Wireless LAN

23 mm

36 mm
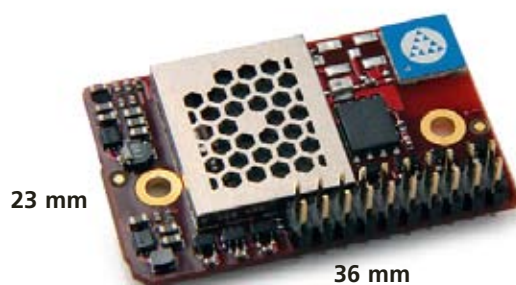
Product Brief OWLAN211g

The WIRELESS LAN MODULE™ from connectBlue has been developed for integration in industrial devices providing state of the art low power features. The 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 802.11b/g) in a device as it provides all hardware, type approval, EMC certification etc. It is developed for reliable, high demanding industrial devices and applications.

The Wireless LAN Module together with the driver software package makes a complete Wireless LAN implementation. The driver is available for Linux and may be adapted for any micro controller. The Wireless LAN module has the same form factor and interface layout as the Bluetooth modules from connectBlue, which enables customers to prepare their device for both Bluetooth and/or Wireless LAN.

Key Features

• Supports both 802.11b and 802.11g

• Software driver available or adaptable for any device.

• Bluetooth co-location with PTA (Packet Traffic Arbitration) support

• Radio type approved for Europe

• Radio type approved for US and Canada

• Compliant with EMC standards

• Industrial temperature range -30 to +85 C

• No host processor load

• Low power requirements

• Supports security features WEP64, WEP128, WPA, WPA2 (TKIP/AES)

• Quality of Service: 802.11e and WMM

• Ad-hoc and infrastructure mode

• Internal or dual external antennas (diversity supported)

connectBlue™

Technical Data

SPECIFICATIONS

802.11 specification
Quality of Service: Supports 802.11e and WMM
Security: Supports 802.11e & WPA/WPA2 (802.11i)
Multidomain Capability: 802.11d

PHY/MAC
802.11b and 802.11g
Extended rate protection
Regulatory domain support
Advanced power management
Antenna Diversity
Wake-on-Wireless
Fast roaming
WPS (WiFi Protected Setup)
Dynamic Transmit Power Adaptation

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

Security
WEP64
WEP128
WPA-EAP-TLS, WPA-PSK
WPA2-EAP-TLS, WPA2-PSK
TKIP
CCMP (AES)

Quality of Service
802.11e
WMM

Additional Features
Zero host load
TX power calibration
Link adaptation
Fragmentation
DTIM based power management
Pre-authentication

Host Interfaces
SPI up to 60 MHz

Connector
20 pin header connector
Board to board connector

Antennas
Internal or single and dual external (diversity)

Bluetooth co-location
Supports IEEE 802.15.2 Packet Traffic Arbitration (PTA)

Power
3.3-5.5 VDC
Deep sleep mode: 0.2mA @ 3.6 VDC
Sleep mode: 0.8 mA @ 3.6 VDC
Active mode, TX: 170mA @ 3.6 VDC

Host reference driver
Linux 2.4/2.6

Dimensions
23 x 36 x 3.1 mm

Weight
3.6 g

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

Environmental
Maximum operating temperature: -30 - +85 °C
Storage temperature: -40 - +85°C
Humidity RH 5-90% non-condensing
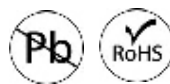Shock and vibration: IEC 61131-2

Certifications and Compliance
R&TTE Directive 1999/5/EC
EN 300 328 V1.6.1 (2004-11)

EMC Directive: 89/336/EEC
EN 301 489-1 V1.4.1 (2002-08)
EN 301 489-17 V1.2.1 (2002-08)
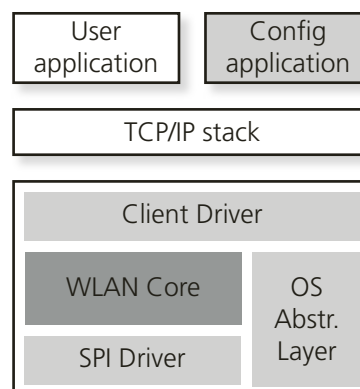EN 61000-6-2 (2001)

Safety Compliance
EN 60950-1:2001 and/or IEC 60950-1:2001 (1st Edition)
EN 60950-1/A11:2004 + Corrigendum:2004

Order Number

cB-OWLAN211gi-02	OEM WLAN module Internal Antenna and Standard J1 Connector
cB-OWLAN211gi-04	OEM WLAN module Internal Antenna (no J1 Connector)
cB-OWLAN211gx-02	OEM WLAN module External Antenna and Standard J1 Connector
cB-OWLAN211gx-04	OEM WLAN module External Antenna (no J1 Connector)

Software Stack

User application	Config application

TCP/IP stack

Client Driver	
WLAN Core	OS Abstr. Layer
SPI Driver	

connectBlue™