B&B ELECTRONICS

M2M Dual Band (2.4GHz, 5GHz) Ethernet Bridge/Router; Serial Server

AirborneM2M™ Industrial Series

PRODUCT FEATURES

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

The AirborneM2M™ line of industrial wireless device serial servers and Ethernet Bridge/Routers are built for networking equipment in an array of machine-to-machine (M2M) applications. AirborneM2M™ Industrial Series feature industrial strength packaging and support a wide temperature rating (-40° to 85°C) to withstand challenging M2M environments. Available in both single and dual serial port models or a single Ethernet port model. Power options include 5-36VDC input or PoE 802.3af (Power over Ethernet) on select models.

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. AirborneM2M™ multi-layered security approach addresses the requirements of Enterprise-class networks and corporate IT departments. These advanced security features include wireless security (801.11i/WPA2 Enterprise); network security (EAP authentication and certificate support); communication security (SSH functionality and fully encrypted data tunnels); and device security (multi-level encryption capability to protect configuration data.

SpeedLink™ Roaming

The latest AirborneM2M™ SpeedLink™ roaming feature further enhances the high level of connection reliability. SpeedLink™ enables AirborneM2M™ devices to roam quickly and freely throughout a wireless network without loosing important data. If you're walking around a hospital or driving through a warehouse, SpeedLink™ ensures you stay connected.

ORDERING INFORMATION

MODEL NUMBER	DESCRIPTION
ABDN-ER-IN5010	Dual Band AirborneM2M™ Industrial Wireless Ethernet Bridge/ Router with 802.11i/WPA2 Enterprise Security Support
ABDN-ER-IN5018	Dual Band AirborneM2M™ Industrial Wireless Ethernet Bridge/ Router with 802.11i/WPA2 Enterprise Security Support; PoE
ABDN-SE-IN5410	Dual Band Industrial wireless serial server with one RS-232/422/485 to 802.11a/b/g/n
ABDN-SE-IN5420	Dual Band Industrial wireless serial server with two RS-232/422/485 to 802.11a/b/g/n

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) 2.4/5 GHz antenna

AIRBORNEM2M™ INDUSTRIAL PRODUCTS CAN BE DEPLOYED INTO A WIDE RANGE OF APPLICATIONS ACROSS VARIOUS INDUSTRIES INCLUDING:

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

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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 (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	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
Power Use	2.5W at 5VDC
Supply In-rush Current	3000mA (MAX) for 20ms
PoE	PoE using a 802.3af Class 1 PSE device
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 1.15in)

REGULATORY APPROVALS

FCC Part 15.247, Class B Sub C Modular Approval
Industry Canada RSS-210
CE
ETSI EN300-328 v1.7.1
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