

Mini-G 802.11GB OEM Embeddable Module
Data Hunter LLC

Product Description

Mini-G is a secure Serial-to-Wireless LAN device server module that also acts as a bridge to connect serial devices to 802.11b/g Wireless LANs. It is packaged in RoHS-compliant ultra-slim form factor. For users wanting to replace older or costlier competitor products, the Mini-G may have competitor pin-out options available so please inquire.

Mini-G offers much more than many other device servers on the market. It acts as a security gap between the application and the network; supports up to 10 simultaneous TCP/UDP sockets; two listening sockets; a web server with two websites; SMTP and POP3 clients; MIME attachments; FTP and TELNET clients, and Serial-Network mode for serial-to-IP bridging. Mini-G supports the SSL3/TLS1 protocol for secure sockets, HTTPS and FTPS, WEP, WPA and WPA2 WiFi encryption.

Mini-G minimizes the need to redesign the host device hardware. It easily inserts into headers on the host PCB (or IDC cable or discrete wire cable) and connects to an external antenna (or optional built-on internal MicroWhip™ antenna).

Minimal or no software configuration is needed for Mini-G to access the Wireless LAN. Mini-G eliminates the need to add WiFi drivers, security and networking protocols and tasks to the host application. The AT+ superset command operating mode offers a true plug-and-play mode that eliminates any changes to the host application.

Mini-G IP stack and Internet configuration parameters are stored in Flash memory. The module is power-efficient: the core operates at 1.2V, while I/Os operate at 3.3V. Power Save mode further reduces power consumption.

The Developer Kit EVB evaluation board provides an easy environment for testing the Mini-G prior to designing it into your product.

Mini-G Hardware Description:

Size: 41.0x31.5x5.0mm (1.61 x 1.24 inches)

Core CPU: 32-bit RISC ARM7 at 48MHz

Operating Voltage: +3.3V+/-10%

Operating Humidity: 90% maximum (non-condensing)

Operating Temperature Range: -40° to 85°C (-40° to 185°F)

Power Consumption:

Transmit –250mA @16dbm, 235mA@12dbm (typical)

Receive – 190mA (typical)

Power Save mode – 8mA

RF Connector Options:

U.FL for RF cable to external RP-SMA bulkhead-mount RF connector

U.FL with built-on low cost “MicroWhip” antenna

Embedded RP-SMA reverse polarity

Signal Header Options:

2x6 Male 2,54mm (0.1 inch) pitch

Low Profile 2x15 Male 1,27mm (0.05 inch) pitch

Host Interface: TTL Logic Level Serial interface

RoHS-compliant; lead-free

Performance Specifications:

Host Data Rate: up to 3Mbps in serial mode

Serial Data Format (AT+ mode): Asynchronous character; binary; 8 data bits; no parity; 1 stop bit

Serial Data Format (Serial-Network mode):

Asynchronous character; binary; 7 or 8 data bits; odd, even, or no parity; 1 stop bit

Flow Control options: None, Hardware (-RTS, -CTS), Software flow control(XON,XOF)

Internet Protocols: ARP, ICMP, IP, UDP, TCP, DHCP, DNS, NTP, SMTP, POP3,

MIME, HTTP, FTP and TELNET

Security protocols: SSL3/TLS1, HTTPS, FTPS, RSA, AES-128/256, 3DES, RC-4, SHA-1, MD-5, WEP, WPA and WPA2

Protocols accelerated in hardware: AES, 3DES and SHA

Wireless Specifications:

Standards supported: IEEE 802.11b/g

Frequency: Europe – 2.412-2.472GHz USA – 2.412-2.462GHz

Channels: Europe – 13 channels USA – 11 channels

Application Program Interface:

AT+ enhanced commands

Serial-Network mode for transparent serial data-to-Internet bridging

Warranty: One year

Certifications: FCC Modular Certification, CE pending

Installation Requirements: The Mini-G must be installed within a full-enclosure device that is safety certified for User's intended application.

Safety Warning: Power supply output to the Mini-G must be limited to 2A Max.

Pin Assignments:

<i>Pin</i>	<i>Name</i>	<i>Type</i>	<i>Description</i>
1	VDD	Power	+3.3VDC VDD power supply
2	GND	Power	GND power supply
3	RXD	Input	Host Data Receive
4	TXD	Output	Host Data Send
5	-RTS	Output	Request to Send Host
6	-DTR	Output	Host Data Terminal Ready
7	-CTS	Input	Clear to Send Host
8	-CD	Output	Not in use
9	-DSR	Input	Host Data Set Ready
10	-RES	Input	Reset
11	MSEL	Input	Mode Select
12	-RF_LED	Output	RF Status Indication



Quan	DH Price \$USD
1	59
100	56

200	54
500	52
1K	49
2K	47
5K	44
10K	42
20K	39

Developer Kit Special is \$295 USD