



## IMC-100M

### 10/100Base-TX to 100Base-FX Managed Fiber Converter



IMC-100M is a family of managed Fast Ethernet media converters that support conversion between electrical 10/100Base-TX and optical 100Base-FX Ethernet. 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. The converter is Web, SNMP or In-Band managed with an easy to use user interface for Operation, Administration, Maintenance & Provisioning, including bandwidth control, speed, and VLAN, Diagnostic, storm filter or converter configurations. It also provide loop-back test and dying gasp, and can be monitored from a centrally located OAM-enabled FRM220-1000MS converter via remote in-band management.

### Features

- Conversion between 10/100Base-TX and 100Base-FX Fiber cable interface
- Redundant dual DC input power 12/24/48VDC (9.6 ~ 60VDC)
- IP30 rugged metal housing and fanless
- Wide operating temperature -20~75°C
- UL60950-1, CE, FCC, Railway traffic EN50121-4 certification
- Industry grade EMS, EMI EN61000-6-2, EN61000-6-4 certification
- Supports jumbo frame 9K bytes packet
- Ingress/Egress bandwidth control
- MIB counters
- Supports LFPT (Link Fault Pass Through)
- Auto Laser Shutdown (ALS)
- Supports SmartView for centralized management (Figure 1)
- SNMP management (Figure 1)
- Web management (Figure 3)
- Supports 16 IEEE 802.1Q Tag VLAN Group
- SNMP alarm trap for power loss and port link down
- Supports in-band management from FRM220 Chassis With FRM220-1000MS (Figure 2)
- Remote loop back test
- Dying gasp (remote power failure detection)

### Specifications

<b>Standard</b>	IEEE802.3 10Base-T 10Mbit/s Ethernet IEEE802.3u 100Base-TX, 100Base-FX, Fast Ethernet IEEE802.3x Flow Control and Back pressure IEEE802.1q Tag VLAN
<b>Fiber Ports</b>	100Base-FX Supports Auto laser shutdown (ALS)
<b>RJ45 Ports</b>	10/100Base-TX
<b>Push Button</b>	Reset, Load default setting
<b>Jumbo Frame</b>	9K bytes
<b>Fiber Parameters</b>	Fiber Cable (Multi-mode): 50/125um, 62.5/125um Fiber Cable (Single-mode): 9/125um Wavelength: 1310nm (Multi-mode/Single-mode) Available distance: 2 KM (Multi-mode) 30KM (Single-mode) 50KM (Single-mode)
<b>Link Fault Pass Through (LFPT)</b>	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
<b>Connector</b>	Fiber: SC/ST (Multi-mode, 2KM), SC/ST (Single-mode, 30KM, 50KM) RJ-45: CAT 5e (10/100Mbps) Twisted Pair cable Auto MDI/MDI-X and Auto-Negotiation Function Supports
<b>LED</b>	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 RJ-45 port: Speed: 10 (OFF), 100 (Green) LNK/ACT for RJ45(Green): ON : Connected to network/ OFF: Not connected to network/ BLK: Networking is active
<b>Reverse Polarity Protection</b>	Present for Power Input
<b>Overload Current Protection</b>	Present
<b>Power Supply</b>	12/24/48VDC (9.6~60VDC), Redundant power with polarity reverse protect function and removable terminal block
<b>Power Suppl</b>	Provide DC Power JACK adapter cable for external power adapter

<b>Alarm Relay Contact</b>	Relay outputs with current carrying capacity of 1 A @24VDC Relay Alarm Output for Power Fail or Port link down
<b>Power Consumption</b>	4.8W
<b>Removable Terminal Block</b>	Provide 2 redundant power, alarm relay contact, 7 Pin
<b>Operating Humidity</b>	5% ~ 95% (Non-condensing)
<b>Operating Temperatur</b>	-10 ~ 60°C (IMC-100M) -20 ~ 75°C (IMC-100M-E)
<b>Storage Temperature</b>	-40 ~ 85°C
<b>Housing</b>	Rugged Metal, IP30 Protection and fanless
<b>Dimensions</b>	106 x 38.6 x 142 mm (D x W x H)
<b>Weight</b>	630g
<b>Installation</b>	DIN Rail mounting or wall mounting
<b>Warranty</b>	5 years
<b>MTBF</b>	778,604 hrs (MIL-HDBK-217)
<b>Certification</b>	
<b>EMI</b>	CE
<b>EMI (Electromagnetic Interference)</b>	FCC Part 15 Subpart B Class A, CE EN55022 Class A
<b>Railway Traffic</b>	EN50121-4
<b>Immunity for Heavy Industrial Environment</b>	EN61000-6-2
<b>Emission for Heavy Industrial Environment</b>	EN61000-6-4
<b>EMS</b>	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
<b>Safety</b>	UL60950-1
<b>Shock</b>	IEC 60068-2-27
<b>Freelfall</b>	IEC 60068-2-32
<b>Vibration</b>	IEC 60068-2-6

## Software Specifications

### SNMP or Web management Mode (Figure 1, 3)

<b>Management</b>	Ingress/Egress bandwidth control with 64K granularity Web management, Firmware upgrade via Web Supports SNMP, MIB for management Supports DHCP client for automatic IP configuration Supports 802.1Q tag VLAN, 16 Tag VLAN group, MIB counters display
<b>Configuration</b>	IP configuration, password setting, converter configuration, port configuration, MIB counter, SNMP configuration, VLAN group configuration, alarm configuration
<b>Diagnostic &amp; Monitor</b>	Supports Link Fault Pass-Through (LFPT) Function Broadcast/Multicast/Unicast storm filter SNMP alarm trap for power loss and port link Up/Down

### In-Band Remote mode (Figure 2)

<b>Management</b>	Supports in-band management from FRM220 Chassis With FRM220-1000MS card Ingress/Egress bandwidth control with 64K granularity
<b>Configuration</b>	IP configuration, converter configuration, port configuration, MIB counter, VLAN group configuration, alarm configuration
<b>Diagnostic &amp; Monitor</b>	Remote loop-back test Dying gasp (remote power failure detection) Supports Link Fault Pass-Through (LFPT) Function Broadcast/Multicast/Unicast storm filter

## Application

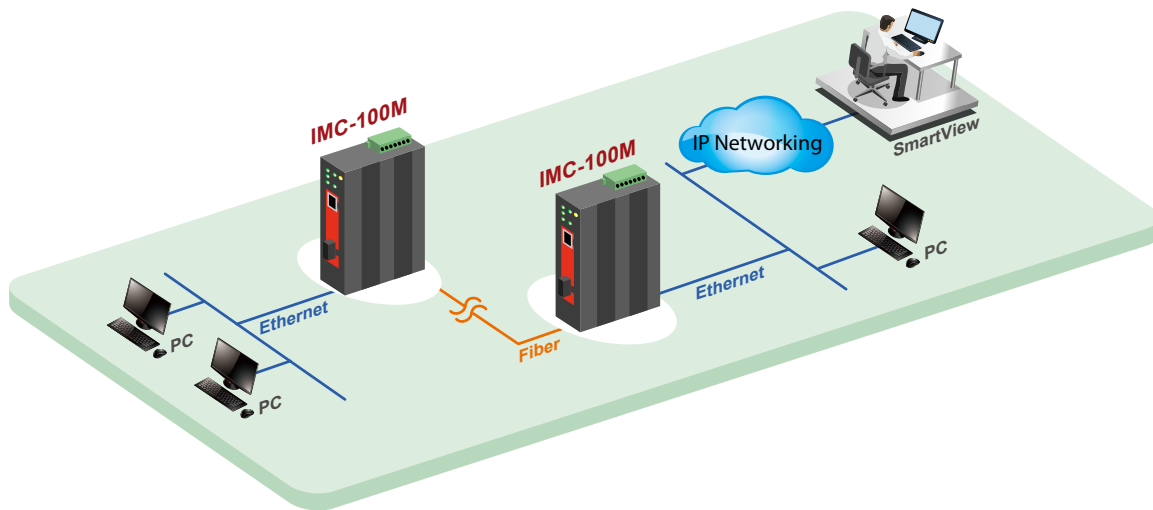


Figure 1 : IMC-100M Management by SNMP, SmartView

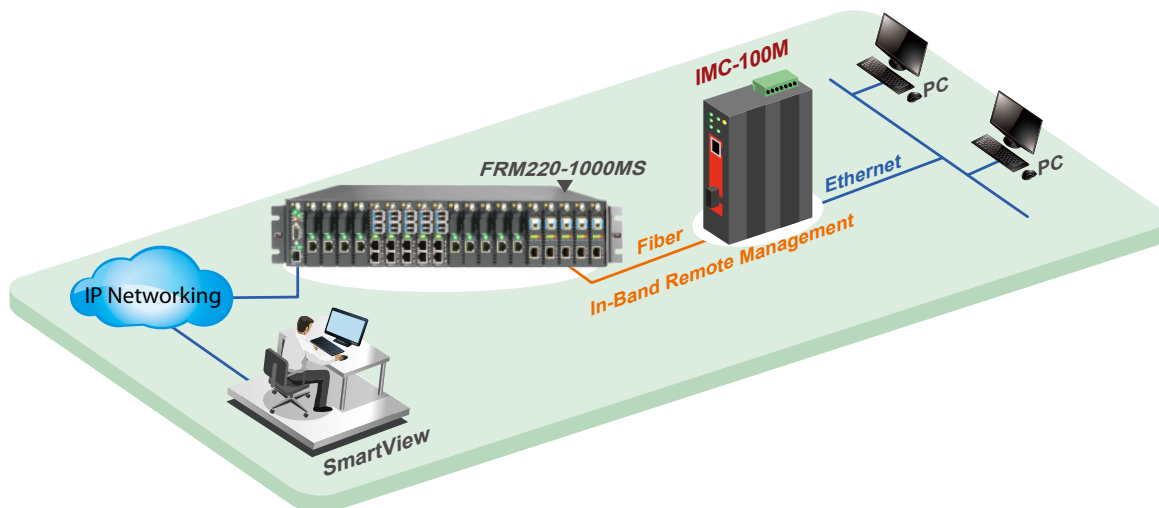


Figure 2 : IMC-100M Application in Remote, in-Band Management

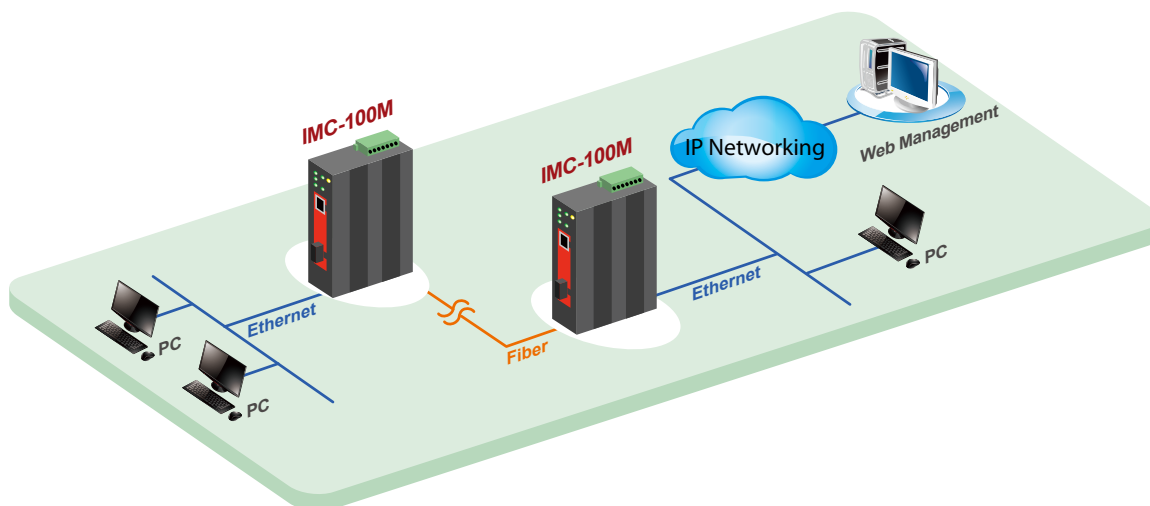
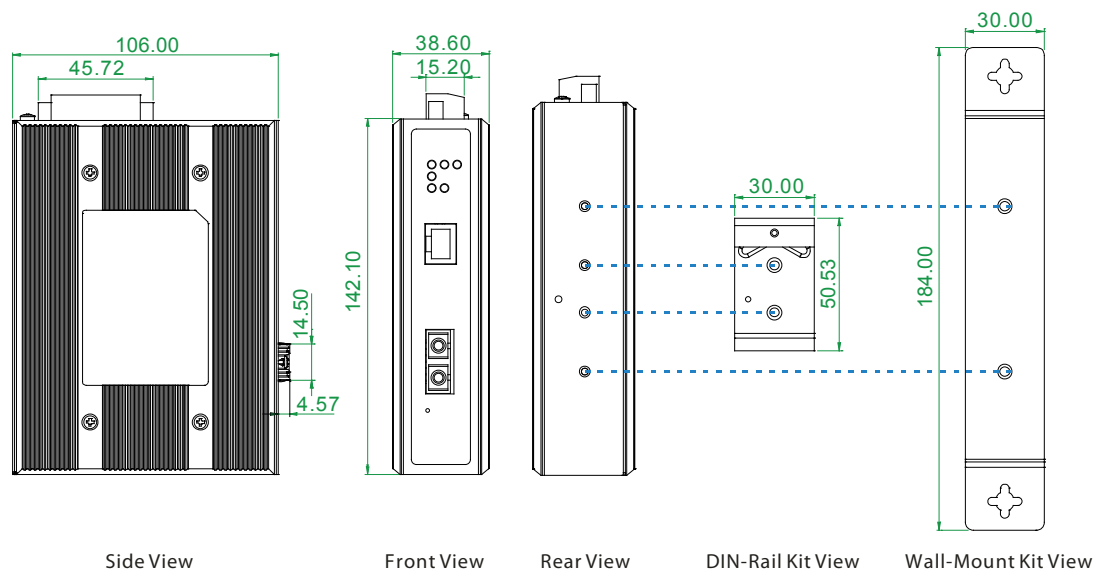


Figure 3 : IMC-100M Application in Web Management

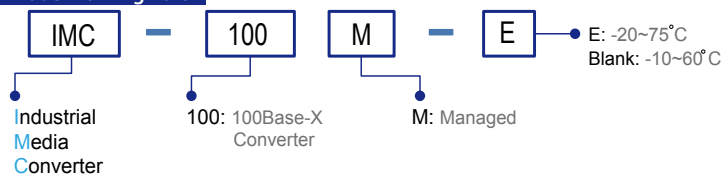
## Dimensions



## Ordering Information

Model Name	Managed	Connectivity		Safety UL60950-1	Railway EN50121-4	Certification			Operating Temperature
		UTP 10/100Base-TX	Fiber 100Base-FX			EN61000-6-2 EN61000-6-4	CE	FCC	
IMC-100M	V	1	1 SC/ST	V	V	V	V	V	-10~60 C
IMC-100M-E	V	1	1 SC/ST	V	V	V	V	V	-20~75 C

### Model Naming Rule



Connector Type	Connectivity Distance
SC, ST	002: 2KM (M/M) 030k: 30km (S/M) 050: 50km (S/M) 020A: WDM 20km A type (TX:1310nm) 020B: WDM 20km B type (TX: 1550nm)

### Accessories

DR-4524	Industrial Power, Input 85 ~ 264VAC, Output 24VDC, 48W, -10 ~ +50°C
MDR-40-24	Industrial Power, Input 85 ~ 264VAC, Output 24VDC, 40W, -20 ~ +70°C

Temperature Connector Connectivity  
Type Type Distance  
**IMC-100M** -  -   
Example: IMC-100M - E - SC002