IMC-1000MS

1x GbE RJ45 to 1x 100/1000Base SFP

◢ Supports LFPT (Link Fault Pass Through) and FEF (Far End Fault)

◢ SNMP, Web based and In-band management,

◢ Remote Loop-Back test

◢ EN50121-4, EN61000-6-2, EN61000-6-4, CE and FCC certified

CE FC | EN50121-4 | EN61000-6-2 EN61000-6-4

Industrial managed media converter with 1 Gigabit UTP port and 1 100/1000 SFP slot for copper and fiber interface conversion, to meet the requirements for extended transmission distance, fanless design, high MTBF, supports wide operating temperature, and redundant 12/24/48VDC power input, it is suitable for heavy-duty applications in harsh environments such as industrial factory automation and data centers, intelligent transportation systems, military and utility market applications where environmental conditions exceed commercial product specifications.

Features

▪ Conversion between 10/100/1000Base-T and 100/1000Base-X Fiber cable interface

▪ Supports Dual Rate (100/1000) SFP for selectable Fast or Gigabit speed on fiber

▪ Redundant dual DC input power 12/24/48VDC (9.6 ~ 60VDC)

▪ IP30 rugged metal housing and fanless

▪ Wide operating temperature -20~75° C (IMC-1000MS-E)

▪ Supports Digital Diagnostic Monitor Interface (DDMI) for SFP

▪ Supports EMS Management

▪ Dying gasp (remote power failure detection)

Specifications

Standard	IEEE 802.3	10Base-T 10Mbit/s Ethernet
	IEEE 802.3u	100Base-TX, 100Base-FX, Fast Ethernet
	IEEE 802.3ab	1000Base-TX Gbit/s Ethernet over twisted pair
	IEEE 802.3z	1000Base-X Gbit/s Ethernet over Fiber-optic
	IEEE 802.3x	Flow Control and Back pressure
	IEEE 802.3ah	OAM management
Fiber Ports	100Base-X or 1000Base-X set by Web supports Auto Laser Shutdown (ALS) Supports DDMI for SFP diagnostic	
RJ45 Ports	10/100/1000Base-T Auto MDI/MDI-X and Auto negotiation Function Supports UTP CAT.5e Twisted Pair Cable	
CPU watch dog	Supported	
Push Button	Reset, Load default seting	
Jumbo Frame	9K bytes	
Link Fault Pass Through (LFPT)	TX-Fiber: If TX port link down, the media converter will force Fiber port to link down	
	Fiber-TX: If Fiber port link down, the media converter will force TX port to link down	
Far-End Fault (FEF)	Work with LFPT to prevents data loss	

LED	Per Unit : Power 1 (Green), Power 2 (Green), Fault (Amber)
	Fiber LNK/ACT (Green): ON: Connected to network, OFF: Not connected to network, BLK: Receive /Transmit data Fiber speed : Yellow : 1000Base-X, Green : 100Base-X
	RJ-45 port: Speed: 10 (OFF), 100 (Green), 1000 (Yellow)
	LNK/ACT for RJ45(Green): ON : Connected to network, OFF: Not connected to network, BLK: Networking is active
Reverse Polarity Protection	Supported for power Input
Overload Current Protection	Supported
Power Supply	12/24/48VDC (9.6~60VDC) , Redundant power with polarity Reverse protect function and removable terminal block
Alarm Relay Contact	Relay outputs with current carrying capacity of 1 A @24VDC
	Relay alarm output for power fail or port link down
Removable Terminal Block	Provides 2 redundant power, alarm relay contact, 7 Pin
Power Consumption	4.8 W
Operating Humidity	5% ~ 95% (Non-condensing)
Operating Temperature	-20 ~ 75°C (IMC-1000MS-E)
Storage Temperature	-40 ~ 85°C
Housing	Rugged Metal, IP30 Protection and fanless
Dimensions	106 x 38.6 x 142.1mm (D x W x H)
Weight	0.62kg
Installation	DIN Rail mounting, or wall mounting (Optional)
MTBF	1,153,428 Hours (MIL-HDBK-217)
Warranty	5 years

Certifications

EMI	CE
EMI (Electromagnetic Interference)	FCC Part 15 Subpart B Class A, CE
Railway Traffic	EN50121-4
Immunity for Heavy Industrial Environment	EN61000-6-2
Emission for Heavy Industrial Environment	EN61000-6-4
EMS (Electromagnetic Susceptibility) Protection Level	EN61000-4-2 (ESD) Level 3, Criteria B
	EN61000-4-3 (RS) Level 3, Criteria A
	EN61000-4-4 (Burst) Level 3, Criteria A
	EN61000-4-5 (Surge) Level 3, Criteria B
	EN61000-4-6 (CS) Level 3, Criteria A
	EN61000-4-8 (PFMF, Magnetic Field) Field Strength: 300A/m, Criteria A
Shock	IEC 60068-2-27
Freefall	IEC 60068-2-32
Vibration	IEC 60068-2-6

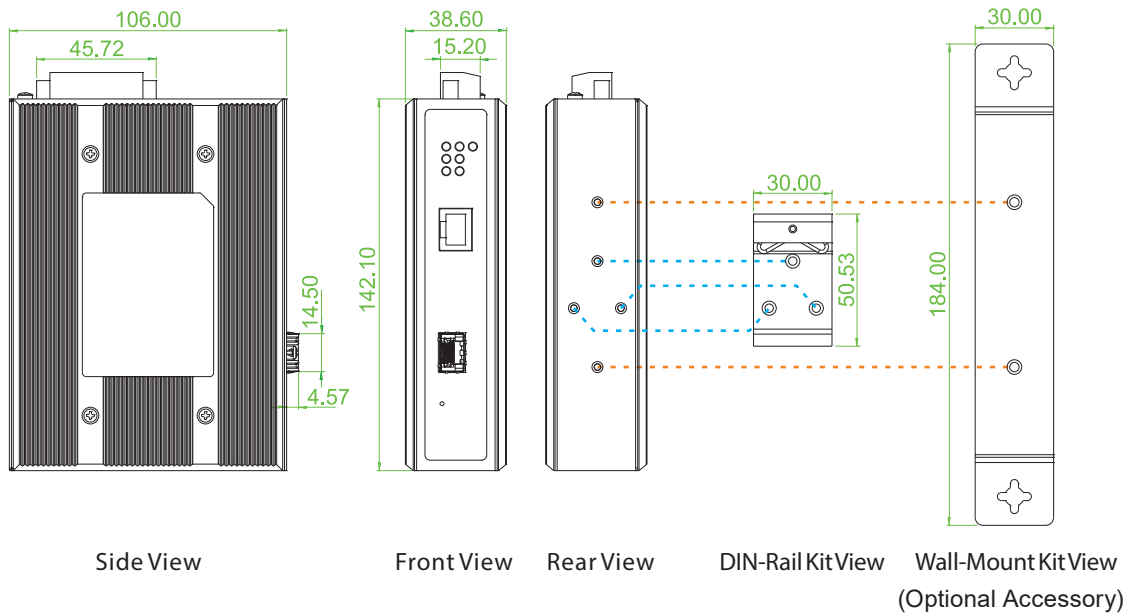## Software Specifications

SNMP or Web Mode

Management	Ingress/Egress bandwidth control with 64K granularity
	Web management, Firmware upgrade via Web
	Supports SNMP, MIB for management
	Supports 802.1Q tag VLAN, 16 Tag VLAN group, MIB counters display
Configuration	IP Configuration, Password Setting, Converter Configuration, Port Configuration, MIB Counter, SNMP Configuration, VLAN Group Configuration and Alarm Configuration
Diagnostic & Monitor	Supports Link Fault Pass-Through (LFPT) Function, Broadcast/Multicast/Unicast Storm Filter, SNMP Alarm Trap for Power Loss and Port Link Up/Down

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In-Band Remote mode

Management	Supports in-band management from FRM220 Chassis with FRM220-1000MS card
	Ingress/Egress bandwidth control with 64K granularity
Configuration	IP Configuration, Converter Configuration, Port Configuration, MIB Counter, VLAN Group Configuration, Alarm Configuration and PoE Configuration
Diagnostic & Monitor	Remote Loop Back Test, Supports Link Fault Pass Through (LFPT) Function, Broadcast/Multicast/Unicast Storm Filter

Dimensions

Side View   Front View   Rear View   DIN-Rail Kit View   Wall-Mount Kit View
(Optional Accessory)

Ordering Information

Model Name	Managed	RJ45	Fiber	Power Input	Certification			Operating Temperature
		10/100/1000 Base-T	Dual Speed 100/1000Base-X	Redundant	EN50121-4	EN61000-6-2 EN61000-6-4	CE, FCC	
IMC-1000MS-E	V	1	1 SFP	12/24/48VDC	V	V	V	-20~75℃

Optional Accessories

■ Wall Mount Kit

IND-WMK01	Wall Mount kit for Industrial product, 184 x 30mm

■ Industrial SFP Transceiver

The ISFP series of industrial grade SFP modules have been fully tested with all CTC Union industrial grade Ethernet switches for guaranteed compatibility and performance. Best performance can be guaranteed, even in mission-critical applications. (Please see CTC Union's Industrial SFP datasheets for more items and detailed information.)

ISFP-M7000-85-D(E)	Industrial SFP GbE 1000Base-SX, M/M, 500 meter,wave length 850nm, 7.5dB, LC, DDMI, -10~70℃ (-40~85℃)
ISFP-S7020-31-D(E)	Industrial SFP 1000Base-LX, S/M, 20km, wave length 1310nm, 15dB, LC, DDMI, -10~70℃(-40~85℃)
ISFP-T7T00-00-(E)	Industrial SFP 10/100/1000Base-T UTP 100meter, -10~70℃ (-40~85℃)
ISFP-M5002-31-D(E)	Industrial SFP 155M 100Base-FX, MM, 2km, wave length 1310nm, 12dB, LC, DDMI, -10~70℃ (-40~85℃)
ISFP-S5030-31-D(E)	Industrial SFP 155M 100Base-FX, SM, 30km, 1310nm, 19dB, LC, DDMI, -10~70℃ (-40~85℃)

■ Industrial Power Supply

MDR-20-24	Industrial Power, Input 85 ~ 264VAC/120 ~ 370VDC, Output 24VDC, 24W, -20 ~ +70℃
MDR-40-48	Industrial Power, Input 85 ~ 264VAC/120 ~ 370VDC, Output 48VDC, 40W, -20 ~ +70℃

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