

FIBERROAD

Industrial Grade Fiber Media Converter

Product Data Sheet



Industrial Fiber Media Converter

The Mini Industrial Gigabit Ethernet media converter that provides cost effective, entry-level media conversion between 1x10/100/1000Base-T RJ45 ports and 1000Base-X ports. With its fixed configuration, deployments are just plug-and-play, and with its small size, it is ideal for locations where space is limited. It is able to operate under temperatures ranging from -30° C to +75 ° C and is with IP40 rugged case to make sure the continuous operation in harsh environments such as transportation, factories, outdoors and places where extremely low or high temperatures can be experienced.

Main Features

- 10/100/1000Mbps Full/Half Duplex, Auto-Negotiation and Auto-MDI/MDIX
- Choice of LC SFP Connectors for MM & SM
- Robust IP40 Aluminum Metal Enclosure for Harsh Environments
- Operate stably under the Temperature Range of -30 – +75°C
- LED Indicates Diagnostic & DIP-switch Ethernet OAM
- Support IEEE 802.3x Flow Control
- Both Desktop and Wall Mounting installation



The industrial converter is equipped with rugged IP40 metal enclosure to ensure industrial operation in harsh environments where extreme low or high temperatures can be experienced. It is specially designed for outdoor and industrial applications such as city surveillance systems, smart manufacturing, etc. It is ideal for miniaturization and rapid deployment, provides users a cost-effective and highly reliable option.

| Ethernet Interface | |
|---------------------------------|--|
| Ports | 1x10/100/1000Base-T RJ45 ports, 1x100/1000Base-X SFP/SC |
| Port Mode(Tx) | Auto Negotiation Speed Full/Half Duplex Mode Auto MDI/MDI-X Connection |
| Standards | IEEE 802.3 for 10BaseT IEEE 802.3u for 100BaseT(X) and 100BaseFX IEEE 802.3ab for 1000BaseT(X) IEEE 802.3z for 1000BaseSX/LX/LHX/ZX IEEE 802.3x for flow control |
| Maximum Packet Length | Up to 10K |
| Forward Filter Rate | 14,880pps(10Mbps) 148,800pps(100Mbps) 1,488,000pps(1000Mbps) |
| Transmission Mode | Store and Forward (full/half duplex mode) |
| Transmission Distance | |
| SFP Port | Depends on optical module(0-160km) |
| RJ45 Port Transmission Distance | 100m (using standard CAT5/CAT5e cable) |
| Power Information | |
| Input Power | 12VDC |
| Power Consumption | 2.4W Max. 0.2A@12VDC |
| Physical Characteristics | |
| Housing | Aluminum case |
| IP Rating | IP40 |
| Dimensions | 36.2mm*117mm*24.5mm |
| Installation Mode | Wall Mounting |
| Weight | 0.15Kg |
| Working Environment | |
| Operating Temperature | -30°C~75°C (-30 to 167 °F) |
| Operating Humidity | 5%~90% (non-condensing) |
| Storage Temperature | -30°C~85°C (-30 to 185 °F) |

Product Specifications

DIP Switch

| | |
|----|--|
| #1 | LFP(Link Fault Pass Through) ON/OFF |
| #2 | ALS(Only for SFP) ON/OFF |
| #3 | FX Rest ON/OFF |
| #4 | FX Speed Setting OFF: Fixed 1000M ON: 100M/1000M |

LED Indicator

| | |
|-------|---|
| Power | Connect-always |
| RJ45 | Link/Act: connect-always; data exchange-twinkle |
| Fiber | Link/Act: connect-always; data exchange-twinkle |

Certification Standard

| | |
|-------------|---|
| EMC/EMI/EMS | FCC Part15 Class A CE-EMC/LVD RoHS EN61000-4-2 (ESD):LEVEL 4 IEC 6100-4-2 (EFT):LEVEL 4 IEC 6100-4-2 (Surge): LEVEL 4 IEC 6100-4-2 (CS): LEVEL 3 IEC 61000-4-2(PFMP) : LEVEL 5 EN61000-4-3 (RS):LEVEL 4 |
| Shock | IEC60068-2-27 |
| Vibration | IEC60068-2-6 |
| Freefall | IEC60068-2-31 |
| Safety | EN 60950-1, UL 60950-1, CSA C22.2 No.60950-1, UL 508 |

Package Contents

| | |
|------------------|--|
| Device | 1x Industrial Media Converter |
| Installation Kit | 1 x Caps, plastic, for SFP Slots Or 1 x Caps, plastic, for SC fiber port Or 1 x Caps, plastic, for ST fiber port 2x Wall-Mount Kits |
| Documentation | 1 x Quick installation guide 1 x Warranty card 1x Product notice |

Warranty

| | |
|--------------------------|--|
| MTBF | > 300,000 hours |
| Defects Liability Period | 5 years warranty, lifetime technical support |

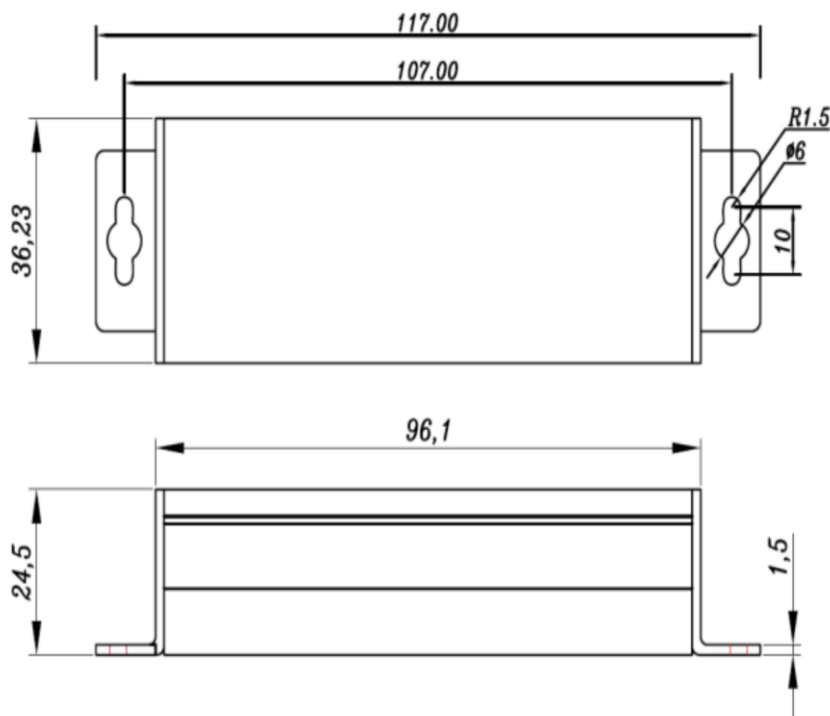
Accessories(Sold Separately)

| Power Supply | |
|--------------|---|
| FR-I-30-24 | DIN-rail 24 VDC power supply with 40W/1.7A, 85 to 264 VAC, or 120 to 370 VDC input, -20 to 70°C operating temperature |
| FR-I-60-24 | DIN-rail 24 VDC power supply with 60W/2.5A, 85 to 264 VAC, or 120 to 370 VDC input, -20 to 70°C operating temperature |
| FR-45-24 | 45W/2A DIN-Rail 24 VDC power supply with universal 85 to 264 VAC or 120 to 370 VDC input, -10 to 50°C operating temperature |
| FR-75-24 | 75W/3.2A DIN-Rail 24 VDC power supply with universal 85 to 264 VAC or 120 to 370 VDC input, -10 to 50°C operating temperature |

| SFP Optical Transceiver | |
|-------------------------|---|
| FRSX-1L311C-I | 1.25Gb/s 1310nm 10km SFP, wide operation temperature range of -30°C-85°C (-30°F - 185°F) |
| FRSX-1L341C-I | 1.25Gb/s 1310nm 40km SFP · wide operation temperature range of -30°C-85°C (-30°F - 185°F) |
| FRSX-1L5X1C-I | 1.25Gb/s 1550nm 80/100km SFP · wide operation temperature range of -30°C-85°C (-30°F - 185°F) |
| FRSX-1L3523/5323C-I | 1.25Gb/s 1310nm/1550nm 20km BiDi SFP · wide operation temperature range of -30°C-85°C (-30°F - 185°F) |

| Armored Fiber Patch Cable / LAN Cable | |
|---------------------------------------|---|
| FRPC-A-LC | Armored LSZH LC UPC to LC UPC Duplex OS2 single mode 7.0mm for Ourdoor Application , 1-50m |
| FRLC-A-CAT6 | Armored Cat6 Snagless shielded(SFTP) Ethernet Network Patch Cable, 26AWG, 1000Base-T, 0.5m – 3m |

Dimensions Unit: mm



Precautions

To avoid damage to the equipment and personal injury caused by improper use, please observe the following precautions:

- ❖ Keep the power off during installation, wear an anti-static wrist, and ensure that the anti-static wrist is in good contact with the skin to avoid potential safety hazards.
- ❖ The switch can work normally under the correct power supply. Please confirm that the power supply voltage matches the voltage indicated by the switch.
- ❖ Before powering on the switch, please make sure that the power circuit is not overloaded, so as not to affect the normal operation of the switch and even cause unnecessary damage.
- ❖ To avoid the risk of electric shock, do not open the case while the switch is working, even if it is not charged, do not open it yourself.
- ❖ Before cleaning the switch, pull out the power plug of the switch. Do not wipe with a wet cloth. Do not use liquid to clean it.
- ❖ The equipment installed in the rack is generally from bottom to top to avoid overload installation.
- ❖ Avoid placing other heavy objects on the surface of the switch to avoid accidents.

Order Information

| | |
|---------|---|
| FR-2701 | Mini Industrial Media Converter, 10/100Base-TX to 100Base-FX SFP, 12VDC |
| FR-2703 | Mini Industrial Media Converter, 10/100/1000Base-TX to 1000Base-FX SFP, 12VDC |

The information in this document is subject to change without notice. Fiberroad Technology., Ltd has made all effects to ensure the accuracy of the information, but all information in this document does not constitute any kind of warranty. Visit our website for the most up-to-date product information

For more information

For more information about Fiberroad Smart Industrial Ethernet series products, Visit <https://www.fiberroad.com> or contact your local account representative.