

Industrial 8GbE/TX, 4 GbE/SFP Managed Switch

JetNet 5612G-4F



The JetNet 5612G-4F is an pure Gigabit industrial Ethernet Switch with 8 ports RJ-45, 4-port Gigabit SFP sockets for optical fiber network connection. It adopts high efficiency Ethernet MAC controller with 24Gbps Switch fabric bandwidth, 9K jumbo frame forwarding. The robust system design makes the JetNet 5612G-4F survive under harsh outdoor environment with extreme electric magnetic interference and the variation of environment temperature.

JetNet 5612G-4F also provides your network infrastructure with great performance and safety with network access control, and handle burst packet with smart buffer management for IP surveillance in real infrastructure.



EN50121-4



Heavy Industrial



Cyber Redundancy



Gigabit



Cyber Security



IEEE1588 PTP

Features

- 8 Gigabit Ethernet RJ-45 ports ,4 Gigabit SFP ports
- 100/1000Mbps Fiber Connection with DDM function
- Non-Blocking, High Speed Network Switching Fabric
- Network Redundancy - MSR (Multiple Super Ring),ITU-T G.8032 ERPS, RSTP, MSTP, Super Chain
- 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
- Advanced Cyber Network Security -MAC security, IEEE 802.1x Port Based access control , IEEE 802.1x RADIUS Server authentication, 802.1x MAB, L2/3/4 ACL, IP Source Guard, Deny of ARP Inspection, TACACS+
- Layer 2 Network Performance - IEEE802.1Q VLAN, Private VLAN, Trunk, Packet Filtering, DHCP Server/Client, Traffic Prioritize, Rate Control
- Hardware Watchdog for System Auto-Recovery
- High Level Electromagnetic interference immunity
- Railway Track Side EN50121-4 compliance
- High Operating Temperature -40-75°C
- Redundant wide range power input- DC 10-36V



Specification

Technology	
Standard	IEEE 802.3 10 Base-T Ethernet IEEE 802.3u 100 Base-TX Fast Ethernet IEEE 802.3ab 1000 Base-T IEEE 802.3z Gigabit Ethernet 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 802.1D-2004 Rapid Spanning Tree Protocol (RSTP) IEEE 802.1s Multiple Spanning Tree Protocol (MSTP) IEEE 802.3ad Link Aggregation Protocol (LACP) IEEE 802.1x Port Based Network Access Protocol ITU-T G.8032 ERPS
Performance	
Switch Technology	Store and Forward Technology with Non-Blocking SwitchFabric
CPU performance	32 bits CPU with Hardware based Watch-dog timer with 10s reset timer
System Memory	32M bytes flash ROM, 256M bytes system RAM.
Transfer packet size	64 bytes to 9K bytes Jumbo Frame
MAC Table	16K
Packet Buffer	1.5MBytes shared memory for packet buffer with intelligent memory management unit for burst data traffic
Transfer performance	14,880pps for Ethernet and 148,800 for Fast Ethernet, 1488,100 for Gigabit Ethernet
Management	
Management Interface	Telnet with SSH, Web Browser with SSL, SNMP V1/V2c/V3 with SNMP Trap (up to 4 trap stations), RMON (Group 1,2,3,9) for in-band management. Local RS-232 connector for out-band management
Management Security	The maximum management session up to four, and support management Host IP secure feature to prevent unauthorized remoteloin
SNMP MIB	MIB-II, Bridge MIB, Ethernet-like-MIB, VLAN MIB, PrivateMIB
NMS	Windows based NMS (Network Management System) -Korenix NMS and Korenix View for device discovery and topology map auto construct
Network Time Protocol	NTP with daylight saving and localize time sync function
IEEE 1588 PTP	IEEE 1588 Precision Time Protocol v1/v2 with Time Transparent
Management IP Security	Predefined Host IP address for management host loginsecurity
E-mail Warning	4 Receipt E-mail accounts with E-mail server authentication
System Event Log	2 Event log record modes- Local and remote Log Server with authentication
Network Performance	
Port Configuration & Statistic	Port link Speed, Link mode, flow control, port statistics
Port Trunk	IEEE 802.3ad Link Aggregation Control Protocol (LACP) and Static port trunk; trunk member up to 8 ports in one group, maximum 6 trunk groups
VLAN	IEEE 802.1Q Tag VLAN with 256 VLAN Entries and provides 2K GVRP entries; 3 VLAN link modes- Trunk mode, Hybrid mode and Link accessmode
Private VLAN	The Private VLAN is special for group uplink access with independent port security. With the private VLAN function, each VLAN community is isolated and only exchange by high level device with primary VLAN community
IEEE 802.1 QinQ	Supports Double VLAN tag for VLAN isolation and security
IEEE 802.1p	The Ethernet Switch MAC controller supports IEEE 802.1p Class of Service function; Per interface with 8 queues
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	On-line traffic monitoring on multiple selectedports

DHCP	System supports DHCP Client function for dynamic IP address obtain from DHCP Server, and the Switch also support DHCP Server function with DHCP Relay Agent to forward DHCP request through specified forwarding path. The DHCP Server also offer port based DHCP Server function with predefined IP address or perform MAC&IP address binding function
IEEE 802.1x/ Port Security	Port based network access control, and authenticated by localize pre-defined MAC address or remote RADIUS Server
Cyber Network Redundancy	
Multiple Super Ring (MSR™)	New generation Korenix Ring Redundancy Technology, Includes Rapid Super Ring, Rapid Dual Homing, TrunkRing™, MultiRing™, Super Chain™
Rapid Dual Homing (RDH™)	Multiple uplink paths to one or multiple upper Switch, up to 256 Groups RDH™ Peer protection
TrunkRing™	Integrate port aggregate function in ring path to get higher throughput ring architecture
MultiRing™	Supports redundant ring up to 7 Gigabit rings in one device
Super Chain	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	IEEE 802.1D-2004 Rapid Spanning Tree Protocol; it compatible with Legacy Spanning Tree and IEEE 802.1w
Multiple Spanning Tree	IEEE 802.1s Multiple Spanning Tree, each MSTP instance can include one or more VLANs, and also supports multiple RSTP deployed in a VLAN or multiple VLANs
ITU-T G.8032 ERPS	Support ITU-T G.8032 ERPS V1 single ring topology, and ERPS v2 multiple rings with ladder topology
Cyber Security	The Cyber Security function includes- DHCP Snooping protection, Dynamic ARP inspect protection, IP Source Guard (IPSG), Distribute Denial-of-Service (DDoS), IEEE 802.1x MAB for non-IEEE 802.1x compliant device.
Industrial Protocol	Modbus/TCP, Ethernet/IP
Interface	
Enclosure Port	10/100/1000Mbps Gigabit Ethernet port (#1-#8): 8 x RJ-45 Connectors 100/1000Mbps Gigabit Ethernet SFP port (#9-#12): SFP Socket with 100/1000Mbps Fiber Transceiver Auto Detection, and with Digital Diagnostic Monitoring (DDM) for optical fiber quality inspection Power input: 4-Pin Removable Terminal Block Connector Digital Input, Output: 4-Pin Removable Terminal Block Connector RS-232 Console: RJ-45, Baud Rate: 115200bps, N, 8, 1 Digital Input: Semi Digital Input (Low: 0-10V, High: 11-30V) Digital Output: Dry Relay Output with Normal Open operating mode with DC 24V/0.5A contact capability
Cables	100Base-TX: 2 pairs STP Cat.5e/Cat.6 cable, EIA/TIA-568B 100-ohm (length: 100Meters) 1000Base-T: 4 pairs STP Cat. 5e/Cat.6 cable, EIA/TIA-568B 100-ohm (length: 100Meters) Power Cable: Recommended uses 18AWG electrical power cable with UL certification
Diagnostic Indicator (LED)	1000Mbps RJ-45 port: Link/Acrivity (Green on, Green Blinking), 1000M (Amber on) 1000Mbps SFP: Link/Activity (Green on, Green Blinking), 1000Mbps (Amber on) Power: Power on (Green on) Sys: Ready (Green on) R.S: Green on (Ring Normal)/Blinking (wrong ring port connective), Amber on (Ring abnormal)/Blinking (ring port failed) D.I.: Digital Input (Green on) D.O.: Dry Relay Output (Red on)
Power Requirement	
System Power	Redundant Power Input: DC 24V(10-36VDC). With power protection.
Power Consumption	15 Watts (maximum)
Mechanical	
Installation	EN50022 DIN Rail Mount
Dimensions	84 mm (W) x 160 mm (H) x 136 mm (D)-with mounting ears 84 mm (W) x 160 mm (H) x 127 mm (D)-without mounting ears
Material Housing	Steel Metal with Aluminum Housing
Ingress Protection	IP-31

Environmental	
Operating temperature	-40-75°C
Operating humidity	0%-95%, non-condensing
Storage Temperature	-40-85°C, 0%-95% humidity
Hi-Pot	Power- Chassis GND/Housing: AC 1KV/DC 1.4KV
MTBF (hrs)	605,279
Regulatory Approvals	
Railway Application	Rolling Stock Track Side EN50121-4
Safety	UL IEC 62368-1
EMC	EMI: IEC/EN61000-6-2, Compliance with EN50121-1/-4 , CE class A, FCC sub part-15 class-A EMS: IEC/EN61000-6-4, Compliance with EN50121-1/-4, EN61000-4-2/-4-3/-4-4/-4-5/-4-6/-4-8/-4-9
Vibration	Compliance with EN60068-2-6
Shock	Compliance with EN60068-2-27
Free Fall	Compliance with EN60068-2-32 (With package)

Ordering Information

[JetNet 5612G-4F] 8G RJ45+ 4G SFP Industrial Full Gigabit Managed Ethernet Switch, -40-75°C

Each Unit include:

- > JetNet 5612G-4F x1
- > Quick Installation Guide