

## Features

- One 10/100Base-TX Fast Ethernet port and one 100Base-FX Fast Ethernet fiber port
- Single-mode transceiver with simplex-SC/UPC connector
- 1550 nm laser diode transmitter
- Up to 15 km transmission over single-mode fiber
- 0 to 50°C 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 1550nm 100Base-FX to 10/100Base-TX)



Aurora Networks' MC1301U-1550-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-1550-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 1550 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.

**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: 0° to +50°C (32° to 122°F)
- Storage temperature range: -20° to +70°C (-4° to 158°F)
- 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: 1480–1580 nm (1550 nm typ)
- Signaling speed: 125 Mbps
- Output power: -14 to -8 dBm
- Optical isolation: 30 dB

**Receiver:**

- Wavelength: 1260–1360 nm (1310 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, with half- or full-duplex options for every mode

- Supported link length: 100 m
- Cable type (100 Mbps segments): CAT5 UTP (100M)

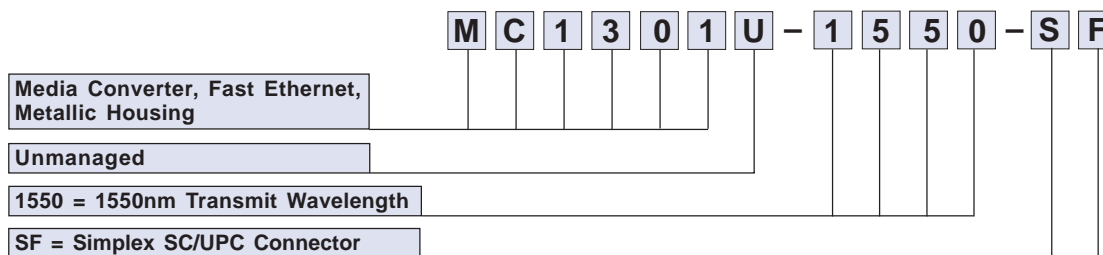
**DIP-Switch Settings:**

- 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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