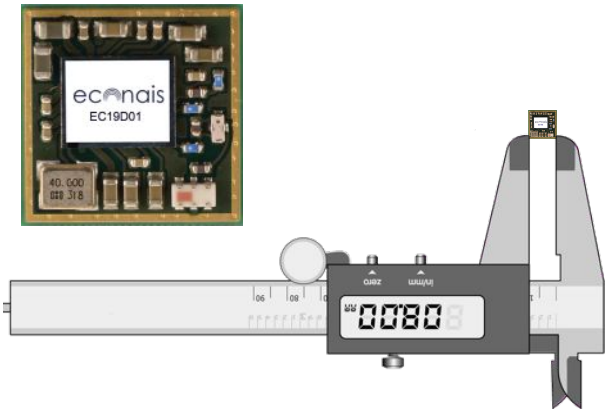
Product Brief

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

econais
Internet of Things. Think WiSmart™

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.

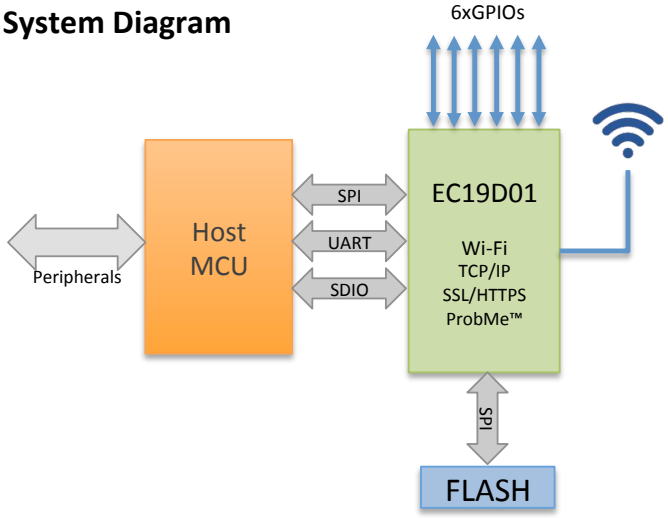
The EC19D is the world's smallest IoT ready Wi-Fi module with full networking capabilities, UART and SPI to Wi-Fi functions with a powerful command set and patented mass configuration method using any Wi-Fi capable device.




## 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 10uA Standby and 1.16mA 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 patented 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

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# *Product Brief*

## Features

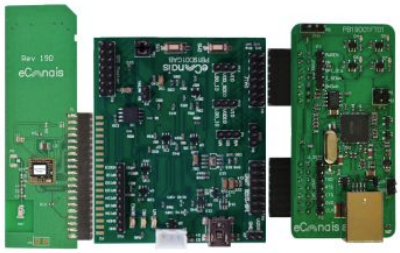
- UART to Wi-Fi
- SPI to Wi-Fi
- Wi-Fi Direct supporting P2P-Client
- Wi-Fi Direct supporting P2P-Group Owner
- Wi-Fi Client and AP mode with up to 8 clients
- WPS 2.0
- WPA/WPA2 Personal
- WPA/WPA2 Enterprise*
- HTTPS/SSL
- Over-The-Air (OTA) Firmware upgrade*
- ProbMe Patented mass configuration method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

*Q3 2014

## 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 | 140KB |
| GPIOs | 6x |
| USARTs | 1x |
| I2S (for digital MIC/DAC) | 1x |
| SPI | 2x20Mbps |
| JTAG | 1x |
| SDIO | Yes |
| Standby | 10uA |
| Idle & Wi-Fi Associated | 1.16mA |
| Active (RX/TX) | 40mA/185mA |
| Max Distance | 300m+ |
| TX/RX max Wi-Fi speed | 11Mbps/54Mbps/72Mbps |

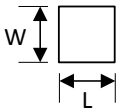
## Evaluation and Development Kits



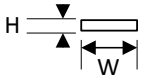
EC19D01SD EC19D01EX EC19D01DBG

## EC19D01 Dimensions

Top View




Side View




| L | W | H |
|---|---|---|
| 8 mm | 8 mm | 1.5 mm |

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