B+B SMARTWORX®

M2M Dual Band (2.4 GHz, 5 GHz) Access Point
AirborneM2M™ Access Point

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°C to +85°C)
- AirborneM2M SpeedLink roaming for enhanced connection reliability
- Supported by Airborne Management Center (AMC) device discovery, management and control application software

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The AirborneM2M™ line of industrial wireless access points is built for networking equipment in an array of machine-to-machine (M2M) applications. AirborneM2M™ Access Point features 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 802.3af (Power over Ethernet) on select models.

Combination Access Point and Client Capability
The AirborneM2M™ Access Point enables M2M equipment to create a self sufficient Wi-Fi network and easy access to equipment data or resources from WiFi 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 a router or bridge mode.

Dual-Band Wi-Fi
The 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. The AirborneM2M™ Access Point multi-layer security approach 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). The AirborneM2M™ access point includes 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, 2 A barrel connector power supply

MDR-20-24: 120-240VAC 50/60 Hz to 24VDC 1.0 A DIN rail

ACH2-DBAT-DP002: 2 dBi portable (Rubber duck) 2.4/5 GHz antenna

ACH2-DBAT-DP003: 3.8/5.5 dBi portable (Rubber duck) 2.4 GHz, 5 GHz 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

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 (Bridge, 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
Channels	US/Canada: 11 Channels 802.11b/g 13 Channels 802.11a Europe: 13 Channels 802.11b/g 19 Channels 802.11a France: 4 Channels 802.11b/g Japan: 14 Channels 802.11b 13 Channels 802.11g 23 Channels 802.11a
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, DHS, 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 17 dBm (50.1mW)

POWER

Input Voltage	5-36VDC +/-5%, 500mA (MAX)
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 (MAX) for 20ms
PoE Option	PoE using a 802.3af Class 1 PSE device (Model # 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
Op. Humidity	5% - 95% (non-condensing)

MECHANICAL

Antenna	RP-SMA Omni-directional 2dBi 2.4/5 GHz Antenna
Vibration	20G peak-to-peak, 20Hz-2KHz swept
Shock	1500G peak-to-peak, 0.5mS duration
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)

REGULATORY APPROVALS

FCC Part 15.247, Class B Sub C Modular Approval
Industry Canada RSS-210
CE
ETSI EN 300 328 V1.8.1 (2.4 GHz)
ETSI EN 301 893 V1.7.1 (5 GHz)
ETSI 60950-1
Directive 2004/108/EC
ETSI EN 55022:2006 + A1:2007 (emissions)
ETSI EN 55024:1998 + A1:2001
ETSI EN 55024:1998 + A2:2003 (immunity)
FCC Part 15 Subpart B:2007
- Part 15.107(b) (conducted emissions, Class A)
- Part 15.109(g) (radiated emissions, Class B)
Industry Canada ICES-003:2004, Issue 4
AS/NZS CISPR 11:2004 (Australia/New Zealand)
RoHS and WEEE Compliant

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