WLg-xROAD-S

Wireless RS232 / RS422 / RS485 serial device server for automotive applications

- Serial RS232 / RS422 / RS485 full duplex up to 250 Kbps
- 9-50 VDC wide range power supply
- IEEE802.11a/b/g/h WiFi radio (2.4/5GHz)
- MIL-STD-810 shock and vibration proof rugged aluminum enclosure, IP65
- Point to Point (virtual cable) & multipoint modes, virtual COM port redirector (ViP)
- TCP Client / Server, UDP & MODBUS/TCP support

FAST ROAMING

Introduction

WLg-xROAD/S gives access to any serial equipments 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).

It is a rugged equipment designed for applications in road transportation, depots, warehouses, agriculture, manufacturing floors, docks, distribution centers, shipyards and lumberyards ... it can be mounted in trucks, city buses, forklifts, trailers, tractors or cranes, for material handling, real-time information transmission, and inventory management.

It fulfills the most severe requirements in terms of operating environment: from -25°C to +70°C, shock and vibration proof according to MIL-STD-810F standard, protection against dust and water projections (IP65).

The product is E-marked (CE standard for electronic equipments installed aboard vehicle), and can thus be installed in full safety aboard all on-road equipments.

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Technical characteristics overview

Serial port	Full RS232 / 4222 / 485 (SUB D9 connector) serial interface, 250 Kbps
RS signals	RS232 mode: TxD, RxD, RTS, DTR, CTS, DCD, DSR, RI RS422/485 mode: -Tx, +Tx, -Rx, +Rx (+RX and –RX signals can be polarized with jumpers)
Cable connection	9-point terminal block for RS signals, 2-point for power supply, stuffing box cable output
WiFi network	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)
Radio data rate	Up to 108 Mbps (Super AG mode)
Channels	13 channels (b/g modes), 8 channels (a mode), 11 channels (h mode)
Output power	Transmitter +20 dBm (TPC)
Sensitivity	Receiver –92 dBm for IEEE 802.11 a/g and -95 dBm for IEEE 802.11b
Antenna	One 2 dBi bi-band external antenna, RP-SMA connector
Modulation	OFDM: BPSK, QPSK, 16QAM, 64QAM DSSS: DBPSK, DQPSK, CCK
Security	64/128 bits WEP, WPA-PSK, WPA2-PSK, IEEE 802.1x (RADIUS)
Modes	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
Administration	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
Operating systems	Windows, Linux, UNIX as well as any operating system supporting TCP/IP
Signaling	Serial TxD & RxD, WLAN, mode, diagnostic and power (LEDs)
Power supply	+9VDC to +50VDC, 3.5 Watts typical
Dimensions & weight	Rugged aluminum enclosure (L: 115 mm x W: 64 mm x H: 35 mm) Weight: 330g (with the 40 cm serial cable)
Standards	MIL-STD-810F methods 514.5 & 516.5 (shocks & vibrations), IP65 seal rating EN 301489-17 & EN 61000-6-2 (CEM), E-marked
Environment	Operating temperature: -25°C to +70°C, storage: -40°C to +80°C Humidity: 0% to 99% (non-condensing)

Ordering references

WLg-xROAD/S	Wireless RS232/RS422/RS485 device server over Ethernet IEEE 802.11 a/b/g/h (WiFi 2.4 / 5 GHz), with Windows COM port redirector software (VIP), MODBUS/TCP data gateway, MODBUS/TCP gateway support, 9-50 VDC power supply, built-in antenna and RSMA connector for an external antenna, 40 cm serial cable with male SUB D9 connector

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