



MICRO INDUSTRIAL FIBER MEDIA CONVERTER

HCM-1001-SFP



Technical Datasheet and Quick Guide

Industrial Fiber Media Converter

The Micro Industrial Fiber Media Converter stands out as an exceptional solution for businesses seeking a seamless transition between Fast Ethernet and Gigabit Ethernet. Its cost-effective, entry-level design ensures that users can effortlessly implement media conversion without the need for complex configurations. With its plug-and-play capability, setting up the converter is as simple as connecting it to your existing network infrastructure. Compact in size, this device is perfect for environments where space is at a premium, allowing you to optimize your setup without compromising on performance. Built to withstand extreme conditions, it operates efficiently within a wide temperature range of -30°C to 75°C and features an IP40 rugged case that protects against dust and debris. This durability makes the Micro Industrial Fiber Media Converter ideal for deployment in challenging locations like factories, transportation hubs, and outdoor settings where fluctuating temperatures are common.

Main Features

- Compliant with IEEE 802.3u/802.3z/802.3ab
- SFP slot for universal deployment(MM, SM or BiDi)
- Full/Half Duplex, Auto-Negotiation and Auto-MDI/MDIX
- SFP port is multi-rate 100Mb/Gigabit – support any 3rd party optics: single and multimode, single or dual fiber options up to 120Km
- Robust IP40 Aluminum Metal Enclosure for Harsh Environments
- Compact size – ideal for confined spaces, including camera poles and roadside cabinets.
- Operating Temperature Range: -30 to +75°C
- DIP-switches to set different configurations, ex. LFP: Link Fault Pass Through
- Plug & Play – no need for any user configuration
- Desktop and Wall Mounting installation



Product Specifications

Hardware Specifications		
Model	HCM-1001-SFP	
Ports	1x10/100Base-TX RJ45 1x100/1000Base-X SFP	
Port Mode(Tx)	Auto Negotiation Speed Full/Half Duplex Mode Auto MDI/MDI-X Connection	
Maximum Packet Length	Up to 10K	
Forward Filter Rate	14,880pps(10Mbps) 148,800pps(100Mbps) 1,488,000pps(1000Mbps)	
Transmission Mode	Store and Forward (full/half duplex mode)	
Transmission Distance		
Optical Fiber Port	Depends on SFP optical module used(0-160km)	
Copper RJ45 Port	100m (using standard CAT5/CAT5e cable)	
Power		
Input Power	DC 9-56V, 0.5/0.25Aa	
Power Consumption	2.4W Max. 0.2A@12VDC	
Physical Characteristics		
Housing	Aluminum case	
IP Rating	IP40	
Dimensions	36.2mm*117mm*24.5mm	
Weight	100g(unit only), 250g(With package – includes AC adapter 12V/1A)	
Installation	Wall Mount and Desktop	
Environmental		
Operating Temperature	-30°C to +75°C (-30 to 167 °F)	
Operating Humidity	5%~90% (non-condensing)	
Storage Temperature	-30°C to +85°C (-30 to 185 °F)	
MTBF	>500,000 hours @MIL-HDBK-217F GF 25°C	
Heat Dissipation	7 BTU/h	
Cooling	Passive Cooling	
Noise Level	0 dBA	
Package Contents		
Device	1x Industrial Media Converter	
Installation Kit	1x Caps, plastic, for SFP Slot, 2 x Wall-Mount Wings(Fixed)	
Documentation	1x Quick installation guide	

Product Specifications

DIP Switch			
No.	Function	State	Description
SFP Port Configuration			
1	LFP	OFF	Disable
		ON	Enable
2	ALS	OFF	Disable
		ON	Enable
3	FX Reset Function	OFF	Disable
		ON	Enable
4	FX Speed	OFF	FX Speed 1000M
		ON	FX Speed 100M/1000M

Note: 1. LFP: Link Fault Pass Through
 2. ALS: Automatic Laser Shutdown Function
 3. FX Reset Function: If enabled, when the FX link is down, the unit will automatically shut down and restart 10-15 seconds later. Such function allows hung-up/stuck links to automatically reset without local intervention. The remote unit can be power cycled by simply disconnecting the local fiber link for a few seconds.

LEDs	States	Description
PWR	On	The device is powered on
LINK/ACT	On	TP cable is properly connected, no data transmission
	Blinking	The TP port is sending or receiving data
SPD	On	The port is operating at 1000Mbps(RJ45)
	Off	The port is operating at 10/100Mbps(RJ45) (FR-2703)
FX/SPD	On	The optical fiber port is operating at 1000M
	Off	The optical fiber port is operating at 100M
FX/LNK	On	The optical fiber cable is properly connected, no data transmission
	Blinking	The port is sending or receiving data

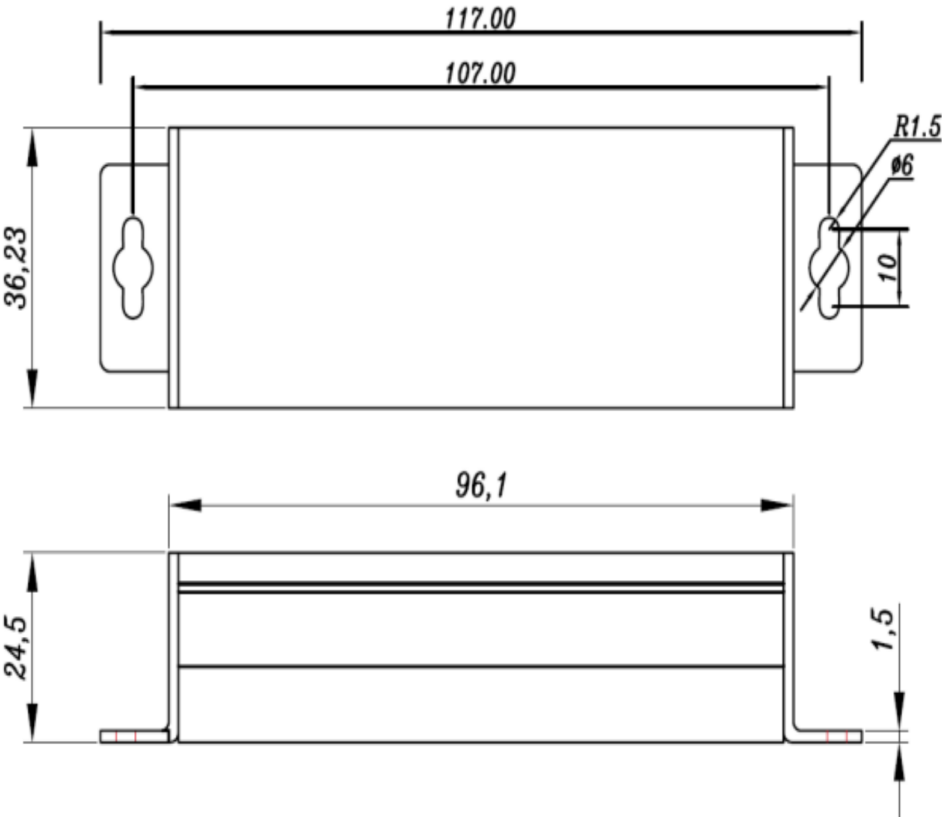
Regulatory & Warranty

Standard Compliance	IEEE 802.3 Ethernet IEEE 802.3u Fast Ethernet IEEE 802.3ab Gigabit Ethernet
ISO	Manufactured in ISO-9001 facility
Safety	IEC62368-1:2020+A11:2020
EMI	FCC Part 15B Class A, IEC 61000-3-2
EMS	IEC61000-4-2 ESD: Contact:±8kV, Air:±15kV IEC61000-4-5 Surge: Power: ±4kV; RJ45:±2kV
Shock	IEC 60068-2-27
Free Fall	IEC 60068-2-32
Vibration	IEC 60068-2-6
Environmental	RoHS 2011/65/EU Annex II(EU)
Warranty	3 Years

Accessories(Sold Separately)

Power Adapter	
ACUS-12V-R	Input: AC100-240V, Output: DC12V-1A
SFP Optical Transceiver	
SFP-7020-31-IDD	1.25Gb/s 1310nm 20km SFP, operation temperature :-40°C to +85°C
SFP-7040-31-IDD	1.25Gb/s 1310nm 40km SFP, operation temperature :-40°C to +85°C
SFP-7080-55-IDD	1.25Gb/s 1550nm 80/100km SFP, operation temperature :-40°C to +85°C
SFP-7020-WA/WB-IDD	1.25Gb/s 1310nm/1550nm 20km SFP, operation temperature :-30°C to +85°C

Dimensions Unit: mm



CAUTION!

Please observe following precautions while using the fiber media converter:

- ❖ Keep the power off during installation, wear an anti-static wrist, and ensure that the anti-static wrist is in good contact with the skin to avoid potential safety hazards.
- ❖ Unit should only operate under correct power supply. Please confirm that the power supply voltage matches the voltage indicated by the unit.
- ❖ Before powering, please make sure that the power circuit is not overloaded.
- ❖ To avoid the risk of electric shock, do not open the case while unit is powered.
- ❖ Before cleaning unit, unplug power from unit. Do not clean with a wet cloth. Do not use liquids for cleaning.
- ❖ Properly secure unit in either desktop or wall mounting installation to mechanical damage.

Ordering Information

Model Number	10/100/1000Base-T, RJ45 Port	100/1000Base-X Port	Optical Port Connector Option	Input Voltage	Operating Temp.
HCM-1001-SFP	1	1	LC or SC, dictated by SFP	DC9-56V	-30 to +75°C

Shipping Information

Model No.	HCM-1001-SFP
Classification Codes	HS Code: 851762
	HTS: 8517.62.00
NDAA Compliant	Yes
Individual Gross Weight	250g
Individual Package Dimension	165x150x50mm
Packaging Quantity	60Units
Packaging Gross Weight (Carton)	16kg
Packaging Dimensions	535x345x470mm

The information in this document is subject to change without notice. ROBOfiber, Inc, has made all efforts to ensure the accuracy of the information, but all information in this document does not constitute any kind of warranty. Visit our website for the most up-to-date product information

For more information

For more information about ROBOfiber's Industrial Ethernet series products, please visit www.robofiber.com or contact your local account representative.