



20.3 x 15.2 mm

AMW006/AMW106 'Numbat' Cloud-Connected Wi-Fi Module

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

LOW POWER CONNECTIVITY TO 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 ultra-low power cloud connectivity coupled with an easy-to-use serial communication command set.

FEATURES

- Standalone WICED Wi-Fi Networking module including apps processor
- Multiple serial interfaces: UART, SPI, I2C
- On-board TCP/IP stack includes SSL/TLS/HTTPS security
- Webserver with REST/websockets
- Fully customizable mobile-responsive web application
- Sensors.com cloud API for remote device monitoring and control
- Ultra-low power mode for battery operation
- Secure over-the-air (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...

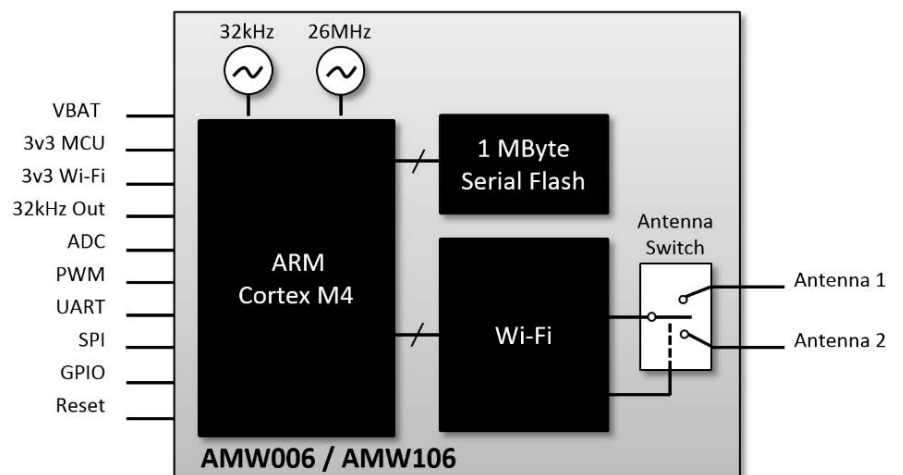
HIGHLIGHTS

The 'Numbat' module is a fully certified small form factor, ultra-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 offering a webserver with REST & websockets, a fully customizable javascript-based webapp and SSL/TLS security. It also includes 1MB serial flash memory, real time clock and selectable antenna diversity all in a physical footprint of just 20.3mm x 15.2 x 2.7mm or (0.8" x 0.6" x 0.11").

The Sensors.com WiConnect operating system is pre-installed on all modules. WiConnect provides products with an intuitive, reliable and secure Wi-Fi networking connection that includes optional API extensions for cloud connectivity powered by Sensors.com.

AMWx06 SYSTEM ARCHITECTURE



AMWx06 SPECIFICATIONS

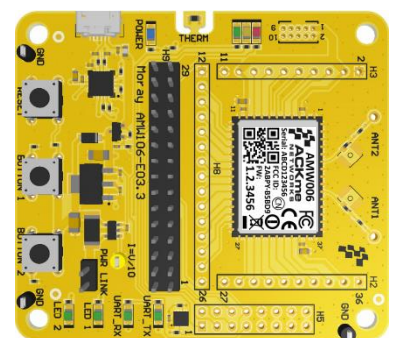
Networking Standards	802.11b/g/n
Frequency Band	2.4GHz – Channels 1-13
Wi-Fi Security	Open, WEP, WPA, WPA2
Network Protocols	UDP, TCP, ARP, ICMP, DNS, SNTP, HTTP, Websockets, DHCP, SMTP, Sensors.com
Network Security	TLS1.2, HTTPS, Secure OTA Update
Communications Interfaces	UART, SPI, I2C, SWD/JTAG
Data Throughput	>10Mbit/s SPI, up to 10Mbit/s UART
Microprocessor & Memory	ARM Cortex® M4 including 512kB MCU flash and 8Mbit (1Mbyte) SPI-serial flash <ul style="list-style-type: none"> AMW006 – 96kB RAM, up to 84MHz MCU core frequency AMW106 – 128kB RAM, up to 100MHz MCU core frequency
Peripherals	GPIO, ADC, PWM, I2S
Real Time Clock	Time-of-day, low power alarms/wakeup
Max. RF Transmit Power	+18dBm (11b), +16dBm (11g), +14dBm (11n)
Min. Receive Sensitivity	-94dBm (11b/g), -86dBm (11n)
Communications Range	>1000ft (330m) line of sight (using recommended antenna)
Antenna	Antenna diversity using external antenna
Power Consumption @ 25°C	Standby: 2.8µA (3.8 µA with 32kHz RTC) Sleep: 10µA with RAM retention (113 µs wake) Wi-Fi Powersave: 0.77mA (DTIM=3) Active Receive: 5.7mA (1Mbit/s UDP) Active Transmit: 11.4mA (1Mbit/s UDP)
Supply Voltage	+3.3V ±10%
Operating Temperature	-30°C to +85°C
Size	20.3mm x 15.2mm x 2.7mm (0.8" x 0.6" x 0.11")
Certifications	FCC, CE, IC
Software	Sensors.com WiConnect Operating System is pre-licensed on all modules

AMWx06 EVALUATION BOARD

Evaluating the AMWx06 module using Sensors.com WiConnect Operating System is easy. Simply plug the board into a PC using a standard USB cable, open a terminal and start typing!

The evaluation board includes:

- USB-serial interface for simplified UART communications & power
- Peripheral interface including two buttons, five LEDs for I/O control and status indication, and a thermistor for temperature measurement
- Expansion headers to break out every pin on the module
- Reset button



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

AMW106 (Numbat)	AMW106 surface mount module
AMW106-A01 (Hopper)	AMW106 with pluggable module adapter (2mm pin pitch)
AMW106-E03 (Moray)	AMW106 surface-mounted on WiConnect Evaluation Board
AMW106-E02 (Marlin+Hopper)	AMW106 pluggable module adapter with WiConnect Eval Board



ABOUT ACKme NETWORKS, INC.

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