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)

### Specifications

**IMC-1000CS**

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

- **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)**

#### Standard

- IEEE802.3 10Base-T 10Mbit/s Ethernet
- IEEE802.3u 100Base-TX, 100Base-FX, Fast Ethernet
- IEEE802.3ab 1000Base-T Gigabit Ethernet over twisted pair
- IEEE802.3x 1000Base-X Gigabit Ethernet over Fiber-Optic
- IEEE802.3x Flow Control

#### RJ45 Ports

- 10/100/1000Base-T

#### Fiber Ports

- 100/1000Base-X SFP Slot

#### Data Process Architecture

- Store and Forward mode or Pass-through mode set by DIP SW

#### Fiber Frame

- Jumbo Frame 9K bytes

#### Fiber Parameters

- Fiber Cable (Multi-mode): 50/125um, 62.5/125um
- Fiber Cable (Single-mode): 9/125um
- Distance depends on SFP Fiber Transceiver

#### 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 protection function and removable terminal block

#### Power Consumption

<table>
<thead>
<tr>
<th>Input Voltage</th>
<th>IMC-1000CS</th>
</tr>
</thead>
<tbody>
<tr>
<td>12VDC</td>
<td>1.8W</td>
</tr>
<tr>
<td>24VDC</td>
<td>2W</td>
</tr>
<tr>
<td>48VDC</td>
<td>2.9W</td>
</tr>
</tbody>
</table>

---

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

*Figure:* IMC-1000CS Media Converter Transmission

**Dimensions**

**Ordering Information**

<table>
<thead>
<tr>
<th>Model Name</th>
<th>UTP 10/100/1000Base-T</th>
<th>Fiber 1000Base-X</th>
<th>Dual Speed 100/1000Base-X</th>
<th>Railway EN50121-41</th>
<th>EN61000-6-2</th>
<th>EN61000-6-4</th>
<th>CE</th>
<th>FCC</th>
<th>Operating Temperature</th>
</tr>
</thead>
<tbody>
<tr>
<td>IMC-1000CS</td>
<td>1</td>
<td>—</td>
<td>1 SFP</td>
<td>V</td>
<td>V</td>
<td>V</td>
<td>V</td>
<td>V</td>
<td>-10~60°C</td>
</tr>
<tr>
<td>IMC-1000CS-E</td>
<td>1</td>
<td>—</td>
<td>1 SFP</td>
<td>V</td>
<td>V</td>
<td>V</td>
<td>V</td>
<td>V</td>
<td>-20~75°C</td>
</tr>
</tbody>
</table>

**Model Naming Rule**

IMC – 1000C S E

**Temperature**

Example: IMC – 1000CS – E

- IMC: Industrial Media Converter
- 1000C: 1000Base-X
- S: SFP type
- E: -20~75°C
- Blank: -10~60°C
Industrial Unmanaged GbE Converter

Optional Accessories

- **Industrial Power Supply**
  - 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
  - IND-WMK03: Wall Mount kit for industrial product (Compact, 150x30mm)

- **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.)

<table>
<thead>
<tr>
<th>Model</th>
<th>Description</th>
<th>Temperature Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>ISFP-M7000-85-00</td>
<td>Industrial SFP GbE 1000Base-SX, M/M, 500 meters, wavelength 850nm, 7.5dB, LC, -10~+70°C (-40~+85°C)</td>
<td>-40~+85°C</td>
</tr>
<tr>
<td>ISFP-S7002-31-00</td>
<td>Industrial SFP 1000Base-LX, S/M, 20km, wavelength 1310nm, 15dB, LC, -10~+70°C (-40~+85°C)</td>
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<tr>
<td>ISFP-T7700-00-00</td>
<td>Industrial SFP 1000Base-T UTP 100meter, -10~+70°C (-40~+85°C)</td>
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<tr>
<td>ISFP-M6000-31-00</td>
<td>Industrial SFP 155M 100Base-FX, MM, 2km, wavelength 1310nm, 12dB, LC, -10~+70°C (-40~+85°C)</td>
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<td>ISFP-S5030-31-00</td>
<td>Industrial SFP 155M 100Base-FX, SM, 30km, 1310nm, 19dB, LC, -10~+70°C (-40~+85°C)</td>
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<td>ISFP-T3T00-MA-00</td>
<td>Industrial SFP 100Mbps, long reach UTP (2 wire) (500meters), Master, -10~+70°C (-40~+85°C)</td>
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<td>Industrial SFP 100Mbps, long reach UTP (2 wire) (500meters), Slave, -10~+70°C (-40~+85°C)</td>
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</table>

**ISFP M 7 040 31 D E**

- **ISFP Naming Rule**
  - ISFP: Industrial SFP Transceiver
  - M: Multi Mode
  - 7: GbE
  - 040: Distance
  - 31: Wavelength
  - D: DDMI
  - E: -40~+85°C Blank: 0~70°C

**Package List**

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

**Industrial Power Supply**

- 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
- IND-WMK03: Wall Mount kit for industrial product (Compact, 150x30mm)

**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.)

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<td>ISFP-T3T00-MA-00</td>
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