User Manual
Industrial Gigabit Media Converter

FCC MARKING

This Equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications.
Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.
This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received; including interference that may cause undesired operation.

CE MARKING

This equipment complies with the requirements relating to electromagnetic compatibility, EN 55022 class A for ITE, the essential protection requirement of Council Directive 2004/108/EC on the approximation of the laws of the Member States relating to electromagnetic compatibility.

Company has an on-going policy of upgrading its products and it may be possible that information in this document is not up-to-date. Please check with your local distributors for the latest information. No part of this document can be copied or reproduced in any form without written consent from the company.

Key Features

- Rugged design Aluminum enclosure 103.5x32x81.5mm (LxWxD)
- Supports 18V-36VAC/12V-56VDC
- Supports Link Fault Pass through (LFP) function
- Supports Switch Mode and Converter Mode.
- Support SFP fiber speed 100M or 1000M dual mode
- Surge protection diodes on power input.
- ESD protection diodes on RJ-45 port
- Provides Far End Fault function on FX port.
- Provides increased Noise Immunity
- Working in extreme environment -40°C to 75°C

Introduction

This mini, hardened Industrial Gigabit Media Converter is designed for Security, Transportation and Telco applications to extend your network distances. It can be powered by wide range of VAC or VDC. With its multi-purpose design, it can also be used for Din-Rail or Wall-Mounted. It is an ideal unit for IP surveillance, traffic monitoring and Security applications in critical environment. It can tolerate -40°C to 75°C in harsh environment to perform a reliable network.

Installation package

The following items are shipped with this device:
- Din-Rail Mounted * 1
- Wall-Mounted * 2
- Screws * 4
- 4 pin Terminal Block * 1

Power connection

This unit provides 4 pin terminal block. It can be operated using either VAC or VDC power source. The VDC power range is from 12VDC to 56VDC, and the VAC power range is from 18VAC to 36VAC. Always Make sure your input voltage is within this supported voltage range.

To make power connection – Follow the printed polarity for V1+, V1-, V2+, V2- and Ground. Connect positive wire to V+, connect negative wire to V- and also connect neutral wire to ground.
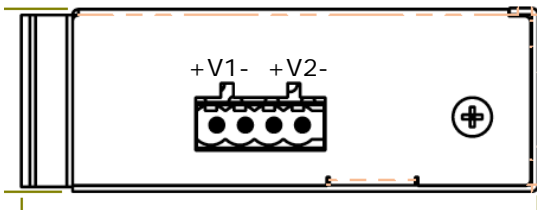
Connecting procedure:
STEP 1 –
Take out 4 pin terminal block located in the included mounting kit package
STEP 2 –
Connect power wire to 4 pin terminal block. V1+, V1- or redundant power wire to V2+, V2- and Ground
STEP 3 –
Plug into terminal block socket shown above. Polarity needs to match the V+ and V-.

WARNING -- Always SHUTS OFF power source to connect power wire.
WARNING -- Any exceeded input voltage will not make this unit function and may damage this unit.

Dip switch function

This unit is equipped with 4 pin Dip-Switch located on the front panel. Adjust the Dip-Switch setting will change the default function of this unit. All the Dip-Switch settings are set to manufacturer default as OFF

Table shown as below is the features of these Dip-Switch function. You may change the Dip-Switch setting to your desired environment.
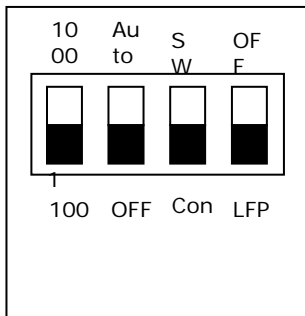
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100   OFF   Con   LFP

DIP 1	ON	SFP Speed 100M
	OFF	SFP Speed 1000M (Default)
DIP 2	ON	Set SFP Auto-negotiation disable
	OFF	Set SFP Auto-negotiation enable (Default)
DIP 3	ON	Converter Mode
	OFF	Switch Mode (Default)
DIP 4	ON	LFP function turn on
	OFF	LFP function turn off (Default)

LED indicator

LED	Color	State	Description
PW1	Green	ON	Power is detected
		OFF	Power is not detected
PW2	Green	ON	Power is detected
		OFF	Power is not detected
SFP LNK/ACT	Green	ON	FX port is detected
		Flashing	FX data is transmitting/receiving
1000	Green	ON	1000M speed is detected
		Flashing	TX data is transmitting/receiving
10/100	Amber	ON	100M speed is detected
		Flashing	TX data is transmitting/receiving

Specification

IEEE Standard	IEEE 802.3 10Base-T Ethernet IEEE 802.3u 100Base-TX Fast Ethernet IEEE 802.3ab 1000Base-T Gigabit Ethernet IEEE 802.3z 1000Base-X Gigabit Ethernet
Data Processing	Store and Forward
Flow Control	IEEE 802.3x Flow Control and Back Pressure
Packet Buffer Size	1M
Jumbo Frame	9KB
Network Connector	1 x RJ-45 10/100/1000 Base-T(X) Auto MDI/MDI-X function, Full/Half duplex 1 x 100/1000 BaseF(X) SFP
LED Indicators	PW1 (Green): ON—Power is detected 　　　　　　　　　OFF—Power is not detected PW2 (Green): ON—Power is detected 　　　　　　　　　OFF—Power is not detected SFP LNK/ACT (Green): ON—FX port is detected 　　　　　Flashing—FX data is transmitting/receiving 1000 (Green): ON—1000M speed is detected 　　　　　Flashing—TX data is transmitting/receiving 10/100 (Amber): ON—10/100M speed is detected 　　　　　Flashing—TX data is transmitting/receiving
DIP Switch Function	DIP 1: ON—SFP Speed 100M 　　　　OFF—SFP Speed 1000M (Default) DIP 2: ON—Set SFP Auto-Negotiation disable 　　　　OFF—Set SFP Auto-Negotiation enable (Default) DIP 3: ON—Converter Mode 　　　　OFF—Switch Mode (Default) DIP 4: ON—LFP enable 　　　　OFF—LFP disable (Default)
Power Protection	Surge protection diodes on power input Reverse polarity protection on power input Overload current protection
Power Input	Redundant Power, 18-36VAC, 12-56VDC
Power Consumption	3Watts @48VDC full load
Removable Terminal Block	4 pin contact terminal block for power input Wire range : 0.34mm^2 to 2.5mm^2 Solid wire (AWG) : 12-24/14-22 Stranded wire(AWG) : 12-24/14-22 Wire Strip length : 7-8mm Torque : 5lb-In/0.5Nm/0.56Nm

Operating Temperature	-40°C~75°C
Operating Humidity	5% to 95% (Non-condensing)
Storage Temperature	-40°C~85°C
Housing Design	IP30 Design, Rugged Aluminum
Case Dimension (L x W x D)	103.5 x 32 x 81.5 mm (L x W x D)
Installation	DIN-Rail Mounted or Panel Mounted

Certifications

EN55022/24	ITE equipment
EN55011	Industrial, Scientific and Medical (ISM) equipment
Safety	IEC EN60950-1
EMC/EMS	CE, FCC, VCCI
EMI	FCC Part 15 Subpart B Class A, CE EN 55022 Class A
EN 50155 / EN 60068-2-6	Vibration
EN 50155 / EN 60068-2-27	Shock
EN 50155 / EN 60068-2-32	Free Fall

Housing Dimension (mm)