

Industrial Dual/Single 802.11 a/b/g/n/ac 2.4G/5G 2T2R MIMO Wireless AP

JetWave 4200 Series



- 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 866M per radio
- Support IPsec, OpenVPN
- Korenix View, SNMP, Korenix NMS
- Controller-Based Central Management
- Industrial IP68
- Gigabit PoE+ power input
- 802.3 at PoE PD Power Input (RJ45)
- EN50121-4, -40~70°C operating temp.
- JetWave 4221/4211: Dual 802.11a/b/g/n/ac 2.4G/5G 2T2R MIMO Radio with Dual Gigabit Ethernet



802.11ac



4T4R MIMO



EN50121-4



GbE Routing



-40~70°C



Waterproof

Overview

The JetWave 4200 series is an industrial 802.11n/a/b/g/ac Wireless AP which offers a high performance and reliability wireless solution for both 2.4G and 5G radio band. With the JetWave 4200 series wireless access point, a network designer will easily achieve the integration of wired and wireless networks.

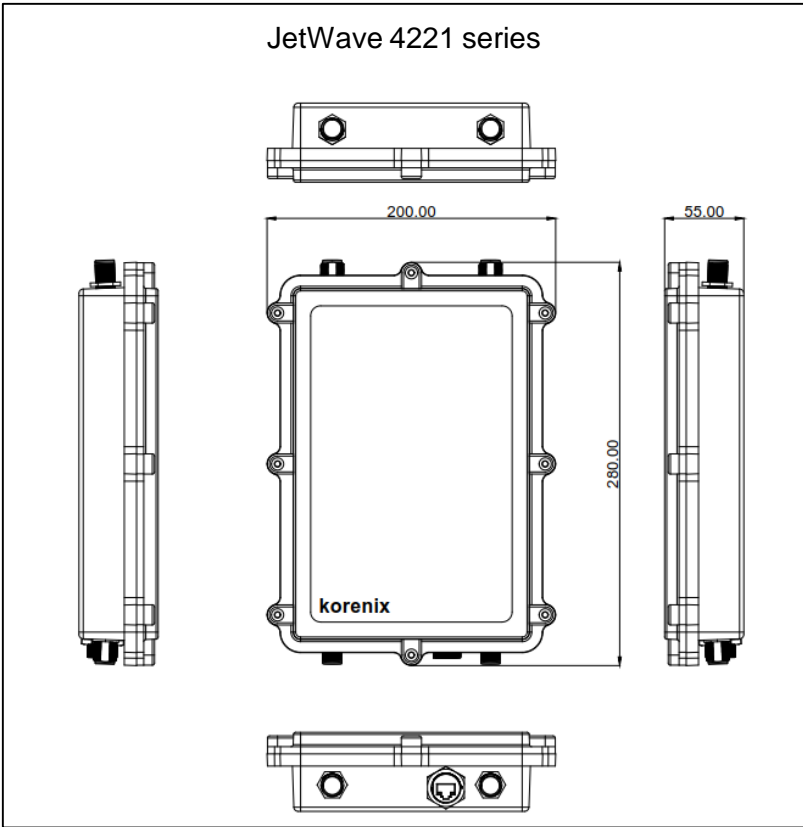
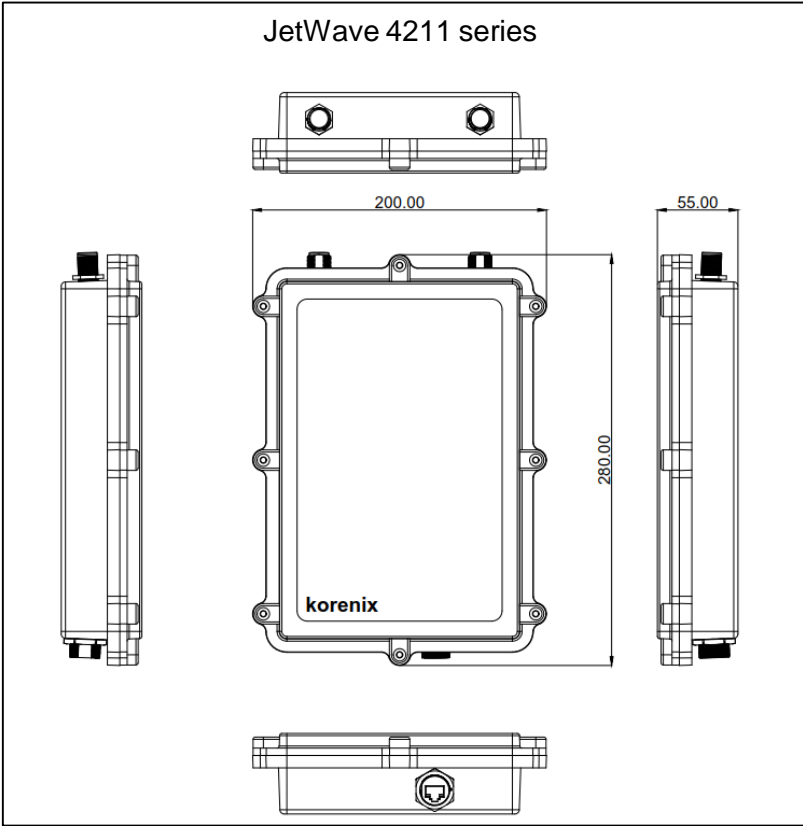
With the new generation 802.11ac MIMO technology, the multi-radio offers a high data rate of up to 866Mbps per radio, provide flexible wireless backbone deployment options, and provide the redundant wireless connections to increase the reliability of the entire wireless network.

The JetWave 4200 series can function as an AP/CPE, WDS modes for different point to point or point to multiple point network applications. The JetWave 4200 series is an industrial grade design with the significant features of gigabit PoE+, 48V PoE power input, IP68 Housing. The design of the EN50121-4 approved and wide operation temperature design allows users to install the device under harsh environmental conditions.

Model Name	Radio	Power	WIFI 1	WIFI 2	Ethernet (RJ45)	N-type Connector
JetWave 4221HP-E	2	High	2.4G	5G	1 x GE	4
JetWave 4221HP-5G-E	2	High	5G	5G	1 x GE	4
JetWave 4221-E	2	Normal	2.4/5G	2.4/5G	1 x GE	4
JetWave 4211HP-5G-E	1	High	5G	n/a	1 x GE	2
JetWave 4211HP-2.4G-E	1	High	2.4G	n/a	1 x GE	2
JetWave 4211-E	1	Normal	2.4/5G	n/a	1 x GE	2

*3T3R Model demand please contact sales for more product information.

Dimension



Specification

Technology	
Standard	Wireless: IEEE 802.11a/b/g/n/ac for Wireless LAN IEEE 802.11i Wireless Security Ethernet: IEEE 802.3 for 10BaseT IEEE 802.3u for 10/100Base-TX IEEE 802.3ab for 1000BaseT IEEE 802.3at for Power over Ethernet plus IEEE 802.1D Spanning Tree Protocol IEEE 802.1Q for VLAN Highest Data Rate: IEEE 802.11a, g: 54 Mbps IEEE 802.11n: 300Mbps @ 40MHz
Interface	
Ethernet Port	1x 10/100/1000Base-T RJ-45 (JetWave 4221/4211) IEEE 802.3at PoE+ Complaint in Ethernet Port 1
Power Input	1 x RJ45 PoE input
Antenna Socket	2 x N-type Female Reverse for WIFI Radio1 2 x N-type Female Reverse for WIFI Radio2 Nylok pre-applied
Performance	
CPU	Qualcomm Atheros Processor and 802.11ac WIFI Chipset
Operating Frequency	5GHz Typical Band: (802.11ac WIFI) FCC: 5.170-5.250GHz, 5.735-5.835GHz CE: 5.170-5.250GHz (Programmable for other 5G Band) 2.4GHz Band: (802.11n WIFI) FCC : 2.412-2.462GHz CE : 2.412-2.472GHz (Programmable for different country regulations)
RF Modulation	802.11ac: OFDM (BPSK, QPSK, 16-QAM, 64QAM,256QAM)
RF Output Power (Max. of Avg.)	5GHz Band: CE EIRP < 23dB (Band 1) EN 301 893 EIRP < 30dB (Band 3) EN 301 489-1/-17 EN 60950 2.4GHz Band: CE EIRP < 20dB EN 300 328
Sensitivity	5 GHz Band: 802.11a: -90dBm@6Mbps,1Rx; -75dBm@54Mbps,1Rx 802.11n HT20: -90dBm@MCS0,1Rx; -71dBm@MCS7,1Rx 802.11n HT40: -87dBm@MCS0,1Rx; -70dBm@MCS7,1Rx 802.11ac VHT80: -84dBm@MCS0,1Rx; -60dBm@MCS9,1Rx 2.4 GHz Band: 802.11b: -94dBm@1Mbps,1Rx; -90dBm@11Mbps,1Rx 802.11g: -92dBm@6Mbps,1Rx; -75dBm@54Mbps,1Rx 802.11n HT20: -91dBm@MCS0,1Rx; -72dBm@MCS7,1Rx 802.11n HT40: -88dBm@MCS0,1Rx; -70dBm@MCS7,1Rx

Power Requirements	
Power	Ethernet 1: IEEE802.3at PoE+ compliant Cables: 2/4-pair UTP/STP Cat. 5E cable (100m)
Power Consumption	Max. 10 Watts @ DC 48V, depend on Radio TX power
Default WIFI Antenna Characteristics	
Gain	N/A (Without default antenna)
Frequency	N/A
Direction	N/A
Material	N/A
Management	
Management	Web GUI, Korenix View Utility, SNMP, NTP, IP Setup, DHCP Server/Client, Management VLAN, Configuration Backup/Restore, Reload Default
Operating Mode	System: Bridge or Router Wireless: Wireless Access Point, Wireless Client WDS-AP, WDS-Client.JSM Redundant AP, Redundant Client for wireless redundancy
Central Management	Standalone/ Controller-Based Mode
Radio	Radio Bandwidth Control, Output power, Antenna number
WLAN Setup	Multiple SSID, Radio On/Off, SSID Broadcast, Frequency/Channel Select, Data Rate, VLAN ID, Advanced Settings, Maximum Client number
Link Integration	Wire and Wireless Link Fault Pass-Through
WMM	WMM QoS
Traffic Shaping	Downstream/ Upstream Traffic Limit
Router	Static, DHCP, LAN/WAN IP, IP/Port Filtering
STP	Support Spanning Tree Protocol
SNMP	Simple Network Management Protocol v1/v2c/v3, Function-based MIB
MIB	Function-based Management Information Base for SNMP Management
Status	Wireless Status, Associated client, Ping, Site Survey, Ping Watchdog
Link Test	Antenna Alignment Tool Data Rate Test
SNMP Trap	SNMP Trap to specific server
SMTp	E-mail Alert
System Log	System events log
Security	
Security	Multi-SSID (up to 8x ESSID for each radio)
Secured Access	HTTPS, SSH, IEEE 802.1X, MAC Address ACL
Firewall	Inbound/outbound firewall for IP/MAC filtering DMZ, Port forwarding
VPN	IPsec, OpenVPN
Security Encryption	WEP 64/128 bits, WPA-PSK(TKIP), WPA2-PSK/EAP (IEEE 802.1x/RADIUS, TKIP and AES)

Mechanical	
Enclosure	IP68 protection
Antenna connector	N type
Mounting	Wall-Mount, Ceiling-Mount (Option Accessory)
Dimension	262 mm (H) x 182 mm (W) x 55 mm (D)
Weight	2.0 kg with package, without optional accessory
Environmental	
Operating	Temperature: -40 ~70°C Humidity: 5% - 95% (operating)
Storage	Temperature: -40 ~ 85°C

Approvals	
Certification	CE RED CE EC50121-4 CE EN55032/55024 EN 301 489 EN 301 893 EN 300 328 EN 61000-6-2. EN61000-6-4 Safety EN62368 EN62311 FCC Part 15B Class A Railway
Warranty	3 years

Ordering Information	
JetWave 4221HP-E	Dual 802.11 a/b/g/n/ac 2.4G/5G 2T2R High Power MIMO Wireless AP
JetWave 4221HP-5G-E	Dual 802.11 a/ac 5G 2T2R High Power MIMO Wireless AP
JetWave 4221-E	Dual 802.11 a/b/g/n/ac 2.4G/5G 2T2R MIMO Wireless AP
JetWave 4211HP-5G-E	Single 802.11 a/ac 5G 2T2R High Power MIMO Wireless AP
JetWave 4211HP-2.4G-E	Single 802.11 b/g/n 2.4G 2T2R High Power MIMO Wireless AP
JetWave 4211-E	Single 802.11 a/b/g/n/ac 2.4G/5G 2T2R MIMO Wireless AP
*3T3R Model demand please contact sales for more product information.	

Ordering Information Accessory	
PoE Injector 48VDC	POE injector with cable 10/100/1000M,48VDC,24W
JWA-Arrestor-00	Antenna Arrestor N-type Jack Bulihead to N-type Plug ,DC spark over 230V, Discharge current 10KA , 0-6GHz
JWDA-Mount-Kit-00	Adjustable Cross Direction Mounting Kit for Directional Panel Antenna (Use with JWDA-2.4G-14dBi-SM-00)
Omni Antenna	
JWA-2.4/5G-2dBi-SM-00	Outdoor N-type Male 2.4G wifi Omni Directional Antenna, 5dBi ,white
JWA-2.4G-5dBi-NF-00	Outdoor N-type Male 2.4G wifi Omni Directional Antenna, 5dBi ,white
JWA-2.4G-7dBi-NF-00	Outdoor N-type Male 2.4G wifi Omni Directional Antenna, 7dBi ,white
JWA-2.4G-9dBi-NF-00	Outdoor N-type Male 2.4G wifi Omni Directional Antenna, 9dBi ,white
JWA-5G-7dBi-NF-00	Outdoor N-type Male 5G wifi Omni Directional Antenna, 7dBi ,white
JWA-2.4/5G-4/6dBi-NF-00	N-type Male dual-band wifi Omni Directional Antenna, 2.4GHz 4dBi,5GHz 6dBi ,white
JWA-5G-12dBi-NF-00	Outdoor N-type Male 5G wifi Omni Directional Antenna, 12dBi ,white
Direction Antenna	
JWDA-2.4G-12dBi-NF-00	N-type Female 2.4G WiFi Directional Patch Antenna, 12dBi ,two port ,white
JWDA-5G-14dBi-NF-00	N-type Female 5G WiFi Directional Patch Antenna, 14dBi ,two port ,white
JWDA-2.4G-14dBi-SM-00	Outdoor SMA Female 2x2 2.4G wifi Directional Panel Antenna, 14dBi (Use with JWDA-Mount-Kit-00)
JWDA-5G-22dBi-SM-00	Outdoor SMA Female 2x2 5G wifi Directional Panel Antenna, 22dBi with Mounting Kit
RF Cable	
JWA-Cable-SM-to-SM-00	RF Cable RP-SMA Male to RP-SMA Female with 1500mm waterproof cap cable
JWA-Cable-NM-to-NM-00	RF Cable N-Type Male to N-Type Male with 1500m
JWA-Cable-NM-to-NM-WP-00	RF Cable N-Type Male to N-Type Male with 1500mm waterproof cap cable
JWA-Cable-NM-to-SM--WP-00	RF Cable N-Type Male to SMA male with 1500mm waterproof cap cable
JWA-Cable-NM-to-NF--WP-00	RF Cable N-Type Male to N-Type Female with 1500mm waterproof cap cable

WiFi 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-4/6dBi-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 4/6dBi 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	1.5km	n/a							
		5G	1.5km	n/a							
JetWave 4020E	N-Type	2.4G	n/a		1km	1.2km	2 km			1.5 km	
		5G					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					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	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	n/a			2.5 km	3.5 km
JetWave 4020	Embedded	2.4G	1.5km	n/a			
		5G	1.5km	n/a			
JetWave 4020E	N-Type	2.4G	n/a	3 km	3km		
		5G				3.5km	5km
JetWave 4221/4211 HP	N-Type	2.4G	n/a	4 km	4.5km		
		5G				7km	10km

WiFi Antenna list



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-4/6dBi-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°	10° -12°	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	Point to multipoint	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
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	Point to Point Long distance	Point to Point Long distance	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