

# 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 Smart managed with an easy to use Web user interface for OAM&P (Operation, Administration, Maintenance & Provisioning), including bandwidth control, duplex, speed, and VLAN configuration. The converter is IEEE802.3ah OAM compliant, making it able to be linked to any 802.3ah compliant fiber switch to support loop back and dying gasp functions.

### 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
- 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
- RMON counters
- Supports IEEE802.3ah OAM management (In-band management)
- Remote loop back test
- Dying gasp (remote power failure detection)
- SNMP alarm trap for power loss and port link down
- Auto Laser Shutdown (ALS)
- Web management on stand-alone
- Supports 16 IEEE802.1Q Tag VLAN Group
- SmartView Management System

### Specifications

|                                    |  |
|------------------------------------|--|
| <b>Standard</b>                    | IEEE802.3 10Base-T<br>IEEE802.3u 100Base-TX, 100Base-FX<br>IEEE802.3x Flow Control and Back pressure<br>IEEE802.3ah OAM management<br>IEEE802.1q Tag VLAN  |
| <b>Fiber Ports</b>                 | 100Base-FX Supports Auto laser shutdown (ALS)  |
| <b>RJ45 Ports</b>                  | 10/100Base-TX  |
| <b>CPU watch dog</b>               | Present  |
| <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<br>Fiber Cable (Single-mode): 9/125um<br>Wavelength: 1310nm (Multi-mode/Single-mode)<br>Available distance: 2 KM (Multi-mode)<br>30KM (Single-mode)<br>50KM (Single-mode)   |
| <b>Link Lose Forward</b>           | TX-Fiber: If TX port link down, the media converter will force Fiber port to link down<br>Fiber-TX: If Fiber port link down, the media converter will force TX port to link down   |
| <b>Connector</b>                   | Fiber: SC (Multi-mode, 2KM), SC (Single-mode, 30KM, 50KM)<br>RJ-45: CAT 5e (10/100Mbps) Twisted Pair cable<br>Auto MDI/MDI-X and Auto-Negotiation Function Supports  |
| <b>LED</b>                         | Per Unit : Power 1 (Green), Power 2 (Green), Fault (Amber)<br>Fiber LNK/ACT (Green):<br>ON: Connected to network<br>OFF: Not connected to network<br>BLK: Receive /Transmit Data<br>RJ-45 port:<br>Speed: 10 (OFF), 100 (Green)<br>LNK/ACT for RJ45(Green):<br>ON : Connected to network/<br>OFF: Not connected to network/<br>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<br>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<br>Relay Alarm Output for Power Fail or Port link down   |
| <b>Removable Terminal Block</b>    | Provide 2 redundant power, alarm relay contact, 7 Pin   |
| <b>Operating Humidity</b>          | 5% ~ 95% (Non-condensing)   |
| <b>Operating Temperature</b>       | -10 ~ 60°C (IMC-100M)<br>-20 ~ 75°C (IMC-100M-E)  |
| <b>Storage Temperature</b>         | -40 ~ 85°C  |
| <b>Housing</b>                     | Rugged Metal, IP30 Protection   |
| <b>Dimensions</b>                  | 106 x 38.6 x 142 mm (D x W x H)   |
| <b>Installation</b>                | DIN Rail mounting or wall mounting  |
| <b>EMI</b>                         | FCC Part 15 Subpart B Class A, CE EN 55022 Class A  |
| <b>EMS</b>                         | EN 61000-6-2 – Immunity for Industrial environment<br>EN61000-4-2 (ESD) Level 3, Criteria B<br>EN61000-4-3 (RS) Level 3, Criteria A<br>EN61000-4-4 (EFT) Level 3, Criteria A<br>EN61000-4-5 (Surge) Level 3, Criteria B<br>EN61000-4-6 (CS) Level 3, Criteria A<br>EN61000-4-8 (Magnetic Field) Level 3, Criteria A |
| <b>Safety</b>                      | UL60950-1   |
| <b>Railway Traffic</b>             | EN 50121-4  |
| <b>Shock</b>                       | IEC 60068-2-27  |
| <b>Freefall</b>                    | IEC 60068-2-32  |
| <b>Vibration</b>                   | IEC 60068-2-6   |
| <b>Warranty</b>                    | 5 years   |

Specifications & design are subject to change without prior notice. Please visit CTC Union website for more details.

## Specifications

|                   |  |
|-------------------|--|
| <b>Management</b> | Ingress/Egress bandwidth control with 64K granularity  |
|                   | Supports IEEE802.3ah OAM management, loop back and dying_gasp (Remote power failure detection)   |
|                   | Firmware upgrade via Web   |
|                   | Web management on stand-alone (Local)  |
|                   | Supports SNMP, MIB for management  |
|                   | OAM In band management (Remote)  |
|                   | Supports DHCP client for automatic TCP/IP configuration  |
|                   | Supports 802.1Q tag VLAN, 16 Tag VLAN group, RMON counters display (Stand-alone only)  |
|                   | Local configuration: IP configuration, password setting, converter configuration, port configuration, MIB counter, SNMP configuration, VLAN group configuration, alarm configuration |
|                   | Remote configuration: IP configuration, converter configuration, port configuration, MIB counter, VLAN group configuration, alarm configuration                                      |

|                                 |  |
|---------------------------------|--|
| <b>OAM</b>                      | Supports in-band remote management from FRM220 rack management             |
|                                 | OAM Function: IEEE802.3ah configuration, Loopback test, IEEE802.3ah status |
| <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                                   |
|                                 | SNMP alarm trap for power loss and port link down                          |

## Application

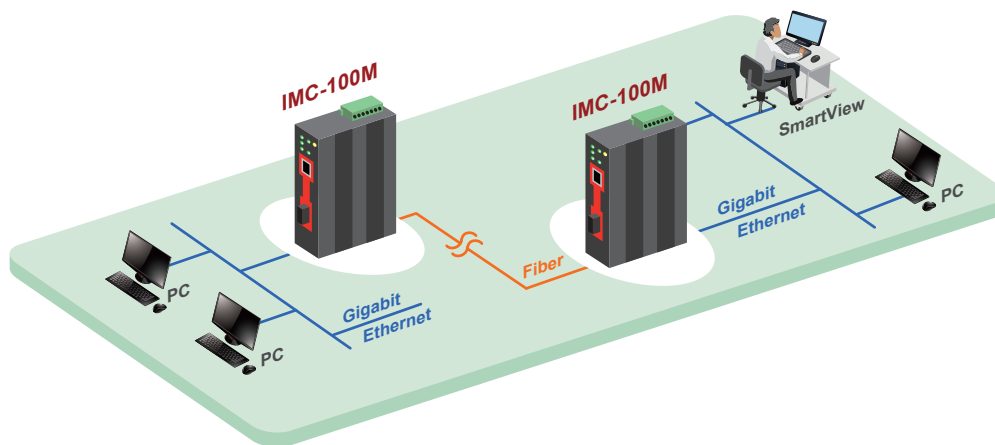
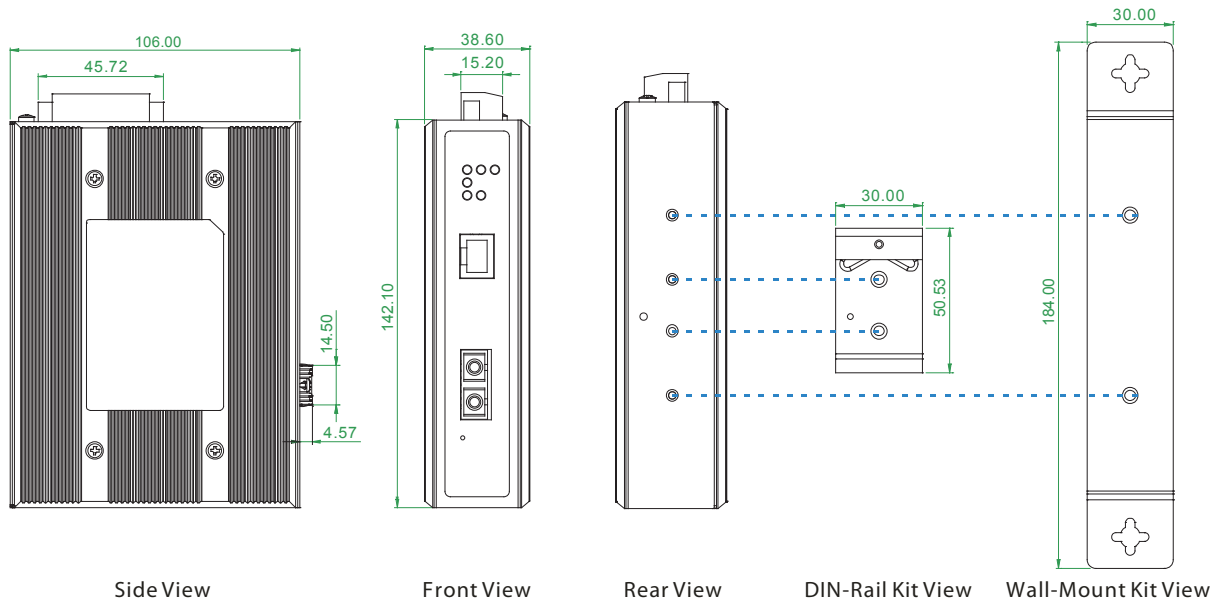


Figure : IMC-100M Ethernet Transmission

## Dimensions



## Ordering Information

| Model Name | Description  |
|------------|--|
| IMC-100M   | Industrial Managed with OAM 10/100Base-TX to 100Base FX Fiber Converter (-10 ~ 60°C) |
| IMC-100M-E | Industrial Managed with OAM 10/100Base-TX to 100Base FX Fiber Converter (-20 ~ 75°C) |

| Connector Type | Connectivity Distance   |
|----------------|---|
| SC             | 002: 2KM (M/M) 030k: 30km (S/M) 050: 50km (S/M)<br>020A: WDM 20km A type (TX: 1310nm)<br>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 Type Connectivity Distance

IMC - 100M - [ ] - [ ] [ ] [ ] [ ] [ ]

Example: IMC - 100M - E - SC002