

Industrial Dual 802.11n 2.4G/5G 2T2R MIMO Wireless AP

JetWave 3220 Series



- Dual Radio Configurable: 802.11 a/b/g/n and 2.4G/5G Band (3220/3220-M12)
- 802.11n 2T2R MIMO data rate up to 300Mbps per radio
- Rugged M12 connector for vehicle installation(3220-M12)
- LAN/Wireless Link Fault Pass-Through
- Dual Radio Bridge and Redundancy (3220/3220-M12)
- LAN/WAN/WIFI Bridging and Routing
- Auto-offload to reduce cellular communication cost
- IPSec VPN
- SNMP, Function-based MIB, Korenix View Utility, Korenix NMS/ Korenix Mobile Manager for remote Management
- Industrial IP31 Aluminum Housing
- Gigabit PoE+ power input
- DC24V(12~48V) Redundant DC Power Input, DI + DO
- EN50121-4, -40~70°C operating temp.
- JetWave 3220: Dual 802.11n 2.4G/5G 2T2R MIMO Radio with Dual Gigabit Ethernet
- JetWave 3220-SR: Single 802.11n 2.4G/5G 2T2R MIMO Radio with Dual Gigabit Ethernet
- JetWave 3220-M12: Dual 802.11n 2.4G/5G 2T2R MIMO Radio with Dual Gigabit Ethernet M12 Connector

Overview

The JetWave 3200 series is an industrial 802.11n/a/b/g Wireless AP which offers a high performance and reliability wireless solution for both 2.4G and 5G radio band. With the JetWave 3200 series wireless access point, a network designer will easily achieve the integration of wired and wireless networks.

With the new generation 802.11n MIMO technology, the multi-radio offers a high data rate of up to 300Mbps 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 3200-M12 series equips with dual Gigabit Ethernet M12 anti-vibration connector for vehicle installation. JetWave 3220-SR is single radio model for both 2.4G and 5G band.

The JetWave 3200 series can function as an AP/CPE, WDS modes for different point to point or point to multiple point network applications. The additional Routing mode allows to separate the LAN and WLAN to different IP subnet, and perform NAT routing. The advanced features include LAN to WLAN Link Fault Pass-Through, Dual Radio Bridging and Redundancy, high speed gigabit Ethernet transmission, Wireless QoS (WMM) and complete wireless security and packet encryption.

The JetWave 3200 series is an industrial grade design with the significant features of gigabit PoE+, dual 24V(12~48V)DC power input, IP31 Housing and Digital Input/Output. The design of the EN50121-4 approved and wide operation temperature design allows users to install the device under harsh environmental conditions.

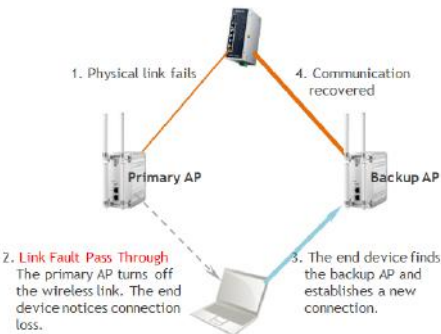
Wireless Redundancy

JetWave 3220 supports two Wifi interfaces that can be configured as 802.11a/g/n and 2.4/5G 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.



Bidirectional Link Fault Pass-Through

The link loss condition of wireless connection is detected and passed to both ends of the physical links. Link Fault Pass Through helps to notify the end devices and administrators to take actions to minimize the down time.

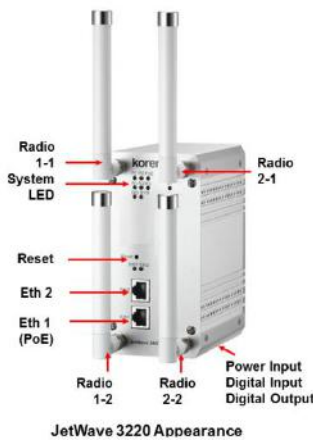


Rugged M12 Connector

The anti-vibration, anti-shock M12 connectors secure the link reliability on bus, trains or other moving vehicles, which is an ideal wireless solution for transportation markets.



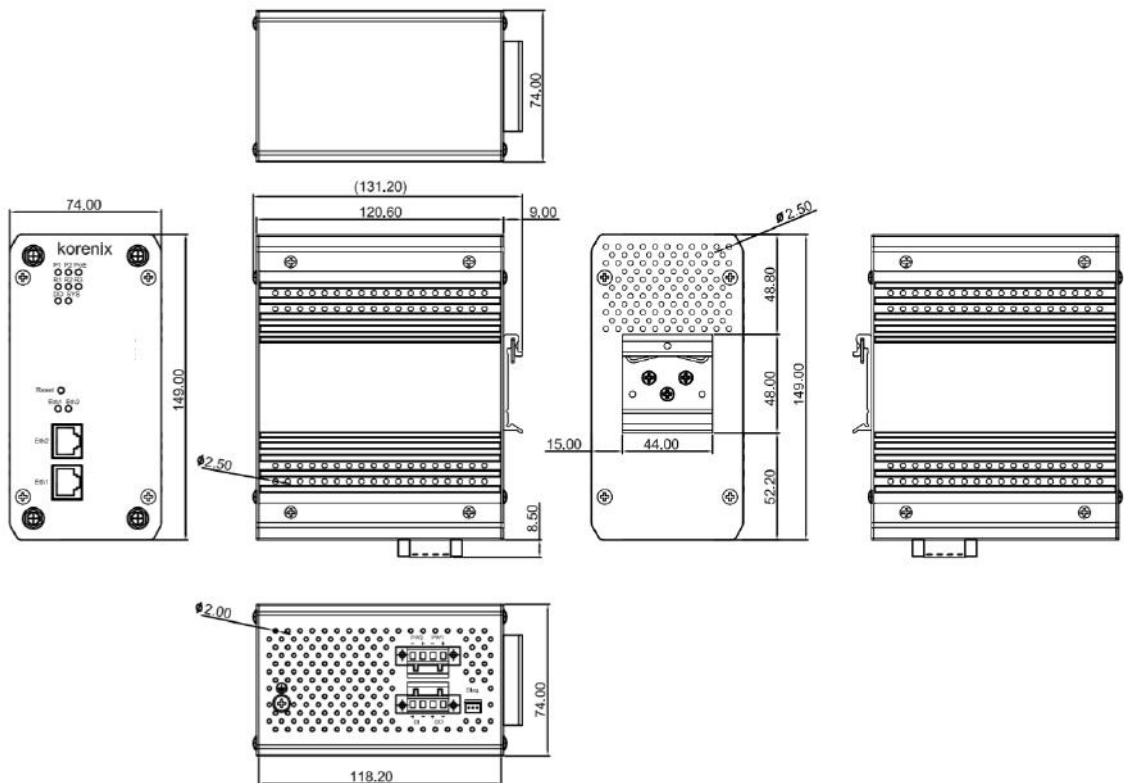
Appearance



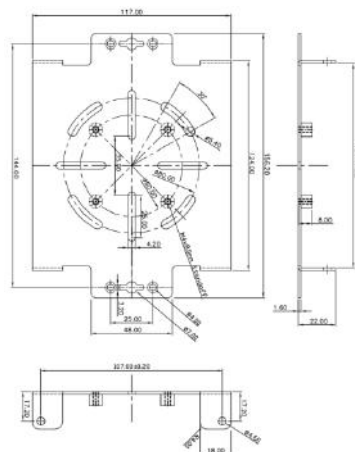
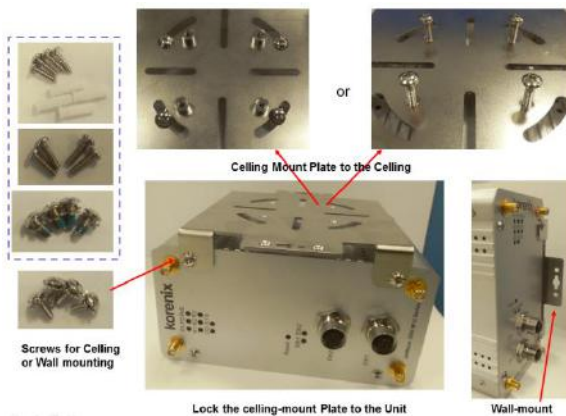
3220-SR:
Radio2-1/2-2 = N/A



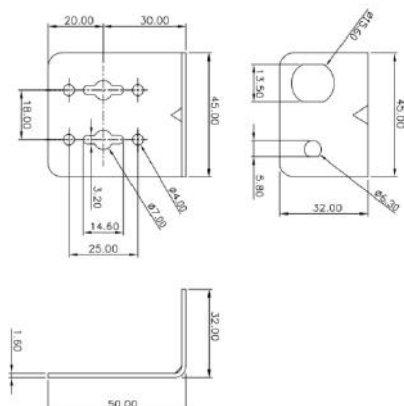
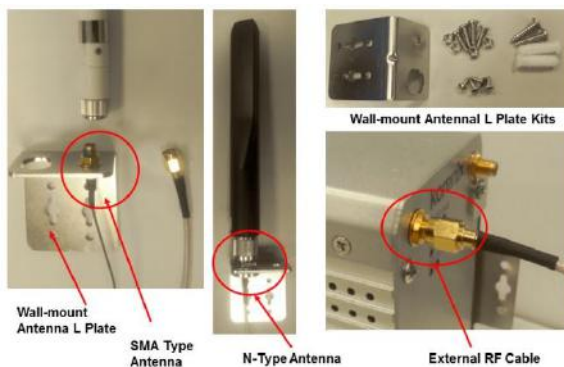
Dimension



Accessory - Ceiling Mounting Kit



Accessory - Antenna Mounting Kit



Specification

Technology	
Standard	Wireless: IEEE 802.11a/b/g/n 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	2x 10/100/1000Base-T RJ-45 (JetWave 3220) 2x 10/100/1000Base-T RJ-45 (JetWave 3220-SR) 2x 10/100/1000Base-T M12 (JetWave 3220-M12) IEEE 802.3at PoE+ Complaint in Ethernet Port 1
Power Input	4-pin socket for Dual DC Input
Digital Input/Output	1x Digital Input, 0: +3V max., 1: +11V~+30VDC 1x Relay Output, 1A@24VDC
Console	3-pin Diag. socket for Diagnostic/CLI
Reset	Reset Factory Default after press 7 seconds
Antenna Socket	JetWave 3220/3220-M12 SMA Reverse type sockets for WIFI (2x2) JetWave 3220-SR SMA Reverse type sockets for WIFI (2x1) Nylok pre-applied
Performance	
CPU	680MHz
Memory	16MB Flash 64MB SDRAM
Operating Frequency	5GHz Typical Band: (802.11n 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	802.11a/n: OFDM (BPSK, QPSK, 16-QAM, 64QAM) 802.11g/n: OFDM (BPSK,QPSK,16-QAM,64QAM)
RF Output Power (Max. of Avg.)	5.8GHz Band: 21dBm@ 802.11a/n HT20 (MCS0/8, 5180MHz) for FCC 23dB EIRP for ETSI 301 893 (Band 1) 25dB EIRP for ETSI 301 893 (Band 4) 2.4GHz Band: 21dBm at 802.11g/n HT40 (MCS0/8, 2422MHz) for FCC 20dB EIRP for CE (ETSI 300 328) (Controllable for different country regulations)
Sensitivity	802.11a: -82dBm@6Mbps,1Rx; -95/-91dBm@6Mbps,2Rx; -65dBm@54Mbps,1Rx; -79/-75dBm@54Mbps, 2Rx; 802.11g: -82dBm@6Mbps,1Rx; -95/-91dBm@6Mbps,2Rx; -65dBm@54Mbps,1Rx; -80/-76dBm@54Mbps,2Rx 802.11a/n HT20: -82dBm@MCS0,1Rx; -95/-91dBm@MCS8,2Rx; -64dBm@MCS7,1Rx; -77/-73dBm@MCS15,2Rx 802.11a/n HT40: -79dBm@MCS0,1Rx; -91/-87dBm@MCS8,2Rx; -61dBm@MCS7,1Rx;-74/-70dBm@MCS15,2Rx 802.11g/n HT20: -82dBm@MCS0,1Rx; -95/-91dBm@MCS8,2Rx; -64dBm@MCS7,1Rx;-77/-73dBm@MCS15,2Rx 802.11g/n HT40: -79dBm@MCS0,1Rx; -90/-86dBm@MCS8,2Rx; -61dBm@MCS7,1Rx;-74/-71dBm@MCS15,2Rx

Power Requirements	
Power	Ethernet 1: IEEE802.3at PoE+ compliant Cables: 2/4-pair UTP/STP Cat. 5E cable (100m) DC Input: Dual 24V (12-48VDC) input
Power Consumption	Max. 10 Watts @ DC 48V, depend on Radio TX power
Default WIFI Antenna Characteristics	
Gain	Default Antenna 5G 3.57dBi, 2.4G 2.63dBi,
Frequency	Available for 5G/2.4G band
Direction	Omni-Antenna
Material	Fiberglass
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 Redundant AP, Redundant Client for wireless redundancy (JetWave 3220/3220-M12)
Radio	Radio Bandwidth Control, Output power, Antenna number, Distance in Meter
WLAN Setup	Multiple SSID, Radio On/Off, SSID Broadcast, Frequency/Channel Select, Data Rate, VLAN ID, Advanced Settings, Maximum Client number, Client Based Fast Roaming <100ms
Link Integration	Wire and Wireless Link Fault Pass-Through
WMM	WMM QoS
Traffic Shaping	Incoming/Outgoing 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	Firewall for IP/MAC filtering DMZ, Port forwarding
Security Encryption	WEP 64/128 bits, WPA-PSK(TKIP), WPA2-PSK/EAP (IEEE 802.1x/RADIUS, TKIP and AES)

Mechanical	
Enclosure	IP31 protection
Antenna connector	Reverse SMA
Mounting	Din-Rail, Wall-Mount, Ceiling-Mount (Option Accessory)
Dimension	149 mm(H) x 120.6 mm(D) x 74 mm(W)
Weight	1.5 kg with package, without optional accessory
Environmental	
Operating	Temperature: -40 ~70°C Humidity: 5% ~ 95% (operating)
Storage	Temperature: -40 ~ 85°C

Regulatory Approvals	
EMC	CE EN55022/24, FCC part 15B Class A Railway
Railway	Railway Roadside EN50121-4 EMC Certification
Safety	EN60950-1
Radio	EN 300 328 V1.8.1 EN 301 893 V1.7.1 EN301 489-1/17(WIFI)
Warranty	5 years
Option Accessory	
Celling Mounting	Celling Mounting Plate, Used for Celling-/Wall-mounting, Dimension: 156x117x22mm
External Antenna Mounting Kit	Antenna Mounting L Plate Extended Radio Cable: RG316 Cable, L=90cm, SMA Male Reverse to SMA Female Reverse

Ordering Information	
JetWave 3220	Industrial Dual 802.11n 2.4G/5G 2T2R MIMO Wireless AP
JetWave 3220-M12	Industrial Dual 802.11n 2.4G/5G 2T2R MIMO Wireless AP, 2x Gigabit Ethernet M12 Connectors
JetWave 3220-SR	Industrial 802.11n 2.4G/5G 2T2R MIMO Wireless AP
Includes:	JetWave 3220/3220-M12 4x Default Antenna Din-Rail Mounting Kit, Wall-mount plate, Power/DI+DO connector Quick Installation Guide JetWave 3220-SR 2x Default Antenna Din-Rail Mounting Kit, Wall-mount plate, Power/DI+DO connector Quick Installation Guide
Optional Accessory	
JetWave 3400/3300/3200 External SMA Antenna Mounting Kit	4x Antenna Mounting L Plate 4x 90cm RG 316 Extended SMA Type Radio Cable 1x Celling-Mounting Plat
Power Source Equipment (PSE)	
Gigabit Managed PoE+ Switch:	JetNet 5310G Industrial 8 PoE + 2 Gigabit Combo Managed High Power IEEE802.3at PoE Switch, -40~75°C JetNet 6710G-M12-HVDC Industrial 8PoE + 2G Managed M12 High Power IEEE802.3at PoE Switch, on-board HVDC power input JetNet 6710G-M12 Industrial 8 PoE + 2G Managed M12 High Power IEEE802.3at PoE Switch
Gigabit 24V Booster PoE+ Switch	JetNet 3906G Industrial 6-port Gigabit IEEE802.3af/at PoE Switch JetNet 3810Gf Industrial 8 FE PoE + 2 GbE SFP Booster PoE Switch JetNet 3810G Industrial 8 FE PoE + 2 GbE Booster PoE Switch
Gigabit PoE+ Injector	JetCon 1702-A Industrial 2-Port High Power PoE Injector, A-Mode, -40~75°C JetCon 1702-B Industrial 2-Port High Power PoE Injector, B-Mode, -40~75°C