Ultra Low Power Wi-Fi® + BLE Modules

For Battery Powered IoT Applications

DA16600 Combo Wi-Fi + BLE Modules

Full Offload Highly Integrated Ultra Low Power Modules

- The DA16600 is a module solution for IoT applications featuring lowest power Wi-Fi + BLE
- The fully integrated module consists of:
 - Wi-Fi SoC: DA16200
 - BLE SoC: DA14531
 - 4MB Flash memory
 - 40MHz Crystal for Wi-Fi
 - 32KHz RTC Crystal for Wi-Fi
 - 32MHz Crystal for BLE
 - Chip antenna or u.FL connector
 - SPDT Antenna Switch
- Single power supply voltage (3.3V)
- DA16600 module SKUs:
 - DA16600MOD-AAC4WA32 chip antenna
 - DA16600MOD-AAE4WA32 external antenna connector (u.FL)



Module Types

On Board Chip Antenna

14.2 mm x 24.6 mm x 3.0 mm

DA16600MOD-AAC



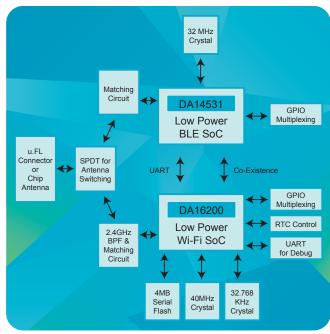
External Antenna Connector (u.FL)

14.2 mm x 24.6 mm x 3.0 mm

DA16600MOD-AAE



System Block Diagram



Country	On Board Chip Antenna	External Antenna Connector (u.FL)
US FCC	TBD	TBD
Canada IC	TBD	TBD
EU CE	CE & RoHS Compliance	CE & RoHS Compliance
South Korea KC	TBD	TBD
Japan TELEC	TBD	TBD
China SRRC	TBD	TBD





Low Power Wi-Fi + BLE Solution for Battery Powered IoT Applications

Features	Benefits
Low Power Wi-Fi	 VirtualZero™ DA16200 SoC • 802.11n 1x1 low power 2.4 GHz Up to 72 Mbps, MCS0-7
Low Power BLE	 SmartBond TINY™ DA14531 SoC • BT5.1 compliant BLE
Ultra Low Power	 Enables year-plus battery life Breakthrough VirtualZero™ low power technology Virtually no power consumption in sleep state Ultra low power sensor wake-up Runs on small batteries and coin cells
Wi-Fi/BLE Coexistence	Built in, customizable, coexistence algorithms
Superior Range	 Wi-Fi: Industry leading output power and Rx sensitivity for max range BLE: 4x range of BT 4.0
Full Offload	SoC runs full OS & TCP/IP stack on module
Simple Setup & Provisioning	Provision Wi-Fi connection simply with BLEAutomatically find & configure new devices w/ smartphone app
Complete Software Stack	Comprehensive networking software stack
Leading Security	 Secure boot Secure debug Secure asset storage Hardware accelerated TLS Digital certificates Elliptic curve
OTA Firmware Update	Enables field deployed device firmware updates
Multiple I/Os	 UART, SPI, ADC, I²C, PWM, I²S, GPIOs, JTAG and SWD



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

- > +18.5 dBm output power
- > -98.5 dBm Rx sensitivity



Highly Integrated SoC

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

Networking
Networking
Capabilities
Capabillites

	Protocols	Complete software stack including TCP/UDP/IP, HTTP, HTTPs, DHCP client/server, DNS client/server, mDNS, DNS-SD, MQTT, CoAP
	Provisioning	Set-up Wi-Fi via BLE; WPS 2.0
	Sensors	ADCs: (1 Wi-Fi, 3 BLE), I ² C, SPI, PWM, and I ² S



Dialog Semiconductor Worldwide Sales Offices

www.dialog-semiconductor.com email:info@diasemi.com

 United Kingdom
 The Netherlands
 Japan
 Hong Kong
 China (Shenzhen)

 Phone: +44 1793 757 700
 Phone: +31 73 640 8822
 Phone: +81 3 5769 5100
 Phone: +85 2 3769 5200
 Phone: +86 755 2981 3669

 Germany
 North America
 Taiwan
 Korea
 China (Shanghai)

 Phone: +49 7021 8050
 Phone: +1 408 845 8500
 Phone: +886 2 80718888
 Phone: +82 2 3469 8200
 Phone: +86 21 5424 9058

This publication is issued to provide outline information only, which unless agreed by Dialog Semiconductor may not be used, applied, or reproduced for any purpose or be regarded as a representation relating to products. All use of Dialog Semiconductor products, software and applications referred to in this document are subject to Dialog Semiconductor's Standard Terms and Conditions of Sale, available on the company website (www.dialogsemiconductor.com) unless otherwise stated.

dialogSEMICONDUCTOR