

Ultra Low Power Wi-Fi® Modules

For Battery Powered IoT Applications

DA16200 Modules

Full Offload Highly Integrated Ultra Low Power Wi-Fi Modules

- The fully integrated module consists of the DA16200 SoC, 4MB flash memory, RF components including crystal oscillator, RF lumped filter, and either a chip antenna or a connector for an external antenna
- Single power supply voltage (3.3V)
- 37 pins including GPIOs, JTAG, RTC control, UART, power input, and 32.768kHz crystal
- DA16200 module SKUs:
 - DA16200MOD-AAC4WA32 with on board chip antenna
 - DA16200MOD-AAE4WA32 with external antenna connector (u.FL)
- Dimensions
 - Both modules have the same dimensions
 - 13.8 mm x 22.1 mm x 3.3 mm

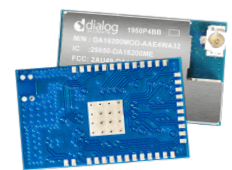


Module Types

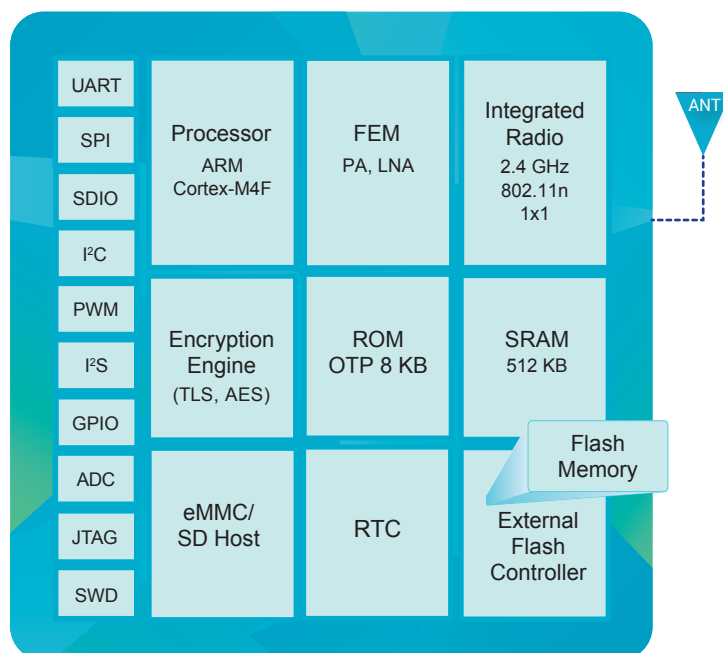
On Board Chip Antenna
13.8 mm x 22.1 mm x 3.3 mm
DA16200MOD-AAC4WA32



External Antenna Connector (u.FL)
13.8 mm x 22.1 mm x 3.3 mm
DA16200MOD-AAE4WA32



Block Diagram (SoC)




Country	On Board Chip Antenna	External Antenna Connector (u.FL)
US FCC	2AU49-DA16200MC	2AU49-DA16200ME
Canada IC	25650-DA16200MC	25650-DA16200ME
EU CE	CE & RoHS Compliance	CE & RoHS Compliance
South Korea KC	R-C-fci-DA16200M-C4WA3	R-C-fci-DA16200M-E4WA3
Japan TELEC	201-190886	201-190892
China SRRC	2020DP0489	2020DJ0161(M)




Low Power Wi-Fi Modules For Battery Powered IoT Applications

Features	Benefits
Ultra Low Power	<ul style="list-style-type: none"> Breakthrough VirtualZero™ technology Virtually no power consumption in sleep state Enables year-plus battery life Ultra low power sensor wake-up
Superior Range	<ul style="list-style-type: none"> Industry leading output power and Rx sensitivity for max range
Highly Integrated SoC	<ul style="list-style-type: none"> 802.11b/g/n radio PHY, BB/MAC, PA, LNA w/on chip SRAM Up to 72 Mbps, MCS0-7
Full Offload	<ul style="list-style-type: none"> SoC runs full OS & TCP/IP stack
Simple Setup & Provisioning	<ul style="list-style-type: none"> Automatically find & configure new devices w/ smartphone app
Complete Software Stack	<ul style="list-style-type: none"> Comprehensive networking software stack
Leading Security	<ul style="list-style-type: none"> Secure boot • Secure debug • Secure asset storage Hardware accelerated • TLS • Digital certificates • Elliptic curve
OTA Firmware Update	<ul style="list-style-type: none"> Enables field deployed device firmware updates
Multiple I/Os	<ul style="list-style-type: none"> UART, SPI, SDIO, ADC, I²C, PWM, I²S, GPIOs, JTAG and SWD
eMMC/SD Expanded Memory	<ul style="list-style-type: none"> Data logging, memory intensive applications

VirtualZero™ Leading Edge Low Power Technology




> 1 Year
Battery Life



Three Sleep Modes

1. Unconnected (nanoamp)
2. Connected ultra low (microamp)
3. Connected ultra fast (microamp)



Ultra Fast Wake-up
Ultra Fast Return to Sleep
Extends battery life

Additional Features



Extended Range

- > +20 dBm range booster mode
- > -100 dBm Rx sensitivity



Highly Integrated SoC

- + No CPU or MCU required
- + Full offload
- + Runs network stack

Networking Capabilities	Protocols	Complete software stack including TCP/UDP/IP, HTTP, HTTPs, DHCP client/server, DNS client/server, mDNS, DNS-SD, MQTT, CoAP
	Provisioning	Included smartphone app for iOS & Android; WPS 2.0
	Sensors	ADC: 4-channel SAR 12-bit, I ² C, SPI, PWM, and I ² S



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