

AirborneM2M™ Ethernet Dual Band (2.4 GHz, 5 GHz) Access Points

Models APXN-Q5428 & APXN-Q5420

B+B SMARTWORX

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PRODUCT FEATURES

- RS-232/422/485 or 10/100 Mbps Ethernet to 802.11a/b/g/n (2.4 GHz, 5 GHz)
- Combination Access Point / Client, one or two serial ports, one Ethernet port
- Supports up to 10 Wi-Fi clients
- Advanced Enterprise class wireless security
- 2 kV serial ESD surge suppression
- Variable DC power (5-36 VDC), PoE 802.3af option
- Extended operating temperature range (-40° to +85° C)
- AirborneM2M SpeedLink roaming for enhanced connection reliability
- Supported by Airborne Management Center (AMC) device discovery, management and control application software

The AirborneM2M line of industrial wireless access points is built for networking equipment in an array of machine-to-machine (M2M) applications. AirborneM2M™ access points feature industrial strength packaging and support a wide temperature rating (-40° to 85°C) to withstand challenging M2M environments. Power options include 5-36VDC input or PoE (Power over Ethernet) 802.3af on select models.

Combination Access Point and Client Capability

AirborneM2M access points enable M2M equipment to create a self sufficient Wi-Fi network and provide easy access to equipment data or resources from Wi-Fi enabled devices. The product also has the capability to be switched from an access point to a client; supporting both a single or dual RS-232/422/485 serial ports or a single 10/100 Mbps Ethernet port. The Ethernet port can be placed into either router or bridge mode.

Dual-Band Wi-Fi

AirborneM2M products establish wireless connections over both 2.4 GHz and 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.

Enterprise Class Security

Security protocols are important to mission critical wireless M2M applications. AirborneM2M access point's multi-layer security addresses the requirements of Enterprise-class networks and corporate IT departments. These advanced security features include wireless security (802.11i/WAP2 enterprise), authentication security using WPA2 (AES-CCMP) and device security (multi-layered encryption). AirborneM2M access points include a fully functional DHCP server to provide unique addresses for each authenticated client. Up to 10 clients can be supported on the local Wi-Fi network.

ORDERING INFORMATION

MODEL NUMBER	DESCRIPTION
APXN-Q5428	Dual Band, AirborneM2M™ Industrial Access Point; 802.11a/b/g/n; with PoE (Power-over-Ethernet)
APXN-Q5420	Dual Band, AirborneM2M™ Industrial Access Point; 802.11a/b/g/n; (no PoE)

World-wide. Check with your local distributor for availability and options.

ACCESSORIES

- PS-WDS: 120-240VAC, 50/60Hz, 5VDC, 2A, barrel connector power supply
- MDR-20-24: 120-240VAC, 50/60Hz, 24VDC, 1.0A, DIN rail power supply
- ACH2-DBAT-DP002: 2dBi portable (rubber duck), 2.4/5GHz antenna
- ACH2-DBAT-DP003: 3.8/5.5dBi portable (rubber duck), 2.4/5GHz antenna

AirborneM2M™ industrial products can be integrated and deployed into a wide range of applications across various industries including:

- Vehicle Telematics & Diagnostics
- Material Handling & Logistics
- Industrial Automation Test & Measurement
- Security & Access Control

All product specifications are subject to change without notice.
APXN-Q542x_DualBandIndustrialAccessPoints_4417ds

AirborneM2M™ Ethernet Dual Band (2.4 GHz, 5 GHz) Access Points

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SPECIFICATIONS

TECHNOLOGY	
Wireless Technology	IEEE 802.11 a/b/g/n, Wi-Fi Compliant
Wired Interface	2 ports, RS-232/422/485, (RS-232/422 4 wire or RS-485 2 wire) 10/100 Ethernet port with rridge or router (NAT3) modes, Software selectable
Frequency	2.4~2.4835 GHz (US/Canada/Europe) 2.4~2.497 GHz (Japan) 5.150 ~ 5.350 GHz 5.725 ~ 5.825 GHz
Modulation Technology	DSSS, CCK, OFDM
Modulation Type	DBPSK, DQPSK, CCK, BPSK, QPSK, 16QAM, 64QAM
Network Access Modes	Access Point Infrastructure (Client), Ad Hoc
Wireless Data Rates	802.11a/g = 54, 48, 36, 24, 18, 12, 9, 6 Mbps 802.11b = 11, 5.5, 2, 1 Mbps 802.11n = 65, 58.5, 42, 39, 26, 19.5, 13, 6.5 Mbps
Network Protocols	TCP/IP, ARP, ICMP, DHCP, DNS, UDAP, TFTP, UDP, PING, HTTP, FTP
Receive Sensitivity - 802.11 b/g	54Mb/s = -72 dBm 36Mb/s = -78 dBm 18Mb/s = -84 dBm 6Mb/s = -89 dBm 11Mb/s = -86 dBm 1Mb/s = -92 dBm
Receive Sensitivity - 802.11 a	54Mb/s = -74 dBm 36Mb/s = -80 dBm 36Mb/s = -80 dBm 6Mb/s = -90 dBm
Wireless Security	Open, WEP 64 & 128 bit, WPA-PSK (TKIP), WPA2-PSK (AES), 802.1x (EAP), WPA-Enterprise, WPA2-Enterprise, EAP-TLS/MSCHAPv2, EAP-TTLS/MSCHAPv2, EAP-TTLS (MD5), EAP-PEAPv0/MSCHAPv2, LEAP Zero host security footprint. Advanced certificate storage and management.
Secure Communications	SSH and SSL tunneling. Encrypted configuration.
Transmit Power	802.11b = 15 dBm (31.6mW) 802.11g = 12.6dBm (18.12mW) 802.11a =m17 dBm (50.1mW)

POWER	
Input Voltage	5-36VDC +/-5%, 500mA (maximum)
Power Connection	2-position terminal block, 2.1mm barrel jack. PoE 802.3af (Model# APXN-Q5428)
Power Use	2.5W at 5VDC
Supply In-rush Current	3000mA (maximum) for 20ms
PoE Option	PoE using a 802.3af Class 1 PSE device (# APXN-Q5428)
LED INDICATORS	
4 LEDs	COMM, LINK, POWER, POST (Power On Self Test)
ENVIRONMENTAL	
Operating Temperature	-40 to +85 °C
Storage Temperature	-40 to +85 °C
Operating Humidity	5 to 95% (non-condensing)
MECHANICAL	
Antenna	RP-SMA omni-directional, 2dBi, 2.4/5GHz antenna
Enclosure	Metal enclosure
Mounting	Panel mount; optional DIN rail brackets
Dimensions	120.14 x 120.12 x 29.21 mm (4.89 x 4.73 x 1.15 in)
MEANTIME BEFORE FAILURE (MTBF)	
MTBF	# APXN-Q5428 = 450186 hours # APXN-Q5420 = 382290 hours
APPROVALS, DIRECTIVES & STANDARDS	
North America	FCC Part 15.247, Class B Sub C Modular Approval
Canada	Industry Canada RSS-210
CE - Directives (Europe)	2014/35/EU - Low Voltage Directive 2014/53/EU - Radio Equipment Directive (RED) Hereby, Advantech B+B SmartWorx declares that the radio equipment type 802.11a/b/g/n access point is in compliance with Directive 2014/53/EU. The full text of the EU declaration of conformity is available at the following internet address: www.advantech-bb.com 2011/65/EU - Reduction of Hazardous Substances (RoHS) Directive 2012/19/EU - Waste Electrical & Electronic Equipment (WEEE) Directive
CE - Standards (Europe)	EMC: ETSI EN 300 328 v2.1.1 - EMC & Radio Spectrum Matters (ERM) Wideband Transmission Systems - 2.4 GHz ISM Band ETSI EN 301 893 v1.8.5 - EMC & Radio Spectrum Matters (ERM) Wideband Transmission Systems - 5 GHz ISM Band ETSI EN 301 489-1 v2.1.1 - Applied in accordance with the specific requirements of: ETSI EN 301 489-17 v3.1.1 - EMC & Radio Spectrum Matters (ERM) Broadband Data Systems EN 55032+AC, Class A - Information Technology Equipment (ITE) - RF Emissions EN 55024 - Information Technology Equipment (ITE) - Immunity Characteristics - Limits and Methods of Measurement Safety: EN 60950-1 + A1 + A11 + A12 + A2 - Information Technology Equipment (ITE) - Safety - Part 1 - General Requirements RF Exposure: EN 62311 - Assessment of electronic and electrical equipment related to human exposure restrictions for EM fields (0 Hz to 300 GHz)