

10/100Base-TX to 100Base-BX WDM Fiber Media Converters

20km~120km Reach, 1x RJ45 + 1x SC/ST/FC, Optional DIP switch



Figure 1 Front Panel



Figure 2 Standard Rear Panel



Figure 3 DIP Rear Panel

Overview

The MC-ESB11-xxxx Series are Fast Ethernet Media Converters designed to convert 10/100BASE-TX copper to 100BASE-BX single fiber. This media converter uses Wavelength-Division Multiplexing (WDM) technology, enabling Bi-Directional communication over a single fiber, doubling the capacity of your existing fiber infrastructure without having to install new cabling.

The single fiber WDM Fast Ethernet media converter is manufactured with latest IC packages from USA or Taiwan and high-quality fiber optical transceiver, which provides a good electrical characteristics to ensure reliable data transmission and long working life. 6 Group LED indicated lights could fully monitor the working conditions of Media Converters. It is easy for end-users to observe network operation. This media converter provide external power as default, it can be as a stand-alone unit, or inserted into Optcore's low-cost **14-slot Media Converter Rack Chassis** (part number: MC-RACK-14, sold separately) that allows all the media converters to be powered by a single internal power supply. The converters is provided with single SC, ST and FC connector option for different IT professionals.

Features

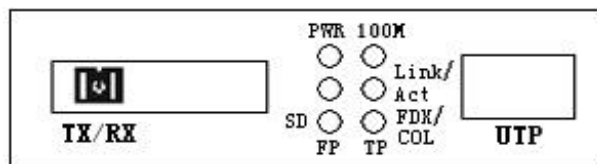
- Auto negotiation function allows UTP port to auto select 10M or 100M, and Full Duplex or Half Duplex
- UTP port supports MDI/MDI-X auto crossover
- Multiple Optical Transceiver could be chosen: SC, ST or FC
- Adopts WDM technology, transmitting and receiving data on one single fiber
- Easy-to-view LED indicators provide monitoring of network system easily
- Compliant with IEEE 802.3 10Base-T and IEEE 802.3u 100Base-TX, 100Base-BX Standards
- Internal Circuit of prevented thunder could greatly reduce damage of the converter caused by thunderbolt induction
- Optional DIP switch to allow end users select LFP functions
- RoHS compliant and Lead Free
- Default as external switching power

Technical Specifications

Product Series	10/100BASE-TX Ethernet to 100BASE-FX Fiber Media Converter	Standards and Protocols	IEEE 802.3, IEEE 802.3u, IEEE 802.3x
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Ports	1 x 10/100BASE-TX RJ45 port 1 x 10/100BASE-FX SC port (ST or FC also available)	Network Media	10Base-T: Cat 5 UTP (maximum 100m) 100Base-T: Cat 5 UTP (maximum 100m) 100Base-FX: Single-mode Fiber Cable (maximum 120km)
Flow control	Full Duplex: IEEE802.3x Half Duplex: back pressure	LED indicator	Power, FX 100, FX Link/Act TX 100, TX FDX, TX Link/Act
Buffer space	128KB	MAC address	1K
Wavelength	1310nm or 1550nm (see order information)	Fiber Type	MMF or SMF
Power Supply	Input: AC 100~240V 50/60Hz Output: DC 5V 1A	Power Consumption	2.5W
Dimensions (WxDxH)	26×70×93mm	Net Weight	190 g (Excluding power adapter)
Environment	Operating: 0°C to 50°C, 10~90% RH Storage: -40°C to 70°C, 5~90% RH	Compliance	FDA IEC/EN 60825-1 RoHS, CE
Included in Package	1 - Fiber Media Converter 1 - Universal Power Adapter (EU/US/UK/CN/SA) 1 - Warranty Card 1 - Instruction Manual	Shipping (Package) Weight	0.4 kg

Figure 4 Front panel of single fiber WDM media converter



Ordering information

① Standard Product

Part number	Description
10/100BASE-TX Ethernet to 100BASE-BX 20km WDM Single Fiber Media Converter	
MC-ESB11-A20C	10/100Base-TX to 100Base-BX Tx1310nm/Rx1550nm 20km Single Fiber WDM Media Converter (SC)
MC-ESB11-B20C	10/100Base-TX to 100Base-BX Tx1550nm/Rx1310nm 20km Single Fiber WDM Media Converter (SC)
MC-ESB11-A20T	10/100Base-TX to 100Base-BX Tx1310nm/Rx1550nm 20km Single Fiber WDM Media Converter (ST)
MC-ESB11-B20T	10/100Base-TX to 100Base-BX Tx1550nm/Rx1310nm 20km Single Fiber WDM Media Converter (ST)
MC-ESB11-A20F	10/100Base-TX to 100Base-BX Tx1310nm/Rx1550nm 20km Single Fiber WDM Media Converter (FC)
MC-ESB11-B20F	10/100Base-TX to 100Base-BX Tx1550nm/Rx1310nm 20km Single Fiber WDM Media Converter (FC)
10/100BASE-TX Ethernet to 100BASE-BX 40km WDM Single Fiber Media Converter	
MC-ESB11-A40C	10/100Base-TX to 100Base-BX Tx1310nm/Rx1550nm 40km Single Fiber WDM Media Converter (SC)
MC-ESB11-B40C	10/100Base-TX to 100Base-BX Tx1550nm/Rx1310nm 40km Single Fiber WDM Media Converter (SC)
MC-ESB11-A40T	10/100Base-TX to 100Base-BX Tx1310nm/Rx1550nm 40km Single Fiber WDM Media Converter (ST)
MC-ESB11-B40T	10/100Base-TX to 100Base-BX Tx1550nm/Rx1310nm 40km Single Fiber WDM Media Converter (ST)

MC-ESB11-A40F	10/100Base-TX to 100Base-BX Tx1310nm/Rx1550nm 40km Single Fiber WDM Media Converter (FC)
MC-ESB11-B40F	10/100Base-TX to 100Base-BX Tx1550nm/Rx1310nm 40km Single Fiber WDM Media Converter (FC)
10/100BASE-TX Ethernet to 100BASE-BX 80km WDM Single Fiber Media Converter	
MC-ESB11-A80C	10/100Base-TX to 100Base-BX Tx1490nm/Rx1550nm 80km Single Fiber WDM Media Converter (SC)
MC-ESB11-B80C	10/100Base-TX to 100Base-BX Tx1550nm/Rx1490nm 80km Single Fiber WDM Media Converter (SC)
MC-ESB11-A80T	10/100Base-TX to 100Base-BX Tx1490nm/Rx1550nm 80km Single Fiber WDM Media Converter (ST)
MC-ESB11-B80T	10/100Base-TX to 100Base-BX Tx1550nm/Rx1490nm 80km Single Fiber WDM Media Converter (ST)
MC-ESB11-A80F	10/100Base-TX to 100Base-BX Tx1490nm/Rx1550nm 80km Single Fiber WDM Media Converter (FC)
MC-ESB11-B80F	10/100Base-TX to 100Base-BX Tx1550nm/Rx1490nm 80km Single Fiber WDM Media Converter (FC)
10/100BASE-TX Ethernet to 100BASE-BX 120km WDM Single Fiber Media Converter	
MC-ESB11-A120C	10/100Base-TX to 100Base-BX Tx1490nm/Rx1550nm 120km Single Fiber WDM Media Converter (SC)
MC-ESB11-B120C	10/100Base-TX to 100Base-BX Tx1550nm/Rx1490nm 120km Single Fiber WDM Media Converter (SC)
MC-ESB11-A120T	10/100Base-TX to 100Base-BX Tx1490nm/Rx1550nm 120km Single Fiber WDM Media Converter (ST)
MC-ESB11-B120T	10/100Base-TX to 100Base-BX Tx1550nm/Rx1490nm 120km Single Fiber WDM Media Converter (ST)
MC-ESB11-A120F	10/100Base-TX to 100Base-BX Tx1490nm/Rx1550nm 120km Single Fiber WDM Media Converter (FC)
MC-ESB11-B120F	10/100Base-TX to 100Base-BX Tx1550nm/Rx1490nm 120km Single Fiber WDM Media Converter (FC)

② With DIP switch function

Part number	Description
10/100BASE-TX Ethernet to 100BASE-BX 20km WDM Single Fiber Media Converter, with DIP switch	
MC-ESB11-A20C/DIP	10/100Base-TX to 100Base-BX Tx1310nm/Rx1550nm 20km Single Fiber Media Converter (SC),DIP
MC-ESB11-B20C/DIP	10/100Base-TX to 100Base-BX Tx1550nm/Rx1310nm 20km Single Fiber Media Converter (SC),DIP
MC-ESB11-A20T/DIP	10/100Base-TX to 100Base-BX Tx1310nm/Rx1550nm 20km Single Fiber Media Converter (ST),DIP
MC-ESB11-B20T/DIP	10/100Base-TX to 100Base-BX Tx1550nm/Rx1310nm 20km Single Fiber Media Converter (ST),DIP
MC-ESB11-A20F/DIP	10/100Base-TX to 100Base-BX Tx1310nm/Rx1550nm 20km Single Fiber Media Converter (FC),DIP
MC-ESB11-B20F/DIP	10/100Base-TX to 100Base-BX Tx1550nm/Rx1310nm 20km Single Fiber Media Converter (FC),DIP
10/100BASE-TX Ethernet to 100BASE-BX 40km WDM Single Fiber Media Converter, with DIP switch	
MC-ESB11-A40C/DIP	10/100Base-TX to 100Base-BX Tx1310nm/Rx1550nm 40km Single Fiber Media Converter (SC),DIP
MC-ESB11-B40C/DIP	10/100Base-TX to 100Base-BX Tx1550nm/Rx1310nm 40km Single Fiber Media Converter (SC),DIP
MC-ESB11-A40T/DIP	10/100Base-TX to 100Base-BX Tx1310nm/Rx1550nm 40km Single Fiber Media Converter (ST),DIP
MC-ESB11-B40T/DIP	10/100Base-TX to 100Base-BX Tx1550nm/Rx1310nm 40km Single Fiber Media Converter (ST),DIP
MC-ESB11-A40F/DIP	10/100Base-TX to 100Base-BX Tx1310nm/Rx1550nm 40km Single Fiber Media Converter (FC),DIP
MC-ESB11-B40F/DIP	10/100Base-TX to 100Base-BX Tx1550nm/Rx1310nm 40km Single Fiber Media Converter (FC),DIP
10/100BASE-TX Ethernet to 100BASE-BX 80km WDM Single Fiber Media Converter, with DIP switch	
MC-ESB11-A80C/DIP	10/100Base-TX to 100Base-BX Tx1490nm/Rx1550nm 80km Single Fiber Media Converter (SC),DIP
MC-ESB11-B80C/DIP	10/100Base-TX to 100Base-BX Tx1550nm/Rx1490nm 80km Single Fiber Media Converter (SC),DIP
MC-ESB11-A80T/DIP	10/100Base-TX to 100Base-BX Tx1490nm/Rx1550nm 80km Single Fiber Media Converter (ST),DIP
MC-ESB11-B80T/DIP	10/100Base-TX to 100Base-BX Tx1550nm/Rx1490nm 80km Single Fiber Media Converter (ST),DIP
MC-ESB11-A80F/DIP	10/100Base-TX to 100Base-BX Tx1490nm/Rx1550nm 80km Single Fiber Media Converter (FC),DIP
MC-ESB11-B80F/DIP	10/100Base-TX to 100Base-BX Tx1550nm/Rx1490nm 80km Single Fiber Media Converter (FC),DIP

10/100BASE-TX Ethernet to 100BASE-BX 120km WDM Single Fiber Media Converter, with DIP switch	
MC-ESB11-A120C/DIP	10/100Base-TX to 100Base-BX Tx1490nm/Rx1550nm 120km Single Fiber Media Converter (SC),DIP
MC-ESB11-B120C/DIP	10/100Base-TX to 100Base-BX Tx1550nm/Rx1490nm 120km Single Fiber Media Converter (SC),DIP
MC-ESB11-A120T/DIP	10/100Base-TX to 100Base-BX Tx1490nm/Rx1550nm 120km Single Fiber Media Converter (ST),DIP
MC-ESB11-B120T/DIP	10/100Base-TX to 100Base-BX Tx1550nm/Rx1490nm 120km Single Fiber Media Converter (ST),DIP
MC-ESB11-A120F/DIP	10/100Base-TX to 100Base-BX Tx1490nm/Rx1550nm 120km Single Fiber Media Converter (FC),DIP
MC-ESB11-B120F/DIP	10/100Base-TX to 100Base-BX Tx1550nm/Rx1490nm 120km Single Fiber Media Converter (FC),DIP

Warnings

Process plug

The optical transceiver in the Ethernet Media Converter is supplied with a dust cover. This plug protects the optical transceiver during standard manufacturing processes by preventing contamination from air borne particles. It is recommended that the dust cover remain in the transceiver whenever an optical fiber connector is not inserted.

Laser Safety

The Ethernet Media Converter is a Class 1 laser product per international standard IEC 60825-1. Radiation emitted by laser devices can be dangerous to human eyes. Avoid eye exposure to direct or indirect radiation.

For more product information, visit us on the web at www.optcore.net



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