



Model

MC 100SB-20A

10/100 Mbit/s Media Converter

1. GENERAL DESCRIPTION

The media converter transforms the transmission media of Ethernet signal from CAT5 100m to optical fiber 850/1310/1550nm. It can extend the transmission distance to several kilometers or hundred kilometers.

All Cudy Media converters apply the new 0.25 μ m technology to improve the performance and to avoid the packet lost with long the transmission. It also reduce the delay time to less than 9.6 μ s.

Using media converter is an economical solution to achieve long distance transmission base on current status.

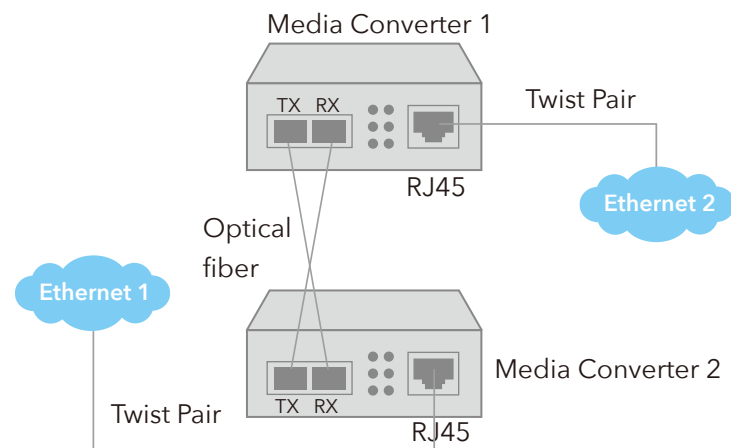


Figure 1.1 Media converter application

Datasheet:10/100 Mbit/s Media Converter

2. FEATURES

1. Built in a 2-port switch: 1x10/100Base-Tx and 1x100Base-Fx
 - Pass all packets without address and CRC check (optional)
 - Supports modified cut-through frame forwarding for low latency
 - Supports store and forwarding mode
 - Supports flow control for full and half duplex operation
 - Bandwidth control
 - Forward 1600 bytes packet for management
 - Optional forward fragments
 - Auto restore time less than 150ns and delay time less than 9.6 μ s
2. Supports 100Base-FX standard
3. Built in 1024KB RAM for data buffer
4. Supports auto MDI-MDIX and auto negotiation speed 10/100M
5. Supports link fault pass through function (LFP optional)
6. Supports for end fault function (optional)
7. LED display for power, link/activity, full/half, 10/100M
8. Support EEPROM configuration (optional)
9. Support VLAN pass through packet
10. The longest transmission distance reaches 120 kilometers

3. STANDARD

IEEE802.3 ETHERNET STANDARD

IEEE802.3u FAST ETHERNET STANDARD

IEEE802.3x FLOW CONTROL STANDARD

IEEE802.3ab FRAME SIZE STANDARD

4. PRODUCTS CLASSIFICATION & LEDs

1. ACCORDING TO OUTLINE:

- 90V~240V AC - 50/60Hz or -48VDC input power standalone media converter;
- +5V DC input power standalone media converter with external switching adaptor;
- Optional USB PORT or +5V DC input power standalone media converter;
- Media converter Card;
- Rack System Chassis(2U);

2. ACCORDING TO QUANTITY of FIBER:

- Single fiber bidirectional media converter,
- Dual fiber media converter;

3. ACCORDING TO TYPE OF FIBER:

- Multimode media converter,
- Single mode media converter;

- 4. +5V DC input power standalone media converter can be applied for 14 slots rack mounted chassis, media converter Card applied for 16 slots rack mounted chassis.

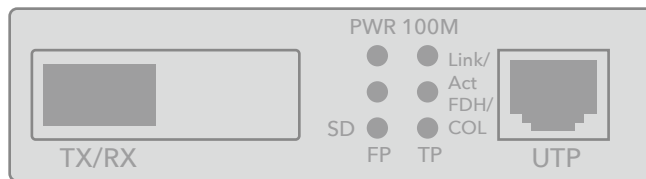


Figure 4.1 : Front panel for single fiber media converter

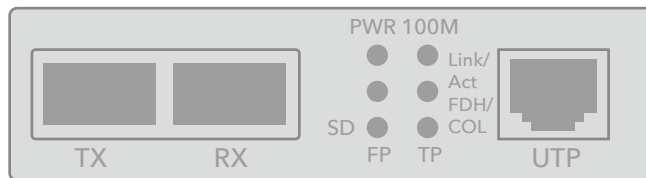


Figure 4.2 : Front panel for dual fiber media converter



Figure 4.3 : Back panel for single/dual fiber media converter

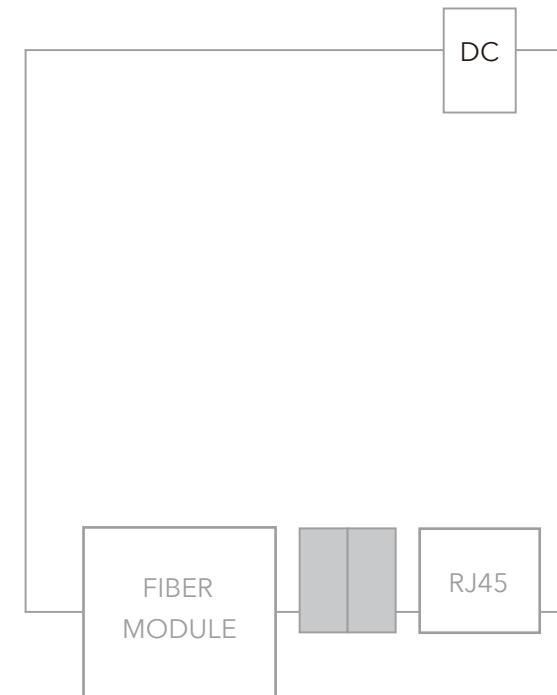


Figure 4.4: Stand alone media converter outline

5. LED FUNCTION DISCRIPTION

Table 5.1 LED Function Description

LED	STATUS	DESCRIPTION
PWR	ON	POWER ON
	OFF	POWER OFF
FX-SD	ON	RECEIVER OPTICAL SIGNAL
	OFF	NO OPTICAL SIGNAL INPUT
FX-LINK/ACT	ON	LINKED ON FIBER PORT
	FLASH	ACTIVITY
	OFF	NOT LINKED
TX-SPD	ON	100M BASE-TX
	OFF	10M BASE-TX
TX-LINK/ACT	ON	LINKED ON UTP PORT
	FLASH	ACTIVITY
	OFF	NOT LINKED
TX-FDX/COL	ON	FULL DUPLEX
	OFF	HALF DUPLEX

6. PARAMETER

Table 6.1 Parameter

	10/100M multimode media converter	10/100M singlemode media converter
Cable	MM Fiber / Twist Pair	SM Fiber / Twist Pair
Transmission Type	10/100M FDX/HDX	10/100M FDX/HDX
MTBF	>3 years	>3 years
BER	<1E-9	<1E-9
Data Buffer	1024KB	1024KB
Power temperature variation	0.2mw/°C	0.2mw/°C
Input Power Range (dBm)	0~-30	0~-40
Operate Temperature	0°C~70°C	0°C~70°C
Storage Temperature	-45°C~80°C	-45°C~80°C
Humidity	Upto 95%none-condensing	Upto 95%none-condensing
Power	2.5w	2.5w
EMC	FCC Part15, CE	FCC Part15,CE
Size	95 × 70 × 26mm (external power)	95 × 70 × 26mm (external power)
	140 × 110 × 30mm(internal power)	140 × 110 × 30mm (internal power)

7. ORDERING INFORMATION

Table 7.1 Model vs Specification

PN	λ TX nm	λ RX nm	PTX dBm	SEN dBm	Overload dBm	Distance Km	Loss dB/km	Connector
MC100MA-2	1310	1310	-22~-12	≤ -30	≥ -3	2	2	MM Dual SC
MC100SA-20	1310	1310	-15~-8	≤ -38	≥ 0	20	0.35	SM Dual SC
MC100SA-40	1310	1310	-8~-3	≤ -38	≥ 0	40	0.35	
MC100SA-60	1310	1310	-3~0	≤ -38	≥ 0	60	0.35	
MC100SA-80	1550	1550	-5~0	≤ -38	≥ 0	80	0.25	
MC100SA-100	1550	1550	≥ -1	≤ -38	≥ 0	100	0.25	
MC100SB-20A	1310	1550	-12~-8	≤ -36	≥ 0	20	0.35	
MC100SB-20B	1550	1310	-8~-3	≤ -36	≥ 0	20	0.25	
MC100SB-40A	1310	1550	-3~0	≤ -36	≥ 0	40	0.35	
MC100SB-40B	1550	1310	-5~0	≤ -36	≥ 0	40	0.25	
MC100SB-60A	1310	1550	-3~0	≤ -36	≥ 0	60	0.35	
MC100SB-60B	1550	1310	-3~0	≤ -36	≥ 0	60	0.25	