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MC1301U-1310-SF

Features

- One 10/100Base-TX Fast Ethernet port and one 100Base-FX Fast Ethernet fiber port
- Single-mode transceiver with simplex-SC/UPC connector
- 1310 nm laser diode transmitter
- Up to 15 km transmission over single-mode fiber
- 0 to 50ºC operating temperature range
- DIP switch to set configurations
- Class 1 laser complies with Laser Safety Standard IEC 60825-1

Fast Ethernet Media Converter (Single-mode 1310nm 100Base-FX to 10/100Base-TX)

Aurora Networks' MC1301U-1310-SF Media Converter permits network planners to connect 10 or 100 Mbps twisted pair network segments to single-mode fiber optic access networks.

The MC1301U-1310-SF incorporates a single-mode transceiver that combines low power consumption with high performance for bi-directional Fast Ethernet data communications. This module is designed for operation over single-mode fiber and transmits at a nominal wavelength of 1310 nm. The transmitter section uses a multiple quantum well laser and is a Class 1 laser device that meets the safety requirements of IEC 60825-1. The receiver section uses an integrated InGaAs detector preamplifier (IDP) mounted in an optical header and a limiting post-amplifier IC for high reliability.

MC1301U-1310-SF Product Specifications

Physical:

- Ports:

  One 10/100M RJ-45 UTP port

  One 100Base-FX fiber port with simplex SC/UPC connector
- Dimensions:

  1.03" H x 2.77" W x 3.7" D
  (2.62 cm x 7.03 cm x 9.4 cm)
- Weight: 0.5 lbs (0.23 kg)

General:

- LED indicators: Power, UTP port (LNK/ACT, and 10/100), and fiber port (LNK/ACT and FDX/COL)
- Flow control: back pressure for half duplex, IEEE802.3x for full duplex

Environmental:

- Operating temperature range: 0º to +50ºC (32º to 122ºF)
- Storage temperature range: –20º to +70ºC (–4º to 158ºF)
- Humidity: 5% to 90% non–condensing

Electrical:

- Input power: 5V ± 5%, 2.5A from external power adapter
- Power consumption: 4.5 Watts maximum
- AC-DC Adapter:
  Input: 100–240 VAC, 50/60 Hz
  Output: 2.5A @ 5V DC

Fiber Optic Port Interface:

Transmitter:

- Wavelength: 1260–1360 nm (1310 nm typ)
- Signaling speed: 125 Mbps
- Output power: –14 to –8 dBm
- Optical isolation: 30 dB

Receiver:

- Wavelength: 1480–1580 nm (1550 nm typ)
- Received optical power: –32 to –8 dBm
- Receive LOS assert level: –32 dBm

System:

- Connector: Simplex SC/UPC
- Optical return loss: 50 dB
- WDM crosstalk (optical): –45 dB max
- Power budget: 15 dB
- Fiber span, max (with 9/125µm SMF): 15 km

Twisted-Pair Port (PD / UTP) Interface:

- Connector: Shielded/Unshielded RJ-45, 8-pin jack
- Impedance: 100 Ω nominal
- Signal level output (differential): 0.95 to 1.05 V (100Base-TX)
- Signal level input: 350 mV minimum (100Base-TX)
- Data transfer rate (TX port): Auto-negotiating 10/100 Mbps or forced 10 (or 100) Mbps modes, with half- or full-duplex options for every mode
- Supported link length: 100 m
- Cable type (100 Mbps segments): CAT5 UTP (100M)

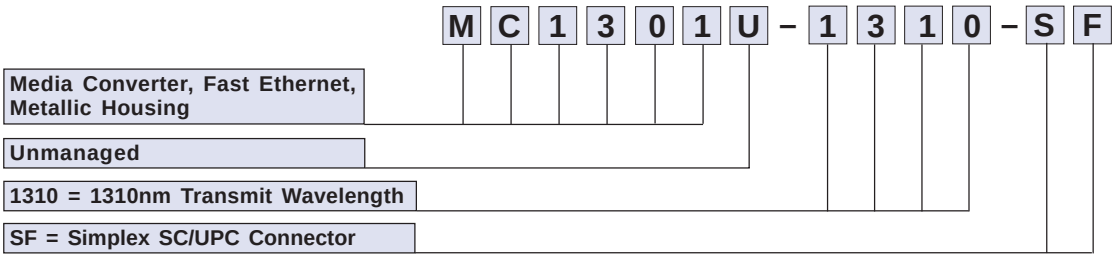
DIP-Switch Settings:

- Bit 1 (for RJ-45 port): AUTO (auto-sensing of speed) or FORCE (speed as selected by S2)
- Bit 2 (speed for RJ-45 port, Mbps): 100 or 10
- Bit 3 (for RJ-45 port): FDX (full-duplex) or HDX (half-duplex)
- Bit 4 (Link Fault Pass-Through): LFP EN (enabled) or LFP DIS (disabled)
- Bit 5 (for fiber port): FDX-FX (full-duplex) or HDX-FX (half-duplex)

Regulatory:

- Compliance: IEEE802.3, IEEE802.3u, IEEE802.3x
- Safety: UL, IEC 60825-1
- Emissions: FCC Part 15, Class A and CE Mark

Ordering Information



NOTE: AC/DC Power Adapter is included with unit.

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