

MCGE - Gigabit Media Converter

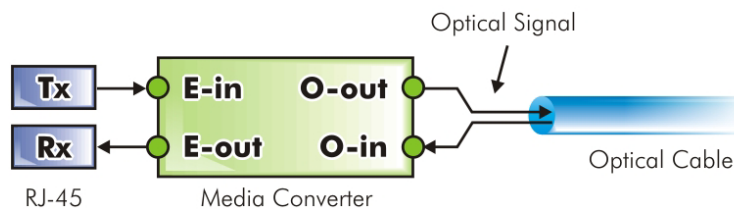


Padtec's MCGE is a Gigabit Media Converter that supports conversion from Ethernet 1000Base-T signal to 1000Base-SX/LX signal. It is classified in two kinds of Ethernet Media Converter, the conventional GBIC (Gigabit Interface converter) SX/LX as well as WGC (WDM Bi-directional SC Receptacle GBIC).

The conventional GBIC is 1000Base-T to 1000Base-SX/LX Multimode/Singlemode Fiber Media Converter including 850nm VCSEL GBIC or 1310/1550nm GBIC.

The other hand, WDM Gigabit Media Converter is 1000Base-T to 1000Base-SX/LX Single Fiber WDM Media Converter including WGC that 1310/1550nm Bi-directional Receptacle GBIC using WDM Technology. In case of WDM Technology combines two fiber cables into one single fiber to save greatly the installation cost of expensive fiber cable.

Functioning Mode



Applications

- Extends network distance between twisted pair ports of two switch hubs or a switch hub and a server.
- Alternative to optical Gigabit ethernet media converter systems
- Can be used to connect remote devices or an existing fiber interface

Physical Characteristics

	Specifications
Standard Compatibility	IEEE 802.3ab 1000Base-T, IEEE802.3z 1000Base-SX/LX
Protocol Compatibility	CSMA/CD
Optical Interface	1) 850nm VCSEL GBIC, 50/125 μm or 62.5/125 μm for MMF 2) 1310nm, 1550nm Duplex or 1310/1550nm WDM Bi-directional GBIC for SMF
Electrical Interface	RJ-45 port for UTP cat.5 cable
Operating Temperature	0 °C up to +70° C
Storage Temperature	-40 °C up to +85° C
Humidity	30% to 90%
Mechanics	Padtec's Media Converter is supplied in 19" 1U height (horizontal mechanics) or in 3U sub-rack vertical mechanics.

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Electrical Characteristics

	Specifications
TX Port	IEEE802.3ab 1000Base-T Full duplex support Max. Distance of Segment: Max. 100m at 1000Base T
Data Transfer Rate	1,488,000 PPS @ 1000Mbps
Power	48 VDC or 85/265 VAC 50/60Hz
LED Indicator	PWR : Power Input — T Link : UTP Link — F Link : Fiber Link TX : Transmitting Data — RX : Receiving Data — FDX : Full Duplex

Optical Characteristics

		Min	Typ	Max	Unit			Min	Typ	Max	Unit
Transmitter						Receiver					
Optical Power	850nm VCSEL	-10		-4	dBm	Optical Sensitivity	850nm			-17	dBm
	1310nm SH	-10		-3			1310nm SH	-	-23	-21	
	1310nm LH	-6	-	0			1310/1550nm LH	-	-26	-25	
	1550nm LH	-4		0			1550nm ULH	-	-26	-25	
	1550nm ULH	0		+4							
Center Wavelength	850nm VCSEL	830	850	860	nm	Sensitivity Degradation	-	-	3	-	dB
	1310nm FP	1260	1310	1360							
	1550nm DFB	1500	1550	1600							
Spectral Width(RMS)¹	850nm VCSEL			0.85	nm	Operating Wavelength	850nm	810	-	860	nm
	1310nm FP	-	-	7.7			1310/1550nm	1200	-	1600	
	1550nm DFB			1.0							
Extinction Ratio²	-	9	-	-	dB	Optical Overload	850nm	-4	-	-	dBm
							1310/1550nm	-3	-	-	

- (1). CW : P = 5mW (1310nm FP, 1550nm DFB), 12mA(850nm VCSEL) at TO CAN.
(2). Extinction Ratio is set to > 10dB SOL and room temperature.

Part Number

MCGE[X][Y][Z][W]

X =	Y =	Z =	W =
(1) 1 U height (3) 3 U height	Optical Interface (1) 1310 FP SMF Short-Haul (10 Km) (2) 850 VCSEL MMF Short Haul (500 m) (3) 1310 FP SMF Long-Haul (40 Km) (4) 1550 DFB SMF Long-Haul (60 Km) (5) 1550 DFB SMF Ultra-Long-Haul (80 Km) (6) 1310nm FP TX/1550nm RX, SMF (7) 1550nm DFB TX/1310nm RX, SMF	Power Supply (A) 85/265 VAC 50/60 Hz (D) 48 VDC (F) Full Range	Monitoring (S) Standard (C) Dry Contact (M) With Management

Note.: - Nor all combinations are available
- Other models upon request