FIBERROAD

UNMANAGED INDUSTRIAL ETHERNET SWITCH

Product Data Sheet

FR-6N3104

FR-6N3104 is an Industrial Gigabit Ethernet Switch, which is designed for the small business network application. Supports 4-Ports 10/100/1000Base-T RJ45 and 1 port 1000Base-X SFP(Optional 1X9 module) based fiber optics. The traditional transmission distance of Fast Ethernet over RJ45 copper can be extended up to 100km+ over a fiber optics interface. FR-6N3104 can optionally support DIN-Rail mounting or Wall mounting, thus suitable for various installation methods. LEDs provide visual monitoring of Ethernet-connected devices such as IP cameras, wireless access points, or PC/laptop via 10/100/1000Base-T twisted-pair RJ45 ports on FR-6N3104. FR-6N3104 is particularly suitable for deploying and provisioning active Ethernet FTTX service of multi-service operators (MSO).

Main Features

-Support up to 5 ports (1xFx port & 4xTx ports)
-Optical port can provide SFP, Optional SC/FC/ST interface, support single fibre/dual fibre transmission
-MDI/MDIX automatic recognition
-Maximum Frame 10K, 12G backplane bandwidth
-Support IEEE802.3AZ high-efficiency energy-saving technology
-4KV anti-static protection, easy to deal with outdoor environment use
-Working temperature -20 to +70℃
-Wide-range DC9~56V power input
-Support power input polarity protection; no worries about the reverse connection
-Aluminium shell, fanless design

It offers and realizes Ethernet data exchange, convergence and long distance optical transmission with efficient bandwidth and reliable fiber optic network solutions for users. The industrial switch complies with various characteristics such as no fan, low power consumption, high reliability and stability, and easy to maintain.

Industrial Ethernet Switch adopt mature technology and open network standards, adapt to low temperature and high temperature, strong anti-electromagnetic interference, anti-salt fog, anti-vibration and anti-shake, equipped with redundant dual power supply (AC/DC), which can offer redundant mechanisms for critical applications that need always-on connections. It can also operate either at standard operating temperature range -20 to 70°C. Industrial switches support standard 19” rack mounts with IP40 protection and are perfect choices for harsh environments.

Ethernet Interface	
Ports	4x10/100/1000Base-TX Ports(RJ45 connector) 1x1000Base-FX (SFP/1x9)
Pors 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 802.3x for flow control IEEE802.3az for Energy Efficient Ethernet IEEE802.1q for VLAN IEEE802.1x for Port Based Network Access Control
Packet Buffer Size	1M
Maximum Packet Length	10K
MAC Address Table	4K
Transmission Mode	Store and Forward (full/half duplex mode)
Exchange Property	Delay time: < 7μs Backplane bandwidth: 12Gbps

Physical Characteristics	
Housing	Aluminum case
IP Rating	IP40
Dimensions	120mm x 90mm x35mm (L x W x H)
Installation Mode	DIN Rail/Wall Mount
Weight	350g
Working Environment	
Operating Temperature	-20℃~70℃ (-4 to 158 ℉)
Operating Humidity	5%~90% (non-condensing)
Storage Temperature	-40℃~85℃ (-40 to 185 ℉)

LED Indicator	
Power	Connect-always
RJ45	Link/Act: connect-always; data exchange-twinkle
Fiber	Link/Act: connect-always; data exchange-twinkle
Power Information	
Redundant Power Input	DC 9-56V
Connector	5 PIN Phoenix Terminal
Overload Protection	Yes
Power Reverse	Support
Power Consumption	Full Load<4W

Warranty	
MTBF	360,000 Hours
Defects Liability Period	5 years warranty, lifetime technical support

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

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
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

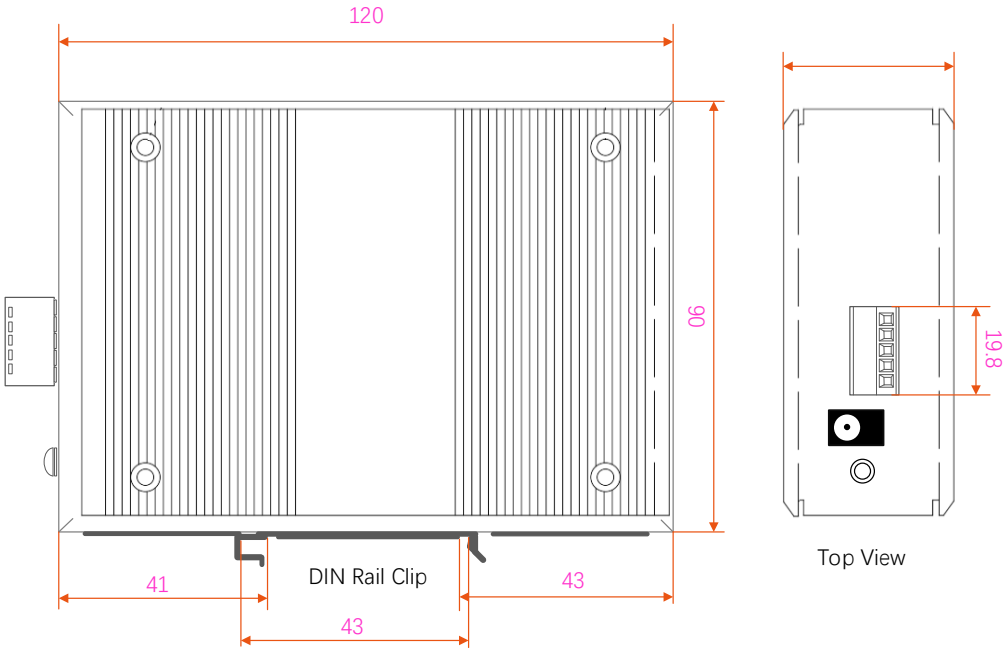
SFP Optical Transceiver	
FRSX-1L311C-I	1.25Gb/s 1310nm 10km SFP, wide operation temperature range of -40℃-85℃（-40℉ - 185℉）
FRSX-1L341C-I	1.25Gb/s 1310nm 40km SFP，wide operation temperature range of -40℃-85℃（-40℉ - 185℉）
FRSX-1L5X1C-I	1.25Gb/s 1550nm 80/100km SFP，wide operation temperature range of -40℃-85℃（-40℉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

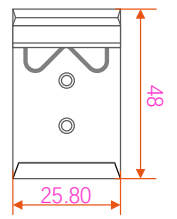
Armored Fiber Patch Cable / LAN Cable	
FRPC-A-LC	Armored LSZH LC UPC to LC UPC Duplex OS2 single mode 7.0mm for Ourdoor Application , 1-50m
FRLC-A-CAT6	Armored Cat6 Snagless shielded(SFTP) Ethernet Network Patch Cable, 26AWG, 1000Base-T, 0.5m – 3m

Package Contents	
Device	1x Industrial Ethernet Switch
Installation Kit	1x cap, plastic, for SFP Slots Or 2 x cap, plastic, for SC fiber port Or 2 x cap, plastic, for ST fiber port 1x DIN-Rail Clip 2x Wall-Mount Kits
Documentation	1 x quick installation guide 1 x warranty card 1x product notice

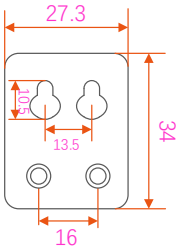
Dimensions

Unit: mm

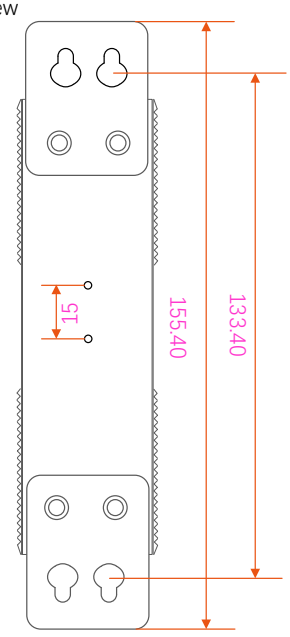




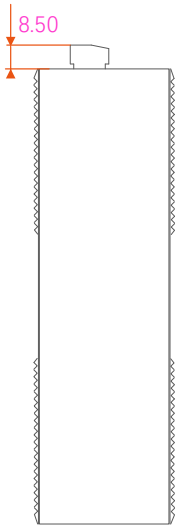
DIN Rail Clip



Wall Mount Kit



Wall Mount State



Front View

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	100/1000Base-X Port	Optical Port Connector Option	Input Voltage	Operating Temp.
FR-6N3005	—	5	—	LC	DC9-56V	-20 to +70℃
FR-6N3008	—	8	—	LC	DC9-56V	-20 to +70℃
FR-6N1104	4	—	1	LC	DC9-56V	-20 to +70℃
FR-6N3104	—	4	1	LC	DC9-56V	-20 to +70℃

The information in this document is subject to change without notice. Fiberroad 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,
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