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

## JetWave 2212S





2 ports RS232/422/485

- Radio configurable: 802.11 a/b/g/n 2.4G/5G Band
- 802.11n 2T2R MIMO doubles data rate up to 300Mbps
- IEEE 802.11i-compliant wireless security
- 2 ports RS232/422/485 3 in 1
- Dual Ethernet Port Bridging
- · Remote management by Web GUI, SNMP
- Dual 24V(9~26V) DC Redundant (power brick isolation)
- -40 to 75°C operating temperature range
- Heavy Industrial Grade design
- DIN-Rail or wall mounting for onsite installation
- Integrated DO for on-site monitoring and warnings

#### **Overview**

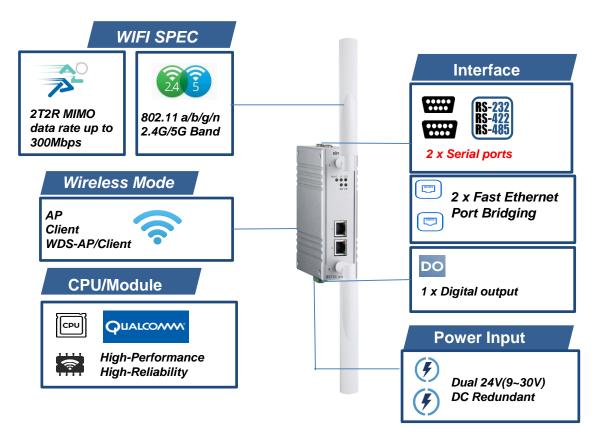
The JetWave 2212S is an industrial 802.11a/b/g/n Wireless AP which offers a high performance and reliability wireless solution.

JetWave 2212S establish wireless connections over both 2.4 GHz or 5 GHz bands. Whenever the 2.4 GHz airspace is overcrowded with competing wireless transmission, AirborneM2M products can be switched over to 5 GHz band to keep data flowing.

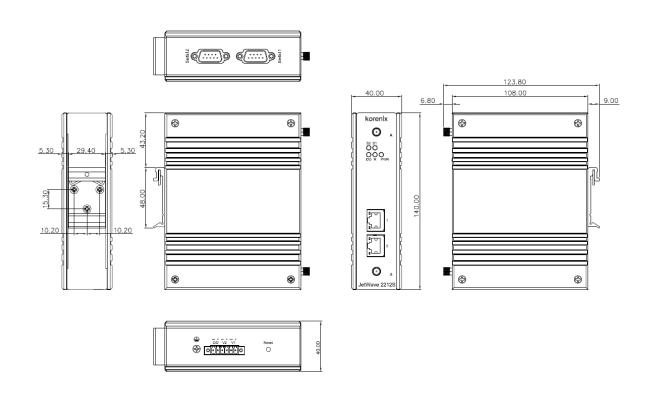
With the JetWave 2212S wireless access point, a network designer will easily achieve the integration of wired and wireless networks. With the new generation 802.11n MIMO technology, the radio offers a high data rate of up to 300Mbps, provide flexible wireless backbone deployment options. connect to the hard-to-wire serial devices and thus solve your network cabling problem in the field.

The serial interface on JetWave 2212S supports versatile serial application, such as TCP Server, TCP Client and UDP Listening. The serial data can be transmit through Wi-Fi interface, and it's easy to JetWave2212S also supports remote management, firewall. The industrial grade design supports dual 24V(9-26V)DC input, Digital Output, wide operating temperature and heavy industrial grade environment protection.

## **Appearance**



### **Dimension**



# **Specification**

	Technology	
IEEE 802.11 to   IEEE 802.10 for Spanning Tree Protocol   IEEE 802.11 to   IEEE 802.11 t		IEEE 802-2 for 10RasoT
IEEE 802.11a /rb/g/n Wireless LAN   IEEE802.11b (or Spanning Tree Protocol IEEE802.11a/b/g/n	Stalldard	IEEE 802.3u for100 Base-T(X)
IEEE802.10 for Spanning Tree Protocol   IEEE802.11 for Switching Store and Forward		
Interface		IEEE802.11i Wireless security
Ethernet Port   2x 10/100 Base-T(X) RJ-45   Switching Store and Forward		
Wiff         IEEEB02.11a/b/g/n           Power Input         2x 24VDC (9-26VDC) input           Relay Output         1xRelay Output, 1A@24VDC           Serial interface         2*RS-232/422/485 D89           Reset         Reset button, Reset to Default over 7 seconds           LED         PWR, Radio, DO, serial1, serial 2           SMA Antenna Socket         Dual Band Dipole SMA Antenna ,2.4GHz 2dBi ,5GHz 3dB           CPU         Qualcomm Atheros 550MHz           MIMO         2T2R           RF Modulation         OFDM(BPSK, QPSK, 16-QAM, 64QAM)           Attached Antenna         Dipole RP SMA 2.4G-5GHz wifi Antenna ,2.4GHz 2dBi ,5GHz 4dBi           Spread Spectrum and Modulation (typical)         - DSSS with DBPSK, QPSK, 16QAM, 64QAM           Spread Spectrum and Modulation (typical)         - DSSS with DBPSK, QPSK, 16QAM, 64QAM           Sol 2.11s: CCK 6 117.55 Mbps, QPSK @2 Mbps, QPSK @1 Mbps, BPSK @ 16 Mbps, BPSK @ 916 Mbps, BPSK @ 918 Mbps, BPSK @ 918 Mbps, BPSK @ 918 Mbps, BPSK @ 916 Mbps, BPSK @ 918 Mbp	Interface	
Power Input   2x 24VDC (9-26VDC) input	Ethernet Port	
Relay Output   1xRelay Output, 1A@24VDC	Wifi	IEEE802.11a/b/g/n
Serial interface	Power Input	2x 24VDC (9~26VDC) input
Reset   Reset button, Reset to Default over 7 seconds	Relay Output	1xRelay Output, 1A@24VDC
Description	Serial interface	2*RS-232/422/485 DB9
SMA Antenna Socket  Dual Band Dipole SMA Antenna, 2.4GHz 2dBi, 5GHz 3dB  CPU  Qualcomm Atheros 550MHz  MMO  ZTZR  RF Modulation  OFDM(BPSK, QPSK, 16-QAM, 64QAM)  Attached Antenna  Dipole RP SMA 2.4G+5GHz wifi Antenna, 2.4GHz 2dBi, 5GHz 4dBi  Spread Spectrum and Modulation (typical)  Spread Spectrum and Suc. 1116; CCK @ 111/5.5 Mbps, DQPSK @ 2 Mbps, DBPSK @ 1 Mbps & 802.11b; CCK @ 111/5.5 Mbps, DQPSK @ 2 Mbps, DBPSK @ 1 Mbps & 802.11b; CCK @ 111/5.5 Mbps, DQPSK @ 2 Mbps, DBPSK @ 18/12 Mbps, BPSK @ 91/6 Mbps & 802.11b; CCK @ 111/5.5 Mbps, DQPSK @ 2 Mbps, DBPSK @ 18/12 Mbps, BPSK @ 91/6 Mbps & 802.11b; CCK @ 111/5.5 Mbps, DQPSK @ 2 Mbps, DBPSK @ 18/12 Mbps, BPSK @ 91/6 Mbps & 802.11b; CdAM @ 30/ Mbps to BPSK @ 6.5 Mbps (multiple rates supported)  Operating Frequency  US: 2.412 to 2.462 GHz (11 channels) 5.480 to 5.240 GHz (Band 1) 5.745 to 5.825 GHz (Band 1) 5.745 to 5.825 GHz (Band 1) 5.745 to 5.320 GHz (Band 1) 5.745 to 5.320 GHz (Band 3)  RF Output Power (Max. of Avg.)  ZHE SPREAD & SAME	Reset	Reset button, Reset to Default over 7 seconds
Qualcomm Atheros 550MHz	LED	PWR, Radio, DO, serial1, serial 2
MIMO   2T2R	SMA Antenna Socket	Dual Band Dipole SMA Antenna ,2.4GHz 2dBi ,5GHz 3dB
Attached Antenna	СРИ	Qualcomm Atheros 550MHz
Dipole RP SMA 2.4G+5GHz wifi Antenna ,2.4GHz 2dBi ,5GHz 4dBi	MIMO	2T2R
Spread Spectrum and Modulation (typical)	RF Modulation	OFDM(BPSK, QPSK, 16-QAM, 64QAM)
Modulation (typical)   - OFDM with BPSK, QPSK, 16QAM, 64QAM   802.11b: CCK @ 11/5.5 Mbps, DQPSK @ 2 Mbps, DBPSK @ 1 Mbps   802.11a/g: 64QAM @ 54/48 Mbps, 16QAM @ 36/24 Mbps, QPSK @ 18/12 Mbps, BPSK @ 9/6 Mbps   802.11n: 64QAM @ 300 Mbps to BPSK @ 6.5 Mbps (multiple rates supported)	Attached Antenna	· · · · · · · · · · · · · · · · · · ·
802.11b; CCK @ 11/5.5 Mbps, DQPSK @ 2 Mbps, DBPSK @ 1 Mbps		
BPSK @ 9/6 Mbps	modulation (typical)	• 802.11b: CCK @ 11/5.5 Mbps, DQPSK @ 2 Mbps, DBPSK @ 1 Mbps
Sensitivity		The state of the s
2.412 to 2.462 GHz (11 channels) 5.180 to 5.240 GHz (Band 1) 5.745 to 5.825 GHz (Band 4) EU: 2.412 to 2.472 GHz (13 channels) 5.180 to 5.240 GHz (Band 1) 5.260 to 5.320 GHz (Band 2) 5.500 to 5.720 GHz (Band 3)  RF Output Power (Max. of Avg.)  Saghz Band: 20dBm@ 802.11a/n HT20 (MCS0/8, 5180MHz) for FCC 22dB EIRP for ETSI 301 893 (Band 1) 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: -93dBm@6Mbps,2Rx; -78dBm@54Mbps, 2Rx; 802.11n HT20: -94dBm@MCS0,2Rx; -75dBm@MCS7,2Rx 802.11n HT40: -90dBm@MCS0,2Rx; -73dBm@MCS7,2Rx 802.11b: -97dBm@1Mbps,2Rx; -93dBm@11Mbps, 2Rx; 802.11g: -95dBm@6Mbps,2Rx; -78dBm@54Mbps, 2Rx; 802.11n HT20: -94dBm@MCS0,2Rx; -75dBm@6MCS7,2Rx 802.11n HT20: -95dBm@6Mbps,2Rx; -78dBm@6MCS7,2Rx 802.11n HT40: -94dBm@MCS0,2Rx; -75dBm@6MCS7,2Rx 802.11n HT40: -94dBm@MCS0,2Rx; -75dBm@6MCS7,2Rx 802.11n HT40: -94dBm@MCS0,2Rx; -75dBm@6MCS7,2Rx		
S.180 to 5.240 GHz (Band 1)	Operating Frequency	
EU:		
2.412 to 2.472 GHz (13 channels) 5.180 to 5.240 GHz (Band 1) 5.260 to 5.320 GHz (Band 2) 5.500 to 5.720 GHz (Band 3)  RF Output Power (Max. of Avg.)  5.8GHz Band: 20dBm@ 802.11a/n HT20 (MCS0/8, 5180MHz) for FCC 22dB EIRP for ETSI 301 893 (Band 1) 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: -93dBm@6Mbps,2Rx; -78dBm@54Mbps, 2Rx; 802.11n HT20: -94dBm@MCS0,2Rx; -75dBm@MCS7,2Rx 802.11n HT40: -90dBm@MCS0,2Rx; -73dBm@MCS7,2Rx 802.11g: -95dBm@6Mbps,2Rx; -93dBm@11Mbps, 2Rx; 802.11n HT20: -94dBm@MCS0,2Rx; -78dBm@54Mbps, 2Rx; 802.11n HT40: -94dBm@MCS0,2Rx; -75dBm@MCS7,2Rx 802.11n HT40:		· · · · · ·
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S.500 to 5.720 GHz (Band 3)    RF Output Power (Max. of Avg.)   S.8GHz Band: 20dBm@ 802.11a/n HT20 (MCS0/8, 5180MHz) for FCC 22dB EIRP for ETSI 301 893 (Band 1) 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: -93dBm@6Mbps,2Rx; -78dBm@54Mbps, 2Rx; 802.11n HT20: -94dBm@MCS0,2Rx; -75dBm@MCS7,2Rx 802.11n HT40: -90dBm@MCS0,2Rx; -73dBm@MCS7,2Rx 802.11p: -97dBm@1Mbps,2Rx; -93dBm@11Mbps, 2Rx; 802.11p: -95dBm@6Mbps,2Rx; -78dBm@54Mbps, 2Rx; 802.11p: -94dBm@MCS0,2Rx; -75dBm@MCS7,2Rx 802.11n HT20: -94dBm@MCS0,2Rx; -75dBm@MCS7,2Rx 802.11n HT40: -94dBm@MCS0,2Rx; -75dBm@MCS0,2Rx; -75dBm@MCS0,2Rx; -75dBm@MCS0,2Rx; -75dBm@MCS0,2Rx; -75dBm@MCS0,2Rx; -75dBm@MCS0,2Rx; -75dBm@MCS0,2Rx; -75dBm@MCS0,2Rx; -75dBm@MC		
(Max. of Avg.)  20dBm@ 802.11a/n HT20 (MCS0/8, 5180MHz) for FCC 22dB EIRP for ETSI 301 893 (Band 1) 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: -93dBm@6Mbps,2Rx; -78dBm@54Mbps, 2Rx; 802.11n HT20: -94dBm@MCS0,2Rx; -75dBm@MCS7,2Rx 802.11n HT40: -90dBm@MCS0,2Rx; -73dBm@MCS7,2Rx  802.11b: -97dBm@1Mbps,2Rx; -93dBm@11Mbps, 2Rx; 802.11g: -95dBm@6Mbps,2Rx; -78dBm@54Mbps, 2Rx; 802.11n HT20: -94dBm@MCS0,2Rx; -75dBm@MCS7,2Rx  802.11n HT40:		
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20dB EIRP for CE (ETSI 300 328) (Controllable for different country regulations)  802.11a:		· · ·
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802.11n HT20: -94dBm@MCS0,2Rx; -75dBm@MCS7,2Rx 802.11n HT40:		802.11g:
-94dBm@MCS0,2Rx; -75dBm@MCS7,2Rx 802.11n HT40:		• • • • • • • • • • • • • • • • • • • •
		-94dBm@MCS0,2Rx; -75dBm@MCS7,2Rx

Management	
Management	Web GUI, Telnet, IP Setup, Management VLAN ID, Configuration Backup/Restore, Firmware Upgrade, Reload Default, Ping, DO Alarms, SMTP
WLAN	$\label{eq:multiple SSID} \textit{Multiple SSID, Radio on/off, SSID Broadcast, Frequency selection, VLAN ID, Advanced settings,}$
Status	System Information, Bridge Table, ARP Table, DHCP Client List
SNMP Trap	SNMP Trap to specific server
System Log	System events log
Utility/NMS	KorenixView Utility
Reliability	
Alert tool	Built-in RTC
Reboot trigger	Build-in Watchdog
Security	
Security	SSID broadcast enable/disable
Secured Access	HTTPS, SSH, IEEE 802.1X, Radius Server
Firewall	UDP/TCP, Firewall for MAC filtering
Security Encryption	WEP 64/128 bits, WPA-PSK(TKIP), WPA2-PSK/EAP (IEEE 802.1x/RADIUS, TKIP and AES)
Power Requirement	
Power	Dual DC24V (9-26VDC) input
Power Consumption	Standby Mode: 2W Full Load: Max. 5Watts *Suggest to reserve 15% tolerance power in practical installation.
Mechanical	
Enclosure	Aluminum housing
External Antenna	Reserve SMA Female connector
Mounting	Din-Rail
Dimension	145mm(H) x 40 mm(D) x 123.8mm(W)
Weight	850g with package
Environmental	
Operating Temperature	-40 ~ 75°C
Operating Humidity	5% ~ 95% (operating)
Storage Temperature	-40 ~ 85 ℃
Approvals	
Radio	EN300 328 EN301 893 EN301 489-1
EMS	EN301 489-1/-17 EN55032/24 EN61000-6-2/-4 FCC Part 15B Class A
Safety	EN60950-1
Warranty	5 years