# FIBERROAD®

# UNMANAGED
## INDUSTRIAL FIBER MEDIA CONVERTER

### Product Data Sheet

The Fiberroad 6N Series Industrial Fiber Media Converter stands out as a reliable and cost-effective solution tailored for semi-outdoor space CCTV cameras and various industrial networking applications. Engineered to thrive in challenging environments, this robust switch supports both 100M and 1000M ethernet connections, ensuring high-speed data transfer without compromising performance. With its impressive operating temperature range of -20℃ to +70℃, the Fiberroad 6N Series is designed to withstand harsh conditions while maintaining optimal functionality. Its compact design allows for easy deployment in tight spaces, making it an ideal choice for enhancing surveillance systems or facilitating seamless communication across industrial networks. Whether used in factories or outdoor monitoring setups, this Industrial Ethernet Switch guarantees stability and efficiency where it matters most.

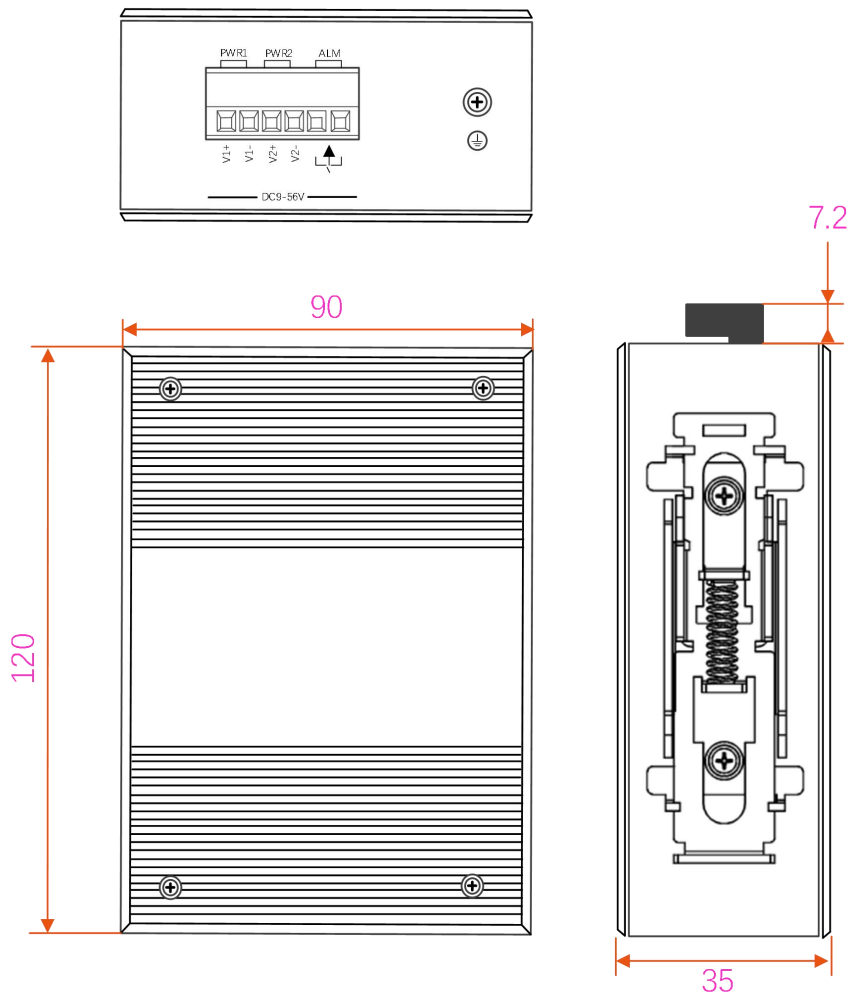| Hardware Specifications | |
|---|---|
| Product | FR-6N1101 |
| Copper Ports | 1x10/100BASE-TX RJ45 Auto-MDI/MDI-X , Port 1 |
| Fiber Ports | 1x100BASE-X SFP Slot or 1x9 Optical Module, Port 2 |
| Enclosure | IP40 aluminum case |
| Installation | DIN-Rail and Wall-mount |
| Dimension | 120 x 90 x 35 mm |
| Weight | 370g(Bare weight), 470g(With package) |
| Surge Protection | ±4kV DC, ±2kV RJ45 |
| **Switching** | |
| Switch Architecture | Store-and-Forward |
| Switch Fabric | 1.8Gbps/non-blocking |
| Forward Filter Rate | 14,880pps(10Mbps) 148,800pps(100Mbps) |
| Packet Buffer Size | 1 Mbits |
| Maximum Packet Length | 1536 bytes |
| MAC Address Table | 2K entries, automatic source address learning and aging |
| Flow Control | IEEE 802.3x pause frame for full duplex, Back pressure for half duplex |

## Power

| | |
|---|---|
| Power Input | 3 |
| Power Connector | 1 removable 5-contact terminal blocks<br>Pin 1/2 for Power 1, Pin 4/5 for Power 2<br>1 DC Connector (2.1mm Input Socket） |
| Operating Voltage | 9-56V DC |
| Power Consumption | 3 Watts Max |
| Protection | Reverse Polarity<br>Overload Current |

## Environmental

| | |
|---|---|
| Operating Temperature | -20℃~70℃ (-4 to 158 ℉ ) |
| Storage Temperature | -40℃~85℃ (-40 to 185 ℉ ) |
| Operating Humidity | 5%~90% (non-condensing) |
| Heat Dissipation | 7 BTU/h |
| Cooling | Passive Cooling |
| MTBF | ＞500,000 hours @MIL-HDBK-217F GF 25℃ |

## LED Indicators

| | |
|---|---|
| PWR | ON:  Power is being supplied<br>OFF: Power is not being supplied |
| LINK & ACT (Port 1-2) | ON:  Port connection is active<br>OFF: Port connection is not active |

## Regulatory & Warranty

| | |
|---|---|
| Standard Compliance | IEEE 802.3 Ethernet<br>IEEE 802.3u Fast Ethernet<br>IEEE 802.3x Full-Duplex Flow Control<br>IEEE 802.3az Energy Efficient Ethernet |
| ISO | Manufactured in ISO-9001facility |
| Safety | IEC62368-1:2020+A11:2020 |
| EMI | FCC Part 15B Class A, IEC 61000-3-2 |
| EMS | IEC61000-4-2 ESD: Contact:±8kV, Air:±15kV<br>IEC61000-4-5 Surge: Power: ±4kV; RJ45:±2kV |
| Shock | IEC 60068-2-27 |
| Free Fall | IEC 60068-2-32 |
| Vibration | IEC 60068-2-6 |
| Environmental | RoHS 2011/65/EU Annex II(EU) |
| Warranty | 5 Years, Details See: https://fiberroad.com/warranty |

## Package Contents

| | |
|---|---|
| Device | 1 x Industrial Fiber Media Converter |
| Installation Kit | 1 x DIN-Rail Clip |
| Documentation | 1 x Quick installation guide<br>1 x Warranty card |

## Accessories(Sold Separately)

**Power Supply**

| FR-I-40-24 | 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 |

**SFP Optical Transceiver**

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

**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

| Model Number | 10/100Base-TX, RJ45 | 10/100/1000Base-T, RJ45 | 100Base-X Port | 1000Base-X Port | Optical Port Connector Option | Input Voltage | Operating Temp. |
|---|---|---|---|---|---|---|---|
| FR-6N1101 | 1 | — | 1 | — | LC/SC/FC/ST | DC9-56V | -20 to +70℃ |
| FR-6N1102 | 2 | — | 1 | — | LC/SC/FC/ST | DC9-56V | -20 to +70℃ |
| FR-6N3101 | — | 1 | — | 1 | LC/SC/FC/ST | DC9-56V | -20 to +70℃ |
| FR-6N3102 | — | 2 | — | 1 | LC/SC/FC/ST | DC9-56V | -20 to +70℃ |

## Shipping

| Model No. | FR-6N1101 |
|---|---|
| Classification Codes | HS Code: 851762 |
| | HTS: 8517.62.00 |
| NDAA Compliant | Yes |
| Individual Gross Weight | 470g |
| Individual Package Dimension | 175x153x43mm |
| Package Quantity | 50 Units |
| Package Gross Weight | 24kg |
| Package Dimension | 540x315x430mm |

The information in this document is subject to change without notice. Fiberroad Technology Co., Limited has made all effects to ensure the accuracy of the information, but all information in this document does not constitute any kind of warranty. Contact us 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.