Let's communicate

Communication adapter
WI-FI / RS-232
ELO E231

Characteristics

Easy installation - application profiles
Indicator Link, Activity, Tx and Rx
DIN rail mounting optional

Introduction

Wireless LANs based on wi-fi (IEEE 802.11) technology, became popular not only in information technology, but also in industrial applications. There are evident advantages of wireless technologies:

- **mobility** – a place which has to be connected must not be fixed,
- **flexibility**, the places which are hardly accessible via cable, can be connected,
- **costs saving** – the costs of cable and its installation,
- **easy scalability –** the number of connected LAN users can be increased without infrastructure expanding.

Adapter E231 allows RS232 device to be connected into standalone wireless local area network or via wi-fi access point device to Ethernet LAN.

Use of the adapter

There is the number of variants how to use E231 under MS Windows 98/ Me/NT4/2000/XP, Vista operating systems.

The adapter makes RS232 device possible to be connected to computer via Ethernet and this way to establish a remote virtual COM port for a program running on the computer. In this case the software called **Real Port** profile can be used to configure the adapter**.**

The next possible application of the two E231 adapters is called bridge. Two RS232 devices can communicate each other over LAN Ethernet. The adapters must be configured via **Serial Bridge** profile**.**

TCP Socket profile makes a connection by means of TCP protocol. The adapter can be configured either as TCP server or TCP client**.**

The two devices can be connected by UDP protocol by means of **UDP Socket.** The devices can be configured as UDP server or UDP client.

Using the **Custom** profile user can configure all the parameters of both adapters' interfaces.

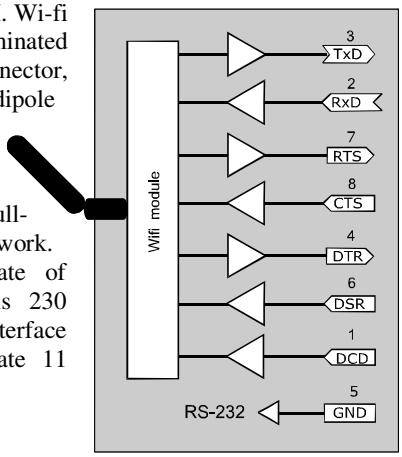
Besides above-mentioned possibilities the E231 adapter can be configured as **GPIO port.** It means that two output and three input binary signals with RS232 levels can be realized. This profile is suitable for remote control or status monitoring of the connected device. There is also a possibility to set binary input signals combination and use it as a trigger to send an alarm message to defined e-mail addresses.

Operation principles

The adapter converts RS232 interface to IEEE 802.11b interface, so-called wi-fi. All the data, control and status signals are transferred except the signal RI. RS232 interface connector is DB9M. Wi-fi interface is terminated with RP-SMA connector, whereon a dipole antenna has been connected.

The adapter E231 allows full-duplex mode of work. Maximum data rate of RS232 interface is 230 kbps. Wi-fi interface works with the rate 11 Mbps.

Block diagram



Specification

Parameters

Standard	IEEE 802.11b, 2.4 GHz
Connector	RP-SMA with dipole antenna
Rate	11 / 5,5 / 2 / 1 Mb/s, automatically
Modulation	CCK / DQPSK / DBPSK
Communication mode	full-duplex
IP address allocation	static, DHCP, auto IP
Protocols supported	TCP, UDP, DHCP, SNMP HTTP, SMTP, ARP, ICMP, IGMP
Ciphering and security	WPA WEP ciphering 64/128 bit
RS232 connector	DB9 male
RS232 data rate	up to 230 kbps
Transferred signals	TXD, RXD, RTS, CTS DTR, DSR, DCD
Data flow control	HW or SW

Other

Adapter configuration	through web interface (HTTP/HTTPS)
Indication LEDs	Link, Activity, Tx, Rx
Supply	9-24V DC
Consumption from 12V supply	up to200mA
Dimensions	
Width x length x height	80 x 120 x 25 mm
Stocking temperature	- 10° to +55 °C
Working temperature	+ 0° to +50 °C
Humidity	0 – 85% (non-condensing)

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