FIBERROAD®

Industrial Ethernet & Optical Transport

PRODUCT CATALOG

Innovating Today, Transforming Tomorrow

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WHO WE ARE ?

At the forefront of innovation in network technology, we are a rapidly growing technology company dedicated to manufacturing professional network connectivity equipment tailored for international markets. With years of extensive experience and relentless research and development focused on Carrier Ethernet and Industrial Ethernet devices specifically designed for Telecom and IoT applications, our team has cultivated an expansive portfolio that addresses the intricate demands of sectors like Industrial 4.0, Smart City and Data Center.

17 YEARS OF ETHERNET CONNECTIVITY

LONG TERM COMMITMENT

Our goal is to provide top-notch value and ensure our customers and partners worldwide succeed with our ethernet solutions. We're all about deep collaboration to make that happen.

RELIABILITY EXCELLENCE

At Fiberroad, we take security seriously. Our team runs constant safety checks on all our products to identify and squash any potential vulnerabilities.

COST EFFICIENCY

Even if you're using Fiberroad devices in an industrial or commercial setting, the interfaces and controls are intuitive enough for just about anyone to pick up and use right away.

WHAT WE OFFER ?

Our product line was created to give our partners a chance to get in on the booming Industrial IoT and edge network connection markets. It includes Ethernet Access devices, Switching and Routing gear, and Optical Transport solutions.

Ethernet Access

- Industrial Wireless
- Fiber Media Converter
- Protocol Converter

Switching & Routing

- Layer 2 & 3 Industrial Ethernet
- Ethernet Embedded Modules
- PTP 1588 & TSN

Optical Transport

- 100G/400G Optical Transmission
- Optical Line System

Network Management

- WebGUI Management
- PREVIEW NMS
- FIRO Cloud Management

STRICT QUALITY ASSURANCE

Are you looking for top-quality telecommunication products? Then Fiberroad is the perfect brand that offers high-end solutions to meet your needs. But how does Fiberroad ensure its products are of superior quality and reliability? The answer lies in their rigorous Quality Assurance process, which involves stringent testing at every stage of development. In this blog post, we will take a closer look at the importance of strict testing in Fiberroad's Quality Assurance Process and how it benefits customers who choose their telecommunication products. So buckle up and get ready to learn more about what sets Fiberroad apart from other brands!

3
RESEARCH CENTER

20%
R&D STAFF RATIO

23%
R&D INPUT RATIO

118
SOFTWARE PATENTS

2
PRODUCTION SITES

300K
MONTHLY MANUFACTURING CAPACITY

Fast Ethernet Media Converters

Gigabit Ethernet Media Converters

2*Gigabit Ethernet Media Converters

10 Gigabit Ethernet Media Converters

100M - 10G Fiber Converters

FR-2000

MINI FIBER MEDIA CONVERTER SERIES

Hot Swappable Redundant Power Supply

36W MAX Power Consumption

Efficient Heat Dissipation

FR-2201

1x10/100M RJ45
1x100M SFP/1x9 Fiber Port
DIP SW: LFPT | ALS
DC5-12V Power Input

FR-2203

1x10/100/1000M RJ45
1x1000M SFP/1x9 Fiber Port
DIP SW: LFPT | ALS
DC5-12V Power Input

FR-2206

2x10/100/1000M RJ45
1x1000M SFP Slot
DIP SW: Jumbo Frame | Port Isolation
DC5-12V Power Input

FR-2209

2x100/1000M SFP Slots
DC5-12V Power Input

FR-2212

2x125M-11.3G SFP/SFP+ Slots
DIP SW: SPEED | ALS | LFPT | LOOP
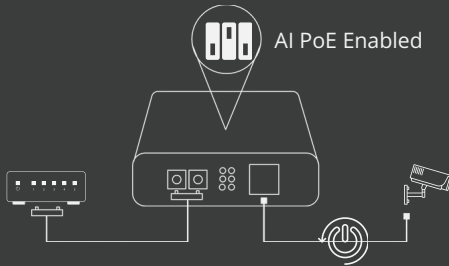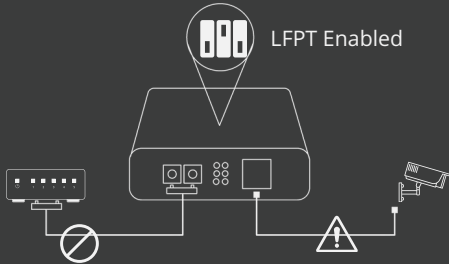DC5-12V Power Input

FR-2222

1x100M/1/2.5/5/10G RJ45
1x10G SFP+ Slot
DIP SW: SPEED | ALS | LFPT
DC5-12V Power Input

What Is the DIP Switch on Unmanaged Media Converter?

DIP switch stands for dual in-line package switch. It is a simple and cost-effective component that can help select and change between various hardware or device options. Users just need to toggle each switch between on and off positions to enable and disable certain functions.

LFPT Enabled

AI PoE Enabled

FR-POE232

- 1x10/100/1000M RJ45
- 1x1000M SFP Slot
- 802.3 at PoE+ Standard
- LFPT | ALS | FX Reset | Speed
- DC48-52V Power Input
- External Power Supply

FR-POE233

- 2x10/100/1000M RJ45
- 1x1000M SFP Slot
- 802.3 at PoE+ Standard
- Jumbo Frame | VLAN | Speed
- DC48-52V Power Input
- External Power Supply

FR-POE331

- 1x10/100M RJ45
- 1x100M SFP/1x9 Fiber Port
- 802.3 at PoE+ Standard
- Speed | AI PoE | LFPT
- AC 100~240V Power Input
- Internal Power Supply

FR-POE332

- 1x10/100/1000M RJ45
- 1x1000M SFP/1x9 Fiber Port
- 802.3 at PoE+ Standard
- Speed | AI PoE | LFPT
- AC 100~240V Power Input
- Internal Power Supply

FR-6N1101

RJ45
1x10/100M
SFP/1X9
1x100M
Jumbo Frame
1536 bytes
Power Input
2xDC9-56V
Operating Temp
-20 to +70℃
IP Rating
IP40
Mounting
DIN Rail &
Wall Mounting

FR-6N3101

RJ45
1x10/100/1000M
SFP/1X9
1x1000M
Jumbo Frame
9K
Power Input
2xDC9-56V
Operating Temp
-20 to +70℃
IP Rating
IP40
Mounting
DIN Rail &
Wall Mounting

FR-6N1102

Port
2x10/100M
SFP/1X9
1x100M
Jumbo Frame
1536 bytes
Power Input
2xDC9-56V
Operating Temp
-20 to +70℃
IP Rating
IP40
Mounting
DIN Rail &
Wall Mounting

FR-6N3102

Port
2x10/100/1000M
SFP/1X9
1x1000M
Jumbo Frame
9K
Power Input
2xDC9-56V
Operating Temp
-20 to +70℃
IP Rating
IP40
Mounting
DIN Rail &
Wall Mounting

FR-2701

Port
1x10/100M
SFP Slot
1x100M
 Jumbo Frame
1536 bytes
Power Input
1xDC9-56V
DIP Switch
LFP | ALS
FX Rest | Speed
Operating Temp
-30 to +70℃
IP Rating
IP40
Mounting
Wall Mounting

FR-2703

Port
1x10/100/1000M
SFP Slot
1x1000M
 Jumbo Frame
9K
Power Input
1xDC9-56V
DIP Switch
LFP | ALS
FX Rest | Speed
Operating Temp
-30 to +70℃
IP Rating
IP40
Mounting
Wall Mounting

FR-7N1101/P/BT

RJ45
1x10/100M
SFP/1X9
1x100M
Jumbo Frame
1536 bytes
Power Input
2xDC9-56V
Operating Temp
-40 to +75℃
IP Rating
IP40
Mounting
DIN Rail
Wall Mounting
PoE Standard
FR-7N1101P/3101P: 802.3 af/at
FR-7N1101BT/3101BT: 802.3 af/at/bt

FR-7N3101/P/BT

RJ45
1x10/100/1000M
SFP/1X9
1x1000M
Jumbo Frame
9K
Power Input
2xDC9-56V
Operating Temp
-40 to +75℃
IP Rating
IP40
Mounting
DIN Rail
Wall Mounting

FR-7N1102/P/BT

Port
2x10/100M
SFP/1X9
1x100M
Jumbo Frame
1536 bytes
Power Input
2xDC9-56V
Operating Temp
-40 to +75℃
IP Rating
IP40
Mounting
DIN Rail
Wall Mounting
PoE Standard
FR-7N1102P/3102P: 802.3 af/at
FR-7N1102BT/3102BT: 802.3 af/at/bt

FR-7N3102/P/BT

Port
2x10/100/1000M
SFP/1X9
1x1000M
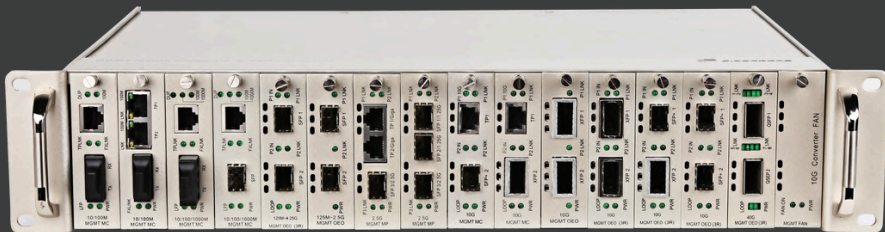**Jumbo Frame**
9K
Power Input
2xDC9-56V
Operating Temp
-40 to +75℃
IP Rating
IP40
Mounting
DIN Rail
Wall Mounting

FR-6216-AA/DD
Multi-Service Platform

FR-6102-DD
Standalone Chassis

FR-6000

MANAGED FIBER MEDIA CONVERTER SERIES

FR-6216M
FR-6216-AA/DD Chassis

Management Module

Multi-service platform chassis, which provides a reliable solution of high density media converter modules for applications such as telecom operator, enterprise, long haul transmission and factory automation.

The management Module connects to the chassis and communicates with the individual cards in the Managed Chassis. Only management traffic - no end-user data traffic - is sent across the managed Chassis to maintain security.

Each slide-in-module for managed Chassis has specific features and functions that are controlled via the Management Module. A network administrator can configure, monitor and troubleshoot slide-in-modules remotely via the management module. The remote management helps reduce operating expenses (OpEx) by reducing technician dispatches. Remote management allows for faster mean-time-to-repair by proactively receiving traps and alerts on potential issues. With less downtime you are able to focus on revenue generating aspects of your business.

WebGUI Management Interface

NMS Management Interface

Features

- Complete system information can be set up and displayed, including the name of the chassis, terrain information, related information of IP, constant operating time and the versions of the hardware and soft ware
- Real time display of voltage and temperature on the cards of the media converters, temperature of chassis and report fault in time
- Supporting SFP/XFP, CWDM SFP/XFP and DWDM SFP/XFP, and it can show the SFP/XFP information and digital diagnosis function
- Remote power off alarming, precisely distinguish remote failure
- Equipment restart, system or module restart by management software, set-up information on each module will be stored spontaneously when power off
- Reset to factory set up or dip switch status are optional
- Each port at local or remote devices can be set up or tracked, including the connecting status, connecting speed, half/full duplex, port locked and LFP etc.
- Supporting Loopback and PRBS, precisely locating the failure, convenient for link test

FR-6102M
FR-6102-DD Chassis
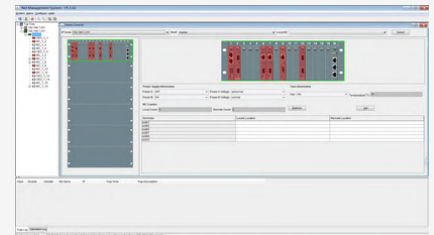
FR-6101
FR-6101R

Port
1x10/100M RJ45
1x100M SFP/1x9 Fiber Port
Management Features
Rate Limitation | LFPT
Power Input
FR-6101: DC5V
FR-6101R: AC220V/DC48V

FR-6102
FR-6102R

Port
2x10/100M RJ45
1x100M SFP/1x9 Fiber Port
Management Features
Rate Limitation |VLAN Model
Power Input
FR-6102: DC5V
FR-6102R: AC220V/DC48V

FR-6103
FR-6103R

Port
1x10/100/1000M RJ45
1x1000M SFP/1x9 Fiber Port
Management Features
Rate Limitation | LFPT
Power Input
FR-6103: DC5V
FR-6103R: AC220V/DC48V

FR-6104
FR-6104R

Port
2x10/100/1000M RJ45
1x1000M SFP Fiber Port
Management Features
Rate Limitation | VLAN Mode
Power Input
FR-6104: DC5V
FR-6104R: AC220V/DC48V

FR-6601
FR-6601R

Port
1x10G RJ45
1x10G SFP+
Management Features
Loopback Mode | SFP+ Status
Power Input
FR-6601: DC5V
FR-6601R: AC220V/DC48V

FR-6000-ODM

4 Channels CWDM M/DEMUX
Wavelength
1270-1330nm(Default)
Channel Spacing
20nm
Insertion Loss
≤1.3dB, 1.0dB

Managed Fiber Media Converter

2.5G TMUX
Port
2x1.25G SFP Slots
1x2.5G SFP Slot
Power Input
FR-6302: DC5V
FR-6302R: AC220V/DC48V

1.25G Optical Line Protection
Port
1x10/100/1000M RJ45
2x1000M SFP Slots
Power Input
FR-6501: DC5V
FR-6501R: AC220V/DC48V

2.5G Optical Transponder
Port
2x125M to 2.5G SFP Slots
Power Input
FR-6201: DC5V
FR-6201R: AC220V/DC48V

4.25G Optical Transponder
Port
2x125M to 4.25G SFP Slots
Power Input
FR-6202: DC5V
FR-6202R: AC220V/DC48V

10G 1R Optical Transponder
Port
2x9.95 to 11.32G XFP Slots
Power Input
FR-6602: DC5V
FR-6602R: AC220V/DC48V

10G 3R Optical Transponder
Port
2x8.5 to 11.7G SFP+ Slots
Power Input
FR-6604: DC5V
FR-6604R: AC220V/DC48V

FR-6101I | FR-6101IP

Port
1x10/100/1000M RJ45
1x1000M SFP

Power Supply
6-pin Phoenix Contact, 2x9-56VDC

PoE (FR-6101IP)
Port 1 802.3af/at standard

DIP Switch
1: LFPT
2: Standalone/Remote Unit
3/4: RJ45 Speed Mode

Highlights
802.3ah In-band Management
Dying Gasp, Bandwidth Control
-40 to +75℃ Operating Temperature

FR-6104I | FR-6104IP

Port
4x10/100/1000M RJ45
1x1000M SFP

Power Supply
6-pin Phoenix Contact, 2x9-56VDC

PoE (FR-6104IP)
Port 1 to 4 802.3af/at standard

DIP Switch
1: LFPT
2: Standalone/Remote Unit
3/4: RJ45 Speed Mode

Highlights
802.3ah In-band Management
Dying Gasp, Bandwidth Control
-40 to +75℃ Operating Temperature

Industrial Wireless

FR-W6270

Outdoor WiFi 5 Access Point

Networking Interface
2x10/100/1000M RJ45

RF Interface
2xN Female

MIMO
2x2 Spatial Streams

Max. Data Rate
2.4GHz: 300M
5.8GHz: 450M

Power Supply
DC48V PoE / DC12V1A

Weatherproofing
IP65

Operating Mode
AP or MESH

Management
WebGUI, AC Unified Management

FR-W6290

Outdoor WiFi 6 Access Point

Networking Interface
2x10/100/1000M RJ45

RF Interface
4xN Female

MIMO
2.4G 2x2 + 5.8G 2x2 Spatial Streams

Max. Data Rate
2.4GHz: 300M
5.8GHz: 1.8G

Power Supply
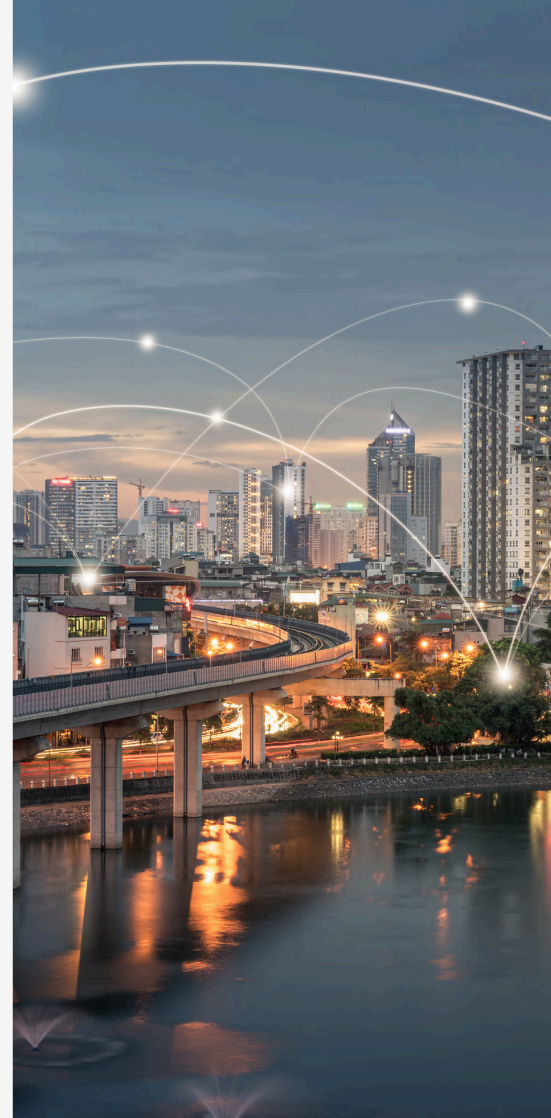DC48V PoE / DC12V1A

Weatherproofing
IP65

Operating Mode
AP, MESH, KVR

Management
WebGUI, AC Unified Management
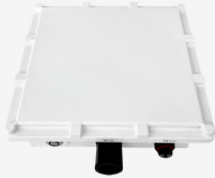
FR-W6300ODU
Outdoor WiFi 6 Access Point

Networking Interface
2x10/100/1000M RJ45

RF Interface
4xN Female

MIMO
2.4G 2x2 + 5.8G 2x2 Spatial Streams

Max. Data Rate
2.4GHz: 574M
5.8GHz: 2.4G

Power Supply
DC48V PoE / DC12V1A

Weatherproofing
IP65

Operating Mode
AP, MESH, KVR

Management
WebGUI, AC Unified Management

FR-SY325I
Industrial 4G Router

Mobile
4G/LTE, 3G, UMTS

Interface
1x10/100M RJ45, WAN
1x10/100M RJ45, LAN
1xRS232/RS485

Flash memory & RAM
16MB Flash, 128MB RAM

Power Supply
DC5-36V

Weatherproofing
IP30

Operating Temperature
-35 to +75°C

Management
WebGUI, CLI

INDUSTRIAL ETHERNET SWITCHES SERIES

6 Series
Unmanaged Industrial Switch

COMPETITIVE PRICING
SEMI-OUTDOOR SAPCE
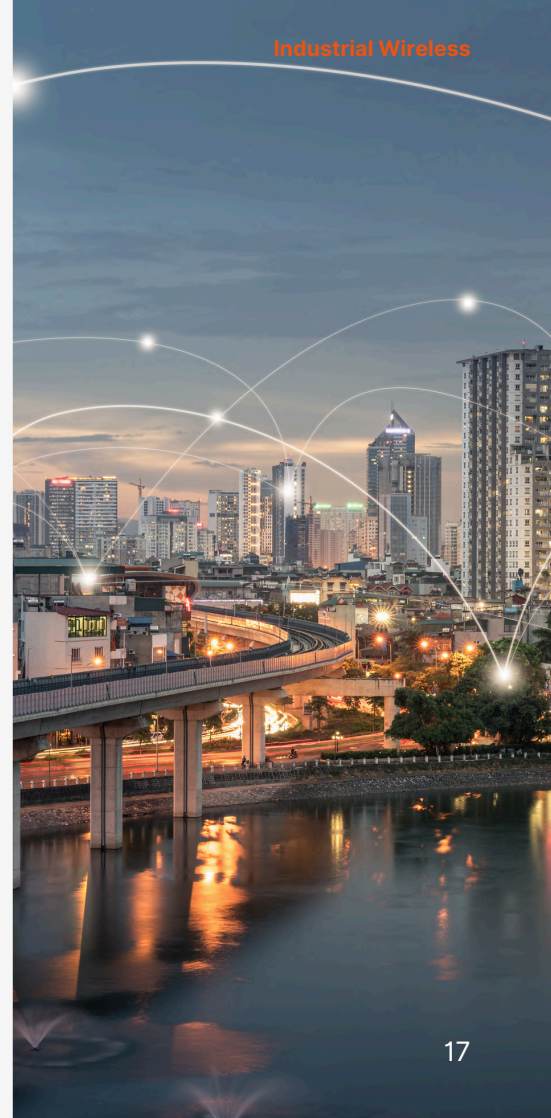SMALL SCALE NETWORK

ADAPTABLE
-20 TO +70℃ OPERATING TEMPERATURE
IP40 RATING
±4KV POWER SUPPLY SURGE PROTECTION
±2KV RJ45 PORT SURGE PROTECTION

COMPACT
EASY TO INSTALL
PLUG AND PLAY

FR-6N1104
RJ45
4x10/100M
SFP/1x9
1x100M
Power Input
2xDC9-56V
Operating Temp
-20 to +70℃

FR-6N3104
RJ45
4x10/100/1000M
SFP/1x9
1x1000M
Power Input
2xDC9-56V
Operating Temp
-20 to +70℃

FR-6N1005
RJ45
5x10/100M
Power Input
2xDC9-56V
Operating Temp
-20 to +70℃

FR-6N3005
RJ45
5x10/100/1000M
Power Input
2xDC9-56V
Operating Temp
-20 to +70℃

FR-6N1008
RJ45
8x10/100M
Power Input
2xDC9-56V
Operating Temp
-20 to +70℃

FR-6N3008
RJ45
8x10/100/1000M
Power Input
2xDC9-56V
Operating Temp
-20 to +70℃

FR-6S3204

Port
4x10/100/1000M RJ45
2x1000M SFP

Power Supply
5-pin Phoenix Contact, 2x9-56VDC

Switching Property
512K Buffer Size
9K Jumbo Frame
2K MAC Address
14Gbps Bandwidth

Environmental
-20 to 70℃ Operating Temp
IP40 Rating

Surge Protection
Power Supply: ±4KV(CM)
　　　　　　　±2KV(DM)
RJ45 Port: ±2KV

FR-6S3208

Port
8x10/100/1000M RJ45
2x1000M SFP

Power Supply
5-pin Phoenix Contact, 2x9-56VDC

Switching Property
2M Buffer Size
9K Jumbo Frame
4K MAC Address
20Gbps Bandwidth

Environmental
-20 to 70℃ Operating Temp
IP40 Rating

Surge Protection
Power Supply: ±4KV(CM)
　　　　　　　±2KV(DM)
RJ45 Port: ±2KV

6 Series
Web Smart Industrial Switch
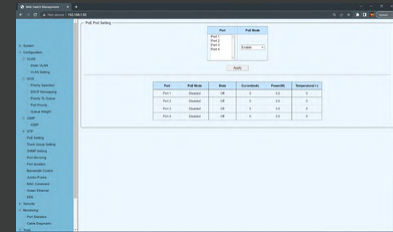
WebGUI Management Interface

PORT SETTING
SPEED/DUPLEX
FLOW CONTROL
BANDWIDTH CONTROL
PORT ISOLATION

VLAN & QOS
VLAN SETTING
TRUNK GROUP SETTING
QOS PRIORITY SELECTION
QOS DSCP REMAPPING

OTHERS
RSTP CONFIGURATION
STORM CONTROL
SECURITY MAC ADDRESS
FIRMWARE UPGRADE

7 Series
Unmanaged Industrial Switch

HIGH STANDARD INDUSTRIAL GRADE
HARSH ENVIRONMENTS
-40 TO +75℃ OPERATING TEMPERATURE
±6KV POWER SUPPLY SURGE PROTECTION
±8KV CONTACT DISCHARGE
IP40 RATING

ADAPTABLE
DC9-56V WIDE VOLTAGE RANGE
OPTIONAL POE/POE+/POE++

PLUG N PLAY
NO ADDITIONAL CONFIGURATION NEEDED
DIN RAIL OR WALL MOUNTING

FR-7N1104/P/BT
RJ45
4x10/100M
SFP/1x9
1x100M
Bandwidth
1.8Gbps
Power Input
2xDC9-56V
PoE Standard
FR-7N1104P/3104P: 802.3 af/at
FR-7N1104BT/3104BT: 802.3 af/at/bt

FR-7N3104/P/BT
RJ45
4x10/100/1000M
SFP/1x9
1x1000M
Bandwidth
14Gbps
Power Input
2xDC9-56V

FR-7N1005/P/BT
RJ45
5x10/100M
Bandwidth
1.8Gbps
Power Input
2xDC9-56V
PoE Standard
FR-7N1005P/3005P: 802.3 af/at
FR-7N1005BT/3005BT: 802.3 af/at/bt

FR-7N3005/P/BT
RJ45
5x10/100/1000M
Bandwidth
14Gbps
Power Input
2xDC9-56V

FR-7N3202/P/BT
RJ45
2x10/100/1000M
SFP
2x1000M
Bandwidth
12Gbps
Power Input
2xDC9-56V

PoE Standard
FR-7N3202P: 802.3 af/at
FR-7N3202BT: 802.3 af/at/bt

FR-7N1008/P/BT   FR-7N3008/P/BT

RJ45
8x10/100M
Switching Property
1M Buffer Size
1500 Bytes Frame
2K MAC Address
1.8Gbps Bandwidth
Power Input
2xDC9-56V

RJ45
8x10/100/1000M
Switching Property
2M Buffer Size
1500 Bytes Frame
4K MAC Address
20Gbps Bandwidth
Power Input
2xDC9-56V

PoE Standard
FR-7N1008P/3008P: Port 1 to 8 802.3 af/at
FR-7N1008BT/3008BT: Port 1 to 8 802.3 af/at/bt

FR-7N3208/P/BT

RJ45
8x10/100/1000M
SFP
2x1000M Slots
Switching Property
2M Buffer Size
1500 Bytes Frame
4K MAC Address
20Gbps Bandwidth
Power Input
2xDC9-56V
PoE Standard
FR-7N3208P: Port 1 to 8 802.3 af/at
FR-7N3208BT: Port 1 to 8 802.3 af/at/bt

FR-7N3224/P │ FR-9N3224/P

RJ45
24x10/100/1000M
SFP
2x1000M Slots
Switching Property
4M Buffer Size
1500 Bytes Frame
8K MAC Address
52Gbps Bandwidth
Power Input
2xDC9-56V
PoE Standard
FR-7N3224P: Port 1 to 24 802.3 af/at
FR-9N3224P: Port 1 to 24 802.3 af/at
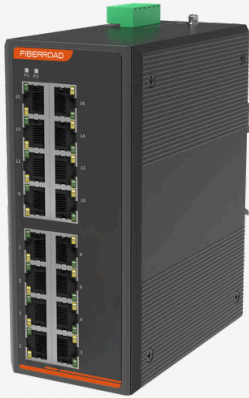
FR-7N3016

Port
16x10/100/1000M RJ45

Power Supply
6-pin Phoenix Contact, 2x9-56VDC
Switching Property
4M Buffer Size
1500 bytes Frame
8K MAC Address
52Gbps Bandwidth
Environmental
-40 to +75℃ Operating Temp
IP40 Rating
Housing & mounting
Aluminium housing with DIN Rail
or wall mounting option

FR-7N3216

Port
16x10/100/1000M RJ45
2x1000M SFP Slots
Power Supply
6-pin Phoenix Contact, 2x9-56VDC
Switching Property
4M Buffer Size
1500 bytes Frame
8K MAC Address
52Gbps Bandwidth
Environmental
-40 to +75℃ Operating Temp
IP40 Rating
Housing & mounting
Aluminium housing with DIN Rail
or wall mounting option

FR-7N3808

Port
8x10/100/1000M RJ45
8x1000M SFP Slots
Power Supply
6-pin Phoenix Contact, 2x9-56VDC
Switching Property
4M Buffer Size
1500 bytes Frame
8K MAC Address
52Gbps Bandwidth
Environmental
-40 to +75℃ Operating Temp
IP40 Rating
Housing & mounting
Aluminium housing with DIN Rail
or wall mounting option

FR-7S3204/P/BT

Port
4x10/100/1000M RJ45
2x1000M SFP Slots
Power Supply
6-pin Phoenix Contact, 9-56VDC
Switching Property
512K Buffer Size
9K Jumbo Frame
2K MAC Address
14Gbps Bandwidth
Environmental
-40 to 75°C Operating Temp
IP40 Rating
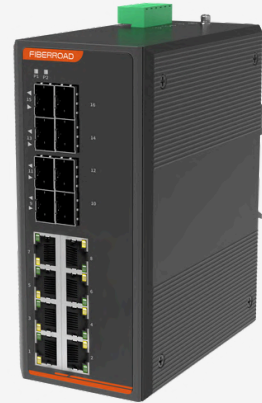**PoE Standard**
FR-7N3204P: Port 1-4 802.3 af/at
FR-7N3204BT: Port 1-4 802.3 af/at/bt

FR-7S3208L

Port
8x10/100/1000M RJ45
2x1000M SFP Slots
Power Supply
6-pin Phoenix Contact, 9-56VDC
Switching Property
2M Buffer Size
9K Jumbo Frame
4K MAC Address
20Gbps Bandwidth
Environmental
-40 to 75°C Operating Temp
IP40 Rating

7 Series
Web Smart Industrial Switch
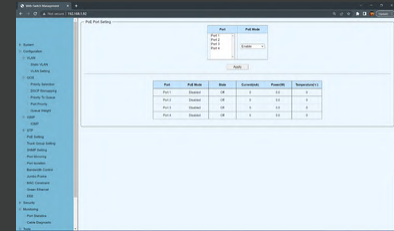
WebGUI Management Interface

PORT SETTING
SPEED/DUPLEX
FLOW CONTROL
BANDWIDTH CONTROL
PORT ISOLATION

VLAN & QOS
VLAN SETTING
TRUNK GROUP SETTING
QOS PRIORITY SELECTION
QOS DSCP REMAPPING

OTHERS
RSTP CONFIGURATION
STORM CONTROL
SECURITY MAC ADDRESS
FIRMWARE UPGRADE

AUTO PRO SERIES
UNMANAGED INDUSTRIAL SWITCHES

Auto Broadcast Suppression

The switch independently learns the addresses of termination devices connected to a port by evaluating the source addresses in the data.

Auto PROFINET PTCP Filtering

Auto PROFINET PTCP Filtering blocks PROFINET PTCP-Delay traffic. Because PTCP-Delay uses the same MAC address (01-80-C2-00-00-0E), the filter blocks LLDP traffic as well.

Auto QoS Priority

Auto QoS, when heavy traffic occurs, packets with an 802.1Q priority level of 4 to 7 or with an IPv4 Type of Service Precedence value of one or more are considered high priority.

FICE205

Port
5x10/100M RJ45
Power Supply
6-pin Phoenix Contact, 2x9-72VDC
Switching Property
512K Buffer Size
2048 bytes Frame
2K MAC Address
1Gbps Bandwidth
Environmental
-40 to +75℃ Operating Temp
IP40 Rating
Housing & mounting
Aluminium housing with DIN Rail
or wall mounting option

FICE208

Port
8x10/100M RJ45
Power Supply
6-pin Phoenix Contact, 2x9-72VDC
Switching Property
1M Buffer Size
2048 bytes Frame
2K MAC Address
1.6Gbps Bandwidth
Environmental
-40 to +75℃ Operating Temp
IP40 Rating
Housing & mounting
Aluminium housing with DIN Rail
or wall mounting option

FICE216

Port
16x10/100/1000M RJ45
Power Supply
6-pin Phoenix Contact, 2x9-72VDC
Switching Property
1M Buffer Size
2048 bytes Frame
2K MAC Address
3.2Gbps Bandwidth
Environmental
-40 to +75℃ Operating Temp
IP40 Rating
Housing & mounting
Aluminium housing with DIN Rail
or wall mounting option

LAYER 2 PLUS
MANAGED INDUSTRIAL ETHERNET SWITCH

Management and Maintenance
- Console, Telnet, SSH 2.0
- HTTP/HTTPS
- SNMP v1/v2/v3
- Upload and download files vis TFTP/FTP
- SNTP

L2 Features
- 802.1d (STP), 802.1d (RSTP), 802.1s (MSTP)
- ERPS(G.8032v2)
- Loopback Detection
- Link Aggregation

VLAN
- 4K VLAN Entries
- QinQ/Selective QinQ
- GVRP

PoE Management
- PoE Scheduling
- Ping Watchdog with Reboot
- Enable/Disable, Priority Level, Power Level

Security Features
- Suppression of broadcast, multicast and unknown unicast packet
- Port isolation
- IP Source Guard
- Port security, MAC+port binding
- DHCP snooping, DHCP option82
- DHCP Client IPv4/IPv6
- Port-based IEEE 802.1x authentication

MAC Table
- Static MAC Entries
- Configurable aging time of MAC address
- Independent learning mode per Port

Multicast Features
- Dynamic/Static Multicast groups
- IGMP Snooping v1,2,3
- Port-based IGMP Snooping Fast Leave
- GMP Querier

Monitoring Functions
- Interface Statistics
- CPU/RAM Utilization Monitoring
- Temperature Monitoring
- Port Cable Test/Ping Test
- Port Mirroring

QoS
- 802.1P/DSCP Class of Service
- Scheduling algorithms such as SP, WRR or WFQ
- Ingress/Egress Rate Limitation

ACL
- L2/L3/L4 ACL
- ACL Based on:
  1. IP Protocol ICMP/IGMP/TCP/UD[
  2. Source/Destination MAC
  3. VLAN
  4. Ethernet Type

Layer 3 Features
- Static Routing

Layer 2 Plus Managed Industrial Ethernet Switch

FR-7M3204/P/BT

Port
4x10/100/1000M RJ45
2x100/1000M SFP Slots
Power Supply
6-pin Phoenix Contact, 2x9-56VDC
1xAC220V Optional (Non-PoE Mode)
Switching Property
4M Buffer Size
10K Jumbo Frame
8K MAC Address
36Gbps Bandwidth
Environmental
-40 to +75℃ Operating Temp
IP40 Rating
PoE Standard
FR-7M3204P: Port 1-4 802.3 af/at
FR-7M3204BT: Port 1-4 802.3 af/at/bt

FR-7M3008/P/BT

Port
8x10/100/1000M RJ45

Power Supply
6-pin Phoenix Contact, 2x9-56VDC
1xAC220V Optional (Non-PoE Mode)
Switching Property
4M Buffer Size
10K Jumbo Frame
8K MAC Address
36Gbps Bandwidth
Environmental
-40 to +75℃ Operating Temp
IP40 Rating
PoE Standard
FR-7M3008P: Port 1-8 802.3 af/at
FR-7M3008BT: Port 1-8 802.3 af/at/bt

FR-7M3208L

Port
8x10/100/1000M RJ45
2x100/1000M SFP Slots
Power Supply
6-pin Phoenix Contact, 2x9-56VDC
1xAC220V Optional (Non-PoE Mode)
Switching Property
4M Buffer Size
10K Jumbo Frame
8K MAC Address
36Gbps Bandwidth
Environmental
-40 to +75℃ Operating Temp
IP40 Rating
Housing & mounting
Aluminium housing with DIN Rail
or wall mounting option

FR-7M3208P/BT

Port
8x10/100/1000M RJ45
2x100/1000M SFP Slots

Power Supply
6-pin Phoenix Contact, 2x9-56VDC
1xAC220V Optional (Non-PoE Mode)
Switching Property
4M Buffer Size
10K Jumbo Frame
8K MAC Address
36Gbps Bandwidth
Environmental
-40 to +75℃ Operating Temp
IP40 Rating
PoE Standard
FR-7M3204P: Port 1-4 802.3 af/at
FR-7M3204BT: Port 1-4 802.3 af/at/bt

FR-7M3408/P/BT

Port
8x10/100/1000M RJ45
4x100/1000M SFP Slots

Power Supply
6-pin Phoenix Contact, 2x9-56VDC
1xAC220V Optional (Non-PoE Mode)
Switching Property
4M Buffer Size
10K Jumbo Frame
8K MAC Address
36Gbps Bandwidth
Environmental
-40 to +75℃ Operating Temp
IP40 Rating
PoE Standard
FR-7M3408P: Port 1-8 802.3 af/at
FR-7M3408BT: Port 1-8 802.3 af/at/bt

FR-7M3208S/SP/SBT

Port
8x10/100/1000M RJ45
2x100/1000M SFP Slots
2x RS485/422/232 Serial Ports
Power Supply
6-pin Phoenix Contact, 2x9-56VDC
1xAC220V Optional (Non-PoE Mode)
Switching Property
4M Buffer Size
10K Jumbo Frame
8K MAC Address
36Gbps Bandwidth
Environmental
-40 to +75℃ Operating Temp
IP40 Rating
PoE Standard
FR-7M3208SP: Port 1-8 802.3 af/at
FR-7M3208SBT: Port 1-8 802.3 af/at/bt

FR-7M3208F/FP

Port
8x10/100/1000M RJ45
2x1000Base-X Optical Fiber Bypass

Power Supply
6-pin Phoenix Contact, 2x9-56VDC
1xAC220V Optional (Non-PoE Mode)
Switching Property
4M Buffer Size
10K Jumbo Frame
8K MAC Address
36Gbps Bandwidth
Environmental
-40 to +75℃ Operating Temp
IP40 Rating
PoE Standard
FR-7M3208FP: Port 1-8 802.3 af/at

FR-7M3408F/FP

Port
8x10/100/1000M RJ45
2x100/1000M SFP Slots
2x1000Base-X Optical Fiber Bypass
Power Supply
6-pin Phoenix Contact, 2x9-56VDC
1xAC220V Optional (Non-PoE Mode)
Switching Property
4M Buffer Size
10K Jumbo Frame
8K MAC Address
36Gbps Bandwidth
Environmental
-40 to +75℃ Operating Temp
IP40 Rating
PoE Standard
FR-7M3408FP: Port 1-8 802.3 af/at

FR-7M3016/P

Port
16x10/100/1000M RJ45

Power Supply
6-pin Phoenix Contact, 2x9-56VDC
1xAC220V Optional (Non-PoE Mode)
Switching Property
4M Buffer Size
10K Jumbo Frame
8K MAC Address
56Gbps Bandwidth
Environmental
-40 to +75℃ Operating Temp
IP40 Rating
PoE Standard
FR-7M3016P: Port 1-16 802.3 af/at

FR-7M3808/P

Port
8x10/100/1000M RJ45
8x100/1000M SFP Slots
Power Supply
6-pin Phoenix Contact, 2x9-56VDC
1xAC220V Optional (Non-PoE Mode)
Switching Property
4M Buffer Size
10K Jumbo Frame
8K MAC Address
56Gbps Bandwidth
Environmental
-40 to +75℃ Operating Temp
IP40 Rating
PoE Standard
FR-7M3808P: Port 1-8 802.3 af/at

FR-7M3416/P

Port
16x10/100/1000M RJ45
4x100/1000M SFP Slots
Power Supply
6-pin Phoenix Contact, 2x9-56VDC
1xAC220V Optional (Non-PoE Mode)
Switching Property
4M Buffer Size
10K Jumbo Frame
8K MAC Address
56Gbps Bandwidth
Environmental
-40 to +75℃ Operating Temp
IP40 Rating
PoE Standard
FR-7M3416P: Port 1-16 802.3 af/at

FR-7M3816/P

Port
16x10/100/1000M RJ45
8x100/1000M SFP Slots
Power Supply
6-pin Phoenix Contact, 2x9-56VDC
1xAC220V Optional (Non-PoE Mode)
Switching Property
4M Buffer Size
10K Jumbo Frame
8K MAC Address
56Gbps Bandwidth
Environmental
-40 to +75℃ Operating Temp
IP40 Rating
PoE Standard
FR-7M3816P: Port 1-16 802.3 af/at

Layer 2 Plus Managed Industrial Ethernet Switch

FR-7M3424/P

Port
24x10/100/1000M RJ45
4x100/1000M SFP Slots
Power Supply
6-pin Phoenix Contact, 2x9-56VDC
1xAC220V Optional (Non-PoE Mode)
Switching Property
4M Buffer Size
10K Jumbo Frame
8K MAC Address
56Gbps Bandwidth
Environmental
-40 to +75℃ Operating Temp
IP40 Rating
PoE Standard
FR-7M3424P: Port 1-24 802.3 af/at

FR-7M348F/P

Port
16x10/100/1000M RJ45
12x100/1000M SFP Slots
Power Supply
6-pin Phoenix Contact, 2x9-56VDC
1xAC220V Optional (Non-PoE Mode)
Switching Property
4M Buffer Size
10K Jumbo Frame
8K MAC Address
56Gbps Bandwidth
Environmental
-40 to +75℃ Operating Temp
IP40 Rating
PoE Standard
FR-7M348FP: Port 1-16 802.3 af/at

FR-9M3424/P

Port
24x10/100/1000M RJ45
4x1000M SFP/RJ45 Combo
Power Supply
5-pin Phoenix Contact, 2x9-56VDC
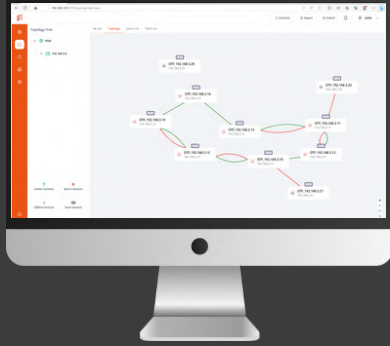1xAC220V Optional (Non-PoE Mode)
Switching Property
4M Buffer Size
10K Jumbo Frame
8K MAC Address
56Gbps Bandwidth
Environmental
-40 to +75℃ Operating Temp
IP40 Rating
PoE Standard
FR-9M3424P: Port 1 to 24 802.3 af/at

PREVIEW
Network Management System

High compatibility and reliability, supporting the mainstream browsers.

Support all Fiberroad IP-based hardware & extension of third-party devices.

Automatically discovers and diagrams network topology.

Dynamic Connectivity Indication – PoE, Ring.

Make network administration more effective and efficient.

FR-9M348F/P

Port
16x10/100/1000M RJ45
8x100/1000M SFP Slots
4x1000M SFP/RJ45 Combo
Power Supply
5-pin Phoenix Contact, 9-56VDC
1xAC220V Optional (Non-PoE Mode)
Switching Property
4M Buffer Size
10K Jumbo Frame
8K MAC Address
56Gbps Bandwidth
Environmental
-40 to +75℃ Operating Temp
IP40 Rating
PoE Standard
FR-7M348FP: Port 9-24 802.3 af/at

FR-9M34F8/P

Port
8x10/100/1000M RJ45
16x100/1000M SFP Slots
4x1000M SFP/RJ45 Combo
Power Supply
5-pin Phoenix Contact, 9-56VDC
1xAC220V Optional (Non-PoE Mode)
Switching Property
4M Buffer Size
10K Jumbo Frame
8K MAC Address
56Gbps Bandwidth
Environmental
-40 to +75℃ Operating Temp
IP40 Rating
PoE Standard
FR-7M34F8P: Port 17-24 802.3 af/at

EMBEDDED
ETHERNET SWITCH MODULE SERIES

Fiberroad Embedded Ethernet Switch Module Series is designed for device manufacturers who would like to embed Ethernet modules in their products to enhance performance and reliability. The Embedded Ethernet Switch Module Series provides an easy and cost-effective integrated solution for adding an Ethernet switch module to an existing product.
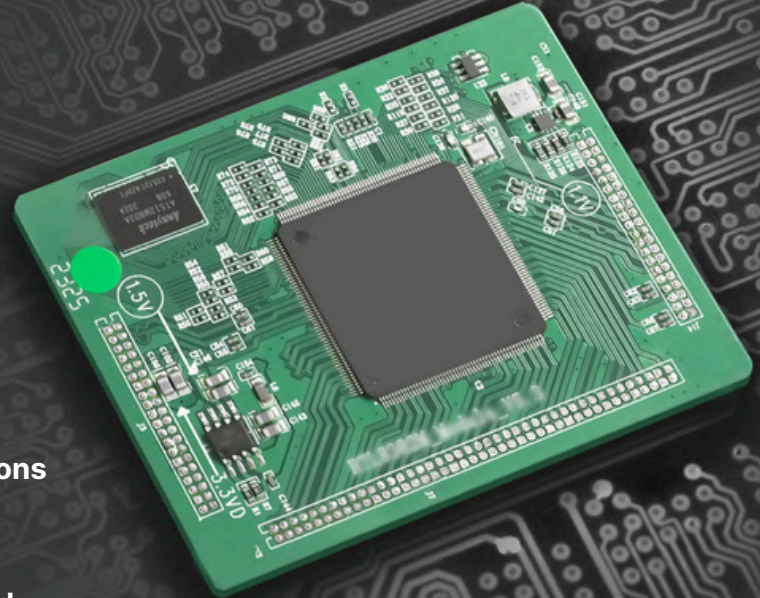
Rapid Secondary Development

Flexible Interface Specifications

Low Power Consumption

Customized On Demand
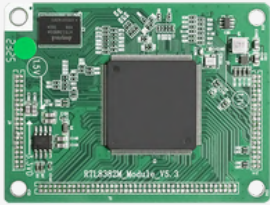
FR-FISE6218G

Built-in MIPS processor, maximum frequency 500MHz, dual 16K L2 cache design, built-in 128K SRAM.

Industrial-grade design, supports 4M Buffer Size, 8K MAC addresses.

Supports flexible secondary development of Ethernet ports, up to 10 Gigabit Optical Fiber Port+ 8 10/100/1000M RJ45 port.

Built-in management and logging functions, supporting Layer 2 + management protocols.

Supports Lite-layer 3 functions and protocols such as static routing。

The power consumption of the whole machine at full load is ≤3W@3.3VDC.

FR-FISE6300

1M Buffer Size and 8K MAC addresses.

Supports 3 Gigabit ports + 7 Fast Ethernet expansion ports.

Built-in 2-channel RS485+1-channel CAN interface.

Built-in management and logging functions, supporting RSTP\ERPS ring network.

The whole machine meets the application requirements of industrial site environment.

The power consumption of the whole machine at full load is ≤3W@3.3VDC.
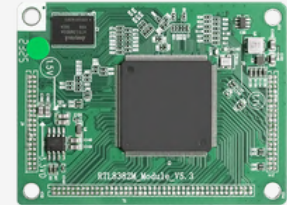
FR-FISE6228G

Built-in MIPS processor, maximum frequency 500MHz, dual 16K L2 cache design, built-in 128K SRAM.

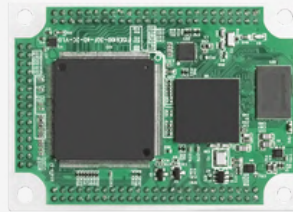Industrial-grade design, supports 4M Buffer Size, 8K MAC addresses.

Supports flexible secondary development of Ethernet ports, up to 20 Gigabit Optical Fiber Port+ 8 10/100/1000M RJ45 port.

Built-in management and logging functions, supporting Layer 2 + management protocols.

Supports Lite-layer 3 functions and protocols such as static routing。

The power consumption of the whole machine at full load is ≤3W@3.3VDC.

INTRINSIC SAFETY
INDUSTRIAL ETHERNET CONNECTIVITY

Intrinsic safety is a design concept that ensures electrical equipment can be used in hazardous environments without causing sparks or ignition. It involves limiting electrical energy and preventing it from reaching levels that could ignite flammable gases, vapors, or dusts. This is achieved by using specially designed intrinsically safe devices that have low power outputs and are incapable of generating enough energy to cause an explosion.

Full load power consumption ≤10W, It has a power supply that meets safety standards, with protection against overvoltage, undervoltage, and reverse polarity.

The whole machine is built to withstand harsh industrial conditions. It can operate in a wide temperature and pressure range, plus it's moisture-proof, mildew-proof, insulated, and pressure-resistant.
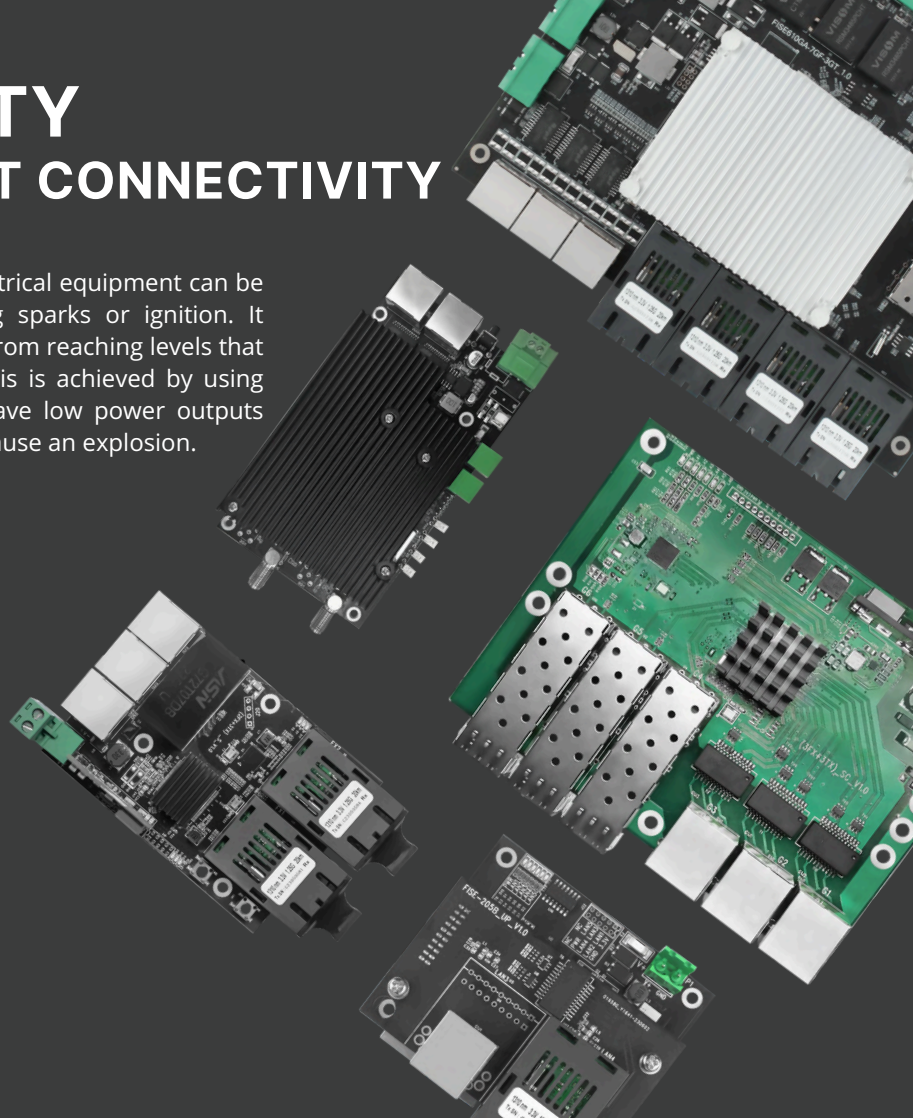
FISE205B
Unmanaged Industrial Ethernet Switch

Port
4x10/100M RJ45
1x100M 1x9 Optical Module
Power Supply
2-pin Industrial Terminal, 9-36VDC
Switching Property
512K Buffer Size
2048 bytes Frame
2K MAC Address
1Gbps Bandwidth
Environmental
-40 to +75℃ Operating Temp
5%-95%(No condensation) Humidity
Dimension
76mmx66mmx33.2mm
Installation
Embedded Hole Positioning

FISE205G
Unmanaged Industrial Ethernet Switch

Port
3x10/100/1000M RJ45
2x1000M 1x9 Optical Module
Power Supply
2-pin Industrial Terminal, 9-36VDC
Switching Property
512K Buffer Size
9K Jumbo Frame
2K MAC Address
14Gbps Bandwidth
Environmental
-40 to +75℃ Operating Temp
5%-95%(No condensation) Humidity
Dimension
94mmx66mmx17mm
Installation
Embedded Hole Positioning

FISE306G
Unmanaged Industrial Ethernet Switch

Port
3x10/100/1000M RJ45
3x1000M SFP Slots
Power Supply
2-pin Industrial Terminal, 9-36VDC
Switching Property
512K Buffer Size
9K Jumbo Frame
2K MAC Address
14Gbps Bandwidth
Environmental
-40 to +75℃ Operating Temp
5%-95%(No condensation) Humidity
Dimension
120mmx90mmx17mm
Installation
Embedded Hole Positioning

Intrinsic Safety Industrial Ethernet Connectivity

FISE505G
Managed Industrial Ethernet Switch

Port
3x10/100/1000M RJ45
2x1000M 1x9 Optical Module

Power Supply
2-pin Industrial Terminal, 9-36VDC
Switching Property
512K Buffer Size
9K Jumbo Frame
2K MAC Address
14Gbps Bandwidth
Environmental
-40 to +75℃ Operating Temp
5%-95%(No condensation) Humidity
Layer 2 Lite Management Features
STP/RSTP
IGMPv1/v2, IGMP Snooping
4K VLAN Entries
Rate Limitation, Storm Control
Dimension
106mmx66mmx17mm
Installation
Embedded Hole Positioning

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FISE610G
Managed Industrial Ethernet Switch

Port
4x10/100/1000M RJ45
6x1000M SFP Slots
2xIsolated RS485
2xIsolated CAN Bus Interface
Power Supply
2-pin Industrial Terminal, 9-36VDC
Switching Property
4M Buffer Size
10K Jumbo Frame
8K MAC Address
36Gbps Bandwidth
Environmental
-40 to +75℃ Operating Temp
5%-95%(No condensation) Humidity
Layer 2 Management Features
ERPSv2/RSTP/MSTP
SNMP v1/v2/v3
4K VLAN Entries
L2/L3/L4 ACL
Dimension
180mmx135mmx18mm
Installation
Embedded Hole Positioning
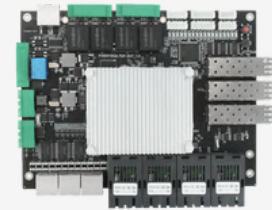
FISE610GA
Managed Industrial Ethernet Switch

Port
3x10/100/1000M RJ45
3x1000M SFP Slots
4x1000M 1x9 Optical Module
2xIsolated RS485 & CAN Bus Interface
Power Supply
2-pin Industrial Terminal, 9-36VDC
Switching Property
4M Buffer Size
10K Jumbo Frame
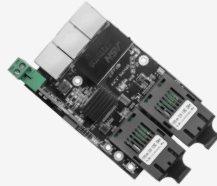8K MAC Address
36Gbps Bandwidth
Environmental
-40 to +75℃ Operating Temp
5%-95%(No condensation) Humidity
Layer 2 Management Features
ERPSv2/RSTP/MSTP
SNMP v1/v2/v3
4K VLAN Entries
L2/L3/L4 ACL
Dimension
180mmx135mmx18mm
Installation
Embedded Hole Positioning
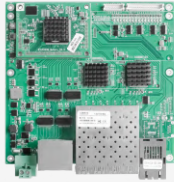
FISE613G
Managed Industrial Ethernet Switch

Port
4x10/100/1000M RJ45
8x1000M SFP Slots
1x1000M 1x9 Optical Module
Power Supply
2-pin Industrial Terminal, 9-36VDC
Switching Property
4M Buffer Size
10K Jumbo Frame
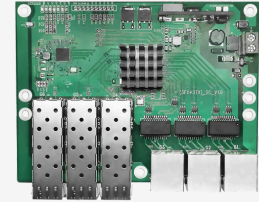8K MAC Address
56Gbps Bandwidth
Environmental
-40 to +75℃ Operating Temp
5%-95%(No condensation) Humidity
Layer 2+ Management Features
ERPSv2/RSTP/MSTP/LACP
SNMP v1/v2/v3
4K VLAN Entries
L2/L3/L4 ACL
Static Routing
Dimension
165mmx160mmx28mm
Installation
Embedded Hole Positioning
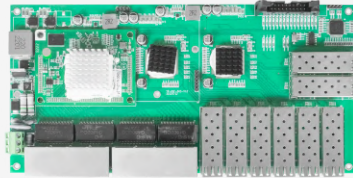
FISE616GA
Managed Industrial Ethernet Switch

Port
8x10/100/1000M RJ45
8x1000M SFP Slots
Power Supply
2-pin Industrial Terminal, 9-36VDC
Switching Property
4M Buffer Size
10K Jumbo Frame
8K MAC Address
56Gbps Bandwidth
Environmental
-40 to +75℃ Operating Temp
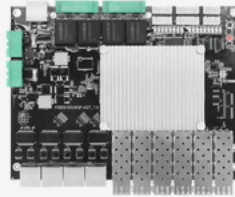5%-95%(No condensation) Humidity
Layer 2 Management Features
ERPSv2/RSTP/MSTP/LACP
SNMP v1/v2/v3
4K VLAN Entries
L2/L3/L4 ACL
Static Routing
Dimension
250mmx125mmx15mm
Installation
Embedded Hole Positioning

FR2000A
WiFi4 Wireless Base Station

Wireless
2.4G:300M 802.11n/b/g MIMO
Flash memory & RAM
16MB Flash, 128MB RAM
Ethernet
2x10/100Mbps(LAN/WAN)
Interfaces
2xRPSMA
Power Supply
9-24VDC
Environmental
-40 to +75℃ Operating Temp
5%-95%(No condensation) Humidity
Dimension
75mmx135mm
Installation
Embedded Hole Positioning

FISE5000C
WiFi 6 Access Point

Wireless
IEEE 802.11 ax/ac/n/a 5 GHz
IEEE 802.11 ax/n/b/g
Flash memory & RAM
16MB Flash, 128MB RAM
Ethernet
2x10/100/1000Mbps(LAN/WAN)
Interfaces
2x2.5G+5.8G
SMA Standard Interface
Power Supply
9-24VDC
Environmental
-40 to +75℃ Operating Temp
5%-95%(No condensation) Humidity
Dimension
124mmx71.5mmx19.5mm
Installation
Embedded Hole Positioning

FR5000M
WiFi6 Roaming CPE

Wireless
IEEE 802.11 ax/ac/n/a 5 GHz
IEEE 802.11 ax/n/b/g
Flash memory & RAM
1GMB Nand Flash, 1GB DDR3 RAM
Ethernet
2x10/100/1000Mbps(LAN/WAN)
Interfaces
2x2.5G+5.8G
MMCX Standard Interface
Power Supply
9-24VDC
Environmental
-40 to +75℃ Operating Temp
5%-95%(No condensation) Humidity
Dimension
75mmx65mmx23mm
Installation
Embedded Hole Positioning

FR6000A
WiFi6 Wireless Base Station

Wireless
IEEE 802.11 ax/ac/n/a 5 GHz
IEEE 802.11 ax/n/b/g
Flash memory & RAM
128MB+16MB Flash, 256MB RAM
Ethernet
4x10/100/1000Mbps LAN
1x10/100/1000Mbps WAN
1x1000Mbps SFP Slot
Interfaces
2x2.5G+2x5.8G
MMCX Standard Interface
Power Supply
9-24VDC
Environmental
-40 to +75℃ Operating Temp
5%-95%(No condensation) Humidity
Dimension
162.5mmx130mmx1.6mm
Installation
Embedded Hole Positioning

INDUSTRIAL ETHERNET SWITCH
STRONG PROTECTION AGAINST ESD AND ELECTRICAL SURGE

ESD
Level 4 (±8KV Contact Discharge, ±15KV Discharge in air)

RADIATION
Level 3 (80MHZ - 1GHZ)

ELECTRIC FAST INSTANTANEOUS PULSE GROUP
Level 4 (Power Port: ±4kV, other ports:±2kV)

SURGE IMPACT
Level 4 (Common Mode:±4kV, Differential Mode:±2kV)

POWER FREQUENCY MAGNETIC FIELD
Level 5 (Stable magnetic field: 100A/m, Short-time magnetic field: 1000A/m)

DAMPED OSCILLATING FIELD
Level 5 (100A/m)

DAMPED OSCILLATING WAVE
Level 3 (Common Mode:±2.5kV, Differential Mode:±1kV)

VOLTAGE DIP
100ms

Industry Specific Industrial Ethernet Switch

FR-9N1024
Unmanaged Industrial Ethernet Switch
Port
24x10/100M RJ45
Power Supply
6-pin Phoenix Contact, 9-56VDC
Switching Property
4M Buffer Size
16K Jumbo Frame
16K MAC Address
14Gbps Bandwidth
Environmental
-40 to 75°C Operating Temp

FR-9N2224
Unmanaged Industrial Ethernet Switch
Port
24x10/100M RJ45+2x1000M SFP
Power Supply
6-pin Phoenix Contact, 9-56VDC
Switching Property
4M Buffer Size
1500 bytes Jumbo Frame
8K MAC Address
52Gbps Bandwidth
Environmental
-40 to 75°C Operating Temp

FR-9N2424
Unmanaged Industrial Ethernet Switch
Port
24x10/100M RJ45+4x1000M SFP
Power Supply
6-pin Phoenix Contact, 9-56VDC
Switching Property
4M Buffer Size
1500 bytes Jumbo Frame
8K MAC Address
52Gbps Bandwidth
Environmental
-40 to 75°C Operating Temp

FR-9N2424F
Unmanaged Industrial Ethernet Switch
Port
24x10/100M SFP+4x1000M SFP
Power Supply
6-pin Phoenix Contact, 9-56VDC
Switching Property
4M Buffer Size
1500 bytes Jumbo Frame
8K MAC Address
52Gbps Bandwidth
Environmental
-40 to 75°C Operating Temp

FR-WIST6412F12
Managed Industrial Ethernet Switch

Port
12x10/100M RJ45
12x100M SFP Slots
4x1000M SFP/1x9
Power Supply
AC85-264/DC110-370
DC9-56V Optional
Switching Property
4M Buffer Size
10K Jumbo Frame
8K MAC Address
56Gbps Bandwidth
Environmental
-40 to +75℃ Operating Temp
5%-95%(No condensation) Humidity
EMC/Protection Rating: Level 4/IP40
Layer 2 Management Features
ERPSv2/RSTP/MSTP
SNMP v1/v2/v3
4K VLAN Entries, QinQ
L2/L3/L4 ACL
DHCP snooping, DHCP option82
IEEE 802.1x authentication

FR-WIST648F16
Managed Industrial Ethernet Switch

Port
16x10/100M RJ45
8x100M SFP Slots
4x1000M SFP/1x9
Power Supply
AC85-264/DC110-370
DC9-56V Optional
Switching Property
4M Buffer Size
10K Jumbo Frame
8K MAC Address
56Gbps Bandwidth
Environmental
-40 to +75℃ Operating Temp
5%-95%(No condensation) Humidity
EMC/Protection Rating: Level 4/IP40
Layer 2 Management Features
ERPSv2/RSTP/MSTP
SNMP v1/v2/v3
4K VLAN Entries, QinQ
L2/L3/L4 ACL
DHCP snooping, DHCP option82
IEEE 802.1x authentication

FR-WIST6000
Managed Industrial Ethernet Switch

Port
24x10/100/1000M RJ45
4x1000M SFP/1x9

Power Supply
AC85-264/DC110-370
DC9-56V Optional
Switching Property
4M Buffer Size
10K Jumbo Frame
8K MAC Address
56Gbps Bandwidth
Environmental
-40 to +75℃ Operating Temp
5%-95%(No condensation) Humidity
EMC/Protection Rating: Level 4/IP4
Layer 2 Management Features
ERPSv2/RSTP/MSTP
SNMP v1/v2/v3
4K VLAN Entries, QinQ
L2/L3/L4 ACL
DHCP snooping, DHCP option82
IEEE 802.1x authentication

FR-WIST6024
Managed Industrial Ethernet Switch

Port
24x10/100M RJ45

Power Supply
AC85-264/DC110-370
DC9-56V Optional
Switching Property
4M Buffer Size
10K Jumbo Frame
8K MAC Address
56Gbps Bandwidth
Environmental
-40 to +75℃ Operating Temp
5%-95%(No condensation) Humidity
EMC/Protection Rating: Level 4/IP40
Layer 2 Management Features
ERPSv2/RSTP/MSTP
SNMP v1/v2/v3
4K VLAN Entries, QinQ
L2/L3/L4 ACL
DHCP snooping, DHCP option82
IEEE 802.1x authentication

FR-WIST6424
Managed Industrial Ethernet Switch

Port
24x10/100M RJ45
4x1000M SFP/1x9

Power Supply
AC85-264/DC110-370
DC9-56V Optional
Switching Property
4M Buffer Size
10K Jumbo Frame
8K MAC Address
56Gbps Bandwidth
Environmental
-40 to +75℃ Operating Temp
5%-95%(No condensation) Humidity
EMC/Protection Rating: Level 4/IP40
Layer 2 Management Features
ERPSv2/RSTP/MSTP
SNMP v1/v2/v3
4K VLAN Entries, QinQ
L2/L3/L4 ACL
DHCP snooping, DHCP option82
IEEE 802.1x authentication

FR-WIST6416F8
Managed Industrial Ethernet Switch

Port
8x10/100M RJ45
16x100M SFP Slots
4x1000M SFP/1x9
Power Supply
AC85-264/DC110-370
DC9-56V Optional
Switching Property
4M Buffer Size
10K Jumbo Frame
8K MAC Address
56Gbps Bandwidth
Environmental
-40 to +75℃ Operating Temp
5%-95%(No condensation) Humidity
EMC/Protection Rating: Level 4/IP40
Layer 2 Management Features
ERPSv2/RSTP/MSTP
SNMP v1/v2/v3
4K VLAN Entries, QinQ
L2/L3/L4 ACL
DHCP snooping, DHCP option82
IEEE 802.1x authentication

LAYER 3
MANAGED INDUSTRIAL ETHERNET SWITCH

Management and Maintenance
- Console, Telnet, SSH 2.0
- HTTP/HTTPS
- SNMP v1/v2/v3
- Upload and download files vis TFTP/FTP
- SNTP/TELNET/SSHv1/v2
- ICMPv6/ICMPv4 Remote Ping
- LLDP/LLDP-MED/UDLD

L2 Features
- 802.1d (STP), 802.1d (RSTP), 802.1s (MSTP) BPDU Guard, BPDU filtering
- ERPS(G.8032v2)
- Loopback Detection
- Link Aggregation/LACP/Stack Trunk/ Traffic Load Balancing

VLAN
- IEEE 802.1Q tag-based VLAN
- 4K VLAN Entries
- QinQ/Selective QinQ
- MAC-based VLAN
- GVRP
- Voice / Surveillance VLAN
- MVR (Multicast VLAN Registration)

Security Features
- Suppression of broadcast, multicast and unknown unicast packet
- Static MAC address
- IP Source Guard
- DoS attacks prevention
- Dynamic ARP Inspection
- DHCP snooping, DHCP option43/82
- DHCP Client IPv4/IPv6
- Port-based IEEE 802.1x authentication
- MAC-based/Local/RADIUS authentication
- AAA(RADIUS/TACACS+)

MAC Table
- Static MAC Entries
- Configurable aging time of MAC address
- Independent learning mode per Port

Routing Protocols
- RIPv1/v2
- OSPFv1/v2
- IPv4/IPv6 Static Route

IPv6 Application
- HTTP/HTTPs
- SSH/SNMP
- TFTP/Syslog/Ping
- DHCP/ACL

Monitoring Functions
- Interface Statistics
- CPU/RAM Utilization Monitoring
- Temperature Monitoring
- Port Cable Test/Ping Test
- Port Mirroring
- RMON

QoS
- 802.1P/DSCP Class of Service
- Scheduling algorithms such as SP, WRRI, WFQ or Hybrid(WRR+SP or WFQ+SP)
- Ingress/Egress Rate Limitation

Multicast Features
- Dynamic/Static Multicast groups
- IGMP Snooping v1,2,3
- IGMP Snooping Fast Leave
- GMP Querier
- MLD Snooping v1/v2

ACL
- L2/L3/L4 ACL
- ACL Based on:
  1. Source/Destination MAC
  2. VLAN
  3. COS
  4. Ethernet Type

FR-9T4424/P
Managed Industrial Ethernet Switch

Port
24x10/100/1000M RJ45
4x10G SFP+ Slots

Power Supply
5-pin Industrial Terminal, 2x9-56VDC
1xAC220V Optional(Non-PoE Mode)
Switching Property
12M Buffer Size
12K Jumbo Frame
16K MAC Address
128Gbps Bandwidth
Environmental
-40 to +75℃ Operating Temp
5%-95%(No condensation) Humidity
PoE Standard
FR-9T4424P: Port 1-24 802.3 af/at
Installation
Rack Mounting

FR-9T448F/P
Managed Industrial Ethernet Switch

Port
16x10/100/1000M RJ45
8xGigabit SFP/RJ45 Combo
4x10G SFP+ Slots
Power Supply
5-pin Industrial Terminal, 2x9-56VDC
1xAC220V Optional(Non-PoE Mode)
Switching Property
12M Buffer Size
12K Jumbo Frame
16K MAC Address
128Gbps Bandwidth
Environmental
-40 to +75℃ Operating Temp
5%-95%(No condensation) Humidity
PoE Standard
FR-9T448FP: Port 9-24 802.3 af/at
Installation
Rack Mounting

FR-9T44F8/P
Managed Industrial Ethernet Switch

Port
16x1000M SFP Slot
8xGigabit SFP/RJ45 Combo
4x10G SFP+ Slots
Power Supply
5-pin Industrial Terminal, 2x9-56VDC
1xAC220V Optional(Non-PoE Mode)
Switching Property
12M Buffer Size
12K Jumbo Frame
16K MAC Address
128Gbps Bandwidth
Environmental
-40 to +75℃ Operating Temp
5%-95%(No condensation) Humidity
PoE Standard
FR-9T44F8P: Port 17-24 802.3 af/at
Installation
Rack Mounting

FR-9T4648
Managed Industrial Ethernet Switch

Port
48x10/100/1000M RJ45
6x1/10G SFP+ Slot
Power Supply
37-75DC/110-240VAC
Switching Property
12M Buffer Size
12K Jumbo Frame
16K MAC Address
256G Bandwidth
Environmental
-40 to +75℃ Operating Temp
5%-95%(No condensation) Humidity
Installation
Rack Mounting

FR-7T4408/P/BT
Managed Industrial Ethernet Switch

Port
8x10/100/1000M RJ45
4x10G SFP+ Slot
Power Supply
6-pin Industrial Terminal, 9-56VDC
1xAC220V Optional(Non-PoE Mode)
Switching Property
12M Buffer Size
10K Jumbo Frame
16K MAC Address
128Gbps Bandwidth
Environmental
-40 to +75℃ Operating Temp
5%-95%(No condensation) Humidity
PoE Standard
FR-7T4408P: Port 1-8 802.3 af/at
FR-7T4408BT: Port 1-8 802.3 af/at/bt
Installation
Rack Mounting

LAYER 3 PRO
MANAGED INDUSTRIAL ETHERNET SWITCH

Management and Maintenance
- Console, Telnet, SSH 2.0
- HTTP/HTTPS
- SNMP v1/v2/v3
- Upload and download files vis TFTP/FTP
- NTP/TELNET/SSHv1/v2
- ICMPv6/ICMPv4 Remote Ping
- LLDP/LLDP-MED/UDLD/sFlow

Redundancy Features
- 802.1d (STP), 802.1d (RSTP), 802.1s (MSTP) BPDU Guard, BPDU filtering
- ERPS(G.8032v2)
- Loopback Protection
- IEEE 802.3ad LACP/static trunk
- MRP(Media Redundancy Protocol)
- APS Protocol

VLAN
- IEEE 802.1Q tag-based VLAN
- 4K VLAN Entries
- QinQ/Selective QinQ
- MAC/Protocol/IP Subnet-based VLAN
- MVRP/GVRP/Private VLANs
- Voice / Surveillance VLAN

OAM
- IEEE 802.3ah Ethernet OAM
- Dying Gasp
- IEEE 802.1ag CFM
- IEEE 802.3ah UDLD

Security Features
- Static MAC address
- IPv4/v6 IP Source Guard
- Dynamic ARP Inspection
- Guest VLAN
- DHCP snooping, DHCP option43/82
- DHCP Client IPv4/IPv6
- Port-based IEEE 802.1x authentication
- MAC-based/Local/RADIUS authentication
- AAA(RADIUS/TACACS+)

MAC Table
- Static MAC Entries
- Configurable aging time of MAC address
- Independent learning mode per Port

Time Synchronization
- IEEE 1588v2 PTP
- 802.1AS-Rev
- 802.1Qbv
- 802.1Qci
- 802.1CB
- 802.1Qbu

ACL
- L2/L3/L4 ACL
- ACL Based on:
  1. Source/Destination MAC
  2. VLAN
  3. DSCP
  4. Ethernet Type

Monitoring Functions
- Interface Statistics
- CPU/RAM Utilization Monitoring
- Temperature Monitoring
- Port Cable Test/Ping Test
- Port Mirroring
- RMON
- UPnP(Universal Plug and Play)

QoS
- Shaping, Policing
- IEEE 802.1p Class of Service (CoS)
- Storm Control
- Bandwidth management
- Scheduling:SP/WRR
- ACL-based traffic classification
- ACL-based CoS/DSCP assignment
- DSCP to CoS remarking
- CoS to DSCP remarking
- ACL-based VLAN assignment

Multicast Features
- Dynamic/Static Multicast groups
- IGMP Snooping v1,2,3
- Port-based IGMP Fast Leave
- GMP Querier
- MLD Snooping v1/v2

Routing Protocols
- RIPv1/v2
- OSPFv1/v2/v3
- IPv4/IPv6 Static Route

FR-TSN3206
Managed Industrial Ethernet Switch

Port
6x10/100/1000M RJ45
2x1000M SFP Slots
Power Supply
6-pin Industrial Terminal, 2x9-56VDC
1xAC220V Optional
Switching Property
12M Buffer Size
15K Jumbo Frame
8K MAC Address
64Gbps Bandwidth
Environmental
-40 to +75℃ Operating Temp
5%-95%(No condensation) Humidity
Time Synchronization
IEEE 1588v2 PTP/802.1AS-Rev
802.1Qbv / 802.1Qci
802.1CB / 802.1Qbu

FR-TSN4208
Managed Industrial Ethernet Switch

Port
8x10/100/1000M RJ45
2x10G SFP+ Slot
Power Supply
6-pin Industrial Terminal, 2x9-56VD
1xAC220V Optional
Switching Property
12M Buffer Size
15K Jumbo Frame
8K MAC Address
64Gbps Bandwidth
Environmental
-40 to +75℃ Operating Temp
5%-95%(No condensation) Humidity
Time Synchronization
IEEE 1588v2 PTP/802.1AS-Rev
802.1Qbv / 802.1Qci
802.1CB / 802.1Qbu

FR-TSN4412
Managed Industrial Ethernet Switch

Port
12x1000M SFP Slot
4x10G SFP+ Slot
Power Supply
6-pin Industrial Terminal, 9-56VDC
1xAC220V Optional
Switching Property
32M Buffer Size
15K Jumbo Frame
32K MAC Address
128Gbps Bandwidth
Environmental
-40 to +75℃ Operating Temp
5%-95%(No condensation) Humidity
Time Synchronization
IEEE 1588v2 PTP/802.1AS-Rev
802.1Qbv / 802.1Qci
802.1CB / 802.1Qbu

FR-TSN44DD
Managed Industrial Ethernet Switch

Port
12x10/100/1000M RJ45
12x1000M SFP Slots
4x10G SFP+ Slots
Power Supply
6-pin Industrial Terminal, 9-56VDC
1xAC220V Optional
Switching Property
32M Buffer Size
15K Jumbo Frame
8K MAC Address
128Gbps Bandwidth
Environmental
-40 to +75℃ Operating Temp
5%-95%(No condensation) Humidity
Time Synchronization
IEEE 1588v2 PTP/802.1AS-Rev
802.1Qbv/802.1Qci/802.1CB
802.1Qbu

FR-PTP3412
Managed Industrial Ethernet Switch

Port
12x1000M RJ45
4x1.25/2.5G SFP Slots
Power Supply
6-pin Industrial Terminal, 9-56VD
1xAC220V Optional
Switching Property
4M Buffer Size
9.6K Jumbo Frame
8K MAC Address
36Gbps Bandwidth
Environmental
-40 to +75℃ Operating Temp
5%-95%(No condensation) Humidity
Time Synchronization
IEEE 1588v2 PTP

COMMERCIAL ETHERNET SWITCH

Unmanaged PoE Switch

8/16/24 Port Unmanaged PoE Switch

Managed PoE Switch

Layer 2/3 Managed PoE Switch

Access Ethernet Switch

Layer 3 Access Ethernet Switch
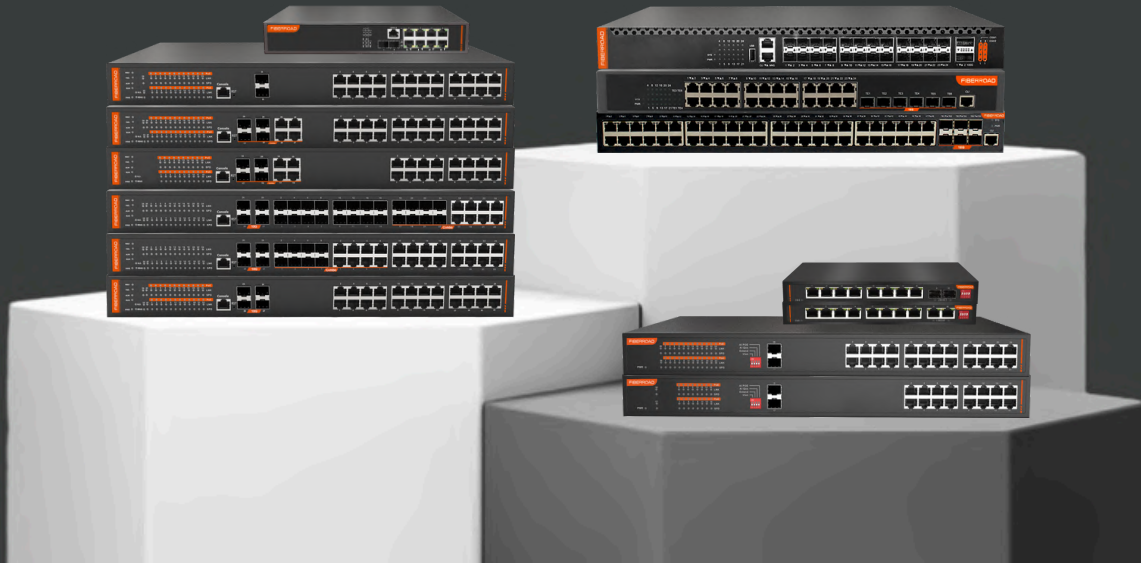
FR-5A3010P
Unmanaged PoE Switch

Port
10x10/100/1000M RJ45

Power Supply
External power adapter
AC100 – 240V 50-60Hz input
Switching Property
2M Buffer Size
1500 bytes Frame
4K MAC Address
20 Gbps Bandwidth
Environmental
0 to +50℃ Operating Temp
5%-80%(No condensation) Humidity
PoE Standard
Port 1-8 802.3 af/at
DIP Switch
AI VLAN | AI Extend | AI Qos | AI PoE

FR-5A3208P
Unmanaged PoE Switch

Port
8x10/100/1000M RJ45
2x1000M SFP Slots
Power Supply
External power adapter
AC100 – 240V 50-60Hz input
Switching Property
2M Buffer Size
1500 bytes Frame
4K MAC Address
20 Gbps Bandwidth
Environmental
0 to +50℃ Operating Temp
5%-80%(No condensation) Humidity
PoE Standard
Port 1-8 802.3 af/at
DIP Switch
AI VLAN | AI Extend | AI Qos | AI PoE

FR-5A3216/P
Unmanaged PoE Switch

Port
16x10/100/1000M RJ45
2x1000M SFP Slots
Power Supply
Internal power adapter
AC100-240V 50-60Hz
Switching Property
4M Buffer Size
1500 bytes Frame
8K MAC Address
52Gbps Bandwidth
Environmental
0 to +50℃ Operating Temp
5%-80%(No condensation) Humidity
PoE Standard
FR-5A3216P: Port 1-16 802.3 af/at
DIP Switch
AI VLAN | AI Extend | AI Qos | AI PoE

FR-5A3224/P
Unmanaged PoE Switch

Port
24x10/100/1000M RJ45
2x1000M SFP Slots
Power Supply
Internal power adapter
AC100-240V 50-60Hz
Switching Property
4M Buffer Size
1500 bytes Frame
8K MAC Address
52Gbps Bandwidth
Environmental
0 to +50℃ Operating Temp
5%-80%(No condensation) Humidity
PoE Standard
FR-5A3224P: Port 1-24 802.3 af/at
DIP Switch
AI VLAN | AI Extend | AI Qos | AI PoE

FR-5M3208/P
Layer 2 Managed Ethernet Switch

Port
8x10/100/1000M RJ45
2x1000M SFP Slots
Power Supply
Internal power adapter
AC100-240V 50-60Hz
Switching Property
4M Buffer Size
10K Jumbo Frame
8K MAC Address
36Gbps Bandwidth
Layer 2 Management Features
ERPSv2/RSTP/MSTP
SNMP v1/v2/v3
4K VLAN Entries, QinQ
L2/L3/L4 ACL
DHCP snooping, DHCP option82
IEEE 802.1x authentication
PoE Standard
FR-5M3208P: Port 1-8 802.3 af/at

FR-5M3224/P
Layer 2 Managed Ethernet Switch

Port
24x10/100/1000M RJ45
2x1000M SFP Slots
Power Supply
Internal power adapter
AC100-240V 50-60Hz
Switching Property
4M Buffer Size
10K Jumbo Frame
8K MAC Address
56Gbps Bandwidth
Layer 2 Management Features
ERPSv2/RSTP/MSTP
SNMP v1/v2/v3
4K VLAN Entries, QinQ
L2/L3/L4 ACL
DHCP snooping, DHCP option82
IEEE 802.1x authentication
PoE Standard
FR-5M3224P: Port 1-24 802.3 af/at

FR-5M3424/P
Layer 2 Managed Ethernet Switch

Port
24x10/100/1000M RJ45
4x1000M RJ45/SFP Combo
Power Supply
Internal power adapter
AC100-240V 50-60Hz
Switching Property
4M Buffer Size
10K Jumbo Frame
8K MAC Address
56Gbps Bandwidth
Layer 2 Management Features
ERPSv2/RSTP/MSTP
SNMP v1/v2/v3
4K VLAN Entries, QinQ
L2/L3/L4 ACL
DHCP snooping, DHCP option82
IEEE 802.1x authentication
PoE Standard
FR-5M3424P: Port 1-24 802.3 af/at

FR-5T4424/P
Layer 3 Managed Ethernet Switch

Port
24x10/100/1000M RJ45
4x10G SFP+ Slots
Power Supply
Internal power adapter
AC100-240V 50-60Hz
Switching Property
12M Buffer Size
12K Jumbo Frame
16K MAC Address
128Gbps Bandwidth
Layer 3 Management Features
ERPSv2/RSTP/MSTP/LACP
SNMPv3/TACACS+/RADIUS
4K VLAN Entries, QinQ, Voice VLAN
802.1P/DSCP Class of Service
L2/L3/L4 ACL/MLD Snooping v1/v2
RIPv2/OSPFv2/IPv4/IPv6 Static Route
DHCP snooping, DHCP option 43/82
IP Source Guard/DoS attacks prevention
PoE Standard
FR-5T4424P: Port 1-24 802.3 af/at

FR-5T448F
Layer 3 Managed Ethernet Switch

Port
16x10/100/1000M RJ45
8x1000M RJ45/SFP Combo
4x10G SFP+ Slots
Power Supply
Internal power adapter
AC100-240V 50-60Hz
Switching Property
12M Buffer Size
12K Jumbo Frame
16K MAC Address
128Gbps Bandwidth
Layer 3 Management Features
ERPSv2/RSTP/MSTP/LACP
SNMPv3/TACACS+/RADIUS
4K VLAN Entries, QinQ, Voice VLAN
802.1P/DSCP Class of Service
L2/L3/L4 ACL/MLD Snooping v1/v2
RIPv2/OSPFv2/IPv4/IPv6 Static Route
DHCP snooping, DHCP option 43/82
IP Source Guard/DoS attacks prevention

FR-5T44F8
Layer 3 Managed Ethernet Switch

Port
16x100/1000M SFP Slot
8x1000M RJ45/SFP Combo
4x10G SFP+ Slots
Power Supply
Internal power adapter
AC100-240V 50-60Hz
Switching Property
12M Buffer Size
12K Jumbo Frame
16K MAC Address
128Gbps Bandwidth
Layer 3 Management Features
ERPSv2/RSTP/MSTP/LACP
SNMPv3/TACACS+/RADIUS
4K VLAN Entries, QinQ, Voice VLAN
802.1P/DSCP Class of Service
L2/L3/L4 ACL/MLD Snooping v1/v2
RIPv2/OSPFv2/IPv4/IPv6 Static Route
DHCP snooping, DHCP option 43/82
IP Source Guard/DoS attacks prevention

FR-5T4624
Layer 3 Access Ethernet Switch

Port
24x10/100/1000M RJ45
6x1/10G SFP+ Slots
Power Supply
AC100-240V 50-60Hz
Switching Property
2M Buffer Size
9K Jumbo Frame
32K MAC Address
216Gbps Bandwidth
12K(IPv4).6K(IPv6) Routing Table
Layer 3 Management Features
ERPSv2/RSTP/MSTP/LACP/HSRP/VRRP
SNMPv3/TACACS+/RADIUS
4K VLAN Entries, QinQ, Private VLAN
802.1P/DSCP Class of Service
IGMPv1/v2/v3/MLD Snooping v1/v2
RIPv2/OSPFv2/BGP/IS-IS/EIGRP
DHCP snooping, DHCP option 43/82
IP Source Guard/DDoS attacks prevention
Virtual Stacking Technology
MPLS VPN /TE/OAM/IPv6 to IPv4 tunnels

FR-5T4648
Layer 3 Access Ethernet Switch

Port
48x10/100/1000M RJ45
6x1/10G SFP+ Slots
Power Supply
AC100-240V 50-60Hz
Switching Property
2M Buffer Size
9K Jumbo Frame
32K MAC Address
216Gbps Bandwidth
12K(IPv4).6K(IPv6) Routing Table
Layer 3 Management Features
ERPSv2/RSTP/MSTP/LACP/HSRP/VRRP
SNMPv3/TACACS+/RADIUS
4K VLAN Entries, QinQ, Private VLAN
802.1P/DSCP Class of Service
IGMPv1/v2/v3/MLD Snooping v1/v2
RIPv2/OSPFv2/BGP/IS-IS/EIGRP
DHCP snooping, DHCP option 43/82
IP Source Guard/DDoS attacks prevention
Virtual Stacking Technology
MPLS VPN /TE/OAM/IPv6 to IPv4 tunnels

FR-5T6224
Layer 3 Access Ethernet Switch

Port
24x10G SFP+ Slots
2x100G QSFP28 Slots
Power Supply
AC100-240V 50-60Hz
Switching Property
4M Buffer Size
16K Jumbo Frame
32K MAC Address
2.56Tbps Bandwidth
16K(IPv4).12K(IPv6) Routing Table
Layer 3 Management Features
ERPSv2/RSTP/MSTP/LACP/HSRP/VRRP
SNMPv3/TACACS+/RADIUS
4K VLAN Entries, QinQ, Private VLAN
802.1P/DSCP Class of Service
IGMPv1/v2/v3/MLD Snooping v1/v2
RIPv2/OSPFv2/BGP/IS-IS/EIGRP
DHCP snooping, DHCP option 43/82
IP Source Guard/DDoS attacks prevention
Virtual Stacking Technology
MPLS VPN /TE/OAM/IPv6 to IPv4 tunnels

OPTICAL TRANSPORT NETWORK

Service Providers

Fronthaul Network

Dark Fiber Providers

Enterprises

FR8000-CH01
1-Slot Platform

FAN
4 Units
Power Supply
2xAC220V/DC-48V

FR8000-CH04
4-Slot Platform

FAN
3 Units
Power Supply
2xAC220V/DC-48V

FR8000-CH08
8-Slot Platform

FAN
4 Units
Power Supply
2xAC220V/DC-48V
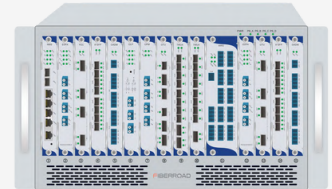
FR8000-CH16
16-Slot Platform

FAN
4 Units
Power Supply
2xAC220V/DC-48V

Management Features

- Support SNMP、CLI、WEB、TELNET Network Management method .
- Completely visual graphic information .
- Entire network topology auto-discovery, Automatically generate network elements.
- Electronic map positioning, Fault location quickly and accurately.
- Voice alarm, e-mail alerts, SMS alerts, real-time online remote monitoring.
- EMS Management Platform, Covering entire Process from Plan to maintenance .
- Fault quick diagnosis, One-click export resource statements.
- Cable Fault point localization diagnosis, real-time detection cable quality .
- OPM channel scanning, OSNR real-time monitoring.

FR8000-NMS

Interfaces
1xRS-232
4x10/100Base-TX
2x100Base-X SFP
1xE1

Management Access
SNMP
WebGUI
Telnet
CLI

Management Features
Fault Management
Performance Management
Security Management
Configuration Management
Event Management
Log Management
Alarm Management
Topology Management
User Management
Online Firmware Upgrade

Platform
FR8000-CH08
FR8000-CH16

Environment
-10 to 60℃ Operating Temperature
5% to 95℃ Non-condensing

Power Consumption
≤15W

FR8000-OTURQS2S

Interfaces
Client Side: 4x10G SFP+ Slots
Line Side:4x10G SFP+ Slots

Data Rate
Fiber Channel: 8.5/10G
SONET OC-192, STM-64
10G WAN (10Gbps)
10G LAN(10.31Gbps)

Wavelength
850nm, 1310nm, 1550nm
CWDM, DWDM

FR8000-OCPDX2XX

Interfaces
Client Side:2x10G XFP Slots
Line Side:4x10G XFP Slots

Data Rate
Fiber Channel: 8.5/10G
SONET OC-192, STM-64
10G WAN (10Gbps)
10G LAN(10.31Gbps)

Protection
1+1 Line Side Protection
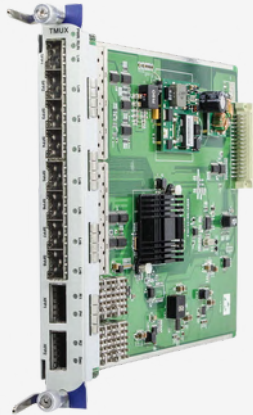
FR8000-TMX

Interfaces
Client Side: 8x1.25G SFP Slots
Line Side: 2x10G SFP+ Slots

Management Features
Client Side Rate Limitation
Client and Line side Loopback

Protection
1+1 Line Side Protection

FR8000-OTURDX2X

Interfaces
Client Side: 2x100G QSFP28 Slots
Line Side: 2x100G QSFP28 Slots

Management Features
Port working Status
Digital Optical Monitoring

Wavelength
Client Side LR4
Line Side: LR4/ZR4/PAM4

FR8000-OD/OM

Number of Channels
40/48

Channel Spacing
100 GHz

Central Wavelength
C-band

Insertion Loss
≤4.5dB(Typical)

FR8000-BA/PA/LA

Mode
BA: Booster Amplifier
LA: In-line Amplifier
PA: Pre Amplifier

Operating Wavelength
1528-1565nm

Embedded OSC for remote
management and topology
detection

Integrated single/dual DCM for
long distance 10G amplified links

OPTICAL TRANSCEIVERS

155M SFP

Wavelength	Distance	Connector	Temp.
850nm	2km	LC	C/I
1310nm	2km	LC	C/I
1310nm	2km	LC	C/I
1310nm	15km	LC	C/I
1310nm	40km	LC	C/I
1310nm	80km	LC	C/I
1550nm	15km	LC	C/I
1550nm	80km	LC	C/I
1550nm	100km	LC	C/I
1550nm	120km	LC	C/I
1550nm	160km	LC	C/I
1550nm	200km	LC	C/I

155M BIDI SFP

Wavelength	Distance	Connector	Temp.
1310nm/1550nm	2km	LC/SC	C/I
1550nm/1310nm	2km	LC/SC	C/I
1310nm/1490nm	10km	LC/SC	C/I
1490nm/1310nm	10km	LC/SC	C/I
1310nm/1550nm	15km	LC/SC	C/I
1550nm/1310nm	15km	LC/SC	C/I
1310nm/1490nm	20km	LC/SC	C/I
1490nm/1310nm	20km	LC/SC	C/I
1310nm/1550nm	40km	LC/SC	C/I
1550nm/1310nm	40km	LC/SC	C/I
1310nm/1490nm	40km	LC/SC	C/I
1490nm/1310nm	40km	LC/SC	C/I
1310nm/1550nm	80km	LC/SC	C/I
1550nm/1310nm	80km	LC/SC	C/I

1.25Gbps SFP

Wavelength	Distance	Connector	Temp.
850nm	550m	LC	C/I
1310nm	1km	LC	C/I
1310nm	10km	LC	C/I
1310nm	15km	LC	C/I
1310nm	20km	LC	C/I
1310nm	40km	LC	C/I
1550nm	40km	LC	C/I
1550nm	80km	LC	C/I
1550nm	100km	LC	C/I
1550nm	120km	LC	C/I
1550nm	160km	LC	C/I
CWDM/DWDM	20km	LC	C/I
CWDM/DWDM	40km	LC	C/I
CWDM/DWDM	80km	LC	C/I
CWDM/DWDM	100km	LC	C/I
CWDM/DWDM	120km	LC	C/I
CWDM/DWDM	160km	LC	C/I

1.25Gbps BIDI SFP

Wavelength	Distance	Connector	Temp.
1310nm/1550nm	1km	LC/SC	C/I
1550nm/1310nm	1km	LC/SC	C/I
1310nm/1490nm	4km	LC/SC	C/I
1490nm/1310nm	4km	LC/SC	C/I
1310nm/1550nm	10km	LC/SC	C/I
1550nm/1310nm	10km	LC/SC	C/I
1310nm/1490nm	10km	LC/SC	C/I
1490nm/1310nm	10km	LC/SC	C/I
1310nm/1550nm	20km	LC/SC	C/I
1550nm/1310nm	20km	LC/SC	C/I
1310nm/1490nm	20km	LC/SC	C/I
1490nm/1310nm	20km	LC/SC	C/I
1310nm/1550nm	40km	LC/SC	C/I
1550nm/1310nm	40km	LC/SC	C/I
1310nm/1490nm	40km	LC/SC	C/I
1490nm/1310nm	40km	LC/SC	C/I
1310nm/1550nm	60km	LC/SC	C/I
1550nm/1310nm	60km	LC/SC	C/I
1310nm/1490nm	60km	LC/SC	C/I
1490nm/1310nm	60km	LC/SC	C/I

2.5Gbps SFP

Wavelength	Distance	Connector	Temp.
850nm	300m	LC	C/I
850nm	500m	LC	C/I
1310nm	2km	LC	C/I
1310nm	20km	LC	C/I
1310nm	40km	LC	C/I
1550nm	40km	LC	C/I
1550nm	80km	LC	C/I
CWDM	40km	LC	C/I
CWDM/DWDM	80km	LC	C/I

2.5Gbps BIDI SFP

Wavelength	Distance	Connector	Temp.
1310nm/1550nm	20km	LC/SC	C/I
1550nm/1310nm	20km	LC/SC	C/I
1490nm/1550nm	40km	LC/SC	C/I
1550nm/1490nm	40km	LC/SC	C/I
1490nm/1550nm	80km	LC	C/I
1550nm/1490nm	80km	LC	C/I

Copper SFP

Data Rate	Distance	Connector	Temp.
100 Base-Tx	100m	RJ45	C/I
1000 Base-T	100m	RJ45	C/I
10/100/1000 Base-T	100m	RJ45	C/I
100/1000/2.5G 5G/10G	30m	RJ45	C/I

1/10G SFP+

Wavelength	Distance	Connector	Temp.
850nm	300m	LC	C
1310nm	10km	LC	C/I
1550nm	40km	LC	C

10G SFP+

Wavelength	Distance	Connector	Temp.
850nm	300m	LC	C/I
1310nm	2km	LC	C/I
1310nm	10km	LC	C/I
1310nm	20km	LC	C/I
1310nm	40km	LC	C/I
1550nm	40km	LC	C/I
1550nm	80km	LC	C/I
1550nm	100km	LC	C
CWDM/DWDM	40km	LC	C/I
CWDM/DWDM	80km	LC	C/I

10G CDR SFP+

Wavelength	Distance	Connector	Temp.
850nm	300m	LC	C
1310nm	2km	LC	C
1310nm	10km	LC	C
1310nm	20km	LC	C
1310nm	40km	LC	C
1550nm	40km	LC	C
1550nm	80km	LC	C
CWDM/DWDM	40km	LC	C/I
CWDM/DWDM	80km	LC	C/I

10G BIDI SFP+

Wavelength	Distance	Connector	Temp.
1270nm/1330nm	10km	LC	C/I
1330nm/1270nm	10km	LC	C/I
1270nm/1330nm	20km	LC	C/I
1330nm/1270nm	20km	LC	C/I
1270nm/1330nm	40km	LC	C/I
1330nm/1270nm	40km	LC	C/I
1270nm/1330nm	60km	LC	C/I
1330nm/1270nm	60km	LC	C/I
1490nm/1550nm	80km	LC	C/I
1550nm/1490nm	80km	LC	C/I

10G BIDI CDR SFP+

Wavelength	Distance	Connector	Temp.
1270nm/1330nm	10km	LC	C/I
1330nm/1270nm	10km	LC	C/I
1270nm/1330nm	20km	LC	C/I
1330nm/1270nm	20km	LC	C/I
1270nm/1330nm	40km	LC	C/I
1330nm/1270nm	40km	LC	C/I
1270nm/1330nm	60km	LC	C/I
1330nm/1270nm	60km	LC	C/I

10G XFP

Wavelength	Distance	Connector	Temp.
850nm	300m	LC	C/I
1310nm	2km	LC	C/I
1310nm	10km	LC	C/I
1310nm	20km	LC	C/I
1310nm	40km	LC	C/I
1550nm	40km	LC	C/I
1550nm	80km	LC	C/I
1550nm	100km	LC	C
CWDM/DWDM	40km	LC	C
CWDM/DWDM	80km	LC	C

8/10G XFP

Wavelength	Distance	Connector	Temp.
850nm	300m	LC	C/I
1310nm	2km	LC	C/I
1310nm	10km	LC	C/I
1310nm	20km	LC	C/I
1550nm	40km	LC	C/I
1550nm	80km	LC	C/I
CWDM/DWDM	40km	LC	C
CWDM/DWDM	80km	LC	C

10G BIDI XFP

Wavelength	Distance	Connector	Temp.
1270nm/1330nm	10km	LC	C/I
1330nm/1270nm	10km	LC	C/I
1270nm/1330nm	20km	LC	C/I
1330nm/1270nm	20km	LC	C/I
1270nm/1330nm	40km	LC	C/I
1330nm/1270nm	40km	LC	C/I
1270nm/1330nm	60km	LC	C/I
1330nm/1270nm	60km	LC	C/I

40G QSFP+

Wavelength	Distance	Connector	Temp.
850nm	100/150m	MPO	C
850nm	300/400m	MPO	C
CWDM4	2km	LC	C
CWDM4	10km	LC	C/I
CWDM4	20km	LC	C/I
CWDM4	40km	LC	C/I

100G QSFP28

Wavelength	Distance	Connector	Temp.
850nm	100m	LC	C/I
850nm	150m	LC	C/I
CWDM4	2km	LC	C/I
CWDM4	10km	LC	C/I
LAN-WDM	40km	LC	C/I
LAN-WDM	80km	LC	C/I
LAN-WDM	100km	LC	C/I
1311nm	500m	LC	C/I
1311nm	2km	LC	C/I
1311nm	10km	LC	C/I
1311nm	30km	LC	C
1311nm	40km	LC	C

100G CWDM/DWDM QSFP28

Wavelength	Distance	Connector	Temp.
1271nm/1291nm /1311nm/1331nm	2km	LC	C
1271nm/1291nm /1311nm/1331nm	10km	LC	C
DWDM C band	80km	LC	C
DWDM O band	25km	LC	C
DWDM O band	40km	LC	C

POWER SUPPLY

DIN Rail Power Supply

	75W	120W	240W	480W
AC Input Voltage Range	90-264VAC; 127-370VDC			
AC Inrush Current(max.)	Cold start, 35A at 230VAC			
DC Adjustment Range	12V: 12-14V, 24V: 24-28V, 48V:48-55V			
Operating Temperature	-20 - +70℃			
Safety Standard	UL508, TUV BS EN/EN62368-1, EAC TP TC, BSMI CNS14336-1			
EMC Standard	BS EN/EN55032 class B, EN61000-3-2,3, EN61000-4-2,3,4,5,6,8,11, EN61000-6-2 (EN50082-2), EN61204-3; EAC TP TC 020			
Dimension(WxHxD)(mm)	32x125.2x102	40x125.2x113.5	63x125.2x113.5	85.5x125.2x128.5

NOTES

GLOBAL DISTRIBUTOR RECRUITING

Looking forward to our Partnership

Through our years of experience, we have focused on creating a recipe for promptly addressing the evolving demands of the market. Our philosophy does not involve sacrificing efficiency, dependability, and user-friendliness in our devices - these aspects are ingrained in our products as a reflection of our vision and principles.

Currently, we have distribution points in various countries worldwide, including the United Kingdom, France, Spain, Italy, Malaysia, Indonesia, Uzbekistan, Egypt, Saudi Arabia and more.

We are constantly expanding and aspire to compete in the international market.

CONTACT US

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