

## Dynamic Fiber Conversion System



**Our toughest, most versatile  
media conversion system.**

## FEATURES

- Dynamic modular system grows with your network.
- More module choices than any other media converter system.
- Tough construction for hard use: Most modules are NEBS Level 3 certified.
- Use with or without management.
- Hot-swappable modules.
- Four different powered chassis to choose from.

## OVERVIEW

The Dynamic Fiber Conversion System is without a doubt the most robust media conversion system we've ever evaluated.

The system is suited for fiber-based carrier-class or enterprise networks. It withstands harder use than most media conversion systems and offers a wider choice of modules—including autosensing 10/100/1000 Ethernet media converters and switches—than any other system. Plus, it's fully SNMP manageable. You just aren't going to find a harder-working, more-versatile system anywhere.

### Tough as nails

Most components of the Dynamic Fiber Conversion System are NEBS Level 3 certified (See "What is NEBS Level 3?" on page 5), and the rest are in the process of being certified. The system is suitable for the most demanding carrier-class applications in telco central offices (COs). The heavy-duty chassis stand up to hard use and each module screws solidly into place.

### Fully manageable

The Dynamic Fiber Conversion System is completely SNMP manageable with the installation of one SNMP Management Module in each chassis. You can manage a stack of up to 16 chassis in one location as a single IP address.

The SNMP Management Module features a 32-bit, high-performance RISC processor. It has a serial port for initial configuration, a frontplane or backplane Ethernet management port, and a pair of multichassis management ports.

The SNMP Management Module polls all converters and power supplies in its domain every second, collecting status and module information. It reports this information to the management software.

Use any standard SNMP management software to manage the system using in-band or out-of-band SNMP and Telnet.

Optional Management Software is customized to work with the Dynamic Fiber Conversion System. It can operate as a standalone application in Windows® 9x/Me/XP, Windows 2000, or Windows NT®. Or you can integrate it into a management program such as HP® OpenView®.

Management Software features an intuitive GUI interface, which provides real-time monitoring, configuration, alarms, and event/trap management.

The software monitors chassis power, voltage, current, and temperature. It enables you to remotely and selectively monitor and configure the chassis, modules, and ports. Settings, such as speed, are switch selectable at the module but can be overridden through the Management Software. (See Management Features on page 4.)

You can group the modules together for mass configuration, and they maintain settings even if there's a power outage.

### Backplane links

Many modules—in particular, the Switch Module—can be linked to other modules in the chassis through the backplane, enabling multiple modules to act as one. The backplane link can be made through a DIP switch on the module or through the management software.

Modules that support backplane links are the Switch Module (LMC3050C), some Gigabit modules (LMC3058C–LMC3063C), and some copper/fiber converters (LMC3033C–3042C).

### Choose from four different powered chassis

The 19-Slot Power Chassis holds up to 19 converter modules or 18 converter modules plus a management module. For extra power redundancy, it holds up to three AC or DC power supplies in any combination, each cooled with an integral fan. The chassis occupies 2U (3.5") of rack space and comes complete with rackmount ears.

The 5-Slot Power Chassis enables you to put five modules into only 1U (1.75") of rack space. It accommodates one or two AC or DC power supplies.

The 2-Slot Power Chassis is intended for desktop use and has one AC or DC power supply.

The 19-, 5-, and 2-Slot Chassis are manageable with the addition of SNMP Management modules. The chassis report the voltage, current, and temperature of each power supply.

Use the unmanaged 1-Slot Power Chassis in non-critical remote locations. It's intended for desktop use and is available only with an AC power supply.

### Many hot-swappable modules to choose from

The Dynamic Fiber Conversion System gives you more module choices than any other we offer, including multimode fiber, single-mode fiber, single-strand fiber, 10/100/1000 Ethernet, Gigabit Ethernet, a 4-port switch module, ATM, and T1/E1.

All modules are hot swappable and manageable.

### UTP to Coax Module

This module converts Ethernet from 10BASE-T to 10BASE2 cable. It works at a speed of 10 Mbps.

UTP ports detect and correct wiring polarity reversals. The module has a crossover switch that enables you to use a straight-through cable to connect to a workstation or hub.

The coax port has a BNC connector and supports 50-ohm cable at distances of up to 184.7 m.

### UTP to Multimode Duplex Fiber Modules

These modules convert Ethernet from twisted-pair to standard duplex multimode fiber optic cable. They're available in 10-Mbps, 100-Mbps, and 1000-Mbps, as well as autosensing 10-/100-Mbps and 10-/100-/1000-Mbps modules.

UTP ports are autosensing for half- or full-duplex. An MDI/MDI-X switch eliminates the need for crossover cable. Plus, the modules feature Link Propagation, which passes on link disconnection information from the fiber side to the copper side, and vice-versa.

### UTP to Single-Mode Duplex Fiber Modules

Single-mode fiber optic cable is the preferred choice for long-distance applications, and the Dynamic Fiber Conversion System offers many single-mode fiber choices, supporting ranges of up to 80 kilometers (that's about 50 miles!).

10-/100-Mbps and 10-/100-/1000-Mbps modules are autosensing for speed on the UTP side. UTP ports on all modules are autosensing for half- or full duplex. All modules have switch-selectable MDI/MDI-X and a Link Propagation feature for communicating link disconnection information from the copper to fiber side, or the fiber to copper side.

### UTP to Single-Mode Single-Strand Modules

These modules enable you to save on cabling costs by transmitting and receiving over one single-mode fiber strand. (See the "Single-strand fiber WDM" box on [page 4](#).) Like our UTP to Single-Mode Duplex Fiber Modules, single-fiber modules are autosensing for speed on 10-/100-Mbps and 10-/100-/1000-Mbps modules and are autosensing for half- or full-duplex. They also have switch-selectable MDI/MDI-X and a Link Propagation feature.

### Mode Converters

Mode Converters enable you to interconnect multimode and single-mode fiber optic cable. All have a Link Propagation feature for remote troubleshooting.

### Redundant Modules

These modules convert a single 100BASE-TX UTP link to dual 100-Mbps fiber optic or dual 10-/100-Mbps copper links. They provide hot backup for your vital connections, switching to the redundant link within 100 microseconds if the primary link goes down.

All ports support full or half-duplex operation; UTP ports autonegotiate duplex, and fiber ports can only be set manually. All UTP ports support MDI/MDI-X, eliminating the need for crossover cables. All ports support Link Loss Carry Forward (Link Propagation).

### Switch Module

Not a converter, but a welcome addition to the Dynamic Fiber Conversion System, the Switch Module features four

10-/100-Mbps Ethernet ports. The switch is autosensing for both speed and duplex with hardware control available for two ports and software control available for all four ports.

The switch supports MDI/MDI-X crossover. Port 1 has a manual crossover switch; Ports 2, 3, and 4 feature automatic crossover detection.

### ATM OC3 Modules

These modules support OC3 over ATM or SONET and convert duplex multimode fiber optic cable to duplex single-mode fiber optic cable. They enable you to use single-mode cable to add up to 28 kilometers (17.4 mi.) of distance to your OC3 network. Plus, you get another 5 kilometers (3.1 miles) of distance on the multimode side.

For fault detection, the modules feature Line Propagate, Link Segment, and Remote Fault Detection modes.

### T1/E1 Modules

Convert copper T1 lines with RJ-48 connectors to single- or multimode fiber for long-range transmission. The modules support AMI or B8ZS/HDB3 modes. A DCE/DTE switch eliminates the need for crossover cable when connecting to devices such as PBXs and CSUs. Test modes include Local Loopback, Force 1s to Copper, Force 1s to Fiber, and Fiber Test.

### Modules with VLAN Tagging

Multimode and single-mode modules are also available with VLAN tagging.

The modules provide UTP to fiber conversion as well as rate conversion between 10BASE-T or 100BASE-TX and 100BASE-FX fiber.

The modules support IEEE 802.1Q Tag VLAN packet tagging and untagging including double-tagging (1Q1A double-stacking) as well as PortVLAN. VLAN tagging provides a secure way to keep track of data packets as they are transported across a LAN or WAN. It also enables users to tunnel enterprise VLAN networks transparently through the service provider's network.

Like the versions without VLAN tagging, these modules are available with different fiber port options such as multimode, single-mode, and single-fiber. They support ST, SC, MT-RJ, and LC connectors.

### Desktop or Wallmount Managed Media Converters for the Dynamic Fiber Conversion System

These remote managed media converters fit neatly on a desktop or mount on a wall. Models are available with 110-VAC, 220-VAC, or 8-16-VDC power supplies. They convert 10BASE-T/100BASE-TX to 100BASE-FX. The converters work with all components of the Dynamic Fiber Conversion System. (See the ordering information on [pages 6-8](#).) Management software (LMC3003A) is also available.



## Technically Speaking

### Single-strand fiber WDM.

Traditional fiber optic media converters perform a useful function but don't really reduce the amount of cable needed to send data on a fiber segment. They still require two strands of glass to send transmit and receive signals for fiber media communications. Wouldn't it be better to combine these two logical communication paths within one strand?

That's exactly what single-strand fiber conversion does. It compresses the transmit and receive wavelengths into one single-mode fiber strand.

The conversion is done with Wave Division Multiplexing (WDM) technology. WDM increases the information-carrying capacity of optical fiber by transmitting two signals simultaneously at different wavelengths on the same fiber. The way it usually works is that one unit transmits at 1550 nm and receives at 1310 nm. The other unit transmits at 1310 nm and receives at 1550 nm. The two wavelengths operate independently and don't interfere with each other. This bidirectional traffic flow effectively converts a single fiber into a pair of "virtual fibers," each driven independently at different wavelengths.

WDM on single-strand fiber is most often used for point-to-point links on a long-distance network. It's also used to increase network capacity or relieve network congestion.



## MANAGEMENT FEATURES

### Chassis Information

- Part Number
- Serial Number
- Revision
- Description

### Chassis Status

- Power Status
- Power Output Voltage
- Chassis Temperature
- Chassis Reset

### Port Information

- Name
- Type
- Speed
- Slot Occupied
- Port Number

### Port Status

- Administrative
- Operational
- Link

### Module Status

- Module Power
- Link Status
- Activity
- Active Port
- Diagnostic Status
- Management
- Redundancy
- Media Converter Type
- Slot Occupied
- Part Number
- Serial Number
- Configuration
- Revision
- Ports on Module

### Alarms

- Cold Start
- Warm Start
- Link Up
- Link Down
- Authentication Failure
- Configuration Change

- Backplane Failure
- Temperature Out of Range
- Power Supply On/Off
- Power Supply Inserted
- Power Supply Removed
- Chassis Reset
- Module Reset
- Port Reset
- Module Insertion
- Module Removal
- Module Unknown
- Module Failure
- Port Link State Change
- Redundant Switchover

### Active Control

- Link Propagate
- Remote Fault Detection
- Port Name
- Module Name
- Chassis Name and Location
- IP Address
- Disable Management Port
- Alarm Threshold Setting
- Download Software via FTP
- Reset Chassis
- Subnet Mask
- Default Gateway
- Telnet to Console Commands

### Management Module

#### Statistics

- In Bytes
- Out Bytes
- In Errors
- Out Errors
- In Discards
- Out Discards

## Technically Speaking

### What is NEBS Level 3?

Network Equipment Building System (NEBS) standards set requirements for telco equipment. The standards are maintained by Telcordia Technologies, Inc., formerly Bellcore. Bellcore Special Report, SR-3580 defines three distinct functional levels of NEBS compliance. The third of these levels, NEBS Level 3, is the most stringent, certifying carrier-class equipment intended for long-term use in variable environments.

NEBS Level 3 certifies that a piece of equipment can be safely used in an extreme environment. To become certified at NEBS Level 3, a device must meet strict physical, electrical, and environmental requirements to prove it will operate safely and reliably in extreme conditions. It must pass a series of tests that include extreme heat, humidity, fire, earthquakes (Zone 4), light, and noise.

### TECH SPECS for Chassis

**Power** — LMC3004A–LMC3005A, LMC3010A, LMC3080A, LMC3014A: 110–230 VAC, 50–60 Hz, autosensing, internal;  
LMC3007A–LMC3008A, LMC3012A, LMC3081A–LMC3082A: ± 48 VDC, internal;  
LMC3015A: 110 VAC, 60 Hz, external (220-VAC power supply available on request)

**Size** — 19-Slot Chassis: 3.5"H (2U) x 17.2"W x 14"D (8.9 x 43.7 x 35.6 cm);  
5-Slot Chassis: 1.75"H (1U) x 17.2"W x 9"D (4.4 x 43.7 x 22.9 cm);  
2-Slot Chassis: 1.9"H x 6.7"W x 5.5"D (4.8 x 17 x 14 cm);  
1-Slot Chassis: 1"H x 3.8"W x 5.5"D (2.5 x 9.7 x 14 cm)

**Weight** —  
19-Slot Chassis: Single power supply: 16 lb. (7.3 kg);  
Dual power supplies: 18.5 lb. (8.4 kg);  
5-Slot Chassis: Single power supply: 7.5 lb. (3.4 kg);  
Dual power supplies: 9 lb. (4.1 kg);  
2-Slot Chassis: 2.5 lb. (1.1 kg);  
1-Slot Chassis: 1.5 lb. (0.7 kg)

### TECH SPECS for Managed Desktop and Wallmount Models

**Connectors** — See ordering information on page 8

**Indicators** — (1) Power, (3) Power Supply, (1) Fiber Optic Link (FO), (1) Master/Slave (BP), (1) 10 UTP, (1) 100 UTP, (1) FDX

**Power** — LMC3100A–LMC3115A: 110 VAC, 60 Hz, external;  
LMC3100AE–LMC3115AE: 220 VAC, 50 Hz, external;  
LMC3100A-DC–LMC3115A-DC: 8–16 VDC

**Size** — 1"H x 3.8"W x 5.5"D (2.5 x 9.7 x 14 cm)

**Weight** — 1.5 lb. (0.7 kg)

### TECH SPECS for Modules

**Connectors** — LMC3000A: (1) DB9 serial, (2) RJ-45 Ethernet, (2) proprietary multichassis management ports;

Converter Modules: See ordering information on pages 6–7

**Indicators** — LEDs:

LMC3000A: (1) Power, (3) Power Supply, (1) UTP Link, (1) Master, (1) Slave, (1) Management Poll;

LMC3018C-R2–LMC3022C-R2: (1) Power, (1) Fiber Link, (1) UTP Link;  
LMC3023C–LMC3032C: (1) Power, (1) Fiber Link, (1) UTP Link, (1) Auto, (1) Half-/Full-Duplex;

LMC3033C–LMC3042C, LMC3084C–LMC3095C: (1) Power, (1) Fiber Link, (1) UTP Link, (1) Auto, (1) UTP Half-/Full-Duplex, (1) Fiber Half-/Full-Duplex, (1) 10/100;

LMC3051C–LMC3052C, LMC3054C–LMC3057C: (1) Power, (1) Fiber Link, (1) UTP Link, (1) Fiber Half-/Full-Duplex;

LMC3058C–LMC3063C: (1) Power, (1) Fiber Optic Link, (1) Auto, (1) Fiber, (1) Half-/Full-Duplex, (1) 10/100/1000;

LMC3064C–LMC3073C: (1) Power, (2) Fiber Optic Link;

LMC3045C–LMC3049C: (1) Power, (1) Fiber Optic Link, (1) UTP Link, (1) Select, (1) Auto, (1) Half-/Full-Duplex;

LMC3043C: (1) Power, (1) UTP Link, (2) 10/100;

LMC3050C: (1) Power, (4) UTP Link, (4) 10/100;

LMC3074C–LMC3075C: (1) Power, (2) Fiber Optic Link;

LMC3076C–LMC3079C: (1) Power, (1) Test, (1) RJ-45/RJ-48 Link, (1) Fiber Optic Link;

LMC3083C: (1) Power, (1) RJ-45 Link, (1) BNC Link;

LMC3100C–LMC3107C: (1) Power, (3) Power Supply, (1) Fiber Optic Link (FO), (1) Master/Slave (BP), (1) 10 UTP, (1) 100 UTP, (1) FDX

**Power** — From the interface

**Size** — 2.8"H x 0.9"W x 4.5"D (7.1 x 2.3 x 11.4 cm)

**Weight** — 0.5 lb. (0.2 kg)



LMC3004A: shown with modules

Item	Code
Dynamic Fiber Conversion System	
<b>First, order the chassis...</b>	
19-Slot Power Chassis (Managed, Rackmount)	
with (1) AC Power Supply	<b>LMC3004A</b>
with (2) AC Power Supplies	<b>LMC3005A</b>
with (1) DC Power Supply	<b>LMC3007A</b>
with (2) DC Power Supplies	<b>LMC3008A</b>
5-Slot Power Chassis (Managed, Rackmount)	
with (1) AC Power Supply	<b>LMC3010A</b>
with (2) AC Power Supplies	<b>LMC3080A</b>
with (1) DC Power Supply	<b>LMC3012A</b>
with (2) DC Power Supplies	<b>LMC3081A</b>
2-Slot Power Chassis (Managed, for Desktop Use)	
with (1) AC Power Supply	<b>LMC3014A</b>
with (1) DC Power Supply	<b>LMC3082A</b>
1-Slot Power Chassis (Unmanaged, for Desktop Use)	
with (1) AC Power Supply	<b>LMC3015A</b>
<b>...then you may need some of these chassis accessories...</b>	
NMM Cascade Cable, 3-ft. (0.9-m)	<b>LMC3001A</b>
Blank Panels for Unused Slots	<b>LMC3002A</b>
Wallmounting Kit for 1-Slot Chassis	<b>LMC3017C</b>
Spare Power Supplies	
for 19-Slot Chassis (Holds up to Three Power Supplies)	
AC	<b>LMC3006P</b>
DC	<b>LMC3009P</b>
for 5-Slot Chassis (Holds up to Two Power Supplies)	
AC	<b>LMC3011P</b>
DC	<b>LMC3013P</b>
<b>If you want to manage your system, order a management module...</b>	
SNMP Management Module	<b>LMC3000A</b>
<b>...then software.</b>	
Management Software	<b>LMC3003A</b>
<b>Next order converter modules.</b>	
UTP to Coax Modules	
10BASE-T to 10BASE2	<b>LMC3083C</b>
UTP to Multimode Duplex Fiber Modules	
10BASE-T/10BASE-FL	
850-nm, 2 km	
ST®	<b>LMC3018C-R2</b>
SC	<b>LMC3021C-R2</b>
1310-nm, 5 km	
ST	<b>LMC3019C-R2</b>
1310-nm, 30 km	
ST	<b>LMC3020C-R2</b>
SC	<b>LMC3022C-R2</b>
100BASE-TX to 100BASE-FX	
1310-nm, 5 km	
ST	<b>LMC3023C</b>
SC	<b>LMC3026C</b>
1310-nm, 30 km	
ST	<b>LMC3024C</b>
SC	<b>LMC3027C</b>
1310-nm, 60 km	
ST	<b>LMC3025C</b>
SC	<b>LMC3028C</b>

Item	Code
10BASE-T/100BASE-TX to 100BASE-FX	
1310-nm, 5 km	
ST	<b>LMC3033C</b>
SC	<b>LMC3036C</b>
1000BASE-T to 1000BASE-SX	
850-nm, 220 m	
SC	<b>LMC3051C</b>
MT-RJ	<b>LMC3054C</b>
10BASE-T/100BASE-TX/1000BASE-T to 1000BASE-SX	
850-nm, 220 m	
SC	<b>LMC3058C</b>
UTP to Single-Mode Duplex Fiber Modules	
10BASE-T/100BASE-TX to 100BASE-FX	
1310-nm	
30 km, ST	<b>LMC3034C</b>
30 km, SC	<b>LMC3037C</b>
60 km, ST	<b>LMC3035C</b>
60 km, SC	<b>LMC3038C</b>
1000BASE-TX to 1000BASE-LX	
1310-nm	
12 km, SC	<b>LMC3052C</b>
12 km, MT-RJ	<b>LMC3055C</b>
10BASE-T/100BASE-TX/1000BASE-T to 1000BASE-LX	
1310-nm	
12 km, SC	<b>LMC3059C</b>
34 km, SC	<b>LMC3060C</b>
1550-nm	
80 km, SC	<b>LMC3061C</b>
10BASE-T/100BASE-TX to 100BASE-FX with VLAN Tagging	
Multimode, 1310-nm/5 km	
ST	<b>LMC3084C</b>
SC	<b>LMC3087C</b>
MT-RJ	<b>LMC3091C</b>
Single-Mode, 1310-nm/30 km	
ST	<b>LMC3085C</b>
SC	<b>LMC3088C</b>
MT-RJ	<b>LMC3092C</b>
LC	<b>LMC3093C</b>
Single-Mode, 1310-nm/60 km	
ST	<b>LMC3086C</b>
SC	<b>LMC3089C</b>
LC	<b>LMC3094C</b>
Single-Mode, 1550-nm/120 km	
SC	<b>LMC3090C</b>
LC	<b>LMC3095C</b>



LMC3032C

Item	Code
UTP to Single-Mode Single Fiber	
100BASE-TX to 100BASE-FX	
1310-nm TX/1550-nm RX	
20 km, SC	<b>LMC3029C</b>
40 km, SC	<b>LMC3030C</b>
1550-nm TX/1310-nm RX	
20 km, SC	<b>LMC3031C</b>
40 km, SC	<b>LMC3032C</b>
10BASE-T/100BASE-TX to 100BASE-FX	
1310-nm TX/1550-nm RX	
20 km, SC	<b>LMC3039C</b>
40 km, SC	<b>LMC3040C</b>
1550-nm TX/1310-nm RX	
20 km, SC	<b>LMC3041C</b>
40 km, SC	<b>LMC3042C</b>
1000BASE-TX to 1000BASE-X	
1310-nm TX/1550-nm RX	
20 km, SC	<b>LMC3056C</b>
1550-nm TX/1310-nm RX	
20 km, SC	<b>LMC3057C</b>
10BASE-T/100BASE-TX/1000BASE-T to 1000BASE-X	
1310-nm TX/1550-nm RX	
20 km, SC	<b>LMC3062C</b>
1550-nm TX/1310-nm RX	
20 km, SC	<b>LMC3063C</b>
Mode Converters	
100BASE-FX Multimode Duplex to 100BASE-FX	
Single-Mode Duplex	
1310-nm/1310-nm, Multimode, 5 km/Single-Mode	
20 km, ST	<b>LMC3064C</b>
20 km, SC	<b>LMC3066C</b>
60 km, ST	<b>LMC3065C</b>
60 km, SC	<b>LMC3067C</b>
120 km, SC	<b>LMC3068C</b>
1000BASE-SX Multimode Duplex to 1000BASE-LX	
Single-Mode Duplex	
850-nm/1310-nm, Multimode, 220 m/Single-Mode	
12 km, SC	<b>LMC3069C</b>
34 km, SC	<b>LMC3070C</b>
80 km, SC	<b>LMC3071C</b>
1000BASE-X Multimode Duplex to 1000BASE-X	
Single-Mode Single-Strand	
220 m/20 km, SC	
1310-nm TX/1550-nm RX	<b>LMC3072C</b>
1550-nm TX/1310-nm RX	<b>LMC3073C</b>

Item	Code
Redundant Modules	
UTP to Dual Multimode Duplex Fiber	
(1) 100BASE-TX to (2) 100BASE-FX, 1310-nm	
5 km, SC	<b>LMC3047C</b>
UTP to Dual Single-Mode Duplex Fiber	
(1) 100BASE-TX to (2) 100BASE-FX, 1310-nm	
30 km, ST	<b>LMC3045C</b>
30 km, SC	<b>LMC3048C</b>
60 km, ST	<b>LMC3046C</b>
60 km, SC	<b>LMC3049C</b>
UTP to Dual UTP	
(1) 100BASE-TX to (2) 10/100BASE-T,	
100 m, RJ-45	<b>LMC3043C</b>
Switch Module	
4-Port 10/100 Ethernet Switch, (4) RJ-45	<b>LMC3050C</b>
ATM OC3 Modules	
Duplex Multimode to Duplex	
Single-Mode, 1310-nm/1310-nm	
5 km/28 km	
ST	<b>LMC3074C</b>
SC	<b>LMC3075C</b>
T1/E1 Copper to 1310-nm Multimode Duplex Fiber Modules	
5 km	
ST	<b>LMC3076C</b>
SC	<b>LMC3078C</b>
30 km	
ST	<b>LMC3077C</b>
SC	<b>LMC3079C</b>
Managed Media Converter Modules for the Dynamic Fiber	
Conversion System	
10BASE-T/100BASE-TX to 100BASE-FX, 1310-nm	
Multimode	
5 km, ST	<b>LMC3100C</b>
5 km, SC	<b>LMC3102C</b>
Single-Mode	
30 km, ST	<b>LMC3101C</b>
30 km, SC	<b>LMC3103C</b>
Single-Mode, Single-Strand, 20 km (Order One of Each.)	
1310-nm TX/1550-nm RX, SC	<b>LMC3104C</b>
1550-nm TX/1310-nm RX, SC	<b>LMC3106C</b>
Single-Mode, Single-Strand, 40 km (Order One of Each.)	
1310-nm TX/1550-nm RX, SC	<b>LMC3105C</b>
1550-nm TX/1310-nm RX, SC	<b>LMC3107C</b>



LMC3108A

Item	Code
Desktop Managed Media Converters for the Dynamic Fiber Conversion System, 110 VAC	
10BASE-T/100BASE-TX to 100BASE-FX	
Multimode, 5 km	
5 km, ST	<b>LMC3100A</b>
5 km, SC	<b>LMC3102A</b>
Single-Mode, 1310-nm, 30 km	
30 km, ST	<b>LMC3101A</b>
30 km, SC	<b>LMC3103A</b>
Single-Mode, Single-Strand, 20 km (Order One of Each.)	
1310-nm TX/1550-nm RX, SC	<b>LMC3104A</b>
1550-nm TX/1310-nm RX, SC	<b>LMC3106A</b>
Single-Mode, Single-Strand, 40 km (Order One of Each.)	
1310-nm TX/1550-nm RX, SC	<b>LMC3105A</b>
1550-nm TX/1310-nm RX, SC	<b>LMC3107A</b>
Desktop Managed Media Converters for the Dynamic Fiber Conversion System, 220 VAC	
10BASE-T/100BASE-TX to 100BASE-FX	
Multimode, 5 km	
ST	<b>LMC3100AE</b>
SC	<b>LMC3102AE</b>
Single-Mode, 1310-nm, 30 km	
ST	<b>LMC3101AE</b>
SC	<b>LMC3103AE</b>
Single-Mode, Single-Strand, 20 km (Order One of Each.)	
1310-nm TX/1550-nm RX, SC	<b>LMC3104AE</b>
1550-nm TX/1310-nm RX, SC	<b>LMC3106AE</b>
Single-Mode, Single-Strand, 40 km (Order One of Each.)	
1310-nm TX/1550-nm RX, SC	<b>LMC3105AE</b>
1550-nm TX/1310-nm RX, SC	<b>LMC3107AE</b>
Desktop Managed Media Converters for the Dynamic Fiber Conversion System, 8–16 VDC	
10BASE-T/100BASE-TX to 100BASE-FX	
Multimode, 5 km	
ST	<b>LMC3100A-DC</b>
SC	<b>LMC3102A-DC</b>
Single-Mode, 1310-nm, 30 km	
ST	<b>LMC3101A-DC</b>
SC	<b>LMC3103A-DC</b>
Single-Mode, Single-Strand, 20 km (Order one of each.)	
1310-nm TX/1550-nm RX, SC	<b>LMC3104A-DC</b>
1550-nm TX/1310-nm RX, SC	<b>LMC3106A-DC</b>
Single-Mode, Single-Strand, 40 km (Order one of each.)	
1310-nm TX/1550-nm RX, SC	<b>LMC3105A-DC</b>
1550-nm TX/1310-nm RX, SC	<b>LMC3107A-DC</b>

Item	Code
Wallmount Managed Media Converters for the Dynamic Fiber Conversion System, 110 VAC	
10BASE-T/100BASE-TX to 100BASE-FX	
Multimode, 5 km	
ST	<b>LMC3108A</b>
SC	<b>LMC3110A</b>
Single-Mode, 5 km	
ST	<b>LMC3109A</b>
SC	<b>LMC3111A</b>
Single-Mode, Single-Strand, 20 km (Order One of Each.)	
1310-nm TX/1550-nm RX, SC	<b>LMC3112A</b>
1550-nm TX/1310-nm RX, SC	<b>LMC3114A</b>
Single-Mode, Single-Strand, 40 km (Order One of Each.)	
1310-nm TX/1550-nm RX, SC	<b>LMC3113A</b>
1550-nm TX/1310-nm RX, SC	<b>LMC3115A</b>
Wallmount Managed Media Converters for the Dynamic Fiber Conversion System, 220 VAC	
10BASE-T/100BASE-TX to 100BASE-FX	
Multimode, 5 km	
ST	<b>LMC3108AE</b>
SC	<b>LMC3110AE</b>
Single-Mode, 5 km	
ST	<b>LMC3109AE</b>
SC	<b>LMC3111AE</b>
Single-Mode, Single-Strand, 20 km (Order One of Each.)	
1310-nm TX/1550-nm RX, SC	<b>LMC3112AE</b>
1550-nm TX/1310-nm RX, SC	<b>LMC3114AE</b>
Single-Mode, Single-Strand, 40 km (Order One of Each.)	
1310-nm TX/1550-nm RX, SC	<b>LMC3113AE</b>
1550-nm TX/1310-nm RX, SC	<b>LMC3115AE</b>
Wallmount Managed Media Converters for the Dynamic Fiber Conversion System, 8–16 VDC	
10BASE-T/100BASE-TX to 100BASE-FX	
Multimode, 5 km	
ST	<b>LMC3108A-DC</b>
SC	<b>LMC3110A-DC</b>
Single-Mode, 5 km	
ST	<b>LMC3109A-DC</b>
SC	<b>LMC3111A-DC</b>
Single-Mode, Single-Strand, 20 km (Order One of Each.)	
1310-nm TX/1550-nm RX, SC	<b>LMC3112A-DC</b>
1550-nm TX/1310-nm RX, SC	<b>LMC3114A-DC</b>
Single-Mode, Single-Strand, 40 km (Order One of Each.)	
1310-nm TX/1550-nm RX, SC	<b>LMC3113A-DC</b>
1550-nm TX/1310-nm RX, SC	<b>LMC3115A-DC</b>