# OPT-GY2012 Series
# Industrial Media Converter

2*10/100/1000Base-Tx to GE SFP

RoHS Compliant

## >>Description

The OPT-GY2012 series industrial Gigabit media converters are designed to provide reliable and stable 10/100/1000BaseT(X) to 1000Base-FX SFP media conversion in harsh industrial environments. OPT-GY2012 series supports redundant power inputs, IP40 protection class and meets EMC industrial level 4 requirements. Its operating temperature ranges from -40 to 85°C. Belonging to Optone Green Ethernet switches series, OPT-GY2012 series full load power consumption is as low as 2.5 watts.

OPT-GY2012 series is a "green", embedded industrial Ethernet module with low-power consumption. It is applicable to wind power, subway PIS, power SCADA, sewage treatment, metallurgy, intelligent transportation, rail transit, and many other industries.OPT-GY2012 series Embedded Ethernet Switching Module can be directly installed in the target device.

## >>Main Features

- Green Ethernet solution with ultra low power consumption design
- Both standard and wide operating temperature
- Complies with IEEE 802.3, IEEE 802.3u, IEEE802.3z, IEEE802.3ab, IEEE 802.3x auto-negotiation
- Extends distances ranging from 550m (multi-mode fiber) to 120km (single mode fiber)
- Supports auto MDI/MDIX function
- Status LED for easy monitoring of device status
- Supports up to 10K Byte Jumbo frames
- Support 8k MAC address
- IP40 protection class
- FCC Class A & CE approved

# >>Specifications

**Interface**
- 2 x Ethernet port (RJ45) 10/100/1000Base-Tx
- 1 x Optical port (SFP) 1000Base-Fx

**Optical Port**
- Available for 1310nm and 1550nm Single mode, and 850nm Multi mode
- Transfer Distance: up to 120km
- Connectors: SFP
- Fiber core: 8.3μm, 8.7μm, 9μm and 10μm on single-mode fiber; 50, 62.5 and 100μm on multi-mode fiber

**Ethernet Port**
- Standard: IEEE802.3, IEEE802.3u, IEEE 802.3ab, IEEE802.3x
- Available speed: force 10Mbps, force 100Mbps, force 1000Mbps and auto-detective 10/100/1000Mbps Full-Duplex and Half-Duplex auto-negotiation
- Connectors: RJ-45 Connector; MDI/MDI-X connection auto-sensing

**Switch Properties**
- MAC Table: 8K
- Packet Buffer: 1Mbit
- Switching Delay: <5μs

**LED Indicators**
- Power, Status, Speed, FX Link/Act, TX Link/Act

**Power Requirement**
- Input: 12VDC~48VDC
- Consumption：MAX 4.5W
- Overload Protection: Support
- Reverse Connection Protection: Support
- Redundancy Protection: Support

**Physical Characteristics**
- Housing: Metal enclosure
- Protection Class: IP40
- Dimensions: 36 x 120 x 103mm
- Weight: 0.42kg
- Installation: DIN-Rail or Panel mounting

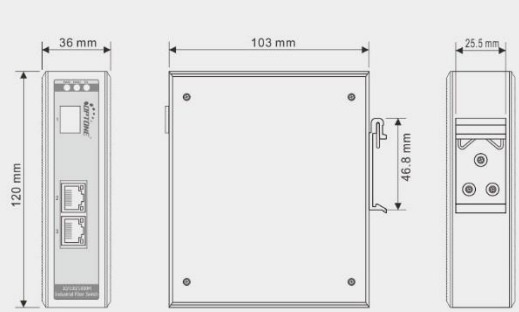
**Environmental Limits**
- Operating Temperature: -40°C to 85°C
- Storage Temperature: -40°C to 85°C
- Operating Humidity: 10% to 95% RH (non-condensing)
- Storage Humidity: 5% to 95% RH (non-condensing)

**Agency Approvals**
- FCC Part 15 of Class A & CE approved

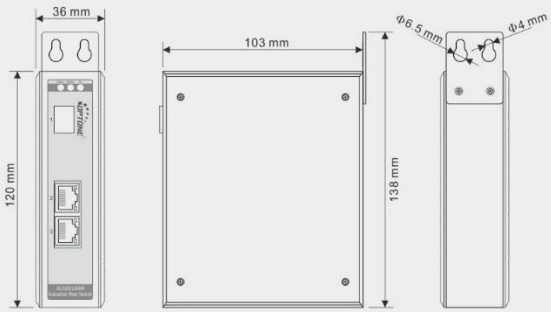
**Industrial Standard**
- EMI: FCC/CE/LVD/EMC
- EMS:
  IEC61000-4-2 (ESD): ±8kV (contact), ±15kV (air)
  IEC61000-4-3 (RS): 10V/m (80MHz-2GHz)
  IEC61000-4-4 (EFT): Power Port: ±4kV; Data Port: ±2kV
  IEC61000-4-5 (Surge): Power Port: ±2kV/DM, ±4kV/CM; Data Port: ±2kV
  IEC61000-4-6 (CS): 3V (10kHz-150kHz); 10V (150kHz-80MHz)
  IEC61000-4-16 (Common mode conduction): 30V (cont.), 300V (1s)
- Shock: IEC 60068-2-27
- Free Fall: IEC 60068-2-32
- Vibration: IEC 60068-2-6

**Warranty**
- 5 years

# >> Mechanical Drawing




DIN-Rail Mounting




Panel Mounting

# >>Ordering Information

| | |
|---|---|
| OPT-GY2012 | 2*10/100/1000Base-Tx to GE SFP Fiber port |

**Optional SFP**

| *Model* | *Rate* | *Wavelength* | *Distance* | *Connector* |
|---|---|---|---|---|
| SFP-SX-MM-0205 | 1.25Gbps | 850nm | 0.5km | 2xLC |
| SFP-LX-SM-0220 | 1.25Gbps | 1310nm | 20km | 2xLC |
| SFP-LX-SM-0240 | 1.25Gbps | 1310nm | 40km | 2xLC |
| SFP-ZX-SM-0280 | 1.25Gbps | 1550nm | 80km | 2xLC |

# >>Important Notice

Performance figures, data and any illustrative material provided in this data sheet are typical and must be specifically confirmed in writing by OPTONE before they become applicable to any particular order or contract. In accordance with the OPTONE policy of continuous improvement specifications may change without notice.

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Edition FEB 10, 2022
Published by Optone Technology Limited