FIBERROAD

SMART INDUSTRIAL ETHERNET SWITCH LITE

Product Data Sheet

Web Smart Industrial Ethernet Switch

Fiberroad's Smart Industrial Ethernet Switch FR-7S3204 is an innovative and independent product for industrial networking. We define it as the LITE model, designed specifically for small industrial networks and highly cost-effective. In addition to adopting industry-leading technical standards, this product can guarantee reliable and reliable Ethernet transmissions.

Main Features

- A compact, all-aluminium case with a fanless design.
- The temperature from -40 to 75°C maintains performance in extreme conditions
- DIP Switch supports RSTP/VLAN/SPEED.
- Support IEEE 802.3af/at/bt PoE standards without damaging non-PoE devices.
- Provide 9K bytes Jumbo frame that is compatible with multiple extension protocols
- Facility IEEE802.3az energy-efficient Ethernet
- Complete with electricity surge protection, easy to use in an outdoor environment
- Detailed status indicator, working state at a glance
- Design for power input polarity protection
- Either DIN rail or Wall Mount Installation
- An easy-to-use WebGUI interface

Ethernet data exchange, convergence, and long-distance optical transmission are available with efficient bandwidth and reliable fibre optic networks. Industrial switches conform to many characteristics, such as no fan, low power consumption, high reliability and stability, and easy maintenance.
Industrial Ethernet Switch adopts mature technology and open network standards, adapts to low temperature and high temperature, protects against electromagnetic interference, anti-salt fog, antivibration, and anti-shake, and is equipped with redundant dual It can also operate either at the standard operating temperature range of -40 to 75℃. Industrial switches support standard 19” rack mounts with IP40 protection and are perfect choices for harsh environments.

Ethernet Interface		
Mode	FR-7S3204	FR-7S3204P/BT
Ports	4x10/100/1000Base-TX RJ45 ports+2x100/1000Base-X SFP ports	
Port 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 9K	
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	

PoE & Power Supply		
Model	FR-7S3204P	FR-7S3204BT
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(-) ,4/5(+), 7/8(-)
Max Power Per Port	30W	90W
Total PWR /Input Voltage	120W(DC48-56V) (Model dependent)	200W(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	

Software Features	
Redundancy Protocol	Support STP/RSTP
Multicast Support	Support IGMP Snooping V1
VLAN	Support IEEE 802.1Q 4K VLAN, Port Isolation, Trunk Group Setting
QOS	Support Port, 1Q, ACL, DSCP, CVLAN, SVLAN, DA, SA, Port Priority, Queue Weight
Diagnostic Maintenance	Support port mirroring, Port Statistics, Cable Diagnostic
Management Function	WEB、SNMPv1, EEE, Green Ethernet
Security	Broadcast/Multicast Storm Protection, MAC filtering, MAC Constraint
PoE Management(PoE Model)	PoE Mode, State and Power Monitoring
Advance Functions	Bandwidth Control(Ingress and Egress Rate), Jumbo Frame, Firmware Online Upgrade, Configuration Backup

Physical Characteristics	
Housing	Aluminum case
IP Rating	IP40
Dimensions	120mm x 90mm x 35mm (L x W x H)
Installation	DIN Rail/Wall Mount
Weight	350g
Environmental	
Operating Temperature	-40 to 75℃
Operating Humidity	5%~95% (non-condensing)
Storage Temperature	-40℃~85℃
MTBF	907,476 hours @ Telcordia SR-332 Standard
Heat Dissipation	34 BTU/h (Non-PoE Mode) 1262 BTU/h (with 360W PoE Load)
Cooling	Passive Cooling, Fanless Design
Noise Level	0 dBA

LED	State	Description
PWR	ON	Power is being supplied
	OFF	Power is not being Supplied.
RUN	Blinking	The system is running well
Link/ACT (1-6)	ON	Port connection is active
	Blinking	Data transmitted
	OFF	Port connection is not active.

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.

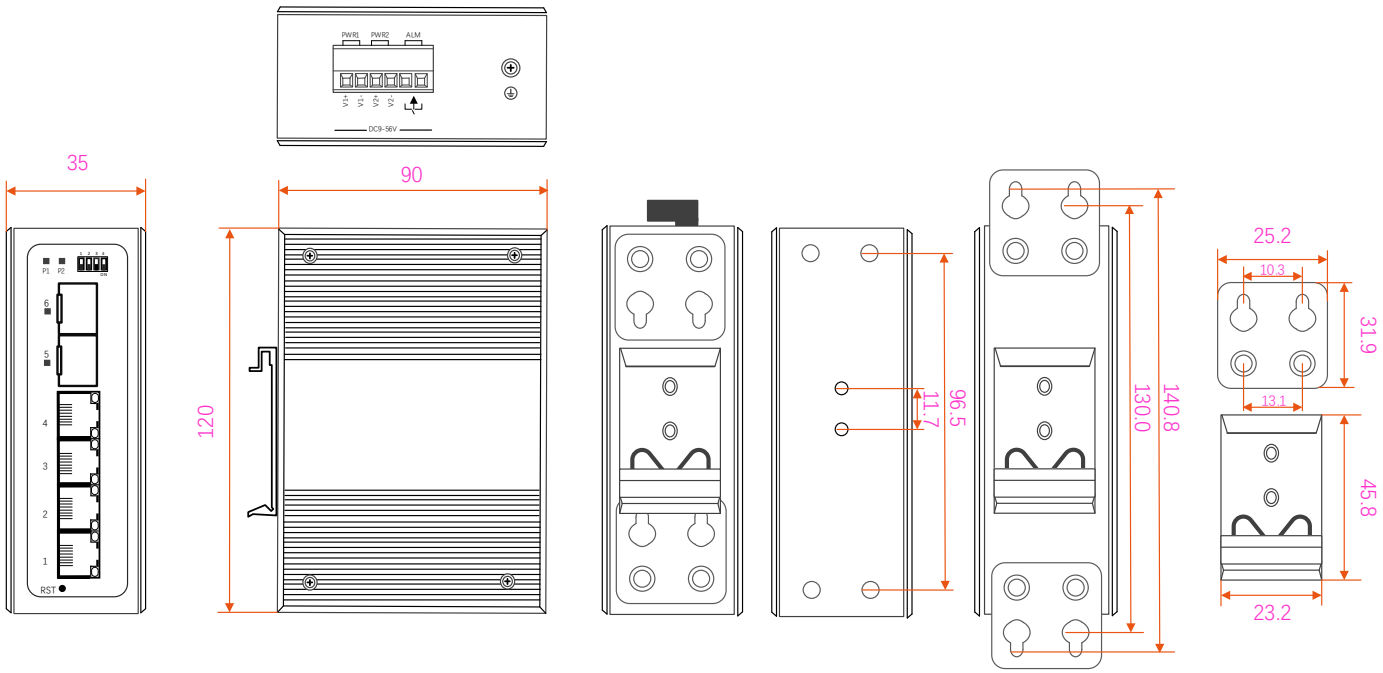
2. VLAN switches to the ON position, which indicates VLAN is in enabled status. All LAN ports are only able to communicate with the SFP uplinks when this option is enabled.

3. To take effect the DIP Switch function while the ethernet switch is in operation, there is a need to reboot the Ethernet switch after tuning the DIP switch.

Regulatory & Warranty	
Safety	IEC/EN 62368-1
EMI	EN55032 Class A, CISPR 32 FCC Part 15B Class A
EMS	EN61000-4-2 (ESD) EN61000-4-3 (RS) EN61000-4-4 (EFT) EN61000-4-5 (Surge) EN61000-4-6 (CS) EN61000-4-8 (PFMF
Shock	IEC 60068-2-27
Free Fall	IEC 60068-2-32
Vibration	IEC 60068-2-6
Environmental	RoHS
Warranty	5 Years, Details See: www.fiberroad.com

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-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℃-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

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(X), RJ45	100/1000Base-X Port	Optical Port Connector Option	PoE Standard	Input Voltage	Operating Temp.
FR-7S3204	4	2	LC	—	DC9-56V	-40 to +75℃
FR-7S3204P	4	2	LC	IEEE802.3af/at	DC9-56V	-40 to +75℃
FR-7S3204BT	4	2	LC	IEEE802.3af/at/bt	DC9-56V	-40 to +75℃
FR-7S3208L	8	2	LC	—	DC9-56V	-40 to +75℃

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,
Visit https://www.fiberroad.com or contact your local account representative.