

# ZENTRI



11 x 12 mm

## ► FEATURES

- Standalone, programmable Wi-Fi Networking module
- Serial interface: UART
- On-board TCP/IP stack includes SSL/TLS security
- Ultra-low power mode for battery operation
- Secure over-the-air (OTA) updates using Zentri Device Management Service (DMS)
- 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 many more...

## AMW007 'Spectre' Low Cost Wi-Fi Module

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

### CONNECTIVITY TO THE CLOUD

Using a Wi-Fi module to connect your device to the internet only solves half the problem. Zentri Wi-Fi modules bridge the gap by providing ultra-low power cloud connectivity coupled with the ZentriOS easy-to-use command API available via serial, HTTP REST, websockets or remote terminal.

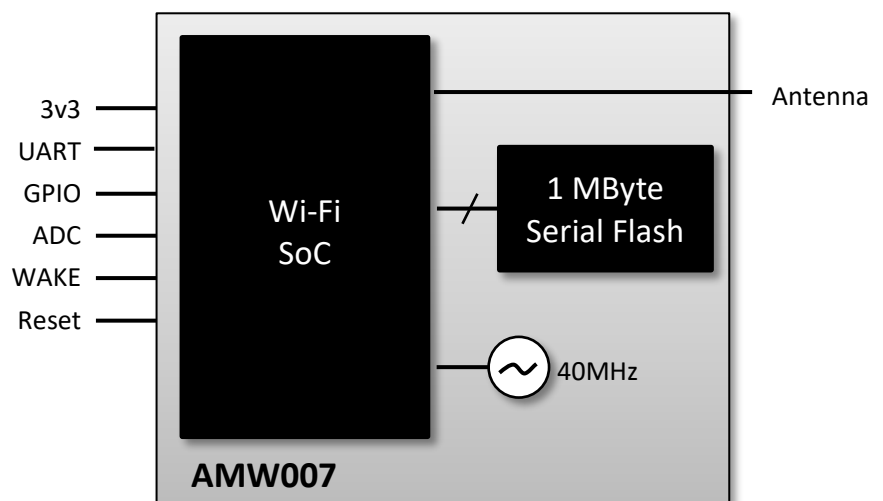
### HIGHLIGHTS

The AMW007 'Spectre' module is a fully certified small form factor, low cost Wi-Fi module perfectly suited to ultra-low power deeply embedded applications for medium to high volumes.

The module runs an embedded TCP/IP networking stack that includes SSL/TLS security. It also includes 1MB serial internal flash memory in a physical footprint of just 11mm x 12mm x 1.8mm or (0.43" x 0.47" x 0.08").

The fully certified module comes pre-installed with ZentriOS. ZentriOS includes API extensions for connectivity to the cloud enabling remote device management and data exchange with various cloud services.

### AMW007 SYSTEM ARCHITECTURE



## AMW007 SPECIFICATIONS

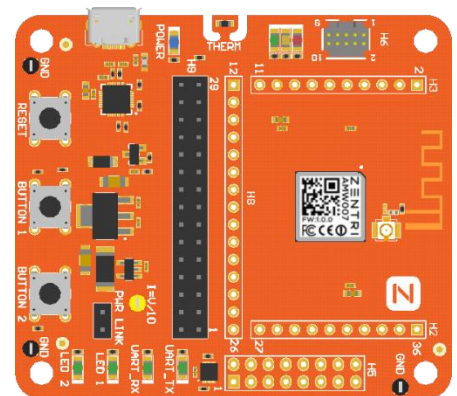
|                                 |   |
|---------------------------------|---|
| <b>Wireless Standard</b>        | 802.11b/g/n   |
| <b>Frequency Band</b>           | 2.4 GHz, Channels 1-13  |
| <b>Protocols/Profiles</b>       | UDP, TCP, ICMP, DNS, HTTP(S), DHCP, SMTP, SNTP, OTA Update                          |
| <b>Security</b>                 | Wi-Fi – Open, WEP, WPA, WPA2-PSK<br>Networking – TLS1.2, HTTPS                      |
| <b>Data Throughput</b>          | >4 Mbit/s UART  |
| <b>Comms Range</b>              | >1000ft / 330m line of sight ( $\lambda/4$ antenna)                                 |
| <b>RF Transmit Power</b>        | +19dBm (11b), +16dBm (11g), +14dBm (11n)  |
| <b>RF Receive Sensitivity</b>   | -94dBm (11b/g), -90dBm (11n)  |
| <b>Power Consumption @ 25°C</b> | Standby: 10 $\mu$ A<br>Sleep: 900 $\mu$ A<br>Wi-Fi Powersave: <330 $\mu$ A (DTIM=3) |
| <b>Wi-Fi &amp; Memory</b>       | 32Bit 80MHz Wi-Fi SoC, on-board 8Mbit (1MByte) QSPI-serial flash                    |
| <b>Serial Interface</b>         | UART  |
| <b>Peripherals</b>              | GPIO, ADC, PWM  |
| <b>Supply Voltage</b>           | +3.3V $\pm$ 10%   |
| <b>Operating Temp.</b>          | -40°C to +85°C  |
| <b>Size</b>                     | 11mm x 12mm x 1.8mm (0.43" x 0.47" x 0.07")   |
| <b>Certifications</b>           | FCC, CE, IC   |
| <b>Software</b>                 | ZentriOS-WL – ZentriOS Lite for Wi-Fi is pre-installed on all modules               |

## AMW007 EVALUATION BOARD

Evaluating the AMW007 module using the ZentriOS Command API 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
- Power monitor for low-mA range power profiling
- Expansion headers to break out every pin on the module
- Reset button



➔ Contact us: <http://zentri.com/contact>  
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Or for more information, visit us  
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**AMW007(Spectre)**

AMW007 surface mount module

**AMW007-E03**

AMW007 surface-mounted on ZentriOS Evaluation Board

# ZENTRI

## ABOUT ZENTRI, INC.

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