

Airborne 802.11b/g Platform Design Upgrades

Introducing DP550 Series Product Families and Features



The design upgrade of the Airborne 802.11b/g wireless product family provides all of the necessary RF technology, networking stacks and advanced security features in a compact, single-board package.

Utilizing a 32bit ARM9 processor and the high-performance Atheros AR6002 802.11

radio, the new Airborne modules deliver increased transmit power and receive sensitivity, contributing to superior range performance.

The Airborne wireless DP55x modules meet extended operating temperatures and shock/vibration specifications of the most demanding M2M applications. The upgraded modules enable maximum efficiency with a 50% reduction in operating power, and have expanded security support.

The included Airborne Management Center enhances discovery, management and control of all Airborne modules.

For additional design comparisons, refer to Table-1.

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 and Ethernet bridges and adapters.

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.



KEY FEATURES

- Plug-n-Play Serial to 802.11 Connectivity and Ethernet to 802.11 Connectivity
- Extended operating temperature range (-20°C to +85°C)
- Low power consumption
- Enterprise Class wireless security (WPA2-Enterprise, WPA, WEP, EAP)
- 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)
- Airborne Management Center included for Quatech device discovery, control and management
- CE and FCC Part 15 Class B Sub C Approval
- 5 year warranty

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



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 losing important data. If you're walking around a hospital or driving through a warehouse SpeedLink™ ensures you stay connected.

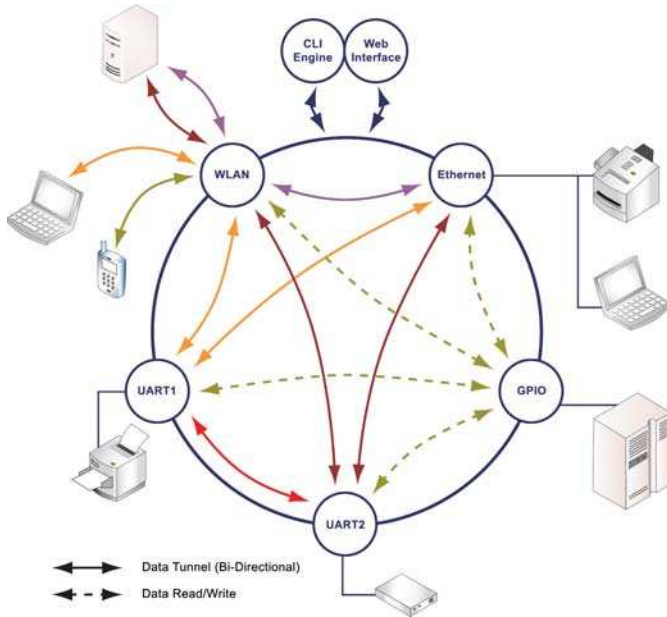
Airborne™ Module Feature Comparison

Table-1

Features	WLNG-xx-DP102	WLNG-xx-DP501	WLNG-xx-DP551
Radio Technology	Marvel 8385 (5 years old)	Marvel 8385 (5 years old)	Atheros AR6002 (<2 years old)
CPU Technology	8-bit Ubicom	32bit ARM9	32 Bit ARM9
Memory	160Kb SRAM/512Kb Flash	128Mb SDRAM/64Mb Flash	128Mb SDRAM/64Mb Flash
Operating Temperature	-40°C to +85°C	-20°C to +85°C	-20°C to +85°C
RF Performance	Good	Good	Best-in-class Rx Sensitivity improved by as much as 6dB (Double the range) 802.11g Tx power up by 2 dBm
Operating Power	Good	Better	Best Operating power 50% less 2.5W @ 5VDC
Size	40.6mm x 29.60mm x 12.37mm	40.6mm x 29.60mm x 12.37mm	40.6mm x 29.60mm x 7.47mm
Boot Time	6 seconds	11 seconds	7 seconds
Throughput Performance	Single 460K UART 1Mb/s SPI 4-6Mb/s Ethernet	Dual 921K UART 4-6Mb/s SPI 8-9Mb/s Ethernet	Dual 921K UART 4-6Mb/s SPI 16-19Mb/s Ethernet
Antenna Diversity	Rx only	Rx only	Tx and Rx
Security Support	WEP/WPA-PSK/LEAP	WEP/LEAP WPA-PSK/WPA2-PSK WPA/WPA2-Enterprise EAP-TLS/TTLS/PEAPv0/FAST	WEP/LEAP WPA-PSK/WPA2-PSK WPA/WPA2-Enterprise EAP-TLS/TTLS/PEAPv0/FAST
Certificate Support	None	Storage for multiple certificates & private keys	Storage for multiple certificates & private keys
Configuration Management	Customer FW Builds	User and OEM File	User and OEM File
Airborne Management Center Support	Discovery, management & configuration	Enhanced Discovery, management, firmware update, configuration control	Enhanced Discovery, management, firmware update, configuration control
Regulatory Certification	FCC Modular Approval ETSI EN 300-328	FCC Modular Approval ETSI EN 300-328	FCC Modular Approval ETSI EN 300-328



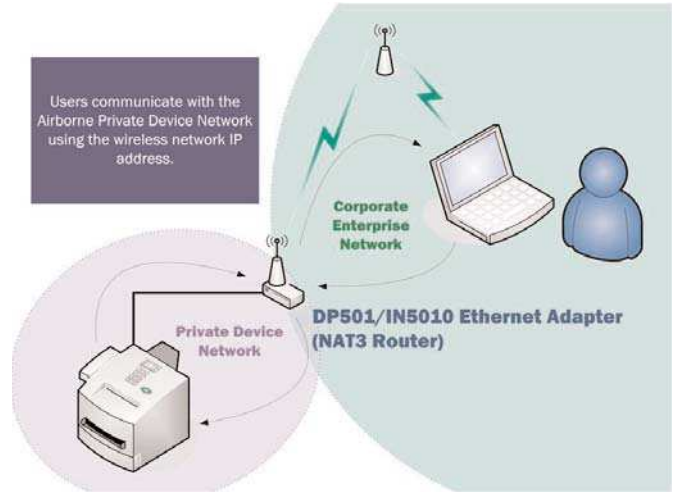
Flexible for a Broad Range of Applications



Available in all 802.11b/g wireless device servers, Airborne's unique PortFlex™ capability enables users to configure communication ports in any combination through a simple setup wizard. Airborne PortFlex™ supports UART, Ethernet and 802.11 interfaces, and provides the ability to independently configure each port.

Data and control can be accessed to and from any of the available ports on the device. For example the serial data can be accessed from the wireless or Ethernet port while the device is managed from the same port without changing the device configuration.

Airborne Router



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 xxxx-BR-DP55x is a client bridge. The xxxx-ET-DP55x is a fully functional NAT3 Ethernet router.

Maximum Protection and Performance



Quatech's ruggedized, serial device servers and Ethernet bridges and adapters are built tough—tough enough to come with a standard 5 year warranty.

The Airborne DP55x product line is rated to meet full industrial operating temperature range of -20°C to +85°C. Low power consumption and PowerSave firmware provide maximum efficiency, especially for battery-operated, mobile devices.

Quatech's highly-optimized 32 bit platform and Atheros 802.11b/g radio deliver 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.

The Airborne DP550 series design core is integrated into all Quatech embedded and external wireless solutions, providing consistency that can be counted on to perform in wide ranging applications.

Airborne external wireless device servers and Ethernet bridges and adapters 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 and Ethernet bridges and adapters are built to meet worldwide regulatory requirements. Certifications include FCC, IOC, CE, ETSI, RoHS and WEEE.



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Airborne Management Center

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

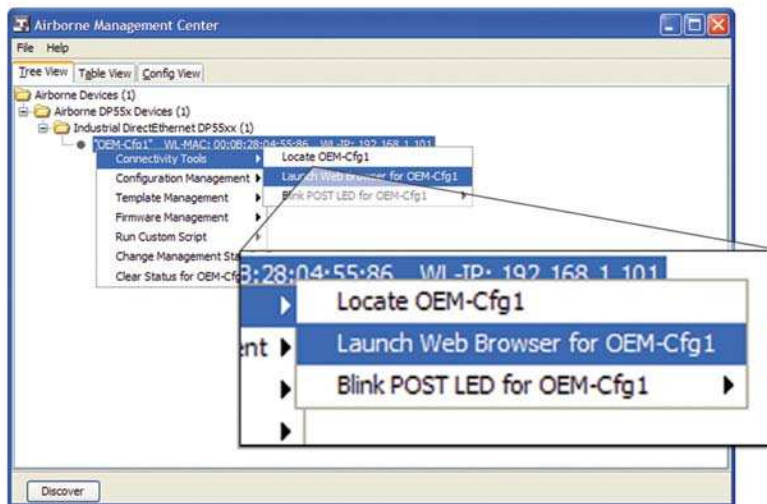
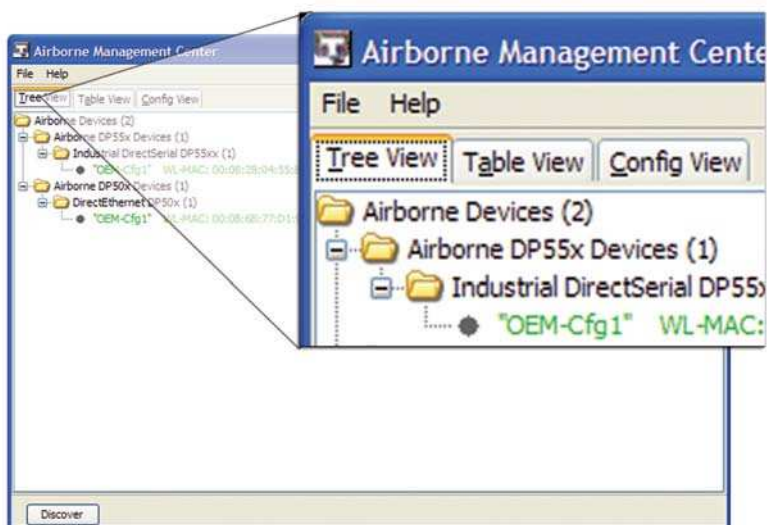
KEY FEATURES

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



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

Virtual COM port drivers can be installed with one click, enabling the use of legacy software to communicate with networked devices seamlessly through Comm Port Addresses 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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