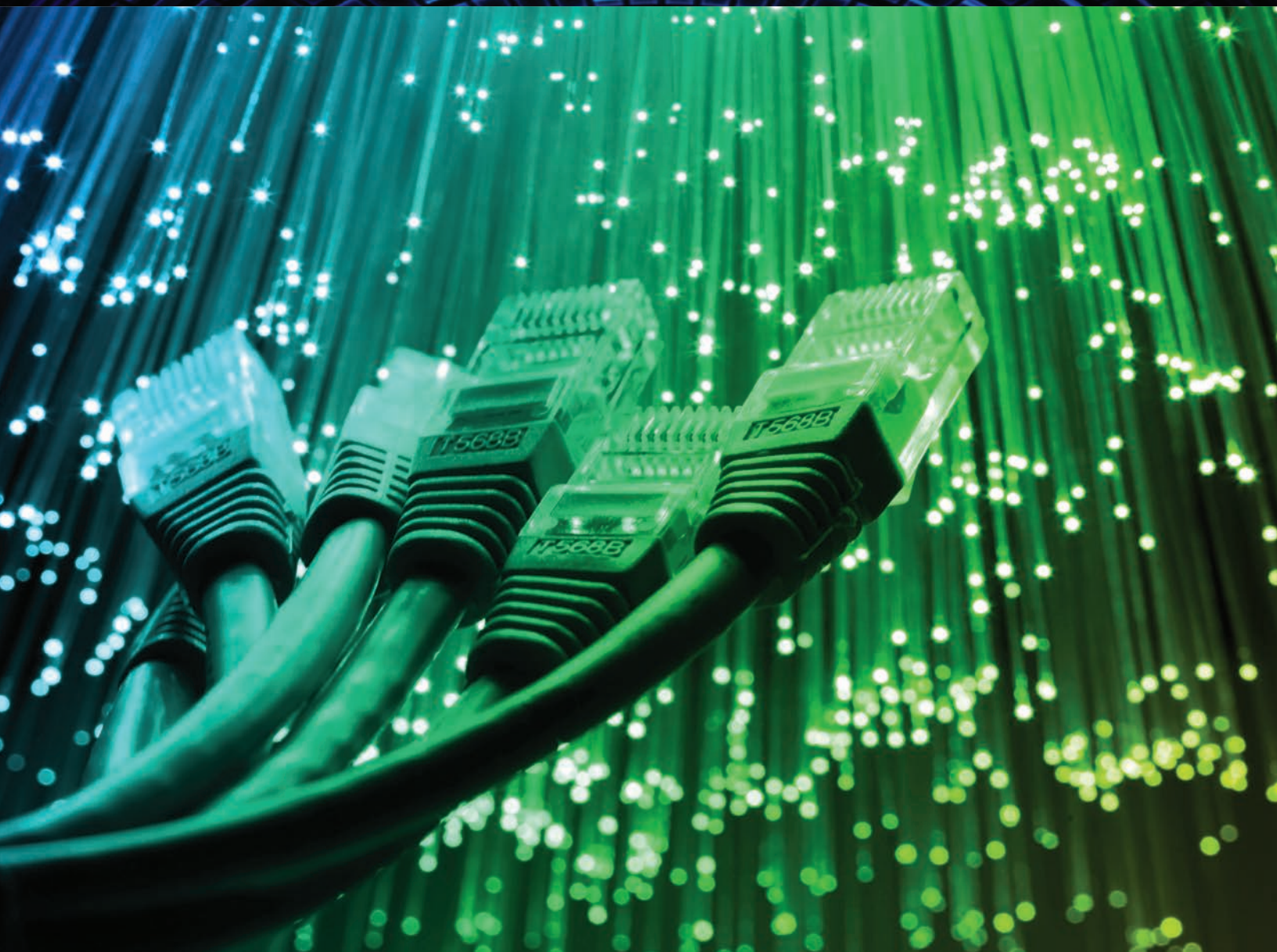
MUL-FO-CLEAV-100-S

The economical MUL-FO-CLEAV-100 is ideal for single fiber FTTx applications. The 12-position blade yields 36,000 single-fiber cleaves before requiring replacement. This easy-to-use precision cleaver provides reliable, repeatable results.

Features:

- **NOW FEATURING SUMITOMO™ BLADE FROM JAPAN**
- Compact body and high precision design
- Applicable for single fiber
- For use on Singlemode and Multi-mode fiber
- 36,000 fiber cleaves life (1,000 cleaves x 3 heights x 12 positions)
- Includes soft carrying case and fiber guide tool

Parameter	MUL-FO-CLEAV-200	MUL-FO-CLEAV-150	MUL-FO-CLEAV-100
	Specifications	Specifications	Specifications
Fiber count	Single fiber, up to 12 ribbon fiber	Single fiber	Single fiber
Cleaving length	10-16mm	10-16mm	10-16mm
Fiber holder	Universal, interchangeable	Universal, interchangeable	Universal, interchangeable
Application fibers	Singlemode, Multi-mode	Singlemode, Multi-mode	Singlemode, Multi-mode
Bare fiber diameter	125μ (250-900mm coating)	125μ (250-900mm coating)	125μ (250-900mm coating)
Cleaving angle	0.5° with single fiber	0.5° with single fiber	0.5° with single fiber
Blade life	48,000 fiber cleaves	48,000 fiber cleaves	36,000 fiber cleaves
Blade positions	3 heights, 16 rotating positions	3 heights, 16 rotating positions	3 heights, 16 rotating positions



IT / DATA PRODUCTS

Fiber carries critical traffic. As speeds and multiplexing increase, the value of the traffic on each fiber multiplies. The interruption of signal on just one fiber can cost a carrier's customer thousands of dollars, and can cost the carrier that customer.

Public networks for video, data and voice are using more and more optical fiber. Fiber-based communications networks have clear advantages over other media in cost, reliability, and capacity, spurring increased deployment on high-capacity networks. Whether you are working with long-haul trunking or local distribution networks, Multicom manufactures and stocks only the highest-quality and most cost-effective IT/Data products for every application.

NEW!

GIGABIT ETHERNET MEDIA CONVERTER - MANAGED



Features:

- Offers a cost-effective method for integrating fiber-optic cabling into a 10/100/1000 UTP environment
- Provides a smaller-sized space-saving alternative that allows enterprises to connect 1000Mbps copper networks to 1000Mbps fiber networks (Mini Converters)
- Auto-adaptation rate and full/half-duplex mode supported at twisted pair port
- Auto MDI /MDIX supported without need of cable selection
- Extends distance of up to 2km (6,600 feet) multimode fiber and 120km (393,701feet) long-haul single mode fiber
- Easy-to-view LED indicators provide status to monitor network activity easily
- Suitable as stand-alone or in 19" rackmount converter chassis
- Can be installed on a desktop: easy to install and does not require any software configuration, options are set using DIP switches

Multicom supplies Gigabit Managed and Unmanaged Media Converters. The MMC-SFP-10/100/1000-MINI-MG is a managed media converter that can be configured using the DIP Switch settings. Multicom also offers options in 1 SFP to 1 RJ45 port and 1 SFP to 2 RJ45 ports and in different sizes, meeting the various needs of extending the life of legacy wiring plants and equipment, connecting a variety of cabling types, or lengthening the distances of the connections in your network.

Parameter	Specification
Standard Protocol	IEEE802.3U IEEE802.3z 1000Base-Tx
Connector	1x RJ-45 connector, 1x SFP connectors
Operation Mode	Full duplex or half duplex mode
Power Supply	AC 100V-240V 50/60 Hz
Operating Temperature	0°C to 40°C
Storage Temperature	-20°C to +85°C
Humidity	90% max, non-condensing
Dimensions	60 x 90 x 20 mm

MMC-SFP-10/100/1000-MINI-MG

FIBER OPTIC MEDIA CONVERTER - UNMANAGED



Multicom supplies a wide range of 10/100/1000Base Ethernet Fiber Media Converters, 1000Base Gigabit Fiber Media Converters and SFP Fiber Media Converters. Options include singlemode dual fiber, multi-mode dual fiber and singlemode single fiber. Instead of costly, across-the-board upgrades, media converters can extend the productive life of the existing cabling as well as the active equipment.

Features:

- Extends traditional Ethernet networks over long distances via fiber optics
- 10/100/1000Mb Ethernet speeds
- LED status display
- Power supply included
- Dual and single fiber available
- Protocols: IEEE802.3, IEEE802.3u, IEEE802.3x

MMC-SFP-10/100/1000

SFP/SFP+/XFP OPTICAL TRANSCEIVER MODULES



Multicom SFP/SFP+/XFP Optical Transceiver Modules give you a wide variety of Ethernet connectivity options for data center, enterprise wiring closet, and service provider transport applications. Multicom stocks a diverse range of industry-compliant optical transceiver modules in the configuration you need for Ethernet deployments in any networking environment.

Features:

- Industry's smallest 10G form factor for greatest density per chassis
- Hot-swappable input/output device that plugs into an Ethernet SFP port of any compatible switch (no need to power down if installing or replacing)
- Digital optical monitoring capability for strong diagnostic capabilities
- Optical interoperability with 10GBASE XENPAK, 10GBASE X2, and 10GBASE XFP interfaces on the same link

M-SFP-S-SLC-15-20

Transmission Distance - 550M, 10KM, 20KM
Wavelength (nm) - 850, 1310, 1550
Connector Type - Single LC, Dual LC
Fiber Mode - SM=Single Mode, MM=Multimode
Transceiver Type - SFP, SFP+, XFP

The **Part#** represents the majority of SFP/SFP+/XFP configurations. However, additional variations are available including connector type, transmission distance and manufacturer-specific transceiver modules.

MEDIA CONVERTER CHASSIS



Multicom's dual-power redundant Media Converter Chassis is capable of housing up to 12 Media Converters. Each single media converter is hot-swappable and equipped with its own housing and AC power adapter. When requirements grow in size, additional Media Converters can be added to the chassis in your equipment rack. The housing of each media converter can be easily removed, and the media converter PC board can be slid into the chassis.

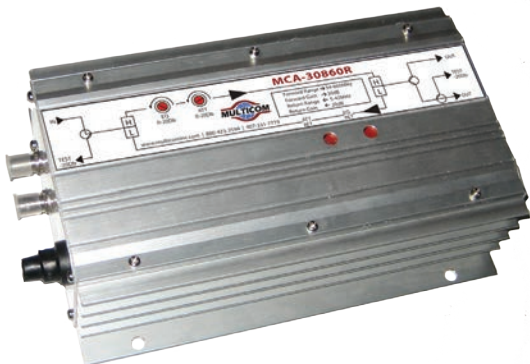
Parameter	Specification
Number of Slots	12
Input Voltage	AC 100V~240V / DC36V~72V
Output Voltage	DC +5V
Power output	36W Max
Case Material	Steel
Dimensions	485 (W) x 270 (D) x 44.5 (H)
Weight	3.2Kgs
Relative humidity	5%~95%
Operating temperature	0°C~+50°C

MUL-F-MC-12-CHASSIS

Bring more your network online quickly and efficiently with the highest-quality products backed by a company that prides itself on trusted relationships built over time

Our inside products portfolio combines the perfect marriage of quality products built in ISO 9001 approved facilities, and cost-effective prices - all backed by Multicom's exclusive customer service and over 35+ years of experience. Our products have not only exceeded industry standards for quality, but set industry standards for the best pricing. Multicom has an expansive indoor product portfolio that includes everything from amplifiers and adapters, to every imaginable communication cable — plus the networking expertise to help support all your indoor applications needs.

FORWARD & REVERSE DISTRIBUTION AMPLIFIER



Features:

- Extremely low distortion and harmonic content
- Suitable for HDTV, CATV, Off-air analog and digital RF distribution applications
- Continuously adjustable equalizer and gain control
- Dual output ports featuring both balanced and unbalanced capabilities (plug-in included)

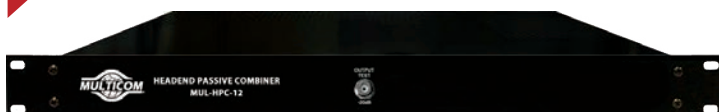
The MCA-30860R has been specifically designed for use in multi-dwelling environments such as hospitals, apartment complexes and hotels. This high-gain unit has a bandwidth of 860MHz, allowing effective transmission of large volumes of data within the CATV network. The built-in equalizer and attenuator allow for increased flexibility and easy adjustment of the signal output.

Parameter	Unit	Specification
Frequency - Forward	MHz	54-860
Frequency - Reverse	MHz	5 - 42
Gain - Forward	dB	30 \pm 1.5
Gain - Reverse	dB	20 \pm 1.5
Max. Output @135 Ch. Loading	dBmV	2 Outputs @50
Noise Figure - Forward	dB	<6
Noise Figure - Reverse	dB	<8

MCA-30860R

NEW!

HEADEND PASSIVE COMBINER



Multicom's rack-mountable RF Passive Headend Passive Combine is designed for use in a headend to combine the output of up to 24 single-channel devices such as modulators and processors. HPC's are available in 8, 12 and 24 port models.

Performance	Frequency (Mhz)	MUL-HPC-8	MUL-HPC-12	MUL-HPC-24
Insertion IN - OUT	54-540	11.5 dB	14.5 dB	18.0 dB
	540-1000	12.0 dB	15.0 dB	18.5 dB
Isolation OUT - OUT	54-540	30.0 dB	30.0 dB	30.0 dB
	540-1000	28.0 dB	28.0 dB	28.0 dB
Return Loss IN/OUT	54-1000	17.0 dB	17.0 dB	17.0 dB
Test Port	54-540	20 \pm 1.0 dB	20 \pm 1.0 dB	20 \pm 1.0 dB
	540-1000	20 \pm 1.5 dB	20 \pm 1.5 dB	20 \pm 1.5 dB

All HPC models feature a compact design, high isolation between ports, low net combining loss, and RFI shielding for minimized egress/ingress interference. A front-panel -20 dB test port (75-ohm "F" connector) allows testing of the combiner's output without service interruption.

Features:

- Superior Isolation & Input/Output Return loss performance
- Suitable for digital applications in the 5-1000 MHz range

MUL-HPC-8

└ Ports - 8, 12, 24

NEW!

MS SERIES 1GHZ PREMIUM DIGITAL CATV SPLITTERS



2-Way



3-Way



4-Way

The Multicom MSxG Series 1 GHz Premium Digital CATV Splitters are the perfect 2, 3 and 4-port splitters for CATV installations. For improved reliability and connectivity, these high-performance splitters also feature high retention 360° round seizing pins, and capacitor coupling circuitry at all ports for effective DC voltage blocking.

Features:

- Digital-ready broadband 5 MHz to 1000 MHz frequency range
- High retention, 360° round seizing pins for high reliability, performance and connectivity
- Solder-back cover-plate provides maximum EMI-RFI shielding > 120dB, eliminating signal ingress to guarantee distortion-free pictures
- High-performance printed board circuitry provides low intermodulation distortion > -100dB to ensure excellent digital performance
- High isolation > 30dB at 5 MHz to 45 MHz sub-bands provides for high level upstream signals
- MSxG series features capacitor coupling circuitry at all ports for effective DC voltage blocking
- 1/2" long precision machined F-connector threads ensure improved port-to-connector interface and accommodate external security devices

Parameter	Frequency	2-Way	3-Way	4-Way
Insertion Loss	5-14 MHz	3.5	3.7/6.9	7.0
	14-40 MHz	3.5	3.7/6.9	7.0
	41-200 MHz	3.7	3.7/7.0	7.0
	200-550 MHz	3.7	3.8/7.5	7.5
	550-750 MHz	3.8	3.9/7.0	7.6
	750-1000 MHz	3.9	4.0/8.0	8.0
Isolation	5-14 MHz	35	30	30
	14-40 MHz	35	36	38
	41-200 MHz	33	30	30
	200-550 MHz	33	28	28
	550-750 MHz	31	28	28
	750-1000 MHz	30	25	25
Input Return Loss	5-14 MHz	25	23	25
	14-40 MHz	26	24	26
	41-200 MHz	26	25	26
	200-550 MHz	26	25	25
	550-750 MHz	24	24	24
	750-1000 MHz	21	21	22
Output Return Loss	5-14 MHz	26	23	22
	14-40 MHz	28	26	26
	41-200 MHz	28	26	28
	200-550 MHz	24	25	25
	550-750 MHz	24	24	24
	750-1000 MHz	22	22	21

MSxG

Ports (2, 3, 4)

NEW!

DIGITAL 1-PORT TAP

Multicom's Digital 1-Port Tap is typically used in schools, business, and anywhere else where multiple receivers are fed from the same signal source. Multicom offers indoor and outdoor taps/directional couplers in a range of tap values.

Features:

- Digital-Ready Broadband 5~1000 MHz frequency range
- Solder-sealed back cover-plate to provide maximum EMI-RFI shielding >-120dB, eliminating signal ingress and guarantee distortion free pictures
- High tap-to-output isolation provides spurious carrier protection and minimizes undesired channel interaction, reducing picture distortion
- High-performance printed board circuitry provides low intermodulation distortion to ensure excellent digital performance
- Capacitor coupling circuitry at all ports provide effective DC voltage blocking for improved hum modulation and intermodulation
- 1/2" long precision machined F-connector threads ensure improved port-to-connector interface and accommodate external security devices
- **Available in tap values of 6, 9, 12, 16, 20, 24, 27 & 30**

MT1G-x

└ Tap Value: 6, 9, 12, 16, 20, 24, 27, 30



TAP VALUE	6	9	12	16	20	24	27	30
Insertion Loss (In-Out) Max. dB								
5 MHz	2.4	1.2	1.2	1.0	1.0	1.0	0.8	0.8
54 MHz	2.2	1.2	1.2	1.0	1.0	1.0	0.8	0.8
216 MHz	2.2	1.2	1.2	1.0	1.0	1.0	0.8	0.8
470 MHz	2.4	1.2	1.2	1.0	1.0	1.0	0.8	0.8
860 MHz	2.4	2.0	1.2	1.0	1.0	1.0	0.8	1.0
1 GHz	2.6	2.2	1.4	1.2	1.2	1.2	1.0	1.2
Tap Loss (In-Out) Nominal								
5 MHz	6.4	8.8	12.6	16.2	19.6	24.3	27.8	30.1
54 MHz	6.4	8.8	12.5	16.2	19.8	24.3	27.5	30.0
216 MHz	6.4	8.6	12.4	16.2	19.7	24.1	27.6	29.6
470 MHz	6.4	8.6	12.0	15.8	18.7	23.5	27.9	28.8
860 MHz	6.4	8.8	11.4	15.8	19.8	23.2	27.8	28.4
1 GHz	6.6	9.4	12.6	16.0	20.4	23.3	27.6	29.0
Isolation (Tap-Out) Min. dB								
5 MHz	24	28	28	36	36	40	40	45
54 MHz	30	28	28	38	38	40	45	45
216 MHz	30	30	30	38	38	38	40	40
470 MHz	24	28	28	32	32	34	36	42
860 MHz	20	21	21	30	24	32	34	35
1 GHz	20	20	20	28	24	32	34	35
Input Return Loss Min. dB								
5 MHz	14	18	18	18	18	20	20	20
54 MHz	15	18	20	20	22	24	24	24
216 MHz	18	20	20	22	22	24	26	26
470 MHz	22	26	20	22	18	22	24	24
860 MHz	16	18	22	22	18	21	24	24
1 GHz	16	16	18	18	18	21	22	22
Tap Return Loss Min. dB								
5 MHz	16	18	18	18	18	18	20	20
54 MHz	20	26	24	21	26	18	24	24
216 MHz	24	26	24	22	26	18	26	26
470 MHz	28	30	20	22	25	19	22	22
860 MHz	18	18	18	18	22	21	20	20
1 GHz	18	16	18	18	18	18	18	18
Output Ret. Loss Min. dB								
5 MHz	18	18	18	18	18	18	18	18
54 MHz	26	24	24	24	24	24	24	24
216 MHz	22	24	22	24	22	24	26	26
470 MHz	22	22	19	20	20	20	26	26
860 MHz	24	24	18	22	18	18	20	24
1 GHz	18	18	18	18	18	18	18	18

AC POWER ADAPTERS



Typical Desktop



Typical Wall Mount

Multicom's AC Power Adapters are reliable, compact, and efficient. These regulated 5, 12 and 15 volt DC power supplies provide ample current to run many popular devices. Use them to replace a lost or damaged power supply for cable modems, AV equipment, office devices, battery chargers, and other electronic components. UL listed and FCC approved.

Features:

- UL Listed
- Universal Input: 100-240VAC 50/60Hz
- Highly efficient with low power consumption
- Short-circuit protection
- Over-current protection
- Over-voltage protection
- Lightweight and compact
- Available with various DC connectors, AC plug configurations, and power cord lengths
- Center positive

Customization:

The AC Power Adapters listed have a variety of Output Power Connectors (A-Z). Connectors and power cord length, as well as other characteristics of these adapters can be customized to your needs.

Part Number	Input (Amp)	Output			Location	DC Connector (mm)		
		VDC	Rated Load	Power (W)		OD	ID	Barrel Length
M-CPE-5-150-A-W-US	0.3	5	1.5	7.5	Wall Mount	4	1.7	9.5
M-CPE-5-250-C-W-US	0.4	5	2.5	12.5	Wall Mount	5	2.1	9.5
M-CPE-12-100-B-W-US	0.4	12	1.0	12	Wall Mount	5	2.1	10
M-CPE-12-150-B-W-US	0.5	12	1.5	18	Wall Mount	5	2.1	10
M-CPE-12-150-C-W-US	0.5	12	1.5	18	Wall Mount	5	2.1	9.5
M-CPE-12-200-C-W-US	0.6	12	2.0	24	Wall Mount	5	2.1	9.5
M-CPE-12-200-F-W-US	0.6	12	2.0	24	Wall Mount	5.5	2.5	11
M-CPE-12-200-G-W-US	0.6	12	2.0	24	Wall Mount	5.5	2.1	11
M-CPE-12-050-D-W-US	0.2	12	0.5	6	Wall Mount	5.5	2	9.5
M-CPE-12-100-E-W-US	0.3	12	1.0	12	Wall Mount	5.5	2.1	9.5
M-CPE-12-150-E-W-US	0.5	12	1.5	18	Wall Mount	5.5	2.1	9.5
M-CPE-12-150-D-W-US	0.5	12	1.5	18	Wall Mount	5.5	2	9.5
M-CPE-12-200-E-W-US	0.6	12	2.0	24	Wall Mount	5.5	2.1	9.5
M-CPE-15-150-H-W-US	0.5	15	1.5	22.5	Wall Mount	4.8	1.7	9.5
M-CPE-12-270-E-D-US	0.85	12	2.7	32.4	Desktop	5.5	2.1	9.5
M-CPE-12-300-E-D-US	0.9	12	3.0	36	Desktop	5.5	2.1	9.5
M-CPE-15-130-D-D-US	0.5	15	1.3	19.5	Desktop	5.5	2	8.5
M-CPE-15-150-A-D-US	0.65	15	1.5	22	Desktop	4	1.7	10



M-CPE-12-100-B-W-US-18

- Power Cord Length - 1=1M, 12=1.2M, 15=1.5M, 18=1.8M
- Plug Type - US=US Configuration
- Model Type - D=Desktop, W=Wall
- Output Power Connector - A-Z (Various)
- Milliamps Out - 250=2.5A, 200=2.0A, 150=1.5A, 100=1.0A, 08=0.8A
- Volts DC - 5, 12, 15

HIGH SPEED HDMI CABLES V1.3 & 1.4



Multicom's High Speed HDMI cable provides a reliable, high quality connection between audio and video components. Featuring a durable molded PVC housing, gold plated contacts and corrosion resistant connectors with V3 shielding, this HDMI cable consistently delivers excellent picture and sound quality for today's discriminating A/V enthusiasts.

Features:

- Supports high definition 1080p, Adobe RGB Color, Deep Color, 3D, sYCC601 Color, and Adobe YCC601 to accurately display natural, vivid colors
- Supports Dolby Digital, DTS, Dolby True HD, DTS-HD MasterAudio, Audio Return Channel and Lip Sync to deliver the highest quality and duplication of sound
- Compatible with the lossless compressed digital audio formats
- Available in a variety of configurations, see Part# Matrix



Parameter	Specification
Standard Reference	1.3 & 1.4/High Speed HDMI, with 100Mbps Ethernet
Video Resolution	(4K x 2K Pixels) Full 1080p, 1440p, 1600p, 2160p
Compatibility	3D, 4Kx2K, ARC return audio channel
Audio Format	Sound Environment 7.1 and lossless audio formats (DTS-HD & Dolby Digital TrueHD)
Bandwidth	10.2, 13.8 Gbps (Data transfer)
Ethernet Channel	Yes
Conductors	HQ 99.99% Oxygen Free, Solid Copper
Connector Type	HMDI Male A to HDMI Male A
Wire Guage	30 AWG
Connector Contacts Finish	Gold Plated
Compliance	RoHS, UL Listed, FCC, ISO9001:2008, ISO14001:2004, Simplay 2.0, ATC:1.4

MUL-HDMI 1.4-1.5M-MA-MA-HS-30SC-A

- Version: With Ethernet Channel
- Wire Type: SC=Solid Copper, CC=Copper Clad Steel
- Wire Gauge: AWG
- Speed: STD=Standard, HS=High Speed
- Conn #2: M=Male, F=Female; Type: A,B,C...
- Conn #1: M=Male, F=Female; Type: A,B,C...
- Cable Length: M=Meters, FT=Feet
- Cable Type: HDMI 1.3, 1.4, 2.0

HIGH SPEED HDMI CABLE V2.0



Multicom's v2.0 High Speed HDMI cable with Ethernet provides a reliable, high quality connection between audio and video components. This HDMI cable with Ethernet consistently delivers excellent picture and sound quality for today's discriminating A/V enthusiasts.

Features:

- Supports full-resolution 4K, Adobe RGB Color, Deep Color, 3D, sYCC601 Color, and Adobe YCC601 to accurately display natural, vivid colors
- Supports Dolby Digital, DTS, Dolby True HD, DTS-HD MasterAudio, Audio Return Channel and Lip Sync to deliver the highest quality and duplication of sound
- Compatible with the lossless compressed digital audio formats



Parameter	Specification
Standard Reference	v2.0 High Speed HDMI with 100Mbps Ethernet Channel
Video Resolution	(4K x 2K Pixels) Full 1080p, 1440p, 1600p, 2160p
Compatibility	3D, 4Kx2K, ARC return audio channel
Audio Format	Sound Environment 7.1 and lossless audio formats (DTS-HD & Dolby Digital TrueHD)
Bandwidth	13.8 Gbps (Data transfer)
Ethernet Channel	Yes
Conductors	High Quality 99.99% Oxygen Free
Conductor Resistance	5 Ohm Max.
Contact Resistance	2 Ohm Max.
Connector	19-Pin HMDI Male A to HDMI Male A Black PVC Outer Shell with metal exterior and zinc alloy interior, gold plated
Insulation Resistance	10M Ohm Min.
Wire Guage	30 AWG
Table Speed	120Hz
Depth of Color	12 Bit
Impedence	100 Ohm ±10
Rated Voltage	30V
Hi-Pot	DC 300V 0.01 Sec.
Cable Wrapping	Outer shell: 45P 6mm Black PVC Inner shell: Aluminum for protection against External Electrical Interference (EMI) & Radio Frequency Interference (RFI) Ferrite Filter ends for triple density protection against interference
Cable Length	1.5M (4.92 Feet) ±40mm, Available in custom lengths
Operating Temperature	-25 to 80°C (-13 to 176°F)
Compliance	RoHS, UL Listed, FCC, ISO9001:2008, ISO14001:2004, Simplay 2.0, ATC:1.4

MUL-HDMI 2.0-1.5M-MA-MA-HS-30SC-A

- Version: With Ethernet Channel
- Wire Type: SC=Solid Copper, CC=Copper Clad Steel
- Wire Gauge: AWG
- Speed: STD=Standard, HS=High Speed
- Conn #2: M=Male, F=Female; Type: A,B,C...
- Conn #1: M=Male, F=Female; Type: A,B,C...
- Cable Length: M=Meters, FT=Feet
- Cable Type: HDMI 1.3, 1.4, 2.0

HDMI is a trademark of HDMI Licensing LLC. in the U.S. and other countries

CAT5E PATCH CABLE



Multicom's superior quality CAT5E boot, snagless Unshielded Twisted Pair (UTP) Network Patch Cable is designed for network adapters, hubs, switches, routers, DSL/cable modems, patch panels and other high performance networking applications.

Parameter	Specification
Cable	24 AWG, 4 Pair, PVC Jacket
Connector	RJ45 (8P8C) Male CAT5E Type
Conductor	Stranded Copper
Contacts	Brass, Gold Plated
Certifications	ISO/IEC 11801, EN 50288, TIA/EIA 568B.2
Compliance	RoHS

MUL-CAT5E-1.5M-W-24-STR-UTP

Twisted Pair Shielding - UTP=Unshielded, STP=Shielded
 Conductor - STR=Stranded, SOL=Solid
 Wire Gauge - AWG
 Color - W=White, B=Black, BL=Blue, BR=Brown...
 Length - Meter (M), or Feet (FT)

RCA AUDIO/VIDEO PATCHCORDS



Multicom's high quality RCA Audio/Video Patchcords provide a reliable, high quality connection between audio and video components such as cable and satellite set-top boxes, DVD players, A/V receivers, gaming consoles, and much more.

Featuring a durable molded PVC housing and nickel-plated copper corrosion resistant connectors, this RCA patchcord consistently delivers excellent picture and sound quality for today's discriminating A/V enthusiasts.

Parameter	Specification
Connector Type	RCA Male, side A and side B
Connector Finish	Nickel Plated Copper
Conductors	Stranded, 10 x .10mm CCS
Shielding	28 x .10mm CCS
Connector Housing Material	Molded PVC, Red, White, Yellow
Number of Conductors	2, 3, 4, 5, 6
Length	1.5 Meters (5 Feet)
Cable Jacket	PVC, Black
Connector Finish	Nickel Plated Copper
Attenuation (at 10MHz)	0.047 dB/m (max)
Compliance	RoHS, ISO 9001, UL Listed

MUL-RCA-3-1.5M-M-M-2.7-NI

Conductor Plating NI=Nickel, GD=Gold
 Conductor Dia (mm) - 2.7 or 5.0
 End #2 - M or F
 End #1 - M or F
 Length - Meter (M), or Feet (FT)
 # of Conductors - 2, 3, 4, 5, 6



RJ-11 MODULAR FLAT TELEPHONE CABLE



Multicom's superior quality RJ-11 Unshielded Twisted Pair (UTP) Modular Telephone Patch Cable is constructed from heavy duty 26 AWG wire with a silver satin PVC jacket. This cable has gold-plated connectors for clearer communication. Its 4-wire construction handles dual phone lines while the heavy duty PVC jacket protects the cable's integrity.

This telephone cable is designed for all telephone communications, VoIP applications, modems, and other high performance telephony applications.



MUL-RJ11-1.5M-26

Wire Gauge: AWG
Cable Length: M=Meters, FT=Feet

Parameter	Specification
Conductors	4 (2 pair), 26 AWG, Solid Copper, 0.51 mm
Connectors	RJ-11 Male, both ends
Outer Diameter, Jacket	5mm, Polyvinyl Chloride (PVC)
Contacts	Brass, Gold Plated
Terminal Resistance	20 Ohm maximum
Insulation Resistance	>1G Ohm

REFURBISHED CABLE MODEMS

Multicom stocks these premium manufacturers, and many more:



Multicom markets a wide variety of refurbished Cable Modems with an enhanced quality selection to meet your needs:

• FIELD PULLED

Sold 'as is' for the best price, and shipped in bulk

• REFURBISHED & TESTED

Tested and certified by Multicom technicians to be in perfect working order, and shipped in bulk

• REFURBISHED, TESTED & BOXED

Tested and certified by Multicom technicians to be in perfect working order, and individually boxed

Features:

- DOCSIS 2.0
- DOCSIS 3.0
- WiFi
- Gateways



SATELLITE & RECEPTION

Television has been called the most important means of distributing information on a global basis.

Over one billion homes on our planet have television and these homes collectively receive over 25,000 TV channels by satellite. Today's high powered satellites have inherent operational and cost advantages that make them superior to other technologies when it comes to video distribution.

Multicom manufactures and stocks all of the products needed for the reception and distribution of satellite audio and video signals for private use or retransmission.

DTH SATELLITE DISHES



MUL-60CM-KU



MUL-75CM-KU



MUL-90CM-KU



MUL-1M-KU



MUL-1.2M-KU

The Direct to Home (DTH) KU band satellite dish provides strong, clear reception. These high quality dishes are designed to withstand high winds, minimize rain fade and improve signal strength. Made with low-weight, high-strength, powder coated galvanized steel, they are simple to assemble and install, making it a excellent choice for cost effective installations.

Parameter	MUL-60CM-KU	MUL-75CM-KU	MUL-90CM-KU	MUL-1M-KU	MUL-1.2CM-KU
Dish Type	Offset-fed, Elliptical	Offset-fed, Elliptical	Offset-fed, Elliptical	Offset-fed, Elliptical	Offset-fed, Elliptical
KU Band Gain (dB)	36.67 @12.5GHz	38.52 @12.5GHz	40.32 @12.5GHz	38.52 @12.5GHz	43 @12.5GHz
Frequency Range (GHz)	10.7 - 12.75	10.7 - 12.75	10.7 - 12.75	10.7 - 12.75	10.7 - 12.75
Mount	Universal	Universal	Universal	Universal	Universal

PRIME FOCUS SATELLITE DISHES



MUL-1.8M-C



MUL-2.4M-C

The Multicom Prime Focus Satellite Dishes are powder coated, rugged, reliable antenna systems that will operate at C-band frequencies with high efficiency and at the same time successfully withstand the effects of the environment. They can be installed on the ground or rooftop.

Parameter	Specification
Dish Type	Prime Focus, Center-fed
C Band Gain (dB)	35.89 @4GHz
Frequency Range (GHz)	3.7 - 4.2
Mount	Ground, Non-Penetrating Roof

LNBFs



MUL-SINGLE-LNBF

Specifically designed for the KU Band DTH markets, Multicom LNBFs provide optimized reception capabilities. The 1, 2, 4 and 8-Port LNBFs enable the reception of a signal from the satellite and its distribution to one or more set-top boxes. They are ready for HD transmission and provide excellent noise figure performance. These LNBFs are an ideal solution for satellite broadcast reception across Europe and South America.

Parameter	Specification
Ports	1
Noise Figure	0.5dB typical
Conversion Gain	60dB min.



MUL-TWIN-LNBF

Parameter	Specification
Ports	2
Noise Figure	0.5dB typical
Conversion Gain	60dB min.



MUL-QUAD-LNBF

Parameter	Specification
Ports	4
Noise Figure	0.5dB typical
Conversion Gain	60dB min.



MUL-OCTO-LNBF

Parameter	Specification
Ports	8
Noise Figure	0.5dB typical
Conversion Gain	60dB min.

NEW!

3X4 SATELLITE IF MULTISWITCH



Features:

- Compatible with Direct to Home satellite
- Interface design allows satellite and antenna signals to be combined and routed to 4 outputs
- Wideband input from 40 up to 2150 MHz
- High Performance, surface mount printed-circuit board design ensures high port-to-port isolation for spurious protection to minimize channel interaction and reduce picture distortion
- High output low return loss ports specifically designed to reduce micro-reflections and lower harmonic distortions
- High-performance PIN diode matrix reduces polarity transfer time and digital artifacts providing high quality video output

MUL-MS-3/4-X

└ E-Epoxy Back
S-Solder Back

Parameter	Specification		
Frequency Range	40-1250 MHz		UHF/VHF In
	950-1250 MHz		Satellite In
	40-1250 MHz		Receivers 1 - 4
Insertion Loss	UHF/VHF Antenna Port	-10dB	40 ~ 806 MHz
		-13dB	807 ~ 860 MHz
	Satellite Ports	2dB	980 ~ 1450 MHz
		3dB	1451 ~ 1750 MHz
		0dB	1751 ~ 2150 MHz
Flatness for all Ports	±1.0dB		40 ~ 806 MHz
	±0.5dB		807 ~ 860 MHz
	±2.0dB		980 ~ 1750 MHz
	±2.5dB		1751 ~ 2150 MHz
Stop Band Attenuation	18dB		Antenna Port @ 950 MHz
	18dB		Satellite Port @ 860 MHz
Isolation	LNB 13/14 to LNB 17/18V	-35dB	950 ~ 2150 MHz
	Out-Out	-18dB	40 ~ 860 MHz
		-35dB	950 ~ 1750 MHz
		-30dB	1751 ~ 2150 MHz
Cross Polarization	-26dB		950 ~ 2150 MHz
Return Loss	UHF/VHF Antenna In	-8dB	40 ~ 860 MHz
	Satellite In	-12dB	980 ~ 1450 MHz
		-10dB	1451 ~ 2150 MHz
	Output	-8dB	40 ~ 860 MHz
		-10dB	980 ~ 1450 MHz
		-8dB	1451 ~ 2150 MHz
Max Current	350mA		LNB
Connector Type	'F' Type Female		All Ports
Impedance	75 OHM		All Ports
LHCP/RHCP Switching Port	14.0 ~ 14.7 VDC		
Voltage/Current Bias Fixed LNB Bias Voltage Required	RHCP 13/14V		11.8 ~ 13.8 VDC
	LHCP 17/18V Port DC Drop		0.3 ~ 0.5 VDC
	Low Voltage Operation 13/14V Port		10 VDC Min

NON-PENETRATING ROOF MOUNT



MUL-NPRM

The MUL-NPRM is a Non-penetrating Roof Mount for DBS, off air antenna satellite systems. Using standard cinderblocks or sandbags as ballast, this Non-penetrating Roof Mount provides a durable and reliable platform to mount a satellite dish without damaging the roofing surface.

Features:

- Extra-large base
- Angle iron frame
- Powder coated
- Double-strut support
- Uses standard blocks or sandbags as ballast
- Attachment bolts

ANALOG SATELLITE FINDER



MUL-ASF-100

The Multicom MUL-ASF-100 Analog Satellite Finder is used to adjust satellite dish position, feedhorn position and polarization to find the strongest satellite strength to your receiver. Handy and reliable, this Signal Finder has a high sensitivity to signal reception and works with most satellite bands.

Features:

- No batteries required. By attaching receiver, power is provided for:
 - Easy to read backlit display - day and night use
 - Audible tone - assists in precise adjustments
- Pocket size and lightweight
- High sensitivity

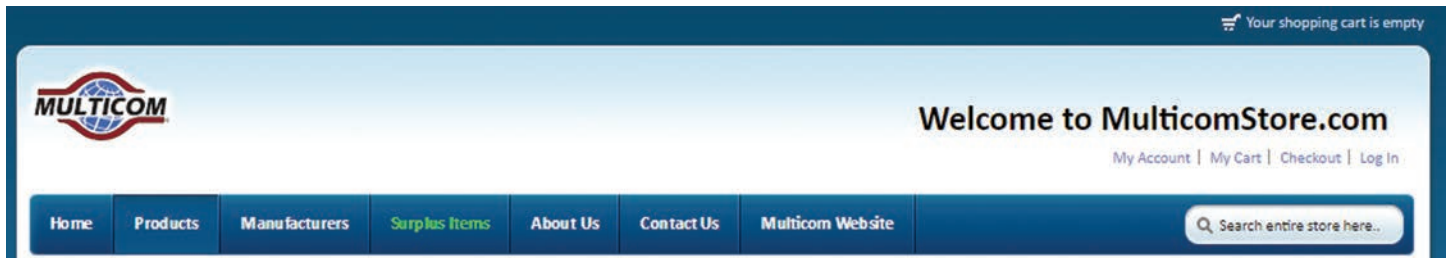
Specifications:

- Frequency Range: 950-2300MHz
- Power Input: 13-18VDC
- Input max: -10dBm
- Input level min: -40dBm
- LNB Gain: 52~60dB

Compatible with:

- DirecTV • Dish Network
- Sky • Free to Air
- Bell Expressvu • and more...

MULTICOM'S ONLINE STORE - MULTICOMSTORE.COM



Purchase High Quality Name Brand Products 24/7 from our Online Store

As an accompaniment to www.multicominc.com, our industry leading website with thousands of products and resources for the CATV, Traffic and International markets, we have introduced **www.multicomstore.com**.



New Monthly Specials - Every Month

Every month we add new products to the **Surplus Products** pages with special discounts that usually include Free Shipping.

These products are at or below cost and are featured on the homepage of the website. Looking for great deals? Or an obscure or discontinued product from a major manufacturer? **Check MulticomStore.com first.**

MulticomStore allows you to purchase thousands of products online 24/7, as well as browsing through the hundreds of products listed in the Surplus Products pages which lists both deeply-discounted products as well as high-value discontinued products.



Multicom is a manufacturer and stocking distributor of over 19,000 products from more than 380 manufacturers. We strive to not only develop and deliver the latest technology, but our products are designed to accommodate the constant evolution of new technology - and you will find the latest in cutting-edge technology on MulticomStore.com. However, when this evolution renders products expendable, obsolete or discontinued - MulticomStore.com is your go-to resource.

For more information about premium cutting-edge technologies as well as Monthly Specials, Surplus and Discontinued Products, see the MulticomStore website:

www.multicomstore.com

MCONNECT VOIP SERVICES - MCONNECTINC.COM

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Customer Login



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Multicom launched its sister company Mconnect VoIP phone service in 2008, to satisfy the needs of cable operators and providers who were looking for a way to add voice services to their growing video and data networks, as well as providing an additional revenue stream for their business. Mconnect VoIP offers full feature packages for small office/home office (SOHO), small business, and enterprise customers. Mconnect is also offering a unique opportunity for select resellers to participate in the growing VoIP industry with flexible options that include private label branding or reselling the Mconnect service direct.

Reseller Program

Mconnect was established to meet the needs of resellers enabling them to quickly capitalize on the booming digital phone revolution while adding a new revenue stream to their business.



- **No Investment**
- **No Start Up Costs**
- **No Contracts**
- No technical, logistical or regulatory headaches associated with providing VoIP service on your own
- Monthly residual income per line

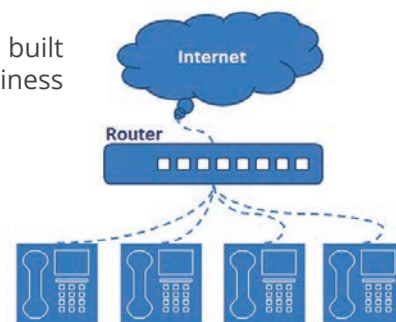
Mconnect makes it simple for you to start making money by implementing a new cutting-edge and fast growing service to your line-up almost immediately.

Business Phone Service

Sound like a Big Business at a Small Business Price

Mconnect is an 'expand with your needs', enterprise-grade phone service built for small businesses with absolutely everything you'd ever need in a business phone system:

- Virtual receptionist - Auto attendant
- Extension dialing
- Conferencing
- Music-on-hold
- Voicemail
- On-line portal
- Call forward
- Call hold
- Call park
- Call transfer
- Hunt group
- and many more



The beauty is in the simplicity

Residential Phone Service

Mconnect Residential Service allows you to replace your landline and use regular phones to make and receive virtually unlimited crystal-clear calls for one low price. You can get a new number or transfer your existing number and it works with the phones you have now - no computer required.

For more information on the Mconnect Reseller Program, or Business and Residential Services, contact Mconnect at:

www.mconnectinc.com / 877-744-VOIP (8647)

Multicom stocks over 19,000 products from more than 380 of the world's leading manufacturers, including these and more:



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J.83B - FREQUENCY ALLOCATION CHART - USA

Lowband	
CH.	Freq.
2	57.0000
3	63.0000
4	69.0000
5	79.0000
6	85.0000

Highband	
CH.	Freq.
7	177.0000
8	183.0000
9	189.0000
10	195.0000
11	201.0000
12	207.0000
13	213.0000

Midband	
CH.	Freq.
14	123.0125
15	129.0125
16	135.0125
17	141.0000
18	147.0000
19	153.0000
20	159.0000
21	165.0000
22	171.0000

Superband	
CH.	Freq.
23	219.0000
24	225.0000
25	231.0125
26	237.0125

Superband	
CH	Freq.
27	243.0125
28	249.0125
29	255.0125
30	261.0125
31	267.0125
32	273.0125
33	279.0125
34	285.0125
35	291.0125
36	297.0125

Hyperband	
CH	Freq.
37	303.0125
38	309.0125
39	315.0125
40	321.0125
41	327.0125
42	333.0250
43	339.0125
44	345.0125
45	351.0125
46	357.0125
47	363.0125
48	369.0125
49	375.0125
50	381.0125
51	387.0125
52	393.0125
53	399.0125
54	405.0000
55	411.0000

Hyperband	
CH.	Freq.
56	417.0000
57	423.0000
58	429.0000
59	435.0000
60	441.0000
61	447.0000
62	453.0000
63	459.0000
64	465.0000

Ultraband	
CH.	Freq.
65	471.0000
66	477.0000
67	483.0000
68	489.0000
69	495.0000
70	501.0000
71	507.0000
72	513.0000
73	519.0000
74	525.0000
75	531.0000
76	537.0000
77	543.0000
78	549.0000
79	555.0000
80	561.0000
81	567.0000
82	573.0000
83	579.0000
84	585.0000
85	591.0000

Ultraband	
CH.	Freq.
86	597.0000
87	603.0000
88	609.0000
89	615.0000
90	621.0000
91	627.0000
92	633.0000
93	639.0000
94	645.0000

Midband	
CH.	Freq.
95	93.0000
96	99.0000
97	105.0000
98	111.0250
99	117.0250

Jumboband	
CH.	Freq.
100	651.0000
101	657.0000
102	663.0000
103	669.0000
104	675.0000
105	681.0000
106	687.0000
107	693.0000
108	699.0000
109	705.0000
110	711.0000
111	717.0000
112	723.0000
113	729.0000

Jumboband	
CH.	Freq.
114	735.0000
115	741.0000
116	747.0000
117	753.0000
118	759.0000
119	765.0000
120	771.0000
121	777.0000
122	783.0000
123	789.0000
124	795.0000
125	801.0000
126	807.0000
127	813.0000
128	819.0000
129	825.0000
130	831.0000
131	837.0000
132	843.0000
133	849.0000
134	855.0000
135	861.0000

ATSC - FREQUENCY ALLOCATION CHART - MEXICO

Channel	Frequency
2	57.0000
3	63.0000
4	69.0000
5	79.0000
6	85.0000
7	177.0000
8	183.0000
9	189.0000
10	195.0000
11	201.0000
12	207.0000
13	213.0000
14	473.0000
15	479.0000
16	485.0000
17	491.0000
18	497.0000
19	503.0000
20	509.0000
21	515.0000
22	521.0000
23	527.0000
24	533.0000
25	539.0000
26	545.0000
27	551.0000
28	557.0000
29	563.0000
30	569.0000
31	575.0000
32	581.0000
33	587.0000
34	593.0000
35	599.0000

Channel	Frequency
36	605.0000
37	611.0000
38	617.0000
39	623.0000
40	629.0000
41	635.0000
42	641.0000
43	647.0000
44	653.0000
45	659.0000
46	665.0000
47	671.0000
48	677.0000
49	683.0000
50	689.0000
51	695.0000
52	701.0000
53	707.0000
54	713.0000
55	719.0000
56	725.0000
57	731.0000
58	737.0000
59	743.0000
60	749.0000
61	755.0000
62	761.0000
63	767.0000
64	773.0000
65	779.0000
66	785.0000
67	791.0000
68	797.0000
69	803.0000

DVB-T (6 MHZ) - FREQUENCY ALLOCATION CHART - COLUMBIA

Channel	Frequency
2	57.0000
3	63.0000
4	69.0000
5	79.0000
6	85.0000
7	177.0000
8	183.0000
9	189.0000
10	195.0000
11	201.0000
12	207.0000
13	213.0000
14	473.0000
15	479.0000
16	485.0000
17	491.0000
18	497.0000
19	503.0000
20	509.0000
21	515.0000
22	521.0000
23	527.0000
24	533.0000
25	539.0000
26	545.0000
27	551.0000
28	557.0000
29	563.0000
30	569.0000
31	575.0000
32	581.0000
33	587.0000
34	593.0000
35	599.0000

Channel	Frequency
36	605.0000
37	611.0000
38	617.0000
39	623.0000
40	629.0000
41	635.0000
42	641.0000
43	647.0000
44	653.0000
45	659.0000
46	665.0000
47	671.0000
48	677.0000
49	683.0000
50	689.0000
51	695.0000
52	701.0000
53	707.0000
54	713.0000
55	719.0000
56	725.0000
57	731.0000
58	737.0000
59	743.0000
60	749.0000
61	755.0000
62	761.0000
63	767.0000
64	773.0000
65	779.0000
66	785.0000
67	791.0000
68	797.0000
69	803.0000

ISDB-T - FREQUENCY ALLOCATION CHART - LATIN AMERICA

Channel	Frequency
7	177.1429
8	183.1429
9	189.1429
10	195.1429
11	201.1429
12	207.1429
13	213.1429
14	473.1429
15	479.1429
16	485.1429
17	491.1429
18	497.1429
19	503.1429
20	509.1429
21	515.1429
22	521.1429
23	527.1429
24	533.1429
25	539.1429
26	545.1429
27	551.1429
28	557.1429
29	563.1429
30	569.1429
31	575.1429
32	581.1429
33	587.1429
34	593.1429
35	599.1429
36	605.1429
37	611.1429
38	617.1429

Channel	Frequency
39	623.1429
40	629.1429
41	635.1429
42	641.1429
43	647.1429
44	653.1429
45	659.1429
46	665.1429
47	671.1429
48	677.1429
49	683.1429
50	689.1429
51	695.1429
52	701.1429
53	707.1429
54	713.1429
55	719.1429
56	725.1429
57	731.1429
58	737.1429
59	743.1429
60	749.1429
61	755.1429
62	761.1429
63	767.1429
64	773.1429
65	779.1429
66	785.1429
67	791.1429
68	797.1429
69	803.1429

LOSS BUDGET CHART FOR SINGLEMODE FIBER

Guidelines/specifications using Excel Spreadsheets and the assumptions shown in the table below are very helpful for contractors performing installations, terminations, and other fiberoptic network work. It provides metrics to quickly identify any fibers which are in or out of specification. The table on this page specifies the basic fiber and splice loss for point-to-point spans up to 80 Kilometers using the G.652 single-mode fibers. The attenuation values are those specified in applicable ITU and TIA standards. Not included in this chart is the use of the optical splitters and the losses introduced by them. Depending on the actual design, the number of connections, splices, and the span distance may all need to be adjusted to be more specific and accurate.

Another quick method to verify the optical loss in the outside plant is to subtract the receiver power level at the ONT from the transmit power level at the OLT (dBm - dBm = dB) at 1490/1550 nm, and the reverse from the ONT transmitter to the OLT receiver at 1310 nm.

Length (Km)	1310 nm (0.4 dB/Km)	# of Splices x 0.1 dB	With Patch Panel	Total	1550 nm (0.25 dB/Km)	# of Splices x 0.1 dB	With Patch Panel	Total
1	0.40	0.20	0.50	1.10	0.25	0.20	0.50	0.95
2	0.80	0.20	0.50	1.50	0.50	0.20	0.50	1.20
3	1.20	0.20	0.50	1.90	0.75	0.20	0.50	1.45
4	1.60	0.20	0.50	2.30	1.00	0.20	0.50	1.70
5	2.00	0.20	0.50	2.70	1.25	0.20	0.50	1.95
10	4.00	0.30	0.50	4.80	2.50	0.30	0.50	3.30
15	6.00	0.40	0.50	6.90	3.75	0.40	0.50	4.65
20	8.00	0.50	0.50	9.00	5.00	0.50	0.50	6.00
25	10.00	0.60	0.50	11.10	6.25	0.60	0.50	7.35
30	12.00	0.60	0.50	13.10	7.50	0.60	0.50	8.60
35	14.00	0.70	0.50	15.20	8.75	0.70	0.50	9.95
40	16.00	0.80	0.50	17.30	10.00	0.80	0.50	11.30
45	18.00	0.90	0.50	19.40	11.25	0.90	0.50	12.65
50	20.00	1.00	0.50	21.50	12.50	1.00	0.50	14.00
55	22.00	1.00	0.50	23.50	13.75	1.00	0.50	15.25
60	24.00	1.10	0.50	25.60	15.00	1.10	0.50	16.60
70	28.00	1.30	0.50	29.80	17.50	1.30	0.50	19.30
80	32.00	1.40	0.50	33.90	20.00	1.40	0.50	21.90
90	36.00	1.50	0.50	38.00	22.50	1.50	0.50	24.50
100	40.00	1.70	0.50	42.20	25.00	1.70	0.50	27.20

Notes:

1. Table calculations are based on the G.652 single-mode fiber attenuation values for 1310 nm (0.4 dB/km) and 1550 nm (0.25 dB/km).
2. The "With Patch Panel" column includes an additional 0.5 dB, as specified in ITU-T G.671 for connection loss.
3. Adjust splice loss to meet your specific requirements. The table is based on 0.1 dB per splice, as specified in TIA-758 OSP standard.
4. The number of splices is based on the inclusion of two pigtail splices and 6-km reel lengths, i.e. two pigtails are always used in each case and the length of the run will determine the number of 6-km reels required.



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