

JetNet 4518

Industrial 18-Port Managed Fast Ethernet Switch



CE FC RoHS

- 16 + 2 FX Combo
- MSR < 5ms
- 9 MultiRings
- IEEE1588 PTP
- Private VLAN, QinQ
- 256 VLANs
- LLDP & JetView Pro
- 40~75°C

- 16 10/100-TX and 2 100M RJ-45/SFP Combo ports (10/100Base-TX, 100Base-FX)
- Non-Blocking Switching Performance
- Korenix Multiple Super Ring pattern aggregates up to 9 Rapid Super Rings
- 802.1s Multiple Spanning Tree and RSTP/STP
- IEEE 1588 Precision Time Protocol for precise time synchronization
- RSTP/STP, 256 802.1Q VLAN, QoS and up to 8 trunk groups
- IGMP Snooping, GMRP Rate Control for multicast message management
- Supports LLDP and JetViewPro i²NMS software for auto topology visualization and efficient group management
- SNMP V1/V2c/V3, RMON for remote management
- Advanced Security supports 802.1x and Access Control List
- Dual 24V (12-48V) DC power inputs
- IP31 rugged aluminum case
- -40~75°C operating temperature

- Industrial Intelligent NMS
- Rackmount PoE Plus Switch
- Industrial PoE Plus Switch
- Industrial 12-24V PoE Switch
- Industrial PoE Switch
- Rackmount L3/L2 Switch
- Gigabit Managed Switch
- Managed Ethernet Switch**
- Entry-level Switch
- IP67/68 Ethernet Switch
- Wireless Outdoor AP
- Embedded PoE/Router Computer (LINUX)
- Industrial Communication Computer (WIN/LINUX)
- Ethernet/PoE/Serial Board
- Ethernet I/O Server
- Media Converter
- Serial Device Server
- SFP Module
- Din Rail Power Supply

Overview

The JetNet 4518 is an 18-port Industrial Managed Ethernet Switch, specifically designed for industrial environments requiring high port density. In addition to the 16 Fast Ethernet ports, JetNet 4518 is equipped with additional 2 10/100Base-TX/100Base-FX SFP Combo ports, which can be configured for a variety of cabling types and distances depending on your specific environmental needs. With the non-blocking switching performance, JetNet 4518 provides 12.8G backplane which ensures the traffic switching without data loss and blocking. Combining rugged IP-31 enclosure, great heat dissipation and -40~75°C wide operating temperature range, JetNet 4518 assures data running smoothly under severe industrial environments.

The embedded software supports standard 802.1s MSTP, 802.1D-2004 RSTP and Korenix Multiple Super Ring (MSR) technology for ring redundancy protection. The Korenix MSR supports up to 5ms short recovery time. With its MultiRing design, the 18 front ports allow users to aggregate up to 9 100M copper rings or 8 100M copper plus 1 fiber rings. This is a unique and Korenix patent protected ring technology.

Besides, JetNet 4518 supports full layer 2 management features, such as VLAN, Private VLAN, Q-in-Q, IGMP Snooping, LACP for network control, SNMP, LLDP for network management. The secured access is protected by Port Security, 802.1x and flexible Layer 2/4 Access Control List. With JetNet 4518, you can fulfill the technicians' needs of having the best solution for the large scale industrial Ethernet infrastructure.

High Port Density and Flexible Fast Ethernet Connectivity

The JetNet 4518 is equipped with 16 100M Fast Ethernet plus 2 Fast Ethernet RJ-45/SFP combo ports and therefore can be used in networks requiring high port density.

Each of the two combo ports combines one Small Form factor Pluggable (SFP) socket for 100Mbps multi-mode or single-mode transceiver, as well as one RJ-45 copper port in 10Mbps full duplex, 100Mbps half/full duplex link mode.

The switch will automatically detect the priority of cable connections for each combo port.

You can choose different types of SFP transceivers for your switch, depending on the environmental needs, the distance or the installed fiber/copper cable types.

Users are able to connect two 100Mbps SFP ports of JetNet 4518 as a Fast Ethernet Fiber Redundant Ring topology.

Multiple Super Ring (MSR™) Aggregation Capability

The JetNet 4518 supports the new generation ring technology – MSR™ which includes various new technologies for redundancy applications and structures of different networks.

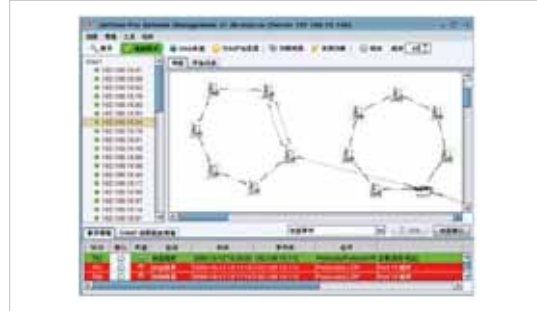
The JetNet 4518 allows to aggregate up to 9 Rapid Super Rings, including 8 copper plus 1 Fiber / Copper rings in a single switch. The Korenix protected pattern eases your network planning while maximizing network performance and reliability .



Rapid Super Ring	Rapid Dual Homing	MultiRing	TrunkRing
<ul style="list-style-type: none"> ■ Ring Master auto-select ■ Seamless restoration ■ Ring Failure alarms/LED ■ Failed ring port together with Ring Master ■ Millisecond Recovery Time ■ Backward compatible with legacy Super Ring 	<ul style="list-style-type: none"> ■ Multiple Uplink Paths ■ One to One upper, Many to One upper, One to Many upper switches ■ Seamless Restoration ■ Korenix Patent protected 	<ul style="list-style-type: none"> ■ Couple 2 rings with shared unit ■ Multiple up to 9 100M rings ■ Korenix Patent protected 	<ul style="list-style-type: none"> ■ Integrate Port Trunk/LACP with MSR, RSR ■ Load balancing of ring Ports ■ Backup with each other ■ Korenix Patent protected

Auto Topology Discovery & Efficient Management

JetNet 4518 supports topology discovery or LLDP (IEEE 802.1AB Link Layer Discovery Protocol) function that can help users to discover multi-vendor's network devices on the same segment by an NMS system, which support LLDP function. With LLDP function, NMS can easily maintain the topology map, display port ID, port description, system description, VLAN ID, etc.. Once a link failure happens, the topology changed events are updated to the NMS to help users easily maintain the network system. Besides the SNMP and LLDP protocols, JetNet 4518 efficiently works with the Korenix patented JetView Pro i²NMS, which in addition to the auto-topology discovery, also delivers MSRTM group management, group IP assignment, group firmware upgrade, group configuration file backup/ restore, SNMP



MIB Browser /compiler, etc.

The user-friendly software allows administrators to discover devices automatically and efficiently manage the performance of the large-scale industrial surveillance networks.

Industrial Intelligent NMS

Rackmount PoE Plus Switch

Industrial PoE Plus Switch

Industrial 12-24V PoE Switch

Industrial PoE Switch

Rackmount L3/L2 Switch

Gigabit Managed Switch

Managed Ethernet Switch

Entry-level Switch

IP67/68 Ethernet Switch

Wireless Outdoor AP

Embedded PoE/Router Computer (LINUX)

Industrial Communication Computer (WIN/LINUX)

Ethernet/PoE/Serial Board

Ethernet I/O Server

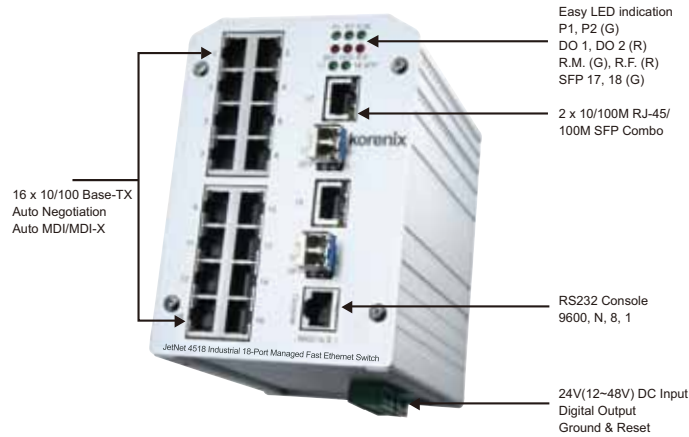
Media Converter

Serial Device Server

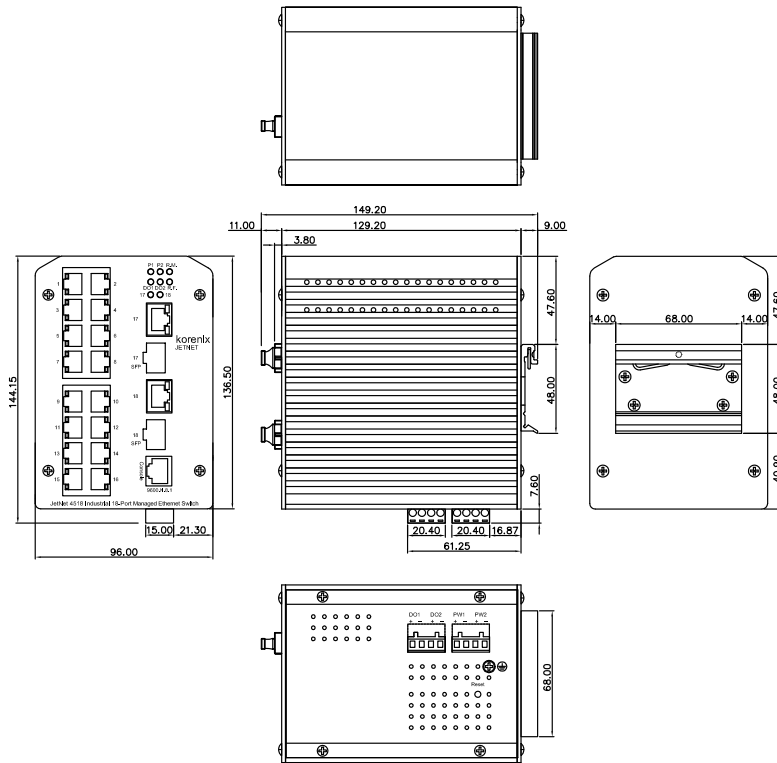
SFP Module

Din Rail Power Supply

JetNet 4518 Appearance



Dimension (Unit = mm)



Specification

Technology

Standard:

- IEEE 802.3 10Base-T Ethernet
- IEEE 802.3u 100Base-TX Fast Ethernet
- IEEE 802.3ab 1000Base-TX
- IEEE 802.3x Flow Control and Back-pressure
- IEEE 802.1p class of service
- IEEE 802.1Q VLAN and GVRP
- IEEE 802.1D-2004 Rapid Spanning Tree Protocol (RSTP)
- IEEE802.3ad Link Aggregation Control Protocol (LACP)
- IEEE802.1X Port based Network Access Control
- IEEE802.1AB Link Layer Discovery Protocol (LLDP)

Performance

Switch Technology: Store and Forward Technology, 12.8Gbps Switch Fabric

System Throughput: 14,880pps for 10M Ethernet, 148,800pps for 100M Fast Ethernet

Transfer packet size: Typical: 64 bytes to 1536 bytes, Jumbo Frame Enabled: Up to 9,216bytes.

MAC Address: 8K

Packet Buffer: 2Mbits

Network Redundancy

Configuration: Cisco-Like CLI, Web, SSL, SSH, JetView, Backup/Restore, DHCP Client, Warm reboot, Reset to default, Admin password, Port Speed/Duplex control, status, statistic, MAC address table display, Static MAC, Aging time Jumbo Frame Enable/Disable: up to 9,216KBytes

LLDP: Link Layer Discovery Protocol to advertise system/port identity and capability on the local network

SNMP: SNMP v1, v2c, v3 and Traps.

SNMP MIB: MIB-II, Bridge MIB, VLAN MIB, SNMP MIB, RMON and Private MIB

IEEE 1588 Precision Time Protocol (PTP): Synchronize time from the PTP server

SNTP: Simple Network Time Protocol to synchronize time

Port Trunk: Static Trunk and IEEE 802.3ad LACP, LACP Timeout, Up to 8 Trunk Group, 2-8 ports per trunk

Rate Control: Ingress and Egress rate limiting

VLAN: IEEE802.1Q VLAN, GVRP. Up to 255 VLANs

Quality of Service: 4 priority queues per port, IEEE802.1p COS and Layer 3 TOS/DiffServ

IGMP Snooping: IGMP Snooping V1/V2/V3 for multicast filtering and IGMP Query

◀◀◀ Industrial L2 / L3 Rackmount / Rail Ethernet Switch

GMRP: GVRP Multicast Registration Protocol
 802.1x: Port_based Network Access Control
Radius: Login by Radius account/password, Key for Radius Server Authentication
Port Security: Assign authorized MAC to specific port
IP Security: IP security to prevent unauthorized access
 Access Control List: Permit/Deny access control lists
DHCP Server: Support 255 Dynamic IP poll
DHCP Option 82: Relay the DHCP request to remote server
Port Mirroring: Online traffic monitoring
E-mail Warning: Automatic warning by pre-defined events
Syslog: Message logged with server and client mode
Alarm Events: Power and Ports Failure, DO state, Ping Failure, Login Fail, Time Synchronize Fail, Super Ring Topology Change

Network Redundancy
Rapid Spanning Tree Protocol: 802.1D-2004 RSTP, compatible with Legacy STP
Multiple Super Ring (MSR)™ : Korenix Ring Redundancy Technology, Includes Rapid Super Ring, Rapid Dual Homing, TrunkRing, MultiRing
Rapid Dual Homing (RDH)™: Multiple uplink paths to one or multiple upper switch
TrunkRing™: Integrate port aggregate function in ring path to get higher throughput ring architecture
MultiRing™: Couple or Multiple 9 100M rings within one switch.
Legacy Super Ring: Backward compatible in client mode

Interface
Number of Fixed Ports:
 10/100Base-TX: 18 x RJ-45, Auto MDI/MDI-X, Auto Negotiation
 100Base-FX: 2 x SFP with Hot Swappable, combo with copper port 17&18

Cables:
 10Base-T: 2-pair UTP/STP Cat. 3, 4, 5 cable (100m)
 100 Base-TX: 2/4-pair UTP/STP Cat. 5 cable (100m)

Diagnostic LED:
 System: Power 1, Power 2, Ring Master (Green), Relay 1, Relay 2, Ring Failure (Red)
 10/100 RJ-45: Link (Green/Left), Activity (Yellow Blinking/Right)
 100M SFP: Link/Activity (Green/Green Blinking)
RS232 Console: RJ-45 type, Pin: (2: TxD, 3: RxD, 5:GND)
Power: 2 sets of DC inputs
Relay Output: 2 sets of Relay Output

Power Requirements
Power: Dual 24V (12-48V) DC power input
Power Consumption: Max. 15 Watts

Mechanical
Installation: Din Rail or Wall Mount
Case: Aluminum metal case with IP31 protection
Dimension: 137mm(H) x 96mm (W) x 129mm (D)
Weight: 1.5 kg with package

Environmental
Operating Temperature: -40 ~75°C
Operating Humidity: 5% ~ 95% (non-condensing)
Storage Temperature: -40 ~ 85°C
 Regulatory Approvals
EMI: FCC Class A, CE/EN55022. Class A
EMS: IEC 61000-4-2, IEC 61000-4-3, IEC 61000-4-4, IEC 61000-4-5, IEC 61000-4-6, IEC 61000-4-8
Shock: IEC60068-2-27
Vibration: IEC60068-2-6
Free Fall: IEC60068-2-32
Warranty: 5 years

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SFP Module
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Ordering Information

JetNet 4518 Industrial 18-Port Managed Fast Ethernet Switch

Includes:

- JetNet 4518 (without SFP transceivers)
- Din Rail Kit
- Document CD
- Quick Installation Guide
- Console Cable

Optional Accessories

- 100Base-FX Multi-Mode SFP Transceiver
- 100Base-FX Single-Mode SFP Transceiver
- 100Base-FX BIDI/WDM Single-Mode SFP Transceiver