



# Connecting Things Connecting Future

Korenix Full Selection Guide

Industrial Data Communication

**korenix** | A Beijer Group  
company

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## Company Profile

**Korenix Technology**, a Beijer group company within the industrial communication business area, is a global leading manufacturer since 2004. We provides innovative, market-oriented, value-focused industrial wired and wireless networking solutions including various product lines:

- Industrial Ethernet Switch
- Industrial Power-over-Ethernet Switch
- Industrial Wi-Fi/Cellular Solution
- Industrial Media Converter
- Industrial Connectivity
- Network Management Software

# Key Features – Cyber Security

The trends of Internet of things (IoT) and Industrial 4.0 brings more devices to be connected to networks. Security issues and hack attacks become even more critical nowadays. Korenix developed “Cyber Security” provide below features.



## Network Level Defense

- DHCP Snooping
- Dynamic ARP Inspection
- IP Source Guard

## Traffic Level Defense

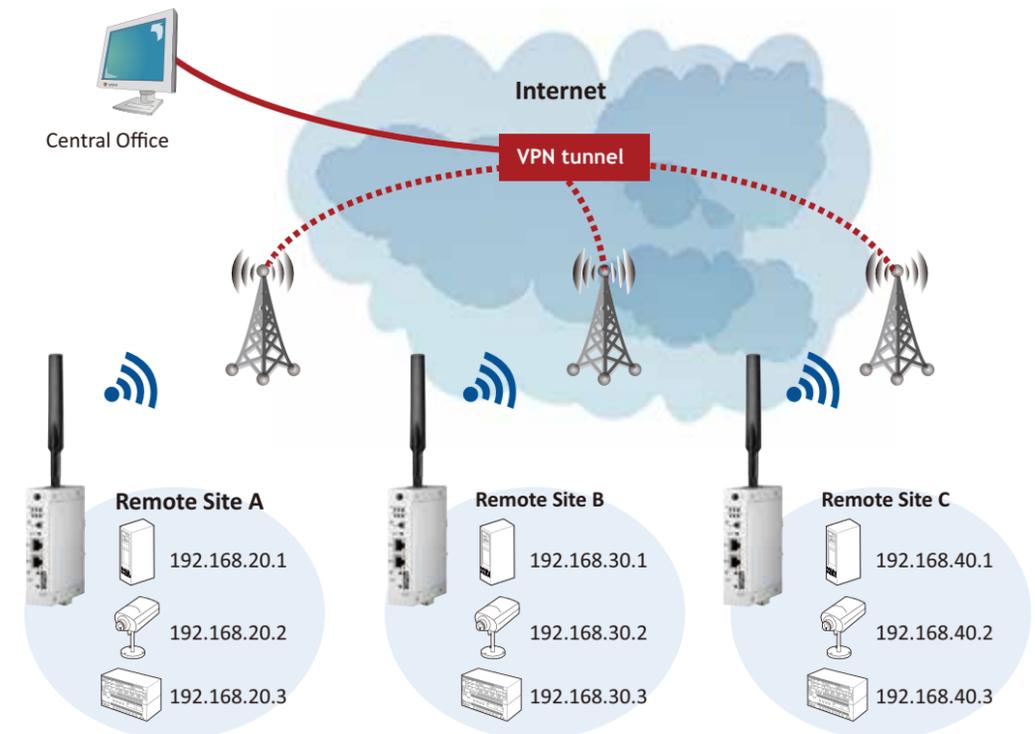
- L3/L4 ACL block untrusted traffic from a trusted device
- Precise video stream isolation

## Device Level Defense

- L2 ACL identifies and authorizes a device
- Only trusted devices can access the network

Function	Application	Benefits
DHCP Snooping	Ensure clients obtain IP from authorized server	Preventing unauthorized DHCP attack
Dynamic ARP Inspection(DAI)	Binding IP + MAC on devices	Only authorized devices can access into the network
IP Source Guard(IPSG)	Validates incoming packets	Prevents IP address spoofing
Multi-Level Authentication	Different levels users' authentication	Different privileges according to different levels
TACACS+	Remote authentication for network access control	One-time authentication on devices, higher security

**VPN (Virtual Private Network)** extends a private network across a public network as if it were directly connected to the private network. It provides security by the use of tunneling protocol and often through procedures such as encryption.



# Key Features – Redundancy

## Multiple Super Ring

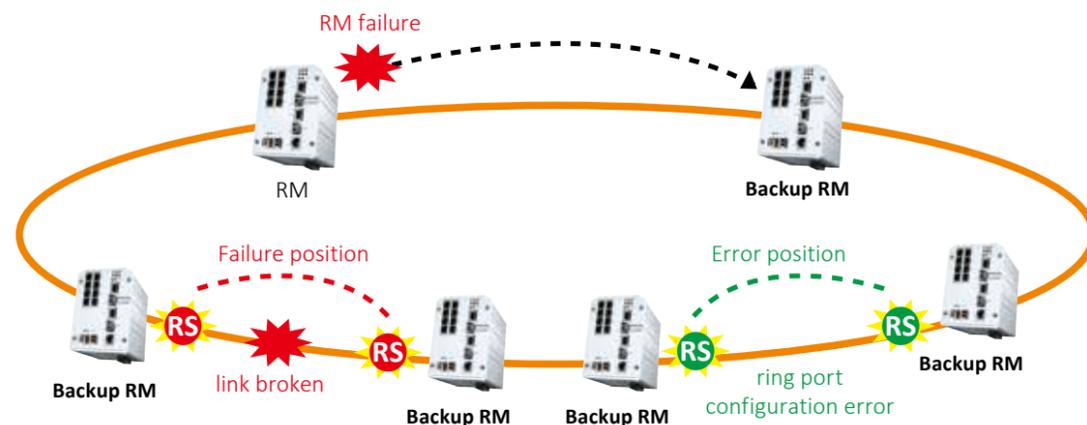
Beyond Fast Recovery  
It's reliable, stable, quality and broadcast-storm-free.

### RM Redundancy

While RM is the only manager in the ring, Korenix-patented **RM Redundancy** solves the critical point problem and guarantees the ring is always well-controlled.

### Backup RMs All Standby

Every switch other than the RM is **Backup RM**. One of the backup RM will immediately take over the role if the RM happens to fail. No manual configuration is required.



### 5 ms\* Failure Recovery

Korenix-patented **Seamless Restoration** introduces the most stable restoration process to the world.



Seamless Restoration    Packet loss    Broadcast storm

\*Note: support on target models

### Failure Positioning Failure Identification

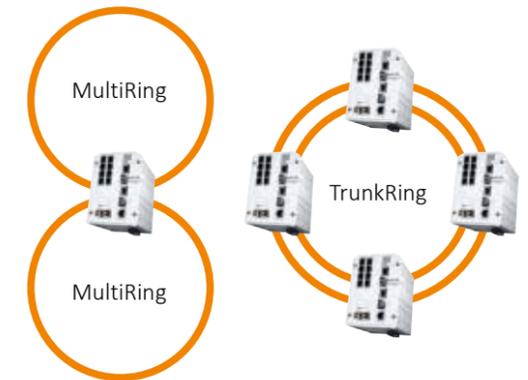
Korenix NMS and the RS LED (Ring Status) help administrators and field engineers to identify the type and location of a failure, which quickens troubleshooting.



Korenix NMS points out the failure position

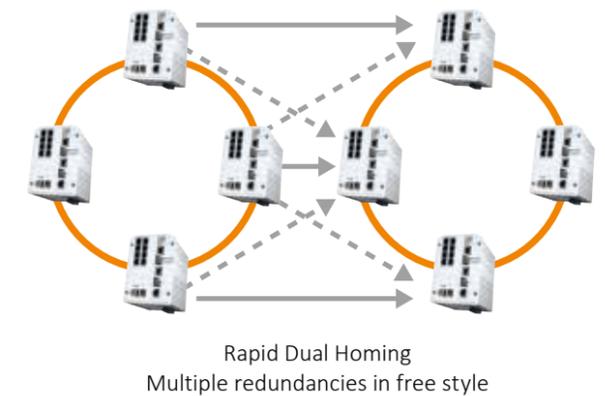
## MultiRing, TrunkRing Flexible Ring Deployment

MultiRing provides the simplest way to connect multiple rings together. TrunkRing combines port trunk and MSR technologies, which doubles the network bandwidth and the link redundancy.



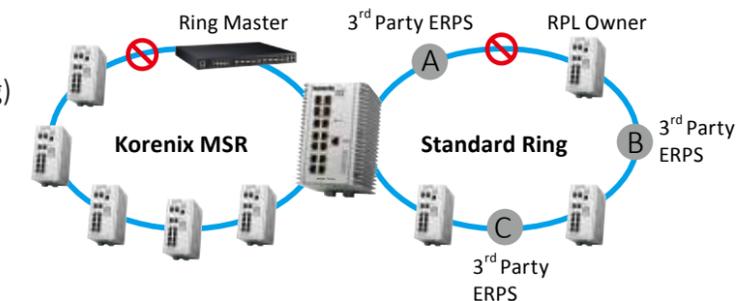
## Rapid Dual Homing Double, Triple... Redundancy

Simply enable the function and connect two rings through multiple links in free style without complex configurations such as master, slave, coupler port and so on. The failover time is less than 50ms and restoration time is 0.



## Korenix offers both proprietary and open technologies to meet various requirements

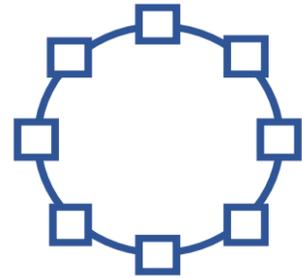
- Korenix Proprietary: MSR (Multiple Super Ring)
- Standard Network Redundancy
  - IEEE 802.1d Rapid Spanning Tree (RSTP)
  - IEEE 802.1s Multiple Spanning Tree (MSTP)
  - ITU-T G.8032 ERPS



## Korenix MSR

### Ultra Fast Recovery Without Single Point Of Failure

One of the best redundant technology, 5ms\*fast recovery, 0ms seamless restoration, without risk of the single point of failure on RM.

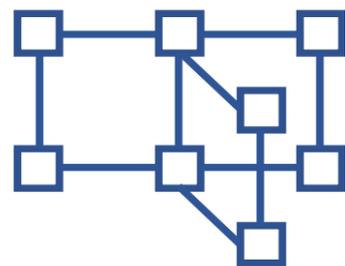


\*Note: support on target models

## ERPS V2

### Flexible In Topology Without Compromise On Recovery Time

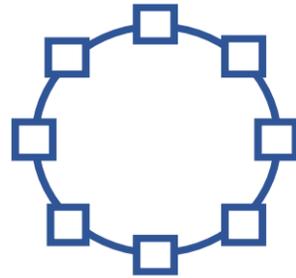
Future proof, easy expansion by adding unlimited levels of rings. Each ring operates independently, and the recovery time in all rings are deterministic, 50ms recovery, 50ms restoration.



## ERPS V1

### Single Ring With Multiple Vendors Mixed

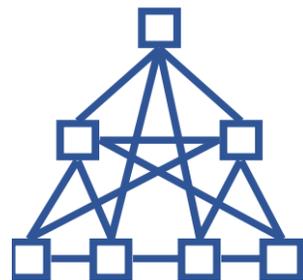
Takes the advantage of the openness, the switches in a ring will not be tied to specific supplier any more. Moderate failover time, 50ms recovery, 50ms restoration.



## RSTP

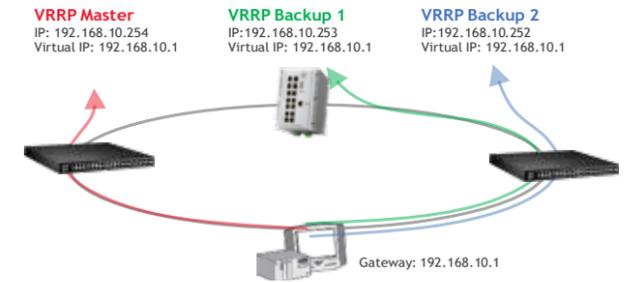
### Any Topology, Multi- Vendors, Recovery Time Is Not Critical

The main purpose of RSTP is for connecting switches from different vendors into any kind of topology. It's flexible and safe, however, the recovery time is not deterministic, depends on the size and topology.



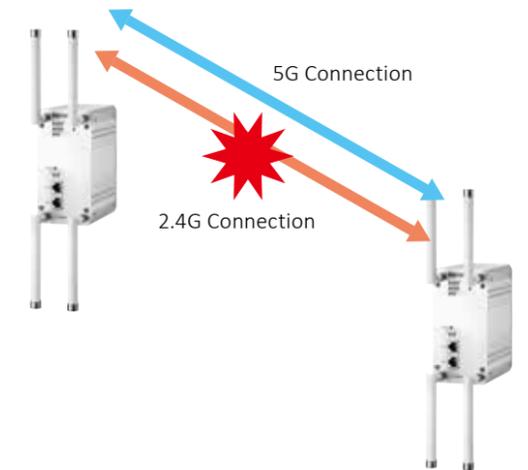
## VRRP (Virtual Router Redundancy Protocol)

VRRP increases the availability and reliability of routing paths via automatic default gateway selections on an IP subnetwork group. If one router goes down, one of the other group members can take place for the responsibilities for forwarding the traffic.



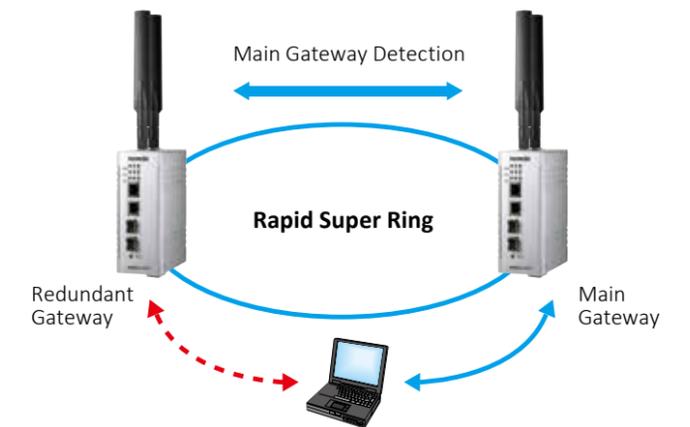
## Dual Radios for wireless Redundancy

JetWave 3220 supports two Wifi interfaces that can be configured as 802.11a/b/g/n/ac and 2.4G/5G band. By connecting the two Wifi interfaces to the same peer, the two links backup with each other. Users can assign primary link on one interface and backup link on the other.



## RSR Redundant Gateway

JetWave products support RSR Redundant Gateway design: the main and redundant gateway exchanges the same gateway settings with each other while the RSR ring is normal. Once the main gateway is shutdown or the RSR ring abnormal, the backup gateway is activated to ensure the edge client devices still can access the internet through backup gateway.



# Key Features – Power over Ethernet

## Per Port Power Budget

Defines an upper bound of the PoE output of each port to prevent over consumption from a malicious or malfunctioning PD.

Port Configuration

Port	PoE Mode	Powering Mode	Power Budget(W)	Power Priority
1	Disable	802.3af	32.0	Critical
2	Enable	802.3af	16.4	Critical
3	Enable	802.3at(2-Event)	32.0	Critical
4	Enable	802.3at(LLDP)	32.0	Critical
5	Enable	Force	32.0	Critical

## PoE On Demand

PoE scheduling turns on/off a PD according to the user defined schedule, 802.1AB LLDP PoE negotiates with PD to give power on demand. It's simply green and efficient.

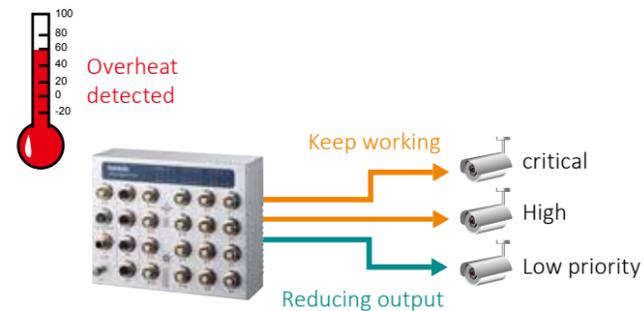
Power over Ethernet Schedule

PoE Schedule on Port 1 is Enabled

Time	Sunday	Monday	Tuesday	Wednesday
00:00				
01:00				
02:00				
03:00				
04:00				
05:00				
06:00				
07:00				
08:00				
09:00				

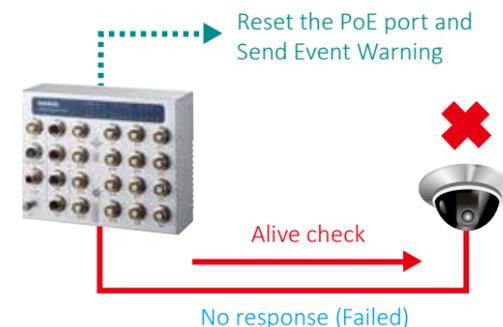
## Overheat Protection

An embedded thermal sensor warns of overheating. The PoE output of less important ports will be reduced to ensure critical PD functioning in abnormal conditions.



## PD Keep-Alive Check

LPLD does a keep-alive check on PD periodically and resets the PoE port to bring the PD back to life if a PD failure is detected.



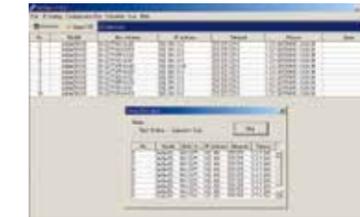
# Key Features – Full Network Management

## Full Network Management Features with Lite Managing Interface

Korenix managed switches support the most commonly used network management features such as MSR, RSTP, VLAN, QoS, IGMP snooping and so on. Users who do not need advanced group management features or SNMP can benefit from this cost effective solution in their projects.



User-friendly web interface



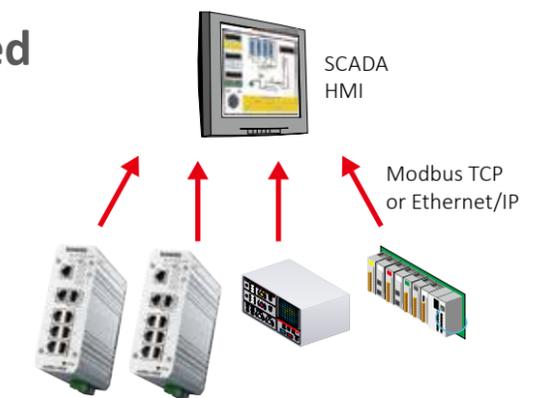
utility



Cisco-like CLI

## Modbus TCP, Ethernet/IP Managed for Industrial Integration

Industrial engineers are able to include JetNet switches and monitor the network status on their SCADA or HMI systems through Modbus TCP or Ethernet/IP without the need of IT knowledge or an additional network management system.



Monitor and control the network and the industrial devices through one single management interface

## Key Features – Software Tool

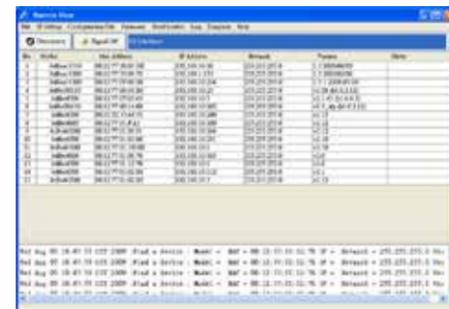
### Korenix NMS

Korenix NMS (Industrial Intelligent Network Management System) provides a comprehensive platform for monitoring, configuring, and maintaining mission-critical IP-based communication networks.



### Korenix View

Korenix View is a client/server architecture based management tool that will discover Korenix devices on all network interfaces or the specific one. Group management is supported. With group assign IP address, firmware upgrade..., it can help to achieve an efficient management.



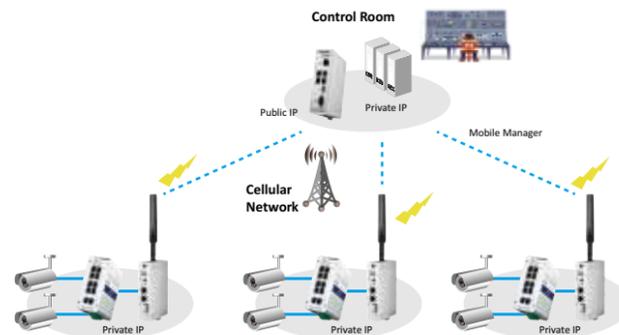
### JetWave Smart Remote(JSR) APP

- Easy way to monitor your WiFi environment
- AP/Client Status Visualization
- Antenna Deployment Assistant



### Korenix Mobile Manager

Korenix Mobile Manager is a simple utility to resolve the issue of mobile devices' inability to be accessed from the internet. The utility provides maintenance capacity on the cellular routers. Therefore, it can simplify the inconvenience of remote management.



# Industrial Certificates



**I.T.S/ Road Side**  
Ind. EMC  
NEMA-TS2



**Surveillance/ Track Board**  
EN50155  
EN50121-2-3/-4



**On Vehicle**  
Ind. EMC  
E-Mark  
ITxPT

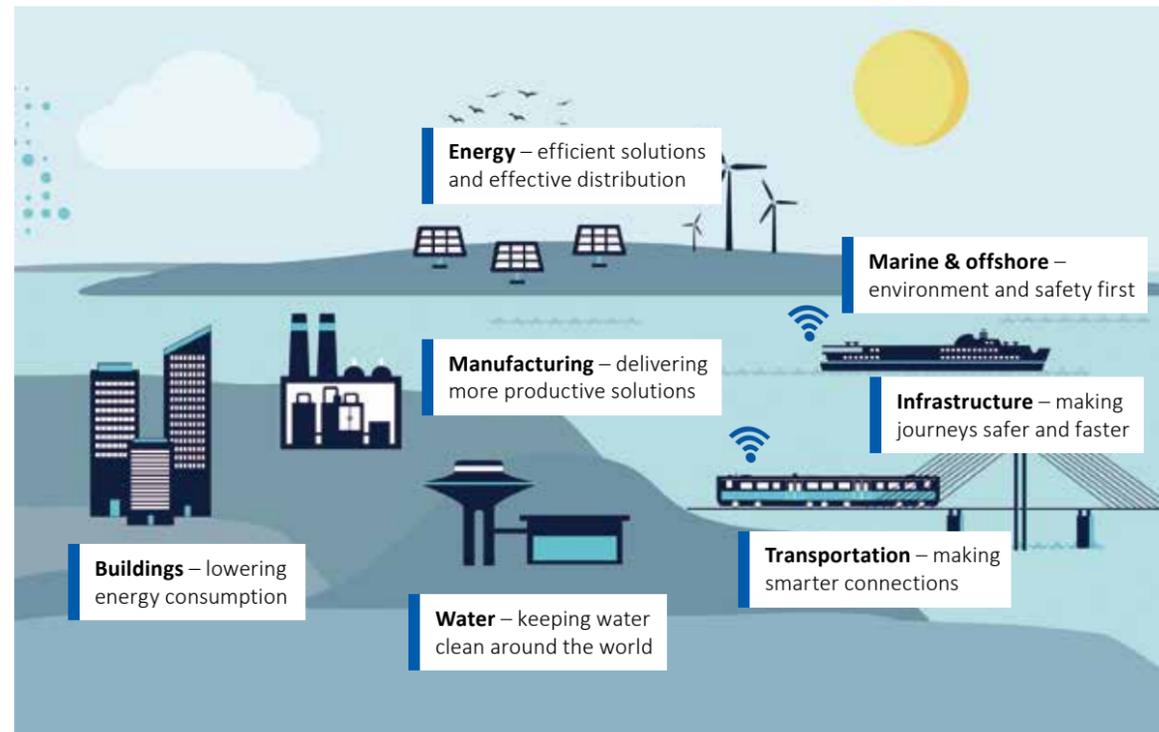


**Petrochemical**  
Ind. EMC  
C1D2



**Power Feeding**  
IEC61850-3  
IEEE1613

# Innovation Solutions for Cross Industry Applications



**Marine**  
Environmental regulations drive investments in old fleets in need of refurbishment. Globalization and electrification drives new built ships.



**Infrastructure & building**  
Urbanization, environmental and digitalization is driving investments towards smart infrastructure and buildings, Improving efficiency and utilization.



**Energy**  
Environmental and green technology drives a fundamental shift to renewable energy production and distributed power delivery.



**Manufacturing**  
Digitalization and Industry 4.0 is driving modernization of the machines in Manufacturing. Also environmental improvements/ energy efficiency is driving changes in the product offer.

# Application – Smart City

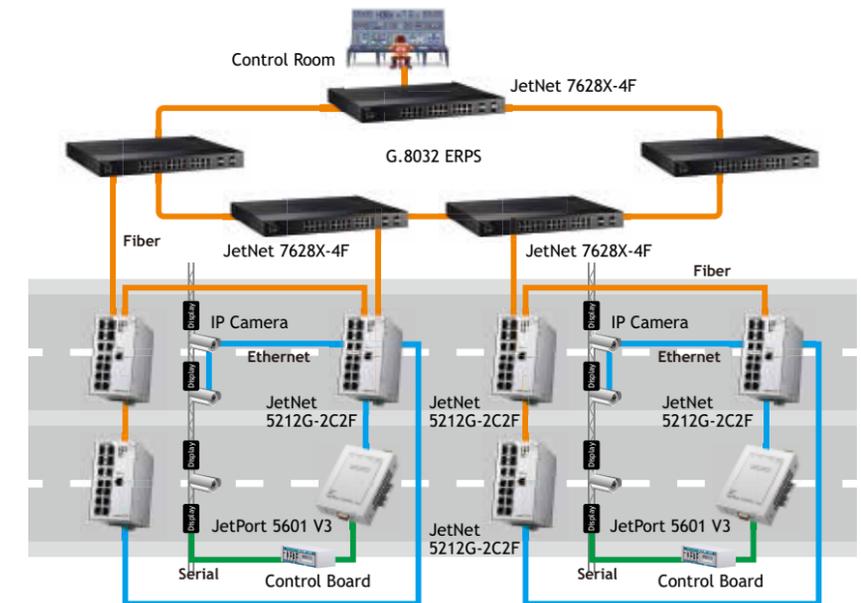


## Sports Complex Surveillance

This application is to manage intelligent transportation system through fiber connection. Korenix provides secure connections with TACACS+, SNMPv3, IEEE802.1x, HTTPS, and SSH to deny unauthorized network access. Also, G.8032 Ring technology provides network redundancy with recovery times in under 50 ms and the topology options offers a backup path and ensure uninterrupted connectivity when link failure occurs. In addition, the wide temperature tolerance (-40 to 75°C) of Korenix products perform reliably without air conditioning in severe operating conditions.

## Korenix Solution

- Provides two Gigabit Ethernet ports for redundant ring and one Gigabit Ethernet port for uplink solution to support massive video and data transmissions.
- ITU-T G.8032 ERPS to minimize network downtime (recovery time < 50 ms).
- Supports IGMP snooping and tagged VLAN for more efficient bandwidth usage
- JetPort series for existing serial devices via Real COM and TCP Server/Client modes.
- All Korenix products are available in wide-temperature (-40 to 75°C) models to provide the durability required for applications.



## Applied Models



## Application – Surveillance



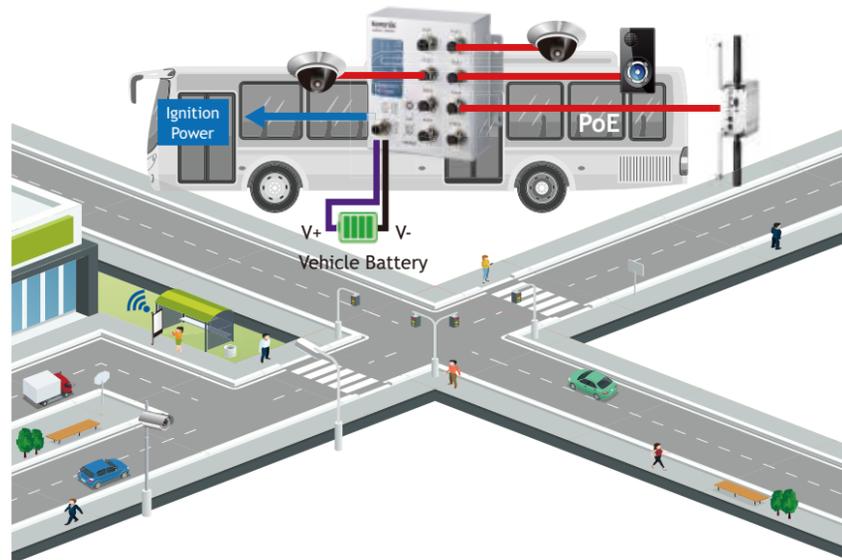
### Bus Surveillance

Surveillance in public transportation ensures the safety of passengers and driver, and plays an important role in criminal investigation. PoE camera is commonly used on bus since it can be powered by PoE switch through the Ethernet cable and achieve data transmission. A bus company chose Korenix's E-Mark compliant PoE switch for their project. It is rugged, plug-and-play unmanaged switch equipped with robust M12 connector design in order to be used well in the vibrating environment.

### Korenix Solution

JetNet 3808G-M12 was implemented DC-to-DC power booster technology. It can take power input range from 9 to 36V and boost to 54V to provide stable power feeding for the powered devices. Another special power design for bus application is "power ignition." In a case that only engine is turned off but the entire vehicle system is on, the feature will set the switch automatically power off after a certain time to prevent the battery from running out.

Certifications includes EN50155, E-Mark and EN50121-4 to ensure high availability and wide usage particularly for bus, train and track side application.



### Applied Models



## Application – Transportation



### Reliable Solution for a Safer Journey

A reliable and tailored railway solution can ensure passenger security. Korenix devices meet multiple railway certificate such as EN50155, EN 50121-4. Also, fast and easy configurations, redundant power supply and rugged outer design, such as extreme operating temperature, M12 interface, waterproof allow your railway project safe and secure.

### Korenix Solution

- Passenger information system (PIS)  
PIS includes in-time and accurate public transportation information and on-board Wi-Fi to passengers. It is an essential part in modern public transportation service.

- Communication-based train control (CBTC)

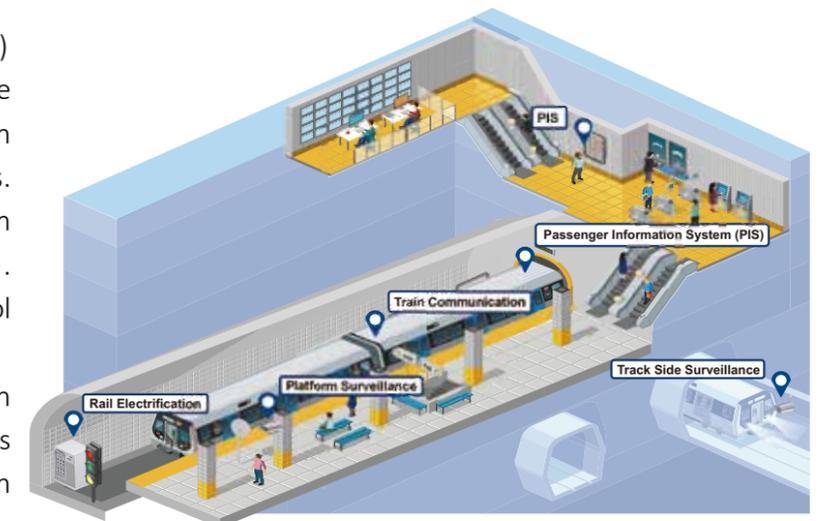
CBTC is a railway communication network system that connects train and trackside information synchronization through network.

- Rail electrification

Railway electrification system allows transmitting power status from RTU in each sub-station to control center.

- Platform surveillance / Trackside surveillance

To ensure platform or trackside safety and prevent accidents, it is important for operation team to monitor platforms in control room. Surveillance on the platform integrates various infrastructures such as IP cams, infrared, sensors which allows AI to perform face detection, accident prevention, people counting and etc.



### Recommended Models



## Application – Industry 4.0

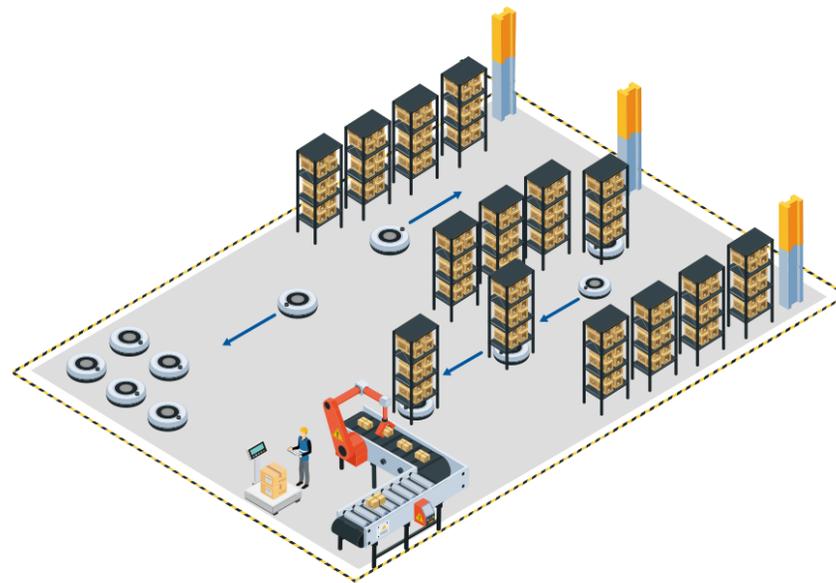


### Automated Warehouse

Automated warehouse reduces the cost, time and accelerates efficiency. It is a good example of new industrial era. AGV(Automated Guided Vehicle) delivers goods through following the wire or marks on the floor in warehouses. It receives instruction, orders and provides the material status and operational condition back to the control center.

### Korenix Solution

An e-commerce company installed Korenix JetWave 2212X on the AGV. The biggest challenge is the roaming reliability. While AGV moving around, the WiFi client will roam to another AP if it is under its network coverage. Faster processing time can reduce packet loss during handover. JetWave was designed with a unique fast roaming mechanism with just 100ms roaming time. Ideal for automated warehousing and mobile related applications.



Another winning point is the compact size of JetWave2212X. It can move easily between the storage racks, and occupied not much space in AGV, which is designed to load goods.

### Applied Models



## Application – IIoT

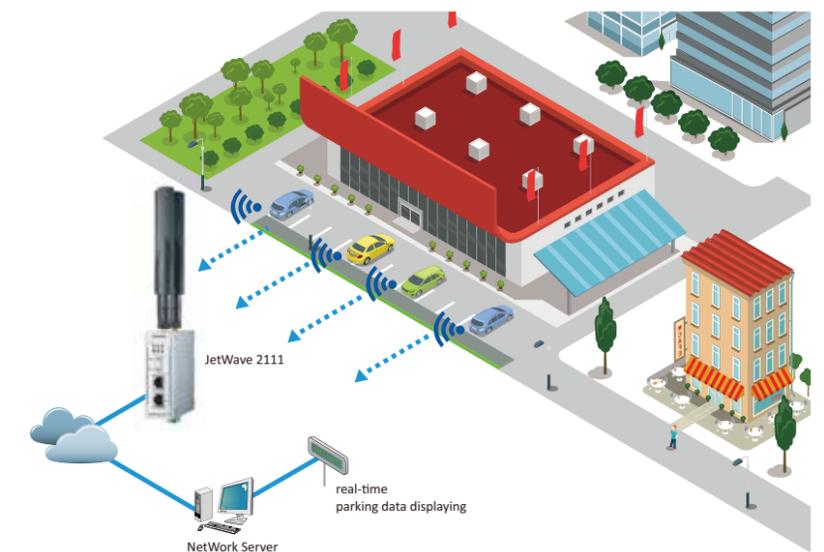


### Smart Parking

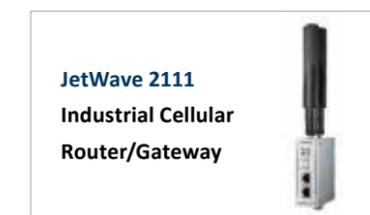
Smart parking is a popular topic in each city. Sensors installed in the parking lot to detect the real-time parking status, and the data will be updated to electronic signage. With the instant display of remaining parking spaces, it significantly eased congestion issue and air pollution by guiding drivers directly to find the vacant parking space.

### Korenix Solution

The data needed to be transferred from sensors is tiny. Therefore, JetWave 2111 – Low Data Rate Cellular Router, was chosen as the solution for data transmission. JetWave 2111 come with serial, Ethernet and LTE Cat.1 interfaces. It connected to the field sensors by serial port and transmit the data through LTE network. The LTE Cat.1 is with low bandwidth behavior – 10Mbps for download and 5Mbps for upload. The JetWave product cannot only transmit these small amounts of data stably, but also effectively save cellular communication costs.



### Applied Models



## Application – Surveillance



### Taipei Intersection

In a recent collaboration with Taipei City Government in Taiwan, Korenix was asked to provide access points to link outdoor surveillance equipment with the city government’s internet.

The impetus for this project hoped to facilitate the wireless transfer of CCTV imagery on intersections in Taipei city to a central control center via a wireless solution, as it is difficult to connect wiring on intersections.

### The Taipei Project

The city government’s previous efforts at such transitions had installed equipment attuned for the 2.4Ghz frequency band, which was unfortunately already the primary frequency used by Wi-Fi network providers around the city.

This presented a large amount of interference and leading to instability of Wi-Fi data transmission for CCTV footage from the equipment to the data center, causing footage lag and, sometimes, disconnections.

Korenix offered its JetWave 2460 device as a solution to assist the city government with the transition from physical wiring to wireless. The device is designed to support both 2.4Ghz and 5.8Ghz frequencies and has also in-built Auto Channel Survey (ACS) functions. This function will allow the device to periodically try and detect whether it is on the “best” Wi-Fi frequency and, if it detects a better frequency with less or zero interference, it would automatically switch over to that channel. This would allow the device to function on the best Wi-Fi network possible.

After introducing the JetWave device on-site, the locale’s 5.8Ghz was determined to be the frequency that is relatively clean and with minimalist interference. Since its switch to the 5.8Ghz, the network has not seen any disconnections and has met the Taipei City government’s expectations of a system providing highly reliable wireless transfers.

### Applied Models

**JetWave 2460**  
**Industrial 802.11a/b/g/n**  
**2.4G/5G 2T2R MIMO**  
**Outdoor Wireless AP**



## Highlight Products – Industrial Switches

### JetNet 5208G / 5210G / 5212G / 5216G Series Industrial Managed Ethernet Switch

- Network Redundancy – MSR (Multiple Super Ring), ITU-T G.8032 ERPS, RSTP, MSTP
- Fully Device Management – SNMP v1/v2c/v3, RMON, Web UI, Telnet and Local Console
- Layer 2 Network Performance – IEEE802.1Q VLAN, Private VLAN, Trunk, Packet Filtering, DHCP Server/Client, Traffic Prioritize, Rate Control
- Advanced Security system by Port Security, Access IP list, SSH, HTTPS Login, TACACS+, DHCP Snooping
- Slim size for installation with minimum spaces required



Model Name	Total Ports	10/100/1000M Base-TX	100/1000M Combo	100/1000M SFP
JetNet 5208G	8	8		
JetNet 5208G-2F	8	6		2
JetNet 5210G-2C	10	8	2	
JetNet 5212G-2C2F	12	8	2	2
JetNet 5216G-4C4F	16	8	4	4

### JetNet 5208GP / 5210GP / 5212GP / 5216GP Series Industrial Managed PoE Switch

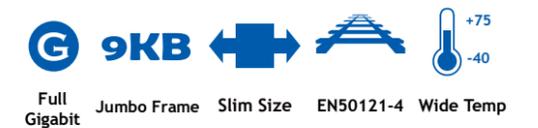
- Intelligent PoE features – PD Detection, Port Priority, PoE Schedule...
- Complies with IEEE 802.3bt up to 90W / per port
- Network Redundancy – MSR (Multiple Super Ring), ITU-T G.8032 ERPS, RSTP, MSTP
- Friendly Device and Network Topology recovery utility – Korenix View, Korenix NMS
- Advanced Security system by Port Security, Access IP list, SSH, HTTPS Login, TACACS+, DHCP Snooping



Model Name	Total Ports	10/100/1000M PoE Ports	10/100/1000M Non-PoE Ports	100/1000M Combo	100/1000M SFP	PoE Port	PoE Mode	PoE Power Budget
JetNet 5208GP	8	6	2			# 1~6	af/at	180W
JetNet 5208GP-2F	8	6			2	# 1~6	af/at	180W
JetNet 5208GP-U	8	4	4			# 1~4	af/at/bt	180W
JetNet 5208GP-2F-U	8	4	2		2	# 1~4	af/at/bt	180W
JetNet 5210GP-2C	10	8		2		# 1~8	af/at	240W
JetNet 5210GP-2C-U	10	8		2		# 1~8	af/at/bt	480W
JetNet 5212GP-2C2F	12	8		2	2	# 1~8	af/at	240W
JetNet 5212GP-2C2F-U	12	8		2	2	# 1~8	af/at/bt	480W
JetNet 5216GP-4F	16	12			4	# 1~12	af/at	360W
JetNet 5216GP-4F-U	16	12			4	# 1~12	af/at/bt	480W

### JetNet 3205G / 3205GP Series Industrial Full Gigabit Unmanaged Switch

- 4 PoE ports compliance with IEEE802.3af/at standard with total power budget 112W (JetNet 3205GP series)
- Industrial Slim Size Design
- 9K bytes Jumbo Frame for large file transmission
- Power Event Alarm



Model Name	10/100/1000 Base-TX	1000 Base-FX
JetNet 3205G	5	
JetNet 3205GP	5 ( 4 PoE )	
JetNet 3205G-1F	4	1
JetNet 3205GP-1F	4 ( 4 PoE )	1

### JetNet 4508 series Industrial 8-port Managed Switch

- 1.6 Gbps Non-Blocking, 8K MAC address table
- MSR (recovery time <5ms), Rapid Dual Homing, Multiple Ring, MSTP / RSTP
- Dual 10~60VDC Power Redundancy
- -40~75°C Wide Temperature operating (“-w” model)
- IEC 61850-3/IEEE 1613 Certification (“i” model)



Model Name	10/100 Base-TX	Fiber Ports	Remark
JetNet 4508/4508-w	8		
JetNet 4508i/4508i-w	8		Power isolation, IEC61850-3 Certification
JetNet 4508f/4508f-w	6	2 FX (SC/ST)	
JetNet 4508if/4508if-w	6	2 FX (SC/ST)	Power isolation, IEC61850-3 Certification

### JetNet 5612G / 7612G Series Industrial 8 GE + 4 G SFP Managed Switch

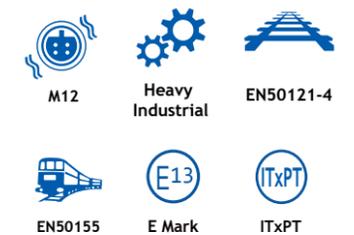
Model Name	10/100/1000 Base-TX	Giga Ports	Power Budget	Remark
JetNet 5612G-4F	8	4 SFP	Non-PoE	Layer 2
JetNet 7612G-4F	8	4 SFP	Non-PoE	Layer 3
JetNet 5612GP-4F	8	4 SFP	240w	Layer 2
JetNet 7612GP-4F	8	4 SFP	240w	Layer 3



### JetNet 3508 / 3808 / 3908 Series Industrial M12 Un-Managed Switch

- M12-A power interface
- Power ignition management
- -40 to 75°C Operating Temperature

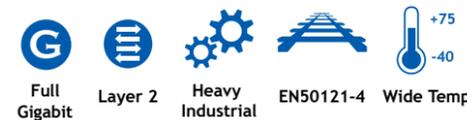
Model Name	10/100 Base-TX	1000 Base-TX	Power Budget	Remark
JetNet 3908G-M12		8	180 W	Booster PoE support
JetNet 3808G-M12	7	1	120 W	Booster PoE support
JetNet 3508-LVDC	7	1		By request
JetNet 3508G-LVDC		8		By request



### JetNet 5620G-4C Industrial Full Gigabit Ethernet L2 Switch

- 16G RJ + 4 Gigabite RJ/SFP combo ports
- Advanced Security system by Port Security, Access IP list, SSH, HTTPS Login, IEEE 802.1x / Radius Server authentication
- Advanced management by LACP/VLAN/GVRP/QoS/IGMP/Private VLAN/QinQ/Snooping/Rate Control/Online Multi-Port Mirroring/DHCP

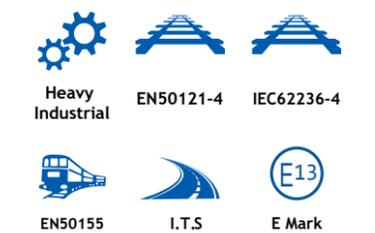
Model Name	10/10/1000 Base-TX	Giga Ports	Power Budget	Remark
JetNet 5620G-4C	16	4 Combo	Non-PoE	Layer 2



### JetNet 5500 / 7500 Series Industrial M12 Managed PoE Switch

- Push-pull and typical M12 connector coexistence
- 1 pair GbE HW Bypass embedded
- Layer 3 IP routing table: 512
- IP Rating: 41 (IP54 by request)

Model Name	Layer	100TX PSE Ports	Gigabit Ports	Power Input	Power Budget
JetNet 7520P-LVDC	3	16	4	10~57V	100W
JetNet 7516P-LVDC		12			
JetNet 7512P-LVDC		8			
JetNet 7520P-HVDC		16		77~137.5V	120W
JetNet 7516P-HVDC		12			
JetNet 7512P-HVDC		8			
JetNet 5520P-LVDC	2	16		10~57V	100W
JetNet 5516P-LVDC		12			
JetNet 5512P-LVDC		8			
JetNet 5520P-HVDC		16		77~137.5V	120W
JetNet 5516P-HVDC		12			
JetNet 5512P-HVDC		8			



### JetNet 5728G Industrial 20FE+8G Managed PoE Ethernet Switch

- Advanced Cyber Redundancy – MSR, SuperChain, ITU-T G.8032 ERPS
- Isolated redundant power inputs with VDC power or 110/220 VAC power



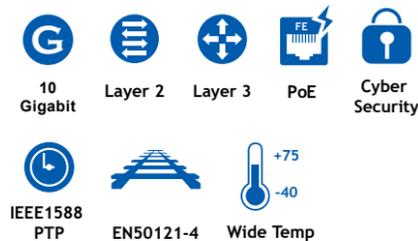
### JetNet 6828Gf Industrial 16G + 8G Combo + 4G SFP Gigabit Managed Switch

- 16 100/1000TX, 8 100/1000 RJ-45/SFP combo ports, 4 Gigabit SFP ports
- Advanced L3 – Static Routing, Dynamic Routing: RIP V1/V2, OSPF V1/V2, VRRP V2
- Advanced Cyber Redundancy – MSR, ERPS, RSTP, MSTP, SuperChain
- 40 to 85°C Operating Temperature



### JetNet 6628X / 7628X series Industrial 10G Rackmount Switch

- 24 100/1000Base-TX + 4 10 Gigabit SFP ports
- Diverse product portfolio including L2/L3, PoE/Non-PoE
- L3 function: static route, RIP v1/v2, OSPF v1/v2, VRRP v2 (JetNet 7628X series)
- 24-port IEEE802.3 af/at PoE (PoE models)
- 40 to 75°C operating temperature, fanless



Model Name	Layer	PoE
JetNet 6628XP-4F	L2	PoE
JetNet 7628XP-4F	L3	PoE
JetNet 6628X-4F	L2	Non-PoE
JetNet 7628X-4F	L3	Non-PoE

## Highlight Products – Industrial Media Converters

### JetCon 3701GP-U Industrial IEEE 802.3bt Gigabit PoE Media Converter

- Converts 10/100/1000TX to 100/1000 Fiber
- IEEE 802.3af/at/bt Compliance
- Flexible SFP Fiber transceiver design
- Slim Case with IP-31 grade protection
- Fault Alert for power
- Power Redundancy with 44~57V wide voltage input



### JetCon 3701G Industrial Gigabit Ethernet PoE Media Converter

- Converts 10/100/1000TX to 100/1000FX
- Flexible SFP Fiber transceiver design
- High Power 30W PoE PSE Media Converter
- IEEE 802.3af / IEEE 802.3at Compliance
- Fault Alert for power
- Two way Link Loss Forwarding



### JetCon 1701GP-U Industrial Gigabit High Power PoE Injector

- 10/100/1000TX 1-port PoE Injector
- High Power 90W PoE power output
- IEEE 802.3af/at/bt Compliance
- Slim Case with IP-31 grade protection
- Industrial Slim Size Design
- Power Redundancy with 44~57V voltage input



# Highlight Products – Wireless Solution

## JetWave 2212 Series Industrial Wireless AP/Client

- 2T2R MIMO doubles data rate up to 300Mbps (JetWave2212G up to 867Mbps)
- Dual 24V DC Redundant
- 1 x Digital input design

Model Name	WIFI Standard	Ethernet Ports	Serial Port
JetWave 2212X	802.11 a/b/g/n	2x FE	
JetWave 2212S	802.11 a/b/g/n	2x FE	2 x Serial (RS232/422/485 3 in 1)
JetWave 2212G	802.11 a/b/g/n/ac	2x GbE	



## JetWave 2111/2111L/2411/2411L JetWave 2114/2414 Industrial LTE Cellular Gateway

- 24V DC power input
- Passive PoE(JW2114/2414)
- GPS (Optional) (JW 2111/2114/2411/2414)

Model Name	LTE Category	Fast Ethernet Ports	RS 232/422/485	DI + DO	SIM Card	Micro SD card slot	Housing
JetWave 2111	Cat 1 (max. 10M DL/5M UL )	1	1	1 DI + 1 DO	1	1	Aluminum
JetWave 2411	Cat 4 (max. 150M DL/50M UL )	1	1	1 DI + 1 DO	1	1	
JetWave 2114	Cat 1 (max. 10M DL/5M UL )	4	2	2 DI + 2 DO	2	1	
JetWave 2414	Cat 4 (max. 150M DL/50M UL )	4	2	2 DI + 2 DO	2	1	
JetWave 2111L	Cat 1 (max. 10M DL/5M UL )	1		1 DI + 1 DO	1		Metal
JetWave 2411L	Cat 4 (max. 150M DL/50M UL )	1		1 DI + 1 DO	1		



## JetWave 4110L Industrial LoRa Private Gateway

- LoRa Wireless data link provide stable data stream.
- High output RF Power and high sensitivity provide more than 40KM transmission distance.
- Multi-Interface support RS-485 / Analog or Digital Input / Digital Output.
- Resist the water, dust, temperature and shock and meet with the IP68 standard.
- Analog Input support 0~10 V / 4~20 mA / ADC
- Digital Output support PWM / Latch Mode.
- AUX I/O support remote setup/status inquiry function.



## JetWave 2460/2460E Industrial 802.11a/b/g/n 2.4G/5G 2T2R MIMO Outdoor Wireless AP

- Radio configurable: 802.11 a/b/g/n 2.4G/5G Band
- 802.11n 2T2R MIMO doubles data rate up to 300Mbps
- Remote management by Web GUI
- Passive PoE (24V/48V) power input
- Wide Temperature, Heavy Industrial Grade design
- Outdoor IP67 design

Model Name	WIFI Standard	Wifi	Ethernet port
JetWave 2460	With embedded antenna	2.4G/5G	1 x FE (RJ45)
JetWave 2460E	With external antenna	2.4G/5G	1 x FE (RJ45)



### JetWave 4200 Series Industrial High Power Dual/Single 802.11 a/b/g/n/ac g/n/ac 2.4G/5G 2T2R MIMO Wireless AP

- Dual /Single Radio Configurable: 802.11 a/b/g/n/ac and 2.4G/5G Band
- 802.11ac 2T2R MIMO doubles data rate up to 866mbps
- Industrial IP67
- Gigabit PoE+ power input
- 48V PoE PD Power Input



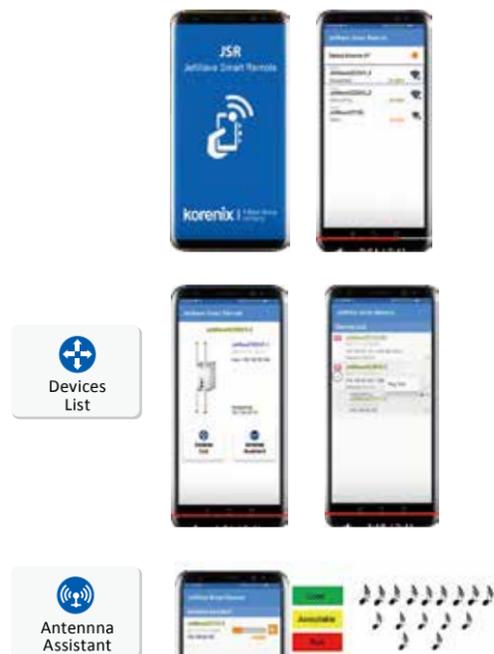
Model Name	Radio	Wifi	Ethernet port	Ethernet port	Antenna
JetWave 4221HP-E	1	1 x 2.4G + 1 x 5G	1 x GE (RJ45)	High Power	External antenna (Buy separately)
JetWave 4221-E	1	2 x 2.4G/5G	1 x GE (RJ45)	Normal Power	
JetWave 4211HP-5G-E	1	1 x 5G	1 x GE (RJ45)	High Power	
JetWave 4211HP-2.4G-E	1	1 x 2.4G	1 x GE (RJ45)	High Power	
JetWave 4211-E	1	1 x 2.4G/5G	1 x GE (RJ45)	Normal Power	

### JSR- JetWave Smart Remote App

An easy management tool from installing to trouble-shooting simply with App on your mobile

- Automatically detect all nearby Korenix AP and client devices
- Check all AP/client connection status or package loss rate with only a few clicks
- Adjust antennas to the best angle effortlessly

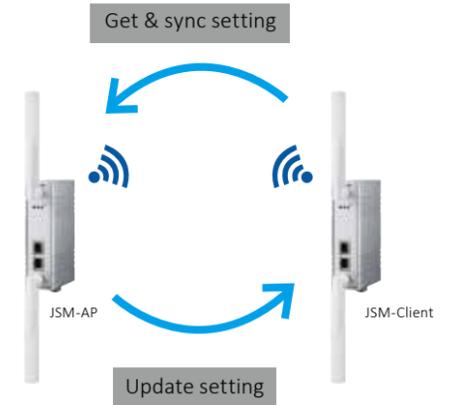
To learn more information, please check Korenix website:



### JSM (JetWave Smart Mapping) A Rapid Way for Wireless Network Deployment

Korenix JSM is an useful technology to simplify the software setting steps during installation phase. The JetWave unit which is configured as JSM-Client will sync wireless parameters from the connected JSM-AP. It not only saves setup time but also ensures corresponding settings between AP and CPE.

The JSM-AP unit periodically analyzes the signal strength of frequency range and then set the optimal channel by itself. The update time is configurable from 60 sec. to 86400 sec. (a day).



#### Typical Wi-Fi Mode

Wireless Mode	WLAN Basic & Security Settings
Wi-Fi AP	Manually User must manual adjust another wireless channel once the operating frequency with serious signal interference.
Wi-Fi Client	Manually Step 1. Execute "Site Survey" and select and select a target AP for CONNECTION Step 2. System apply the same "802.11 Mode" setting automatically. (Form AP) Step 3. Manual configure "Channel Mode". (Follow AP's setting) Step 4. Manual configure "Security Settings". (Follow AP's setting)

#### Efficient JSM Mode

Wireless Mode	WLAN Basic & Security Settings
JSM-AP	Manually System actively applies the best wireless channel.
JSM-Client	Automatically Connect to JSM-AP without manual selection and sync parameters from it.

**Sync range**

- ✓ SSID
- ✓ 802.11 Mode
- ✓ Channel Mode
- ✓ Authentication
- \* Encryption
- \* WPAW Passphrase



JetNet 7628X-4F



JetNet 6828Gf (-AC/2AC/2DC24/2DC48/AC-DC24)



JetNet 6628X-4F



JetNet 6528Gf (-AC/2AC/2DC24/2DC48/AC-DC24)



JetNet 5428G V2-AC  
JetNet 5428G V2-2DC



JetNet 5428G-20SFP-AC  
JetNet 5428G-20SFP-2DC



JetNet 7612G-4F



JetNet 7020G



JetNet 7014G V2



JetNet 6059G  
JetNet 6059G-w



JetNet 5620G-4C



JetNet 5612G-4F

Rackmount Gigabit Core Switches			Rackmount Ethernet Switches			
<b>Interface</b>						
Total ports number	28	28	28	28	28	28
10/100TX Ports					24	8
10/100/1000TX Ports	24	16	24	16		
100/1000M Combo		8		8	4	4
SFP Ports	4 x 10GbE/1G	4 x 1000M	4 x 10GbE/1G	4 x 1000M		16 x 100M
Console/USB	RS232/USB	RS232/USB	RS232/USB	RS232/USB	RS232/USB	RS232/USB
DC Power input	2x44-57VDC	DC24(18-36VDC) DC48(36-75VDC)	2x44-57VDC	DC24(18-36VDC) DC48(36-75VDC)	2 x DC24/48 (18-75VDC)	2x DC24/48V(18-75VDC)
AC Power input	1x90-264 VAC	AC110/220 (90-264VAC)	1x90-264 VAC	AC110/220 (90-264VAC)	1xAC110/220 (90-264VAC)	1xAC110/220 (90-264VAC)
<b>Features</b>						
MSR, MultiRing, TrunkRing, RDH SuperChain, ERPS	●	●	●	●	●	●
Broadcast Storm/Loop Protection	●	●	●	●	●	●
L2+ Security (L2/3/4 ACL)	●	●	●	●	●	●
DHCP Server (Opt82, Port Based)	●	●	●	●	●	●
korenix View / korenix NMS	●	●	●	●	●	●
<b>L3 Protocols</b>						
L3 Routing	IPv4/IPv6 routing, RIPv1/v2, OSPF v2	static/Dynamic Routing/ VLAN routing RIP, OSPF v2				
Multicast Routing	IGMP, Mroute	IGMP, Mroute				
VRRP Gateway Redundancy	●	●				
<b>SW/Protocol</b>						
IPv6 Management	●	●	●	●	●	●
RSTP/MSTP	●	●	●	●	●	●
Traffic Priority (QoS)	8 Queues/port	8 Queues/port	8 Queues/port	8 Queues/port	8 Queues/port	8 Queues/port
VLAN, P-VLAN, QinQ, GVRP	4k VLANs	4k VLANs	4k VLANs	4k VLANs	4k VLANs	4k VLANs
IGMP Query, Snooping, GMRP	●	●	●	●	●	●
IEEE 802.1AB LLDP Network Discovery	●	●	●	●	●	●
IEEE 802.3ad LACP, Static Trunk	●	●	●	●	●	●
IEEE 1588 PTP v1/v2	●	●	●	●	●	●
Jumbo Frame/MAC Address	9.2Kbytes/16K	9.2Kbytes/16K	9.2Kbytes/16K	9.2Kbytes/16K	9.2Kbytes/16K	9.2Kbytes/16K
Port Mirroring	●	●	●	●	●	●
DDM SFP	●	●	●	●	●	●
IEEE 802.1x, IP/Port Security/SSL/HTTPS,SSH/Telnet	●	●	●	●	●	●
TACACS+, Radius	●	●	●	●	●	●
Ind. Protocol (ModBus/TCP, EtherNet/IP)	●	●	●	●	●	●
SNMP/RMON/Trap	●	●	●	●	●	●
CLI/Web/Telnet	●	●	●	●	●	●
<b>HW/ME</b>						
Housing Protection (IP)	IP40	IP40	IP40	IP40	IP30	IP40
Dimension (HxWxD mm)	44 x 440 x 378.5	44 x 440 x 378.5	44 x 440 x 378.5	44 x 438 x 375	44 x 438 x 170	43.6 x 431 x 375
Mounting	Rackmount	Rackmount	Rackmount	Rackmount	Rackmount	Rackmount
Operating Temperature	-40~75°C	-40~85°C	-40~75°C	-40~75°C	-40~75°C	-40~75°C
MTBF (hrs)	>202,000	>445,000	>202,000	>445,000	>234,000	>234,000
<b>Certification</b>						
Regulatory/Approval	CE/FCC/EN50121-4	CE/FCC/EN50121-4 /IEEE1613 /IEC61850-3	CE/FCC/EN50121-4	CE/FCC/EN50121-4 /IEEE1613 /IEC61850-3	CE/FCC/UL/ NEMA TS2	CE/FCC/EN50121-4

● Supported

DIN-Rail Managed Ethernet Switches

DIN-Rail Managed Ethernet Switches						
<b>Interface</b>						
Total ports number	12	20	14	9	20	12
10/100TX Ports						
10/100/1000TX Ports	8	16	10	4	16	8
100/1000M Combo		4		5	4	
SFP Ports	4 x 100/1000M		4 x 100/1000M			4 x 100/1000M
DI/DO (Dry Relay)	1 DI, 1 DO	1 DI, 1 DO	1 DI, 1 DO	1 DI, 1 DO	1 DI, 1 DO	1 DI, 1 DO
DC Power Input	2 x DC24 (10-36VDC)	2 x DC24V (10-60V)	2 x DC24 (10-36V)	2 x DC24V (10.5-60V)	2 x DC24V (10-60V)	2 x DC24 (10-36V)
Console	RS-232	RS-232	RS-232	RS-232	RS-232	RS-232
<b>Features</b>						
Network Redundancy (MSR, RDH, TrunkRing, MultiRing, SuperChain, ERPS, RSTP, MSTP, LACP)	●	●	●	●	●	●
Broadcast Storm/Loop Protection	●	●	●	●	●	●
Advanced Security (L2/3/4 ACL) DHCP Snooping, IP Source Guard, DAI)	●	●	●	●	●	●
DHCP Server (Opt82, Port Based)	●	●	●	●	●	●
Korenix View/Korenix NMS	●	●	●	●	●	●
<b>SW/Protocol</b>						
IPv6 Management	●	●	●	●	●	●
RSTP/MSTP	●	●	●	●	●	●
Traffic Priority (QoS)	●	●	●	●	●	●
VLAN, P-VLAN, QinQ, GVRP	●	●	●	●	●	●
IGMP Query, Snooping, GMRP	●	●	●	●	●	●
IEEE802.1AB LLDP Network Discovery	●	●	●	●	●	●
IEEE802.3ad LACP, Static Trunk	●	●	●	●	●	●
IEEE 1588 PTP v1	●	●	●	●	●	●
Jumbo Frame	●	●	●	●	●	●
Port Mirroring	●	●	●	●	●	●
DDM SFP	●	●	●	●	●	●
IP Security/Port Security/SSL/HTTPS/SSH/Telnet	●	●	●	●	●	●
User Security	●	●	●	●	●	●
Ind. Protocol (ModBus TCP, Ethernet/IP)	●	●	●	●	●	●
SNMP/RMON/Trap	●	●	●	●	●	●
CLI/Web/Telnet	●	●	●	●	●	●
<b>HW/ME</b>						
Housing Protection (IP)	IP31/Aluminum	IP31/Aluminum	IP31/Aluminum	IP31/Aluminum	IP31/Aluminum	IP31/Aluminum
Dimension (HxWxD mm)	160 x 84 x 136	147 x 98 x 126	160 x 108 x 136	160 x 95 x 127	147 x 98 x 126	160 x 84 x 136
Mounting	DIN Rail	DIN Rail	DIN Rail	DIN Rail	DIN Rail	DIN Rail
Operating Temperature	-40~75°C	-40~75°C	-40~75°C	-25~70°C/-40~75°C(-w)	-40~75°C	-40~75°C
MTBF (hrs)	578,000	308,000	578,000	425,000	308,000	578,000
<b>Certification</b>						
Regulatory/Approval	CE/FCC/UL/EN50121-4	CE/FCC/UL/EN50121-4/IEEE1613/IEC61850-3	CE/FCC/UL/EN50121-4	CE/FCC/UL/NEMA(-w)	CE/FCC/UL/EN50121-4/IEEE1613/IEC61850-3	CE/FCC/UL/EN50121-4
Compliance Standard	Heavy Ind. EMC	Heavy Ind. EMC	Heavy Ind. EMC	Heavy Ind. EMC	Heavy Ind. EMC	Heavy Ind. EMC

● Supported



DIN-Rail Managed Ethernet Switches

Interface	JetNet 5208	JetNet 5208-2F	JetNet 5208G	JetNet 5208G-2F	JetNet 5210G-2C	JetNet 5212G-2C2F	JetNet 5216G-4C4F
Total ports number	8	8	8	8	10	12	16
10/100TX Ports	8	6					
10/100/1000TX Ports			8	6	8	8	8
100/1000M Combo					2	2	4
SFP Ports		2 x 100/1000M		2 x 100/1000M		2 x 100/1000M	4 x 100/1000M
DI/DO (Dry Relay)	1 DI, 1 DO						
DC Power Input	2 x DC24V (10-60V)						
Console	RS-232						
<b>Features</b>							
Network Redundancy (MSR, RDH, TrunkRing, MultiRing, SuperChain, ERPS, RSTP, MSTP, LACP)	•	•	•	•	•	•	•
Broadcast Storm/Loop Protection	•	•	•	•	•	•	•
Advanced Security (L2/3/4 ACL) DHCP Snooping, IP Source Guard, DAI)	•	•	•	•	•	•	•
DHCP Server (Opt82, Port Based)	•	•	•	•	•	•	•
Korenix View	•	•	•	•	•	•	•
<b>SW/Protocol</b>							
IPv6 Management	•	•	•	•	•	•	•
RSTP/MSTP	•	•	•	•	•	•	•
Traffic Priority (QoS)	•	•	•	•	•	•	•
VLAN, P-VLAN, QinQ, GVRP	•	•	•	•	•	•	•
IGMP Query, Snooping, GMRP	•	•	•	•	•	•	•
IEEE802.1AB LLDP Network Discovery	•	•	•	•	•	•	•
IEEE802.3ad LACP, Static Trunk	•	•	•	•	•	•	•
IEEE 1588 PTP v1	•	•	•	•	•	•	•
Jumbo Frame	•	•	•	•	•	•	•
Port Mirroring	•	•	•	•	•	•	•
DDM SFP	•	•	•	•	•	•	•
IP Security/Port Security/SSL/HTTPS/SSH/Telnet	•	•	•	•	•	•	•
User Security	•	•	•	•	•	•	•
Ind. Protocol (ModBus TCP, Ethernet/IP)	•	•	•	•	•	•	•
SNMP/RMON/Trap	•	•	•	•	•	•	•
CLI/Web/Telnet	•	•	•	•	•	•	•
<b>HW/ME</b>							
Housing Protection (IP)	IP31/Aluminum						
Dimension (HxWxD mm)	135 x 50 x 120	135 x 74 x 132	135 x 74 x 132	189 x 96 x 132			
Mounting	DIN Rail						
Operating Temperature	-40~75°C						
MTBF (hrs)	734,700 hrs	734,700 hrs	734,700 hrs	734,700 hrs	832,875 hrs	832,875 hrs	1,252,145 hrs.
<b>Certification</b>							
Regulatory/Approval	CE/FCC/EN50121-4						
Compliance Standard	Heavy Ind. EMC						

● Supported



DIN-Rail Managed Ethernet Switches

Interface	JetNet 5210G	JetNet 5010G JetNet 5010G-w	JetNet 4510 JetNet 4510-w	JetNet 4508if/4508f-w JetNet 4508if/4508f-w	JetNet 4508/4508-w JetNet 4508i/4508i-w
Total ports number	10	10	10	8	8
10/100TX Ports	8	7		6	8
10/100/1000TX Ports			7		
100/1000M Combo	2	3	3 x 100M		
SFP Ports				2 X 100M(SC)	
DI/DO (Dry Relay)	1 DI, 1 DO	2 DI, 2 DO	2 DI, 2 DO	1 DI, 1 DO	1 DI, 1 DO
DC Power Input	2 x DC24V (10-60V)	2 x DC24V (10.5-60V)	2 x DC24V (10.5-60V)	2 x DC24V (10-60V)	2 x DC24V (10-60V)
Console	RS-232	RS-232	RS-232	RS-232	RS-232
<b>Features</b>					
Network Redundancy (MSR, RDH, TrunkRing, MultiRing, SuperChain, ERPS, RSTP, MSTP, LACP)	•	•	•	•	•
Broadcast Storm/Loop Protection	•	•	•	•	•
Advanced Security (L2/3/4 ACL) DHCP Snooping, IP Source Guard, DAI)	•	•	•	•	•
DHCP Server (Opt82, Port Based)	•	•	•	•	•
Korenix View/Korenix NMS	•	•	•	•	•
<b>SW/Protocol</b>					
IPv6 Management	•	•	•	•	•
RSTP/MSTP	•	•	•	•	•
Traffic Priority (QoS)	•	•	•	•	•
VLAN, P-VLAN, QinQ, GVRP	•	•	•	•	•
IGMP Query, Snooping, GMRP	•	IGMP Query, Snooping	IGMP Query, Snooping	IGMP Query, Snooping	IGMP Query, Snooping
IEEE802.1AB LLDP Network Discovery	•	•	•	•	•
IEEE802.3ad LACP, Static Trunk	•	•	•	•	•
IEEE 1588 PTP v1	•	•	•	•	•
Jumbo Frame	•	•	•	•	•
Port Mirroring	•	•	•	•	•
DDM SFP	•	•	•	•	•
IP Security/Port Security/SSL/HTTPS/SSH/Telnet	•	•	•	•	•
User Security	•	•	•	•	•
Ind. Protocol (ModBus TCP, Ethernet/IP)	•	•	•	•	•
SNMP/RMON/Trap	•	•	•	•	•
CLI/Web/Telnet	•	•	•	•	•
<b>HW/ME</b>					
Housing Protection (IP)	IP31/Aluminum	IP31/Aluminum	IP31/Aluminum	IP31/Aluminum	IP31/Aluminum
Dimension (HxWxD mm)	160 x 80 x 136	137 x 96 x 139	137 x 96 x 139	149 x 55 x 131	149 x 55 x 131
Mounting	DIN Rail	DIN Rail/Wall Mounting	DIN Rail/Wall Mounting	DIN Rail/Wall Mounting	DIN Rail/Wall Mounting
Operating Temperature	-40~75°C	-25~70°C / -40~75°C(-w)	-25~70°C / -40~75°C(-w)	-10~70°C / -40~75°C(-w)	-25~70°C / -40~75°C(-w)
MTBF (hrs)	472,000	425,000	425,000	661,000	425,000
<b>Certification</b>					
Regulatory/Approval	CE/FCC/UL/EN50121-4	CE/FCC/UL	CE/FCC/UL	4508i/4508if Series: CE/FCC/IEEE1613/IEC61850-3	
Compliance Standard	Heavy Ind. EMC	Heavy Ind. EMC	Heavy Ind. EMC	Heavy Ind. EMC	Heavy Ind. EMC



**Unmanaged Ethernet Switches**

Interface	JetNet 3212G-2C2F	JetNet 3205G JetNet 3205G-1F	JetNet 3018G	JetNet 3010G JetNet 3010G-w	JetNet 3008G V2	JetNet 3005G V2	JetNet 3008 JetNet 3008-w	JetNet 3008f JetNet 3008f-w	JetNet 2005 JetNet 2005-w	JetNet 2005f JetNet 2005f-w	JetNet 3508G-LVDC	JetNet 3508-LVDC
Total ports number	12	5	18	10	8	5	8	8	5	5	8	8
10/100TX Ports			16	7			8	6	5	4		7 x M12-D
10/100/1000 TX Ports	8	5 (3205G) 4 (3205G-1F)			8	5					8 x M12-X	1 x M12-X
100/1000M Combo	2 x 1000M		2	3 x 1000M								
SFP Ports	2 x 1000M	1 X1000M (3205G-1F)					2 x 100M (SC)		1 x 100M (SC)			
DI/DO (Dry Relay)	1 DO	1 DO	2 DO		1 DO	1 DO	1 DO	1 DO	1 DO	1 DO		
DC Power input	2 x DC24 (10-60V)	2 x DC24 (10-60V)	2 x DC24 (10-60V)	2 x DC24 (12-48VDC)	2 x DC24 (9-60VDC)	2 x DC24 (10-60V)	2 x DC24 (10-60V)	2 x DC24 (10-60V)	1 x DC24V (18-32V)	1 x DC24V (18-32V)	2 x DC12-24V	2 x DC12-24V
<b>Features</b>												
Qos traffic Priority	4 Queues		4 Queues	4 Queues	4 Queues	4 Queues	2 Queues	2 Queues			•	•
Broadcast Storm filtering	•		• (DIP Switch)		•	•	•	•				
Port/Power Event Alarm	Power Alarm	Power Alarm	Port 17, 18 Alarm		•	•	•	•	Port Alarm	Port Alarm		
Jumbo Frame	10K Bytes	9K Bytes	9K Bytes		10K Bytes	9K Bytes					10Kbytes	10Kbytes
<b>HW/ME</b>												
Housing Protection (IP)	IP31/Metal	IP31/Metal	IP31/Aluminum	IP31/Aluminum	IP31/Aluminum	IP30/Metal	IP31/Aluminum	IP31/Aluminum	IP31/Aluminum	IP31/Aluminum	IP41 Steel Metal	IP54 Steel Metal by request
Dimension (HxWxD mm)	135 x 74 x 141	120 x 30 x 108	136.5 x 96 x 149.2	136.5 x 96 x 139.2	120 x 55 x 112	111.8 x 30 x 98.5	120 x 55 x 108	120 x 55 x 108	111.8 x 30 x 98.4	111.8 x 30 x 98.4	116 x 58 x 146	116 x 58 x 146
Mounting	DIN Rail	DIN Rail	DIN Rail	DIN Rail	DIN Rail	DIN Rail	DIN Rail	DIN Rail	DIN Rail	DIN Rail	Wall Mount	Wall Mount
Operating Temperature	-40~75°C	-40~75°C	-40~75°C(-w)	-20~70°C/ -40~75°C(-w)	-40~70°C	-40~75°C	-20~70°C/ -40~75°C(-w)	-20~70°C/ -40~75°C(-w)	-20~70°C/ -40~75°C(-w)	-10~60°C/ -40~75°C(-w)	-40~75°C	-40~75°C
MTBF (hrs)		380,000	>200,000	>250,000	382,000	810,458	400,000	400,000	818,646	713,506	379,940	379,940
<b>Certification</b>												
Regulatory/Approval	CE/FCC/EN50121-4	CE/FCC/EN50121-4	CE/FCC	CE/FCC/UL508	CE/FCC/EN50121-4	CE/FCC	CE/FCC/UL/UL C1D2 (3008-w)	CE/FCC/UL/UL C1D2 (3008f-w)	CE/FCC/UL508/UL C1D2 (2005-w)	CE/FCC/UL508/UL C1D2 (2005f-w)	CE/FCC/EN50155/EN50121-4/EN50121-3-2/E-Mark 13/ITxPT	
Compliance Standard	Heavy Ind. EMC	Heavy Ind. EMC									Heavy Industrial	

• Supported



**Rackmount Managed PoE Switch**

Interface	JetNet 7628XP-4F	JetNet 6628XP-4F	JetNet 6728G-24P	JetNet 6728G-16P	JetNet 5728G-24P V2	JetNet 5728G-16P V2
Total Ports Number	28	28	28	28	28	28
10/100/1000TX Ports	24(PoE+)	24(PoE+)	24(PoE+)	24(16 PoE+)	4(PoE+)	4
10/100TX Ports					20(PoE+)	20(16 PoE+)
100/1000M Combo						
SFP Ports	4 x 10GbE/1G	4 x 10GbE/1G	4 x 1000M		4 x 1000M	4 x 1000M
DI/DO (Dry Relay)		DO		DO		DO
Console/USB		RS232/USB		RS232/USB		RS232/USB
DC Power input	2x44-57VDC(IEEE 802.3af) 2x50-57VDC(IEEE 802.3at)		2x44-57VDC(IEEE 802.3af) 2x50-57VDC(IEEE 802.3at)		2x44-57VDC(IEEE 802.3af) 2x50-57VDC(IEEE 802.3at)	2x44-57VDC(IEEE 802.3af) 2x50-57VDC(IEEE 802.3at)
AC Power input		1x90-264 VAC		1x90-264 VAC		1x90-264 VAC
<b>Features</b>						
Korenix Cyber Redundancy+ (MSR, MultiRing, TrunkRing, RDH, SuperChain, ITU-T.G.8032 ERPS)	•	•	•	•	•	•
Korenix Cyber Security+ (DHCP Snooping, IP Source Guard, DAI, DOS)	•	•	•	•	•	•
IPv4/IPv6 ACL(L2/L3/L4) Security	•	•	•	•	•	•
Industrial Protocol (ModBus/TCP, EtherNet/IP)	•	•	•	•	•	•
EEE Energy Saving	•	•	•	•	•	•
Korenix View/Korenix NMS	•	•	•	•	•	•
<b>PoE Features</b>						
PoE Wiring	1,2,3,6		1,2,3,6		1,2,3,6	
PoE Specification	IEEE802.3af, IEEE802.3at		IEEE802.3af, IEEE802.3at		IEEE802.3af, IEEE802.3at	
PoE Technology	PoE Priority Control, PD keep alive checking, PoE Scheduling		PoE Priority Control, PD keep alive checking, PoE Scheduling		PoE Priority Control, PD keep alive checking, PoE Scheduling	
Embedded AC power		300W		300W		300W
Total Power Budget	230W@AC(75°C), 300W@AC(-40~60°C), 720W@DC(-40~75°C)	230W@AC(75°C), 300W@AC(-40~60°C), 480W@DC(-40~75°C)	230W@AC(75°C), 300W@AC(-40~60°C), 720W@DC(-40~75°C)	230W@AC(75°C), 300W@AC(-40~60°C), 480W@DC(-40~75°C)	180W@AC(75°C), 270W@AC(-40~60°C), 650W@DC(-40~75°C)	180W@AC(75°C), 270W@AC(-40~60°C), 480W@DC(-40~75°C)
<b>SW/Protocol</b>						
IPv6 Management	•	•	•	•	•	•
RSTP/MSTP	•	•	•	•	•	•
Traffic Priority (QoS)		8 Queues/port		8 Queues/port		8 Queues/port
VLAN,P-VLAN, QinQ, GVRP		4k VLANs		4k VLANs		4k VLANs
IGMP Query, Snooping, GMRP	•	•	•	•	•	•
IEEE 802.1AB LLDP Network Discovery	•	•	•	•	•	•
IEEE 802.3ad LACP	•	•	•	•	•	•
IEEE 1588 PTP v1/v2		HW time stamping		HW time stamping		SW based
Jumbo Frame/MAC Address		9.2Kbytes/16K		9.2Kbytes/16K		9.2Kbytes/16K
Broadcast Storm Protection	•	•	•	•	•	•
DDM SFP	•	•	•	•	•	•
IEEE 802.1x, IP/Port Security	•	•	•	•	•	•
SSL /HTTPS, SSH/Telnet	•	•	•	•	•	•
TACACS+, Radius	•	•	•	•	•	•
SNMP/RMON/Trap	•	•	•	•	•	•
CLI/Web/Telnet	•	•	•	•	•	•
<b>HW/ME</b>						
Ingress Protection/Housing		IP40		IP40		IP40
Dimension (HxWxD mm)		44 x 440 x 378.5		44 x 440 x 378.5		44 x 431 x 375
Mounting		Rackmount		Rackmount		Rackmount
Operating Temperature		-40~75°C (fanless)		-40~75°C (fanless)		-40~75°C (fanless)
MTBF (hrs)		>202,000		>202,000		>202,000
<b>Certification</b>						
Regulatory/Approval		CE/FCC/EN50121-4		CE/FCC/UL/EN50121-4		CE/FCC/UL/CB/EN50121-4

• Supported



JetNet 7520P-HVDC  
JetNet 7520P-LVDC



JetNet 7516P-HVDC  
JetNet 7516P-LVDC



JetNet 7714G



JetNet 6910G-M12 HVDC  
JetNet 6910G-M12 LVDC



JetNet 5520P-HVDC  
JetNet 5520P-LVDC



JetNet 5512P-HVDC  
JetNet 5512P-LVDC



JetNet 7310G V2



JetNet 7612GP-4F



JetNet 5612GP-4F



JetNet 5810G



JetNet 5310G



JetNet 4706  
JetNet 4706f

### M12 Giga Managed Industrial PoE Switch

M12 Giga Managed Industrial PoE Switch						
<b>Interface</b>						
Total Ports Number	20	16	14	10	20	12
100/1000TX Ports	2 x M12-X 2 x M12-X (w/Bypass)	2 x M12-X 2 x M12-X(w/Bypass)	4 x M12-A	1 x M12-X(PoE+) 2 x M12-X(w/Bypass)	2 x M12-X 2 x M12-X (w/Bypass)	2 x M12-X 2 x M12-X(w/Bypass)
10/100TX Ports	16 x M12-D	12 x M12-D	10 x M12-D	7 x M12-D	16 x M12-D	8 x M12-D
100/1000M Combo						
SFP Ports						
DI/DO (Dry Relay)						
Console	M12-ARS-232, USB	M12-ARS-232, USB	M12-ARS-232, USB	M12-ARS-232, USB	M12-ARS-232, USB	M12-ARS-232, USB
Power Input	2 x DC 110V(77-137.5V) (-HVDC) 2 x DC 24V(10-57V)(-LVDC)		2 x DC 110V (77-137.5V)	2 x DC 110V (77-137.5V)(HVDC)	2 x DC 110V(77-137.5V) (-HVDC) 2 x DC 24V(10-57V)(-LVDC)	
<b>Features</b>						
Network Redundancy (MSR, RDH, TrunkRing, MultiRing, SuperChain, ERPS, RSTP, MSTP, LACP)	●	●	●	MSR, RSTP/MSTP, LACP	●	●
IP Security/Port Security/SSL/HTTPS/SSH/Telnet	●	●	Port, IEEE 802.1x Port w /Radius Server, SSL/HTTPS, SSH/Telnet	Port, IEEE 802.1x Port w /Radius Server, SSL/HTTPS, SSH/Telnet	●	●
Advanced Security (L2/3/4 ACL) DHCP Snooping, IP Source Guard, DAI)	●	●	●	●	●	●
korenix View	●	●	●	●	●	●
Ind. Protocol (ModBus TCP, Ethernet)						
<b>Power over Ethernet</b>						
PoE Ports	16	8	8	8	16	8
Power Feeding Mode	M12-D : V+(1,3), V-(2,4)	M12-D : V+(1,3), V-(2,4)	M12-D : V+(1,3), V-(2,4)	M12-X : V+(1,2), V-(3,4) M12-D : V+(1,3), V-(2,4)	M12-D : V+(1,3), V-(2,4)	M12-D : V+(1,3), V-(2,4)
PoE Mode	IEEE 802.3af/at	IEEE 802.3af/at	IEEE 802.3af/at	IEEE 802.3af/at	IEEE 802.3af/at	IEEE 802.3af/at
PoE Scheduling	●	●	●	●	●	●
System PoE Budget	120W/70°C (-HVDC) 100W/70°C (-LVDC)		100W/70°C	100W/70°C	120W/70°C (-HVDC) 100W/70°C (-LVDC)	
<b>L3 Protocols</b>						
L3 Routing	●	●	●			
Multicast Routing	●	●	●			
VRRP Gateway Redundancy	●	●	●			
<b>SW/Protocol</b>						
Management (SNMP V1/2c/3, CLI, Web, Trap,RMON)	●	●	●	●	●	●
Traffic Priority (QoS)	●	●	●	●	●	●
VLAN,P-VLAN, QinQ, GVRP	●	●	●	●	●	●
IGMP Query, Snooping, GMRP	●	●	●	●	●	●
IEEE 802.1AB LLDP	●	●	●	●	●	●
IEEE 1588 PTP v1/v2	●	●	IEEE 1588 PTP V2	IEEE 1588 PTP V1	●	●
Jumbo Frame	9.2Kbytes	9.2Kbytes	9.2Kbytes	9.2Kbytes	9.2Kbytes	9.2Kbytes
DHCP (Server, Client, Opt 82, Port Based Server)	●	●	●	●	●	●
<b>HW/ME</b>						
Housing Protection (IP)	IP41 Steel Metal IP54 Steel Metal by request		IP30	IP30	IP41 Steel Metal IP54 Steel Metal by request	
Dimension (HxWxD mm)	162.2 x 206 x 70		145.2 x 198 x 120	145.2 x 198 x 120	162.2 x 206 x 70	
Mounting	Wall Mount/ DaiRail		Wall Mount	Wall Mount	Wall Mount/ DaiRail	
Operating Temperature	-40~70°C		-40~70°C	-40~70°C	-40~70°C	
MTBF (hrs)	426,523		>375,000	>365,000	426,523	
<b>Certification</b>						
Regulatory/Approval	CE/FCC/EN50155/IEC 62236-4/ IEC 61373/EN50121-3-2/EN50121-4		CE/FCC/EN50155/ IEC 61373/EN50121-3-2	CE/FCC/EN50155/ IEC 61373/EN50121-3-2	CE/FCC/EN50155/IEC 62236-4/ IEC 61373/EN50121-3-2/EN50121-4	
Compliance Standard	E-Mark (-LVDC)				E-Mark (-LVDC)	

● Supported

### Managed Industrial PoE Switch

Managed Industrial PoE Switch						
<b>Interface</b>						
Total Ports Number	10	12	12	10	10	6
100/1000TX Ports	8	8	8			
10/100TX Ports				8	8	6 (4706) 4 (4706f)
100/1000M Combo				2	2	
SFP Ports	2 x 100/1000M	4 x 100/1000M				2 x 100M(SC) (4706f)
DI/DO (Dry Relay)	1 x DI, 1 x DO	1 x DI, 1 x DO		1 x DI, 1 x DO		1 DO
Console	RS-232	RS-232		RS-232		RS-232
Power Input	2x DC 48V (46-57V)	2x DC 48V (46-57V)		2x DC 24V (12-24V)	2 x DC 48V (48-57V)	2 x DC 48V (48-57V)
<b>Features</b>						
Network Redundancy (MSR, RDH, TrunkRing, MultiRing, SuperChain, ERPS, RSTP, MSTP, LACP)	●	●	●	●	●	MSR, RSTP/ MSTP, LACP
IP Security/Port Security/SSL/HTTPS/SSH/Telnet	●	●	●	●	●	Port Security
Advanced Security (L2/3/4 ACL) DHCP Snooping, IP Source Guard, DAI)	●	●	●	●	●	
korenix View	●	●	●	●	●	●
Ind. Protocol (ModBus TCP, Ethernet /IP)	●	●	●	●	●	
<b>Power over Ethernet</b>						
PoE Ports	8	8		8		4
Power Feeding Mode	1,2,3,6 (A)	1,2,3,6 (A)		1,2,3,6 (A)		RJ-45 (4,5,7,8) (B)
PoE Mode	IEEE 802.3af/at	IEEE 802.3af/at		IEEE 802.3af/at		IEEE 802.3af
PoE Scheduling	●	●	●	●	●	●
System PoE Budget	240W/75°C	240W/75°C		240W/75°C		80W/60°C
<b>L3 Protocols</b>						
L3 Routing	●	●				
Multicast Routing	●	●				
VRRP Gateway Redundancy	●	●				
<b>SW/Protocol</b>						
Management (SNMP V1/2c/3, CLI, Web, Trap,RMON)	●	●	●	●	●	●
Traffic Priority (QoS)	●	●	●	●	●	●
VLAN,P-VLAN, QinQ, GVRP	●	●	●	●	●	Port Based VLAN
IGMP Query, Snooping, GMRP	●	●	●	●	●	IGMP Query, Snooping
IEEE 802.1AB LLDP	●	●	●	●	●	●
IEEE 1588 PTP v1/v2	●	●	●	IEEE 1588 PTP V1		
Jumbo Frame	9Kbytes	9Kbytes	9Kbytes			
DHCP (Server, Client, Opt 82, Port Based Server)	●	●	●	●	●	
<b>HW/ME</b>						
Housing Protection (IP)	IP31	IP31		IP31		IP31
Dimension (HxWxD mm)	160 x 108 x 136	160 x 84 x 136		159 x 96 x 132	160 x 95 x 135	136 x 185 x 45
Mounting	DIN Rail	DIN Rail		DIN Rail		Wall Mount
Operating Temperature	-40~75°C	-40~75°C		-40~75°C		-40~60°C
MTBF (hrs)	499,000	499,000		446,000		>272,000
<b>Certification</b>						
Regulatory/Approval	CE/FCC/EN50121-4	CE/FCC/EN50121-4		CE/FCC	CE/FCC/UL/ EN50121-4	CE/FCC/UL
Compliance Standard				Heavy Industrial		

● Supported



JetNet 5208GP



JetNet 5208GP-2F



JetNet 5208GP-U



JetNet 5208GP-2F-U



JetNet 5210GP-2C



JetNet 5210GP-2C-U

## Managed Industrial PoE Switch

Managed Industrial PoE Switch						
<b>Interface</b>						
Total Ports Number	8	8	8	8	10	10
100/1000TX Ports	8	6	8	6	8	8
10/100TX Ports						
100/1000M Combo					2	2
SFP Ports		2 x 100/1000M		2 x 100/1000M		
DI/DO (Dry Relay)	1 x DI, 1 x DO	1 x DI, 1 x DO	1 x DI, 1 x DO	1 x DI, 1 x DO	1 x DI, 1 x DO	1 x DI, 1 x DO
Console	RS-232	RS-232	RS-232	RS-232	RS-232	RS-232
Power Input	2x DC 48V (46-57V)	2x DC 48V (46-57V)	2x DC 48V (46-57V)	2x DC 48V (46-57V)	2x DC 48V (46-57V)	2x DC 48V (46-57V)
<b>Features</b>						
Network Redundancy (MSR, RDH, TrunkRing, MultiRing, SuperChain, ERPS, RSTP, MSTP, LACP)	●	●	●	●	●	●
IP Security/Port Security/SSL/HTTPS/SSH/Telnet	●	●	●	●	●	●
Advanced Security (L2/3/4 ACL) DHCP Snooping, IP Source Guard, DAI)	●	●	●	●	●	●
korenix View	●	●	●	●	●	●
Ind. Protocol (ModBus TCP, Ethernet /IP)	●	●	●	●	●	●
<b>Power over Ethernet</b>						
PoE Ports	8	8	8	8	8	8
Power Feeding Mode	1,2,3,6 (A)	1,2,3,6 (A)	1,2,3,6 (A) 1,2,3,4,5,6,7,8 (bt)	1,2,3,6 (A) 1,2,3,4,5,6,7,8 (bt)	1,2,3,6 (A)	1,2,3,6 (A) 1,2,3,4,5,6,7,8 (bt)
PoE Mode	IEEE 802.3af/at	IEEE 802.3af/at	IEEE 802.3af/at/bt	IEEE 802.3af/at/bt	IEEE 802.3af/at	IEEE 802.3af/at
PoE Scheduling	●	●	●	●	●	●
System PoE Budget	180W/75°C	180W/75°C	180W/75°C	180W/75°C	240W/75°C	480W/75°C
<b>SW/Protocol</b>						
Management (SNMP V1/2c/3, CLI, Web, Trap, RMON)	●	●	●	●	●	●
Traffic Priority (QoS)	●	●	●	●	●	●
VLAN, P-VLAN, QinQ, GVRP	●	●	●	●	●	●
IGMP Query, Snooping, GMRP	●	●	●	●	●	●
IEEE 802.1AB LLDP	●	●	●	●	●	●
IEEE 1588 PTP v1/v2	●	●	●	●	●	●
Jumbo Frame	9Kbytes	9Kbytes	9Kbytes	9Kbytes	9Kbytes	9Kbytes
DHCP (Server, Client, Opt 82, Port Based Server)	●	●	●	●	●	●
<b>HW/ME</b>						
Housing Protection (IP)	IP31	IP31	IP31	IP31	IP31	IP31
Dimension (HxWxD mm)	135 x 50 x 120	135 x 50 x 120	135 x 50 x 120	135 x 50 x 120	135 x 96 x 132	135 x 96 x 132
Mounting	DIN Rail	DIN Rail	DIN Rail	DIN Rail	DIN Rail	DIN Rail
Operating Temperature	-40~75°C	-40~75°C	-40~75°C	-40~75°C	-40~75°C	-40~75°C
MTBF (hrs)	730,941 hrs	730,941 hrs	730,941 hrs	730,941 hrs	551,403 hrs	551,403 hrs
<b>Certification</b>						
Regulatory/Approval	CE/FCC/EN50121-4	CE/FCC/EN50121-4	CE/FCC/EN50121-4	CE/FCC/EN50121-4	CE/FCC/EN50121-4	CE/FCC/EN50121-4
Compliance Standard						

● Supported



JetNet 5212GP-2C2F



JetNet 5212GP-2C2F-U



JetNet 5216GP-4F



JetNet 5216GP-4F-U

## Managed Industrial PoE Switch

Managed Industrial PoE Switch				
<b>Interface</b>				
Total Ports Number	12	12	16	16
100/1000TX Ports	8	8	12	12
10/100TX Ports				
100/1000M Combo	2	2		
SFP Ports	2 x 100/1000M	2 x 100/1000M	4x 100/1000M	4x 100/1000M
DI/DO (Dry Relay)	1 x DI, 1 x DO	1 x DI, 1 x DO	1 x DI, 1 x DO	1 x DI, 1 x DO
Console	RS-232	RS-232	RS-232	RS-232
Power Input	2x DC 48V (46-57V)	2x DC 48V (46-57V)	2x DC 48V (46-57V)	2x DC 48V (46-57V)
<b>Features</b>				
Network Redundancy (MSR, RDH, TrunkRing, MultiRing, SuperChain, ERPS, RSTP, MSTP, LACP)	●	●	●	●
IP Security/Port Security/SSL/HTTPS/SSH/Telnet	●	●	●	●
Advanced Security (L2/3/4 ACL) DHCP Snooping, IP Source Guard, DAI)	●	●	●	●
korenix View	●	●	●	●
Ind. Protocol (ModBus TCP, Ethernet /IP)	●	●	●	●
<b>Power over Ethernet</b>				
PoE Ports	8	8	8	8
Power Feeding Mode	1,2,3,6 (A)	1,2,3,6 (A) 1,2,3,4,5,6,7,8 (bt)	1,2,3,6 (A)	1,2,3,6 (A) 1,2,3,4,5,6,7,8 (bt)
PoE Mode	IEEE 802.3af/at	IEEE 802.3af/at	IEEE 802.3af/at	IEEE 802.3af/at
PoE Scheduling	●	●	●	●
System PoE Budget	240W/75°C	480W/75°C	360W/75°C	480W/75°C
<b>SW/Protocol</b>				
Management (SNMP V1/2c/3, CLI, Web, Trap, RMON)	●	●	●	●
Traffic Priority (QoS)	●	●	●	●
VLAN, P-VLAN, QinQ, GVRP	●	●	●	●
IGMP Query, Snooping, GMRP	●	●	●	●
IEEE 802.1AB LLDP	●	●	●	●
IEEE 1588 PTP v1/v2	●	●	●	●
Jumbo Frame	9Kbytes	9Kbytes	9Kbytes	9Kbytes
DHCP (Server, Client, Opt 82, Port Based Server)	●	●	●	●
<b>HW/ME</b>				
Housing Protection (IP)	IP31	IP31	IP31	IP31
Dimension (HxWxD mm)	135 x 96 x 132	135 x 96 x 132	189 x 96 x 132	189 x 96 x 132
Mounting	DIN Rail	DIN Rail	DIN Rail	DIN Rail
Operating Temperature	-40~75°C	-40~75°C	-40~75°C	-40~75°C
MTBF (hrs)	551,403 hrs	551,403 hrs	1,243,697 hrs.	TBC
<b>Certification</b>				
Regulatory/Approval	CE/FCC/EN50121-4	CE/FCC/EN50121-4	CE/FCC/EN50121-4	CE/FCC/EN50121-4
Compliance Standard				

● Supported



**Unmanaged Industrial PoE Switch**

Unmanaged Industrial PoE Switch								
<b>Interface</b>								
Total Ports Number	8	8	6	10/6	10	5	10	5
100/1000TX Ports	8 x M12-X	1 x M12-X	4 x 100/1000M 1 x 1000M	2 x RJ-45 (3810G/3806G)	2		8	4(3205GP-1F) 5(3205GP)
10/100 TX Ports		7 x M12-D		8 x (3810G)/4(3806G)	8	5(3705) / 4(3705f)		
100/1000M Combo							2	
SFP Ports			1 x 100/1000M	2 x 1000M(3810Gf) 2 x 100M(3810f)		1 x 100M(SC) (JetNet 3705f)		1 x 1000M (JetNet 3205GP-1F)
DI/DO (Dry Relay)			1 x DO	1 x DO		1 x DO	1 x DO	1 x DO
DC Power input	2 x 12-24V		2 x 12-36V	1 x 12-24V 1 x 8-32V(3810G V2)	1 x 48V	2 x 48V	2 x 12V-56V	2 x 44V-57V
Hi-Pot	AC 1KV		AC 1.5KV	AC 1.5KV		AC 1.2KV	AC 1.2KV	AC 1.2KV
<b>Power Over Ethernet</b>								
PoE Ports	8	8	4	8 / 4(3806G)	8	4	8	4
Power Feeding Mode	M12-X: V+(1,2), V-(3,4)	M12-X: V+(1,2), V-(3,4) M12-D: V+(1,3), V-(2,4)	1,2,3,6 (A)	4,5,7,8 (B)		4,5,7,8 (B)	1,2,3,6 (A)	1,2,3,6 (A)
PoE Mode	IEEE 802.3af/at		IEEE 802.3af/at	IEEE 802.3af		IEEE 802.3af	IEEE 802.3af/at	IEEE 802.3af/at
System PoE Budget	180W @24V	120W @24V 60 W @ 12V	110W@24V, 65°C 90W@24V, 75°C	65W@24V, 60°C	65W@48V, 70°C	60W	240W	112W
<b>Features</b>								
QoS	●	●		●	●		●	
Failure Alarm			Port, Power	Port		Port, Power	Power	Power
Jumbo Frame	10Kbytes		9Kbytes				10Kbytes	9Kbytes
<b>HW/ME</b>								
Housing Protection (IP)	IP41 Steel Metal IP54 Steel Metal by request		IP31 Steel Metal	IP31 Aluminum		IP31 Aluminum	IP31 Metal	IP31 Metal
Dimension (HxWxD mm)	116 x 58 x 146		140 x 55 x 119	149 x 66 x 131.2		108 x 164.8 x 33.8	135 x 96.18 x 132	120 x 30 x 108
Mounting	Wall Mount		DIN Rail	DIN Rail		DIN Rail	DIN Rail	DIN Rail
Operating Temperature	-40~75°C		-40~75°C	-25~60°C	-25~70°C	-25~70°C (3705) -10~70°C (3705f)	-40~75°C	-40~75°C
<b>Certification</b>								
RoHS	●	●	●	●	●	●	●	●
Regulatory/Approval	CE/FCC/EN50155/EN50121-4/ EN50121-3-2/E-Mark 13/ITxPT		CE/FCC/UL	CE/FCC/UL		CE/FCC/UL	CE/FCC	CE/FCC/UL
Compliance Standard	Heavy Industrial		NEMA TS2					

● Supported



**Media Converter**

Media Converter										
<b>Interface</b>										
Total Ports Number	2	2	2	4	2	3	4	2	3	2
Number of 10/100TX ports						1	2	1	2	1
Number of 10/100/1000TX port			1	2	1					
Fiber Ports	1X 100/1000SFP	1X 100/1000SFP			1X 100/1000SFP		2 x 100FX/SC 2km (2302-m) 30km (2302-s)	1 x 100FX/SC 2km (2301S-m) 30km (2301S-s)	1 x 100FX/SC 2km (1302-m) 30km (1302-s)	1 x 100FX/SC 2km (1301-m) 30km (1301-s)
other ports						1 x VDSL2				
IEEE 802.3 af/at	●	●	●	●						
Power Input	2 x DC 44-57V	2 x DC 44-57V	2 x DC 44-57V	1 x DC 44-57V	2 x DC 10-60V	2 x DC 12~48V (1 Terminal & 1 Power Jack)	2 x DC 10~60V	2 x DC 10~60V	1x DC 18~32V	1 x DC 18~32V
Event Alarm	Power Alarm	Power Alarm	Power Alarm		Power Alarm		●	●	Port Alarm	
Hi-Pot (AC 1.5KV)	●	●	●	●	●	●	●	●	●	●
<b>Power over Ethernet</b>										
PoE ports	1	1	1	2						
Power Feeding Mode	1,2,3,6 (A)	1,2,3,6 (A)	1,2,3,6 (A)	1,2,3,6 (A) 4,5,7,8 (B)						
PoE Mode	IEEE 802.3 af/at/bt	IEEE 802.3 af/at	IEEE 802.3 af/at/bt	IEEE 802.3 af/at						
System Power Budget	90W	30W	90W	60W						
<b>Features</b>										
QoS	●	●	●		●	●				
Failure Alarm	●	●	●							
<b>SW/Protocol</b>										
Link Loss Forwarding	●	●			●			●		●
Switch Mode with Store & Forward	●	●			●	●	●	●	●	●
Pure Converter Mode							2-Channel	●		●
Converter Mode with Auto-change								●		
Modify Cut-through mode								●		
Broadcast storm filtering	●	●			●	●				
<b>HW/ME</b>										
Housing Protection (IP)	IP 31 Steel	IP 31 Steel	IP 31 Steel	IP 30 Steel	IP 31 Steel	IP 30 Aluminum	IP 30 Aluminum	IP 31 Steel	IP31 Aluminum	IP31 Aluminum
Dimension (HxWxD mm)	120 x 30 x 99	120 x 30 x 99	120 x 30 x 99	111.8 x 30 x 89.5	120 x 30 x 99	114.8 x 110 x 29.6	120 x 55 x 108	120 x 30 x 99	111.8 x 30 x 98.2	70 x 30 x 89
Mounting	Din-rail	Din-rail	Din-rail	Din-rail	Din-rail	Din-rail Wall mount	Din-rail	Din-rail	Din-rail	Din-rail
Operating Temperature	-40~75°C	-40~75°C	-40~75°C	-40~75°C	-40~75°C	-40~70°C	-25~75°C -40~75°C (-w)	-40~75°C	-10~70°C -40~70°C (-w)	-10~70°C -40~80°C (-w)
MTBF (hurs)		>313,000		>313,000	>313,000	>897,000	>813,000	>1,324,000	>632,000	>506,000
<b>Certificate</b>										
Regulatory/Approval	CE/FCC	CE/FCC	CE/FCC	CE/FCC	CE/FCC	CE/FCC	CE/FCC	CE/FCC	CE/FCC	CE/FCC
Compliance Standard	EN50121-4 Compliance	EN50121-4 Compliance	EN50121-4 Compliance			EN50121-4 Compliance		EN50121-4 Compliance	EN50121-4	

● Supported



JetWave 4221HP  
JetWave 4211HP  
JetWave 2460  
JetWave 2460E  
JetWave 3220 V3  
JetWave 3220 V3-M12  
JetWave 2212X/S/G  
JetWave 2211C

Wireless LAN Access Point					
<b>Interfaces</b>					
Ethernet	1x GERJ-45	1x FERJ-45	2x GERJ-45 (or M12)	2x FERJ-45	1x FERJ-45
WIFI	(JetWave 4221HP) 1x 2.4G 802.11n + 1x 5G 802.11ac (JetWave 4221HP) 1x 2.4G 802.11n or 1x 5G 802.11ac	1x 2.4G/5G 802.11n	2x 2.4G/5G 802.11n/ac	(JetWave 2212X/S) 1x 2.4G/5G 802.11n (JetWave 2212G) 1x 2.4G 802.11n or 1x 5G 802.11ac	1x 2.4G/5G 802.11n
WIFI Antenna Socket	(JetWave 4221HP) 4 (Dual 2T2R MIMO) (JetWave 4221HP) 2 (2T2R MIMO)	(JetWave 2460E) 2 (2T2R MIMO)	4 (Dual 2T2R MIMO)	2 (2T2R MIMO)	2 (2T2R MIMO)
Serial				2x RS-232/422/485 (JetWave 2212S)	
PoE	PoE PD	Passive PoE	PoE PD	Passive PoE (JetWave 2212G)	Passive PoE
DI/DO			1/1	0/1	1/1
Power Input	802.3at PoE (Eth 1)	Passive PoE (Eth 1)	802.3at PoE (Eth 1) Dual DC 24V(12~48V)	Dual DC 24V	DC 24V
<b>Protocols</b>					
Wireless Mode	AP, Client, WDS-AP/Client, Redundant AP/Client JSM AP/Client	AP, Client, WDS-AP/Client JSM AP/Client Repeater	AP, Client, WDS-AP/Client, Redundant AP/Client JSM AP/Client Repeater	AP, Client, WDS-AP/Client JSM AP/Client Repeater	Client JSM Client
Routing	LAN/WIFI to WAN	LAN/WIFI to WAN	LAN/WIFI to WAN		
NAT/Firewall	●	●	●		
VPN	OpenVPN/IPsec	OpenVPN/IPsec	OpenVPN/IPsec		
Link Fault Pass-Through	●	●	●		
Fast Roaming	●	●	●	●	●
802.1x, MAC Access Control	●	●	●	●	●
Configuration	CLI, Web, Utility, SNMP	CLI, Web, Utility, SNMP	CLI, Web, Utility, SNMP	CLI, Web, Utility, SNMP	CLI, Web, Utility, SNMP
Link Test Tools	●	●	●		
Event Alarm	E-mail, Syslog, SNMP Trap	E-mail, Syslog, SNMP Trap	DO, E-mail, Syslog, SNMP Trap	DO, E-mail, Syslog, SNMP Trap	DO, E-mail, Syslog, SNMP Trap
<b>Mechanical</b>					
Dimension (H x D x W mm)	262 x 186 x 55	268 x 150 x 55	149 x 120.6 x 74	140 x 118 x 40	100 x 100 x 35
Operating Temperature	-40~70°C	-40~70°C	-40~70°C	-40~70°C	-40~70°C
Housing	Aluminum (IP67)	Plastic (IP67)	Aluminum (IP31)	Aluminum (IP31)	Iron (IP31)
<b>Certification</b>					
CE/FCC	●	●	●	●	●
E-Mark				●	●
Railway EMC	EN50121-4	EN50121-4	EN50121-4/EN50155	EN50121-4	EN50121-4

● Supported

**Standard**

WIFI IEEE802.11a/g/n/ac

3G 3GPP Release 4,6,7

LTE 3GPP Release 8,9

**Operating Frequency**

2.4G WIFI FCC: 2.412~2.462GHz; CE: 2.412~2.472GHz

5G WIFI FCC: 5.170~5.250GHz and 5.745~5.825GHz, CE: 5.170~5.250GHz

3G GSM/GPRS/EDGE: Quad band 850/900/1800/1900MHz,  
UMTS/HSPA+: Five band 800/850/900/1900/2100MHz

LTE LTE-E: 800(20)/900(8)/1800(3)/2600(7)MHz  
LTE-U: 700(17)/850(5)/AWS1700/2100(4)/1900(2)MHz  
LTE-A: 2100(1)/1900(2)/1800(3)/1700(4)/850(5)/2600(7)/900(8)/700(28)MHz

\*DI: Digital Input; DO: Digital Output



JetWave 3420 V3  
JetWave 3420 V3-M12  
JetWave 2714GF-LTE  
JetWave 2714GF-WIFI  
JetWave 2714G-LTE  
JetWave 2714G-WIFI  
JetWave 2111L  
JetWave 2411L  
JetWave 2111  
JetWave 2411  
JetWave 2114  
JetWave 2414  
JetWave 4110L

Mobile Cellular Router / Gateway								LoRa Gateway
<b>Interfaces</b>								
Ethernet	2x GE RJ-45 (or M12)	2x GE RJ-45 2x 100/1000 SFP	4 x GE RJ-45	1x FERJ-45	1x FERJ-45	4x FERJ-45	1 x RS485	
WIFI	1x 2.4G 802.11n or 1x 5G 802.11ac	(JetWave 2714GF-WIFI) 1x 2.4G 802.11n or 1x 5G 802.11ac	(JetWave 2714G-WIFI) 1x 2.4G 802.11n or 1x 5G 802.11ac					
Cellular	LTE-E/A/U	LTE-E/A/U	LTE-E/A/U	LTE-E/A/U (JetWave 2111L LTE Cat 1) (JetWave 2411L LTE Cat 4)	LTE-E/A/U (JetWave 2111 LTE Cat 1) (JetWave 2411 LTE Cat 4)	LTE-E/A/U (JetWave 2114 LTE Cat 1) (JetWave 2414 LTE Cat 4)		
LoRa								Private LoRa
WIFI Antenna Socket	2 (2T2R MIMO)	2 (2T2R MIMO)	2 (2T2R MIMO)					1 (1T1R)
Serial	1x RS-232/422/485				1x RS-232/422/485	2x RS-232/422/485		1x RS-485
PoE		2xRJ45 (PSE)	4xRJ45 (PSE)	Passive PoE		Passive PoE		
DI/DO	1/1	0/1	0/1	1/1	1/1	2/2		2/2
Power Input	802.3at PoE (Eth 1) Dual DC 24V(12~48V)	Dual DC 54V (48V-57V)	Dual DC 9-48V	DC 24V-48V	DC 24V	DC 24V-48V		DC 12V-36V
<b>Protocols</b>								
Wireless Mode	AP, Client, WDS-AP/Client JSM AP/Client	AP, Client, WDS-AP/Client JSM AP/Client Repeater (WIFI model only)	AP, Client, WDS-AP/Client JSM AP/Client Repeater (WIFI model only)					P2P / Group / Broadcast
Routing	LAN/WIFI to LTE/WAN	LAN to LTE	LAN to LTE	LAN to 3G or LTE	LAN to 3G or LTE	LAN to 3G or LTE		
NAT/Firewall	●	●	●	●	●	●		
VPN	OpenVPN/IPsec	OpenVPN/IPsec	OpenVPN/IPsec	OpenVPN/IPsec	OpenVPN/IPsec	OpenVPN/IPsec		
WAN Redundancy	WAN/LTE							
Link Fault Pass-Through	●							
Fast Roaming	●							
802.1x, MAC Access Control	●	●	●					
Configuration	CLI, Web, Utility, SNMP	CLI, Web, Utility, SNMP	CLI, Web, Utility, SNMP	CLI, Web, Utility, SNMP	CLI, Web, Utility, SNMP	CLI, Web, Utility, SNMP	CLI, Web, Utility, SNMP	CLI, Web, Utility, SNMP
Link Test Tools	●							
Auto IP Report	●	●	●	●	●	●		
Event Alarm	DO, E-mail, Syslog, SNMP Trap	DO, E-mail, Syslog, SNMP Trap	DO, E-mail, Syslog, SNMP Trap	DI/DO, E-mail, Syslog, SNMP Trap	DI/DO, E-mail, Syslog, SNMP Trap	DI/DO, E-mail, Syslog, SNMP Trap		DI/DO, Syslog
<b>Mechanical</b>								
Dimension (HxDxW mm)	149 x 120.6 x 74	140 x 115 x 55	140 x 115 x 55	100 x 100 x 30	100 x 100 x 35	100 x 100 x 55		100 x 100 x 48
Operating Temperature	-40~70°C	-40~75°C	-40~75°C	-40~70°C	-40~70°C	-40~70°C		-40~85°C
Housing	Aluminum (IP31)	Aluminum (IP31)	Aluminum (IP31)	Aluminum (IP31)	Aluminum (IP31)	Aluminum (IP31)		Plastic (IP68)
<b>Certification</b>								
CE/FCC	●	●	●	●	●	●		●
Railway EMC	EN50121-4 EN50155	EN50121-4	EN50121-4	EN50121-4	EN50121-4	EN50121-4		

● Supported

**Standard**

WIFI IEEE802.11a/g/n/ac

3G 3GPP Release 4,6,7

LTE 3GPP Release 8,9

**Operating Frequency**

2.4G WIFI FCC: 2.412~2.462GHz; CE: 2.412~2.472GHz

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LTE-A: 2100(1)/1900(2)/1800(3)/1700(4)/850(5)/2600(7)/900(8)/700(28)MHz

\*DI: Digital Input; DO: Digital Output

### Omni Antenna

	JWA-2.4/5G-2dBi-SM-00	JWA-2.4G-5dBi-NF-00	JWA-2.4G-7dBi-NF-00	JWA-2.4G-9dBi-NF-00	JWA-5G-7dBi-NF-00	JWA-2.4/5G-5/7dBi-NF-00	JWA-5G-12dBi-NF-00
Application	Indoor	Outdoor	Outdoor	Outdoor	Outdoor	Outdoor	Outdoor
Connector Type	SMA	N-Type	N-Type	N-Type	N-Type	N-Type	N-Type
Gain (dBi)	2dBi	5dBi	7dBi	9dBi	7dBi	2.4G 5dBi 5G 7dBi	12dBi
Angle	Horz	360°	360°	360°	360°	360°	360°
	Vert	360°	10° -12°	10° -12°	10° -12°	360°	10° -12°
Dimension (mm)	8 x 8 x 3	18.7 x 2 x 2.2	29 x 2 x 2	46 x 2.3 x 2.3	19 x 2.2 x 2.2	19 x 2.2 x 2.2	45 x 2.2 x 2.2
Remark	AGV application Point to multipoint	Point to multipoint	Point to multipoint				

### Directional Panel Antenna

	JWDA-2.4G-12dBi-NF-00	JWDA-2.4G-14dBi-SM-00	JWDA-5G-14dBi-NF-00	JWDA-5G-22dBi-SM-00
Frequency	2.4G	2.4G	5G	5G
Application	Outdoor	Outdoor	Outdoor	Outdoor
Connector Type	N-Type	SMA	N-Type	SMA
Gain (dBi)	12dBi	14dBi	14dBi	22dBi
Angle	Horz	35°	32°	9°
	Vert	30°	30°	9°
Dimension (mm)	20 x 12 x 3	22 x 22 x 3.1	22 x 22 x 3.4	38 x 38 x 18
Remark	Point to Point Long distance			

### RF Cable

	JWA-Cable-SM-to-SM-00	JWA-Cable-NM-to-NM-00	JWA-Cable-NM-to-NM-WP-00	JWA-Cable-NM-to-SM-WP-00
Connector	RP-SMA Male to RP-SMA Female	N-Type Male to N-Type Male	N-Type Male to N-Type Male	N-Type Male to SMA male
Length	1500mm	1500mm	1500mm	1500mm

### WiFi AP /Antenna distance reference table

Model Name	Connector type	Frequency	Default Antenna	Omni Antenna							
				JWA-2.4/5G-2dBi-SM-00	JWA-2.4G-5dBi-NF-00	JWA-2.4G-7dBi-NF-00	JWA-2.4G-9dBi-NF-00	JWA-5G-7dBi-NF-00	JWA-2.4/5G-5/7dBi-NF-00	JWA-5G-12dBi-NF-00	
				2.4G/5G 2dBi SMA	2.4G 5dBi N-Type	2.4G 7dBi N-Type	2.4G 9dBi N-Type	5G 7dBi N-Type	2.4/5G-5/7dBi N-Type	5G 12dBi N-Type	
JetWave 2211C	SMA	2.4G	0.2km	0.15km	0.6km	1km	1.5 km				
		5G	0.15km	0.1km				1km	1.5 km	1.5 km	
JetWave 2212 & 3000 series	SMA	2.4G	0.3km	0.15km	0.6km	1km	1.5 km			1.5 km	
		5G	0.2km	0.1km				1km	1.5 km	1.5 km	
JetWave 2460	Embedded	2.4G/5G	1.5km	n/a							
JetWave 2460E	N-Type	2.4G	1.5km	0.15km	0.6km	1km	1.5 km			1.5 km	
		5G	1.5km	0.1km				1km	1.5 km	1.5 km	
JetWave 4221/4211	N-Type	2.4G	n/a	0.15km	0.6km	1km	1.5 km			1.5 km	
		5G	n/a	0.1km				1km	1.5 km	1.5 km	
JetWave 4020	Embedded	2.4G 5G	1.5km 1.5km	n/a							
JetWave 4020E	N-Type	2.4G	n/a		1km	1.2km	2 km			1.5 km	
		5G	n/a					2 km	1.5 km	3 km	
JetWave 4221/4211 HP	N-Type	2.4G	n/a		1.5km	2.4km	3 km			3km	
		5G	n/a					3 km	4km	4 km	

Model Name	Connector type	Frequency	Default Antenna	Directional Panel Antenna			
				JWDA-2.4G-12dBi-NF-00	JWDA-2.4G-14dBi-SM-00	JWDA-5G-14dBi-NF-00	JWDA-5G-22dBi-SM-00
				2.4G 12dBi N-Type	2.4G 14dBi SMA	5G 14dBi N-Type	5G 22dBi SMA
JetWave 2211C	SMA	2.4G	0.2km				
		5G	0.15km				
JetWave 2212 & 3000 series	SMA	2.4G	0.3km	2.5 km	3 km		
		5G	0.2km			2.5 km	3.5 km
JetWave 2460	Embedded	2.4G/5G	1.5km	n/a			
JetWave 2460E	N-Type	2.4G	1.5km	2.5 km	3 km		
		5G	1.5km			2.5 km	3.5 km
JetWave 4221/4211	N-Type	2.4G	n/a	2.5 km	3 km		
		5G	n/a			2.5 km	3.5 km
JetWave 4020	Embedded	2.4G 5G	1.5km 1.5km	n/a			
JetWave 4020E	N-Type	2.4G	n/a	3 km	3km		
		5G	n/a			3.5km	5km
JetWave 4221/4211 HP	N-Type	2.4G	n/a	4 km	4.5km		
		5G	n/a			7km	10km

Industrial Ethernet Switch  
Industrial Power-over-Ethernet Switch  
Industrial Wi-Fi/Cellular Solution  
Industrial Media Converter  
Industrial Connectivity  
Network Management Software

**Korenix Technology Co., Ltd**

[www.korenix.com](http://www.korenix.com)

Tel: +886 2 8911 1000

Fax: +886 2 2912 3328

Business: [sales@korenix.com](mailto:sales@korenix.com)

Service: [korecare@korenix.com](mailto:korecare@korenix.com)



V21.1\_Brochure