



Serial to Wi-Fi® Adapter Board

PRODUCT OVERVIEW

The Serial to Wi-Fi Adapter Boards provide the means to evaluate the capabilities of GainSpan's low power Wi-Fi modules and the Serial to Wi-Fi embedded software, and develop Wi-Fi enabled devices using Renesas microcontrollers. They are designed to plug into Renesas Development Kits (RDK) through the Application Header Interface or the PMOD interface.

The Wi-Fi adapter boards are available in two configurations:

- The WAB-GS1011-MIP supports IEEE 802.11b protocol and includes a GainSpan GS1011MIP soldered down module
- The WAB-GS-1500M supports IEEE 802.11b/g/n protocols and includes a GainSpan GS1500M soldered down module

The Wi-Fi adapter boards come with pre-loaded serial to Wi-Fi firmware that supports an embedded HTTP server with Wi-Fi and IP network configuration pages, as well as the limited AP capability for ease of provisioning. The Serial to Wi-Fi embedded software allows devices and appliances manufacturers to easily add Wi-Fi capabilities to their products with minor impact on the host microcontroller firmware.

Drivers are available or in development for most Renesas microcontrollers including RL78, RX62, RX63, R8C, V850, SuperH, 78K0, 78K0R. The drivers have a small footprint so they can be used with IAR Embedded Workbench-Kickstart Edition. To download software and documentation go to:

<http://www.gainspan.com/products/renesasadapter.php>

The Wi-Fi adapter boards have built-in external flash for reliable over the air firmware upgrade, factory restore configuration as well as data storage such as for web pages.



WIFI-ADAPTER BOARD DETAILS:

Feature	Description
Radio Protocol	IEEE 802.11b for WAB-GW-GS1011MIP IEEE 802.11b/g/n for WAB-GW-GS1500M
RF Module	GS1011MIP or GS1500M
RF Output Power (Typical)	8 dBm for GS1011MIP 14 dBm (802.11b) 12dBm (802.11n) for GS1500M
Radio Frequency	2.4 – 2.497 GHz
Antenna Type	On-board PCB Trace
I/O Port	SPI or UART
Jumper	To select UART or SPI Current measurement mode
Switch	Factory Code Restore
Interfaces/Connectors	Factory Application Header Interface, PMOD interface
Power Source	From Renesas RDK or PMOD
Dimensions (in)	TBD

WI-FI ADAPTER BOARD ORDERING INFORMATION

ITEM	PART NUMBER	Description
GS1011 Wi-Fi Adapter Board	WAB-GW-GS1011MIP	802.11b Adapter Board with a GS1011MIP module (internal PA and on-board PCB antenna)
GS1500 Wi-Fi Adapter Board	WAB-GW-GS1500M	802.11b/g/n Adapter Board with GS1500M module

