

JetNet 3018G

Industrial 16+2G Gigabit Ethernet Switch



- 16 10/100-TX and 2 Gigabit RJ-45/SFP combo ports (10/100/1000 Base-TX, 1000Base-X)
- 12.8G Non-Blocking Switching Performance, high backplane single chip solution
- Supports up to 9,216 bytes Jumbo Frame Packet for secured large file transmission
- 2 Relay Outputs for Gigabit port Link Failure Detection
- IEEE 802.1p Quality of Service (QoS) compliance
- Auto Gigabit RJ-45/SFP module detection
- IP31 rugged aluminum case
- Dual 24V (12-48V) DC power inputs



Overview

JetNet 3018G, the 16+2G Industrial Gigabit Ethernet Switch, provides high port density for large-scale Ethernet network applications, while ensuring lower system costs by less unit installation.

With the non-blocking switching performance, JetNet 3018G provides 12.8G on-chip backplane which ensures faster local transmission latency and efficient upstream transmission without data loss and blocking.

For large scale surveillance networks or for applications, which require large size traffic transmission, JetNet 3018G supports up to 9K Jumbo frame allowing to bypass larger file packets with fewer segments to the uplink networks.

With dual on board gigabit SFP uplink ports, the switch can flexibly develop high-density copper or fiber network connections with other high-end switches.

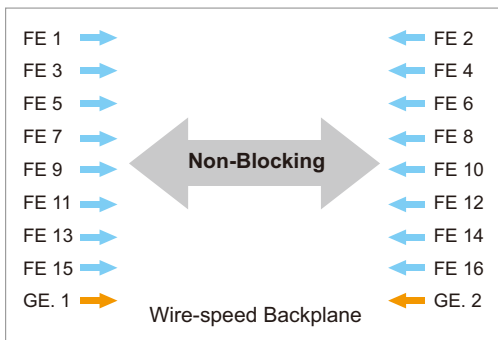
Just like the JetNet models, JetNet 3018G also supports 2 Digital Outputs to indicate fault conditions when a gigabit port link failure happens as a result increasing the system reliability.

JetNet 3018G is designed as a rugged surface in aluminum material housing with efficient heat dispersion capability and -25~70°C wide operating temperature to provide high-performance and reliable data transmission under severe industrial conditions.

High Bandwidth and Performance

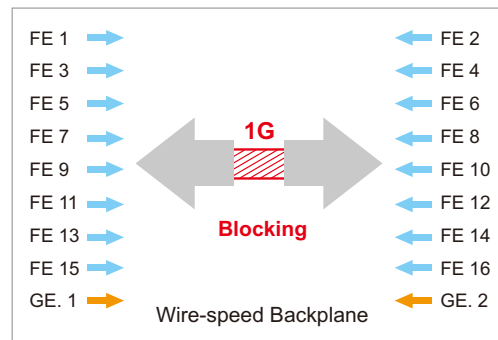
The JetNet3018G equipped with 16 100M Fast Ethernet plus 2 Gigabit Ethernet ports, totally requests at least 7.2G backplane for wire-speed and bi-directional transmission. To meet the requests, there are 2 types of system architecture - non-blocking and blocking.

In non-blocking architecture, the switch fabric should provide higher backplane than are the front ports' requests. No matter it's a one to one or fully mesh network, the throughput is always 100% without any loss.



The blocking architecture is usually implemented in non-single chipset solution. Limited backplane may cause traffic jam when there is a heavy loading transmission among the ports.

The JetNet 3018G embedded 8.8G backplane is much higher than the system requires. All the traffic can be switching without blocking and loss. Up to 9K Jumbo frame allows transmitting larger files with less segments. The high bandwidth and performance solution guarantees the high capabilities of the product.



- Industrial PoE Switch
- IP67/68 Ethernet Switch
- Rackmount Managed Switch
- Gigabit Switch
- Redundant Switch
- Entry-Level Switch
- Networking Computer
- Communication Computer
- Ethernet I/O Server
- Serial Device Server
- Media Converter
- Multiport Serial Card
- SFP Module
- Din Rail Power Supply

Up to 9KBytes Jumbo Frame Bypass

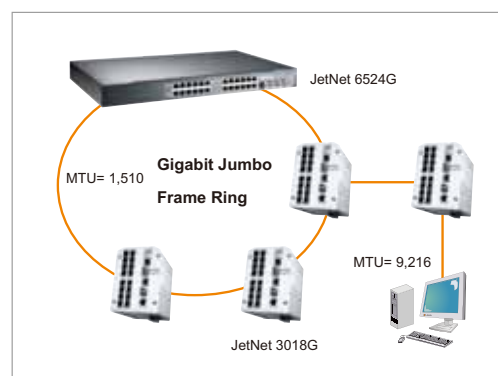
What is Jumbo Frame?

The typical Ethernet frame ranges from 64 to 1518 bytes. This is sufficient for general usage. However, when users need to transmit large files, the files may be divided into many small size packets. While the transmitting speed becomes slow, 9KBytes Jumbo frame can solve the issue.

Example:

Transmitting large files, like the size of the LCD's bitmap type circuit may reach up to 800MB.

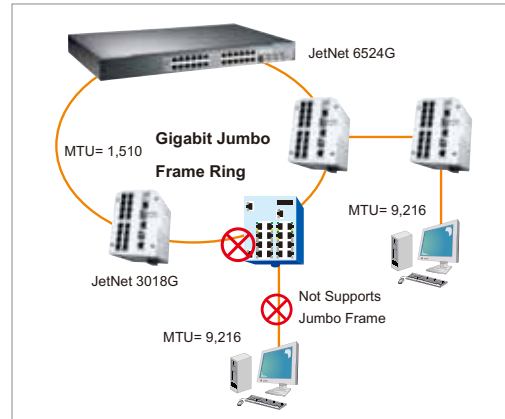
Network servers usually progress backups for lots of large files.



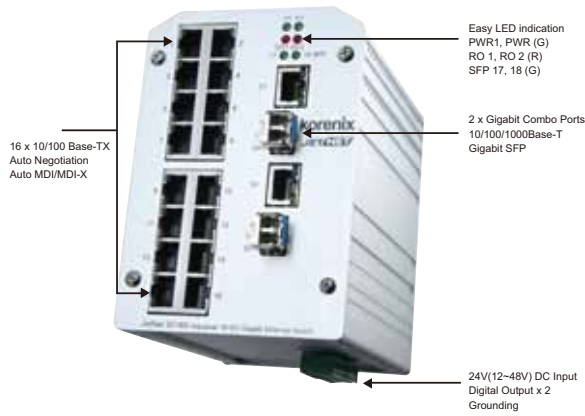
Jumbo Frame Packet Bypass

To run Jumbo Frame within the industrial environment, all the switches in the network must support Jumbo Frame feature. Once there is any Jumbo Frame unaware switch within the network, the Jumbo Frame will be dropped.

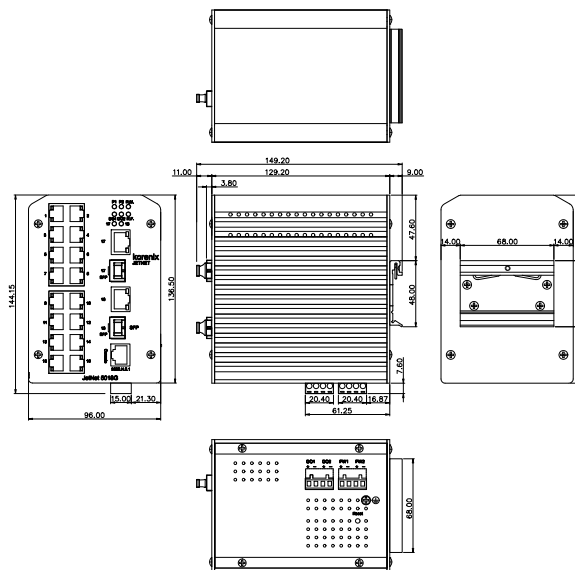
Korenix provides complete Jumbo Frame supported switches for allowing users to easily build a Jumbo Frame network. The JetNet 3018G acts as an entry level Jumbo frame switch to bypass up to 9K Jumbo Frame packet from the PC to the uplink network of higher level backbone switches.



JetNet 3018 Appearance



Dimension



Specification

Technology

Standard:

IEEE 802.3 10Base-T Ethernet
 IEEE 802.3u 100Base-TX Fast Ethernet
 IEEE 802.3ab 1000Base-TX
 IEEE 802.3z Gigabit Ethernet Fiber
 IEEE 802.3x Flow Control and Back-pressure
 IEEE 802.1p class of service

Performance

Switch Technology:

Store and Forward Technology, 12.8Gbps Switch Fabric.

System Throughput: 14,880pps for 10M Ethernet,
 148,800pps for 100M Fast Ethernet, 1,488,100 for Gigabit Ethernet

Transfer packet size: Typical: 64 bytes to 1536 bytes,

Jumbo Frame: Up to 9,216bytes.

MAC Address: 8K

Packet Buffer: 2Mbits

Quality of Service:

Compliant with IEEE802.1p class of service with Tag Based Priority rule. The Tag Priority ID as following: Higher (6,7), High (4,5), Low (0,3), Lowest (1,2)

Interface

Number of Fixed Gigabit Ports:

10/100Base-TX: 16 x RJ-45, Auto MDI/MDI-X, Auto Negotiation

10/100/1000Base-TX: 2 x RJ-45, combo with SFP

1000Base-X: 2 x SFP with Hot Swappable

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)

1000 Base-T: 4-pair UTP/STP Cat. 5 cable (100m)

Diagnostic LED:

System: Power 1, Power 2 (Green), Relay 1, Relay 2 (Red)
 10/100 RJ-45: Link (Green/Left), Activity (Yellow Blinking/Right)

1000Base-T RJ-45: 10/100 Link (Green/Left), 1000 Link (Yellow/Right), Activity (Green/Yellow Blinking)

Gigabit SFP: Link/Activity (Green/Green Blinking)

Power: 2 sets of DC inputs

Relay Output: 2 sets of Relay Output for Gigabit Port Link Failure. RO1 represent for port 17(Gigabit 1), RO2 represent for port 18(Gigabit 2).

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: -25 ~70°C

Operating Humidity: 5% ~ 95% (non-condensing)

Storage Temperature: -40 ~ 85°C

Regulatory Approvals

EMI: FCC Class A, CE/EN55022. Class A

EMS: EN61000-4-2, EN61000-4-3, EN61000-4-4, EN61000-4-5, EN61000-4-6, EN61000-4-8, EN61000-4-11

Safety: UL, cUL, EN60950, cB (IEC60950-1) (Pending)

Shock: IEC60068-2-29

Vibration: IEC60068-2-6

Free Fall: IEC60068-2-32

Warranty: 5 years

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- Rackmount Managed Switch
- Gigabit Switch
- Redundant Switch
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- Serial Device Server
- Media Converter
- Multiport Serial Card
- SFP Module
- Din Rail Power Supply

Ordering Information

JetNet 3018G Industrial 16+2G Gigabit Ethernet Switch

Includes:

- JetNet 3018G (without SFP transceivers)
- Din Rail Kit / Document CD / Quick Installation Guide / Console Cable

Optional Accessories

Gigabit SFP

- SFPGSX:** 1000Base-SX multi-mode transceiver 550m , commercial operating Temp, -10~70°C
- SFPGSX-w:** 1000Base-SX multi-mode transceiver 550m , commercial operating Temp, -40~85°C
- SFPGSX2:** 1000Base-SX multi-mode transceiver 2km , commercial operating Temp, -10~70°C
- SFPGSX2-w:** 1000Base-SX multi-mode transceiver 2km , commercial operating Temp, -40~85°C
- SFPGXL10:** 1000Base-LX single-mode transceiver 10Km , commercial operating Temp, -10~70°C
- SFPGXL10-w:** 1000Base-LX single-mode transceiver 10Km , commercial operating Temp, -40~85°C
- SFPGXLH30:** 1000Base-LHX single-mode transceiver 30Km , commercial operating Temp, -10~70°C
- SFPGXLH30-w:** 1000Base-LHX single-mode transceiver 30Km , commercial operating Temp, -40~85°C
- SFPGXD50:** 1000Base-XD single-mode transceiver 50Km , commercial operating Temp, -10~70°C
- SFPGXD50-w:** 1000Base-XD single-mode transceiver 50Km , commercial operating Temp, -40~85°C
- SFPGZX70:** 1000Base-ZX single-mode transceiver 70Km , commercial operating Temp, -10~70°C
- SFPGZX70-w:** 1000Base-ZX single-mode transceiver 70Km , commercial operating Temp, -40~85°C