SM-MM Series: Single-Mode/Multimode Optical Media Converter System

Preliminary

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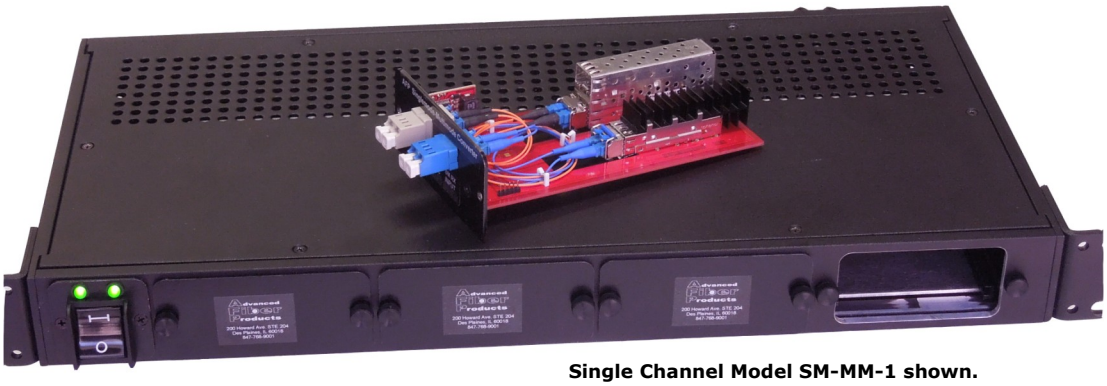


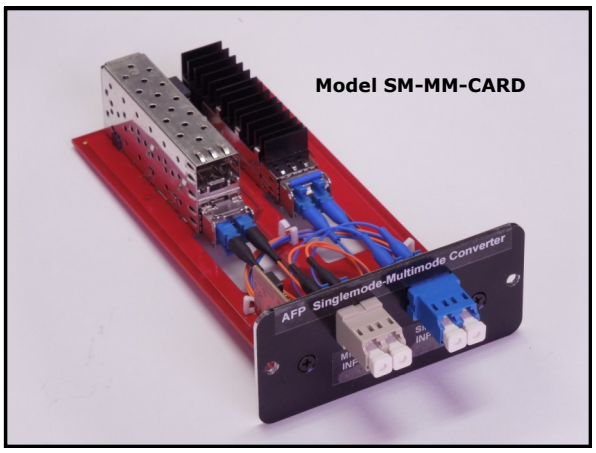
Single Channel Model SM-MM-1 shown.

Description

The SM-MM Optical Media Converter System is a full duplex protocol independent 1RU system that will convert up to 4 independent channels of optical multimode binary digital traffic into optical, single mode binary digital traffic.

The optical data to and from the multi-mode side is connected to the multimode duplex LC fiber ports on the front plate of the Media Converter System. The optical traffic then passes the conversion module that coverts the optical traffic to and from the single-mode duplex LC fiber ports on the front plate.

The individual cards come populated with 1310 nm multimode SFP optics and include on-board storage of the 850 nm multimode SFP optics for easy field change-over by simply swapping the multimode SFP.



Model SM-MM-CARD

Key Features

- Supports the following optical protocols:
  - DS1 (T1)
  - DS3 (T3)
  - DNE Technologies CV-MCU2 Universal Converter Module*
  - 100 Base-FX
- 1310 nm optical wavelength for single-mode and on-board options of 850 nm or 1310 nm for the multi-mode.
- 12VDC Redundant Supply supports base system.
- Up to 10 km link distance on single-mode fiber and 1 km link distance on multi-mode fiber.
- 1 RU Chassis supports up to 4 hot pluggable channel cards.
- LED RX power indication and multimode wavelength indication on each card.

* except pulse modulated CP-2270 traffic

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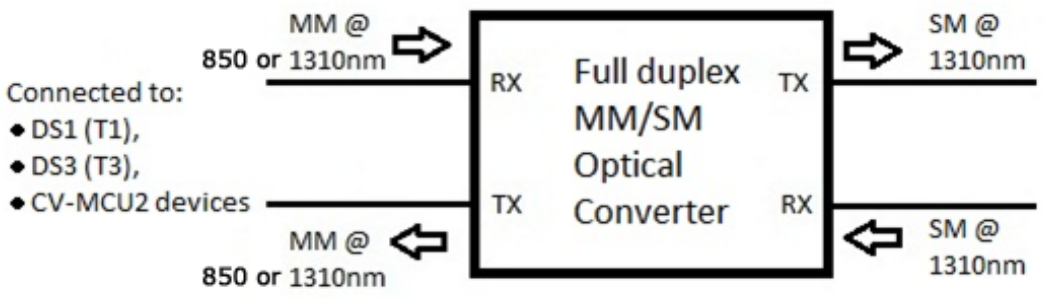
Channel Block Diagram



Ordering Information SM-MM Converter System:

SM-MM-X:

X = ***1, 2, 3, or 4*** **for number of SM-MM Converter card slots populated.**
X = ***RACK*** **for empty front 1RU Chassis.**
X = ***CARD*** **for complete SM-MM converter PCB Assembly with 3 SFPs installed.**

SM-RJ-CARD-GbE: Single-mode10/100/1000T to GbE Optical Media Converter; 1310nm (consult factory).

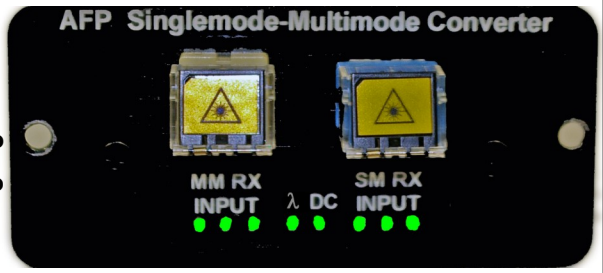
MM-RJ-CARD-GbE: Multimode 10/100/1000T to GbE Optical Media Converter; 1310nm (consult factory).

SFP-MULTI-X-Y:

X = MM for Multimode Multi-rate SFP.
= SM for 1310nm Single-mode Multi-rate SFP.
Y = Multimode Wavelength:
= 31 for 1310 nm.
= 85 for 850 nm.
= Blank for Single-mode.

Green LED Functions:

DC LED Solid = Power on.
λ LED Solid = 1310nm MM SFP
λ LED Flashing = 850nm MM SFP



MM RX Input LEDs Flashing = No MM SFP installed in MM slot
SM RX Input LEDs Flashing = MM or no SM SFP installed in SM slot
SM/MM RX Input LEDs = Binary RX Optical Input Power Indication

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Transmitter Specifications

Parameters		Min.	Typ.	Max.	Units
MM Optical Link	Output Optical Power	-20		-14	dBm
	Wavelength	1260	1310	1360	nm
	Output Optical Power	-10		-3	dBm
	Wavelength	830	850	860	nm
SM Optical Link	Output Optical Power	-10		-3	dBm
	Wavelength	1260	1310	1360	nm
Data Bit Rate		16		125,000	Kbps

Receiver Specifications

Parameters		Min.	Typ.	Max.	Units
MM Optical Link	Receive Optical Power	-22		-3	dBm
	Wavelength	1260	1310	1360	nm
	Link Budget	17			dB
	Receive Optical Power	-25		-3	dBm
	Wavelength	830	850	860	nm
	Link Budget	22			dB
SM Optical Link	Receive Optical Power	-22		-3	dBm
	Wavelength	1260	1310	1360	nm
	Link Budget	19			dB
Data Bit Rate		16		125,000	Kbps

Recommended Operating Conditions

Parameter	Min	Typ	Max	Units
Ambient Operating Temp.	-10	25	+ 50	°C
Storage Temperature	-40		+85	°C
Humidity (non-condensing)	0		85	RH%
Power Consumption per Converter Channel (not including T1 media converter)	-	1.3	1.7	W

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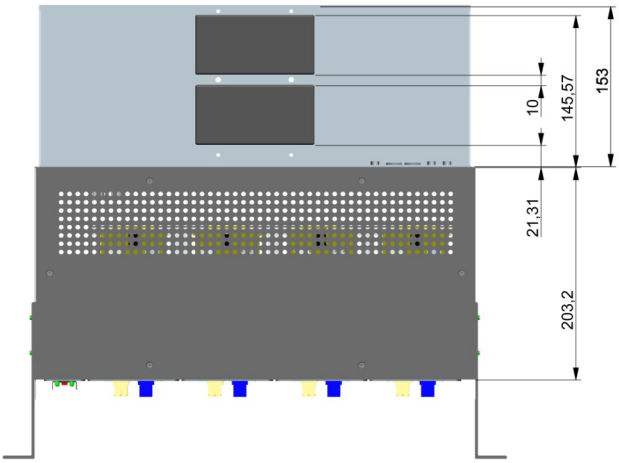
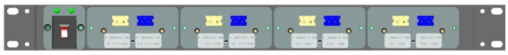
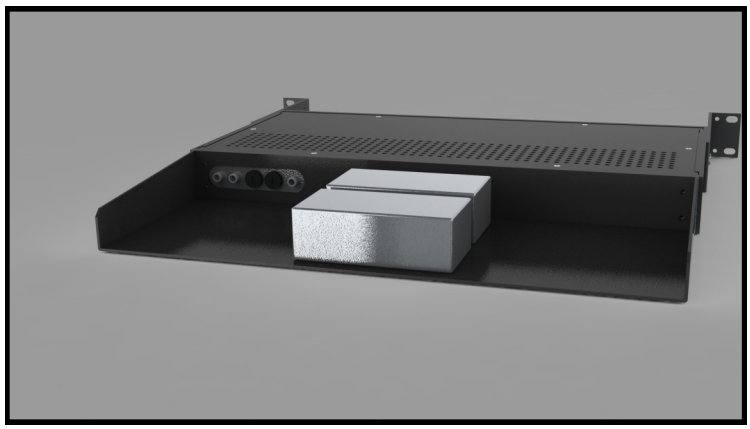


Overall Dimensions (SM-MM-4 Shown)





Shipping Dimensions	24x24x6 in	62x62x17 cm
Shipping Weight	TBD lb	TBD g

Advanced Fiber Products, LLC develops and manufactures active optical devices engineered and packaged to withstand the rigors of broadcast production and many industrial environments. AFP also offers a wide range of ancillary components in addition to specialized fiber assemblies related to high performance optical hermeticity, laser-to-fiber or fiber-to-detector delivery and integration into complete packaging solutions. AFP LLC is a wholly owned subsidiary of Advanced Fiber Products Ltd. headquartered near Cambridge in the UK.

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