INDUSTRIAL ETHERNET SWITCH

Industrial 8FE + 2G Combo Managed Switch

JetNet 5210G

Korenix JetNet 5210G, the DIN-Rail type Industrial Gigabit Managed Switch is designed with eight 10/100TX ports and two Gigabit RJ-45 / SFP combo ports. The two Gigabit Ethernet combo ports provide high speed uplink to connect with higher level backbone switches with Korenix MSR™ network redundancy technology, while ensuring the reliability of data transfer through the exclusive recovery time in several milliseconds and seamless restoration.

JetNet 5210G is designed for operating reliably under harsh environment, 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 EN50121-4 certified design, including robust enclosure and -40~75ºC wide operating temperature range, JetNet 5210G ensures high performance in rolling stocks, traffic control systems and other harsh Network applications.
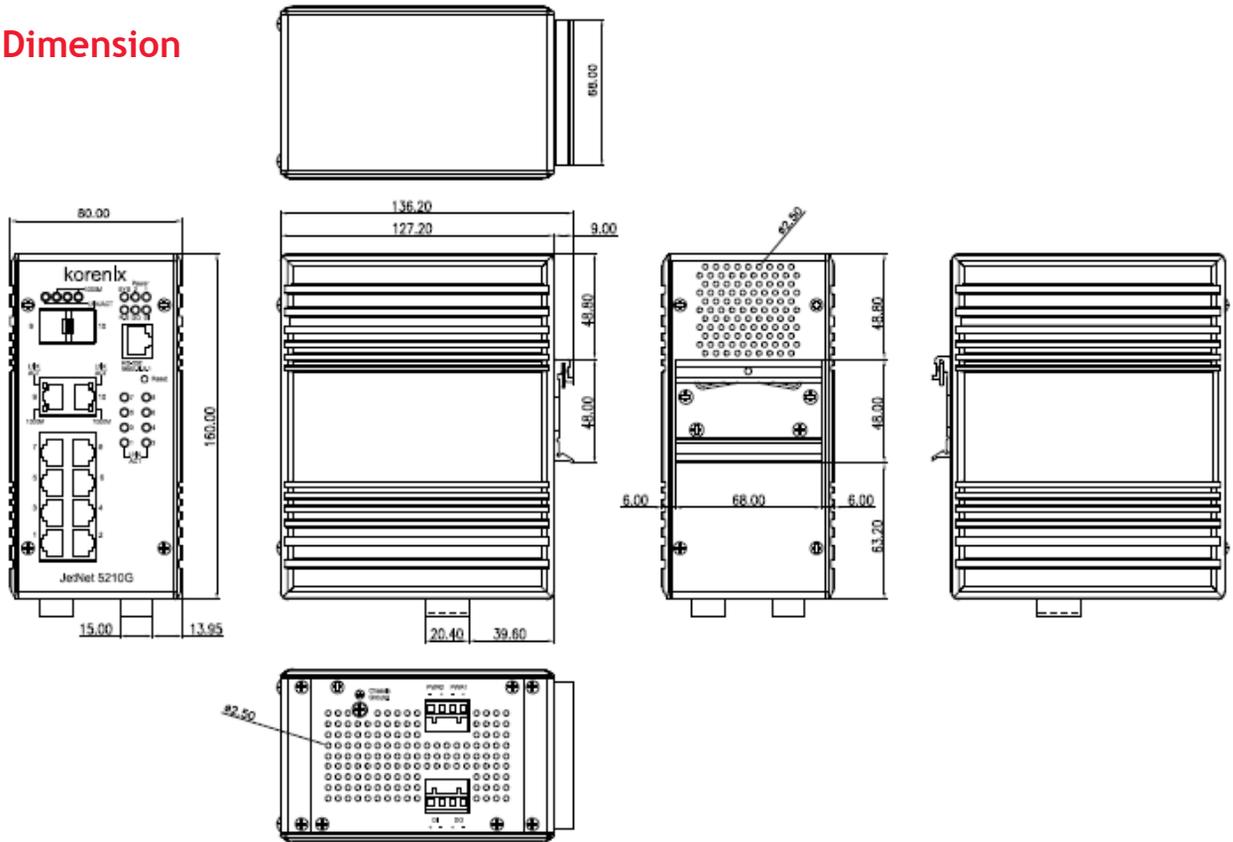
Layer 2   10~60V   Wide Temp   EN50121-4

Specification

- ▸ 8 10/100 Base TX ports and 2 Gigabit RJ-45/ SFP combo ports
- ▸ SFP ports support 100/1000 Mbps with Digital Diagnostic Monitoring (DDM) to monitor fiber quality
- ▸ Network Redundancy – MSR (Multiple Super Ring),ITU-T G.8032 ERPS, RSTP, MSTP, Super Chain, ERPS V2
- ▸ 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 High Operating Temperature
- ▸ 10~60VDC Redundant wide range power input

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 802.1QinQ IEEE 802.1D-2004 Rapid Spanning Tree Protocol (RSTP) IEEE 802.1s Multiple Spanning Tree Protocol (MSTP) IEEE802.3ad Link Aggregation Protocol (LACP) IEEE802.1x Port Based Network Access Protocol IEEE 1588 Precision Time Protocol
Performance	
Switch Technology	Store and Forward Technology with 5.6Gbps Switch Fabric
System Throughput	8.3Mega packet per second
CPU performance	32 bits ARM-9E running at 180 Mhz and performance up to 200MIPS; Embedded hardware based watch-dog timer
System Memory	8M bytes flash ROM, 64M bytes SDRAM
Transfer packet size	64 bytes to 1522 bytes (includes double VLAN tag)
MAC Address	8K MAC address table
Packet Buffer	1Mega bits shared memory for packet buffer.
Forwarding performance	14,880 pps for Ethernet and 148,800 pps for Fast Ethernet, 1488,100 pps for Gigabit Ethernet

Interface

Enclosure Port	• 10/100Mbps Ethernet port: 8 x RJ-45 • Gigabit Ethernet port : 2 x RJ-45 with auto MDI/MDI-X function • 100Mbps / 1000Mbps Fiber port : 2 x SFP 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: 4-pair Cat.5^{E}e / Cat.6 UTP/STP câble, 100Meters 1000 Base-T: 4-pair Cat.5e/Cat.6 UTP/STP cable, 100Meters
Digital Input	Digital Input (Hi): DC 11V~30V Digital Input (Low): DC 0V~10V
Relay Output	Dry Relay output: 0.5A / DC 24V Supports Multiple Events Binding trigger function.
Diagnostic Indicators	Power: Green On: (System power applied) D.I.: Green On (digital signal high level is detected) D.O.: Red On (relay active and form as) Sys (System): Green On (System Ready), Blinking (System perform firmware upgrade) R.S.(Ring status): Green on (Ring normal) / Blinking (Ring with wrong port), Yellow on (Ring abnormal) / Blinking (device's ring port failed) LNK (Link): Green on, ACT (Active): Green Blinking

System 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

Network Redundancy

Multiple Super Ring (MSR)^{TM}	New generation Korenix Ring Redundancy Technology, Includes Rapid Super Ring, Rapid Dual Homing, TrunkRing^{TM}, MultiRing^{TM}, SuperChain^{TM} and backward compatible with legacy Super Ring^{TM}.
Rapid Dual Homing (RDH)^{TM}	Multiple uplink paths to one or multiple upper switch
TrunkRing^{TM}	Integrates port aggregation function in ring path to get higher throughput ring architecture
MultiRing^{TM}	Couple or multiple rings; Up to 4 100M rings and 2 Gigabit rings in single switch
SuperChain^{TM}	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
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 5 trunk groups include Gigabit Ethernet port
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.
IEEE 802.1x	Port based network access control
Mechanical	
Installation	DIN-Rail mounting
Case	Steel metal with Aluminum heat-dissipate panel housing
Ingress Protection	IP31
Dimension (mm)	80 (W) x 127(D) x 160 (H) – w/o DIN Rail Clip 80 (W) x 136.2(D) x 160 (H) – w/ DIN Rail Clip
Installation	DIN-rail mounting
Weight	1.2Kg
Power Requirement	
System power	2x DC power input with polarity reverse protection
Input Range	DC 10-60V
Power system type	Passive power system
Power Consumption	15Watt
Environmental	
Operating Temperature	-40 ~75°C
Operating Humidity	0% ~ 95%, non-condensing
Storage Temperature	-40 ~ 85°C, 0% ~90% Humidity
Hi-Pot	DC 2.25KV for power to chassis ground, Ethernet port to chassis ground
Regulatory Approvals	
Rail Traffic	EN50121-4
EMC	IEC /EN61000-6-2, IEC/EN61000-6-4 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
MTBF	472,000 Hrs

Ordering Information

Model Name	Description
JetNet 5210G	Industrial 8 + 2 Gigabit RJ / SFP DIN Rail Managed Switch, -40~75°C
	Includes: • JetNet 5210G • Quick Installation Guide Note: Please download User Manual from Korenix website

System Integration Professional

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