Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of "Quality Parts,Customers Priority,Honest Operation,and Considerate Service",our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!

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Airborne Industrial Wireless Ethernet Solutions
Ethernet to 802.11b/g Wireless LAN

ABDG-BR-IN5010 Bridge and ABDG-ET-IN5010 Adapter

The Airborne™ line of industrial wireless device servers and Ethernet adapters are built for networking equipment in an array of machine-to-machine (M2M) applications. Available in both single and dual-port models, each wireless device server comes standard with industry-leading RF performance, enterprise class security support, and industrial-strength packaging designed to withstand the most challenging M2M environments.

Wireless Security
WPA/WPA2-Enterprise, 802.11i

Network Security
PEAP, EAP-TLS, EAP-TTLS, EAP-FAST, LEAP

Secured Access
Ethernet Firewall
WLAN Firewall/Port Forwarding
User Authentication

Secure Communications
Secure Shell (SSH)

Secure Device
Encrypted Configuration

Five Layer Security

Protecting enterprise networks is one of the most important challenges undertaken by today's network administrators. Airborne security keeps your data private by using the latest wireless security protocols (WPA2-Enterprise) and SSH tunneling. It protects the network by encrypting configurations and providing an embedded firewall. Today, there is no more secure solution for Enterprise class device servers.

Quatech supports the broadest range of EAP processes (including EAP-TLS, EAP-TTLS, PEAP and LEAP). In addition, the Airborne line supports the most flexible certificate delivery and management available in the wireless device market.

Maximum Protection and Performance

Quatech's ruggedized, industrial device servers are built tough—tough enough to come with a standard 5 year warranty.

5YRS -40°C/+85°C

The Airborne product line is rated to meet full industrial operating temperature range of -20°C to +85°C. The industrial series also incorporates a variable power supply (5-36 VDC) with screw terminal connectors for easy installation.

Quatech's highly-optimized 32 bit platform delivers superior transmit power and receive sensitivity, leading to greater range and the highest available throughput rates over both the serial and 10/100 Ethernet interfaces.
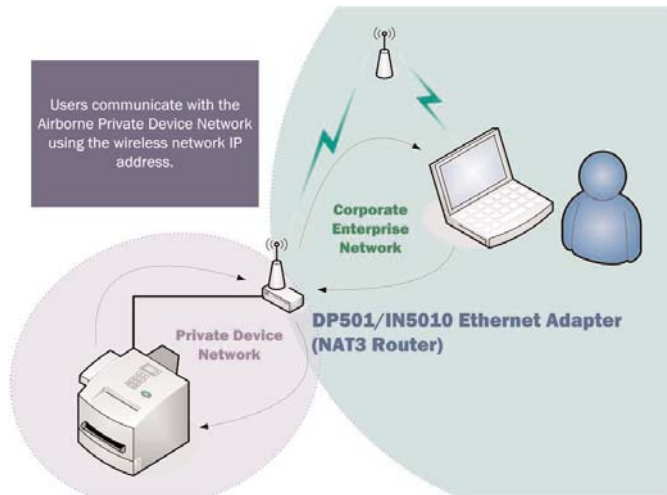
KEY FEATURES

- Extended operating temperature range (-20°C to +85°C)
- Plug-n-Play Serial to 802.11 Connectivity and Ethernet to 802.11 Connectivity
- Enterprise Class wireless security (WPA2-Enterprise, WPA, WEP, EAP)
- Airborne Management Center included for Quatech device discovery, control and management
- Variable DC power supply (5-36 VDC) with screw terminal connectors
- 2 kV serial ESD Surge Suppression
- Airborne SpeedLink roaming for enhanced connection reliability
- Onboard certificate delivery and storage
- Airborne PortFlex capability enables any combination of comm ports (Serial, Ethernet and 802.11 interfaces)
- CE and FCC Part 15 Class B Sub C Approval
- 5 year warranty

Airbone wireless device servers come standard with an integrated 3 dBi omni antenna. Users may also extend the range of the Airborne line by selecting a higher-gain antenna and magnetic mount options (contact Quatech for an approved list).

All Airborne Wireless Device Servers are built to meet worldwide regulatory requirements. Certifications include FCC, IOC, CE, ETSI, RoHS and WEEE.

Airborne Router

Users communicate with the Airborne Private Device Network using the wireless network IP address.

Corporate Enterprise Network

DP501/IN5010 Ethernet Adapter (NAT3 Router)

Private Device Network

The Ethernet Adapter from Quatech includes a fully functional Network Address Translation (NAT) router. When coupled with the built-in DHCP server on the Ethernet port the most powerful Ethernet adapter in the M2M market comes to life. Your Ethernet device needs no special security settings, IP configuration or proprietary protocols. If it supports DHCP or Static IP addressing you can quickly connect to the most advanced Enterprise class networks without changing your platform.

With an included firewall and advanced rule based port-forwarding the NAT router allows multiple Ethernet devices to interact with almost any wireless network deployed. The NAT router is configured to work out of the box and requires almost no configuration. Just send your data to the IP address of the Wireless Interface and the Airborne router will do the rest.

The ABDG-BR-IN5010 is a client bridge. The ABDG-ET-IN5010 is a fully functional NAT3 Ethernet router.

SpeedLink™ Roaming

The latest Airborne SpeedLink™ roaming feature further enhances the high level of connection reliability. SpeedLink™ enables mobile 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.

Markets

Quatech has delivered high-performance device networking and connectivity solutions around the world since 1983.

Today, Airborne wireless device servers and Ethernet adapters operate in a wide-range of M2M applications, including:
• Industrial Automation
• Medical Devices
• Retail/Point of Sale
• Vehicle Telematics
• Military Communications
• Material Handling & Logistics
• Energy Management
• Test & Measurement
• Security & Access Control

Model Selection Guide

Model No.	Interface		NAT	Ports	WiFi	Security				
	10 Base-T	10/100 Ethernet			802.11b/g	WEP (64 & 128 bit)	WPA	WPA2	LEAP	EAP
ABDG-BR-IN5010	•	•	2.5	1	•	•	•	•	•	•
ABDG-ET-IN5010	•	•	3	1	•	•	•	•	•	•
Accessories	
PS-SDS	Optional 120VAC/DC power supply, providing 5VDC @ 3w (max)/2.1 mm barrel
ACH2-AT-DP002	2 dBi portable (Rubber duck) antenna (RP-SMA)
ACH2-AT-DP003	5 dBi portable (Rubber duck) antenna (RP-SMA)
ACH2-AT-DP011	5 dBi magnetic mount vehicle antenna, indoor/outdoor

B&B electronics MANUFACTURING COMPANY

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Airborne Management Center

Managing your Airborne™ products is now simpler, whether you have one or one thousand.

KEY FEATURES

The Quatech Airborne Management Center (AMC) is a device discovery, control and management application that supports individual and group management of all aspects of the devices:

- Firmware updating
- Configuration management
- Access management (passwords)
- Virtual COM port installation

AMC allows a single or group of devices to have their firmware updated in the background.

- Directly launch web browser for devices from AMC
- Supports cloning device configurations across groups of units
- Records configuration changes for automatic update logging
- Remembers all discovered devices and maintains a database of their configuration
- Allows unauthorized devices to be marked as rogue

- Automatically informs user of new and unmanaged devices
- Manages all DP100, DP500 and DP550 devices
- Predefined device configuration templates available
- JAVA application included that will run on Windows, Linux and MacOS platforms

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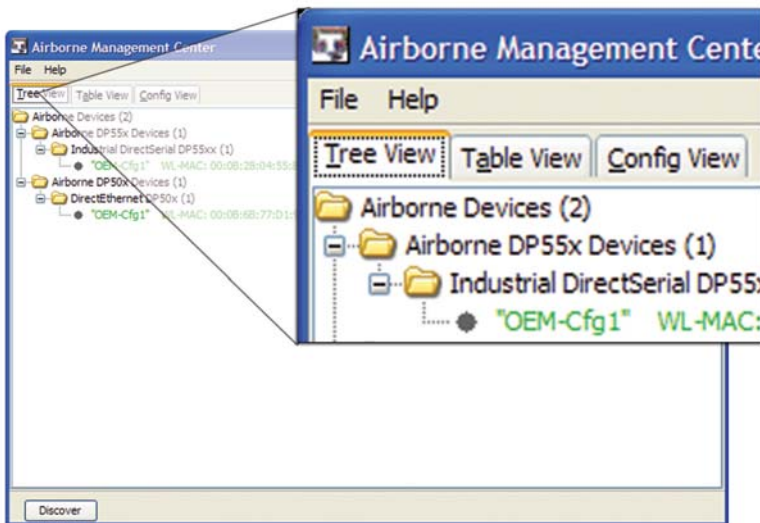
The Quatech Airborne Management Center (AMC) brings Enterprise class device discovery, management and control to the world of M2M wireless devices. This advanced device management application enables single-click maintenance of your entire population of deployed products.

From either the directory or table based views, you can:
- Update firmware and configurations
- Deliver certificates and private keys
- Access and monitor groups of devices

AMC Command Set

With just a single click, AMC provides access to a range of commands and functions:

- Locate modules
- Launch web browser
- Blink POST LED
- Refresh, display and edit configs
- Install VCOM Driver
- Set preconfigured passwords

- Add and manage templates
- Update module firmware and Uboot
- Restart module
- Manage or unmanage
- Remove modules
- Set modules to rogue
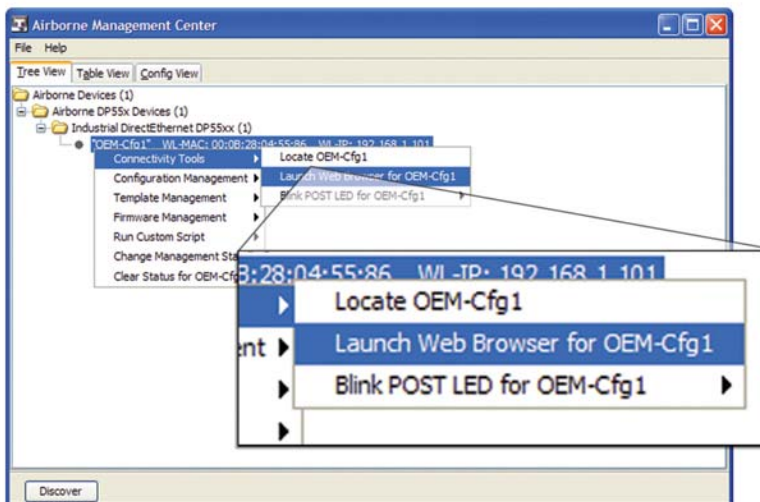
VCom port drivers can be installed with one click, enabling the use of legacy software to communicate with networked devices seemlessly through Comm Port Addresses (i.e., com1, com2) in the system's device manager. Quatech's VCom driver takes care of routing virtual comm ports to the network devices.

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Specifications

Wireless Technology
IEEE 802.11b/g, WiFi compliant

Wired Interface
RS-232
RS-422
RS-485
MEI (2 wire)
10/100 Ethernet (auto sense)
Software selectable

Frequency
2.4 ~ 2.4835 GHz (US/Canada/Europe)
2.4 ~ 2.497 GHz (Japan)

Modulation Technology
DSSS, CCK, OFDM

Modulation Type
DBPSK, DQPSK, CCK, BPSK, QPSK,
16QAM, 64QAM

Network Access Modes
– Infrastructure
– Ad Hoc

Channels
USA/Canada: 11 channels
Europe: 13 channels
France: 4 channels
Japan: 14 channels
                      13 channels - 11g

Wireless Data Rate
802.11b = 11, 5.5, 2, 1 Mbps
802.11g = 54, 48, 36, 24, 18, 12, 9, 6 Mbps

Network Protocols
TCP/IP, ARP, ICMP, DHCP, DHS, UDAP,
TFTP, UDP, PING, HTTP, FTP

Receive Sensitivity
54 Mb/s = -69dBm
  6 Mb/s = -86dBm
  1 Mb/s = -86dBm

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 & management

Secure Communications
– SSH and SSL tunneling
– Encrypted configuration

Network Addressing Translation (NAT)
ABDG-BR-IN5010, Client Bridge
ABDG-ET-IN5010, NAT3 Router

Supply
5-36 VDC+/-5%, 500mA (MAX)

Power Consumption
2.5W @ 5VDC

Supply In-rush Current
3000mA (MAX) for 20ms

Power Connector
2-position terminal block
2.1mm barrel jack

DC Characteristics
Operating current = 190mA @ 5VDC (Typ.)
PS-Poll mode = 140mA @ 5VDC (Typ.)

Connectors
1 x DE-9 (DB-9)
1 x RJ-45 socket
1 x RP-SMA

Enclosure
Ruggedized metal (Black)
DIN rail mounting adapter

Dimensions
120.14 mm x 120.12 mm x 29.21 mm
(4.89" x 4.73" x 1.15")

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

Environmental
Operating temperature: -20°C to +85°C
Storage temperature: -55°C to +150°C
Relative humidity: 5% to 95% (non-condensing)

LED Indicators
4 Indicator LEDs (POWER, POST, LINK, COMM)
Site survey mode

Antenna
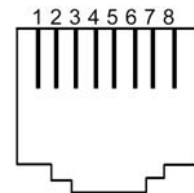RP-SMA antenna connector
Integrated omni-directional 3dBi antenna

Airborne Management Center
– Fully supported
– Device identification
– Enhanced discovery
– Configuration management
– Firmware update
– VCOM install

Mechanical Outline

107.42mm (4.23")
28.44mm (1.12")

Top View

Front View

Back View

(Model 5010 shown)
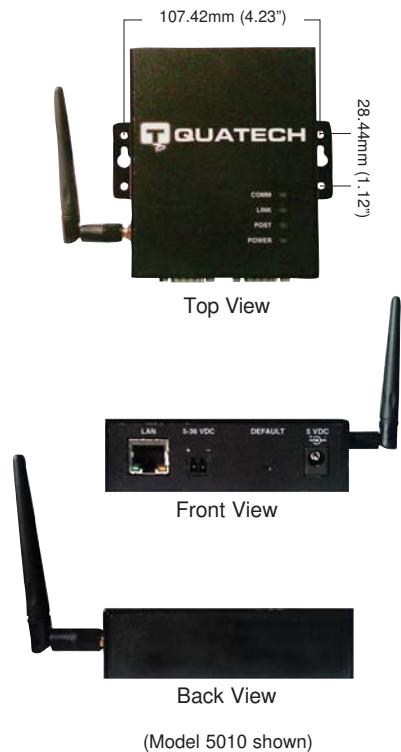
RJ-45 Ethernet Port Pinout

1 2 3 4 5 6 7 8

Signal Information

Ethernet Signal Description	RJ-45
Transmit Data (TxD+)	1
Transmit Data (TxD-)	2
Receive Data (RxD+)	3
No Connection	4, 5
Receive Data (RxD-)	6
No Connection	7, 8

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