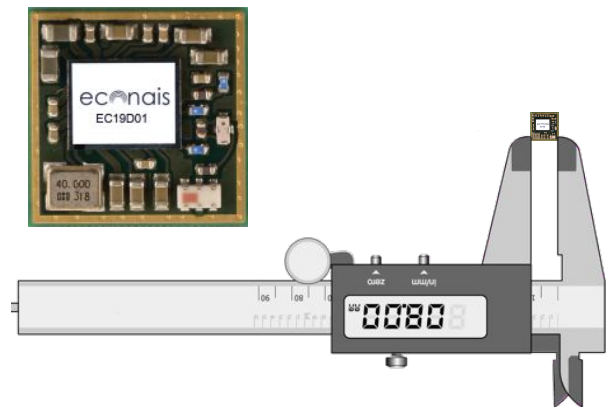


# EC19D01 802.11 b/g/n 8x8x1.5mm Wi-Fi Modules



The EC19D01 module is the ultimate choice for product designers who want to integrate Wi-Fi into any device or appliance with minimal impact on budget, space, power, and development time.

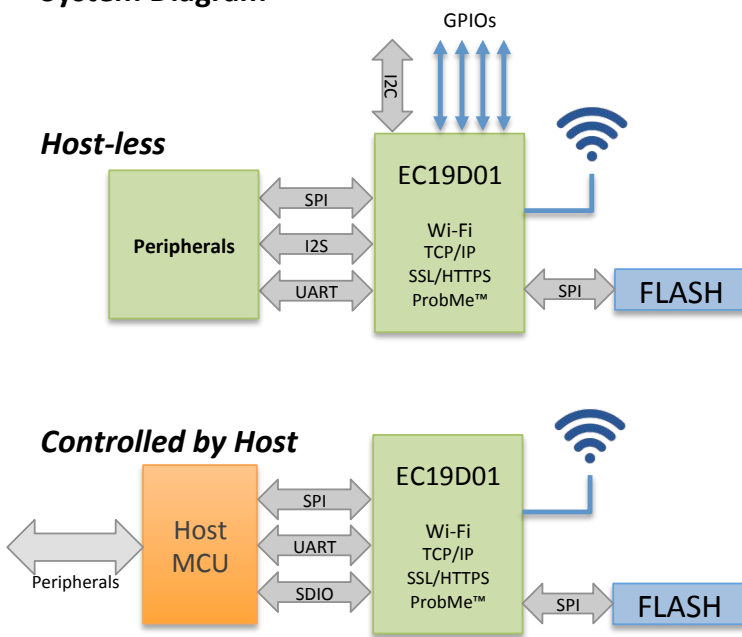
The EC19D is the world's smallest IoT ready Wi-Fi module with full networking capabilities, UART and SPI to Wi-Fi functions with a powerful command set and patented mass configuration method using any Wi-Fi capable device.



## Highlights

- Smallest self contained Wi-Fi module with IoT capabilities in the world
- Integrated 32-bit processor to support application customization
- Power consumption as low as 12.33uA Shutdown and 1.8mA with Wi-Fi associated and IP configured
- UART to Wi-Fi and SPI to Wi-Fi functions
- Wi-Fi Direct supporting P2P Client and P2P Group Owner modes
- ProbMe proprietary method for mass configuration
- Network Tx/Rx performance of up to 12/13Mbps TCP and 20Mbps UDP
- Ideal for Wi-Fi connected OEM/ODM products, audio/video/media streaming, and M2M applications

## System Diagram



## Applications

- Home Automation and Smart Appliances
- Wi-Fi Audio Speakers and Headphones
- Wireless Sensors and Sensor Networks
- Wireless Monitoring (Audio and Video)
- Smart Appliances
- Healthcare and Fitness Devices
- Wearable Devices
- Security, Authentication, and Admittance Control
- Lighting
- Toys
- Building/Energy/Industrial Management/Control
- Cloud Connected Devices
- Remote Control, Data Acquisition & Monitoring



# Product Brief

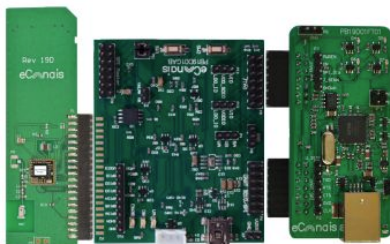
## Features

- UART to Wi-Fi
- SPI to Wi-Fi
- Wi-Fi Direct supporting P2P-Client
- Wi-Fi Direct supporting P2P-Group Owner
- Wi-Fi Client and AP mode with up to 8 clients
- WPS 2.0
- WPA/WPA2 Personal
- WPA/WPA2 Enterprise\*
- HTTPS/SSL
- Over-The-Air (OTA) Firmware upgrade
- ProbMe proprietary mass configuration method
- DHCP Client/Server
- Configurable Web Server
- TCP/UDP Sockets
- Free Linux based development tools
- DLNA with DMR (Media audio renderer)
- Integrated Cloud Service Support

## Specifications

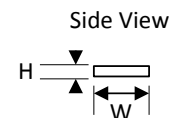
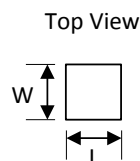
EC19D01	
Radio Technology	2.4GHz IEEE 802.11b/g/n
Power supply	3.3VDC (3.6VDC supported)
Max TX power (802.11b/g)	Typical 21 dBm
Max TX power (802.11n)	Typical 17 dBm
Max RX sensitivity (802.11b/g)	-99.6 dBm (1 Mbps)
Max RX sensitivity (802.11n)	-93.5 dBm (7.2 Mbps)
Storage Temp.	-65°C to 125°C
Optimal Operating Temp.	-30°C to 70°C
Max Operating Temp.	-40°C to 85°C
Certification	RoHS
Processor	32bit
Clock	80MHz
RAM available to user apps	128KB
GPIOs (dedicated + multiplexed)	6x + 7x
USARTs	1x
I2C (Software Simulated)	1x
I2S (for digital MIC/DAC)	1x
SPI (Master and Slave)	2x20Mbps
JTAG	1x
SDIO	Yes
Shutdown	12.33uA
Idle & Wi-Fi Associated (DTIM:3)	1.8mA
Active (RX/TX)	40mA/220mA
Max Distance	300m+
TX/RX max Wi-Fi speed	11Mbps/54Mbps/72Mbps

## Development Kit: EC19D01DK



EC19D01SD

## EC19D01 Dimensions



L	W	H
8 mm	8 mm	1.5 mm