







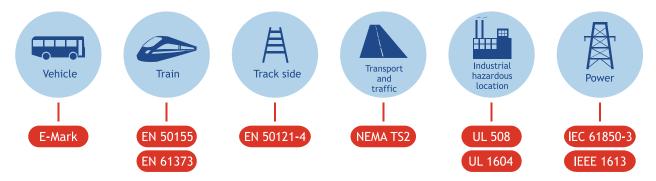
International Awards

Sharp focus on innovation and in value creation, Korenix reaps rewards from the proactive professionals. By understanding the composition and change of drivers, korenix leads the market and develops solutions that exceed customers' satisfaction.

- 2012 Gongkong Innovative Product Award
- 2010 D&B D-U-N-S RegisteredTM Enterprise
- 2010 Standard Chartered SME Elite
- 2009 Taiwan Leading Product Sponsorship
- 2009 Best I/O Modules of Automation
- 2009 COMPUTEX Best Choice Award
- 2009 COMPUTEX Design & Innovation Award
- 2008 COMPUTEX Best Choice Award
- 2008 Outstanding IT Products Award
- 2008 Golden Penguin Award
- 2007 COMPUTEX Best Choice Award
- 2007 PRODUCT OF THE YEAR Control Engineering

Quality Assurance and Vertical Certificate

Korenix and its own production facility in Taipei, designs products with high level of ruggedness and reliability, fulfilling and exceeding the requirements of mission critical communications networks deployed in harsh environments, such as UL 508 and UL1604 for industrial hazardous location, EN50155 and EN61373 for train, NEMA TS2 for transport and traffic, EN50121-4 for track side and E-Mark for Vehicle.



Korenix ONLY

Korenix reaps rewards from teamwork and exercise of creativity in an environment that encourages professional growth and rewards performance. Through these efforts we achieved many outstanding awards and have secured many patents. These patents are below:

- 2006
- Rapid super ring
- Tracked switch casing machinery
- 2007
- Multiple super ring with multiring, trunkring, anyring
- Rapid dual homing ll
- Waterproof switch casing machinery
- 2008
- 6 in 1 Communication computer
- 2009
- 24V to 48V PoE Boost Technology
- Fast Recovery Mechanism for Trunk Ring
- Initial setup method for ring network, broken link redundancy procedure and restoration method for reconnected broken link
- Ring network coupling and its redundant procedure

- 2010
- Distribute power management device
- Network protocol speedup classification method
- 2011
- Seamless ring restoration with zero restoration time
- 2012
- The failure recovery method for power over Ethernet system
- Scalable Multi-Level Multi-Dimensional Self-Protected Ring Network
- Encrypted auto-run customization setting for the devices
- 2013
- Power over Ethernet system having hi-pot isolation and automatic output power adjustment with thermal control
 - A Fast Redundant Path Moving Mechanism for Network Coupling
- Distributed power management device

SURVEILLANCE ANYWHERE

The world-leading PoE Technology that Korenix stands proudly behind brings PoE to vehicle, bus, railway, industrial and mission critical applications, making IP surveillance everywhere feasible and reliable.





JetNet 6710G-M12 HVDC

- 110VDC power input deliver max 120W PoE
- Anti-vibration M12 Rugged Connectors
- EN50155 Railway Compliance



JetNet 3810G / JetNet 3806G

- 12~24VDC power input for bus application
- 2 Gigabit uplink for NVR and wireless connections
- E-mark approval



JetNet 5310G

- 8-port 30W PoE up to 120W@75°C in total
- MSR redundant ring, 5ms recovery, 0ms restoration
- NEMA TS2 compliant



JetNet 3705 / JetNet 3705f

- 4-port, 60W full PoE capacity @70°C
- Corrosion and dust resistant IP31 protection
- Full aluminum housing, excellent cooling



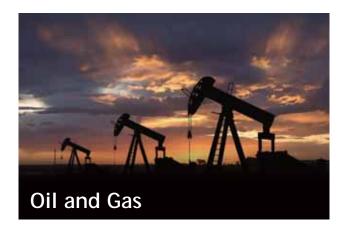
JetNet 4706 / JetNet 4706f

- 25W high power PoE for high-end IP cameras
- IP31 aluminum housing for harsh environments
- -40 to 60°C wide operating temperature



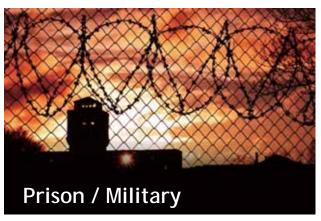
JetNet 5728G-24P

- 24-port 30W PoE, up to 540W in total
- System-based power management enhances reliability
- PoE emergency management



JetNet 3710G

- IP31 aluminum housing, corrosion and dust resistant
- Excellent cooling design enhances reliability in extreme temperatures



JetNet 5310G

- Camera keep alive checking and failure alarm
- Redundant ring ensures no image loss for link failure
- Optimized IGMP snooping for quality video multicast



JetNet 4706 / JetNet 4706f

- 4-port 25W high power PoE for high-end IP cameras
- MSR redundant ring, 5ms recovery, 0ms restoration
- Optimized IGMP snooping quality video multicast



JetNet 5728G-16P

- 16-port 30W PoE, 340W in total
- MSR redundant ring, 5ms recovery, 0ms restoration
- Optimized IGMP snooping, Private VLAN for quality video transmission

INFINITE WIRELESS COMMUNICATION

Wireless solutions are getting faster and longer. Korenix PoE products can power wireless AP. With high power capability, gigabit switching, and reliable design, Korenix PoE products fit industrial applications in outdoor, moving vehicles, and extreme environments.





JetNet 3906G

- 12~36VDC for solar and bus power systems
- 4-port gigabit 30W PoE for high speed wireless AP and high resolution cameras
- Giga SFP and RJ45 port for wired or wireless uplink

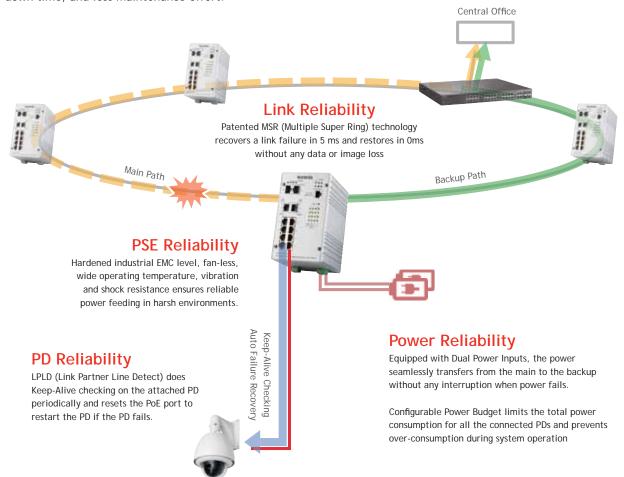


JetCon 1702

- 2-channel gigabit high power 30W PoE injector
- PoE over-temperature, over-current protection
- Strong surge and transient protection on power input

Korenix PoE Concept: Enhances System Reliability From A Node To The Whole.

Korenix takes your system into consideration and designs not just a PoE switch, but an enhancement of system reliability. We give you higher reliability, shorter down time, and less maintenance effort.



It's SIMPLE, SMART, STRONG, SECURE and SAFE.

PoE Anywhere

The built-in Power Booster makes the deployment of Korenix switches easy at where standard PoE 48V is not available such as trains (110V), busses (24V), and Vehicles (12V). Models with AC power input are also available for building applications.



Advanced PoE Management

Defining an upper bound of each PoE port can prevent malicious or malfunctioning over-consumption. With priority setting, the low priority ports will turn off to ensure high priority ports have power in case of abnormal conditions. This protects high priority PDs from shutdowns caused by system overloading, power failure/derating, or ambient overheat.

Port	PoEMode	Powering Mode	Power Budget(M)	Power Priority	l
.1	Disable	802.3af	32.0	Critical	Ī
2	Enable	802.3af	15.4	Critical	1
3	Enable	802.3at(2-Event)	32.0	Critical	1
4	Enable	802.3at(LLDP)	32.0	Critical	1
5	Enable	Force	32.0	Critical	ŀ

PoE Energy Saving

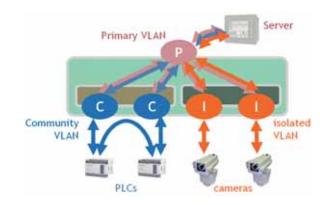
In addition to 802.1AB LLDP which negotiates with PD to give power on demand, korenix PoE switches support PoE scheduling that turns on/off a PD according to a user-defined schedule. It's simply green and efficient.

Time	Sunday	Monday	Tuesday	Wednesday	Thursday	Friday
00.00					-	
01:00						
02.00						
03:00						
04:00						
05.00						
00.00						
07.00						
00.90						
09:00						
10.00						

Enhances Video Transmission Quality.

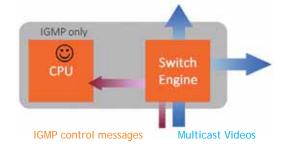
Private VLAN Advanced Traffic Isolation

Simply divide a network into Primary, Community and Isolated VLAN. The server can talk to the PLCs and cameras. The PLCs can only talk to the server and with each other. The cameras are isolated and can only send images to the server.



Video Multicast IGMP Optimization

Unlike some others, Korenix IGMP implementation snoops IGMP messages only without receiving multicast videos. The CPU of the switch has a clear brain to ensure multicasting quality, especially in large surveillance systems.



Jumbo Frame Maximum NVR Performance

A 9KB jumbo frame is 6 times larger than a common 1518-byte Ethernet maximum transfer unit. It helps to maximum NVR video storage performance in surveillance applications.



Ensure Non-stop Video Transmission.



Korenix: fast, little packet loss



Others: Slow, more image loss

5 ms Failure Recovery Minimizes Video Loss

While a single Ethernet link can carry multiple video streams, any link failure results in serious damage, especially in a large IP surveillance system. Compared to RSTP or other ring technologies, Korenix MSR minimizes the packet loss and restores all the video streams within 5 ms.



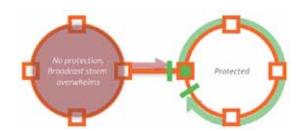
Korenix: Seamless, no influence



Others: broadcast storm or image loss

0 ms Restoration Keeps Video Going Seamlessly

Broadcast storm and packet loss happen to common ring technology when a user restores a broken link. Korenix solves this problem with its patented seamless restoration technology. All videos and data keep running smoothly without any interference.

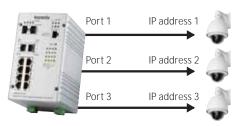


Broadcast Storm Prevention Secures All Videos

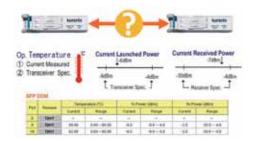
Broadcast storms happen when there is a loop in the network. Broadcast storms overwhelm all the network devices, servers, cameras and all images are lost. Korenix's Loop Protection technology, which detects loop topology and breaks the detected loop, protects your network from the risk of broadcast storms.

Easy and Friendly.





Port-based DHCP server or DHCP server option 82



Korenix NMS - Industrial Network Management System

Easily discover, manage and show the topology up to 1024 network nodes, including 3-rd party devices in a large network. Any SNMP enabled device can be supervised. Supports advanced user-defined event warning and performance monitoring. Multiple languages are available.

Advanced DHCP Server Assigns Fixed IP by Port

In addition to DHCP option 82 server, JetPoE supports Port-Based DHCP allowing users to assign specific IP by port without the need of a option 82 server. A device will always get a fixed IP as long as it is connected to the same port.

DDM Fiber Quality Monitoring

DDM (Digital Diagnostic Monitoring) monitors SFP parameter, such as output power, input power, temperature in real-time for fast maintenance and debugging without additional optical cable analyzers.

Outstanding RSTP / MSTP Conformance and Compatibility

Very high pass ratio of IxANVL Conformance & Inter-Op test greatly reduces the problems and efforts when korenix switches are connected to 3rd party switches in a project.



IPv6 Golden Logo Meets The Future

Fully fledged features of IPv6 including, IPv6 SSH & SSL, Ping6, CLI/Telnet/Web management, neighbor discovery, firmware upgrades. Its dual stack design allows to use IPv4-IPv6 in mixed network environments.



IT Staff Friendly Cisco-Like CLI

The command line interface is friendly to the advanced IT staffs and minimums the learning curve and maintenance efforts on JetPoE switches.

```
Switche sh running-config
Building configuration...

Current configuration:
hostname Switch
vlan learning independent
!
interface fastethernet1
switchport access vlan add 1
interface fastethernet2
acceptable frame type vlantaggedonly
ingress filtering enable
switchport access vlan add 1
switchport access vlan add 1
switchport trunk native vlan 2
```











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	JetNet 5728G-24P	JetNet 5728G-16P	JetNet 5720G-8P	JetNet 6710G-M12 HVDC	JetNet 6810G-M12
	Giga L2+ 802.3at Managed	Giga L2+ 802.3at Managed	Giga L2+ 802.3at Managed	Giga 110V 802.3at Managed	Giga 802.3at Managed
Interface					
10/100TX Ports	24	24	16	8 M12 D-Code	8 M12 D-Code
10/100/1000TX Ports	4 (combo)	4 (combo)	4 (combo)	2 M12 A-Code	2 M12 A-Code
Fiber Ports	4 x 1000 SFP	4 x 1000 SFP	4 x 1000 SFP		
DI/DO/Console	1 x DO, RS-232	1 x DO, RS-232	1 x DO, RS-232	1 x DO, RS-232 (M12 A-code)	1 x DO, RS-232 (M12 A-code)
Power Input	2 x DC 46 ~ 57V 1 x AC 90~264V/DC127~370V	2 x DC 46 ~ 57V 1 x AC 90~264V/DC127~370V	2 x DC 46 - 57V 1 x AC 90-264V/DC127-370V	2 x 110VDC (77~137V) M12 A-Code Male	2 x DC 48~57V) CTG-4F Rugged Con
Pover Over Ethernet					
PoE Ports	24	16	8	8 M12 D-Code	8 M12 D-Code
PoE Wiring (A: Data Pins/ B: Spare Pins)	1,2,3,6 (A)	1,2,3,6 (A)	1,2,3,6 (A)	1,2,3,4 (A)	1,2,3,4 (A)
PoE modes	802.3 af, 802.3at 2-event, 802.3at LLDP, Forced Powering	802.3 af, 802.3at 2-event, 802.3at LLDP, Forced Powering	802.3 af, 802.3at 2-event, 802.3at LLDP, Forced Powering	802.3 af, 802.3at LLDP, Forced Powering	802.3 af, 802.3at LLDP, Forced Powering
PoE Power Per Port	15.4W/30W	15.4W/30W	15.4W/30W	15.4W/30W	15.4W/30W
Total Power Budget	240W @AC(50°C)/ 540W @DC(65°C)	240W @AC(50°C)/ 340W @DC(65°C)	75W @AC(50°C)/ 160W @DC(65°C)	120W @ 60°C 100W @ 70°C	120W @ 60°C 100W @ 70°C
PoE Priority Control	•	•	•	Port-based (P1: highest-P8: lowest)	Port-based (P1: highest-P8: lowest)
PD Keep Alive Checking	•	•	•	•	•
PoE Scheduling	•	•	•	•	•
Features					
MSR, MultiRing, TrunkRing, RDH	•	•	•	•	•
Broadcast Storm/Loop Protection	•*	•*	•*	•	•
DHCP Server (Op82, Port-based)	•	•	•	•	•
Korenix NMS / Korenix View Managed	•	•	•	•	•
SW/Protocol					
IPv6 Management	•	•	•	•*	•*
RSTP/MSTP	•	•	•	•	•
QoS,Traffic Priority	•	•	•	•	•
VLAN, Private VLAN, QinQ, GVRP	•	•	•	•	•
IGMP Query, Snooping, GMRP	•	•	•	•	•
LLDP Network Discovery	•	•	•	•	•
LACP/Static Trunking	•	•	•	•	•
IEEE 1588	•	•	•	•	•
Jumbo frame	9 Kbytes	9 Kbytes	9 Kbytes		
Port Mirror	•	•	•	•	•
DDM SFP Monitoring	•	•	•	•	•
802.1x, IP/Port Security, HTTPS, SSH	•	•	•	•	•
Centrialized Password Authentication	Radius *	Radius *	Radius *	Radius	Radius
Modbus TCP Management	•	•	•		
SNMP/RMON/Trap	V1/V2c/V3	V1/V2c/V3	V1/V2c/V3	V1/V2c/V3	V1/V2c/V3
CLI/Web/Telnet	•	•	•	•	•
HW/ME					
Housing Protection (IP)	IP31 Steel	IP31 Steel	IP31 Steel	IP30 Steel	IP30 Steel
Dimension (H x W x D mm)	43.8 x 431 x 375	43.8 x 431 x 375	43.8 x 431 x 375	145.2 x 198 x 120	145.2 x 198 x 120
Operating Temperature	-25~65°C (fanless)	-25~65°C (fanless)	-25-65°C (fanless)	-40~70°C	-40~60°C
Certificate/DoC					
Regulatory Approval	CE/ FCC/ UL/ CB	CE/ FCC/ UL/ CB	CE/ FCC	CE/ FCC	CE/ FCC
RoHS/REACH	•	•	•	•	•
Vertical Market	Heavy Industry	Heavy Industry	Heavy Industry	Heavy Industry, EN50155	Heavy Industry, EN50121-4 Railway IEC61373 Railway

^{*} Coming soon

				# 1	#	#	"	#		
11					4		4			-
JetNet 5310G	JetNet 4706	JetNet 4706f	JetNet 3906G	JetNet 3810f	JetNet 3810G	JetNet 3810Gf	JetNet 3806G	JetNet 3710G	JetNet 3705	JetNet 3705
Giga 802.3at Managed	High Powe	r Managed	Full Giga PoE+ Switch	12-24V PoE Switch	Giga	a 12-24V PoE Sw	ritch	Giga PoE Switch	PoE	Switch
	,	4		0	8	0	4	8	5 x 100TX	4 x 100TX
8 2 (combo)	6	4	5	8	2	8	2	2	5 X 1001 X	4 X 1001 X
2 (0011150)		2 x 100FX/SC	0				_	_		1 x 100FX/S
2 x 100/1000 SFP		2km (4706f-m) 30km (4706f-s)	1 x 100/1000 SFP	2 x100 SFP		2 x1000 SFP				2km (3705f-n 30km (3705f-
1 x DI, 1 x DO, RS-232	1 x DO, RS-232	1 x DO, RS-232	1 x DO						1 x DO	1 x DO
2 x DC 48 ~ 57V	2 x DC 48 ~ 57V	2 x DC 48 ~ 57V	2 x DC 12- 36V	DC 12- 24V	DC 12- 24V	DC 12- 24V	DC 12- 24V	DC 48V		Termial Block) C (DC Jack)
8	4	4	4	8	8	8	4	8	4	4
1,2,3,6 (A)	4,5,7,8 (B)	4,5,7,8 (B)	1,2,3,6 (A)	4,5,7,8 (B)						
802.3 af, 802.3at 2-event, 802.3at LLDP, Forced Powering	802.3 af, Forced Powering	802.3 af, Forced Powering	802.3 af, 802.3at	802.3 af						
15.4W/30W	15.4W/25W (Forced)	15.4W/25W (Forced)	30W/15.4W	15.4W						
120W @ 75°C	80W @ 60°C	80W @ 60°C	110W @24V, 65°C 90W @24V, 75°C	65W @24V, 60°C	65W @24V, 60°C	65W @24V, 60°C	60W @24V, 60°C	65W @48V, 70°C	60W @48V, 70°C	60W @48V, 70°C
•										
•	•	•								
•	•	•								
•	MSR, RDH	MSR, RDH								
•										
•	•	•								
•										
•	RSTP	RSTP								
•	• Port Bas	• • • • • • • • • • • • • • • • • • •	•	•	•	•	•	•		
•	IGMP Query									
•	•	•								
•										
•										
			9 Kbytes							
•	•	•								
•	•	•								
Radius										
•*										
V1/V2c/V3	V1/V2c/V3	V1/V2c/V3								
•	•	•								
IP31 Aluminum	IP31 Aluminum	IP31 Aluminum	IP31 Steel	IP31 Aluminum		IP31 Aluminum		IP31 Aluminum	IP31 A	Juminum
160 x 95 x 127	46.5 x 147.8 x 136	46.5 x 147.8 x 136	140 x 45 x 105	149 x 66 x 131.2		149 x 66 x 131.2		149 x 66 x 131.2		54.8 x 33.8
-40~75°C	-40~60°C	-40~60°C	-40~75°C	-25-60°C		-25~60°C		-25~70°C	-20~70°C	-10~70°C
CE/ FCC/ UL	CE/ FCC/ UL	CE/ FCC/ UL	CE/ FCC/ UL	CE/ FCC/ UL		CE/ FCC/ UL		CE/ FCC/ UL	CF/	FCC/ UL
•	•	•	•	•		•		•	357	•
Heavy Industry NEMA TS2 compliant			Heavy Industry NEMA TS2 Compliant	e-mark		e-mark				

"JetNet 5728G-24P, a fanless switch that can drive 540W PoE, makes the impossible possible."

Strong Driver

An embedded 300W, 90-264VAC power module supports strong PoE power delivery. Along with two 46~57VDC power interfaces, JetNet 5728G-24P meets various needs in different locations and applications.



Manageable Power Input

The AC power and the two DC powers can be either aggregated into 540W huge PoE capacity or backup with one another as double Redundancy.

540W Huge PoE Capacity

Supports 24-port PoE in IEEE 802.3af, 802.3at 2-event and 802.3at LLDP PoE powering modes. Max 30W per port, 540W in total.

Fanless Wide Op. Temperature

Outstanding cooling design overcomes the power derating problem seen in common PoE switches and guarantees a 540W PoE, fanless operation from -25°C to 65°C.



An embedded thermal sensor detects and warns of overheating. The PoE output of the low priority ports can turn off to protect the whole system under abnormal conditions.

Industrial Grade

Fully complies with industrial EMC and environmental standards and extends MTBF value to more than 23 years, which ensures reliable power feeding in harsh environments.

Jumbo Frame Gigabit Redundant Ring

High speed uplink is accelerated by 6 times and is secured by Korenix-patented redundant ring technology which has 5ms link failure recovery time and 0ms seamless restoration.

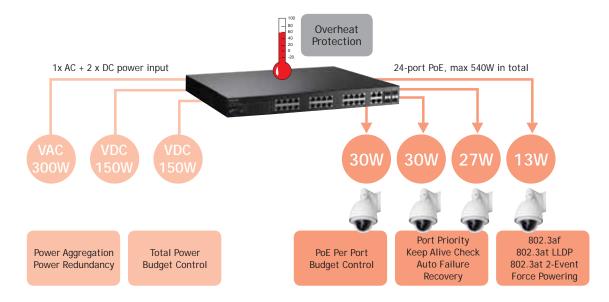
Industrial 24+4G Managed High Power PoE Switch w/ 24-port PoE

JetNet 5728G-24P

- Support 802.3af, 802.3at 2-event, 802.3at LLDP and force powering
- 24-port PoE, 30W per port, 540W in total @DC 65°C
- LPLD for PD keep alive checking and auto resets if PD fails
- PoE scheduling and LLDP dynamic powering on demand
- PoE emergency management by Priority Powering
- Multiple Super Ring, failover < 5ms, restoration = 0ms
- Optimized IGMP Snooping for quality video multicasting
- Private VLAN easily configure community and isolated VLAN
- Dual redundant low voltage range: 48VDC(46~57VDC) and high voltage range: 90~264VAC or 127~370VDC
- Fanless wide operating temperature range -25~65°C

System-Based PoE Management

Rather than port-based PoE management, JetNet 5728G-24P manages the power flow from input to output. While PoE is part of the power system, overall management can enhance the reliability and efficiency of power delivery.

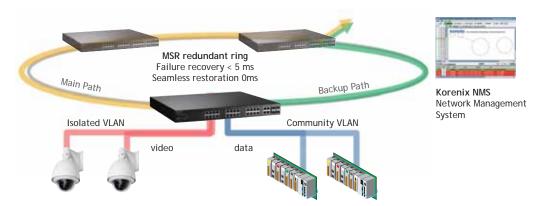


Quality Video Multicasting

Combining the optimized IGMP snooping, Private VLAN, and MSR gigiabit redundant ring technology, videos are isolated from data packets and transmitted with quality and reliability.

Large Surveillance Network

Easily discover, display and manage up to 1024 network devices in a large surveillance project. User-defined event warning and performance monitoring help administrators quickly address issues.



Clean and Secure Intranet

Precisely permit or deny a specific traffic to come in from a specific port and go out to a specific port. Compared to a firewall which protects at the external entrance, a L2+ switch secures your subnet at the internal boundary.



prevents malicious attacks from an authorized host.

JetNet 5728G Family



JetNet 5728G-16P

- Industrial 24+4G Managed High Power PoE Switch
- 16-port PoE, 30W per port, 340W in total @DC 65°C



JetNet 5720G-8P

- Industrial 16+4G Managed High Power PoE Switch
- 8-port PoE, 30W per port, 160W in total @DC 65°C

JetNet 5728G-24P

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 802.3af Power Over Ethernet (PoE)

IEEE 802.3at Power Over Ethernet Plus (PoE Plus)

IEEE 802.1p Class of Service

IEEE 802.1Q VLAN

IEEE 802.1P GMRP

IEEE 802.1d Spanning Tree Protocol

IEEE 802.1D-2004 Rapid Spanning Tree Protocol (RSTP)

IEEE 802.1s Multiple Spanning Tree Protocol (MSTP)

IEEE802.3ad Link Aggregation Control Protocol (LACP)

IEEE802.1x Port based Network Access Control

IEEE802.1AB Link Layer Discovery Protocol

IEEE1588 Precision Time Protocol

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 1546 bytes

Jumbo Frame Enabled: Up to 9,216bytes

MAC Address: 16K Packet Buffer: 32Mbits

PoE Technology: End-Span wiring architecture, fully IEEE802.3af-2003 compliant, and support IEEE802.3at,

including 2-event and LLDP classification

PoE Pin Assignments: RX/V-(1, 2) and TX/V+(3, 6)

Management

Configuration: Cisco-Like CLI, Telnet, Korenix NMS, Web, SSL, SSH, SNMP v1/v2c/v3, RMON, IPv6 management LLDP: Link Layer Discovery Protocol for NMS automated

topology discovery (ex. Korenix NMS)

SNMP Trap: SNMP v1/v2c Traps

SNMP MIB: MIB-II, Bridge MIB, Ethernet-like MIB, VLAN MIB, SNMP MIB, POE MIB, LLDP MIB, RMON MIB, Trap MIB, and Private MIB

NTP: Network Time Protocol to synchronize time

Port Mirroring: Online traffic monitoring

Port Trunk: Static Trunk and 802.3ad LACP, Up to 8 Trunk

Group, 8 ports per trunk

Rate Control: Ingress filtering for Broadcast, Multicast,

Unknown DA or All packets, step by 64kbps. VLAN: IEEE802.1Q VLAN, GVRP. Up to 256 VLANs

Quality of Service: 8 priority queues per port,

IEEE802.1p COS and Layer 3 TOS/DiffServ

IGMP Snooping: IGMP Snooping v1/v2/v3 for multicast

filtering and IGMP Query v1/v2

GMRP: GARP Multicast Registration Protocol

IEEE 1588 PTP: Precision Time Protocol for precise time

synchronization of networks

Port Security: Assign authorized MAC to specific port

802.1x: Port based Network Access Control

Access Control List (ACL): L2~L4 access control lists DHCP: Supports DHCP Client/Server & DHCP Option 82 E-mail Warning: Automatic warning by pre-defined events Syslog: Supports both local mode and server mode

Network Redundancy

Multiple Spanning Tree Protocol: IEEE802.1s MSTP, each

MSTP instance can include one or more VLANs

Rapid Spanning Tree Protocol: IEEE802.1D-2004 RSTP.

Compatible with STP

Multiple Super Ring (MSR[™]): New generation Korenix Ring Redundancy Technology, including Rapid Super Ring, Rapid

Dual Homing, TrunkRing, and MultiRing.

Rapid Super Ring (RSRTM): Provide failover time less than

10 ms and seamless restoration at full load

Rapid Dual Homing (RDH™): Multiple uplink paths to one or multiple upper switch

TrunkRing[™]: Increase the ring bandwidth and redundancy MultiRing[™]: Multiple ring connections. Up to 12 100Mbps

rings and 2 Gbps rings in one JetNet 5728G

 $\mathbf{LPLD}^{\mathsf{TM}}$: Auto-detect Powered Device status for device auto-reset

PoE Schedule Management: Each PoE port can be activated and powered scheduling with different rules. Weekly schedule on hourly basis is supported

Advanced PoE Power Management: Individual port status monitoring, emergency power management, voltage/current monitoring and regulation

Interface

Number of Ports:

10/100Base-TX: 24 x RJ-45 with 24 PoE injector 10/100/1000Base-TX: 4 x RJ-45, combo with SFP

1000Base-X: 4 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)

MSR status LED:

- 1. MSR in Normal State (Lit Green)
- 2. MSR in Abnormal State (Lit Amber)
- 3. MSR function not active (Not Lit)
- 4. Incorrect configuration of MSR, ex. ring not connected to ring port (Flashes Green)
- 5. The break has been detected to be local to one of the ports (Flashes Amber)

PoE LED:

802.3af mode: Detection/Powering (Green) 802.3at mode: Detection/Powering (Blue)

Port LED:

10/100 RJ-45: Link/Activity (Lit Green/Flashes Green) Gigabit Copper/SFP: Link/Activity (Lit Green/Flashes Green)

Diagnostic LED:

PSU/DC Power (Green), RDY (Green), Alarm (Red) RS232 Console: RJ-45 Connector, Pin3: TxD, Pin6: RxD,

Pin5:GND

Power Connector: 1 Standard 3-pronged AC plug + 4 pin

DC Terminal Block

Relay Alarm: 1 set of relay output with current carrying

capability of 1A@24V

Alarm Events: Power (PSU, DC1, DC2) failure, port failure,

ping failure, login failure, RSR topology change

Power Requirements

Power Consumption without the PD Loading: 28 Watts Max

PSU: 90-264VAC/127-370VDC, 300W

DC1/DC2: 48VDC (46-57VDC), redundant dual inputs

Overload Current Protection: Present Reverse Polarity Protection: Present

PoE Power Output IEEE 802.3at: 50-57VDC, 0.6A PoE Power Output IEEE 802.3af: 44-57VDC, 0.35A PoE Protection: over-temp, over-current, over/under-

voltage & transient

Mechanical

Installation: 19-inch, 1U Rack Mount Casing: IP31 protection, Metal case

Dimension: 43.8mm(H) x 431mm (W) x 375mm (D)

Weight: appr. 5 kg
Environmental

Operating Temperature: -25 ~ 65°C (fanless)
Operating Humidity: 5% ~ 95% (non-condensing)

Storage Temperature: -40 ~ 85°C Hi-Pot: 1.5KV for ports and power

Regulatory Approvals

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

EMS:

EN61000-4-2 (ESD), level 3 EN61000-4-3 (RS), level 3 EN61000-4-4 (EFT), level 3

EN61000-4-5 (Surge), level 3

EN61000-4-6 (CS), level 3

EN61000-4-8

EN61000-4-11

Traffic Control: NEMA TS2 (Pending)
Maritime: DNV (Pending), GL (Pending)
Safety: UL, cUL, EN60950 (Applying)

Shock: IEC60068-2-27 Vibration: IEC60068-2-6 Free Fall: IEC60068-2-32

MTBF: Above 200,000 Hours, MIL-HDBK-217F GB standard

Warranty: 5 years

JetNet 5728G-16P

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 802.3af Power Over Ethernet (PoE)

IEEE 802.3at Power Over Ethernet Plus (PoE Plus)

IEEE 802.1p Class of Service

IEEE 802.1Q VLAN

IEEE 802.1P GMRP

IEEE 802.1d Spanning Tree Protocol

IEEE 802.1D-2004 Rapid Spanning Tree Protocol (RSTP)

IEEE 802.1s Multiple Spanning Tree Protocol (MSTP)

IEEE802.3ad Link Aggregation Control Protocol (LACP)

IEEE802.1x Port based Network Access Control

IEEE802.1AB Link Layer Discovery Protocol

IEEE1588 Precision Time Protocol

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 1546 bytes

Jumbo Frame Enabled: Up to 9,216bytes

MAC Address: 16K Packet Buffer: 32Mbits

PoE Technology: End-Span wiring architecture, fully IEEE802.3af-2003 compliant, and support IEEE802.3at,

including 2-event and LLDP classification

PoE Pin Assignments: RX/V-(1, 2) and TX/V+(3, 6)

Management

Configuration: Cisco-Like CLI, Telnet, Korenix NMS, Web, SSL, SSH, SNMP v1/v2c/v3, RMON, IPv6 management

LLDP: Link Layer Discovery Protocol for NMS automated

topology discovery (ex. Korenix NMS) SNMP Trap: SNMP v1/v2c Traps

SNMP MIB: MIB-II, Bridge MIB, Ethernet-like MIB, VLAN MIB, SNMP MIB, PoE MIB, LLDP MIB, RMON MIB, Trap MIB, and Private MIB

NTP: Network Time Protocol to synchronize time

Port Mirroring: Online traffic monitoring

Port Trunk: Static Trunk and 802.3ad LACP, Up to 8 Trunk

Group, 8 ports per trunk

Rate Control: Ingress filtering for Broadcast, Multicast,

Unknown DA or All packets, step by 64kbps.

VLAN: IEEE802.1Q VLAN, GVRP. Up to 256 VLANs Quality of Service: 8 priority queues per port,

IEEE802.1p COS and Layer 3 TOS/DiffServ

IGMP Snooping: IGMP Snooping v1/v2/v3 for multicast

filtering and IGMP Query v1/v2

GMRP: GARP Multicast Registration Protocol

IEEE 1588 PTP: Precision Time Protocol for precise time

synchronization of networks

Port Security: Assign authorized MAC to specific port

802.1x: Port based Network Access Control

Access Control List (ACL): L2~L4 access control lists DHCP: Supports DHCP Client/Server & DHCP Option 82 E-mail Warning: Automatic warning by pre-defined events

Syslog: Supports both local mode and server mode

Network Redundancy

Multiple Spanning Tree Protocol: IEEE802.1s MSTP, each

MSTP instance can include one or more VLANs

Rapid Spanning Tree Protocol: IEEE802.1D-2004 RSTP.

Compatible with STP

Multiple Super Ring (MSR[™]): New generation Korenix Ring Redundancy Technology, including Rapid Super Ring, Rapid

Dual Homing, TrunkRing, and MultiRing.

Rapid Super Ring (RSRTM): Provide failover time less than

10 ms and seamless restoration at full load

Rapid Dual Homing (RDH™): Multiple uplink paths to one

or multiple upper switch

TrunkRing™: Increase the ring bandwidth and redundancy MultiRing[™]: Multiple ring connections. Up to 12 100Mbps

rings and 2 Gbps rings in one JetNet 5728G

LPLD[™]: Auto-detect Powered Device status for device auto-reset

PoE Schedule Management: Each PoE port can be activated and powered scheduling with different rules. Weekly schedule on hourly basis is supported

Advanced PoE Power Management: Individual port status monitoring, emergency power management, voltage/current monitoring and regulation

Interface

Number of Ports:

10/100Base-TX: 24 x RJ-45 with 16 PoE injector 10/100/1000Base-TX: 4 x RJ-45, combo with SFP

1000Base-X: 4 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)

MSR status LED:

- 1. MSR in Normal State (Lit Green)
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10/100 RJ-45: Link/Activity (Lit Green/Flashes Green) Gigabit Copper/SFP: Link/Activity (Lit Green/Flashes Green)

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DC Terminal Block

Relay Alarm: 1 set of relay output with current carrying

capability of 1A@24V

Alarm Events: Power (PSU, DC1, DC2) failure, port failure,

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Power Requirements

Power Consumption without the PD Loading: 28 Watts Max

PSU: 90-264VAC/127-370VDC, 300W

DC1/DC2: 48VDC (46-57VDC), redundant dual inputs

Overload Current Protection: Present Reverse Polarity Protection: Present

PoE Power Output IEEE 802.3at: 50-57VDC, 0.6A PoE Power Output IEEE 802.3af: 44-57VDC, 0.35A PoE Protection: over-temp, over-current, over/under-

voltage & transient

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Installation: 19-inch, 1U Rack Mount Casing: IP31 protection, Metal case

Dimension: 43.8mm(H) x 431mm (W) x 375mm (D)

Weight: appr. 5 kg
Environmental

Operating Temperature: -25 ~ 65°C (fanless)
Operating Humidity: 5% ~ 95% (non-condensing)

Storage Temperature: -40 ~ 85°C Hi-Pot: 1.5KV for ports and power

Regulatory Approvals

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

EMS:

EN61000-4-2 (ESD), level 3 EN61000-4-3 (RS), level 3 EN61000-4-4 (EFT), level 3

EN61000-4-5 (Surge), level 3

EN61000-4-6 (CS), level 3

EN61000-4-8

EN61000-4-11

Traffic Control: NEMA TS2 (Pending)
Maritime: DNV (Pending), GL (Pending)
Safety: UL, cUL, EN60950 (Applying)

Shock: IEC60068-2-27 Vibration: IEC60068-2-6 Free Fall: IEC60068-2-32

MTBF: Above 200,000 Hours, MIL-HDBK-217F GB standard

Warranty: 5 years

JetNet 5720G-8P

Specification

Technology

IEEE 000 0 40

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

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IEEE 802.1d Spanning Tree Protocol

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SNMP MIB: MIB-II, Bridge MIB, Ethernet-like MIB, VLAN MIB, SNMP MIB, POE MIB, LLDP MIB, RMON MIB, Trap MIB, and

Private MIB

NTP: Network Time Protocol to synchronize time

Port Mirroring: Online traffic monitoring

Port Trunk: Static Trunk and 802.3ad LACP, Up to 8 Trunk

Group, 8 ports per trunk

Rate Control: Ingress filtering for Broadcast, Multicast,

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DHCP: Supports DHCP Client/Server & DHCP Option 82
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Rapid Dual Homing (RDHTM): Multiple uplink paths to one

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TrunkRing $^{\text{TM}}$: Increase the ring bandwidth and redundancy

 $\mathbf{MultiRing}^{\mathsf{TM}}$: Multiple ring connections. Up to 12 100Mbps

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Dimension: 43.8mm(H) x 431mm (W) x 375mm (D)

Weight: appr. 5 kg
Environmental

Operating Temperature: -25 ~ 65°C (fanless)
Operating Humidity: 5% ~ 95% (non-condensing)

Storage Temperature: -40 ~ 85°C Hi-Pot: 1.5KV for ports and power

Regulatory Approvals

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

EMS:

EN61000-4-2 (ESD), level 3 EN61000-4-3 (RS), level 3 EN61000-4-4 (EFT), level 3

EN61000-4-5 (Surge), level 3

EN61000-4-6 (CS), level 3

EN61000-4-8

EN61000-4-11

Traffic Control: NEMA TS2 (Pending)
Maritime: DNV (Pending), GL (Pending)
Safety: UL, cUL, EN60950 (Applying)

Shock: IEC60068-2-27 Vibration: IEC60068-2-6

Free Fall: IEC60068-2-32 MTBF: Above 200,000 Hours, MIL-HDBK-217F GB standard

Warranty: 5 years



Train 8 PoE+2G Managed High Power PoE Switch

JetNet 6710G-M12 HVDC

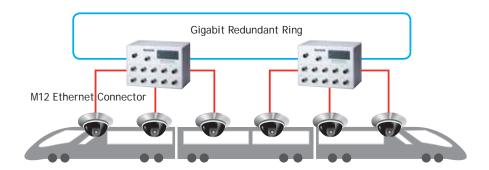
- 110 (77~137) VDC power input to 48VDC high power PoE
- M12 rugged connectors anti vibration and shock
- Supports 802.3af, 802.3at LLDP and Force Powering
- 8-port PoE, 30W per port, 120W in total at 65°C
- LPLD for PD keep alive checking and auto resets if PD fails
- PoE scheduling and LLDP dynamic powering on demand
- PoE emergency management by Priority Powering
- Loop protection prevents broadcast storm
- Multiple Super Ring, failover < 5ms, restoration = 0ms
- Optimized IGMP Snooping for quality video multicasting
- Private VLAN easily configure community and isolated VLAN
- RSTP/MSTP high compatibility for 3rd party switches
- Fanless, -40~70°C wide operating temperature range

EN50155 Compliance Born To Live Onboard

Proven to sustain the strong EMC interference, heavy shock and vibration, rapid and wide external ambient temperature variation for rolling stock applications.

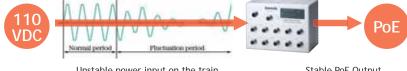
Anti-Vibration Anti-Shock

Equipped with M12 connectors and rugged housing to pass the random vibration, 15 hours simulated long life vibration, and 50g shock test defined in IEC61373.



Wide Range Of Power Input

Sustains a serious voltage fluctuation on train from 77 to 137 VDC. The Hipot isolation of the DC power booster protects the device from lightning and surges in the Ethernet cables.

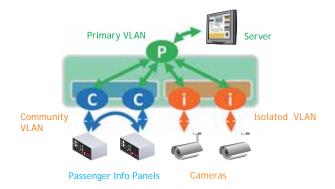


Unstable power input on the train

Stable PoE Output

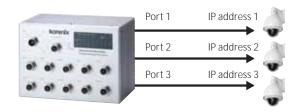
Reliable and Quality Video Multicasting

With the advanced Private VLAN, optimized IGMP snooping, and the MSR gigabit redundant ring, JetNet 6710G-M12 isolates and transmits each video stream with quality and reliability.



Advanced DHCP Server Assigns Fixed IP by Port

Port-Based DHCP allows users to assign specific IP by port. A device will always get a fixed IP as long as it is connected to the same port.





Train 8 PoE+2G Managed High Power Booster PoE Switch

JetNet 6810G-M12

- 37.5 (23~42.5) VDC power input boost to 48VDC high power PoE
- 8-port PoE, 30W per port, 120W in total @DC 60°C
- Fanless, -40~60°C wide operating temperature

JetNet 6710G-M12 HVDC

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 802.3x Flow Control and Back-pressure

IEEE 802.3af Power over Ethernet

IEEE 802.3at High Power over Ethernet

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)

IEEE802.3ad Link Aggregation Protocol (LACP)

IEEE802.1x Port Based Network Access Protocol

Performance

Switch: Store and Forward with 32Gbps Switch Fabric

System Throughput: 8.3 Mpps@64 Bytes

Transfer packet size: 64 bytes to 1522 bytes (includes

double VLAN tag)
MAC Address: 8K

Packet Buffer: 1M bits shared memory for packet buffer. Transfer performance: 14,880pps for Ethernet and 148,800 pps for Fast Ethernet, 1488,100 pps for Gigabit Environment Monitoring: Embedded board-level thermal

detector for system temperature monitoring Relay Alarm: Dry Relay output with 1A /30V DC Embedded hardware based watch-dog timer

System Management

Configuration and monitoring interface: Telnet, local RS-232 console, Web- browser, SNMP, Trap and SMTP Telnet & Local Console: Supports Cisco-like command line interface with maximum 4 sessions; the telnet interface also supports SSH

SNMP: v1, v2c, V3, SNMP trap and RMON 1,2,3,9; max 4

trap servers

 $\textbf{SNMP MIB} \hbox{: } \textbf{MIB II, Bridge MIB, Ethernet-like MIB, VLAN}$

MIB, IGMP MIB, Korenix Private MIB

Korenix Utility: Supports Korenix View and Korenix NMS with IEEE 802.1AB Link Layer Discovery Protocol for device

finding and link topology discovery

Network Time Protocol: Supports NTP protocol with daylight saving function and localize time sync function.

Management IP Security: IP address security to prevent unauthorized access

E-mail Warning: 4 E-mail with mail server authentication System Log: Local or remote Server with authentication

Network Performance

Port Configuration: Port link Speed, Link mode, current

status and enable/disable

Port Trunk: IEEE 802.3ad LACP with timer and static port trunk; trunk member up to 8 ports and maximum 5 trunk

groups include Gigabit Ethernet port

VLAN: IEEE 802.1Q VLAN and GVRP. 256 VLAN Entries,

VLAN ID from 1 to 4094

Supports Trunk, Hybrid and Link access modes.

Private VLAN: Direct client ports in isolated/community

VLAN to promiscuous port in primary VLAN

IEEE 802.1 QinQ: Double VLAN Tag in an Ethernet frame Class of Service: IEEE 802.1p class of service; per port 4 priority queues

Traffic Prioritize: Weighted fair queuing (WRR) and Strict Priority scheme by 802.1p CoS tag and IPv4 ToS/ Diffserv IGMP Snooping: IGMP Snooping v1/v2c /v3 and IGMP Query mode; also support unknown multicasting drop/flooding/ forward to router port

Rate Control: Ingress/Egress filtering for Broadcast,

Multicast, Unknown DA or All packets.

Port Mirroring: traffic monitoring on selected ports
Port Security: assign authorized MAC to specific port
DHCP: DHCP Client, DHCP Server with IP & MAC Address
binding, DHCP Relay Agent function and DHCP Server with
static port based single IP assigned function

IEEE 802.1x: Port based network access control

Power over Ethernet

PoE Standards: IEEE 802.3af / IEEE 802.3at

PoE Operating Mode: Auto mode: Auto detects and powering by IEEE 802.3af, IEEE 802.3at 1-Event plus LLDP

protocol for high power

Forced mode: User configured power consumption without

detection, classification

PoE Powering Pins: M12 D-coding V+(3,4) V-(1,2)

Power Capability: 802.3af:15.4W/port; 802.3at:30W/port Power Budget Control: Port Based budget control with priority control, system will auto calculate total power and shut down low priority port when drawing current is over the power supply

Network Redundancy

Multiple Super Ring (MSR[™]): New generation Korenix Ring Redundancy Technology, Includes Rapid Super Ring, Rapid Dual Homing, TrunkRing[™], MultiRing[™] and backward compatible with legacy Super Ring[™]

Rapid Super Ring: 5ms (Best case) failover time for Fast

Ethernet, and zero second for restoration

Rapid Dual Homing (RDH™): Multiple uplink paths to one or multiple upper switch

TrunkRing[™]: Integrate port aggregation function in ring path to get higher throughput ring architecture

MultiRing[™]: up to 4 100M rings and 1 Gigabit ring

Rapid Spanning Tree: STP, RSTP, MSTP

Interface

Enclosure Port:

10/100 TX port: 8 x M12-D-Code 4-pin Female Gigabit port: 2 x M12-A-Code 8-pin Female Console port & Alarm Relay Output:

M12 A-code Male for RS-232 and relay alarm output.

Power port: M12, A-coded, male type, 4-pin connector
Cables: 100 Base-TX/1000 Base-T: UTP/STP Cat.5e/Cat.6.

EIA/TIA-568B 100-ohm (100m) RS-232 & Alarm Output:

RS232: M12 A-code female 5-pin connector, TxD (Pin 1),

RxD(Pin 2), Signal Ground (Pin 5)

Alarm Output: M12 A-code female 5-pin connector 3, 4

LED Indicators:

100Mbps: Link (Green on) / Activity (Green Blinking) Full duplex (Yellow on) / Collision (Yellow Blinking) Gigabit: Link (Green on) / Activity (Green Blinking) PoE port:

IEEE 802.3af Powering (Green on); Detecting (Blinking)
IEEE 802.3at Powering (Blue on); Detecting (Blinking)

Power: System power ready (Green On)

Sys: System Ready (Green On)

R.S. (Ring status): Green on (Ring normal) / Blinking (Ring port configure error), Yellow on (Ring abnormal) / Blinking

(device's ring port failed)
Alarm: Relay Active (Green On)
Power Requirements

System Power:

Input Voltage: 110VDC (77~137.5V) with reverse protection

Power Consumption: 14W without PD loading

Mechanical

Installation: Wall Mount

Case: IP30 Steel Dimension (mm):

198 (W) x 145.2 (H) x 120 (D) w/o mounting kit 230.6 (W) x 145.2 (H) x 120 (D) w/mounting kit

Weight: 3.14Kg Environmental

Operating Temperature: -40~60°C:120W/system,

 $\text{-40$^{\circ}$C:100W/system}$

Operating Humidity: 0% ~ 95% (non-condensing)

Storage Temperature: -40 ~ 85°C Hi-Pot: 1.5KV for all ports and power

Regulatory Approvals

EMI: FCC Part 15B Class A

EN61000-6-4, CISPR 16-1-2/16-2-1/16-2-3, CISPR 22

EMS: IEC/EN61000-6-2, IEC/EN61000-4-2, IEC/EN61000-4-3, IEC/EN61000-4-4, IEC/EN61000-4-5, IEC/EN61000-4-6, IEC/EN6100-4-6, IEC/EN6100-4, IEC/EN6100-4-6, IEC/EN6100-4-6, IEC/EN6100-4-6, IEC/EN6100-4-6, IEC/EN6100-4-6, IEC/EN61

EN61000-4-8, IEC/EN61000-4-9

Railway EMC: EN50121-4 and EN50121-1

Vibration & Shock: IEC 61373 Warranty: Global 5 years

JetNet 6810G-M12

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Technology

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IEEE 802.3at High Power over Ethernet

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)

IEEE802.3ad Link Aggregation Protocol (LACP)

IEEE802.1x Port Based Network Access Protocol

Performance

Switch: Store and Forward with 32Gbps Switch Fabric

System Throughput: 8.3 Mpps@64 Bytes

Transfer packet size: 64 bytes to 1522 bytes (includes

double VLAN tag)
MAC Address: 8K

Packet Buffer: 1M bits shared memory for packet buffer. Transfer performance: 14,880pps for Ethernet and 148,800 pps for Fast Ethernet, 1488,100 pps for Gigabit Environment Monitoring: Embedded board-level thermal

detector for system temperature monitoring Relay Alarm: Dry Relay output with 1A /30V DC Embedded hardware based watch-dog timer

System Management

Configuration and monitoring interface: Telnet, local RS-232 console, Web- browser, SNMP, Trap and SMTP Telnet & Local Console: Supports Cisco-like command line interface with maximum 4 sessions; the telnet interface also supports SSH

SNMP: v1, v2c, V3, SNMP trap and RMON 1,2,3,9; max 4

trap servers

 $\textbf{SNMP MIB:} \ \textbf{MIB II}, \ \textbf{Bridge MIB}, \ \textbf{Ethernet-like MIB}, \ \textbf{VLAN}$

MIB, IGMP MIB, Korenix Private MIB

Korenix Utility: Supports Korenix View and Korenix NMS with IEEE 802.1AB Link Layer Discovery Protocol for device

finding and link topology discovery

Network Time Protocol: Supports NTP protocol with daylight saving function and localize time sync function. Management IP Security: IP address security to prevent unauthorized access

E-mail Warning: 4 E-mail with mail server authentication System Log: Local or remote Server with authentication

Network Performance

Port Configuration: Port link Speed, Link mode, current status and enable/disable

Port Trunk: IEEE 802.3ad LACP with timer and static port trunk; trunk member up to 8 ports and maximum 5 trunk

groups include Gigabit Ethernet port

VLAN: IEEE 802.1Q VLAN and GVRP. 256 VLAN Entries,

VLAN ID from 1 to 4094

Supports Trunk, Hybrid and Link access modes.

Private VLAN: Direct client ports in isolated/community

VLAN to promiscuous port in primary VLAN

IEEE 802.1 QinQ: Double VLAN Tag in an Ethernet frame Class of Service: IEEE 802.1p class of service; per port 4 priority queues

Traffic Prioritize: Weighted fair queuing (WRR) and Strict Priority scheme by 802.1p CoS tag and IPv4 ToS/ Diffserv IGMP Snooping: IGMP Snooping v1/v2c /v3 and IGMP Query mode; also support unknown multicasting drop/flooding/ forward to router port

Rate Control: Ingress/Egress filtering for Broadcast,

Multicast, Unknown DA or All packets.

Port Mirroring: traffic monitoring on selected ports
Port Security: assign authorized MAC to specific port
DHCP: DHCP Client, DHCP Server with IP & MAC Address
binding, DHCP Relay Agent function and DHCP Server with
static port based single IP assigned function

IEEE 802.1x: Port based network access control

Power over Ethernet

PoE Standards: IEEE 802.3af, IEEE 802.3at

PoE Operating Mode: Auto mode: Auto detects and powering by IEEE 802.3af, IEEE 802.3at 1-Event plus LLDP

protocol for high power

Forced mode: User configured power consumption without

detection, classification

PoE Powering Pins: M12 D-coding V+(3,4) V-(1,2)

Power Capability: 802.3af:15.4W/port, 802.3at:30W/port Power Budget Control: Port Based budget control with priority control, system will auto calculate total power and shut down low priority port when drawing current is over the power supply

Network Redundancy

Multiple Super Ring (MSR[™]): New generation Korenix Ring Redundancy Technology, Includes Rapid Super Ring, Rapid Dual Homing, TrunkRing[™], MultiRing[™] and backward compatible with legacy Super Ring™

Rapid Super Ring: 5ms (Best case) failover time for Fast

Ethernet, and zero second for restoration

Rapid Dual Homing (RDHTM): Multiple uplink paths to one or multiple upper switch

TrunkRing[™]: Integrate port aggregation function in ring path to get higher throughput ring architecture MultiRing[™]: up to 4 100M rings and 1 Gigabit rings

Rapid Spanning Tree: STP, RSTP, MSTP

Interface

Enclosure Port:

10/100 TX port: 8 x M12-D-Code 4-pin Female Gigabit port: 2 x M12-A-Code 8-pin Female Console port & Alarm Relay Output:

M12 A-code Male for RS-232 and relay alarm output

Power port: CTG-4F 4-pin rugged connector

Cables: 100 Base-TX/1000 Base-T: UTP/STP Cat.5e/Cat.6.

EIA/TIA-568B 100-ohm (100m) RS-232 & Alarm Output:

RS232: M12 A-code female 5-pin connector, TxD (Pin 1),

RxD(Pin 2), Signal Ground (Pin 5)

Alarm Output: M12 A-code female 5-pin connector 3, 4

LED Indicators:

100Mbps: Link (Green on) / Activity (Green Blinking) Full duplex (Yellow on) / Collision (Yellow Blinking) Gigabit: Link (Green on) / Activity (Green Blinking) PoE port:

IEEE 802.3af Powering (Green on); Detecting (Blinking) IEEE 802.3at Powering (Blue on); Detecting (Blinking)

Power: System power ready (Green On)

Sys: System Ready (Green On)

R.S. (Ring status): Green on (Ring normal) / Blinking (Ring port configure error), Yellow on (Ring abnormal) / Blinking

(device's ring port failed) Alarm: Relay Active (Green On) **Power Requirements**

System Power:

Input Voltage: 24VDC (23~42.5) with reverse protection

Power Consumption: 14W without PD loading

Mechanical

Installation: Wall Mount

Case: IP30 Steel Dimension (mm):

198 (W) x 145.2 (H) x 120 (D) w/o mounting kit 230.6 (W) x 145.2 (H) x 120 (D) w/mounting kit

Weight: 3.14Kg

Environmental

Operating Temperature: -40~60°C:120W/system,

-40~70°C:100W/system

Operating Humidity: 0% ~ 95% (non-condensing)

Storage Temperature: -40 ~ 85°C Hi-Pot: 1.5KV for all ports and power

Regulatory Approvals

EMI: FCC Part 15B Class A

IEC/EN61000-6-4, CISPR 16-1-2/16-2-1/16-2-3, CISPR 22 EMS: IEC/EN61000-6-2, IEC/EN61000-4-2, IEC/EN61000-4-3, IEC/EN61000-4-4, IEC/EN61000-4-5, IEC/EN61000-4-6,

IEC/EN61000-4-8, IEC/EN61000-4-9 Railway EMC: EN50121-4 and EN50121-1

Vibration & Shock: IEC 61373 Warranty: Global 5 years

"Innovation beyond the power of PoE."

Industrial 8 PoE +2G SFP Managed High Power PoE Switch

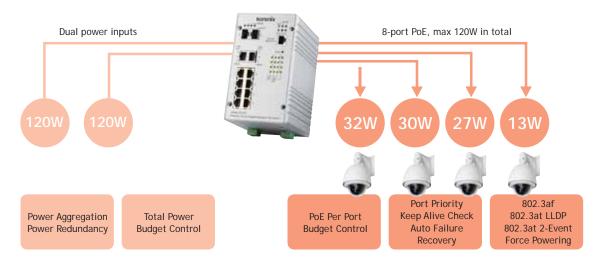
JetNet 5310G

- 8 10/100TX PoE and 2 gigabit SFP combo ports
- 802.3af, 802.3at 2-event, LLDP and Force Powering
- 30W PoE per port, up to 120W in total @75°C
- PD keep alive checking and auto resets if PD fails
- PoE scheduling and LLDP dynamic powering
- PoE emergency management by Priority Powering
- Supports Power Aggregation/Redundancy, Budget Control
- Loop protection prevents broadcast storm
- Multiple Super Ring, failover < 5ms, restoration = 0ms
- Private VLAN easily configure community and isolated VLAN
- Optimized IGMP Snooping for quality video multicasting
- 48~57VDC Redundant/Load Sharing Power Inputs
- -40~75°C wide operating temperature range



System-Based PoE Management

Rather than port-based PoE management, JetNet 5310G manages the power flow from input to output. While PoE is part of the power system, overall management can enhance the reliability and efficiency of power delivery.



Advanced PoE Management

Defining an upper bound of each PoE port can prevent malicious or malfunctioning over-consumption. With priority setting, the low priority ports will turn off to ensure high priority ports have power in case of abnormal conditions. This protects high priority PDs from shutdowns caused by system overloading, power failure/derating, or ambient overheating.

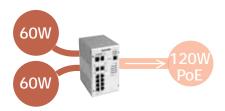
Port	PoE Mode	Powering Mode	Power Budget(W)	Power Priority
1	Disable	802.3af	32.0	Critical
2	Enable	802.3af	15.4	Critical
3	Enable	802.3at(2-Event)	32.0	Critical
4	Enable	802.3at(LLDP)	32.0	Critical
5	Enable	Force	32.0	Critical

PD Auto Failure Recovery

Checks the live status of PD. Once any PD fails, JetNet 5310G sends a warning to the administrator by email, SNMP trap, relay alarm, and restarts the PoE port immediately to recover the PD. This enhances the reliability and reduces the maintenance effort.

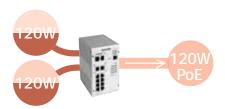


Innovative Power Input To PoE Design



Power Aggregation

Two 60W power supplies can be aggregated to deliver 120W full PoE capacity.



Power Load Sharing

Two 120W power supplies share the total power drawn by the PoE ports. The load sharing mechanism reduces the loading and prolongs the life cycle of the power supply.

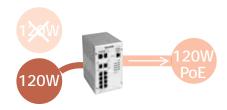
Reliable PoE+ In Extreme Temperatures

High temperatures derate the performance of power supplies. JetNet 5310G overcomes the dilemma between high power and high operating temperatures, and is designed with IP31 protection and excellent cooling to ensure reliable operation in harsh environments.



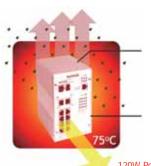
PoE Priority Output

If one of the power input fails, the system will shutdown the low priority PoE ports to secure the high priority ones keep working.



Power Redundancy

Under normal conditions, the two power supplies can share the loading or work as redundancy. If one of the power fails, the other takes over immediately. All PoE ports keep working without any interruption.



IP31 without any cooling holes on the top which protects better from drops and dust.

The whole aluminum body as a big heat sink to bring out heat generated by high speed switching and PoE.

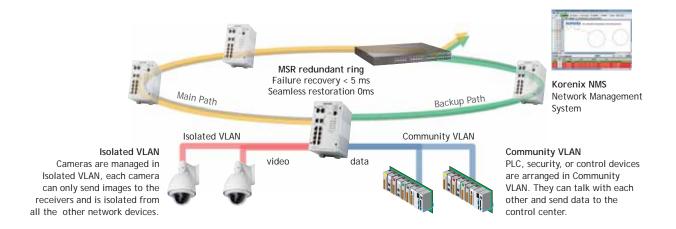
120W PoE+

Reliable and Quality Video Multicasting

Combining the optimized IGMP snooping, Private VLAN, and MSR gigabit redundant ring technology, JetNet 5310G isolates the video streams from data packets, and transmits the packets with quality and reliability.

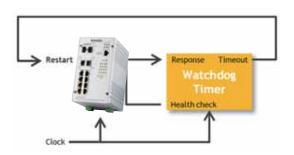
Large Surveillance Network Management

Easily discover, display and manage up to 1024 network devices in a large surveillance project. Advanced user-defined event warning and performance monitoring help administrators quickly address issues.



Self Health Check Self Healing

A built-in hardware watchdog timer checks the realtime status of the switch itself. If the switch halts or does not respond, the watchdog restarts the switch automatically to recover the failure in a short time.



JetNet 5310G

Specification

Technology

Standard:

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 802.3af Power over Ethernet

IEEE 802.3at High power Power over Ethernet

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: Store and Forward with 32Gbps Switch Fabric System Throughput: 8.3Mega packet per second

Transfer packet size: up to 1522 bytes (double VLAN tag)

MAC Address: 8K

Transfer performance: 14,880pps for Ethernet and 148,800 pps for Fast Ethernet, 1488,100 pps for Gigabit Environment Monitoring: Embedded board-level thermal

detector for system temperature monitoring Embedded hardware based watch-dog timer

System Management

Configuration and monitoring interface: IPv6, Telnet, RS-232 console, Web, SNMP, Trap and SMTP interface. Telnet & Console: Cisco like command line interface

with maximum 4 sessions; telnet supports SSH

SNMP: v1, v2c, V3, SNMP trap and RMON 1,2,3,9; max 4

trap servers

SNMP MIB: MIB II, Bridge MIB, Ethernet-like MIB, VLAN

MIB, IGMP MIB, Korenix Private MIB

Korenix Utility: Supports Korenix View and Korenix NMS with IEEE 802.1AB LLDP for device and auto-topology discovery

Network Time Protocol: Supports NTP protocol with daylight saving time and localized time sync function.

Management IP Security: IP address security to prevent unauthorized access

E-mail Warning: 4 emails with server authentication System Log: Local or remote server with authentication

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

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: per port 4 priority queues

Traffic Prioritize: Weighted fair queuing (WRR) and Strict Priority scheme by 802.1p CoS tag or IPv4 ToS/ DiffServ IGMP Snooping: IGMP Snooping v1/v2c /v3 and IGMP Query mode; support unknown multicasting drop/flooding/

forward to router port

Rate Control: Ingress/Egress filtering for Broadcast,

Multicast, Unknown DA or All packets

Port Mirroring: traffic monitoring on selected ports
Port Security: 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

Power over Ethernet

PoE Standards: IEEE 802.3af / IEEE 802.3at

PoE Operating Mode: Auto mode: Auto detects and powering by IEEE 802.3af, IEEE 802.3at 2-event / LLDP

Forced mode: User configured power consumption without detection, classification

PoE Powering Pins: Alternative A: V+(3,6) V-(1,2)
PoE Capability: 802.3af: 15.4w/port, 802.3at:30w/port
PoE System Power Budget: 120W @ 75°C, 95% Humidity,
DC 48V power input

Power Budget Control: Port-based system power budget control with first plug-in high priority mechanism

Network Redundancy

Multiple Super Ring (MSR[™]): New generation Korenix Ring Redundancy Technology, Includes Rapid Super Ring, Super Chain, Rapid Dual Homing, TrunkRing[™], MultiRing[™] and backward compatible with legacy Super Ring[™] Rapid Super Ring: 5ms (Best case) failover time for Fast

Ethernet, and zero second for restoration

Rapid Dual Homing (RDH™): Multiple uplink paths to one or multiple upper switch

TrunkRing™: Integrate port aggregation function in ring path to get higher throughput

MultiRing[™]: up to 4 100M rings and 1 Gigabit ring

Rapid Spanning Tree: STP, RSTP, MSTP

Interface

Enclosure Port: 10/100Mbps PSE port: 8 x RJ-45

Gigabit Ethernet port: 2 x RJ-45

100Mbps / 1000Mbps Fiber port : 2 x SFP Socket for SFP fiber transceiver with Hot-swappable and D.D.M. functions

Console port: 1 x RJ-45 for system configuration

Digital Input / Relay Output port: 4-Pin removable terminal

block connector

Power input: 4-Pin removable terminal block connector Cables: 100 Base-TX/1000 Base-T: UTP/STP/FTP Cat.5

cable, EIA/TIA-568B 100-ohm (100m)

Digital Input: (Hi): DC 11V~30V (Low): DC 10V~0V; Supports

sink type signal input with photo-coupler isolation Relay Output: Dry Relay output: 0.5A / DC 24V. Supports

Multiple Events Binding trigger function.

LED Indicators: Power: Green On (System power applied)

D.I.: Green On (digital signal high level is detected)

D.O.: Red On. (relay active form a close circuit)

Sys: Green On (System Ready), Blinking (firmware upgrade) R.S. (Ring status): Green on (Ring normal) / Blinking (Ring port configure error), Yellow on (Ring abnormal) / Blinking (device's ring port failed)

LNK (Link): Green on, ACT (Active): Green Blinking
PoE: Yellow on (PoE powering) / Blinking (PoE Abnormal)

Power Requirements

System power inquire: Input Range: DC 46-57V; Inrush current: 64A / DC 46V input, 76.4A / DC 57V input

Power system type: Passive power source Power Consumption: 15W without PD loading

Mechanical

Installation: DIN-Rail mounting

Case material: Steel with aluminum heat-dissipate panel

Ingress Protection IP30 Dimension (mm):

95 (W) x 127(D) x 160 (H) - w/o DIN Rail Clip 95 (W) x 136.2(D) x 160 (H) - w/ DIN Rail Clip

Weight: 1.28Kg
Environmental

Operating Temperature: -40 \sim 75°C: 120Watts Operating Humidity: 0% \sim 95%, non-condensing Storage Temperature: -40 \sim 85°C, 0% \sim 90% Humidity Hi-Pot: DC 2.25KV for power to chassis ground, Ethernet port to chassis ground

Regulatory Approvals

Safety: UL 60950-1, IEC 60950-1

EMC: IEC/EN61000-6-2, IEC/EN61000-6-4 Heavy Industrial

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, IEC/EN6100-4-8, IEC/EN6100-4-8, IEC/EN6100-4-8, IEC/EN61000-4-8, IEC/

EN61000-4-9

Warranty: Global 5 years



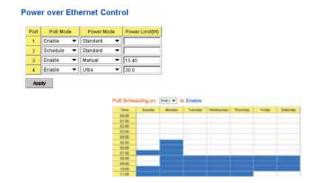
Industrial 6-port Managed PoE Switch w/ 4-port PoE

JetNet 4706 JetNet 4706f

- 4-port PoE, 25W per port, 80W in total
- Two 10/100TX Fast Ethernet links (JetNet 4706)
- Two 100FX SC fiber links (JetNet 4706f)
- LPLD for PD keep alive checking and auto resets if PD fails
- PoE schedule powering by hour/weekly basis
- Multiple Super Ring, failover < 5ms, restoration = 0ms
- Optimized IGMP Snooping for quality video multicasting
- Port-based VLAN isolates video and data traffic by port
- Watchdog timer for system auto-reset
- IP31 aluminum housing protection
- Fanless, -40~60°C wide operating temperature range

Simple And Powerful

Supports IEEE 802.3af 15.4W standard PoE, Ultra mode with 25W limitation, or Forced Powering mode to turn on non-standard PoE devices that cannot be detected as valid standard PDs.



PD Auto Failure Recovery

Checks the live status of PD. Once any PD fails, JetNet 4706 sends a warning to the administrator immediately by email, SNMP trap, relay alarm, and restarts the PoE port to recover the PD. This enhances the reliability and reduces the maintenance effort.



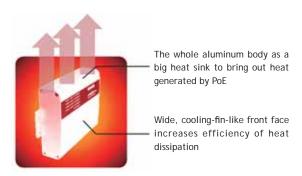
Reliable and Quality Video Multicasting

Combining the optimized IGMP snooping, portbased VLAN, and MSR redundant ring technology, JetNet 4706 isolates the video stream from control data, and transmits the packets with quality and reliability.



Aluminum Body Heat Sink

The thermal conductivity of aluminum is 8 times better than steel. By attaching the internal heat generating parts directly to the aluminum body, JetNet 4706 ensures long-term, reliable PoE operation in high temperatures.



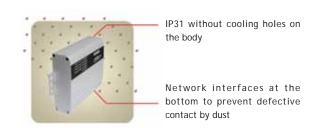
Self Health Check Self Healing

A built-in hardware watchdog timer checks the realtime status of the switch itself. If the switch halts or does not respond, the watchdog restarts the switch automatically to recover the failure in a short time.



Survives In Dusty Environments

By cooling through the whole body heat sink, JetNet 4706 is one of the few IP31 PoE switches without any cooling holes, which outstandingly protects itself from environmental drops, dirt and dust, especially in tunnels, mines and other harsh environments.



JetNet 4706

Specification

Technology

Standard:

IEEE 802.3 10Base-T IEEE 802.3u 100Base-TX

IEEE 802.1p Class of Service

IEEE 802.3af Power Over Ethernet(PoE)

IEEE 802.3 Flow Control and Back-pressure

IEEE 802.1d Spanning Tree

IEEE 802.1w Rapid Spanning Tree

IEEE 802.1AB Link Layer Discovery Protocol (LLDP)

Performance

Switch Technology:

Store and Forward Technology with 3.2Gbps wire-speed

non-blocking Switch Fabric

System Throughput: 1.785Mpps

MAC Address: 2000

Packet Buffer: Embedded 1Mbits shared buffer

Transfer performance: 14,880pps for Ethernet and 148,800

for Fast Ethernet and transfer packet size from 64 to

1522Bytes

PoE Technology: End-Span wiring architecture

PD classification detection, class ID 0-3 follow IEEE802.3af standard, and 25W High power deliver procedures for class ID 4

Pin assignment: V+ (RJ-45 Pin 4,5), V- (RJ-45 Pin 7,8),

TXD (RJ-45 Pin 1,2), RXD (RJ-45 Pin 3,6)

Protection: Provides over-current protection by PD class ID

Management

Management interface: SNMP v1, v2c and v3, Web browser,

Korenix View, Korenix NMS and CLI Management

Management Security: 4 entries for web, telnet, SNMP

management security

SNMP Trap: Provides Cold start, Warm start, Port event, Power event, Authentication failure, PoE trap and Korenix

private trap for proprietary functions

SNMP MIB: RFC 1213 MIBII, RFC 1493 Bridge MIB, RFC 1757

RMON MIB, RFC 2674 VLAN MIB, RFC 1643 Ethernet

like MIB, RFC1215 Trap MIB, RFC 3621 Power Ethernet 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

Firmware upgrade: TFTP, HTTP and Korenix View System Log: 1000 system entries for system or remote

log server

Event Alarm Relay: 1A@24V Dry Relay Contact output for

port link down, PoE and System power events.

Quality of Service: Quality of Service determined by

port, Tag and IPv4 Type of Service

Class of Service: IEEE802.1p class of service, with 4

priority queues

DHCP: Supports DHCP Cilent and DHCP Server function with specified IP exclusion and MAC binding function Timer: Supports Network Time Protocol (NTP) to

synchronize time from NTP Server

VLAN: Port based VLAN

IGMP Snooping: Supports IGMP Snooping v1/v2/v3 and

IGMP Query v1/v2

Network Redundancy: Supports Rapid Super Ring function for network redundancy with 5ms recovery time in 100Mbps Fast Ethernet connection (best case) and zero second restoration time. To inter-operate with other higher level switches, JetNet 4706 provides Dual Homing

II technology to conform with RSTP protocol.

JetNet 4706 also comforms with IEEE802.1D 2004 edition

for RSTP and STP standard protocols

PoE Control: Supports user configuration for PoE

enable, disable, or based on schedule

12.9W@DC 48V input or 25W @ DC57V input

Power Limit Control: The control mode supports IEEE802.3af Standard, Manual and Ultra mode for 25W Hi-power or forced powering mode for Non-standard PD. The maximum DC power delivery on each PoE port is

PoE Schedule Control: Each PoE port can be activated and powered scheduling with different rule. It supports

weekly schedule on hourly basis

IP Security: IP security to prevent unauthorized access

Interface

Number of Ports:

4 x 10/100Base-TX with PoE Injector

2 x 10/100Base-TX ports

1 x RS-232 Console

Connectors:

10/100TX: RJ-45

Console: RJ-45

Power & Relay Alarm: 6-pin Terminal Block

Cable:

100Base-TX: 4-pair UTP/STP, Cat.5e/Cat.6 cable,

EIA/TIA 568B 100-ohm(100m)

Reset Button: For system reboot and factory default

setting

Diagnostic LED:

Power LED: Power 1/Power 2 (Green)

Fast Ethernet Port 1~4: Link(Green)/Activity (Green

blinking),

PoE Powering (Yellow on), PoE Detect (Yellow blinking),

PoE Disable (Yellow off), PoE Powering failure (Yellow fast

blinking)

Fast Ethernet Port 5,6: Link(Green) / Activity (Green

blinking)

Alarm (Red): Port link down or power failure occurred

Power Requirements

System Power: Support positive or negative power system with DC 48-57V power input range and polarity reverse

protection

Power Consumption:

8 Watts @ 50V (Maximum) without PD loading

Mechanical

Installation: DIN-Rail mount or desktop or wall mount

Case: IP31 grade aluminum metal case

Dimension: 46.5 mm (H) x 147.8 mm (W) x 136 mm (D)

without DIN-rail clip

Weight:

0.72 kg with package

0.65 kg without package

Environmental

Operating Temperature: -40 ~ 60°C

Operating Humidity: 0% ~ 95%, (non-condensing)

Storage Temperature: -40 ~ 80°C

Storage Humidity: 5%~ 95%, (non-condensing)

Regulatory Approvals

Safety: UL60950-1, CSA C22-2 No.60950-1-03

EMI: FCC Class A; CE/EN55022:2003 Class A;

CE/EN61000-3-2:2001 Harmonic Test;

CE/EN61000-3-3:1995 Flicker test

EMS:

EN61000-4-2:1998, ESD

EN61000-4-3:1998, RS

EN61000-4-4:1995, EFT

EN61000-4-5:1995, Surge

EN61000-4-6:1996, CS

Shock: IEC60068-2-27

Vibration: IEC60068-2-6

Free Fall: IEC60068-2-32

MTBF: 324,345 Hours, MIL-HDBK-217F GB standard

JetNet 4706f

Specification

Technology Standard:

IEEE 802.3 10Base-T

IEEE 802.3u 100Base-TX/FX

IEEE 802.1p Class of Service

IEEE 802.3af Power Over Ethernet (PoE)

IEEE 802.1d Spanning Tree

IEEE 802.1w Rapid Spanning Tree

IEEE 802.1AB Link Layer Discovery Protocol (LLDP)

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non-blocking Switch Fabric

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TXD (RJ-45 Pin 1,2), RXD (RJ-45 Pin 3,6)

Protection: Provides over-current protection by PD class ID

Management

Management interface: SNMP v1, v2c and v3, Web browser,

Korenix View, Korenix NMS, and CLI Management

Management Security: 4 entries for web, telnet, SNMP

management security

SNMP MIB: RFC 1213 MIBII, RFC 1493 Bridge MIB, RFC 1757 RMON MIB, RFC 2674 VLAN MIB, RFC 1643 Ethernet like MIB, RFC1215 Trap MIB, RFC 3621 Power Ethernet MIB, Korenix

Private MIB

SNMP Trap: Provides Cold start, Warm start, Port event, Power event, Authentication failure, PoE trap and Korenix private

trap for proprietary functions

Korenix Utility: Supports Korenix View and Korenix NMS with IEEE 802.1AB Link Layer Discovery Protocol for device and

link auto-topology discovery

Firmware upgrade: TFTP, HTTP and Korenix View System Log: 1000 system entries for system or remote

log server

Event Alarm Relay: 1A @24V Dry Relay Contact output for port link down, PoE and System power events. Quality of Service: Quality of Service determined by

port, Tag and IPv4 Type of Service

Class of Service: IEEE802.1p class of service, with 4

priority queues

DHCP: Supports DHCP Cilent and DHCP Server function with specified IP exclusion and MAC binding function Timer: Supports Network Time Protocol (NTP) to

synchronize time from NTP Server

VLAN: Port based VLAN

IGMP: Supports IGMP Snooping v1/v2/v3 and IGMP Query

v1/v2

Network Redundancy: Supports Multiple Super Ring function for network redundancy with 5ms recovery time in 100Mbps Fast Ethernet connection (best case) and zero second restoration time. To inter-operate with other higher-level switches, JetNet 4706f provids RapidDual Homing II technology to conform with RSTP protocol. JetNet 4706f also conforms with IEEE802.1D 2004 edition

for RSTP and STP standard protocols

PoE Port Control: Supports user configuration for PoE

enable disable, or based on schedule

Power Limit Control: The control mode supports IEEE802.3af standard, Manual and Ultra mode for 25W Hi-power or forced powering mode for Non-standard PD. The maximum DC power delivery on each PoE port is

12.9W@DC 48V input or 25W @ DC57V input

PoE Scheduling Control: Each PoE port can be activated and powered scheduling with different rule. It supports weekly scheduling by hourly basis.

LPLD function: The Link Partner Line Detect function (LPLD) is available on PoE ports. With the LPLD function, the PoE port can keep attached PD alive

IP Security: IP security to prevent unauthorized access

Interface

Number of Ports: 4 x 10/100Base-TX with PoE Injector

2 x 100Base-FX ports 1 x RS-232 Console

Connectors: 10/100TX: RJ-45

100Base-FX: SC Console: RJ-45

Power & Relay Alarm: 6-pin Terminal Block

Power Consumption:

8 Watts @ 50V (Maximum) without PD loading

Cable:

10Base-T: 4-pair UTP/STP Cat. 3, 4, 5 cable, EIA/TIA 568B

100-ohm(100m)

100Base-TX: 4-pair UTP/STP Cat. 5 cable, EIA/TIA 568B

100-ohm(100m)

100Base-FX: Multi-mode 50~62.5/125um; Single-mode

8~10/125um

Fiber Transceiver:

JetNet4706f-m, Multi-mode: 2KM max, distance

Wave-length: 1310nm Min Tx Power:-19dBm Max Tx Power:-14dBm Min Rx Sensitivity:-30dBm

Link budget:11dBm JetNet 4706f-s, Single-mode: 30KM max. distance

Wave-length:1310nm Max Tx Power:-8dBm Min Tx Power:-15dBm Min Rx Sensitivity:-34dBm

Link budget:19dBm

Reset Button: For system reboot and factory default setting

Diagnostic LED:

Power LED: Power 1/Power 2 (Green) Fast Ethernet Port 1~4: Link(Green)/

Activity (Green blinking),

PoE Powering (Yellow on), PoE Detect (Yellow blinking), PoE Disable (Yellow off), PoE Powering failure (Yellow fast

blinking)

Fast Ethernet Port 5,6: Link(Green)/Activity (Green blinking)
Alarm (Red): Port link down or power failure occurred

Power Requirements

System Power: Support positive or negative power system with DC 48~57V power input range and polarity reverse

protection

Power Consumption:

8 Watts @ 50V (Maximum) without PD loading

Mechanical

Installation: DIN-Rail mount or desktop or wall mount

Case: IP31 grade aluminum metal case

Dimension:

46.5 mm (H) x 174.8 mm (W) x 136 mm (D)

without DIN-rail mount

Weight:

0.72 kg with package

0.65 kg without package

Environmental

Operating Temperature: -40 ~ 60°C

Operating Humidity: 0% ~ 95%, (non-condensing)

Storage Temperature: -40 ~ 80°C

Storage Humidity: 5%~ 95%, (non-condensing)

Regulatory Approvals

Safety: UL/cUL60950-1, CSA C22.2 No.60950-1-03

EMI:

FCC Class A; CE/EN55022:2003 Class A CE/EN61000-3-2:2001 Harmonic Test CE/EN61000-3-3:1995 Flicker test

EMS:

EN61000-4-2:1998, ESD EN61000-4-3:1998, RS EN61000-4-4:1995, EFT EN61000-4-5:1995

EN61000-4-6:1996 Shock: IEC60068-2-27 Vibration: IEC60068-2-6 Free Fall: IEC60068-2-32

MTBF: 272,306 Hours, MIL-HDBK-217F GB standard

FULL GIGABIT POE SOLUTION



Industrial 12~36V Full Gigabit High Power PoE Switch w/ 4-port PoE

JetNet 3906G

- Compact, full gigabit non-blocking PoE switch
- 12~36V power input boost to 57V 802.3at, 48V 802.3af PoE
- 4 gigabit PoE ports, 30W per port, up to 110W in total
- 11000 TX and 1100/1000 SFP fiber ports
- 9KB jumbo frame, QoS enhance video transmission
- User configurable multi-event alarm relay out
- IP30 rugged steel housing
- Fanless, -40~75°C wide operating temperature range

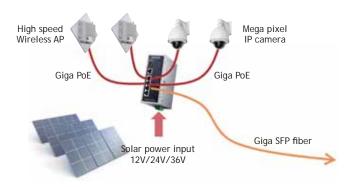
Full Gigabit Bus Surveillance

With its 12~36VDC vehicle power input, high power PoE capability and full gigabit switching, JetNet 3906G enables mega pixel cameras for advanced surveillance on busses.

JetNet 3906G

Solar Powered Wireless and Surveillance

Transfers 12V or 24V solar power input to high power PoE output for longer, faster WiMax and Wifi AP. The SFP fiber connects the field side AP or camera which can be far away from the wired backbone network.



JetNet 3906G

Specification

Technology

Standard:

IEEE 802.3 10Base-T IEEE 802.3u 100Base-TX IEEE 802.3u 100Base-FX IEEE 802.3ab 1000Base-T

IEEE 802.3z Gigabit Ethernet Fiber IEEE 802.3af Power over Ethernet

IEEE 802.3at High Power PoE with 2-Event classification

IEEE 802.3x Flow control and back-pressure

Performance

Switching: Store and Forward technology

Switch MAC Table: 2K Packet Buffer: 1Mbits

Forwarding frame size: 64bytes - 9Kbytes jumbo frame Transfer performance: 10Mbps -14880 PPS; 100Mbps-

148800 PPS; 1000Mbps -1488000 PPS

Interface

Gigabit Ethernet: 5 RJ-45 Auto MDI/MDI-X, auto

negotiation

Cable:

100Base-TX: 2-pairs EIA/TIA 568-B UTP/STP Cat.5e/Cat.6 1000Base-T: 4-pairs EIA/TIA 568-B UTP/STP Cat.5e/Cat.6 SFP Socket: 1 x SFP socket for Gigabit 1000Mbps SFP or Fast Ethernet 100Mbps SFP transceiver. Manual selected

and activate by DIP-Switch and power reset Power: 6-pin removable terminal block connector.

Alarm relay output: 1 dry relay output in 6-pin removable

terminal block connector

Alarm control: Ethernet port (1~6) link down and power

event alarm, configure by 6-pin DIP switch

Relay output ability: Dry Output with 0.5 A current forwarding ability with DC 24V external power system Relay output Type: Normal state (Open/Alarm off)

Abnormal state (Close/Alarm on)

Diagnostic LEDs: System: Power 1 (Green)/ Power 2

(Green), Alarm Active (Red)

Ethernet Link/Activity (Green on/ Green Blinking), PoE powering (Amber on), SFP port: Link (Green on)

Power over Ethernet

PoE interface: Gigabit Ethernet port 1 ~ 4 Powering pins: Alternative A: V+ (3,6) V- (1,2) PoE Mode: IEEE 802.3af and IEEE 802.3at 2-Event PoE Capacity: 30W PoE/port, System Max Output:

DC24V, 90W/ 75°C /95% Humidity DC24V, 110W/ 65°C /95% Humidity DC12V, 60W/ 70°C /95% Humidity

Power Requirements

System power: Redundant DC 12V or DC 24V (12~36VDC)

Polarity Protection and Over-Current protection

System power-on inrush current: 7.6A / DC 12V, 6.1A/ DC 24V

Consumption: 10 W/24V at 75°C without PoE Loading

Mechanical

Installation: EN50022 DIN rail

Case: IP30 Steel Housing with Ingress protection

Dimension(mm): 144(H) x 55(W) x 105(D) w/o mounting kit

Weight: 0.8 Kg without package

Environment

Operating temperature: -40~75°C Operating Humidity: 0~95% Storage temperature: -40~80°C Storage humidity: 0~95%

Regulatory & Approvals

Electrical Safety: Compliance to IEC 60950-1, UL 60950-1 **EMC/ EMI:** IEC/EN 61000-6-4, CISPR 16-1-2/-2-1/-2-3, CISPR

22, FCC Class A, CE

EMC/EMS: IEC/EN61000-6-2, IEC/EN61000-4-2, IEC/EN61000-4-3, IEC/EN61000-4-4, IEC/EN61000-4-5, IEC/EN

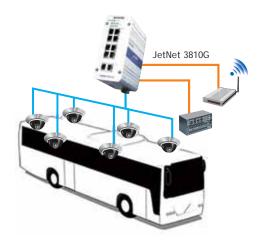
61000-4-6, IEC/EN 61000-4-8 Vibration: IEC/EN 60068-2-6, Shock: IEC /EN 60068-2-27





JetNet 3810G JetNet 3806G

- 12~24VDC vehicle power input for 802.3af 48V PoE
- 15.4W per port and up to 65W (JetNet 3810G), 60W (JetNet 3806G)
- 8-port PoE (JetNet 3810G), 4-port PoE (JetNet 3806G)
- 2 Gigabit Ethernet uplinks for NVR and wireless module
- Supports QoS for quality video transmission
- IP31 thick, rugged aluminum housing
- Durable, corrosion resistance and rust resistance
- Excellent cooling enhances stability in extreme temperatures
- e-mark certificate for vehicle applications
- Fanless, -25~60°C wide operating temperature range



Ideal for Bus Surveillance

e-Mark approval and rugged mechanics sustains IEC60068-2-27 50g shock, IEC60068-2-6 5g vibration, which ensure long-term, reliable operation on moving vehicles.

12~24VDC Vehicle PoE

Korenix's patented design that embeds a power booster in the switch and boosts 12-24VDC power of bus to standard 48V PoE. This eliminates the cost of a power adaptor and enhances system reliability.

Gigabit High Speed Transmission

Two gigabit uplinks can be used to connect to NVR servers and wireless modules on the bus. Videos are stored in the server or sent to the central station by the high-speed, real-time wireless communication.

JetNet 3810G

Specification

Technology

Standard:

IEEE 802.3 10Base-T Ethernet

IEEE 802.3u 100Base-TX Fast Ethernet

IEEE 802.3ab 1000Base-T

IEEE802.3x Flow Control and Back-pressure

IEEE 802.3af Power Over Ethernet IEEE 802.1p Class of Service

Performance

Switch Technology: Store and Forward Technology with

32Gbps Switch Fabric

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

Gigabit Ethernet

Transfer packet size: 64 bytes to 1522 bytes

for untagged and tagged frames

MAC Address: 8k
Packet Buffer: 1 Mbits
Power over Ethernet
PoE interface: Ethernet port 1~8
PoE standard: IEEE 802.3af

PoE System Power Budget: 65W @ 60°C, DC24V PoE technology: Alternative B: V+(4,5) V-(7,8)

Interface

Ethernet RJ-45: 10/100Mbps RJ-45 x8 with Auto MDI/MDI-X, auto negotiation, PoE port #1-#8 Alternative-B mode

powering

Gigabit Ethernet RJ-45: 10/100/1000Mbps RJ-45 x2 with

Auto MDI/MDI-X, auto negotiation

Cables:

10 Base-T: 2-pair UTP/STP Cat. 3,4,5 cable (100m)

100 Base-Tx: 2-pair UTP/STP Cat. 5 cable (100m) 1000 Base-T: 4-pair UTP/STP Cat. 5 cable (100m)

10Base-T: 4-pair UTP/STP Cat 3,4,5, 100ohm (100m) for PoE 100Base-Tx: 4-pair UTP/STP Cat.5, 100ohm (100m) for PoE

LED per unit: PoE (Green) x8 Fault alarm (Red) x1

Power on/ off (Green on/ off) x1

LED on Ethernet port:

Link/ Activity (Green on/ blinking)

Gigabit copper: Link/Act (Green on/ Blinking)
Full duplex/ Collision (Yellow on/ Blinking)
Gigabit copper: Speed (Yellow Blinking)

Relay Alarm: Dry Relay output with 1A@24V ability

Power Requirements

Power: 12~24V

Power Consumption: 30W without PoE, 95W with PoE

Mechanical

Construction: Rugged Aluminum Alloy Chassis

Mounting: DIN-Rail mount

Dimension:

66(W) x 149(H) x 131.2(D) mm (with Din-rail clip)

Net weight: 1.05kg Environment

Operating Temp: $-13 \sim 140^{\circ}F(-25 \sim 60^{\circ}C)$, 5 to 95% RH Storage Temp: $-40 \sim 176^{\circ}C(-40 \sim 80^{\circ}C)$, 5 to 95% RH

EMI: FCC class A, CE/EN55022 Class A

EMC: EN61000-4-2, EN61000-4-3, EN61000-4-4, EN61000-4-5,

EN61000-4-6, EN61000-4-8, EN61000-4-11 Shock: IEC60068-2-27 (50g peak acceleration)

Vibration: IEC60068-2-6 (5g/5~500Hz/random operation)

JetNet 3806G

Specification

Technology Standard:

IEEE 802.3 10Base-T Ethernet

IEEE 802.3u 100Base-TX Fast Ethernet

IEEE 802.3ab 1000Base-T

IEEE802.3x Flow Control and Back-pressure

IEEE 802.3af Power Over Ethernet

IEEE 802.1p Class of Service

Performance

Switch Technology: Store and Forward Technology with

32Gbps Switch Fabric

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

Gigabit Ethernet

Transfer packet size: IEEE 64 bytes to 1522 bytes

(with untagged and tagged frame)

MAC Address: 8k
Packet Buffer: 1 Mbits
Power over Ethernet

PoE interface: Ethernet port 1~4

PoE standard: IEEE 802.3af

PoE System Power Budget: 60W @ 60°C, DC24V PoE technology: Alternative B: V+(4,5) V-(7,8)

Interface

Ethernet RJ-45: 10/100Mbps RJ-45 x4 with Auto MDI/ MDI-X, auto negotiation, PoE port #1-#4 Alternative-B mode

Gigabit Ethernet RJ-45: 10/100/1000Mbps RJ-45 x2 with

Auto MDI/MDI-X, auto negotiation

Cables:

powering

10 Base-T: 2-pair UTP/STP Cat. 3,4,5 cable (100m)

100 Base-Tx: 2-pair UTP/STP Cat. 5 cable (100m) 1000 Base-T: 4-pair UTP/STP Cat. 5 cable (100m)

10Base-T: 4-pair UTP/STP Cat 3,4,5, 100ohm (100m) for PoE 100Base-Tx: 4-pair UTP/STP Cat.5, 100ohm (100m) for PoE

Diagnostic LED: PoE (Green) x4 Fault alarm (Red) x1

Power on/off (Green on/off) x1

LED on Ethernet port:

Link/ Activity (Green on/ blinking)

Gigabit copper: Link/Act (Green on/ Blinking)
Full duplex/ Collision (Yellow on/ Blinking)
Gigabit copper: Speed (Yellow Blinking)

Relay Alarm: Dry Relay output with 1A@24V ability

Power Requirements

Power: 12~24V

Power Consumption: 25W without PoE, 80W with PoE

Mechanical

Construction: Rugged Aluminum Alloy Chassis

Mounting: DIN-Rail mount

Dimension:

66(W) x 149(H) x 131.2(D) mm (with Din-rail clip)

Net weight: 1.05 kg Environment

Operating Temp: $-13 \sim 140^{\circ}F(-25 \sim 60^{\circ}C)$, 5 to 95% RH Storage Temp: $-40 \sim 176^{\circ}C(-40 \sim 80^{\circ}C)$, 5 to 95% RH

EMI: FCC class A, CE/EN55022 Class A

EMC: EN61000-4-2, EN61000-4-3, EN61000-4-4, EN61000-4-5,

EN61000-4-6, EN61000-4-8, EN61000-4-11 Shock: IEC60068-2-27 (50g peak acceleration)

Vibration: IEC60068-2-6 (5g/5~500Hz/random operation)



Industrial 12~24V Gigabit Booster PoE Switch w/ 8-port PoE

JetNet 3810Gf JetNet 3810f

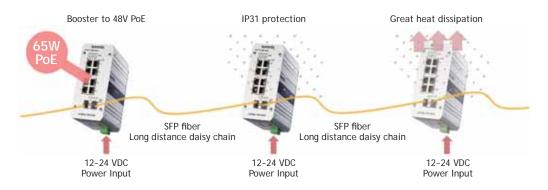
- 12~24VDC power booster to 802.3af 48V PoE
- 8-port PoE, 15.4W per port and up to 65W in total
- Two gigabit SFP ports for flexible fiber installation (JetNet 3810Gf)
- Two 100Mbps SFP ports for flexible fiber installation (JetNet 3810f)
- Supports QoS for quality video transmission
- IP31 thick, rugged aluminum housing stronger than plastic and steel
- Durable, corrosion resistance and rust resistance
- Excellent cooling enhances stability in extreme temperatures
- Fanless, -25~60°C wide operating temperature range

12~24V Power Input Booster To 48V PoE

Korenix-patented DC 12-24V to 48V PoE boost technology is the best solution for industrial applications where DC 48V power supply is not available. The PoE switch eliminates an additional power adapter and makes the system more reliable.

Long Distance and Outdoor Installation

Supports two SFP fiber uplinks to carry data long distances. IP31 housing offers good protection in outdoor environments. By attaching the internal heat generating parts to the aluminum body, the switch ensures reliable PoE operating in high temperatures.



JetNet 3810Gf

Specification

Technology Standard:

IEEE 802.3 10Base-T Ethernet

IEEE 802.3u 100Base-TX Fast Ethernet

IEEE802.3u 100 Base- Fx (JetNet 3810f)

IEEE802.3z 1000 Base-Fx (JetNet 3810Gf)

IEEE802.3x Flow Control and Back-pressure

IEEE 802.3af Power Over Ethernet

IEEE 802.1p Class of Service

Performance

Switch Technology: Store and Forward Technology with

32Gbps Switch Fabric

System Throughput: 14,880pps for 10M Ethernet,

148,800pps for 100M Fast Ethernet, 1,488,100pps for Gigabit

Ethernet

Transfer packet size: 64 bytes to 1522 bytes

for untagged and tagged frames

MAC Address: 8k
Packet Buffer: 1 Mbits
Power over Ethernet
PoE interface: Ethernet port 1~8

PoE standard: IEEE 802.3af

PoE System Power Budget: 65W @ 60°C, DC24V PoE technology: Alternative B: V+(4,5) V-(7,8)

Interface

Ethernet RJ-45: 10/100Mbps RJ-45 x8 with Auto MDI/MDI-X, auto negotiation, PoE port #1~#8 Alternative-B mode

powering

SFP Socket: SFP socket x2 for Gigabit 1000Mbps SFP

Cables:

10Base-T: 4-pair UTP/STP Cat 3,4,5, 100ohm (100m) for PoE 100Base-Tx: 4-pair UTP/STP Cat.5, 100ohm (100m) for PoE

LED per unit: PoE (Green) x8 Fault alarm (Red) x1

Power on/ off (Green on/ off) x1

Gigabit fiber: Link/Act (Green on/ Blinking) x2 Gigabit fiber: Speed (Yellow Blinking) x2

LED on Ethernet port:

Link/ Activity (Green on/ blinking)

Full duplex/ Collision (Yellow on/ Blinking)

Relay Alarm: Dry Relay output with 1A@24V ability

Power Requirements

Power: 12~24V

Power Consumption: 30W without PoE, 95W with PoE

Mechanical

Construction: Rugged Aluminum Alloy Chassis

Mounting: DIN-Rail mount

Dimension:

66(W) x 149(H) x 131.2(D) mm (with Din-rail clip)

Net weight: 1.05kg Environment

Operating Temp: $-13 \sim 140^{\circ}F(-25 \sim 60^{\circ}C)$, 5 to 95% RH Storage Temp: $-40 \sim 176^{\circ}C(-40 \sim 80^{\circ}C)$, 5 to 95% RH

EMI: FCC class A, CE/EN55022 Class A

EMC: EN61000-4-2, EN61000-4-3, EN61000-4-4, EN61000-4-

5, EN61000-4-6, EN61000-4-8, EN61000-4-11 **Shock**: IEC60068-2-27 (50g peak acceleration)

Vibration: IEC60068-2-6 (5g/5~500Hz/random operation)

JetNet 3810f

Specification

Technology

Standard:

IEEE 802.3 10Base-T Ethernet

IEEE 802.3u 100Base-TX Fast Ethernet

IEEE802.3u 100 Base- Fx (JetNet 3810f)

IEEE802.3z 1000 Base-Fx (JetNet 3810Gf)

IEEE802.3x Flow Control and Back-pressure

IEEE 802.3af Power Over Ethernet

IEEE 802.1p Class of Service

Performance

Switch Technology: Store and Forward Technology with

32Gbps Switch Fabric

System Throughput: 14,880pps for 10M Ethernet,

148,800pps for 100M Fast Ethernet, 1,488,100pps for Gigabit

Ethernet

Transfer packet size: 64 bytes to 1522 bytes

for untagged and tagged frames

MAC Address: 8k
Packet Buffer: 1 Mbits

Power over Ethernet

PoE interface: Ethernet port 1~8

PoE standard: IEEE 802.3af

PoE System Power Budget: $65W @ 60^{\circ}C$, DC24V

PoE technology: Alternative B: V+(4,5) V-(7,8)

Interface

Ethernet RJ-45: 10/100Mbps RJ-45 x8 with Auto MDI/

MDI-X, auto negotiation, PoE port #1~#8 Alternative-B mode

powering

SFP Socket: SFP socket x2 Fast Ethernet 100Mbps SFP

Cables:

10Base-T: 4-pair UTP/STP Cat 3,4,5, 100ohm (100m) for PoE

100Base-Tx: 4-pair UTP/STP Cat.5, 100ohm (100m) for PoE

LED per unit:

PoE (Green) x8

Fault alarm (Red) x1

Power on/ off (Green on/ off) x1

Gigabit fiber: Link/Act (Green on/Blinking) x2

Gigabit fiber: Speed (Yellow Blinking) x2

LED on Ethernet port:

Link/ Activity (Green on/ blinking)

Full duplex/ Collision (Yellow on/ Blinking)

Relay Alarm: Dry Relay output with 1A@24V ability

Power Requirements

Power: 12~24V

Power Consumption: 30W without PoE, 95W with PoE

Mechanical

Construction: Rugged Aluminum Alloy Chassis

Mounting: DIN-Rail mount

Dimension:

66(W) x 149(H) x 131.2(D) mm (with Din-rail clip)

Net weight: 1.05kg

Environment

Operating Temp: $-13 \sim 140^{\circ} F(-25 \sim 60^{\circ} C)$, 5 to 95% RH

Storage Temp: $-40 \sim 176^{\circ}\text{C}(-40 \sim 80^{\circ}\text{C})$, 5 to 95% RH

EMI: FCC class A, CE/EN55022 Class A

EMC: EN61000-4-2, EN61000-4-3, EN61000-4-4, EN61000-4-

5, EN61000-4-6, EN61000-4-8, EN61000-4-11 **Shock**: IEC60068-2-27 (50g peak acceleration)

Vibration: IEC60068-2-6 (5g/5~500Hz/random operation)



Specification

Technology

Standard:

IEEE 802.3 10Base-T Ethernet

IEEE 802.3u 100Base-TX Fast Ethernet

IEEE 802.3ab 1000Base-T

IEEE802.3x Flow Control and Back-pressure

IEEE 802.3af Power Over Ethernet IEEE 802.1p Class of Service

Performance

Switch Technology: Store and Forward Technology with

32Gbps Switch Fabric

System Throughput: 14,880pps for 10M Ethernet,

148,800pps for 100M Fast Ethernet, 1,488,100pps for Gigabit

Ethernet

Transfer packet size: 64 bytes to 1522 bytes

(with untagged and tagged frames)

MAC Address: 8k
Packet Buffer: 1 Mbits
Power over Ethernet
PoE interface: Ethernet port 1~8
PoE standard: IEEE 802.3af

PoE System Power Budget: 65W @ 70°C, DC48V PoE technology: Alternative B: V+(4,5) V-(7,8)

Interface

Ethernet RJ-45: 10/100Mbps RJ-45 x8 with Auto MDI/ MDI-X, auto negotiation, PoE port #1~#8 Alternative-B mode

powering

Gigabit Ethernet RJ-45: 10/100/1000Mbps RJ-45 x2 with

Auto MDI/MDI-X, auto negotiation

Cables: 10 Base-T: 2-pair UTP/STP Cat. 3,4,5 cable (100m)

Industrial 10-port Gigabit PoE Switch w/ 8-port PoE

JetNet 3710G

- 8-port 802.3af PoE, 15.4W per port and up to 65W in total
- 2 Gigabit uplinks for megapixel video surveillance
- Supports QoS for quality video transmission
- IP31 thick, rugged aluminum housing stronger than plastic and steel
- Durable, corrosion resistance and rust resistance
- Excellent cooling enhances stability in extreme temperatures
- Fanless, -25~70°C wide operating temperature range

100 Base-Tx: 2-pair UTP/STP Cat. 5 cable (100m) 1000 Base-T: 4-pair UTP/STP Cat. 5 cable (100m)

10Base-T: 4-pair UTP/STP Cat 3,4,5, 100ohm (100m) for PoE 100Base-Tx: 4-pair UTP/STP Cat.5, 100ohm (100m) for PoE

LED per unit: PoE (Green) x8

Fault alarm (Red) x1

Power on/ off (Green on/ off) x1

LED on Ethernet port: Link/ Activity (Green on/ blinking)

Gigabit copper: Link/Act (Green on/ Blinking)
Full duplex/ Collision (Yellow on/ Blinking)
Gigabit copper: Speed (Yellow Blinking)

Relay Alarm: Dry Relay output with 1A@24V ability

Power Requirements

Power: 48V

Power Consumption: 30W without PoE, 95W with PoE

Mechanical

Construction: Rugged Aluminum Alloy Chassis

Mounting: DIN-Rail

Dimension:

66(W) x 149(H) x 131.2(D) mm (with Din-rail clip)

Net weight: 1.05kg

Environment

Operating Temp: -13 ~ 158°F(-25 ~ 70°C), 5 to 95% RH Storage Temp: -40 ~ 176°C(-40 ~ 80°C), 5 to 95% RH

EMI: FCC class A, CE/EN55022 Class A

EMC: EN61000-4-2, EN61000-4-3, EN61000-4-4, EN61000-4-5,

EN61000-4-6, EN61000-4-8, EN61000-4-11 Shock: IEC60068-2-27 (50g peak acceleration)

Vibration: IEC60068-2-6 (5g/5~500Hz/random operation)



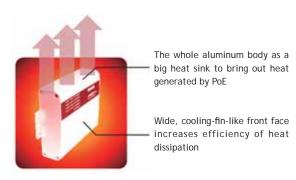
Industrial 5-port Unmanaged PoE Switch / 4-port PoE

JetNet 3705 JetNet 3705f

- 4-port 802.3af PoE, 15.4W per port
- One 100TX uplink (JetNet 3705)
- One 100FX uplink (JetNet 3705f)
- Supports QoS for quality video transmission
- Relay alarm for port failure
- IP31 thick, rugged aluminum housing stronger than plastic and steel
- Durable, corrosion resistance and rust resistance
- Excellent cooling enhances stability in extreme temperatures
- Fanless, -20~70°C wide operating temperature range
- Redundant 48VDC power input

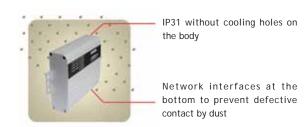
Aluminum Body Heat Sink

The thermal conductivity of aluminum is 8 times better than steel. By attaching the internal heat generating parts directly to the aluminum body, JetNet 3705 ensures long-term, reliable PoE operation in high temperatures.



Survives In Dusty Environments

By cooling through the whole body heat sink, JetNet 3705 is one of the few IP31 PoE switches without any cooling holes, which outstandingly protects itself from environmental drops, dirt and dust, especially in tunnels, mines and other harsh environments.



JetNet 3705

Specification

Technology

Standard:

IEEE802.3u 100Base-TX

IEEE802.3af Power over Ethernet

IEEE802.3x flow control

Switch Technology: Store and forward technology and

with 3.2Gbps internal switch fabric. Aggregate System Throughput: 1.49Mpps MAC Address: 1K MAC address Table

Packet Buffer: 512Kbits
Power over Ethernet port:

Port 1~4, with 15.4w full power forwarding ability RJ-45 pin assignment: TX (3,6), RX (1,2), V+ (4,5), V-(7,8)

PoE output voltage: DC 44~57V

Interface

Number of Ports: 4 x 100 Base-TX with Power over Ethernet injector ,Auto MDI/MDI-X, Auto-Negotiation

1 x 100 Base-TX uplink port

Connectors: 100 Base-TX: RJ-45

Power/Relay: 6-Pin Terminal Block

DC-Jack Cables:

100Base-TX: 4-pair UTP/STP Cat. 5 cable,

EIA/TIA-568 100-ohm(100m)
Port Alarm DIP Switch:

DIP 1~5: Enable (On) or disable (Off) port link down

alarm from port 1 to port 5

DIP 6: Enable (On) or disable (Off) power alarm.

Diagnostic LED:

Power x 3 (Green), Fault x 1(Red)

PoE x 4(Green), Link/Activity x 5 (Green on/Green

Blinking)@100Mbps

Power Requirements

System Power

Input Voltage:

48VDC dual power inputs in terminal block connection

AC /DC Power Adapter DC 48V/1.6A (option)
One DC jack for AC/DC power adapter
Reverse Polarity Protection: Present

Power Consumption: 6.5Watts without PD loading

70Watts with PD full loading

Mechanical

Installation: DIN-Rail mount or Wall Mount Case: IP31 grade aluminum metal case

Dimension: 36.9 mm (H) x 142.8 mm(W) x 111.5 mm (D)

Environmental

Operating Temperature: -20 ~70°C, -40 ~70°C (-w) Operating Humidity: 0% ~ 95%, (non-condensing)

Storage Temperature: -40 ~ 80 °C

Storage Humidity: 0%~ 95%, (non-condensing)

Regulatory Approvals

Hi-Pot: 1.2KV testing passed on port to power

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

Shock: IEC60068-2-27 Vibration: IEC60068-2-6 Free Fall: IEC60068-2-32

MTBF: 517,810 Hours, MIL-HDBK-217F GB standard

JetNet 3705f

Specification

Technology

Standard:

IEEE802.3u 100Base-TX/100Base-FX IEEE802.3af Power over Ethernet

IEEE802.3x Flow control

Switch Technology: Store and forward technology and

with 3.2Gbps internal switch fabric Aggregate System Throughput: 1.49Mpps MAC Address: 1K MAC address Table

Packet Buffer: 512Kbits
Power over Ethernet port:

Port 1~4, with 15.4w full power forwarding ability RJ-45 pin assignment: TX (3,6), RX (1,2), V+ (4,5), V- (7,8)

PoE output voltage: DC 44~57V

Interface

Number of Ports: 4 x 100 Base-TX with Power over Ethernet injector ,Auto MDI/MDI-X, Auto-Negotiation 1 x

Fast Ethernet Fiber

Connectors: 100 Base-TX: RJ-45

Fast Ethernet Fiber: SC

Power/Relay: 6-Pin Terminal Block

DC-Jack Cables:

100Base-TX: 4-pair UTP/STP Cat. 5 cable,

EIA/TIA-568B 100-ohm(100m)

Fiber port: Multi-mode (JetNet 3705-m) /

Single mode (JetNet 3705f-s) Fiber Port parameters:

Wavelength: 1310nm(Multi mode/Single mode)

Available distance: 2km(Multi-mode)/30km(Single mode)

Min. TX power:

-19 dBm(Multi-mode)/-15 dBm(Single mode)

Max. TX power:

-14 dBm(Multi-mode)/-8 dBm(Single mode)

Sensitivity: -31 dBm(Multi-mode)/-34 dBm(Single mode)

Port Alarm DIP Switch:

DIP 1-5: Enable (On) or Disable (Off)
port link down alarm from port 1 to port 5
DIP 6: Enable (On) or Disable (Off) power alarm
Diagnostic LED: Power x 3 (Green), Fault x 1(Red)
PoE x 4(Green), Link/Activity x 5 (Green on / Green

Blinking)@100Mbps

Power Requirements

System Power

Input Voltage:

48VDC dual power inputs in terminal block connection

AC/DC Power Adapter 48VDC/1.6A (option)
One DC jack for AC/DC power adapter
Reverse Polarity Protection: Present

Power Consumption: 6.5Watts without PD loading

70Watts with PD full loading

Mechanical

Installation: DIN-Rail mount, Wall mount or Desktop

Case: IP31 grade aluminum metal case

Dimension: 36.9 mm (H) x 142.8 mm(W) x 111.5 mm (D)

Environmental

Operating Temperature: -10 ~70°C, -40 ~70°C (-w) Operating Humidity: 0% ~ 95%, (non-condensing)

Storage Temperature: -40 ~ 80°C

Storage Humidity: 0%~ 95%, (non-condensing)

Regulatory Approvals

Hi-Pot: 1.2KV testing passed on port to power

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

Shock: IEC60068-2-27 Vibration: IEC60068-2-6 Free Fall: IEC60068-2-32

MTBF: 473,362 Hours, MIL-HDBK-217F GB standard



Industrial 2-Channel Gigabit High Power PoE Injector

JetCon 1702-A JetCon 1702-B

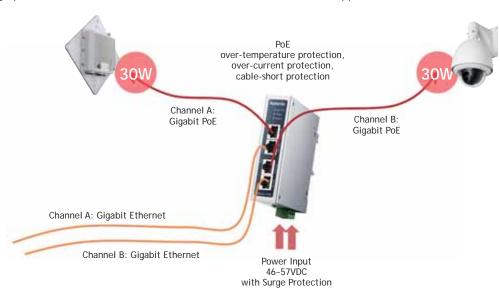
- 2-channel Gigabit Ethernet to Gigabit PoE
- Supports IEEE 802.3af and 802.3at, up to 30W per port
- Compact size, plug-and-play
- PoE over-temperature, over-current, cable-short protection
- Power port with surge, transient protection
- Wide operating temperature -40~75°C

Gigabit High Power PoE Injector

Combines 30W high power PoE and gigabit switching for the most demanding applications such as high speed, long distance outdoor WiMax, 802.11n Wifi AP and mega pixel video surveillance.

Strong EMS For Outdoor Installation

Passes high level EMS testing such as military grade transient (15KW) and spark (5KW) tests on power interface for installation in outdoor or heavy industrial applications.



JetCon 1702

Specification

Technology

Standard:

IEEE 802.3 10Base-T IEEE 802.3u 100Base-TX IEEE 802.3ab 1000Base-T

IEEE 802.3af Power over Ethernet IEEE 802.3at High Power PoE

Performance

PoE Operating Mode: Power Sourcing Equipment (PSE) with Auto detection, classification, powering and disconnection.

PoE powering mode:

Alternative-A: JetCon 1702-A RJ-45 (1,2):V-, RJ-45 (3,6):V+ Alternative-B: JetCon 1702-B RJ-45 (4,5):V+, RJ-45 (7,8):V-

PoE Output Budget:

IEEE 802.3af: 15W @DC 48V, per port IEEE 802.3at: 30W @ DC 53V, per port PoE Disconnection: DC disconnection

Protection: PoE over temperature, Over current and

Under/ Over voltage protetion

Over Current Protection (Icut): 600mA, IEEE 802.3at,

305mA IEEE 802.3af

Interface

Data Port: Data Port: Two RJ-45 connectors

PSE Port: Data and Power: Two RJ-45 connectors with PoE

power output

Power input Port: 4-Pin removable Terminal Block

Connector

2 conductors for DC input, 1 conductor for Surge protection

System Diagnostic LEDs

System Power:

Sys Pwr: System power is on applying (Green on)

PSE: PSE 1, PSE 2: PoE powering (Green on), PoE over current or cable short (Green slow blinking), PoE system over voltage or over temperature (Green fast blinking)

Power Requirements

System power: DC 46-57V with polarity reverse protection Power Consumption: JetCon 1702-A/ JetCon 1702-B

(Maximum): 2W without PoE loading (Maximum) JetCon 1702-A/ JetCon 1702-B (Maximum with PoE FullLoading): IEEE 802.3af 35.04W@DC48V, IEEE 82.3at

60.42W@DC53V, IEEE 802.3at 70.2W@DC 57V

Inrush Current: 0.2A/ DC 46V, 0.224A/ DC 48V, 0.271A/

DC53V, 0.33A/ DC 57V

Mechanical

System Installation: DIN Rail installation

Case: Steel Metal Housing with Ingress Protection - code 31 Dimensions: 111.8 mm(H) x 30mm (W) x 89.5mm (D)

Weight: 0.485 kg with package 0.335 kg without package

Environmental

Operating Temperature: -40 ~75°C

Operating Humidity: 0% ~ 95% (non-condensing)

Storage Temperature: -40 ~ 80°C

Storage Humidity: 0%~ 95% non-condensing

Regulatory Approvals

EMC: CE, FCC A, IEC/EN61000-6-2, IEC/EN61000-6-4 MIL-STD 1275 - Power port with DC48V source

MTBF: 498,000 Hours ,MIL-HDBK-217F



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