

# WLg-DONGLE-OEM

Compact serial to WiFi IEEE 802.11 a/b/g/h (2.4 / 5 GHz) for embedded applications



- IEEE 802.11 a/b/g/h & super AG standards
- Security: WEP, WPA-PSK, WPA2-PSK and IEEE 802.1x (RADIUS)
- Easy to use web based configuration, TELNET, SNMP & ACKSYS NDM
- 250 Kbps serial RS232 or TTL interface
- +3.3VDC or +5VDC power supply
- Compact module (L:89 x W:57 x H:19mm)



## Introduction

WLg-DONGLE-OEM gives access to any serial equipment from Windows, UNIX & Linux computers connected to your WiFi Ethernet TCP/IP network, making it possible to communicate between two distant serial equipments through the network, or directly with a peer to peer connection (Ad-Hoc mode).

The support of the Telnet (RFC 2217) extension associated to a COM ports re-director enables distant serial equipments connected to the WLg-DONGLE- OEM to be directly used by Windows & Linux existing applications using standard COM ports.

The WLg-DONGLE-OEM device is also designed to work as a wireless bridge between MODBUS ASCII/RTU protocols and the radio network, this feature allows connecting any serial MODBUS equipments to the radio.

Integrators and manufacturers (point of sales, medical instrumentation, industrial automation, security systems, video surveillance, automotive, building automation ...) can right now rely on this new technology to safely build wireless network applications while freeing themselves from wiring constraints.

## Technical characteristics overview

<b>Serial port</b>	Full RS232 (SUB D9 connector) or TTL (HE10 connector) serial interface, 250 Kbps
<b>WiFi network</b>	Compliant to the IEEE 802.11a/b/g/h 2.4/5 GHz standards, multi-country Roaming support (IEEE 802.11d); Dynamic Frequency Selection (DFS) support provides flexible selection of best frequency to allow mobility among all existing IEEE 802.11a/b/g/h networks; «ClearVoice» band provides non-overlapping channels for fast-speed data transmission; Transmission Power Control (TPC) offers flexibility to adjust RF output power, based on the Atheros's AR5414 (AR5006XS) chip set, single channel fast roaming (< 50 ms)
<b>Radio data rate</b>	Up to 108 Mbps (Super AG mode)
<b>Channels</b>	13 channels (b/g modes), 8 channels (a mode), 11 channels (h mode)
<b>Output power</b>	Transmitter +20 dBm (TPC)
<b>Sensitivity</b>	Receiver -92 dBm for IEEE 802.11 a/g and -95 dBm for IEEE 802.11b
<b>Antennas</b>	2 Hirose UFL connectors enable to connect up to 2 antennas for diversity
<b>Modulation</b>	OFDM: BPSK, QPSK, 16QAM, 64QAM DSSS: DBPSK, DQPSK, CCK
<b>Security</b>	64/128 bits WEP, WPA-PSK, WPA2-PSK, IEEE 802.1x (RADIUS)
<b>Modes</b>	Support for TCP Client/Server, DHCP Client, TELNET RFC2217 extension, Telnet Server, COM port re-director (VIP), multipoint or point to point virtual link over UDP modes and MODBUS/TCP Client/Server, MODBUS/RTU & MODBUS/ASCII protocols, direct communication (ad hoc) or from access point
<b>Administration</b>	Thanks to its built-in WEB interface, the setup of the device is achieved using any web browser installed on your computer (Internet Explorer, Netscape, Mozilla ...), SNMP agent, ACKSYS NDM, TELNET from the serial link
<b>Operating systems</b>	Windows, Linux, UNIX as well as any operating system supporting TCP/IP
<b>Signaling</b>	TxD / RxD serial and WLAN radio activity on LEDs
<b>Power supply</b>	From +3.3VDC or +5VDC power source on an HE10 connector
<b>Consumption</b>	3.5 Watts typical, 5 Watts maximum
<b>Dimensions</b>	Small sized PCB (L: 89 x W: 57 x H: 19 mm)
<b>Environment</b>	Operating temperature: -20°C to +70°C, storage: -65 to +100°C Humidity: 5% to 95% (non-condensing)

## Ordering references

WLg-DONGLE-OEM-232	Single channel serial server and serial MODBUS to MODBUS/TCP data gateway with RS232 interface (SUB D9) to the wireless WiFi Network (IEEE 802.11 a/b/g/h), with COM port redirection software, without antenna nor antenna cable
WLg-DONGLE-OEM-TTL	Single channel serial server and serial MODBUS to MODBUS/TCP data gateway with TTL interface (HE10) to the wireless WiFi Network (IEEE 802.11 a/b/g/h), with COM port redirection software, without antenna nor antenna cable
WL-KIT-ANT-1a	15 cm Hirose UFL cable with RSMA connector and bi-band 2.4 / 5 Ghz antenna (0 dBi)
WLg-DONGLE-OEM-EVAL	Contains both WLg-DONGLE-OEM-232 PCB and the WL-KIT-ANT-1a antenna / cable kit / +5VDC power supply
WLg-RF400MW	High power radio option (26 dBm, 400 mW), requires the WLg-DONGLE-OEM module to be powered from a 3.3 VDC power source only

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