

SNMP Manageable 10/100 Mbs Ethernet Media Converters



Illustrated: SNMP Manageable Ethernet Media Converter

CMX-101X series Media Converters deliver 10/100 Mbs Copper-to-Fiber media conversion. SNMP and Web Management ready, this Converter Group enables managers to remotely monitor networked connections quickly and easily via their RJ-45 / Fiber ports (in-band) or serial RS-232 (out-of-band) ports. Depending on the fiber optic connector type, enterprise LAN management and configuration of CMX-101X converters can be extended to 60 km over duplex and single fiber links.

CMX-101XR (Redundant) versions have a pair each of RJ-45 and Fiber ports and, in conjunction with LFS and IEEE 802.1D Spanning Tree protocol, enable parallel UTP/Fiber link redundancy.

Full SNMP and Web Management, Loopback Test capability, and Link Fault Signaling (LFS), makes the CMX-101XX series highly efficient additions to networks that require managed services across the network.

CMX-10XX series
Manageable and
Redundant / Dual path
10/100 Mbs Ethernet
Media Converter

Features:

**SNMP and Web
Management Ready**

**Loopback
Test capability**

Link fault signaling

**Efficient Converters
for networks requiring
managed services**

**Redundant parallel
Operation capability**

Efficient Converters
for networks requiring
managed services.

Configuration options ... when flexibility matters.



Product Specifications

Performance

- Max. Distance:
Twisted Pair: 100 m (330 ft)
Fiber Optic: Up to 60,000 m (198,000 ft)
- Frame Buffer: 1MB RAM (frame) buffer with non-blocking architecture
- Flow Control: Back pressure for half-duplex
- Managed Ports:
Out-of-Band: One RS-232 (DB-9-pin, male, 38400-N-8-N)
In-Band: via RJ-45 & Fiber ports

Network Management

- System Configuration: Console port, Telnet, Web browser, SNMP
- Management Agent: SNMP Support: MIB II and Canary's Private MIB

SNMP Standards

- RFC 1213, MIB II, Canary Proprietary MIB

Standards and Compliance

- IEEE 802.3: 10BASE-T specification
- IEEE 802.3u: 100BASE-TX and 100BASE-FX specification
- IEEE 802.1D: Spanning-Tree Protocol

Power Supply

- Power: Input: 90 / 240 VAC, (47 ~ 63 Hz)

Environmental Characteristics

- Temperature:
Operating: 0° to 50° C (32° to 122° F)
Storage: -20° to 65° C (-4° to 149° F)
- Humidity:
Operating: 10% to 80% RH
(non-condensing)
Storage: 5% to 90% RH

Warranty:

Three (3) Years, parts and labor

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Manageable 10/100 Mbs Ethernet Media Converters

Physical Characteristics

- Width: 10.5" (26.8 cm)
- Depth: 5.0" (12.8 cm)
- Height: 1.7" (4.4 cm)

Electromagnetic Compatibility

- Emissions:
FCC Part 15 of Class A
CE, UL approved

The pages that follow provide ordering information for Canary's SNMP Manageable 10/100 Mbs Ethernet Media Converters:

- **Manageable 10/100 UTP-to-Fiber Media Converter**
CMX-101X series
- **Redundant / Dual path, or Parallel Operation (two sets) 10/100 UTP-to-Fiber ports**
CMX-101XR series



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SNMP Manageable 10/100 Mbs Ethernet Media Converters

CMX-101X series – Manageable 10/100 UTP-to-Fiber Media Converter

CMX-101XR series – Redundant / Dual path, or Parallel Operation (two sets) 10/100 UTP-to-Fiber ports

CMX-101XR only

- Four ports: Two sets of RJ-45 and Fiber ports for dual path operations
 - Configurable for Fault-Tolerance: One UTP/Fiber port pair is defined as a Primary path, the second pair is defined as the Redundant path – that becomes operational when a fault is detected on the Primary path.
 - Configurable for parallel operation i.e. as two separate UTP-to-Fiber converters running in parallel
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Redundant versions of Canary's SNMP Manageable 10/100 Mbs Ethernet Media Converter can be configured to operate in one of two ways: Redundant mode and Parallel mode. The redundant mode is oriented to ensuring an 'always on' link between two stations. In this mode, all four ports are inter-connected with one RJ-45 and Fiber port set defined as the Primary path and the other set defined as the Redundant (secondary) path. When a disruption in the Primary UTP/Fiber link path takes place, the CMX-101XR will redirect data along the Redundant UTP/Fiber link until the Primary link is restored, ensuring 'always on' connectivity.

In parallel mode, the two sets of copper and fiber ports function as two separate, independent media converters, both running in parallel and under unified management control. Parallel UTP and Fiber ports encourage the installation of redundant links between critical network devices, and provide additional insurance that essential services are always online. The non-redundant CMX-101X versions have one pair of UTP-to-Fiber connections and function like standard media converters – with the addition of management capability.

CMX-101X and CMX-101XR

- Canary SNMP management application software (HP Open View® and IBM/Tivoli NetView® capable)
 - Console Port and Telnet with both CLI (Command Line Interface) and Menu driven user interfaces
 - Supports in-band, out-of-band and Web-based management
 - Menu-driven, Web browser user interface.
 - TFTP firmware upgradeable
 - Supports 2K MAC address entries
 - Back-pressure flow control under half-duplex
 - 1MB RAM buffer with non-blocking architecture
 - Full array of LED status and diagnostic indicators
 - Loopback Test (LBK) for instant connectivity confirmation
 - Automatic MDI/MDI-X selection and 10/100 auto-negotiation on the RJ-45 port
 - Link Fault Signaling (LFS) forwards 'lost link state', to the next station, in order to force a quicker Spanning Tree Protocol response
 - Internal Auto-sensing 90 – 240 VAC power supply
 - FCC Class A and CE approved
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SNMP Manageable 10/100 Mbs Ethernet Media Converters

CMX-101X series – Manageable 10/100 UTP-to-Fiber Media Converter

CMX-101XR series – Redundant / Dual path, or Parallel Operation (two sets) 10/100 UTP-to-Fiber ports

Specifications

Model Numbers	Min. Tx PWR	Max. Tx PWR	Rx Sensitivity	Min. PWR Budget	Max. PWR Budget	Max. Input PWR	Connector Type	Wavelength (nm)	Transmit Distance
CMX-1011 & CMX-1011R	-20.0 dBm	-14.0 dBm	-31.0 dBm	11.0 dB	17.0 dB	-8.0 dBm	SC	1310 nm	2000 m
CMX-1012 & CMX-1012R	-20.0 dBm	-14.0 dBm	-31.0 dBm	11.0 dB	17.0 dB	-8.0 dBm	ST	1310 nm	2000 m
<i>Specifications above in blue are for multi-mode, fiber connectors. Specifications below for single-mode, fiber connectors.</i>									
CMX-1011S & CMX-1011RS	-15.0 dBm	-8.0 dBm	-34.0 dBm	19.0 dB	26.0 dB	-7.0 dBm	SC	1310 nm	30 Km
CMX-1012S & CMX-1012RS	-15.0 dBm	-8.0 dBm	-34.0 dBm	19.0 dB	26.0 dB	-7.0 dBm	ST	1310 nm	30 Km

**NOTE 1: Manageable CMX-101X converter models can be ordered with Long-Reach single-mode and Single-Fiber Bi-Directional single-mode fiber connectors. For special order, please contact Canary for additional information.*

Ordering Information

Model Numbers	Product Description	Number of UTP Ports	Number of Fiber Ports	Fiber Connector	Transmit Distance
CMX-1011	Web/SNMP/Serial - Managed 2-port Media Converter with one m/m SC Fiber port	(1) RJ-45	One m/m	SC	2000 m
CMX-1012	Web/SNMP/Serial - Managed 2-port Media Converter with one m/m ST Fiber port	(1) RJ-45	One m/m	ST	2000 m
CMX-1011S	Web/SNMP/Serial - Managed 2-port Media Converter with one s/m SC Fiber port	(1) RJ-45	One s/m	SC	30 Km
CMX-1012S	Web/SNMP/Serial - Managed 2-port Media Converter with one s/m ST Fiber port	(1) RJ-45	One s/m	ST	30 Km
<i>Following are Redundant CMX-101XR versions that have a pair each of UTP and Fiber ports that can be configured for fault-tolerance or parallel (paired) operation</i>					
CMX-1011R	Web/SNMP/Serial - Managed 4-port Media Converter with two m/m SC Fiber ports	(2) RJ-45	Two m/m	SC	2000 m
CMX-1012R	Web/SNMP/Serial - Managed 4-port Media Converter with two m/m ST Fiber ports	(2) RJ-45	Two m/m	ST	2000 m
CMX-1011RS	Web/SNMP/Serial - Managed 4-port Media Converter with two s/m SC Fiber ports	(2) RJ-45	Two s/m	SC	30 Km
CMX-1012RS	Web/SNMP/Serial - Managed 4-port Media Converter with two s/m ST Fiber ports	(2) RJ-45	Two s/m	ST	30 Km

**NOTE 1: Manageable CMX-101X models can be ordered with Long-Reach single-mode and Single-Fiber Bi-Directional single-mode fiber connectors. For special order, please contact Canary for additional information.*

More versions of the CMX-101X series may be found on the Canary web site as they become available.



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CMX-101X series – Manageable 10/100 UTP-to-Fiber Media Converter

CMX-101XR series – Redundant / Dual path, or Parallel Operation (two sets) 10/100 UTP-to-Fiber ports

Figure 1

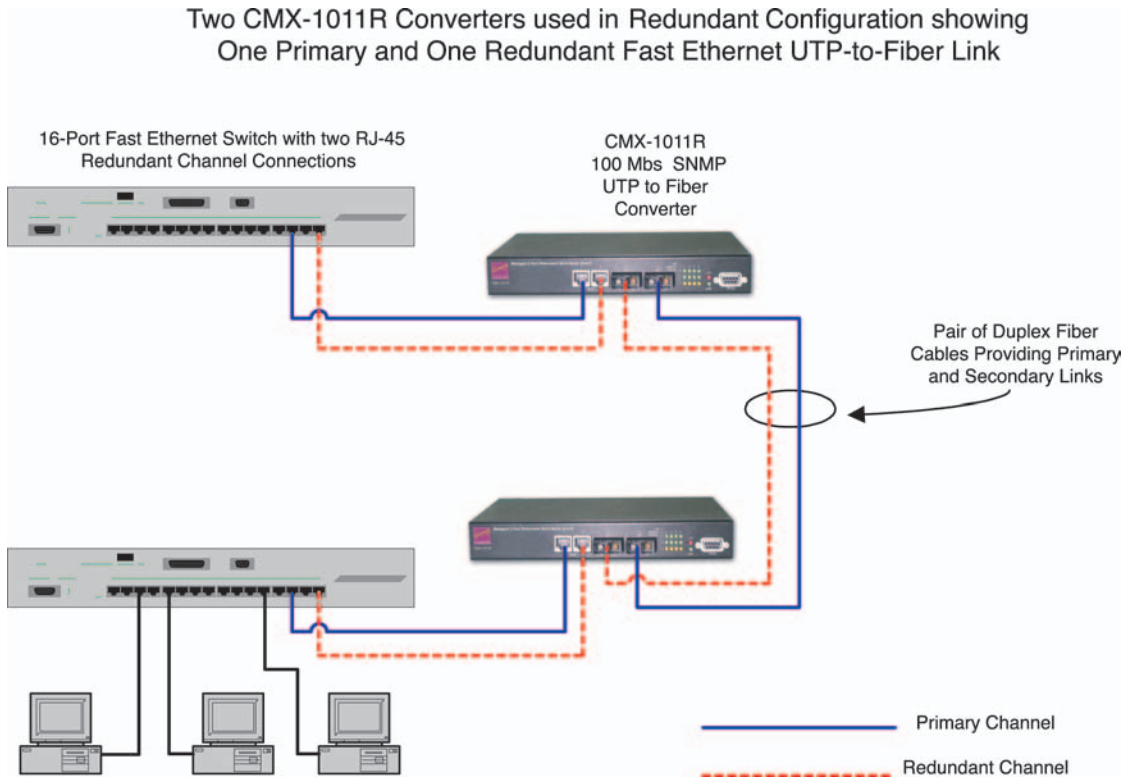


Figure 2

