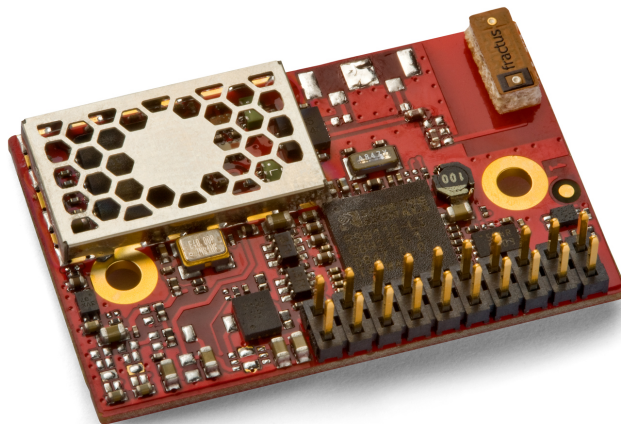


WLAN SDIO Module



Product Brief WLAN Dual-band SDIO Module OWL222a

The WLAN SDIO Module 222a has been developed for integration in industrial, medical, and other demanding devices providing state of the art low power features and dual-band support for both 2.4GHz and the full 5GHz radio band. The accompanying software driver works as the interface between the TCP/IP stack in the device and the module. The module minimizes the work needed to implement WLAN (IEEE 802.11 a, b, g, n) in a device as it provides all hardware, type approval, EMC certification etc. It is developed for reliable, high demanding devices and applications. The driver is available for Linux and WinCE, and may be adapted for any micro controller.

- Supports 802.11 a, b, g, n
- Dual-band radio, 2.4GHz and 5GHz
- 2.4GHz channels 1-13
- 5GHz channels 36-165 (U-NII band 1, 2, 2e, 3)
- 802.11n space time block code for extended range and throughput
- SDIO v2.0 Host interface
- Software driver available or adaptable for any device
- Radio type approved for Europe, US, Japan and Canada (R&TTE, FCC, MIC, IC)
- Compliant with EMC standards
- Industrial temperature range -30 to +85°C
- Low power requirements
- Supports security features WEP64, WEP128, WPA, WPA2
- Quality of Service: 802.11e and WMM
- Ad-hoc and infrastructure mode
- Internal or dual external antennas (diversity supported)

Technical Data - WLAN Dual-band SDIO Module OWL222a

Wireless Standard

Wireless LAN / WLAN

Standard Specification

Conforms to 802.11 a, b, g, e, i, h, j, drafts 802.11 k, r, and single-stream 802.11 n standards
Quality of Service: Supports 802.11 e and WMM
Security: Supports WPA/WPA2 (802.11 i)

Radio

Internal antenna (range & max output power incl. antenna): 400m & 20dBm
External antenna (range & max output power incl. antenna): 400m & 20dBm
802.11 a, b, g, n (single stream n) dual band, 65 Mbit/s
2.4 GHz channels: 1-13
5 GHz channels: 36-165 (U-NII Band 1, 2, 2e, 3)

Type Approvals

Europe (ETSI R&TTE)
US (FCC/CFR 47 part 15 unlicensed modular transmitter approval)
Canada (IC RSS)
Japan, 2.4 GHz only (MIC - formerly TELEC)

Interface

SDIO v2.0 max 50MHz: Supports SPI, SD 1-bit, or 4-bit modes

Features

Throughput: 25 Mbps

Security:

- WEP64/128
- TKIP
- AES (CCMP)
- WPA-EAP-TLS, WPA-PSK
- WPA2-EAP-TLS, WPA2-PSK

Quality of Service (QoS):

- 802.11e
- WMM

Android Support

iPhone/iPad support

Operational modes:

- BSS (infrastructure)
- IBSS (ad-hoc)

Driver support:

- Linux
- WinCE
- Embedded systems
- Other systems, please contact us

Integrated baseband and MAC processing

Advanced power management

802.11n space time block code support

Regulatory domain support

Antenna Diversity: Internal or single and dual external

Fast roaming

WPS (WiFi Protected Setup)

Dynamic Transmit Power Adaptation

Zero host load

TX power calibration

Link adaptation

Fragmentation

DTIM based power management

Pre-authentication

Bluetooth co-location: Supports IEEE 802.15.2 Packet

Traffic Arbitration (PTA)

Power

Power supply voltage: 3.1 - 3.6 VDC

Current consumption (minimum): 5 mA @3.1V

Current consumption (average Tx): 150 mA @3.1V

Connectors

Board-to-board connector

20-pin header connector (optional)

Mechanical

Operating temperature: -30°C to +85°C

Mounting holes

Dimensions: 23x36x3 mm

Certifications and Compliance

R&TTE Directive 1999/5/EC:

- EN 300 328, EN 301 893
- EMC: EN 301 489-1, EN 301 489-17, EN 61000-6-2
- Safety Compliance: IEC 60950-1 / EN 60950-1

Medical Electrical Equipment:

- IEC 60601-1-2 (for single antenna configurations)

Article numbers

For article number descriptions, please see

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