

ETX-42, ETX-43



Gigabit Ethernet Layer 1 Single Strand Media Converters



FEATURES

- Provide cost-effective UTP-to-fiber media conversion for Gigabit Ethernet services
- Can be installed in the following enclosures:
 - 16-slot modular rack for central site installation (LRS-20)
 - Single-slot standalone unit for remote site installation, or if a single converter is needed (LRS-1)
- Operate over single strand single mode fiber optic cables
- Use 1310 and 1550 nm lasers
- Transparent operation without signal degradation
- Automatic MDI/MDIX crossover function
- User-configurable fault propagation
- LED indicators for the connection status

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DESCRIPTION

- ETX-42 and ETX-43 are media converters that provide transparent conversion of optical and electrical signals for the Gigabit Ethernet service.
- The media converters are used to extend the operation distance between two copper Gigabit Ethernet devices via fiber optic infrastructure transparently and with no performance degradation.
- The ETX-42 and ETX-43 cards can be installed in the following enclosures:
 - LRS-20, 16-slot 3U-high modular rack, accommodating up to 16 hot-swappable converter cards. The LRS-20 rack is intended for central site installation.
 - LRS-1, 1U high standalone unit, accommodating one converter card. LRS-1 is intended for installation at remote sites, or if only a single converter is required.
- The converters use WDM technology to operate over single strand fiber optic cables.
- The ETX-42 and ETX-43 cards operate in pairs, converting between UTP and single mode fiber optic cables (see *Table 1*).
- The UTP port of the ETX-42 and ETX-43 cards supports automatic MDI/MDIX function, correcting connection polarity errors. This allows using straight or crossed cables for the Ethernet connection.
- The user-configurable fault propagation mechanism automatically shuts down the UTP port if a failure is detected on the fiber optic port. The UTP link is re-established when the fiber optic connection is restored.
- LEDs indicate the fiber optic link status, data transmission and duplex modes statuses of the UTP port.

SPECIFICATIONS

ETX-42, ETX-43

UTP INTERFACE

- **Type**
Gigabit Ethernet, MDI/MDIX
- **Cable Type**
Category 5 UTP
- **Cable Length**
Up to 100m (328 ft)
- **Connector**
RJ-45

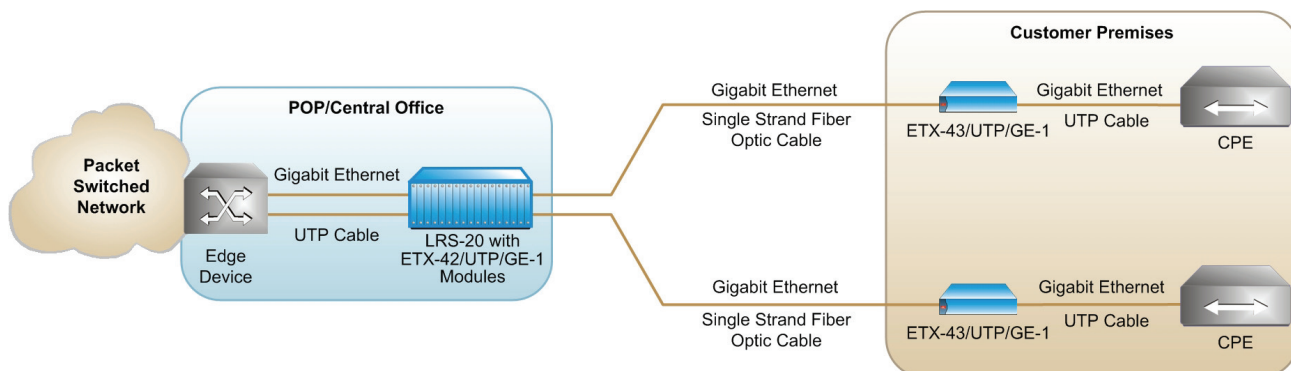
FIBER OPTIC INTERFACE

- **Type**
Gigabit Ethernet
- **Characteristics**
See *Table 1*

GENERAL

- **Indicators**
PWR (green) – Power status
LNK (green) – Fiber optic link connection status
LNK (green) – UTP link connection status
FDX (green) – Current duplex mode
TX (green) – Data transmit status (UTP link)
RX (green) – Data receive status (UTP link)
- **Environment**
Operating temperature:
0–45°C (32–113°F)
Humidity: Up to 90%, non-condensing

APPLICATION



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LRS-1 UNIT

- **Number of Slots**
1
- **Power**
AC: 115–230 VAC, 50/60 Hz
DC: -48 VDC
- **Power Consumption**
15W max
- **Physical**
Height: 40 mm (1.5 in)
Width: 158 mm (6.2 in)
Depth: 200 mm (7.8 in)
Weight: 1.2 kg (2.6 lb)
- **Environment**
Operating temperature:
-20–60°C (-4–140°F)
Storage temperature:
-40–80°C (-40–176°F)
Humidity: 5–90%,
non-condensing

Table 1. Fiber Optic Interface Characteristics

Module	Fiber Type [μm]	Wavelength [nm]	Transmitter Type	Attenuation [dB/km]	Power [dBm]		Receiver Sensitivity [dBm]	Typical Range		Connector Type
					Min	Max		[km]	[miles]	
ETX-42/UTP/GE-1	9/125 single mode	Tx – 1310 Rx – 1550	Laser	0.5	-5	0	-25	0–25	0–15.5	SC/APC
ETX-43/UTP/GE-1	9/125 single mode	Tx – 1550 Rx – 1310	Laser	0.5	-5	0	-25	0–25	0–15.5	SC/APC



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ORDERING

ETX-42/UTP/GE-1/*

UTP to single mode fiber optic converter card, 1310 nm Tx / 1550 nm Rx, 0–25 km (0–15.5 miles) typical range

ETX-43/UTP/GE-1/*

UTP to single mode fiber optic converter card, 1550 nm Tx / 1310 nm Rx, 0–25 km (0–15.5 miles) typical range

Note: If a power supply type is specified for an ETX-42 or ETX-43 card, the card is supplied with corresponding LRS-1 unit (AC or DC). If no power supply is specified, only an ETX-42 or ETX-43 card is supplied.

The LRS-1 enclosure can be ordered separately, see ordering information below.

LRS-1/*

Standalone single-slot chassis

- * Specify power supply type:
AC for 115–230 VAC
DC for -48 VDC



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