MODEL NO. | DESCRIPTION
--- | ---
BB-APXN-Q5420 | Dual serial port/s OR single 10/100 Ethernet port to 802.11a/b/g/n, Dual band (2.4/5 GHz)

**ACCESSORIES** - sold separately

- BB-MDR-20-24 – Power supply, 24VDC, 120-240 VAC, 50/60 Hz, 1.0A DIN rail
- BB-PS-WDS – Power supply, 5VDC, 120-240VAC, 50/60Hz, 3A, 15W, barrel connector. (Note: includes USA cord; other cords sold separately.)
- BB-ACH2-AT-DP003-G – Antenna replacement, Wi-Fi 2.4/5GHz, 3.8/5.5dBi, RP-SMA
- BB-9PAMF6 – Serial Cable, RS-232 DB9M to DB9F, 1.8 m (6 ft)
- BB-TBKT7 – Terminal block replacement, 2-position, 3.5mm, screw, Euro RA, plug

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

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

Model BB-APXN-Q5420 industrial wireless access point is built for networking equipment in an array of machine-to-machine (M2M) applications. The AirborneM2M™ access point features industrial strength packaging and a wide temperature rating (-40 to +85 °C) to withstand challenging M2M environments.

**Combination Access Point and Client Capability**
The AirborneM2M access point enables M2M equipment to create a self-sufficient Wi-Fi network and provides 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 dual RS-232/422/485 serial ports or a single 10/100 Mbps Ethernet port. The Ethernet port can be placed into either router mode or bridge mode.

**Dual-Band Wi-Fi**
Model BB-APXN-Q5420 establishes wireless connections over 2.4 GHz or 5 GHz bands. Whenever the 2.4 GHz airspace is overcrowded with competing wireless transmissions, the access point can be switched to 5 GHz the band to keep data flowing.

**Enterprise Class Security**
Security protocols are important to mission critical wireless M2M applications. Model BB-APXN-Q5420 access point’s multi-layer security addresses the requirements of Enterprise-class IT networks and corporate IT departments.

Advanced security features include: wireless security (802.11i/WAP2 enterprise), authentication security using WPA2 (AES-CCMP) and device security (multi-layered encryption). The access point includes a fully functional DHCP server to provide unique addresses for each authenticated client. Up to 9 clients can be supported on the local Wi-Fi network.

**Power**
The access point is powered by an external 5-36 VDC power source (not included, sold separately).
## Specifications

### Technology

<table>
<thead>
<tr>
<th>Feature</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Wireless Technology</strong></td>
<td>IEEE 802.11 a/b/g/n, Wi-Fi Compliant</td>
</tr>
</tbody>
</table>

### Wired Interface

<table>
<thead>
<tr>
<th>Feature</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>2 ports RS-232/422/485,</td>
<td>(RS-232/422 4-wire or RS-485 2-wire)</td>
</tr>
<tr>
<td>10/100 Ethernet port with</td>
<td>bridge or router (NAT3) modes, Software selectable</td>
</tr>
<tr>
<td>Modulation Technology</td>
<td>DSSS, CCK, OFDM</td>
</tr>
</tbody>
</table>

### 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 Type

- DBPSK, DQPSK, CCK, BPSK, QPSK, 16QAM, 64QAM

### Network Access Modes

- Access Point Infrastructure (Client), Ad Hoc

### Wireless Data Rates

- 802.11a/b/g = 54, 48, 36, 24, 18, 9, 6 Mbps
- 802.11b = 11, 5.5, 2, 1 Mbps

### Network Protocols

- TCP/IP, ARP, ICMP, DHCP, DLS, UDP, TFTP, UDP, PING, HTTP, FTP

### Receive Sensitivity

- **-802.11 b/g**
  - 54Mbs = -72 dBm
  - 36Mbs = -78 dBm
  - 18Mbs = -84 dBm
  - 6Mbs = -90 dBm
  - 11Mbs = -86 dBm
  - 1Mbs = -92 dBm

- **-802.11 a**
  - 54Mbs = -74 dBm
  - 36Mbs = -80 dBm
  - 6Mbs = -80 dBm
  - 9Mbs = -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 (MSD), EAP-PEAP/MSCHAPv2, LEAP
- Zero host security footprint.
- Advanced certificate storage and management.

### Power

- Input Voltage: 5-36VDC +/-5%, 500mA (maximum)
- Power Connection: 2-position terminal block, 2.1mm barrel jack
- Power Use: 2.5W at 5VDC
- Supply In-rush Current: 3000mA (maximum) for 20ms
- Source: External, required. (not included, sold separately)

### 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: 12.01 x 12.01 x 2.92 cm (4.89 x 4.73 x 1.15 in)

### Mean Time Between Failures (MTBF)

- MTBF: 382920 hours

### Approvals, Directives, Standards

#### CE - Directives (Europe)

- 2014/35/EU - Low Voltage Directive

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.com

#### CE - Standards (Europe)

- EN 60950-1 + A1 + A11 + A12 + A2 - Information Technology - Safety - Part 1: General Requirements
- EN 62311 - Assessment of electronic and electrical equipment related to human exposure restrictions for EM fields (0 Hz to 300 GHz)