



Web Smart Ethernet Switches

FR-7S3204 • FR-7S3204P • FR-7S3204BT

Industrial Lite-Managed 4-port 10/100/1000Base-TX (Non-PoE/PoE+/PoE++)
+ 2-port 1000Base-SFP Ethernet Switch with Redundant DC Power Inputs

Product Data Sheet



FR-7S3204 • FR-7S3204P • FR-7S3204BT

Main Features



- Compact all-aluminium housing with fanless design
- Wide operating temperature range from -40°C to 75°C for stable performance in harsh environments
- DIP switch configuration for RSTP / VLAN / Speed settings
- Supports IEEE 802.3af/at/bt PoE standards with protection for non-PoE devices
- Supports 9K jumbo frames for compatibility with extended network protocols
- Supports IEEE 802.3az Energy-Efficient Ethernet (EEE)
- Integrated surge protection for improved reliability in outdoor installations
- LED status indicators for quick system and port status monitoring
- Power input polarity protection design
- DIN-rail or wall-mount installation
- User-friendly WebGUI management interface

Overview

Fiberroad Web Smart Ethernet Switches are designed for industrial networking applications requiring reliable and cost-effective connectivity, making it suitable for small industrial networks. The switch supports efficient Ethernet data exchange, traffic aggregation, and long-distance fiber transmission, providing stable bandwidth and dependable fiber-optic network performance.

Featuring an industrial-grade design, the FR-7S3204 series offers fanless operation, low power consumption, high reliability, and simplified maintenance. Built with mature switching technology and open networking standards, it ensures stable operation in industrial environments.

The switch withstands harsh conditions including electromagnetic interference, vibration, and salt-fog environments, and operates within a wide temperature range of -40°C to 75°C with IP40 protection. Supporting standard 19-inch rack-mount installation, the FR-7S3204 series is well suited for deployment in demanding environments such as factories, transportation systems, and outdoor installations.

Ethernet		
Mode	FR-7S3204FR-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
PoE Power Budget	Max 120W@dual 52VDC inputs	Max 360W@dual 52VDC inputs
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°C
Operating Humidity	5%~95% (non-condensing)
Storage Temperature	-40°C~85°C
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

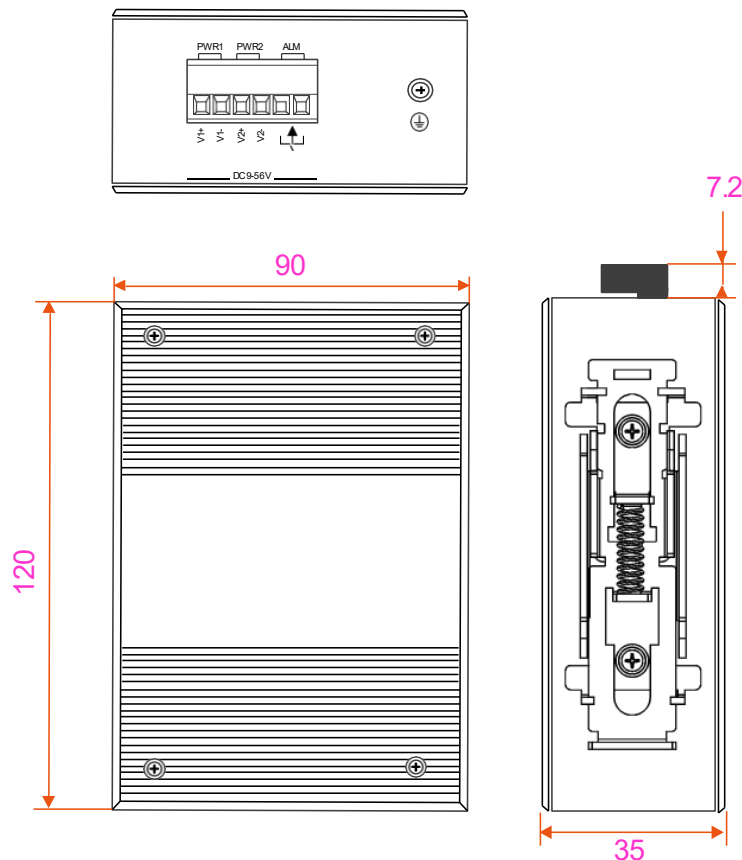
Safety	IEC/EN 62368-1
EMI	EN55032 Class A, CISPR 32 FCC Part 15B Class A
EMS	EN61000-4-2 (ESD) EN61000-4-3 (RS) EN61000-4-4 (EFT) EN61000-4-5 (Surge) EN61000-4-6 (CS) EN61000-4-8 (PFMF)
Shock	IEC 60068-2-27
Free Fall	IEC 60068-2-32
Vibration	IEC 60068-2-6
Environmental	RoHS
Warranty	5 Years, Details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



Ordering Information

Available Model	Description	Input Voltage	Operating Temp.
FR-7S3204	Industrial Lite-Managed 4-port 10/100/1000Base-TX + 2-port 1000Base-SFP Ethernet Switch with Redundant DC Power Inputs	Dual DC9-56V	-40 to +75°C
FR-7S3204P	Industrial Lite-Managed 4-port 10/100/1000Base-TX (PoE+) + 2-port 1000Base-SFP Ethernet Switch with Redundant DC Power Inputs	Dual DC9-56V	-40 to +75°C
FR-7S3204BT	Industrial Lite-Managed 4-port 10/100/1000Base-TX (PoE++) + 2-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

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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