

# Wi-Fi 802.11b/g/n Wireless Networking Module

## *Plug-and-Play... Small Foot Print... Integrated Antenna*

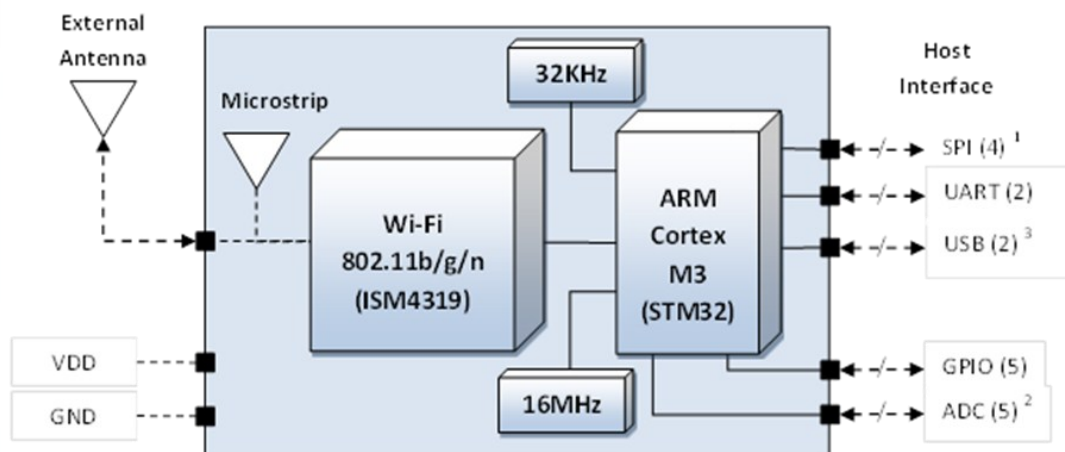
The Inventek eS-WiFi is an embedded family of wireless Internet Connectivity devices that operate in the 2.4 Ghz spectra. The Wi-Fi modules hardware consists of a 120 Mhz host processor, Broadcom BCM4319 Wi-Fi device and PCB trace antenna.

The module provides USB, SPI and UART interfaces enabling easy connection to an embedded design. The Wi-Fi module requires no operating system and has a complete integrated TCP/IP Stack that only requires a simple AT command set to establish connectivity for your wireless product, minimizing development time and testing. The simple AT command set can be run on any simple 8 bit microcontroller. The low-cost, small foot-print design (15mmx30mm), and ease of design-in make it ideal for a wide range of embedded wireless applications.



### **Main Features**

- ◆ 802.11 b, g, n compliant based on Broadcom MAC/Baseband/Radio device
- ◆ Fully contained TCP/IP stack minimizing host CPU requirements
- ◆ Configurable through simple AT commands
- ◆ FCC and Ce certified
- ◆ IEEE 802.11 b/g/n compliant
- ◆ Soft Access Point for up to 2 clients for configuration and ad-hoc networks
- ◆ Host interfaces: USB (HID & VCP), UART, SPI up to 25 MHz.
- ◆ Network features ICMP ( Ping), ARP, DHCP, TCP, UDP
- ◆ Low power operation (3.3V supply) built in



### Application Examples

- ◆ PDA, Pocket PC, computing devices
- ◆ Building automation and smart energy control
- ◆ Industrial sensing and remote equipment monitoring
- ◆ Warehousing, logistics and freight management
- ◆ PC and gaming peripherals
- ◆ Printers, scanners, alarm and video systems
- ◆ Medical applications including patient monitoring and remote diagnostics

<b>NETWORK STANDARD</b>	IEEE 802.11b/g/n
<b>RF FREQUENCY</b>	2.400 GHz ~ 2.497 GHz
<b>DATA RATES</b>	802.11n: 6.5, 13, 19.5, 26, 39, 52, 58.5, 65 Mbps
	802.11g: 6, 9, 12, 18, 24, 36, 48, 54 Mbps
	802.11b: 1, 2, 5.5, 11 Mbps
<b>MODULATION TECHNIQUES</b>	802.11g/n: 64-QAM, 16-QAM, QPSK, BPSK
	802.11b: CCK, DQPSK, DBPSK
<b>WIRELESS SECURITY</b>	WEP (64/128-bit), WPA™ (PSK, TKIP) / WPA2™ (AES, CCMP, 802.1x Authentication)
<b>HOST INTERFACES</b>	SPI, UART, USB ( HID And VCP)
<b>NETWORK PROTOCOLS</b>	TCP, UDP, IPv4, ARP, ICMP, DHCP Client
<b>WLAN FUNCTIONS</b>	Power save modes, automatic roaming, auto-rate
	Ad-hoc and Infrastructure modes
<b>CONFIGURATION</b>	AT commands, SPI frames
<b>SUPPLY VOLTAGE</b>	3.3V ± 5%
<b>PACKAGE</b>	44-pin LGA, 14.5mm x 30 mm
<b>OPERATING TEMPERATURE</b>	-35°C to +80°C
<b>CERTIFICATIONS</b>	FCC and CE

<b>Products Availability</b>	<b>Model Number</b>	<b>Description</b>
eS-WiFi ISM4319	ISM4319-M3G-L44-E	802.11 b/g/n etch antenna, 44 pin LGA package

<b>eS-WiFi Evaluation Board Availability</b>	<b>Products it supports</b>
ISM4319-M3G-EVB-E	ISM4319-M3G-L44-E

**Contact**  
Inventek Systems  
2 Republic Road  
Billerica Ma 01862  
978-667-1962

**E-mail**  
Sales@Inventeksys.com  
Engineering@Inventeksys.com  
www.Inventeksys.com