

FIBERROAD®

# UNMANAGED INDUSTRIAL ETHERNET SWITCH

Product Data Sheet



# Unmanaged Industrial Ethernet Switch

The High Port Density Unmanaged Industrial Switch is a versatile and reliable solution for industrial network applications. With its easy access to Gigabit Ethernet, this switch offers seamless connectivity for demanding environments. Its robust design ensures durability in industrial and outdoor surveillance settings, making it an ideal choice for rugged conditions. The switch can be easily mounted on DIN-Rail or Wall, providing flexibility in installation options. The built-in LEDs offer convenient visual monitoring of connected devices through the RJ45 ports, enhancing ease of use and efficiency in managing network connections.

## Main Features

- Supports IEEE 802.3x flow control for Full Duplex mode and backpressure for Half Duplex mode
- Non-blocking switching architecture that forwards and filters packets at full wire-speed for maximum throughput
- Auto-MDI/MDIX eliminates the need for crossover cables
- Supports MAC address auto-learning and auto-aging
- Auto-negotiation ports provide smart integration between 10Mbps, 100Mbps and 1000Mbps hardware.
- IEEE 802.1Q VLAN Transparency
- Plug and Play design simplifies installation.

## Industrial Case and Installation

- IP40 Aluminium case, Fanless design
- 9-56V DC redundant power with reverse polarity protection
- DIN-rail and wall mount installation
- -40 to +75°C operating temperature



# Product Specifications

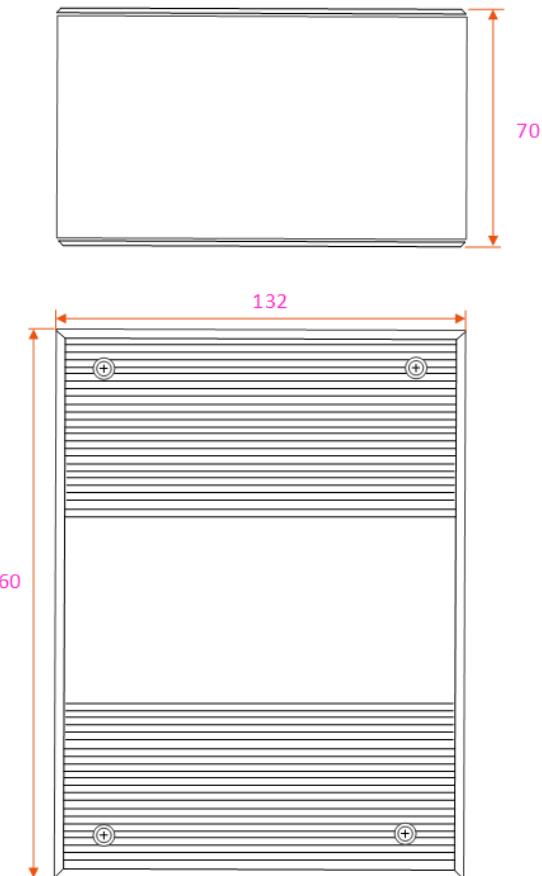
<b>Hardware Specifications</b>			
Product	FR-7N3808	FR-7N3016	FR-7N3216
Copper Port	8x10/100/1000BASE-T RJ45	16x10/100/1000BASE-T RJ45	16x10/100/1000BASE-T RJ45
Fiber Ports	8X1000BASE-X SFP	\	2X1000BASE-X SFP
Enclosure	IP40 aluminum case		
Installation	DIN-Rail and Wall-mount		
Dimension	160x132x70mm		
Weight	990g(Bare weight), 1250g(With package)		
Surge Protection	±6kV DC, ±4kV RJ45		
<b>Switching</b>			
Switch Architecture	Store-and-Forward		
Switch Fabric	52Gbps/non-blocking		
Forwarding Rate	23.8 Mpps(64-byte packet size)	26.8 Mpps(64-byte packet size)	
Packet Buffer Size	4Mbits		
MAX. Packet Length	9K bytes		
MAC Address Table	8K entries, automatic source address learning and aging		
Flow Control	IEEE 802.3x pause frame for full duplex, Back pressure for half duplex		
<b>Power Supply</b>			
Power Input	2		
Power Connector	1 removable 5-contact terminal blocks Pin 1/2 for Power 1, Pin 4/5 for Power 2		
Operating Voltage	DC9-56V		
Power Consumption	10 Watts Max (without PoE load)		
Protection	Reverse Polarity, Overload Current		
<b>Environmental</b>			
Operating Temperature	-40°C to +75°C (-40 to 167 °F)		
Storage Temperature	-40°C to +85°C (-40 to 185 °F)		
Operating Humidity	5%~95% (non-condensing)		
Cooling	Passive Cooling		
MTBF	>500,000 hours @Telcordia SR-332 GB 50° C		
<b>LED Indicators</b>			
P1 & P2	ON: Power is being supplied ,OFF: Power is not being supplied		
Fiber Port	ON: Port connection is active, Blinking: Data transmitted, OFF: Port connection is not active		
RJ45 Port Amber LEDs	ON: Port connection is active, Blinking: Data transmitted, OFF: Port connection is not active		
RJ45 Port Green LEDs	ON: Port is operating at 1000 Mb/s, OFF: Port is operating at 10/100 Mb/s		
<b>Package Contents</b>			
Device	1 x Industrial Ethernet Switch		
Installation Kit	1 x DIN-Rail Clip		
Documentation	1 x Quick Start Guide 1 x Warranty card		

# Product Specifications

## Regulatory & Warranty

Standard Compliance	IEEE 802.3 Ethernet IEEE 802.3u Fast Ethernet IEEE 802.3ab Gigabit Ethernet IEEE 802.3x Full-Duplex Flow Control IEEE 802.3az Energy Efficient Ethernet
ISO	Manufactured in ISO-9001 facility
Safety	IEC62368-1:2020+A11:2020
EMI	FCC Part 15B Class A, IEC 61000-3-2
EMS	IEC61000-4-2 ESD: Contact: $\pm 8\text{kV}$ , Air: $\pm 15\text{kV}$ IEC61000-4-5 Surge: Power: $\pm 6\text{kV}$ ; RJ45: $\pm 4\text{kV}$
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: <a href="https://fiberroad.com/warranty">https://fiberroad.com/warranty</a>

## Dimensions      Unit: mm



## Accessories(Sold Separately)

### Power Supply

FR-I-60-24	DIN-rail 24 VDC power supply with 60W/0.6A, 85 to 264 VAC, or 120 to 370 VDC input, -20 to 70°C operating temperature
FR-I-120-48	DIN-rail 48-58V VDC power supply with 120W/1.2A, , 85 to 264 VAC, or 120 to 370 VDC input, -20 to 70°C operating temperature
FR-I-240W-48	DIN-rail 48-55V VDC power supply with 240W/2A, , 85 to 264 VAC, or 120 to 370 VDC input, -20 to 70°C operating temperature
FR-I-480W-48	DIN-rail 48-55V VDC power supply with 480W/4A, , 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°C-85°C (-40°F - 185°F)
FRSX-1L341C-I	1.25Gb/s 1310nm 40km SFP, wide operation temperature range of -40°C-85°C (-40°F - 185°F)
FRSX-1L5X1C-I	1.25Gb/s 1550nm 80/100km SFP, wide operation temperature range of -40°C-85°C (-40°F - 185°F)
FRSX-1L3523/5323C-I	1.25Gb/s 1310nm/1550nm 20km BiDi SFP, wide operation temperature range of -40°C-85°C (-40°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

## 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	10/100/1000Base-T RJ45	1000Base-X Port	Optical Connector Option	Input Voltage	Operating Temp.
FR-7N3808	8	8	LC	DC9-56V	-40 to +75°C
FR-7N3016	16	/	/	DC9-56V	-40 to +75°C
FR-7N3216	16	2	LC	DC9-56V	-40 to +75°C

## Shipping

Model No.	FR-7N3808	FR-7N3016	FR-7N3216
Classification Codes	HS Code: 851762 HTS: 8517.62.00		
NDAA Compliant	Yes		
Individual Gross Weight	1.25kg		
Individual Package Dimension	215*203*93mm		
Package Quantity	14 Units		
Package Gross Weight	18.5kg		
Package Dimension	535*345*470		

The information in this document is subject to change without notice. Fiberroad has made all efforts 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 Industrial Ethernet series products, Visit <https://www.fiberroad.com> or contact your local account representative.