Wireless LAN (WLAN) SDIO Module OWL222a
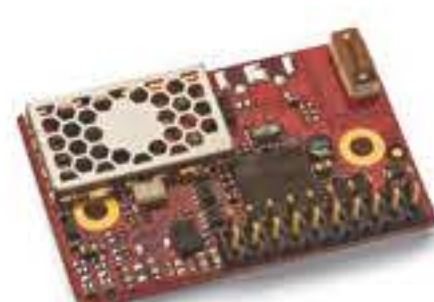

Downloads

Visit the OWL222a product support page for software downloads and technical documentation.

- Open PDF (A4 format)
- Open PDF (Letter format)
- Print PDF (A4 format)
- Print PDF (Letter format)

Key features

The Wireless LAN 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 5GHz radio bands. 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 Wireless LAN (IEEE 802.11a/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 802.11a/b/g/n
- Dual-band radio, 2.4GHz & 5GHz
- 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 and Canada (R&TTE, FCC, 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

Wireless Standard

Wireless LAN (WLAN)

Standard Specification

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

Radio

Internal antenna (range & max output power incl. antenna): 400m & 20dBm
External antenna (range & max output power incl. antenna): 400m & 20dBm
802.11a/b/g/n (single stream n) dual band, 65 Mbit/s
2.4 GHz channels: 1-13
5 GHz channels: 36-48 (U-NII Band 1)

Type Approvals

Europe (R&TTE)
US (FCC/CFR 47 part 15 unlicensed modular transmitter approval)
Canada (IC)

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 V1.7.1 (2006-10), EN 301 893 V1.5.1 (2008-12)
- EMC: EN 301 489-1 V1.8.1 (2008-04), EN 301 489-17 V1.3.2 (2007-06), EN 61000-6-2 (2005)
- Safety Compliance: IEC 60950-1:2005 (2nd Edition) / EN 60950-1:2006

Medical Electrical Equipment:

- IEC 60601-1-2 (2007) (for single antenna configurations)

Article numbers

cB-OWL222ai-02: OEM Wireless LAN 222a module with integrated antenna, board-to-board connector and 20 pin header connector

cB-OWL222ai-04: OEM Wireless LAN 222a module with integrated antenna and board-to-board connector

cB-OWL222ax-02: OEM Wireless LAN 222a module with connector for external antenna, board-to-board connector and 20 pin header connector

cB-OWL222ax-04: OEM Wireless LAN 222a module with connector for external antenna and board-to-board connector

Where to buy

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