



Unmanaged Ethernet Switches

FR-7N3104 • FR-7N3104P • FR-7N3104BT

Industrial Unmanaged 4-port 10/100/1000Base-TX (Non-PoE/PoE+/PoE++)
+ 1-port 1000Base-SFP Ethernet Switch with Redundant DC Power Inputs

Product Data Sheet



FR-7N3104 • FR-7N3104P • FR-7N3104BT



Main Features

- 4 x 10/100/1000Base-T RJ45 Ports
- 1 x 1000BASE-X SFP slots
- Optionally support IEEE 802.3 af/at/bt Power Over Ethernet Standard
- 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

Overview

The Fiberroad 7N Series Unmanaged Industrial Ethernet Switch is designed for stable operation in outdoor surveillance and industrial networking environments. Built to perform under harsh weather conditions, it provides reliable Ethernet connectivity for CCTV systems and other industrial devices deployed in demanding field installations.

The 7N Series supports optional IEEE 802.3af/at/bt Power over Ethernet (PoE), enabling power and data transmission over a single cable. This reduces cabling requirements and simplifies deployment in outdoor or remote locations.

With multiple port configurations available, the switch integrates easily into existing network infrastructures. Its industrial-grade construction ensures dependable performance while supporting cost-effective network deployment for surveillance and industrial applications.

Hardware Specifications

Product	FR-7N3104	FR-7N3104P	FR-7N3104BT
Copper Ports	4x10/100/1000BASE-T RJ45 Auto-MDI/MDI-X (Port 1-4)		
Fiber Ports	1x1000BASE-X SFP slot (Port 5)		
Enclosure	IP40 aluminum case		
Installation	DIN-Rail and Wall-mount		
Dimension	120 x 90 x 35 mm		
Weight	380g(Bare weight), 480g(With package)		
Surge Protection	±6kV DC, ±4kV RJ45		±6kV DC, ±6kV RJ45

Switching

Switch Architecture	Store-and-Forward		
Switch Fabric	14Gbps/non-blocking		
Forwarding Rate	7.44 Mpps(64-byte packet size)		
Packet Buffer Size	512 Kbits		
MAX. Packet Length	9K bytes		
MAC Address Table	2K entries, automatic source address learning and aging		

Power Supply and PoE

Power Input	2		
Power 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(As required)		
Operating Voltage	DC9-56V	DC48-56V	DC52-56V
Power Consumption	6 Watts Max (without PoE load)		
Protection	Reverse Polarity, Overload Current		
PoE Ports	\	Port 1 to 4 IEEE802.3 af/at	Port 1 to 4 IEEE802.3 af/at/bt
PoE Power Supply Type	\	End-span	End-span
Power Supply Pin	\	1/2(+), 3/6(-)	1/2(+), 3/6(-) or 4/5(+), 7/8(-)
Max Power Per Port	\	30W	90W
PoE Power Budget	\	120W (Depending on power input)	120W (Depending on power input)

Environmental

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)		
Heat Dissipation	10 BTU/h (Non-PoE), 430 BTU/h (with 120W PoE load)		
Cooling	Passive Cooling		
MTBF	>500,000 hours @MIL-HDBK-217F GF 25°C		

LED Indicators

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		

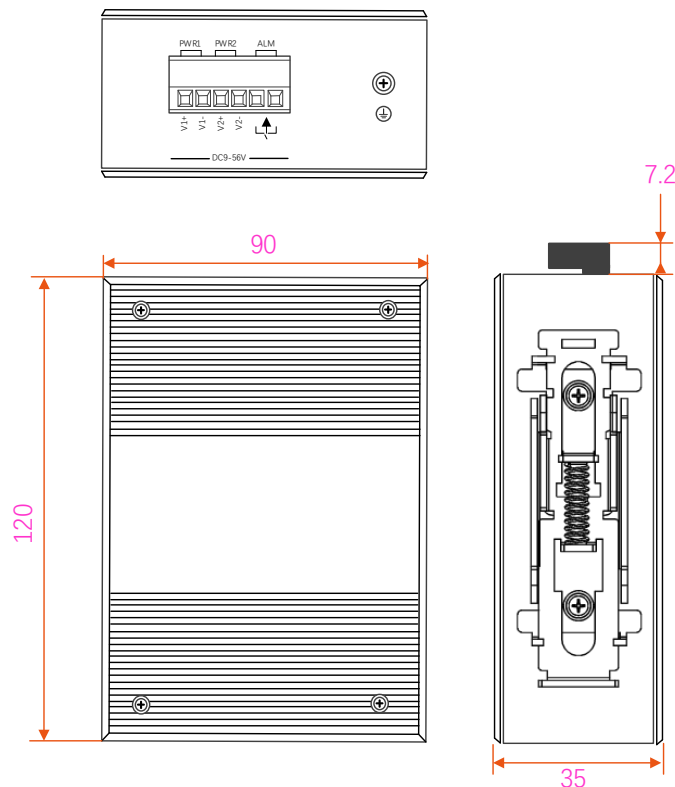
Regulatory & Warranty

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:±8kV, Air:±15kV IEC61000-4-5 Surge: Power: ±6kV; RJ45:±4kV/±6kV(PoE)
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 Ethernet Switch
Installation Kit	1 x DIN-Rail Clip
Documentation	1 x Quick installation guide 1 x Warranty card

Dimensions Unit: mm



Ordering Information

Available Model	Description	Input Voltage	Operating Temp.
FR-7N3104	Industrial Unmanaged 4-port 10/100/1000Base-TX + 1-port 1000Base-SFP Ethernet Switch with Redundant DC Power Inputs	Dual DC9-56V	-40 to +75°C
FR-7N3104P	Industrial Unmanaged 4-port 10/100/1000Base-TX (PoE+) + 1-port 1000Base-SFP Ethernet Switch with Redundant DC Power Inputs	Dual DC9-56V	-40 to +75°C
FR-7N3104BT	Industrial Unmanaged 4-port 10/100/1000Base-TX (PoE++) + 1-port 1000Base-SFP Ethernet Switch with Redundant DC Power Inputs	Dual DC9-56V	-40 to +75°C

Optional Accessories (to be purchased 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

(S)=SFP Option Please select your SFP on our SFP Modules page for details.

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

Shipping

Model No.	FR-7N3104	FR-7N3104P	FR-7N3104BT
Classification Codes	HS Code: 851762		
	HTS: 8517.62.00		
NDA Compliant	Yes		
Individual Gross Weight	480g	500g	
Individual Package Dimension	175x153x43mm		
Package Quantity	50 Units		
Package Gross Weight	24kg	25.6kg	
Package Dimension	540x315x430mm		

Precautions

To prevent equipment damage or personal injury caused by improper operation, please observe the following precautions:

- ❖ Turn off the power before installation. Wear an anti-static wrist strap and ensure proper skin contact to prevent electrostatic discharge (ESD) damage.
- ❖ Ensure the power supply voltage matches the voltage specified on the switch.
- ❖ Before powering on the switch, verify that the power circuit is not overloaded to avoid abnormal operation or equipment damage.
- ❖ Do not open the chassis while the switch is operating. To avoid the risk of electric shock, do not disassemble the device.
- ❖ Disconnect the power before cleaning. Do not use a wet cloth or liquid cleaners.
- ❖ When installing in a rack, mount equipment from bottom to top to prevent overloading.
- ❖ Do not place heavy objects on the switch.

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