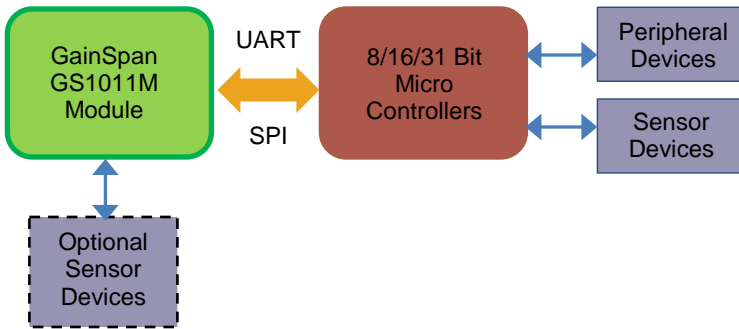




# GainSpan GS1011MExSC Low Power Wi-Fi Module with Connector

The GS1011MExSC certified module offers a quick, easy and cost effective way for device and appliance manufacturers to add Wi-Fi capabilities to their products. This module uses a 40-pin connector and provides a serial UART or SPI connection to any embedded design utilizing an 8/16/32-bit microcontroller. The GS1011MExSC family is the ideal solution for organizations with limited Wi-Fi or RF expertise, as it dramatically reduces RF design time by removing the burden of testing and certification, allowing customers to focus on their core application, product, and expertise. The module supports data rates up to 11 Mbps, is IEEE 802.11b compliant and meets regulatory and Wi-Fi Alliance certification requirements.

The module includes an analog to digital converter (ADC) pin for connecting sensors and runs multiple software configurations. For applications with a small microcontroller, the module supports a serial to Wi-Fi configuration, running the full Wi-Fi and TCP/IP networking stacks on module, completely offloading the host. It supports WPA/WPA2 and legacy WEP encryption, Web Server, and Wi-Fi Protected Setup (WPS) for ease of provisioning.



**GS1011MExSC Based Embedded Design**

The module has a 40-pin connector that brings out the I/O connections. It is available with a PCB antenna or a u.FL connector for an external antenna. The module is US (FCC/IC), Europe (ETSI) and Japan (TELEC) certified.

SKU	Power Amplifier	Antenna Option
GS1011MEPSC	External PA	PCB Antenna
GS1011MEESC	External PA	External Antenna



**BENEFITS:**

- Brings Wi-Fi and Internet connectivity to any device with a microcontroller and serial host interface (UART, SPI)
- Reduces development time, testing and certification, accelerating time to market
- Fully contained solution minimizes load on host processor
- Easy device provisioning through Limited AP (embedded web pages) or Wi-Fi Protected Set-up (WPS)
- Ultra low power consumption through dynamic power management
  - Sleep, Deep Sleep, Standby modes

**FEATURES:**

- Connects to standard IEEE 802.11 b/g/n access points at speeds up to 11 Mbps (802.11b rates)
- Infrastructure, Limited AP or ad-hoc mode (IBSS)
- Supports data rates of up to 921.6 Kbps on UART
- Supports data rates of up to 11 Mbps on SPI (master) or 1.4 Mbps (slave)
- Full Wi-Fi software including WPS and networking stack and services
- 802.11i Security, WPA/2 – Personal and Enterprise, legacy WEP

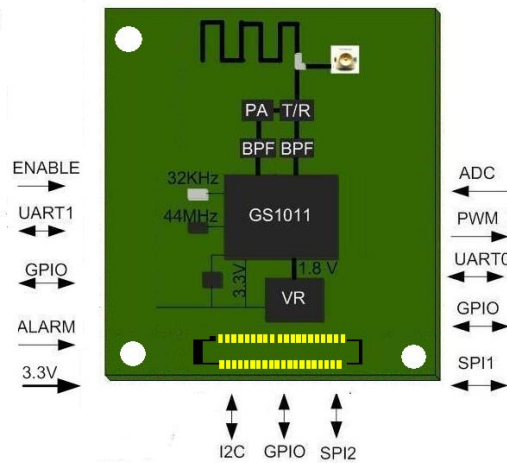
**MODULE HIGHLIGHTS:**

- Power source:
  - 3.3V main supply
  - 1.8V or 3.3V I/O
  - 1.6V to 3.6V Battery
- Certification: FCC, IC, ETSI, TELEC, Wi-Fi
- I/O interfaces : UART, SPI, GPIO, I2C, ADC, PWM



**GS1011MEXSC MODULE SPECIFICATIONS**

<b>Radio Protocol</b>	IEEE 802.11b; 802.11b/g/n compatible
<b>RF Output Power (Typical)</b>	+18 dBm
<b>RF Operating Frequency</b>	2.4 - 2.495 GHz
<b>Supported Data Rates</b>	11, 5.5, 2, 1 Mbps
<b>Antenna</b>	PCB or External Antenna (u.FL connector)
<b>Operating Temperature</b>	-40° to +85°C
<b>Security Protocols</b>	WPA/WPA2 - Personal, WPA/WPA2 - Enterprise (PEAP, EAP-FAST, EAP-TLS, EAP-TTLS), WEP
<b>Networking Protocols</b>	UDP, TCP/IP, DHCP, DNS, HTTP Client and Server, SSL
<b>Certifications and Compliance</b>	FCC, IC, TELEC, ETSI, RoHS, Wi-Fi CERTIFIED
<b>I/O Interfaces</b>	UART, I2C, SPI, ADC, ALARM, GPIOs, PWM
<b>Outline Dimensions</b>	29.0 mm x 39.2 mm x 5.15 mm
<b>Power Source</b>	3.3V or 1.8V VDDIO, 3.6V VBATT
<b>Connector</b>	Molex 501920-4001 on module; mates with Molex 52991-0408 on host board



**GS1011MEXSC Block Diagram**

**TARGET APPLICATIONS**

The GainSpan GS1011MEXSC module is easily designed into embedded systems, allowing customers to develop a broad array of devices and appliances that connect to other local devices or the Internet over Wi-Fi. Applications include healthcare and fitness, smart energy, industrial controls, commercial building automation, and consumer electronics.

