



FR-6R3204

SMART INDUSTRIAL ETHERNET SWITCH LITE

Product Data Sheet



FR-6R3204

FR-6R3204 is Smart Industrial Ethernet Switch independently developed by Fiberroad for industrial networking applications. We define it as the LITE model, wholly designed for small businesses, extremely cost-effective. This product adopts industry-leading technical standards and can provide stable and reliable Ethernet transmission with high quality.

Main Features

- 4x10/100/1000Base-TX RJ45 ports, 2x100/1000Base-FX Fast SFP ports
- DIP Switch supports RSTP/VLAN/SPEED.
- Support 9K bytes giant frame, compatible with various extension protocol
- Support IEEE802.3az energy-efficient Ethernet technology
- Electric 4KV surge protection, easy to use in an outdoor environment
- Complete status indicator, working state at a glance
- Power input polarity protection design
- Aluminum case, no fan design
- Installation method: DIN Rail /Wall mounting



Management	Network	IP Rating
Web	RSTP	IP40
Op Temp	Multicast	DIP Switch
-40°C +85°C	IGMP	

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 -40 to 85°C. Industrial switches support standard 19" rack mounts with IP40 protection and are perfect choices for harsh environments.

Product Specifications

Ethernet Interface	
Ports	4x10/100/1000Base-TX RJ45 ports, 2x100/1000Base-FX Fast SFP ports
Ports 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 802.3ab for 1000BaseT(X) IEEE 802.3z for 1000BaseSX/LX/LHX/ZX IEEE 802.3x for flow control IEEE 802.1D-2004 for Spanning Tree Protocol IEEE 802.1w for Rapid Spanning Tree Protocol IEEE 802.1p for Class of Service IEEE 802.1Q for VLAN Tagging
Packet Buffer Size	2M
Maximum Packet Length	Up to 16K
MAC Address Table	4K
Transmission Mode	Store and Forward (full/half duplex mode)
Exchange Property	Delay time: < 7μs Backplane bandwidth: 20Gbps
IGMP Group	256
VLAN ID Range	VID 1 to 4094
Transmission Distance	
SFP Port	Depends on optical module
RJ45 Port Transmission Distance	100m (using standard CAT5/CAT5e cable)
Power Information	
Supply Current	1.0A/48VDC
Working Voltage	9-56VDC
Overload Protection	Yes
Power Reverse	Support
Power Consumption	Full load<10W
Warranty	
MTBF	500,000 hours
Defects Liability Period	5 years warranty, lifetime technical support
DIP Switch	
#1	RSTP Enable/Disable (Default: Enable)
#2	VLAN Enable/Disable (Default: Disabled)
#3	SFP port fixed speed, ON as 100M (Default: 100/1000M Adaptive)

Notes: 1. RSTP switches to the ON position, which indicates RSTP is in disabled status.

2. VLAN switches to the ON position, which indicates VLAN is in enabled status. All LAN ports are only able to communicate with the SFP uplinks when this option is enabled.

Product Specifications

Ethernet Software Features	
Redundant Network	Support STP/RSTP
Multicast Support	Support IGMP Snooping V1/V2/V3
VLAN	Support IEEE 802.1Q 4K VLAN
QOS	Support Port, 1Q, ACL, DSCP, CVLAN, SVLAN, DA, SA
Diagnostic Maintenance	Support port mirroring, Ping
Management Function	WEB
Security	Broadcast/Multicast Storm Protection, MAC filtering

Physical Characteristics	
Housing	Aluminum case
IP Rating	IP40
Dimensions	120mm*90mm*35mm
Installation Mode	DIN Rail and Wall Mounting
Weight	350g

Working Environment	
Operating Temperature	-40°C~75°C (-40 to 167 °F)
Operating Humidity	5%~90% (non-condensing)
Storage Temperature	-40°C~85°C (-40 to 185 °F)

LED Indicator	
Power	Connect-always
RJ45	Link/Act: connect-always; data exchange-twinkle
Fiber	Link/Act: connect-always; data exchange-twinkle

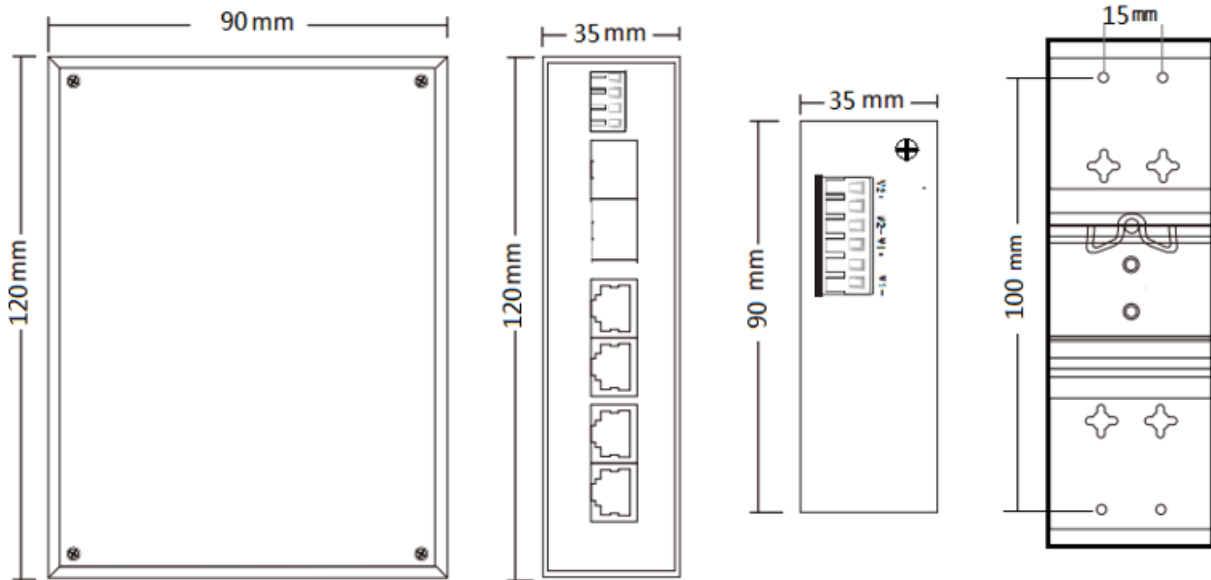
Certification Standard	
EMC/EMI/EMS	FCC Part15 Class A CE-EMC/LVD RoHS EN61000-4-2 (ESD):LEVEL 4 IEC 6100-4-2 (EFT):LEVEL 4 IEC 6100-4-2 (Surge): LEVEL 4 IEC 6100-4-2 (CS): LEVEL 3 IEC 61000-4-2(PFMP) : LEVEL 5 EN61000-4-3 (RS):LEVEL 4
Shock	IEC60068-2-27
Vibration	IEC60068-2-6
Freefall	IEC60068-2-31
Safety	EN 60950-1, UL 60950-1, CSA C22.2 No.60950-1, UL 508

Product Specifications

Package Contents

Device	1x Industrial Ethernet Switch
Installation Kit	2 x Caps, plastic, for SFP Slots Or 2 x Caps, plastic, for SC fiber port Or 2 x Caps, plastic, for ST fiber port 2x Wall-Mount Kits 1x DIN Rail Buckle
Documentation	1 x Quick installation guide 1 x Warranty card 1x Product notice

Dimensions Unit: mm



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°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

FR-6R3204	4x10/100/1000Base-TX RJ45 ports, 2x100/1000Base-FX SFP ports with DIP Switch, DC9~56V Input
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*Fiber port can add SFP module. RJ45 port with PoE optional.

The information in this document is subject to change without notice. Fiberroad Technology., Ltd 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, Visit <https://www.fiberroad.com> or contact your local account representative.