

FIBERROAD

UNMANAGED INDUSTRIAL ETHERNET SWITCH

Product Data Sheet

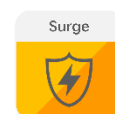
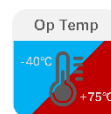


Unmanaged Industrial Ethernet Switch

The Unmanaged Industrial Ethernet Switch is designed for small business industrial network applications. It provides an easy way to make the access point to Fast or Gigabit Ethernet. With a robust design, this switch is ideal for industrial or outdoor surveillance, withstanding the harshest conditions. The Industrial switch is Plug-and-Play, allowing for easy and quick deployment. It can optionally be mounted on a DIN-Rail or Wall Mount, making it suitable for various installation methods. An LED monitor displays information from Ethernet-connected devices such as IP cameras, wireless access points, or PC/laptops.

Main Features

- ❖ All-aluminum Case, Compact and Fanless Design
- ❖ Full/Half-duplex self-adaptation
- ❖ MDI/MDIX automatic recognition
- ❖ Optionally support IEEE 802.3af/at/bt PoE Standard, without damaging not-PoE devices.
- ❖ Operating Temperature from -40 to 75°C
- ❖ Dual Redundant DC9~56V power input
- ❖ Support power input polarity protection; no worries about the reverse connection
- ❖ Aluminium shell, fanless design
- ❖ Free fall, shock-proof and vibration-proof for industries
- ❖ Plug and play; no software configuration is needed
- ❖ Either DIN rail or Wall Mount installation



The industrial switch is designed for reliability and easy maintenance, with features like a fanless design and low power consumption. The Industrial Ethernet Switch uses mature technology and open network standards and can adapt to both low and high temperatures. It is also resistant to electric interference, salt fog, vibration, and shocks. Additionally, it is equipped with a redundant dual power supply, providing additional reliability for critical applications that need always-on connections.

Product Specifications

Ethernet Interface		
Model	FR-7N1104/FR-7N1104P/1104BT	FR-7N3104/FR-7N3104P/3104BT
Ports	4x10/100Base-TX Port(RJ45) 1x100Base-X(SFP/1x9)	4x10/100/1000Base-TX Port(RJ45) 1x1000Base-X(SFP/1x9)
Port Mode(Tx)	Auto Negotiation Speed Full/Half Duplex Mode Auto MDI/MDI-X Connection	
Standards	IEEE 802.3 for Ethernet IEEE 802.3u for Fast Ethernet IEEE 802.3x for flow control and back pressure IEEE802.3az for Energy Efficient Ethernet(EEE)	IEEE 802.3 for 10BaseT IEEE 802.3u for Fast Ethernet IEEE 802.3ab Gigabit Ethernet IEEE 802.3x for flow control and back pressure IEEE802.3az for Energy Efficient Ethernet(EEE)
Packet Buffer Size	512K	1M
Maximum Packet Length	9K	10K
MAC Address Table	4K	4K
Transmission Mode	Store and Forward (full/half duplex mode)	
Exchange Property	Delay time: < 7 μ s Backplane bandwidth: 1.25G	Delay time: < 7 μ s Backplane bandwidth: 12G

PoE & Power Supply		
Model	FR-7N1104P/3104P	FR-7N1104BT/3104BT
PoE Ports	Port 1 to 4 IEEE802.3af/at @PoE+	Port 1 to 4 IEEE802.3af/at/bt @PoE++
Power Supply Pin	Default: 1/2(+), 3/6(-)	Default: 1/2(+), 3/6(-) or 4/5(+), 7/8(-)
Max Power Per Port	30W	90W
Total PWR /Input Voltage	120W(DC48-56V) (Model dependent)	360W(DC52-56V) (Model dependent)
Power Consumption	3 Watts Max(without PoE load)	
Power Inputs	2	
Input Voltage	9-56VDC,Redundant dual inputs	
Operating Voltage	Non-PoE Mode: 9-56VDC 30W PoE Mode: 48-56VDC 90W PoE Mode: 52-56VDC(IEEE802.3bt model)	
Connector	1 removable 6-contact terminal blocks Pin 1/2 for Power 1, Pin 3/4 for Power 2, Pin 5/6 for fault alarm	
Protection	Overload Current Protection, Reverse Polarity Protection	

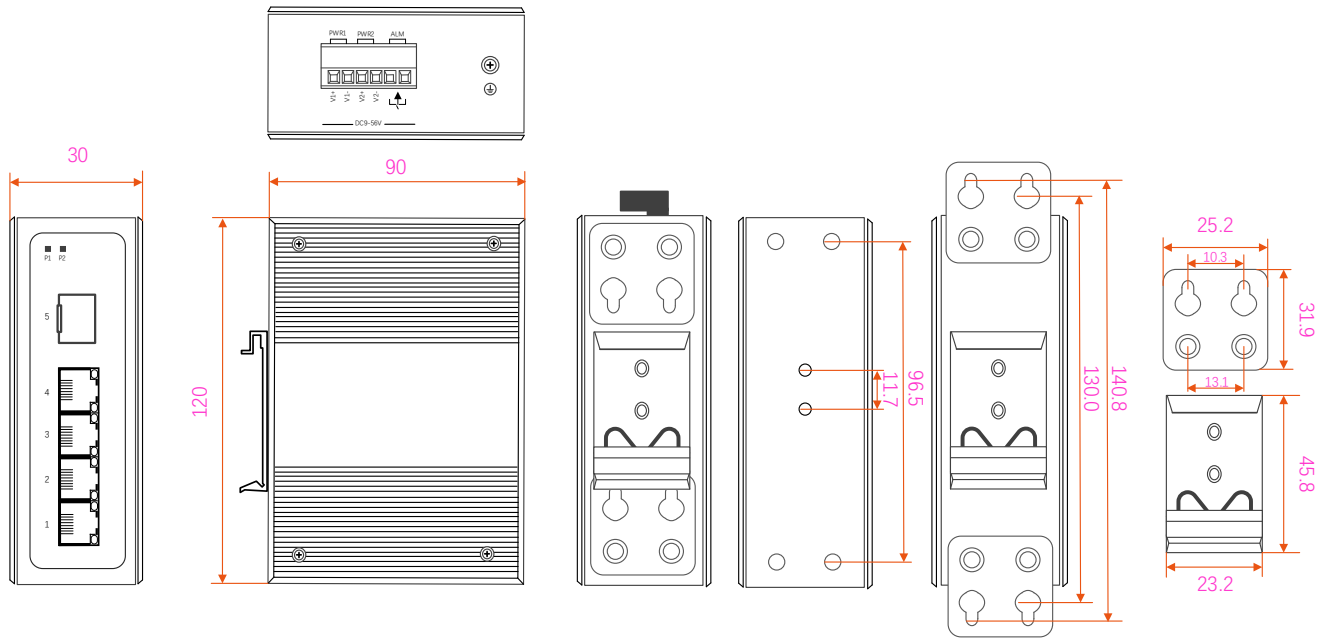
LED	State	Description
PWR (P1&P2)	ON	Power is being supplied
	OFF	Power is not being Supplied.
Link/ACT (1-5)	ON	Port connection is active
	Blinking	Data transmitted
	OFF	Port connection is not active.

Product Specifications

Physical Characteristics	
Housing	Aluminium case
IP Rating	IP40
ESD Protection	6kV
EFT Protection	6kV
Dimensions	120mm x 90mm x35mm (L x W x H)
Installation Mode	DIN Rail/Wall Mount
Weight	400g(without PoE)
Working Environment	
Operating Temperature	-40°C~75°C (-40 to 167 °F)
Operating Humidity	5%~95% (non-condensing)
Storage Temperature	-40°C~85°C (-40 to 185 °F)
Heat Dissipation	10 BTU/h (Non-PoE) 420 BTU/h (30W PoE) 1260 BTU/h (90W PoE)
Cooling	Passive Cooling
Noise Level	0 dBA
Warranty	
MTBF	> 500,000 Hours, Standard: Telcordia(Bellcore), GB
Defects Liability Period	5 years warranty, lifetime technical support See www.fiberroad.com
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 Ethernet Switch
Installation Kit	1x DIN-Rail Clip 2x Wall-Mount Kits
Documentation	1 x Quick installation guide 1 x Warranty card 1x Product notice

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 Outdoor 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	10/100Base-T(X), RJ45	10/100/1000Base-T(X), RJ45	100Base-X Port	1000Base-X Port	Optical Port Connector Option	PoE Standard	Input Voltage	Operating Temp.
FR-7N1104	4	—	1	—	LC/SC/ST/FC	—	DC9-56V	-40 to +75°C
FR-7N1104P	4	—	1	—	LC/SC/ST/FC	IEEE802.3af/at	DC9-56V	-40 to +75°C
FR-7N1104BT	4	—	1	—	LC/SC/ST/FC	IEEE802.3af/at/bt	DC9-56V	-40 to +75°C
FR-7N3104	—	4	—	1	LC/SC/ST/FC	—	DC9-56V	-40 to +75°C
FR-7N3104P	—	4	—	1	LC/SC/ST/FC	IEEE802.3af/at	DC9-56V	-40 to +75°C
FR-7N3104BT	—	4	—	1	LC/SC/ST/FC	IEEE802.3af/at/bt	DC9-56V	-40 to +75°C

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For more information

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