

Connecting Things Connecting Future

Korenix Full Selection Guide

Industrial Data Communication

korenix | A Beijer Group
company

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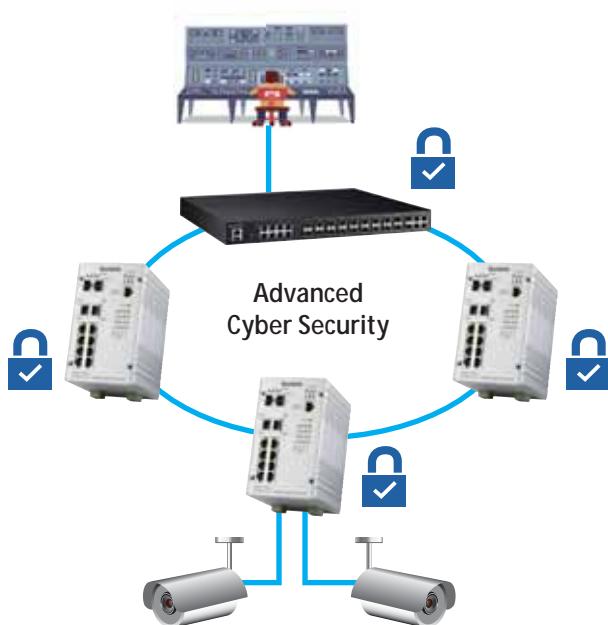
Company Profile

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" features that meet IEC-62443-4-2 which provide more safety and reliable network infrastructure.



Network Level Defense

- DHCP Snooping
- Dynamic ARP Inspection
- IP Source Guard

Traffic Level Defense

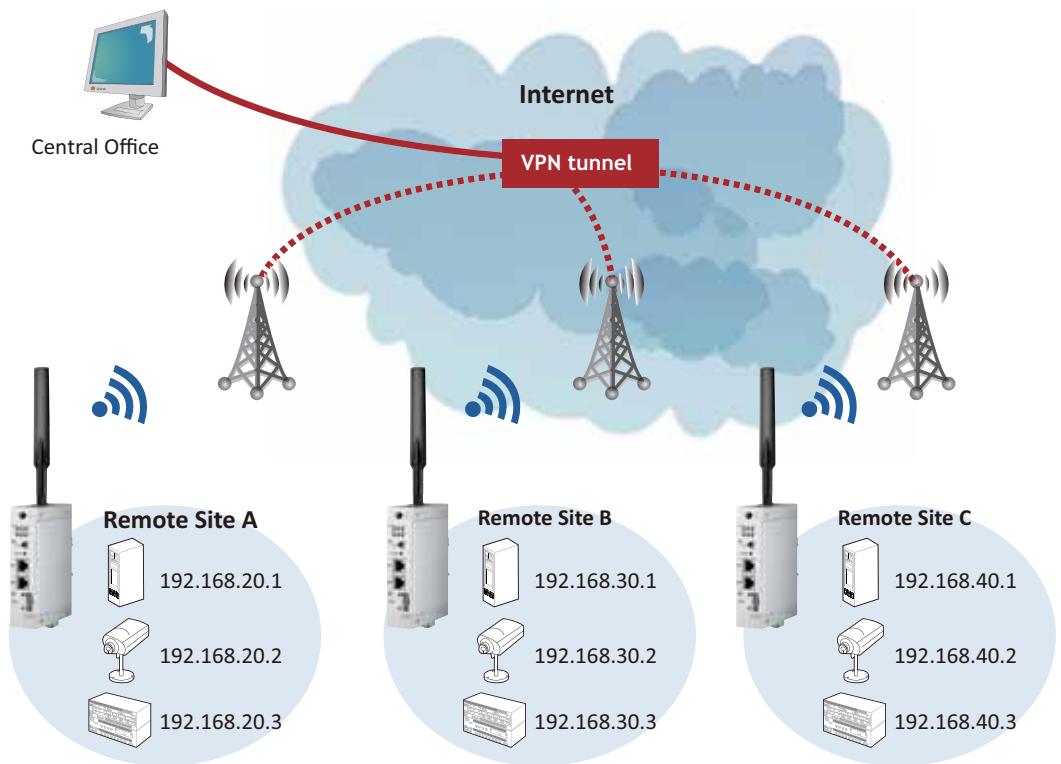
- L3/L4 ACL block untrusted traffic from a trusted device
- Precise video stream isolation

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

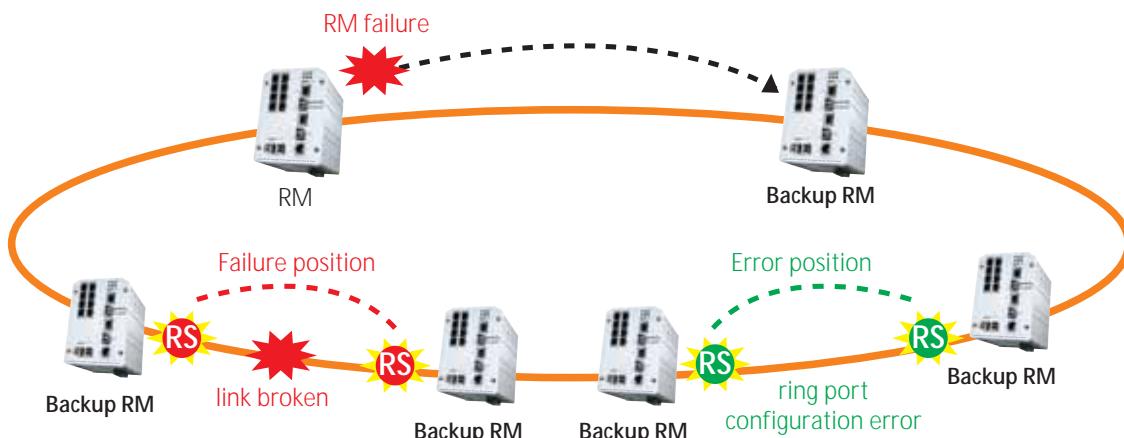
It's reliable, stable, quality and broadcast-storm-free.

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 0 ms Link Restoration

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

- No packet loss
- No broadcast storm
- No influence to the network



Seamless
Restoration



Packet loss



Broadcast storm

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.

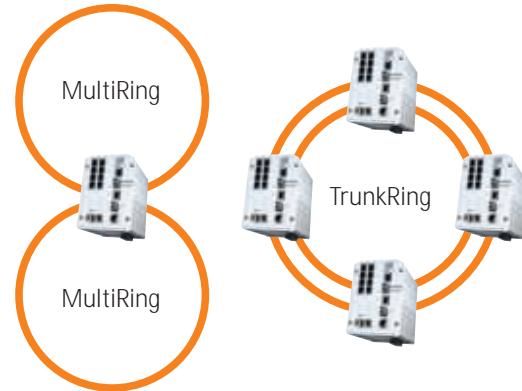


Korenix NMS points out the failure position

*Note: support on target models

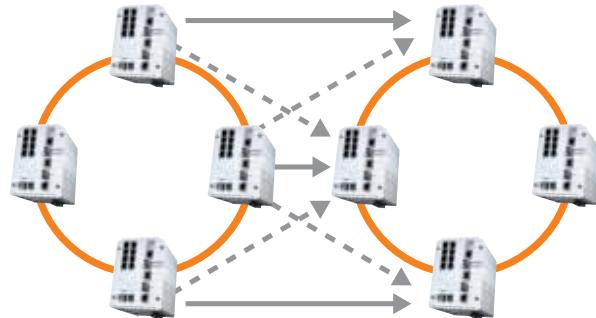
MultiRing, TrunkRing Flexible Ring Deployment

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

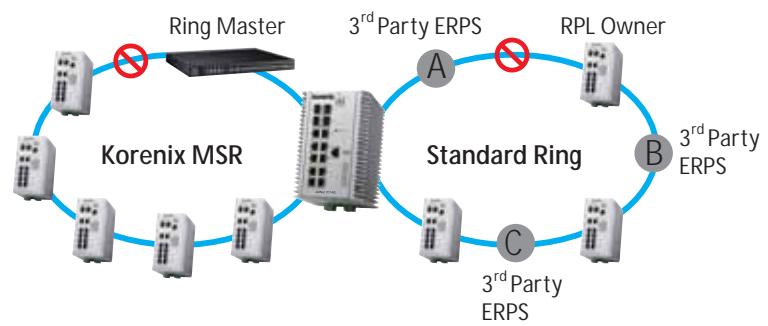
Simply enable the function and connect two rings through multiple links in free style without complex configurations such as master, slave, coupler port and so on. The failover time is less than 50ms and restoration time is 0.



Rapid Dual Homing
Multiple redundancies in free style

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

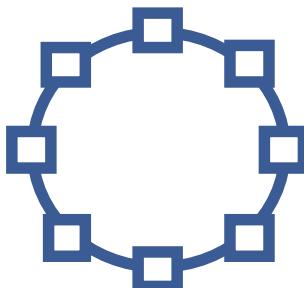
- Korenix Proprietary: MSR (Multiple Super Ring)
- Standard Network Redundancy
 - IEEE 802.1d Rapid Spanning Tree (RSTP)
 - IEEE 802.1s Multiple Spanning Tree (MSTP)
 - ITU-T G.8032 ERPS



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

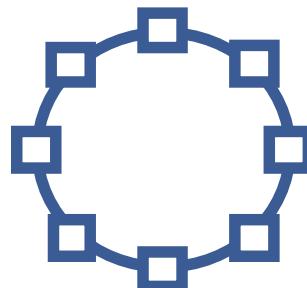
ERPS V1

Single Ring With Multiple Vendors Mixed

ERPS V1

Single Ring With Multiple Vendors Mixed

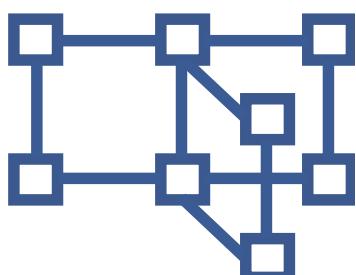
Takes the advantage of the openness, the switches in a ring will not be tied to specific supplier any more. Moderate failover time, 50ms recovery, 50ms restoration.



ERPS V2

Flexible In Topology Without Compromise On Recovery Time

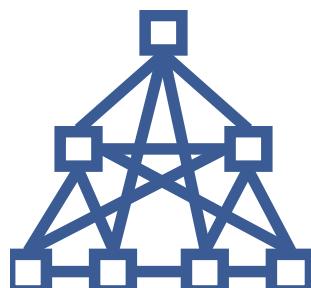
Future proof, easy expansion by adding unlimited levels of rings. Each ring operates independently, and the recovery time in all rings are deterministic, 50ms recovery, 50ms restoration.



RSTP

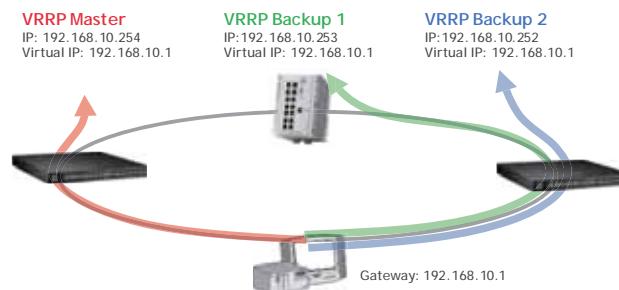
Any Topology, Multi- Vendors, Recovery Time Is Not Critical

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.



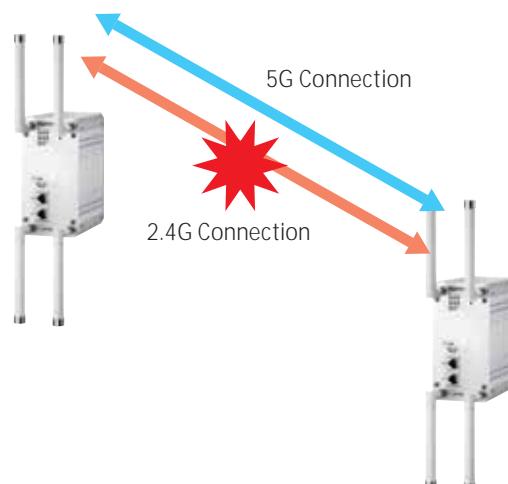
VRRP (Virtual Router Redundancy Protocol)

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.



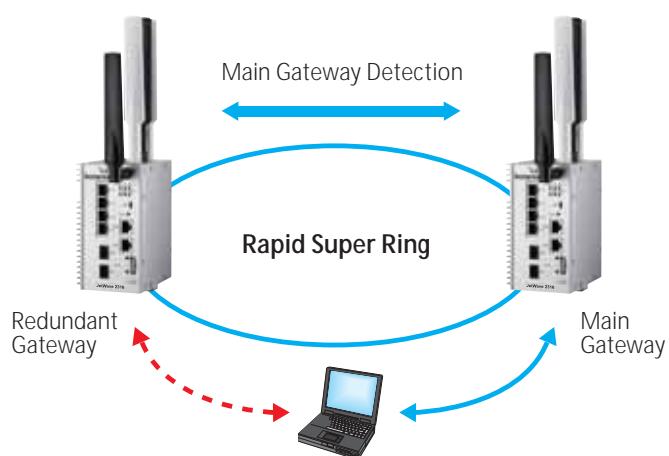
Dual Radios for wireless Redundancy

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	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

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.

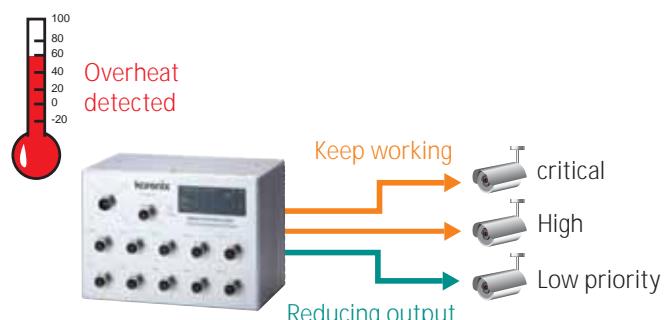
Power over Ethernet Schedule

PoE Schedule on Port 1 is Enabled

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

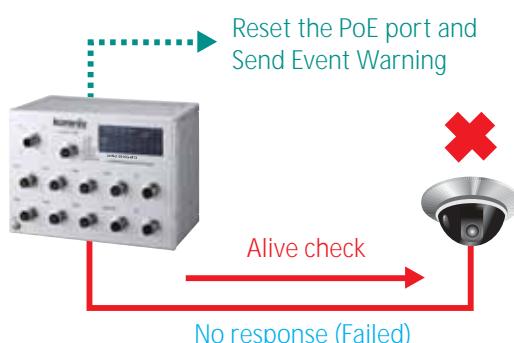
Overheat Protection

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



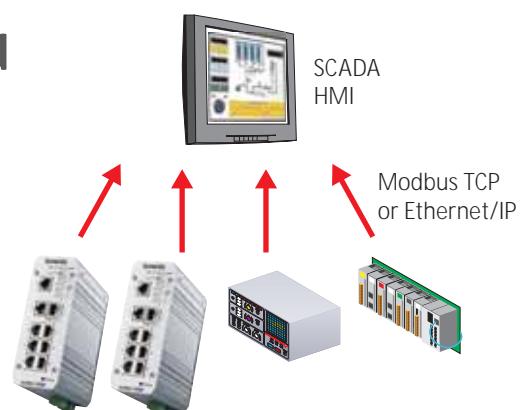
utility

```
switch# sh running-config  
Building configuration...  
Current configuration:  
hostname switch  
vlan learning independent  
vlan 1  
  interface fastethernet1  
    switchport access vlan add 1  
  interface fastethernet2  
    acceptable frame type vlan taggedonly  
    ingress filtering enable  
    switchport access vlan add 1  
    switchport trunk native vlan 2
```

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

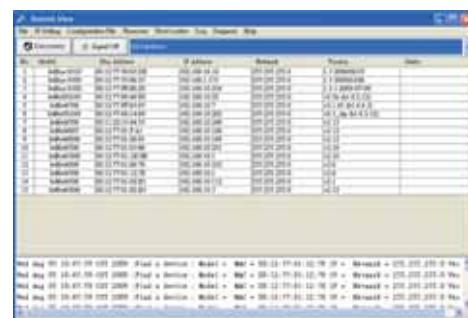
Korenix NMS

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.



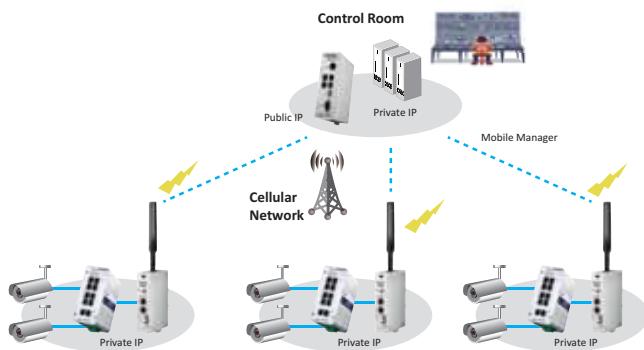
JetWave Smart Remote(JSR) APP

- 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



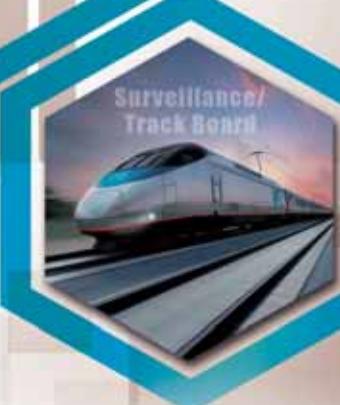
I.T.S/ Road Side

Ind. EMC
NEMA-TS2



Surveillance/ Track Board

EN50155
EN50121-2-3/-4



On Vehicle

Ind. EMC
E-Mark



Petrochemical

Ind. EMC
C1D2



Power Feeding

IEC61850-3
IEEE1613

Application – Smart City

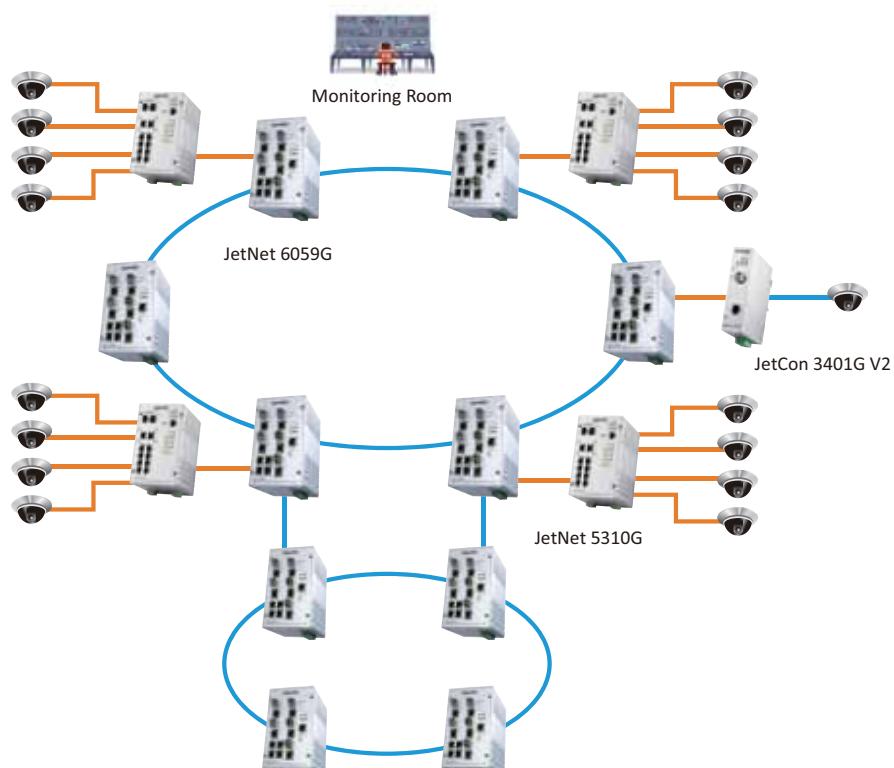


Sports Complex Surveillance

This sports complex in Middle East occupies more than 800,000 sqm, and contains two football stadiums, training fields, hotels, and apartments which make this location absolutely critical in terms of security. High quality and live video with no time delay is the main objective of video surveillance projects.

Korenix Solution

High definition IP cameras have been installed in most of locations in the sport complex - main gates, entrances, parking zones, auditoriums, corridors and storage areas. A reliable network infrastructure with minimum possibility down time, fast recovery from disasters and centralizing management system was a big challenge for project managers. Korenix Ring and PoE switches provided reliable network solution connecting long distance between buildings and central monitor room, solved the power supply problem to the cameras. It works reliably even the temperature in summer is higher than 60°C.



Applied Models



Application – Surveillance



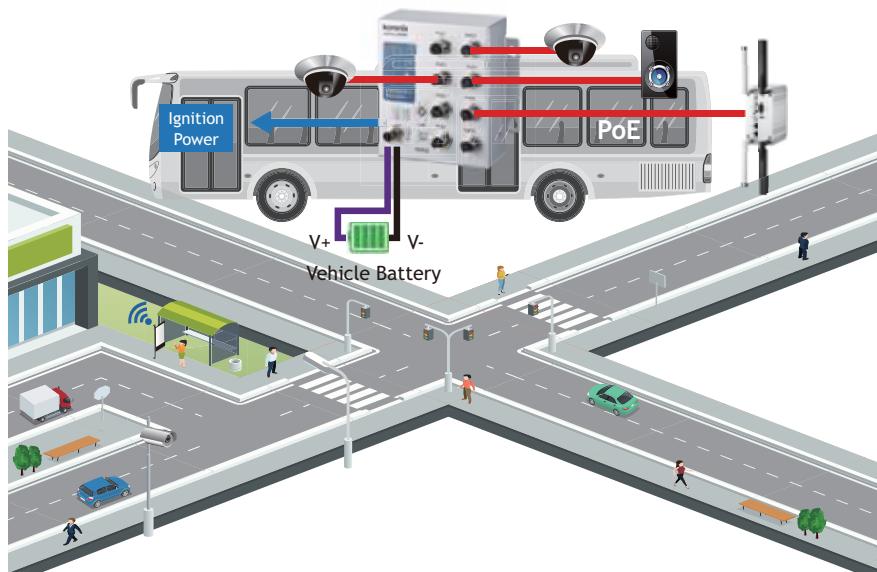
Bus Surveillance

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

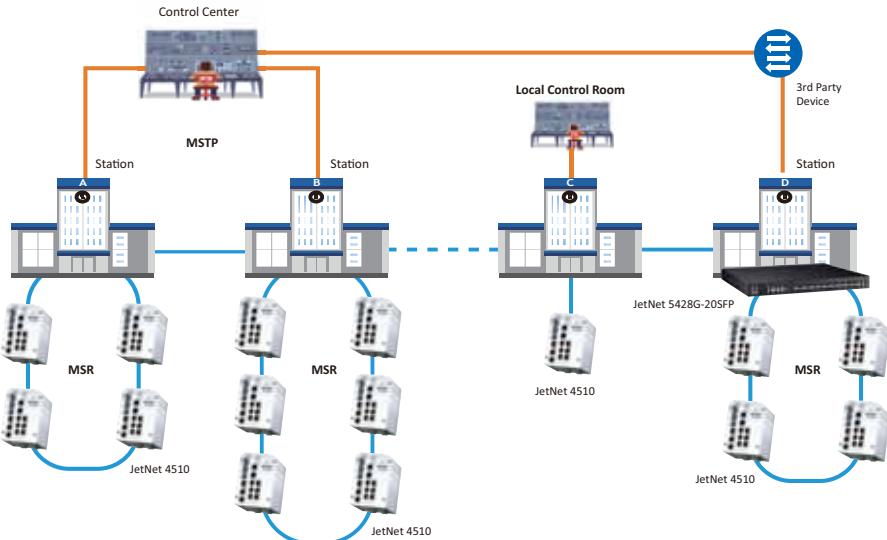


Qinghai - Tibet Railway

The Qinghai-Tibet railway is the highest plateau railway in the world. To ensure a reliable operation in the extreme environment, the authority built a monitoring and control system on its power SCADA system along all the track line.

Korenix Solution

Korenix was chosen as its main network system for the ability to work stably in extreme conditions - strong winds, heavy sandstorms and more than a 30°C temperature variation during one day. The IP31 aluminum housing offers great cooling effect, and protects the device from heavy sandstorms. EN50121-4 EMC level compliance ensures to protect the switches from the frequent thunderstorms.



114 pieces of JetNet 5428G and 96 pieces of JetNet 4510 were installed in 22 railway stations and the 96 field sites. Two levels of rings are designed for better scalability. Each field-level ring consists of several JetNet 4510 that run Korenix MSR for fast recovery. The JetNet 5428G at the station-level connected with the 3rd party core switches by MSTP. Korenix NMS is a visualized management system for monitoring and control over large networks. It is used to report failures and helps the customer reduce troubleshooting efforts to a minimum.

Applied Models



JetNet 4510
Industrial 10-ports
Managed Switch



JetNet 5428G-20SFP
Industrial 8FE+16SFP+4G
Gigabit Managed Switch



Korenix NMS
Intelligent Network
Management System

Application – Industry 4.0

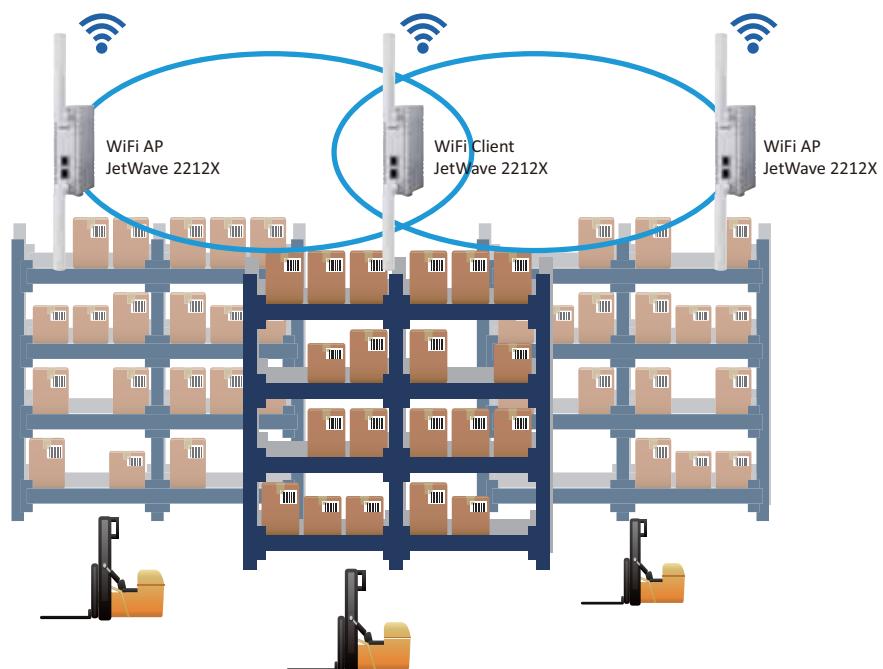


Automated warehouse

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.

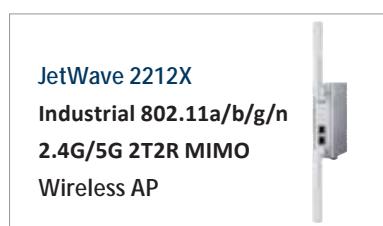
Korenix Solution

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



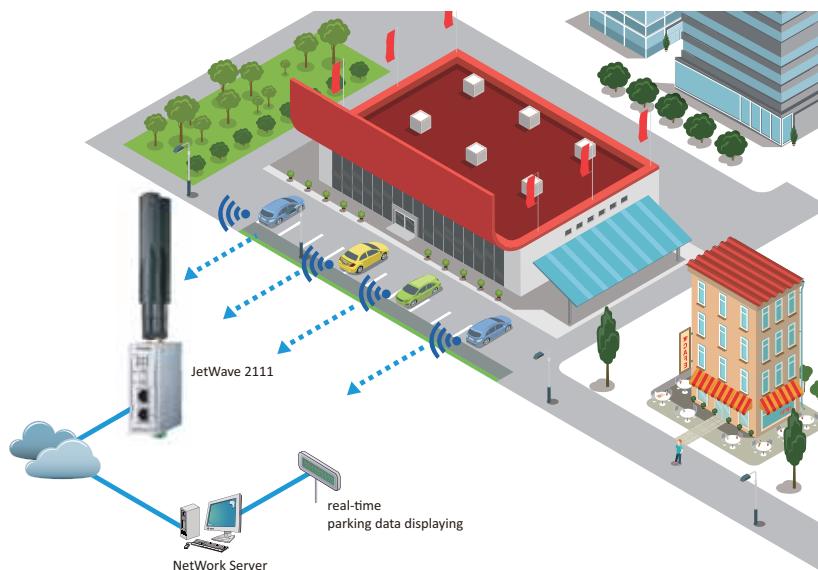
Smart Parking

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.

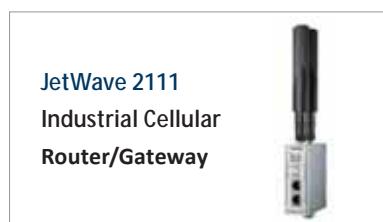
Korenix Solution

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



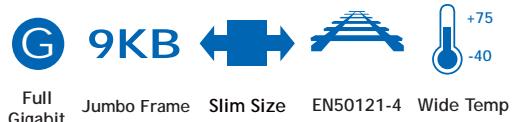
Highlight Products – Industrial (PoE) Switches

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 5210G

Industrial 8FE + 2G RJ/SFP Combo Managed Switch

- 8 10/100TX, 2 Gigabit RJ/SFP combo ports
- Network Redundancy – MSR, ERPS, RSTP, MSTP, Super Chain
- Advanced Security – Port Security, IP Access list, SSH and HTTPS



JetNet 5612G/7612G Series

Industrial 8 GE + 4 G SFP Managed Switch

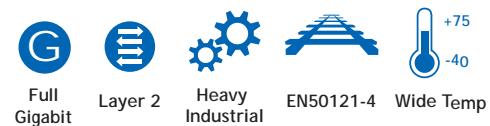
Model Name	10/100/ 1000 Base-TX	Giga Ports	Power Budget	Remark
JetNet 5612G-4F	8	4 SFP	Non-PoE	Layer 2
JetNet 7612G-4F	8	4 SFP	Non-PoE	Layer 3
JetNet 5612GP-4F	8	4 SFP	240w	Layer 2
JetNet 7612GP-4F	8	4 SFP	240w	Layer 3



JetNet 5620G-4C

- 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 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



Full
Gigabit



Cyber
Security



IEEE1588
PTP



EN50121-4



IEC61850-3
IEEE 1613

JetNet 7500 / 5500 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)



Heavy
Industrial



EN50121-4



IEC62236-4



EN50155



I.T.S



E Mark

Model Name	Layer	100TX PSE Ports	Gigabit Ports	Power Input	Power Budget
JetNet 7520P-LVDC	3	16		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	4	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 3810G V2 Industrial Booster PoE Switch

- Vehicle PoE: DC 8-32V, deliver 8 port PoE @48V
- IEEE802.3af compliant PoE: Total power budget is 80W with max. 15.4W per port



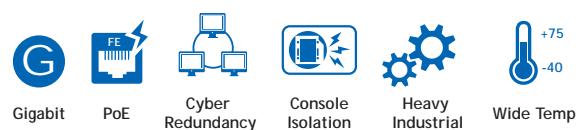
JetNet 3808G-M12 Industrial 7FE + 1 GbE Un-Managed Booster PoE Switch

- 1 Gigabit/PSE M12 X-code, 7 100M/PSE M12 D-code, M12-A Power
- Power System design with 120W PoE budget and compliance with safety requirement
- Embedded DC 54V Booster
- Power Ignition Management
- -40 to 75°C Operating Temperature



JetNet 5310G Industrial Gigabit Managed PoE Switch

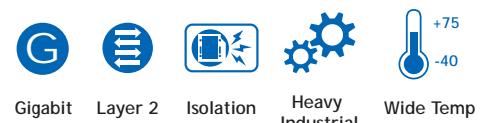
- IEEE 802.3af 15.4W / IEEE 802.3at 30W High Power PoE
- 240W total power budget for High-power PoE camera
- SFP ports support 100/1000 Mbps with Digital Diagnostic Monitoring (DDM) to monitor long distance fiber quality



JetNet 5810G

Industrial 8FE + 2G Combo DC Booster Switch

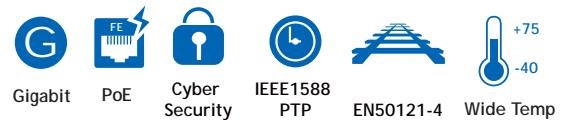
- 8 10/100TX, 2 Gigabit RJ/SFP combo ports
- Total PoE Budget 240W @ 75°C ambient temperature
- Advanced Security system by Port Security, Access IP list, SSH, HTTPS Login, IEEE 802.1x / Radius Server authentication
- Advanced management by LACP/VLAN/GVRP/QoS/IGMP/ Private VLAN/QinQ/Snooping/Rate Control/Online Multi-Port Mirroring/DHCP



JetNet 5728G

Industrial 20FE+8G Managed PoE Ethernet Switch

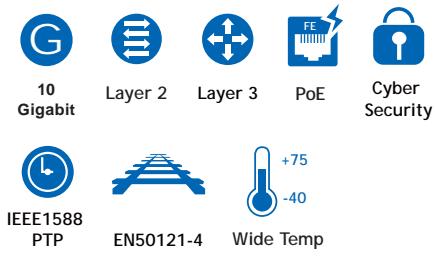
- Advanced Cyber Redundancy – MSR, SuperChain, ITU-T G.8032 ERPS
- Isolated redundant power inputs with VDC power or 110/220 VAC power



JetNet 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 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



Full
Gigabit



10~60V

30

60

EN50121-4



+75
-40

Wide Temp

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



Full
Gigabit



10~60V

30

60

EN50121-4



+75
-40

Wide Temp

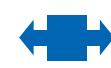
JetCon 1701GP-U

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



9KB



Gigabit Jumbo Frame



Slim Size



+75
-40

Wide Temp

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 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



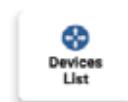
Model Name	Radio	Wifi	Ethernet port	Ethernet port	Antenna
JetWave 4221HP-E	1	1 x 2.4G + 1 x 5G	1 x GE (RJ45)	High Power	
JetWave 4221-E	1	2 x 2.4G/5G	1 x GE (RJ45)	Normal Power	
JetWave 4211HP-5G-E	1	1 x 5G	1 x GE (RJ45)	High Power	External antenna (Buy separately)
JetWave 4211HP-2.4G-E	1	1 x 2.4G	1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

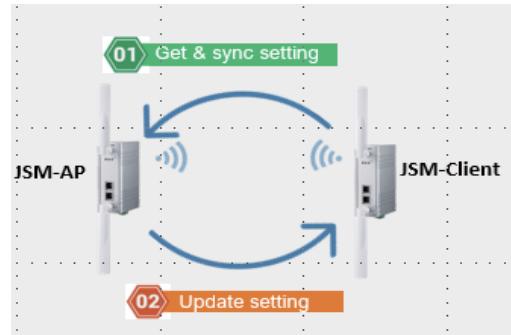


JSM (JetWave Smart Mapping)

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).

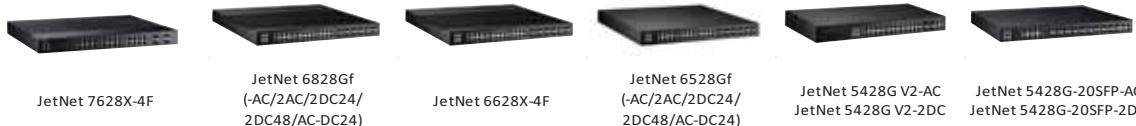


Typical Wi-Fi Mode		Wireless Mode WLAN Basic & Security Settings	
Wi-Fi AP		Manually	User must manual adjust another wireless channel once the operating frequency with serious signal interference.
Wi-Fi Client		Manually	Step 1. Execute "Site Survey" and select a target AP for connection. Step 2. System apply the same "802.11 Mode" setting automatically. (From 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
 - WPA 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 V2-2DC JetNet 5428G-20SFP-AC JetNet 5428G-20SFP-2DC

Rackmount Gigabit Core Switches			Rackmount Ethernet Switches			
Interface						
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)
Features						
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	●	●	●	●	●	●
L3 Protocols						
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	●	●				
SW/Protocol						
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 SecuritySSL/HTTPS,SSH/Telnet	●	●	●	●	●	●
TACACS+, Radius	●	●	●	●	●	●
Ind. Protocol (ModBus/TCP, EtherNet/IP)	●	●	●	●	●	●
SNMP/RMON/Trap	●	●	●	●	●	●
CLI/Web/Telnet	●	●	●	●	●	●
HW/ME						
Housing Protection (IP)	IP40	IP40	IP40	IP40	IP30	IP40
Dimension (HxDxW 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
Certification						
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



JetNet 7612G-4F



JetNet 7020G



JetNet 7014G V2

JetNet 6059G
JetNet 6059G-w

JetNet 5620G-4C



JetNet 5612G-4F

DIN-Rail Managed Ethernet Switches

Interface						
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
Features						
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	•	•	•	•	•	•
SW/Protocol						
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	•	•	•	•	•	•
HW/ME						
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
Certification						
Regulatory/Approval	CE/FCC/UL/EN50121-4 IEEE1613/IEC61850-3	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



JetNet 5210G



JetNet 5020G

JetNet 5010G
JetNet 5010G-wJetNet 4510
JetNet 4510-wJetNet 4508f/4508f-w
JetNet 4508if/4508if-wJetNet 4508/4508-w
JetNet 4508i/4508i-w

DIN-Rail Managed Ethernet Switches

Interface						
Total ports number	10	20	10	10	8	8
10/100TX Ports	8	16	7	7	6	8
10/100/1000TX Ports						
100/1000M Combo	2	4	3	3 x 100M		
SFP Ports					2 x 100M(SC)	
DI/DO (Dry Relay)	1 DI, 1 DO	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 (9.6-60V)	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	RS-232
Features						
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	•	•	•	•	•	•
SW/Protocol						
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	•	•	•	•	•	•
HW/ME						
Housing Protection (IP)	IP31/Aluminum	IP31/Aluminum	IP31/Aluminum	IP31/Aluminum	IP31/Aluminum	IP31/Aluminum
Dimension (HxWxD mm)	160 x 80 x 136	160 x 108 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	DIN Rail/Wall Mounting	DIN Rail/Wall Mounting	DIN Rail/Wall Mounting	DIN Rail/Wall Mounting
Operating Temperature	-40~75°C	-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	290,000	425,000	425,000	661,000	425,000
Certification						
Regulatory/Approval	CE/FCC/UL/EN50121-4	CE/FCC/UL/EN50121-4	CE/FCC/UL/NEMA	CE/FCC/UL/NEMA	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	Heavy Ind. EMC

● Supported



Unmanaged Ethernet Switches

Interface												
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
Features												
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
HW/ME												
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)	-20~60°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
Certification												
Regulatory/Approval	CE/FCC/EN50121-4	CE/FCC/EN50121-4	CE/FCC	CE/FCC/UL 508	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	
Compliance Standard	Heavy Ind. EMC	Heavy Ind. EMC									Heavy Industrial	

● Supported



JetNet 7628XP-4F

JetNet 6628XP-4F

JetNet 6728G-24P

JetNet 6728G-16P

JetNet 5728G-24P V2

JetNet 5728G-16P V2

Rackmount Managed PoE Switch

Interface

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
D/I/D0 (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)	
AC Power input	1x90~264 VAC		1x90~264 VAC		1x90~264 VAC	

Features

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	●	●	●	●	●	●
PoE Features						
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)

SW/Protocol

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	●	●	●	●	●	●

HW/ME

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

Certification

Regulatory/Approval	CE/FCC/EN50121-4	CE/FCC/UL/EN50121-4	CE/FCC/UL/CB/EN50121-4
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● Supported

JetNet 7520P-HVDC
JetNet 7520P-LVDCJetNet 7512P-HVDC
JetNet 7512P-LVDC

JetNet 7714G

JetNet 6910G-M12 HVDC
JetNet 6910G-M12 LVDCJetNet 5520P-HVDC
JetNet 5520P-LVDCJetNet 5512P-HVDC
JetNet 5512P-LVDC**M12 Giga Managed Industrial PoE Switch**

Interface						
Total Ports Number	20	12	14	10	20	12
100/100TX 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 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	8 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)	
Features						
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						
Power over Ethernet						
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)	
L3 Protocols						
L3 Routing	●	●	●			
Multicast Routing	●	●	●			
VRP Gateway Redundancy	●	●	●			
SW/Protocol						
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)	●	●	●	●	●	●
HW/ME						
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
Certification						
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						
Interface						
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	4x 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)	2x DC 48V (48-57V)	2 x DC 48V (48-57V)
Features						
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)	●	●	●	●	●	
Power over Ethernet						
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
L3 Protocols						
L3 Routing	●	●				
Multicast Routing	●	●				
VRRP Gateway Redundancy	●	●				
SW/Protocol						
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)	●	●	●	●	●	
HW/ME						
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
Certification						
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 3908G-M12

JetNet 3808G-M12

JetNet 3906G

JetNet 3810G V2/
3806G/3810f/3810f

JetNet 3710G

JetNet 3705
JetNet 3705f

JetNet 3210GP-2C

JetNet 3205GP
JetNet 3205GP-1F

Unmanaged Industrial PoE Switch

Interface								
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)
D/I/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
Power Over Ethernet								
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 60 W @ 12V	120W @24V 60 W @ 12V	110W@24V, 65°C 90W@24V, 75°C	65W@24V, 60°C 65W@48V, 70°C		60W	240W	112W
Features								
QoS	●	●		●	●		●	
Failure Alarm			Port, Power	Port		Port, Power	Power	Power
Jumbo Frame	10Kbytes		9Kbytes				10Kbytes	9Kbytes
HW/ME								
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
Certification								
RoHS	●	●	●	●	●	●	●	●
Regulatory/Approval	CE/FCC/EN50155/ EN50121-4/EN50121-3-2/E-Mark 13	CE/FCC/UL		CE/FCC/UL		CE/FCC/UL	CE/FCC	CE/FCC/UL
Compliance Standard	Heavy Industrial	NEMA TS2						

● Supported



JetCon 3701GP-U JetCon 3701G JetCon 1701GP-U JetCon 1702 JetCon 3401GV2 JetCon 2502 JetCon 2302 JetCon 2301S JetCon 1302 JetCon 1301

Media Converter										
Interface										
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 (23015-m) 30km (23015-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 1 x ISDN / POTS				
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	1 x 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)	●	●	●	●	●	●	●	●	●	●
Power over Ethernet										
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						
Features										
QoS	●	●	●		●	●				
Failure Alarm	●	●	●							
SW/Protocol										
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	●	●			●	●				
HW/ME										
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 Temerature	-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 (hours)		>313,000		>313,000	>313,000	>897,000	>813,000	>1,324,000	>632,000	>506,000
Certificate										
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 IWC 5630



JetWave 4020 JetWave 4020E JetWave 4221HP JetWave 2460 JetWave 3220 V3 JetWave 3220 V3-M12 JetWave 2212X/S/G JetWave 2211C

Industrial WLAN Controller	
Interface	
Ethernet	4x GE RJ-45 1x 100/100 SFP
Power input	DC 9~36V
Capacity	
Managed APs	25
Concurrent Users	1000
WLAN Profile	8
AP management	Layer2/3 AP auto discovery/provision, AP firmware distribution
Security	
Standards	WPA, WPA2-personal and enterprise (802.1X/RADIUS), 802.11i
Encryption	WEP, TKIP, AES
Traffic Filtering	Layer 2 MAC ACL Layer 3 Firewall
RADIUS	Built-in RADIUS server
NAT/DMZ	●
Feature	
Roaming	Server-based Fast Roaming
Watchdog	Embedded Hardware Watchdog Timer
Network monitor	AP/Controller status AP/station list Traffic statistics
Mechanical	
Dimension (H x D x W mm)	160 x 118 x 47
Operating Temperature	-40~75°C
Housing	Metal Chassis
Certification	
CE/FCC	●
Railway EMC	EN50121-4

● Supported

Wireless LAN Access Point						
Interfaces						
Ethernet	2x GE M12	1x GE RJ-45	1x FE RJ-45	2x GE RJ-45 (or M12)	2x FE RJ-45	1x FE RJ-45
WIFI	1x 2.4G 802.11n 1x 5G 802.11ac	(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 4020E) 4 (Dual 2T2R MIMO)	(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	Passive PoE	PoE PD	Passive PoE	PoE PD	Passive PoE (JetWave 2212G)	Passive PoE
DI/DO				1/1	0/1	1/1
Power Input	Passive PoE (Eth 1) Dual DC 24V 110V by option	802.3at PoE (Eth 1)	Passive PoE (Eth 1)	802.3at PoE (Eth 1) Dual DC 24V(12~48V)	Dual DC 24V	DC 24V
Protocols						
Wireless Mode	AP, Client, WDS/AP/Client	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	LAN/WIFI to WAN		
NAT/Firewall	●	●	●	●		
VPN	OpenVPN/IPsec	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	CLI, Web, Utility, SNMP
Link Test Tools	●	●	●	●		
Event Alarm	E-mail, Syslog, SNMP Trap	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
Mechanical						
Dimension (H x D x W mm)	236.8 x 266.8 x 91.5	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	-40~70°C
Housing	Aluminum (IP67)	Aluminum (IP67)	Plastic (IP67)	Aluminum (IP31)	Aluminum (IP31)	Iron (IP31)
Certification						
CE/FCC	●	●	●	●	●	●
E-Mark					●	●
Railway EMC	EN50121-4	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-M12JetWave 2714GF-LTE
JetWave 2714GF-WIFIJetWave 2714G-LTE
JetWave 2714G-WIFIJetWave 2111L
JetWave 2411LJetWave 2111
JetWave 2411JetWave 2114
JetWave 2414

JetWave 4110L

Mobile Cellular Router / Gateway								LoRa Gateway
Interfaces								
Ethernet	2x GE RJ-45 (or M12)	2x GE RJ-45 2x 100/1000 SFP	4 x GE RJ-45	1x FE RJ-45	1x FE RJ-45	4x FE RJ-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	
Protocols								
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	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	
Mechanical								
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)	
Certification								
CE/FCC	●	●	●	●	●	●	●	●
Railway EMC	EN50121-4 EN50155	EN50121-4	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

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(2)/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



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-7dBi-NF-00



JWA-5G-12dBi-NF-00

Omni Antenna

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				



JWDA-2.4G-12dBi-NF-00



JWDA-2.4G-14dBi-SM-00



JWDA-5G-14dBi-NF-00



JWDA-5G-22dBi-SM-00

Directional Panel Antenna

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
	Horz	35°	32°	32°
Angle	Vert	30°	30°	30°
	Dimension (mm)	20 x 12 x 3	22 x 22 x 3.1	22 x 22 x 3.4
Remark	Point to Point Long distance			



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

RF Cable

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

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	2.4G 5dBi	2.4G 7dBi	2.4G 9dBi	5G 7dBi	2.4/5G-5/7dBi	5G 12dBi
				SMA	N-Type	N-Type	N-Type	N-Type	N-Type	N-Type
JetWave 2211C	SMA	2.4G	0.2km	0.15km	0.6km	1km	1.5 km		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		0.1km				1km	1.5 km	1.5 km
JetWave 4020	Embedded	2.4G	1.5km				n/a			
		5G	1.5km							
JetWave 4020E	N-Type	2.4G			1km	1.2km	2 km		1.5 km	
		5G						2 km	1.5 km	3 km
JetWave 4221/4211 HP	N-Type	2.4G			1.5km	2.4km	3 km		3km	
		5G						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	2.4G 14dBi	5G 14dBi	5G 22dBi
				N-Type	SMA	N-Type	SMA
JetWave 2211C	SMA	2.4G	0.2km	2.5 km		3 km	
		5G	0.15km			2.5 km	3.5 km
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				2.5 km	3.5 km
JetWave 4020	Embedded	2.4G	1.5km		n/a		
		5G	1.5km				
JetWave 4020E	N-Type	2.4G		3 km	3km		
		5G				3.5km	5km
JetWave 4221/4211 HP	N-Type	2.4G		4 km	4.5km		
		5G				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

Tel: +886 2 8911 1000

Fax: +886 2 2912 3328

Business: sales@korenix.com

Service: korecare@korenix.com

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