

**INDUSTRIAL ETHERNET SWITCH**
**Industrial 8G RJ45 + 2G Combo + 2G SFP Managed Ethernet Switch**

# JetNet 5212G-2C2F



Korenix JetNet 5212G, the DIN-Rail type industrial Gigabit Managed Switch is designed with eight 10/100/1000TX ports, two Gigabit RJ-45 / SFP combo ports and two Gigabit SFP port. JetNet 5212G is designed for operating reliably under harsh environments, it supports one alarm relay to indicate fault conditions when any link or power failure happens, as a result, users can quickly handle the emergency and shorten the failover time. With IEC 61000-6-2 / 61000-6-4 Heavy Industrial EMC and Trackside certification design, including robust enclosure and -40~75°C wide operating temperature range, JetNet 5212G ensures high performance under traffic control systems and other Network applications.



Layer 2



Heavy Industrial



Wide Temp

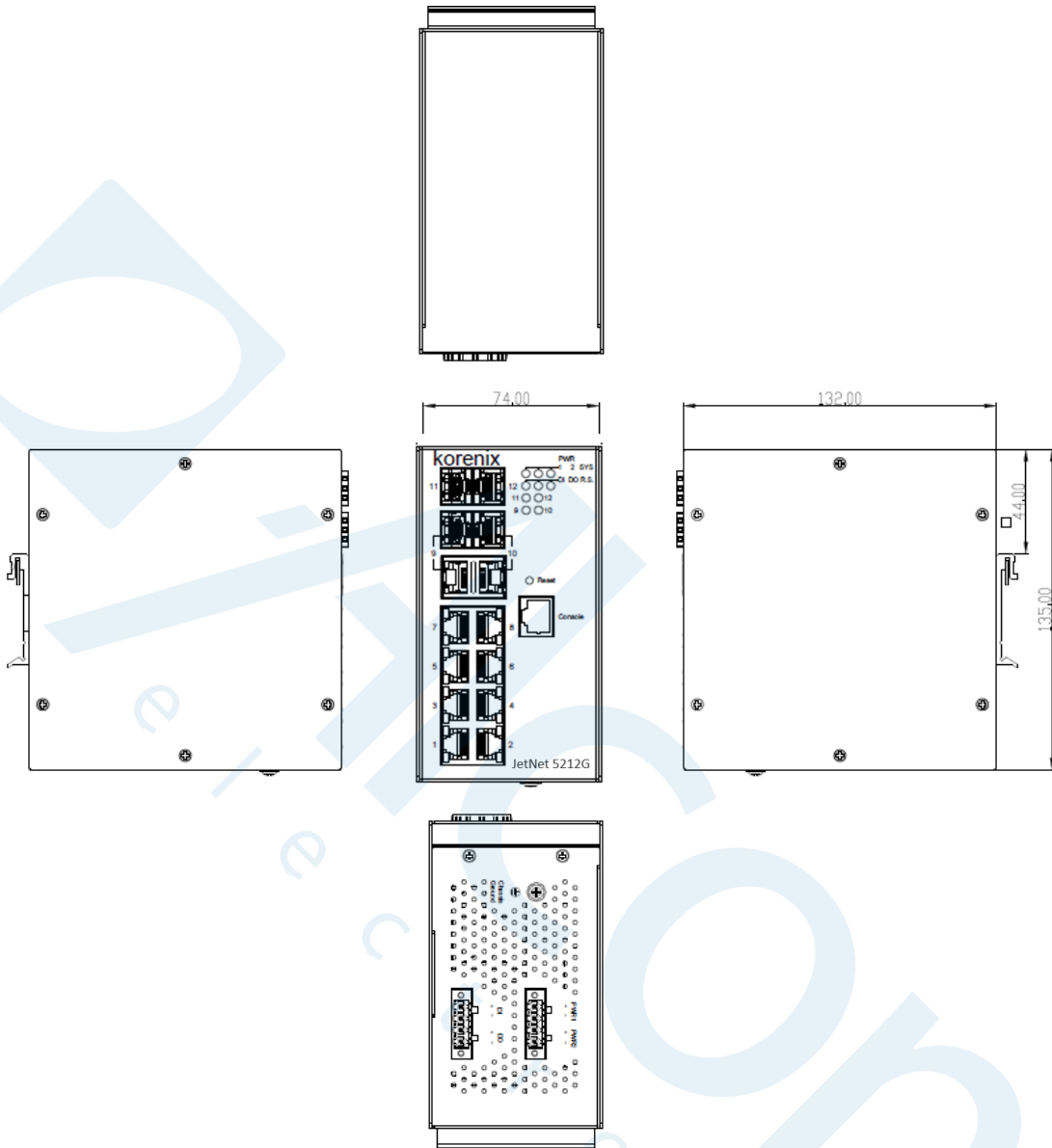


EN50121-4

## Overview

- ▶ 8 10/100/1000 Base TX ports + 2 Gigabit RJ-45/ SFP combo + 2 Gigabit SFP
- ▶ SFP ports support Digital Diagnostic Monitoring (DDM)
- ▶ Network Redundancy - MSR (Multiple Super Ring), ITU-T G.8032 ERPS V1/V2, RSTP, MSTP
- ▶ Fully Device Management - SNMP v1/v2c/v3, RMON, Web UI, Telnet and Local Console
- ▶ Friendly Device and Network Topology recovery utility - Korenix View, Korenix NMS
- ▶ Layer 2 Network Performance - IEEE802.1Q VLAN, Private VLAN, Trunk, Packet Filtering, DHCP Server/Client, Traffic Prioritize, Rate Control
- ▶ Advanced Security system by Port Security, Access IP list, SSH, HTTPS Login, TACACS+
- ▶ Event Notification through E-mail, SNMP trap and SysLog
- ▶ IEEE 802.1AB LLDP and optional Korenix NMS software for auto-topology and group management
- ▶ Cisco-Like CLI, Web, SNMP/RMON for network management
- ▶ Multiple event relay output for enhanced device alarm control
- ▶ Hi-Pot Isolation Protection for ports and power
- ▶ Railway Track Side EN50121-4 Certification
- ▶ Dual 24VDC Power input
- ▶ -40~75°C Wide Operating Temperature

## Dimension



## Specification

### Technology

|                |  |
|----------------|--|
| IEEE Standards | <ul style="list-style-type: none"> <li>IEEE 802.3 10 Base-T Ethernet</li> <li>IEEE 802.3u 100 Base-TX Fast Ethernet</li> <li>IEEE 802.3u 100 Base-FX Fast Ethernet Fiber</li> <li>IEEE 802.3ab 1000 Base-T</li> <li>IEEE 802.3z Gigabit Fiber</li> <li>IEEE 802.3x Flow Control and Back-pressure</li> <li>IEEE 802.1AB Link Layer Discovery Protocol (LLDP)</li> <li>IEEE 802.1p Class of Service (CoS)</li> <li>IEEE 802.1Q VLAN and GVRP</li> <li>IEEE 802.1 QinQ</li> <li>IEEE 802.1D-2004 Rapid Spanning Tree Protocol (RSTP)</li> <li>IEEE 802.1s Multiple Spanning Tree Protocol (MSTP)</li> <li>IEEE 802.3ad Link Aggregation Control Protocol (LACP)</li> <li>IEEE 802.1x Port Based Network Access Protocol</li> </ul> |
|----------------|--|

## Specification

| Performance            |  |
|------------------------|--|
| Switch Technology      | Store and Forward Technology with 24 Gbps Switch Fabric  |
| System Throughput      | 29.7Mega packet per second   |
| CPU performance        | MIPS-4KEc CPU running at 500 MHz   |
| System Memory          | 32M Bytes flash ROM, 256M Bytes DDR3 SDRAM   |
| Transfer packet size   | 64 bytes to 10K bytes Jumbo Frame  |
| MAC Address            | 8K MAC address table   |
| Packet Buffer          | 4.1Mbit SRAM packet memory   |
| Forwarding performance | 14,880 pps for Ethernet and 148,800 pps for Fast Ethernet, 1488,100 pps for Gigabit Ethernet   |
| Interface              |  |
| Enclosure Port         | <ul style="list-style-type: none"> <li>10/100/1000 Mbps Ethernet port: 8 x RJ-45</li> <li>Gigabit Ethernet port : 2 x RJ-45 with auto MDI/MDI-X function</li> <li>100Mbps / 1000Mbps Fiber port : 4 x SFP Socket for SFP fiber transceiver with Hot-swappable and D.D.M. functions</li> <li>RS-232 Console port : 1 x RJ-45 for system configuration</li> <li>Digital Input / Relay Output port: 4-Pin removable terminal block connector</li> <li>Power input port: 4-Pin removable terminal block connector</li> </ul> |
| Ethernet Cable         | 100 Base-TX: 2-pair UTP/STP Cat.5e/Cat.6 cable, EIA/TIA-568B 100-ohm (100m)<br>1000 Base-T: 4-pair UTP/STP Cat.5e/Cat.6 cable, EIA/TIA-568B 100-ohm (100m)   |
| Digital Input          | Digital Input (Hi): DC 11V-30V<br>Digital Input (Low): DC 0V-10V<br>Supports sink type signal input with photo-coupler isolation   |
| Relay Output           | Dry Relay output: 1A / DC 24V<br>Supports Multiple Events Binding trigger function.  |
| Diagnostic Indicators  | <ul style="list-style-type: none"> <li>1000Mbps RJ-45 port: Link / Activity (Green on, Green Blinking), 1000Mbps (Yellow)</li> <li>SFP port: Link/Activity (Green on, Green Blinking)</li> <li>Power: System Power ready (Green on)</li> <li>Sys: System Ready (Green on), System Updating (Green Blinking)</li> <li>DO (Alarm): Alarm Relay Active (Red On)</li> <li>R.S.: Green on (Ring normal)/Blinking (wrong ring port connective), Amber on (Ring abnormal) / Blinking (device's ring port failed)</li> </ul>     |
| Management             |  |
| Telnet & Local Console | Supports command line interface with Cisco-like commands and maximum 4 sessions; the telnet interface also supports SSH  |
| SNMP                   | Support IPv4/IPv6, v1, v2c, v3 with SNMP trap function, trap station up to 4 and can be manually configured the trap server IP address.  |
| SNMP MIB               | MIBII, Bridge MIB, Ethernet-like MIB, VLAN MIB, IGMP MIB, Korenix Private MIB  |
| Korenix Utility        | Supports Korenix View and Korenix NMS with IEEE 802.1AB Link Layer Discovery Protocol for device and link auto-topology discovery  |
| Network Time Protocol  | Supports NTP protocol with daylight saving function and localized time sync function.  |
| Management IP Security | IP address security to prevent unauthorized access   |
| E-mail Warning         | 4 receipt E-mail accounts with mail server authentication  |
| System Log             | Supports both Local or remote Server with authentication   |
| IEEE 802.1x            | Port based network access control, RADIUS, MAB, TACACS+  |

| Network Redundancy         |   |
|----------------------------|---|
| Multiple Super Ring (MSR™) | New generation Korenix Ring Redundancy Technology, Includes Rapid Super Ring, Rapid Dual Homing, TrunkRing™, MultiRing™, SuperChain™ and backward compatible with legacy Super Ring™.                       |
| Rapid Dual Homing (RDH™)   | Multiple uplink paths to one or multiple upper switch   |
| TrunkRing™                 | Integrates port aggregation function in ring path to get higher throughput ring architecture  |
| MultiRing™                 | Couple or multiple rings; Up to 6 Gigabit rings in single switch  |
| SuperChain™                | It is new ring technology with flexible and scalability, compatibility, and easy configurable. The ring includes 2 types of node Switch - Border Switch and Member Switch                                   |
| ITU-T G.8032 ERPS          | Support ITU-T G.8032 ERPS V1 single ring topology, and ERPS V2 multiple rings with ladder topology  |
| Rapid Spanning Tree        | IEEE802.1D-2004 Rapid Spanning Tree Protocol. Compatible with Legacy Spanning Tree and IEEE 802.1w multiple spanning tree   |
| Loop Protection            | The Loop Protection prevents any network looping caused by RSTP and MSR ring topology change  |
| Network Performance        |   |
| Port Configuration         | Port link Speed, Link mode, current status and enable/disable   |
| Port Trunk                 | IEEE 802.3ad port aggregation and static port trunk; trunk member up to 8 ports and maximum 6 trunk groups include Gigabit Ethernet port  |
| VLAN                       | IEEE 802.1Q Tag VLAN with 256 VLAN Entries and provides 2K GVRP entries<br>3 VLAN link modes- Trunk, Hybrid and Link access   |
| Private VLAN               | Direct client ports in isolated/community VLAN to promiscuous port in primary VLAN  |
| IEEE802.1 Qinq             | Supports Double VLAN Tag function for implementing Metro Network topologies   |
| Class of Service           | IEEE 802.1p class of service; per port 4 priority queues.   |
| Traffic Prioritize         | Supports 4 physical queues, weighted fair queuing (W.R.R.) and Strict Priority scheme, which follows 802.1p CoS tag and IPv4 ToS/ DiffServ information to prioritize the traffic of your industrial network |
| IGMP Snooping              | IGMP Snooping v1/v2c /v3 for multicast filtering and IGMP Query mode; also support unknown multicasting process forwarding policies- drop, flooding and forward to router port                              |
| Rate Control               | Ingress/Egress filtering for Broadcast, Multicast, Unknown DA or All packets  |
| Port Mirroring             | Online traffic monitoring on multiple selected ports  |
| Port Security              | Port security to assign authorized MAC to specific port   |
| DHCP                       | DHCP Client, DHCP Server with IP & MAC Address binding, DHCP relay and port based DHCP server   |
| Mechanical                 |   |
| Installation               | DIN-Rail mounting   |
| Case                       | Steel metal with Aluminum heat-dissipate panel housing  |
| Ingress Protection         | IP31  |
| Dimension (mm)             | 74 (W) x 132(D) x 135 (H) - w/o DIN Rail Clip   |
| Weight                     | 1.2Kg   |
| Power Requirement          |   |
| System power               | 2x DC power input with polarity reverse protection  |
| Input Range                | DC 24V (10-60V)   |

| Environmental         |  |
|-----------------------|--|
| Operating Temperature | -40 ~75°C  |
| Operating Humidity    | 0% ~ 95%, non-condensing   |
| Storage Temperature   | -40 ~ 85°C, 0% ~90% Humidity   |
| Hi-Pot                | AC 1.5KV for Ethernet port and power   |
| Regulatory Approvals  |  |
| EMC                   | IEC/EN61000-6-2, IEC/EN61000-6-4 Heavy Industrial EMC<br>EMI: FCC Class A, CE/ Class A<br>EMS: IEC/EN61000-4-2, IEC/EN61000-4-3, IEC/EN61000-4-4, IEC/EN61000-4-5,<br>IEC/EN61000-4-6, IEC/EN61000-4-8 |
| Railway Application   | EN50121-4  |
| Shock                 | Compliance with IEC 60068-2-27   |
| Vibration             | Compliance with IEC 60068-2-6  |
| Free Fall             | Compliance with IEC 60068-2-32   |
| Warranty              | 5 years  |

## Ordering Information

| Model Name        | Description   |
|-------------------|---|
| JetNet 5212G-2C2F | Industrial 8G RJ45 + 2G Combo + 2G SFP Managed Ethernet Switch, -40-75°C<br><br>Includes:<br><ul style="list-style-type: none"> <li>• JetNet 5212G-2C2F</li> <li>• DIN-Rail kit</li> <li>• Quick Installation Guide</li> </ul> Note: Please download User Manual from Korenix website |