Airborne™ Wireless Enterprise Device Server Module Evaluation Kit

Quick Start Guide

Package Contents

The Airborne™ Wireless Enterprise Device Server Module Evaluation Kit includes the following items for evaluating the Airborne™ Module:

- One Airborne™ Device Server Module Evaluation Circuit Board Assembly (EVB)
- One WLNG-XX-DP501 module (mounted on the EVB)
- Two monopole Antennas (2dBi RP-SMA)
- One AC adapter (5VDC/500mA)
- One DB9-to-DB9 serial cable (Null Modem)
- USB to serial Adapter (SSU2-100)
- One CD containing drivers, evaluation software, PDF documents, and Adobe® Acrobat® Reader® for viewing the documents

Getting Started

1. Unpack the Airborne™ Module EVB Kit

Unpack the Airborne Device Server Module EVB and compare the package contents with the items listed on the front of this Quick Start Guide. If any item is missing or damaged, contact Quatech immediately.

Contact details can be found at www.quatech.com/support.

2. What else you need

- A host computer that communicates with the Airborne Device Server module, the interface options are:
  - WLNG-EK-DP501 via the EVB RS-232 interface (PORT 1, CN1)
  - WLNG-EK-DP502 via the EVB SPI interface
  - WLNG-EK-DP503 via the EVB RJ-45 interface (ETHERNET, CN4)
- An IEEE-compliant 802.11b/g AP for which you know the association and authentication settings.
- A terminal emulation program like HyperTerminal, PuTTy, TerraTerm

3. Attach Antenna and Power-up the EVB

Attach the supplied antenna to connector CN11 on the EVB. Connect the supplied AC adapter to the power (J1) connector on the Airborne EVB. Confirm that the EVB is receiving power by verifying that the Power LED (D3) is lit when POWER (SW1) is in the ON position.

4. Install Serial to USB Adapter (Optional)

If your host computer does not have a RS232 port the Evaluation Kit includes a USB to Serial adapter (SSU2-100). This adapter provides the ability to connect using a virtual serial port on the host to the EVB. Please refer to the enclosed CD and documentation for the installation of the adapter.

Serial Device Server Connection

If you have purchased the WLNG-EK-DP501 or WLNG-EK-DP502 kit please use the following instructions for connecting to and evaluating the Airborne Serial Device Server. The following describes initial connection to an Airborne Device Server module loaded with serial firmware, if you have a module loaded with Ethernet firmware, please skip to Page 6.

1. Connect a Host Computer

Use the supplied serial cable or USB adapter (see USB-to-Serial Adapter User's Manual for USB adapter installation) to connect the DB9 serial port (CN1) connector on the Airborne EVB to the Host computer. On the Host computer, start a terminal emulation program such as HyperTerminal. Configure the program for 9600 baud, 8 data bits, no parity, and no flow control. For COM Port, select the COM port that corresponds to the host's physical serial port connected to the EVB (or in the case of the USB adapter, the virtual COM port created by the adapter software)

2. Interacting with the Airborne™ Module

On the Host computer, use the terminal emulation program to interact with the module by issuing Command Line Interface (CLI) commands. CLI commands let you request status or change parameter settings. Press the Enter key (<CR>) after each command line you type. After the module starts, type the following CLI command to log in (you must log in before CLI commands can be recognized):

CLI Command	Description
`auth dpac dpac <CR>`	The module responds with OK, indicating that it executed the command successfully. (If you did not receive OK, check the settings in your terminal emulation program.

You will have to log into the module after any reset or restart.

3. Determine and Store the Access Point SSID

On the Host computer, use the terminal emulation program to type the following CLI commands in the order shown:

CLI Command	Description
wl-scan<CR>	The module scans for APs and returns information on each one it discovers. Note the SSID value that is returned, as you will need to enter it in the next command
wl-ssid [SSID]<CR>	Associates the module with the AP whose [SSID] you specify. [SSID] is the value returned by the wl-scan command.
commit<CR>	Stores the information to flash memory.

If your access point has security enabled, you will also need to use the CLI to enter those parameters (See the Enterprise CLI Reference Guide for details). That setup is outside the scope of this quick-start guide, which assumes that the AP being tested with has no security.

After issuing the commands, press the reset switch (SW2) on the EVB. The EVB restarts and the RF_ACT LED blinks to show that the module is searching for an AP. Once the module has found and associated to the AP entered using the `wl-ssid` command the RF_ACT LED will turn on continuously.

4. Determine the Module's IP address

On the Host computer, use the terminal emulation program to type the following CLI commands:

CLI Command	Description
auth dpac dpac <CR>	Authenticate with the device server.
wl-ip<CR>	The module returns the IP address assigned to it by the AP.

5. Accessing the Module Using Telnet

On the Remote computer, use HyperTerminal to start a Telnet session. In the first screen, name the session 'TCP <Module IP>' (for reference purposes only), click on any icon you want to associate with this Telnet session, and click OK. In the next screen, click TCP/IP (Winsock) for Connect Using. In the Host Address field, type the module's IP address. Leave the default Port Number value of 23 and click OK.

The HyperTerminal application will then attempt to open a TCP session with the module, *Connecting* is shown in the status bar at the bottom-left side of the screen as HyperTerminal tries to make the Telnet connection. When the connection is made, *Connecting* is replaced by *Connected*. You can know interact with the Airborne Device Server, to authenticate with the module, type `auth dpac dpac<CR>`. After the connection is authenticated you can enter now CLI commands e.g. type `wl-info` to view basic information on the module.

For more information on the full CLI command set please refer to the Command Line Reference Manuals.

6. Where to Go from Here

After you verify that you can send commands and receive responses from the Airborne Device Server Module, you can move on to setting advanced configuration and setting up a data pass-through connection with the module. For more information on how to perform these procedures, please refer to the following documents that are included on the CD that comes with the Evaluation Kit:

- Airborne Command Line Reference Guide
- Airborne Enterprise Class Command Line Reference Guide
- Airborne Data Book WLNG DP500 Family

Ethernet Bridge Connection

If you have purchased the WLNG-EK-DP503 kit, please use the following instructions for connecting to and evaluating the Airborne Ethernet Bridge Module.

1. Connect a Host Computer

Using a Cat5 cable, connect the RJ45 port (CN4) connector on the Airborne EVB to the Ethernet port on the Host computer. First make sure the Host PC has the IP address of its Ethernet port set to be assigned by DHCP or assigned a static address of 192.168.2.100.

2. Interacting with the Airborne™ Module

On the Host computer, use HyperTerminal to start a Telnet session. In the first screen, name the session Wired Telnet (for reference purposes only), click on any icon you want to associate with this Telnet session, and click OK. In the next screen, click TCP/IP (Winsock) for Connect Using. In the Host Address field, enter the IP address 192.168.2.1. Leave the default Port Number value of 23 and click OK. Use the terminal emulation program to interact with the module by issuing command Line Interface (CLI) commands. CLI commands let you request status or change parameter settings. Press the Enter key (`<CR>`) after each command line you type. After the module starts, type the following CLI command to log in (You must log in before CLI commands can be recognized):

CLI Command	Description
`auth dpac dpac <CR>`	The module responds with OK, indicating that it executed the command successfully. (If you did not receive OK, check the settings in your terminal emulation program.

You will have to log into the module after any reset or restart

3. Determine and Store the Access Point SSID

On the Host computer, use the terminal emulation program to type the following CLI commands in the order shown:

CLI Command	Description
wl-scan<CR>	The module scans for APs and returns information on each one it discovers. Note the SSID value that is returned, as you will need to enter it in the next command
wl-ssid [SSID]<CR>	Associates the module with the AP who's [SSID] you specify. [SSID] is the value returned by the wl-scan command.
commit<CR>	Stores the information to flash memory.

If your access point has security enabled, you will also need to use the CLI to enter those parameters (See the CLI Reference Guide for details). That setup is outside the scope of this quick-start guide, which assumes that the AP being used has no security.

After issuing the commands, press the reset switch (SW2) on the EVB. The EVB restarts and the RF_ACT LED turn on solid to show that the module has connected to the AP. You will need to reconnect the Telnet session after each reset or restart.

4. Determine the Module's IP address

On the Host computer, use the terminal emulation program to type the following CLI commands:

CLI Command	Description
auth dpac dpac <CR>	Authenticate with the firmware
wl-ip<CR>	The module returns the IP address assigned to it by the AP.

5. Accessing the Module Using Telnet

On the Remote computer, use HyperTerminal to start a Telnet session. In the first screen, name the session 'TCP <Module IP>' (for reference purposes only), click on any icon you want to associate with this Telnet session, and click OK. In the next screen, click TCP/IP (Winsock) for Connect Using. In the Host Address field, type the module's IP address. Leave the default Port Number value of 23 and click OK.

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For more information on the full CLI command set please refer to the Command Line Reference Manuals.

6. Where to Go from Here

After you verify that you can send commands and receive responses from the Airborne Device Server Module, you can move on to setting advanced configurations on the module. For more information on how to perform these procedures, please refer to the following documents that are included on the CD that comes with the Evaluation Kit:

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