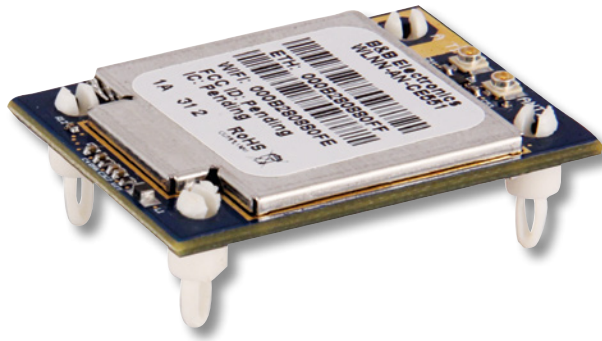




Secure, Rugged Wi-Fi Access Point Modules

APMN-Q551 Series



PRODUCT FEATURES

- Quick time to market and reduced integration costs
- 802.11a/b/g/n Wi-Fi radio (2.4 GHz, 5 GHz)
- AirborneM2M Power Save firmware reduces power consumption and extends battery life in mobile devices
- Extended operating temperature Range (-40°C to +85°C) and environmental specifications
- AirborneM2M Speed Link roaming provides enhanced connection reliability
- AirborneM2M PortFlex capability enables any combination of communication ports (UART, SPI, GPIO, Ethernet and 802.11 interfaces)
- FCC Part 15 Class B Sub C Modular Approval minimizes regulatory requirements
- Backwards compatible with previous generations of AirborneM2M embedded modules

AIRBORNE_{M2M} EMBEDDED DUAL BAND ACCESS POINT MODULE OR CLIENT 802.11A/B/G/N (2.4 GHz, 5 GHz)

The AirborneM2M line of highly-integrated 802.11 wireless access point modules allow OEMs to Wi-Fi enable devices used in an array of machine-to-machine (M2M) applications. B&B delivers all of the necessary RF technology networking stacks and advanced security features in a compact, single-board package, reducing integration costs for OEMs and providing for a quick time to market.

Big Performance in Small and Ruggedized Package

The AirborneM2M series delivers the industry's most rugged, highly integrated, embedded wireless access point Wi-Fi module solution. AirborneM2M modules meet extended operating temperature and shock vibration specifications of the most demanding M2M applications.

Utilizing a 32bit ARM9 processor and the high-performance Atheros AR6203 802.11 radio, the new AirborneM2M modules deliver increased transmit power and receive sensitivity, contributing to superior range performance.

SpeedLink™ Roaming

The new AirborneM2M Speed Link roaming feature provides enhanced connection reliability, enabling OEM devices to roam freely within a wireless network without loss of data or connection.

Flexible & Easy to Integrate

AirborneM2M incorporates support for both wireless access point and serial to Wi-Fi communications. Utilizing AirborneM2M Port Flex capability, OEMs may configure via software any combination of UART, SPI, Ethernet, GPIO and 802.11 interfaces. Each individual port can be independently configured.

The AirborneM2M modules are footprint and pin-compatible with their predecessors. Our commitment to maintaining Hardware and software compatibility assures OEMs of a simple, future-proof migration path even as wireless technology evolves.

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
APMN-Q551	802.11a/b/g/n, 10/100 Industrial wireless access point/router/client: UART, SPI and RS-232/422/485 wired interfaces
WLNN-EK-DP551	Design and Development Kit

World-wide.

Check with your local distributor for availability and options.

ACCESSORIES

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

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SPECIFICATIONS

TECHNOLOGY	
Technology	IEEE 802.11a/b/g/n, Wi-Fi compliant
Frequency	2.4 ~ 2.4835 GHz (US/Canada/Europe)
	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	<p>US/Canada: 11 Channels 802.11b/g 13 Channels 802.11a</p> <p>Europe: 13 Channels 802.11b/g 19 Channels 802.11a</p> <p>France: 4 Channels 802.11b/g</p> <p>Japan: 14 Channels 802.11b 13 Channels 802.11g 23 Channels 802.11a</p>
Wireless Data Rate	802.11b: 11, 5.5, 2, 1 Mbps 802.11a/g: 54, 48, 36, 24, 18, 12, 9, 6 Mbps 802.11n: 65, 58.5, 42, 39, 26, 19.5, 13, 6.5 Mbps
MAC	CSMA/CA with ACK, RTS, CTS
Network Protocols	TCP/IP, ARP, ICMP, DHCP, DNS, UDAP, TFTP, UDP, PING
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
Receive Sensitivity 802.11 a	1Mb/s = -92 dBm
	54Mb/s = -74 dBm
	36Mb/s = -80 dBm
	18Mb/s = -86 dBm
6Mb/s = -90 dBm	
Transmit Power	802.11b 15 dBm (31.6mW) 802.11g 12.6dBm (18.12mW) 802.11a 17 dBm (50.1mW)
Security Protocols (AP and AdHoc modes)	Disabled, WEP 64 & 128bit, WPA-PSK(TKIP), WPA2-PSK(AES)
Security Protocols (Client mode)	Disabled, WEP 64 & 128bit, WPA-PSK(TKIP), WPA2-PSK(AES), WPA & WPA2 Enterprise (EAP-TLS, EAP-TTLS, EAP-PEAP, EAP-FAST, LEAP) and a suite of Migration modes (wpa-leap64, wpa-leap128, wpa-psk64, wpa-psk128, wpa-psk128-tkip, wpa2-psk-tkip) Supports Certificates and Private Key Upload and Storage (Multiple)
Antenna	Two (2) U.FL coaxial connectors, 50 ohms Max gain @ 5 GHz = 5.5 dBi Max gain @ 2.4 GHz = 4.1 dBi
Supply	3.3VDC +/-5%, 650mA (MAX)
Supply In-rush Current	1500mA (MAX) for 400us
DC Characteristics	Operating Current (Tx, 802.11g) = 370mA Typ. Operating Current (Rx, 802.11g) = 200mA Typ. Operating Temperature: -40° to +85°C Storage Temperature: -40° to +85°C
Environmental	Relative humidity: 5% - 95% (non-condensing) Vibration: 20G peak-to-peak, 20Hz-2KHz swept Shock: 1500G peak-to-peak, 0.5mS duration
Interfaces	Dual UART (960KBAUD), RS232/ 422/ 485, SPI (1bit/8MHz), 10/100 Ethernet, PortFlex
Digital I/O	8 GPIO
LED Indicators	4 indicator LED signals (RF_ACT, POST, CONNECT, RF_LINK), Signal Strength
Connector	36 pin High Density SMT connector from Hirose (DF12-36DS-0.5V), 4mm Height North America: FCC Title 47 Part 15 Class B Sub C Intentional Radiator, IOE RSS210 Europe: CE ETSI EN300 328 RoHS & WEEE compliant
Agency Approvals	