



## AMW004

# Cloud-Connected Wi-Fi Module

Connecting your device to the cloud just got a whole lot easier

### IT'S ALL ABOUT THE CLOUD

Using a Wi-Fi module to connect your device to the internet only solves half the problem. ACKme Wi-Fi modules bridge the gap by providing integrated cloud connectivity coupled with an easy-to-use serial communication command set.

### HIGHLIGHTS

The AMW004 'Wallaby' module is a fully certified small form factor, low power WICED-based Wi-Fi networking module perfectly suited to deeply embedded applications for medium to high volumes.

The module runs an embedded TCP/IP networking stack with SSL/TLS/HTTPS security and includes an onboard PCB trace antenna and u.FL connector all in a physical footprint of just 31.2mm x 17.8mm (1.25" x 0.7").

ACKme WiConnect firmware is pre-installed on all AMW004 modules. WiConnect is an intuitive and reliable serial Wi-Fi networking application that includes free (optional) support for cloud connectivity powered by Sensors.com.

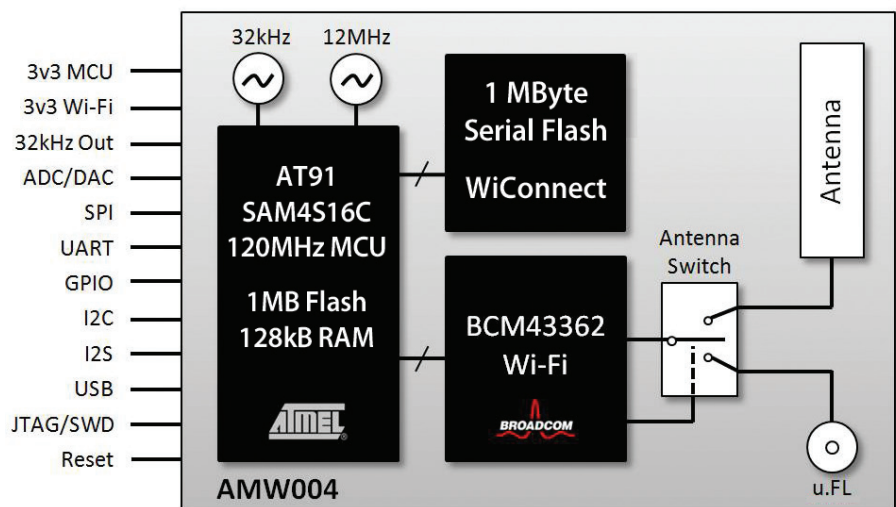
## FEATURES

- Standalone WICED Wi-Fi Networking module including an apps processor and on-board antenna
- Multiple serial interfaces: UART, SPI, I2C
- Sensors.com cloud API for remote device monitoring and control
- Ultra-low power mode for battery operation
- On-board TCP/IP stack includes SSL/TLS/HTTPS security
- Automatic or manual OTA upgrade
- Various Wi-Fi provisioning options including WPS and softAP/webserver

## APPLICATIONS

- Environmental & energy monitoring
- Wireless sensing, remote data logging
- HVAC, power, light & thermostat control
- Appliance control
- Security cameras
- Door/window monitoring
- Entry control and monitoring
- Fitness equipment
- Home health monitoring
- Medical devices
- Audio
- Toys & robots
- And more...

## AMW004 SYSTEM ARCHITECTURE



## AMW004 SPECIFICATIONS

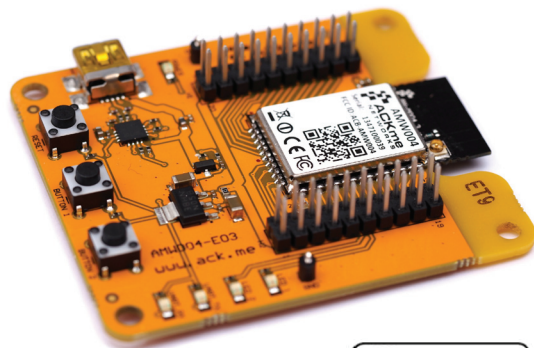
Networking Standards	802.11b/g/n
Frequency Band	2.4GHz, Channels 1-14
Wi-Fi Security	Open, WEP, WPA, WPA2
Network Protocols	UDP, TCP, ARP, ICMP, DNS, SNTP, HTTP, DHCP, SMTP, Sensors.com
Network Security	SSL3.0/TLS1.1, HTTPS
Communications Interfaces	UART, SPI, I2C, USB, JTAG
Data Throughput	>10Mbit/s SPI, 4Mbit/s UART
Communications Range	>1000ft (330m) line of sight
Microprocessor & Memory	ARM CM4 @ 120MHz incl. 1MB flash and 128kB RAM, on-board 8Mbit (1MByte) SPI-serial flash
Peripherals	GPIO, ADC, DAC, PWM, I2S
Real Time Clock	Time-of-day, low power alarms/wakeup
RF Transmit Power	+19dBm (11b), +16dBm (11g), +14dBm (11n)
Antenna	PCB & u.FL connector for external antenna
Power Consumption @ 25°C	Standby: 1.8µA (incl. 32kHz RTC) Sleep: 28uA Wi-Fi Powersave: 0.77mA (DTIM=3) Active Rx: 6.9mA (1Mbit/s UDP) Active Tx: 12.5mA (1Mbit/s UDP)
Supply Voltage	+3.3V ±10%
Operating Temperature	-30°C to +85°C
Size	31.8mm x 17.8mm x 3.1mm (1.25" x 0.7" x 0.08")
Certifications	FCC, CE, IC
Software	ACKme WiConnect serial Wi-Fi Application is pre-installed on all modules

## AMW004 EVALUATION BOARD

Evaluating the AMW004 module using ACKme's WiConnect serial Wi-Fi software is easy. Simply plug the board into a PC using a standard USB cable, open a terminal application and start typing!

The evaluation board includes:

- USB-serial interface for simplified UART communications & power
- Two buttons & two LEDs to demonstrate I/O control
- Expansion headers to break out every pin on the module
- Reset button



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Or for more information, visit  
us online at <http://ack.me>



APB-MW004-100D6 | Product Brief  
January 3, 2014

**AMW004 (Wallaby)**

AMW004 surface-mount module

**AMW004-A01 (Hornet)**

AMW004 with pluggable module adapter (2mm pin pitch)

**AMW004-E03 (Mackerel)**

AMW004 surface-mounted on WiConnect Evaluation Board

**AMW004-E02 (Marlin+Hornet)**

AMW004 pluggable module adapter with WiConnect Evaluation Board

**AMW004-E01 (Snapper)**

AMW004 surface-mounted on WICED SDK Evaluation Board

## ABOUT ACKme NETWORKS, INC.

ACKme Networks offers a range of industry leading cloud-connected wireless communication modules including Wi-Fi, Bluetooth, Bluetooth Low Energy and GPRS cellular. ACKme is headquartered in Silicon Valley, USA with a design centre in Sydney, Australia and a range of international distributors.