EN50121-4 EN61000-6-2 EN61000-6-4

IMC-1000CS

100/1000Base–T to 100/1000Base–X SFP Slot Fiber Converter *(Compact)*

IMC-1000CS is an industrial grade, non-managed, Gigabit Ethernet media converter that supports conversion between electrical 10/100/1000Base-T and optical 1000Base-FX Ethernet. Simple DIP switch settings allow configuring the UTP port for auto-negotiation or for forced 10/100/1000 speed and half/ full duplex as well as for enabling LFPT (Link Fault Pass Through), Ethernet flow control (802.3x) and selecting Switch Mode (store & forward) or Converter Mode (Jumbo frame Pass-through). Housed in rugged DIN rail or wall mountable enclosures, these converters are designed for harsh environments, such as industrial networking and intelligent transportation systems (ITS) and are also suitable for many military and utility market applications where environmental conditions exceed commercial product specifications.

Features

- DC input power 12/24/48VDC (9.6 ~ 60VDC)
- IP30 rugged metal housing and fanless
- Wide operating temperature -20 ~ 75°C (IMC-1000CS-E)
- CE, FCC, Railway traffic EN50121-4 certification
- Industrial Grade EMS, EMI, EN61000-6-2, EN61000-6-4 certified
- Store-and-Forward mode and Pass through mode (set by DIP SW)
- Conversion between 10/100/1000Base-T and 1000Base-X Fiber cable interface
- Provides a DIP-Switch to set functions
- Supports LFPT (Link Fault Pass Through)

Specifications

Standard	IEEE802.3 10Base-T 10Mbit/s Ethernet
	IEEE802.3u 100Base-TX, 100Base-FX, Fast Ethernet
	IEEE802.3ab 1000Base-T Gbit/s Ethernet over twisted pair
	IEEE802.3z 1000Base-X Gbit/s Ethernet over Fiber-Optic
	IEEE802.3x Flow Control
RJ45 Ports	10/100/1000Base-TX
Fiber Ports	100/1000Base-X SFP Slot
Data Process Architecture	Store and Forward mode or Pass through mode set by DIP SW
Jumbo Frame	9K bytes
Fiber Parameters	Fiber Cable (Multi-mode): 50/125um, 62.5/125um
	Fiber Cable (Single-mode): 9/125um
	Distance depend on SFP Fiber Tranceiver
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
DIP Switch	Data process architecture OFF: Switch Mode ON: Converter Mode
	LFPT OFF:LFPT Disable ON: LFPT Enable
	Fiber Duplex OFF: Auto ON: Force
	Fiber Speed OFF: 1000Base-X ON: 100Base-FX
Connector	Fiber: SFP Slot
	RJ-45 Socket: CAT 5e Twisted Pair cable Auto MDI/MDI-X and Auto-Negotiation Function Supports
LED	Per Unit: Power (Green)
	SFP/Fiber port Link/Act (Yellow)
	RJ-45 port: Speed & Link/Act 10/100 (Green), 1000 (Yellow)
Reserve Polarity Protection	Present
Overload Current Protection	Present
Power Supply	12/24/48VDC (9.6~60VDC) or 24VAC (18~36VAC) with polarity reverse protect function and removable terminal block

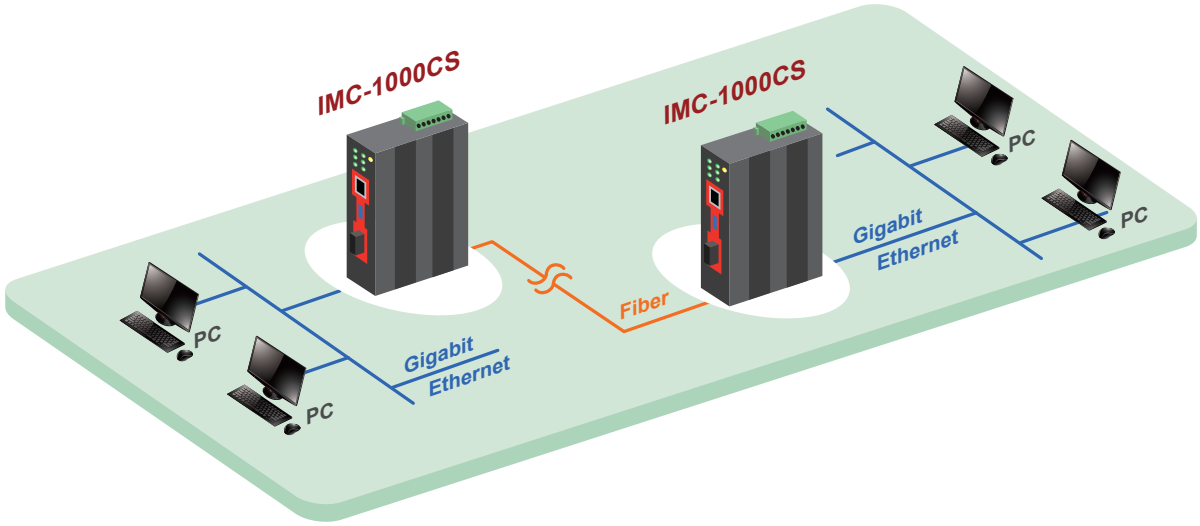
Power Consumption

Input Voltage	IMC-1000CS
12VDC	1.8W
24VDC	2W
48VDC	2.9W

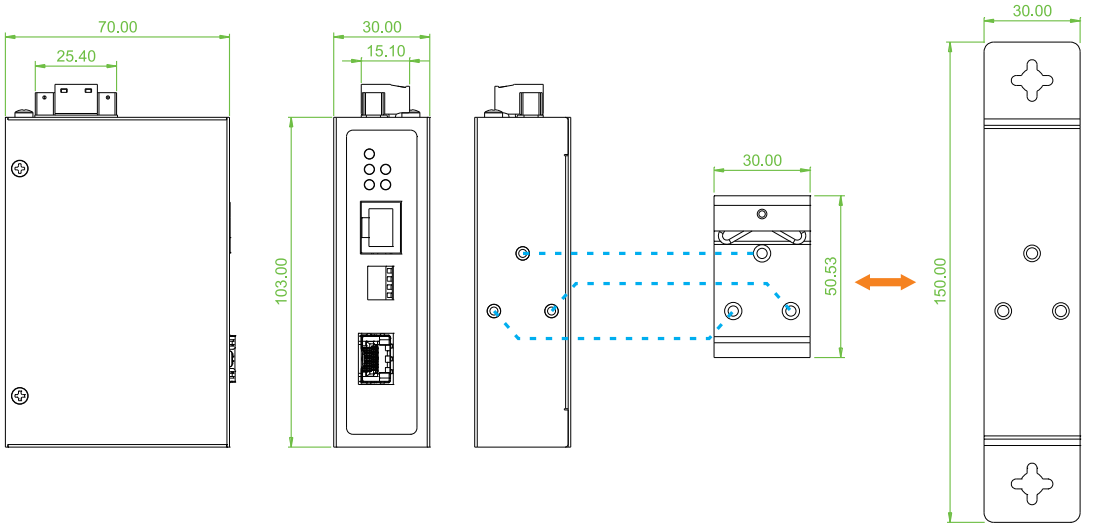
Removable Terminal Block	Provides for input power (2 Pin)
Operating Humidity	5% ~ 95% (Non-condensing)
Operating Temperature	-10 ~ 60°C (IMC-1000CS) -20 ~ 75°C (IMC-1000CS-E)
Storage Temperature	-40 ~ 85°C
Housing	Rugged Metal, IP30 Protection and fanless
Dimensions	70x 30x 103 mm (D x W x H)
Weight	215g
Installation	DIN Rail, or wall mounting (Optional)
MTBF	1,789,658 Hours (MIL-HDBK-217)
Warranty	5 years
Certification	
EMC	CE
EMI (Electromagnetic Interference)	FCC Part 15 Subpart B Class A,CE EN55022 Class A
Railway Traffic	EN50121-4
Immunity for Heavy Industrial Environment	EN61000-6-2
Emission for Heavy Industrial Environment	EN61000-6-4
EMS	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

Application & Topology

Figure : IMC-1000CS Media Converter Transmission



Dimensions



Side View | Front View | Rear View | DIN-Rail Kit View | Wall-Mount Kit View

Ordering Information

Model Name	UTP	Fiber		Certification				Operating Temperature
	10/100/1000Base-T	1000Base-X	Dual Speed 100/1000Base-X	Railway EN50121-41	EN61000-6-2 EN61000-6-4	CE	FCC	
IMC-1000CS	1	—	1 SFP	V	V	V	V	-10~60℃
IMC-1000CS-E	1	—	1 SFP	V	V	V	V	-20~75℃

Model Naming Rule

IMC – 1000C S – E

- IMC: Industrial Media Converter
- 1000C: 1000Base-X Converter (Compact)
- S: SFP type
- E: -20~75˚C
- Blank: -10~60˚C

Temperature

IMC – 1000CS – □

Example: IMC – 1000CS – E

Optional Accessories

Industrial Power Supply

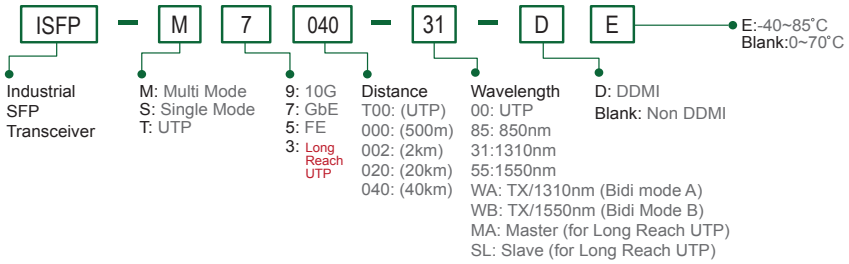
DR-4524	Industrial Power, Input 85 ~ 264VAC, Output 24VDC, 48W, -10 ~ +50℃
MDR-40-24	Industrial Power, Input 85 ~ 264VAC, Output 24VDC, 40W, -20 ~ +70℃
IND-WMK03	Wall Mount kit for Industrial product (Compact, 150x 30mm)

Industrial SFP Transceiver

(The ISFP series of industrial grade SFP modules have been fully tested with the IMC-1000CS product for guaranteed compatibility and performance. The best performance can be guaranteed even in mission-critical applications.)
(Please see CTC Union's Industrial SFP datasheet for more details and more items.)

ISFP-M7000-85-(E)	Industrial SFP GbE 1000Base-SX, M/M, 500 meter,wave length 850nm, 7.5dB, LC, -10~70℃ (-40~85℃)
ISFP-S7020-31-(E)	Industrial SFP 1000Base-LX, S/M, 20km, wave length 1310nm, 15dB, LC, -10~70℃ (-40~85℃)
ISFP-T7T00-00-(E)	Industrial SFP 1000Base-T UTP 100meter, -10~70℃ (-40~85℃)
ISFP-M5002-31-(E)	Industrial SFP 155M 100Base-FX, MM, 2km, wave length 1310nm, 12dB, LC, -10~70℃ (-40~85℃)
ISFP-S5030-31-(E)	Industrial SFP 155M 100Base-FX, SM, 30km, 1310nm, 19dB, LC, -10~70℃ (-40~85℃)
ISFP-T3T00-MA-(E)	Industrial SFP 100Mbps , long reach UTP (2 wire) (500meter) , Master, -10~70℃ (-40~85℃)
ISFP-T3T00-SL-(E)	Industrial SFP 100Mbps , long reach UTP (2 wire) (500meter) , Slave, -10~70℃ (-40~85℃)

SFP Naming Rule



Package List

- IMC-1000CS device
- Quickly installation guide
- Din Rail bracket with screws
- Terminal block
- Protective caps for SFP ports