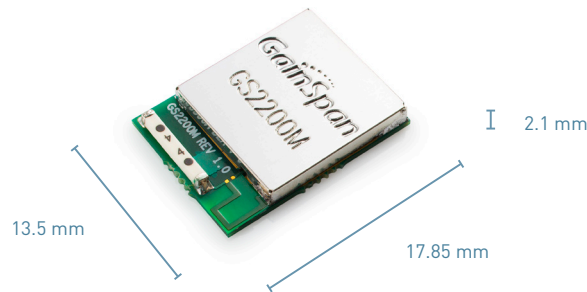


## GS2200M Series

Wi-Fi 802.11 b/g/n Embedded



### Product Description

The GS2200M series is a fully integrated Wi-Fi module with an extremely small footprint that provides an easy, cost-effective way for manufacturers to add Wi-Fi connectivity to their products. Module comes with optional integrated chip antenna or UFL connector. Intended for a variety of size-constrained applications, the ~250 sq. mm comes with optional on-board chip antenna or U.FL connector, 4MB FLASH, industry-leading SRAM resources, a high bit-rate 16-bit sigma-delta ADC, 12-bit ADC, and 19 GPIO supporting most interfaces.

This module provides a low-cost, high-speed serial to Wi-Fi connection to an embedded design built on an 8/16/32-bit microcontroller, through UART, SPI, or SDIO interfaces.

The GS2200M is an ideal solution for organizations with limited Wi-Fi or RF expertise or for those seeking faster time to market, as it reduces RF design time and removes the burden of testing and certification. The module is IEEE 802.11b/g/n compliant, and meets major global regulatory and Wi-Fi Alliance certification requirements.

The module runs the full Wi-Fi and TCP/IP networking stacks, completely offloading the host microcontroller. It supports a complete suite of security protocols, also without tasking the host microcontroller, including WPA/WPA2-Enterprise and Personal security modes, and upper layer security protocols such as TLS/SSL and HTTPS. Alternatively, it can be run self-contained without a host.

Easy to provision, the module can be set up from a smartphone or laptop through the innovative Limited AP mode or with Wi-Fi Protected Setup (WPS).

The module is single-sided with solder pads on the bottom for the I/O and PWR/GND connections for soldering down on the product's baseboard. It is intended for both line-powered and battery-powered applications.

The GS2200M 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 to the Internet over Wi-Fi. Applications include smart energy, smart home, healthcare and fitness, industrial controls, commercial building automation, and audio/video consumer electronics

### Key Benefits

- Extremely compact for size-constrained applications
- Adds low power, high speed Wi-Fi and Internet connectivity to any device with a microcontroller and serial host interface or as the standalone application microcontroller
- Certified module reduces development time, testing and certification, accelerating time to market
- Easy smartphone provisioning with Limited AP or Wi-Fi Protected Set-up (WPS)
- Ultra-low power through dynamic power management modes and optional off module DC to DC components

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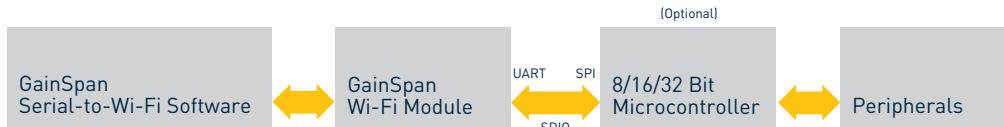
## GS2200M Series

Radio Protocol	IEEE 802.11 b/g/n
Pin Count	66 pins (30 GND)
RF Output Power (Typical)	+15 dBm (802.11b 1Mbps), +14 dBm (802.11g 6Mbps), +14 dBm (802.11n MCS0)
Rx Sensitivity (Typical)	-91 dBm (802.11b 1Mbps), -88 dBm (802.11g 6Mbps), -88 dBm (802.11n MCS0)
RF Operating Frequency	2.4 - 2.495 GHz
Supported Data Rates	72, 65, 58, 43, 29, 22, 14, 7 Mbps (802.11n), 54, 48, 36, 24, 18, 12, 9, 6 Mbps (802.11g) 11, 5.5, 2, 1 Mbps (802.11b)
Antenna Option	Onboard chip antenna or UFL connector
Operating Temperature	-40° to +70°C
Security Protocols	WPA/WPA2 - Personal, WPA/WPA2 - Enterprise (PEAP, EAP-FAST, EAP-TLS, EAP-TTLS), WEP, TLS/SSL Client and Server, HTTPs
Networking Protocols	TCP, UDP, IPv4, IPv6, TLS Client and Server, SNMP client, DHCP Client and Server v4, DHCP Client and Server v6, DNS Client and Server, mDNS, DNS-SD, HTTP Client and Server, and XML Parser
Certifications and Compliance	FCC, IC, TELEC, CE/ETSI, ROHS, Wi-Fi CERTIFIED
I/O Interfaces	SPI, UART, SDIO, I <sup>2</sup> C, I <sup>2</sup> S, GPIO (19), 16 & 12 bit ADC, JTAG, PWM (3), RTC
Host Connections	UART, SPI, SDIO
Internal Flash	4 MB
Outline Dimensions	13.5mm x 17.85mm x 2.1mm
I/O Voltage	3.3V or 1.8V
Operating Voltage	2.7-3.6V
V <sub>BAT</sub>	1.6-3.6V

### Models

GS2200MIZ	Chip Antenna
GS2200MIE	U.FL

## GS2200MIZ System Block Diagram



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Telit Communications S.p.A.  
Via Stazione di Prosecco, 5/B  
I-34010 Sgonico (Trieste), Italy  
**Phone** +39 040 4192 200  
**Fax** +39 040 4192 383  
**E-Mail** [EMEA@telit.com](mailto:EMEA@telit.com)

Telit Wireless Solutions Inc.  
3131 RDU Center Drive, Suite 135  
Morrisville, NC 27560, USA  
**Phone** +1 888 846 9773 or +1 919 439 7977  
**Fax** +1 888 846 9774 or +1 919 840 0337  
**E-Mail** [NORTHAMERICA@telit.com](mailto:NORTHAMERICA@telit.com)

Telit Wireless Solutions Inc.  
Rua Paes Leme, 524, Conj. 126  
05424-101, Pinheiros  
São Paulo-SP-Brazil  
**Phone** +55 11 3031 5051  
**Fax** +55 11 3031 5051  
**E-Mail** [LATINAMERICA@telit.com](mailto:LATINAMERICA@telit.com)

Telit Wireless Solutions Co., Ltd.  
8th FL., Shinyoung Securities Bld.  
6, Gukjegeumyung-ro8-gil, Yeongdeungpo-gu  
Seoul, 150-884, Korea  
**Phone** +82 2 368 4600  
**Fax** +82 2 368 4606  
**E-Mail** [APAC@telit.com](mailto:APAC@telit.com)

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