

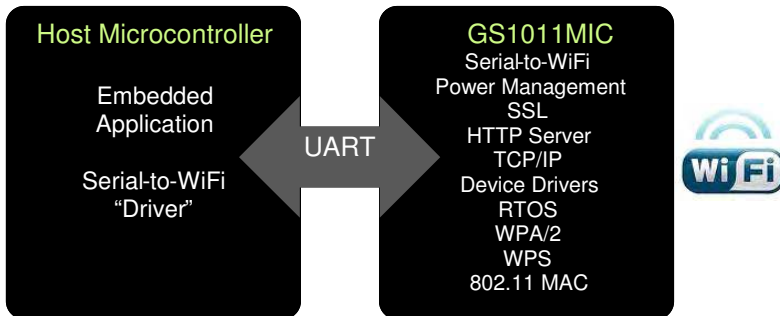


# GainSpan GS1011MIC EVK Mrk IIc Evaluation Kit

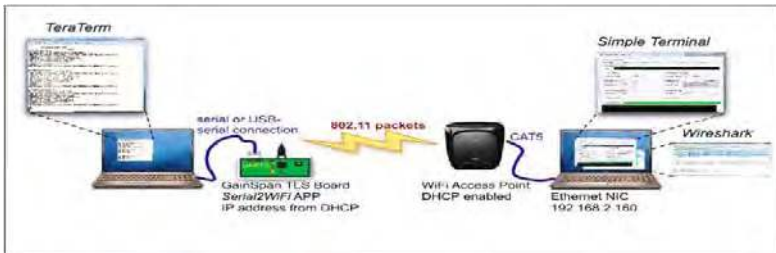
## PRODUCT OVERVIEW

The GS1011MIC EVK Mrk IIc Evaluation Kit provides GainSpan customers the means to evaluate capabilities of the GS1011 ultra-low power wireless system-on-a-chip and the Serial-to-WiFi embedded software for Wi-Fi networks. The Serial-to-WiFi embedded software allows devices and appliances manufacturers to easily add Wi-Fi capabilities to their products with minimal impact on host microcontroller firmware.

The GS1011MIC EVK Mrk IIc Evaluation Kit uses the GS1011MIC modules and provides all the hardware and software necessary to quickly set up a serial (UART) based link to a PC or external microcontroller. In order to evaluate the ease of adding secure Wi-Fi communications to a product using the GainSpan AT command set, the kit includes all the software tools necessary for configuration of Serial-to-Wi-Fi and GS1011MIC module, data transfer using “AT” command-set and protocol analyzer for validation of packet & frame fields. For additional details on the GS1011MIC see the module product brief.



The GS1011 EVK Mrk IIc Evaluation Kit enables GainSpan customers to develop software on their existing microcontrollers to support the “AT” command set, and connect it through the UART interface on the evaluation kit reference board.



## BENEFITS:

- GS1011MIC highly integrated 802.11b Wi-Fi radio module
- Easy integration of Wi-Fi and web connectivity to devices with existing microcontroller and UART interface
- Easy device provisioning through Limited AP (embedded web pages) or Wi-Fi Protected Set-up (WPS)
- Serial-to-WiFi software allows easy addition of Wi-Fi capabilities to embedded system
- Offloads Wi-Fi and TCP/ IP networking from smaller host microcontrollers
- Simple AT commands for configuration and data communication

## FEATURES:

- Supports Infrastructure, Limited AP and Adhoc networking
- Two UART ports. Clock Data rates are
  - up to 921 Kbps
- Push button for Alarms
- Full Wi-Fi and networking stack services including TCP/UDP/IP, HTTP, DNS, DHCP and SSL
- Wi-Fi Security
  - WEP, WPA/WPA2 Personal
  - WPA/WPA2 Enterprise
  - Wi-Fi Protected Setup (WPS 1.0)
- FCC/IC/ETSI, Japan TELEC Certified Module
- Power Save Modes – PS-Poll, Sleep, Deep Sleep, Standby



**AT COMMAND SET**

The 'AT' command set supports the full range of capabilities provided by the underlying GainSpan network services software that abstract the complexity of IP networking and Wi-Fi communication from the embedded application, allowing complete control.

Types	Commands
<b>Serial Interface Configuration</b>	Set Serial Parameters (baud rate, flow control)
<b>Profile Management</b>	Load/Save/Restore profiles
<b>Wi-Fi Interface</b>	Scan/associate/disassociate
<b>Security</b>	Enable/set security
<b>Network interface</b>	Static or DHCP client, DNS client
<b>Connection management</b>	UDP/TCP/HTTP client/server
<b>Power management</b>	Enable/disable PS-Poll, deep sleep and standby
<b>Services</b>	Upgrade firmware

**EVALUATION BOARD SPECIFICATIONS**

Feature	Description
<b>Radio Protocol</b>	IEEE 802.11b
<b>RF Module</b>	GS1011MIC – Connector based Ultra-Low Power Module
<b>RF Output Power (Typical)</b>	9 dbm
<b>Radio Frequency</b>	2.412 – 2.484 GHz
<b>Antenna Type</b>	PCB Trace
<b>I/O Port</b>	6-pin serial UART interface, 15540 compatible; DB9 RS232 Connector
<b>Power Source</b>	1.5 V Lithium Batteries (2x) or Line Powered
<b>GS1011MIC Firmware</b>	Serial to Wi-Fi (default); Temperature and Light Sensor (TLS) application
<b>Dimensions</b>	3.5 in X 3.0 in (includes module and RS232 connector)
<b>Module Connector</b>	0.5mm Pitch, 30-pin B - to- B Connector

**EVALUATION KIT CONTENTS**

ITEM	Description
<b>GS1011MIC Evaluation Board</b>	Evaluation board based on low power GS1011MIC module
<b>USB Memory Stick</b>	Installation software for Serial to Wi-Fi firmware, Documentation and Tools
<b>Batteries</b>	Two 1.5V Lithium AA Batteries
<b>Wi-Fi Access Point</b>	Off the Shelf Wi-Fi Access Point for out of box functionality
<b>Cable</b>	6-pin serial UART to USB cable to connect to host PC
<b>Software Tools</b>	TeraTerm --- Open Source Serial Terminal Emulator Wireshark --- Open Source, Network Protocol Analyzer GSDemo – GainSpan tool to demonstrate TLS application GS Flash Program --- GainSpan tool for Firmware Upgrade
<b>Documentation</b>	Quick Start Guide, Programmers Guide, Schematics

**EVALUATION KIT ORDERING INFORMATION**

ITEM	PART NUMBER	Description
<b>GS1011MIC EVK Mrk IIc Evaluation Kit</b>	GS1011MIC-EVK2C-S2W-WEB	Serial to Wi-Fi Evaluation kit based on the ultra-low power GS1011MIC module base board. The Serial to Wi-Fi firmware supports embedded web-server for provisioning