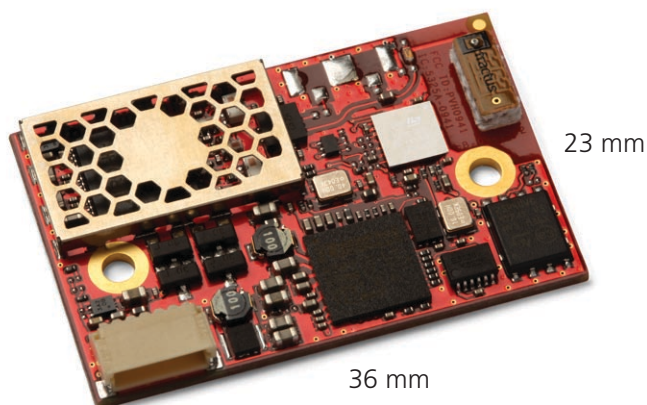


Wireless LAN OEM Serial Port Adapter



Product Brief OWS451 (UART interface)

The OEM WIRELESS LAN SERIAL PORT ADAPTER™ 451 series from connectBlue is a module with UART interface and fully embedded TCP/IP stack and driver. It is developed for reliable, high demanding industrial devices and applications providing state of the art low power features and dual-band support for both 2.4GHz and 5GHz radio bands. The module is presented as a serial port/UART to the host. Raw serial data is sent to the module, which will package the data into TCP/UDP packages and transmit via Wireless LAN. 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.

KEY FEATURES

- Supports 802.11a/b/g/n
- Dual-band radio, 2.4GHz and 5GHz
- 802.11n space time block code for extended range and throughput
- High Speed UART interface up to 1.8Mbps
- Radio type approved for Europe, US and Canada (R&TTE, FCC, IC)*
- Compliant with EMC standards*
- Industrial temperature range -40 to +85°C*
- Low power consumption
- Security support: Enterprise, WPA2-PSK, WPA-PSK, PEAP, LEAP, WEP64/128
- Quality of Service: 802.11e and WMM*
- Ad-hoc and infrastructure mode
- Extended Data Mode™ for individual control of up to 7 channels*
- Internal or dual external antennas

Technical Data – OWS451 (UART interface)

IEEE 802.11 SPECIFICATIONS

Conforms to 802.11a/b/g/e/i/h/j, drafts 802.11k/r/s, single-stream 802.11n standards and WMM

PHY/MAC

802.11a/b/g/n (single stream n)
Dual-band radio, 2.4GHz and 5GHz
Max output power: +17dBm
Integrated baseband and MAC processing
Advanced power management
802.11n space time block code support
Regulatory domain support
Antenna receive diversity

SOFTWARE

All software embedded in the module (TCP/IP stack and serial port adapter application)
Configurable via AT commands (via Wireless LAN or serial port)
Extended Data Mode™ for individually controlled multipoint data channels* (different data can be sent to / received from each slave)

OPERATIONAL MODES

BSS (infrastructure) and IBSS (ad-hoc)

SECURITY

Enterprise modes
WPA-PSK, WPA2-PSK
PEAP, LEAP
802.11i
WEP64/128
TKIP, AES (CCMP)

QUALITY OF SERVICE*

802.11e
WMM

ADDITIONAL FEATURES

TCP/UDP protocol support
TX Power calibration
Link adaptation
Fragmentation
DTIM based power management
DHCP server and client
DNS-resolver
Fast roaming
LLDP

HOST INTERFACE

UART Logic Level
Supported baud rates: 1200 bps - 1.8 Mbps
Support for non-standard baud rates
Flow control: CTS/RTS or none
Full modem signalling

CONNECTORS

Board-to-board connector
Solder pads
6-pin JST connector (optional)

* In progress

ANTENNAS

Single internal or dual external (receive diversity)

POWER

3.3-5.5 VDC
Deep sleep mode (average): TBA
Sleep mode, connected (average): TBA
Active mode, transmitting at 115 kbps (average): TBA

DIMENSIONS / WEIGHT

Dimensions: 23 x 36 x 3.2 mm
Weight: 3.7g

TYPE APPROVAL*

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

ENVIRONMENTAL*

Operating temperature: -40 to +85 °C
Storage temperature: -40 to +85°C
Humidity RH 5-90% non-condensing

CERTIFICATIONS AND COMPLIANCE*

R&TTE Directive 1999/5/EC:

Effective use of frequency spectrum
EN 300 328 V1.7.1 (2006-10)

EMC Directive: 89/336/EEC
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
EN 50371:2002
EN 60950-1:2006 and/or IEC 60950-1:2006

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

ARTICLE NUMBERS

cB-OWS451i-04
OEM Wireless LAN SPA 451 with integrated antenna, board-to-board connector and solder pads.

cB-OWS451i-06
OEM Wireless LAN SPA 451 with integrated antenna, board-to-board connector, solder pads and JST connector.

cB-OWS451x-04
OEM Wireless LAN SPA 451 with connector for external antenna, board-to-board connector and solder pads.

cB-OWS451x-06
OEM Wireless LAN SPA 451 with connector for external antenna, board-to-board connector, solder pads and JST connector.

connectBlue™

The strongest connection in a wireless world

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