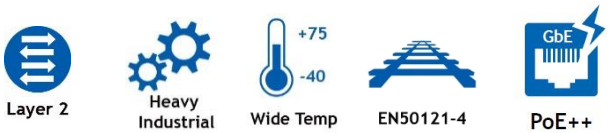
Industrial Managed PoE Switch

JetNet 5216GP-4F Series



Korenix JetNet 5216GP Series, the DIN-Rail type industrial Gigabit Managed PoE Switch. JetNet 5216GP is the first industrial ethernet switch compliance with IEEE 802.3af/at/bt, each ethernet port can max supports 90W for PD, and total budget up to 480W *Note.

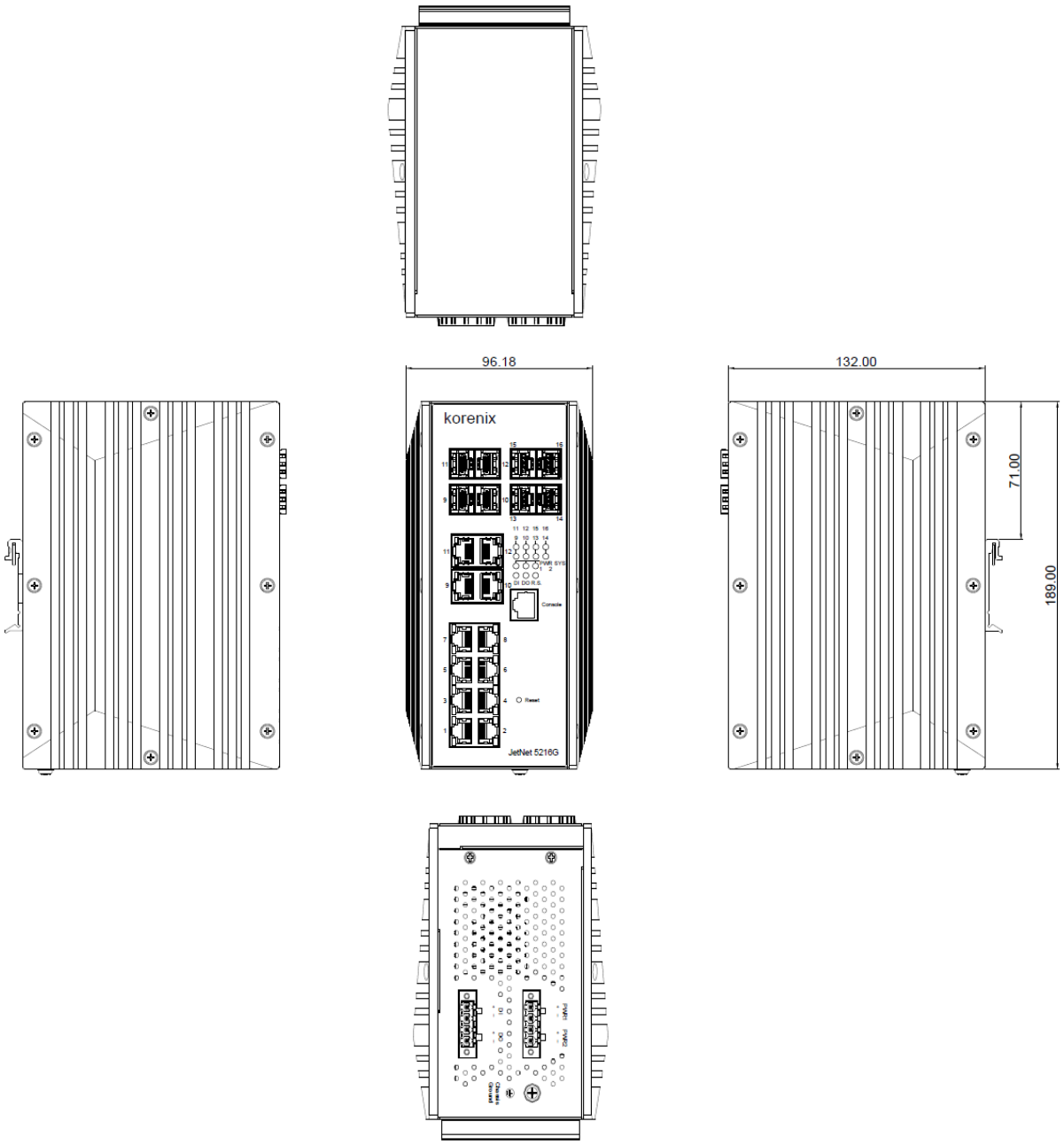
JetNet 5216GP series is designed for operating reliably under harsh environments, it supports one alarm relay to indicate fault conditions when any link or power failure happens, as a result, users can quickly handle the emergency and shorten the failover time. With IEC 61000-6-2 / 61000-6-4 Heavy Industrial EMC and Trackside certification design, including robust enclosure and -40~75°C wide operating temperature range, JetNet 5216GP series ensures high performance under traffic control systems and other Network applications.



Overview

- 12 10/100/1000 Base TX ports + 4G SFP (JetNet5216GP-4F Series)
- SFP ports support Digital Diagnostic Monitoring (DDM)
- Compliance with IEEE 802.3af/at/bt, each port max 90W High Power PoE *Note
- Total PoE Budget 480W *Note, Flexible PoE ports setting
- 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
- -40~75°C Wide Operating Temperature

Dimension:



Specification

Technology	
IEEE Standards	IEEE 802.3 10 Base-T Ethernet IEEE 802.3u 100 Base-TX Fast Ethernet IEEE 802.3u 100 Base-FX Fast Ethernet Fiber IEEE 802.3ab 1000 Base-T IEEE 802.3z Gigabit Fiber IEEE 802.3x Flow Control and Back-pressure IEEE 802.1AB Link Layer Discovery Protocol (LLDP) IEEE 802.1p Class of Service (CoS) IEEE 802.1Q VLAN and GVRP IEEE 802.1 QinQ IEEE 802.1D-2004 Rapid Spanning Tree Protocol (RSTP) IEEE 802.1s Multiple Spanning Tree Protocol (MSTP) IEEE 802.3ad Link Aggregation Control Protocol (LACP) IEEE 802.1x Port Based Network Access Protocol IEEE 802.3af/at/bt Power over Ethernet

Specification

Performance	
Switch Technology	Store and Forward Technology with 16 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	• 10/100/1000 Mbps Ethernet port: - 12 x RJ-45 (JetNet5216G-4C4F) - 12 x RJ-45 (JetNet5216GP-4F) • 100Mbps / 1000Mbps Fiber port : - 8 x SFP (JetNet5216G-4C4F) - 4 x SFP (JetNet5216GP-4F) Socket for SFP fiber transceiver with Hot-swappable and D.D.M. functions • RS-232 Console port : 1 x RJ-45 for system configuration • Digital Input / Relay Output port: 4-Pin removable terminal block connector • Power input port: 4-Pin removable terminal block connector
Ethernet Cable	100 Base-TX: 2-pair UTP/STP Cat. 6 cable, EIA/TIA-568B 100-ohm (100m) 1000 Base-TX: 4-pair UTP/STP Cat. 6 cable, EIA/TIA-568B 100-ohm (100m)
Digital Input	Digital Input (Hi): DC 11V~30V Digital Input (Low): DC 0V~10V Supports sink type signal input with photo-coupler isolation
Relay Output	Dry Relay output: 1A / DC 24V Supports Multiple Events Binding trigger function.
Diagnostic Indicators	• RJ-45 port: Link /Activity (Green on, Green Blinking),1000Mbps (Yellow) • SFP port: Link/Activity (Green on, Green Blinking) • Power: System Power ready (Green on) • Sys: System Ready (Green on), System Updating (Green Blinking) • DO (Alarm): Alarm Relay Active (Red On) • R.S.: Green on (Ring normal)/Blinking (wrong ring port connective), Amber on (Ring abnormal) / Blinking (device's ring port failed) • PoE: Green On (PD Detect/On), Off (None-Detect/Off)
Power over Ethernet (For JetNet 5216GP-4F(-U) only)	
Standard	IEEE 802.3af, IEEE 802.3at, IEEE 802.3bt
PoE operating mode	Auto Mode: IEEE 802.3af/at/bt *Note Forced Mode: User configured Power consumption budget control with IEEE 802.3 PoE /PD detection, or forced without PD detection
PoE forwarding conductor	IEEE 802.3 af/at: RJ-45: V+(3,6), V- (1,2) IEEE 802.3 bt: RJ-45: V+(3,4,5,6), V- (1,2,7,8) *Note
Power forwarding capability	12 port PoE (#1-12) PoE Port: 15W/IEEE802.3af, 30W/IEEE 802.3at, 60W-90W/IEEE 802.3bt *Note
PoE System Power Budget	Port-based system power budget control with first plug-in high priority mechanism PoE System Power Budget: 480Watts. *Note

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
1588 PTP	IEEE 1588 Precision Time Protocol v1/v2 with Time Transparent
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 8 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 8 trunk groups
VLAN	IEEE 802.1Q Tag VLAN with 256 VLAN Entries and provides 2K GVRP entries 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/v2/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)	96 (W) x 132(D) x 189 (H) – w/o DIN Rail Clip
Installation	DIN-rail mounting
Weight	1.5 Kg
Power Requirement	
System power	2x DC power input with polarity reverse protection
Input Range	DC 48-57V (JetNet 5216GP-4F) DC 50-57V (JetNet 5216GP-4F-U)
PoE Power Budget	PoE 480W@48V; 480W@50V *Note
Power Consumption	17.1W@50VDC without PoE
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 EMI: FCC Class A, CE/ Class A EMS:IEC/EN61000-4-2, IEC/EN61000-4-3, IEC/EN61000-4-4, IEC/EN61000-4-5, 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
MTBF	1,243,697 hrs
Warranty	5 years

*Note:
Please note that only the model with "U" supporting IEEE 802.3bt, and with 480W power budget.
Kindly refer below order information for more details.

Ordering Information

Model Name	Description
JetNet 5216GP-4F	Industrial 12G RJ45 + 4G SFP Managed PoE Switch with 360W Power Budget, -40~75°C
JetNet 5216GP-4F-U	Industrial 12G RJ45 + 4G SFP Managed PoE Switch with 480W Power Budget, IEEE802.3af/at/bt,-40~75°C
Package	Includes: • JetNet 5216G Series • DIN-Rail kit • Quick Installation Guide Note: Please download User Manual from Korenix website