

Datasheet

ADA-14110

RS232 to Wi-Fi (802.11b) Wireless Serial Server with MODBUS GATEWAY



APPLICATION

ADA-14110 wireless serial server transmits data between devices equipped with the RS232 interface via the wireless network WLAN. The data transmission is without the interference into the format of transmitted data. The operating in the Wi-Fi WLAN wireless network can be in the virtual serial port mode (port server), MODBUS Data Gateway, TCP and UDP serial bridge, TCP and UDP socked. The MODBUS Data Gateway converts protocols MODBUS-RTU master/slave and MODBUS-ASCII master/slave to MODBUS-TCP protocol and reverse. It lets to integrate devices MODBUS-RTU/ASCII with MODBUS-TCP devices in one network. ADA-14110 supports protocols such as: TCP, UDP, DHCP, SNMP, SSL/TLS, Telnet, Rlogin, LPD, HTTP/HTTPS, SMTP, ICMP, IGMP, ARP. The server has WWW server for remote configuration and management by the use of internet browser and has the baud rate up to 230,4kbps. This device has standard DB-9M (male) connector for RS232 interface, screw terminal block for connection of power supply and SMA for aerial Wi-Fi network. ADA-14110 use signals as follows: Rx, Tx, RTS, CTS, DTR, DSR, DCD of RS232 interface and to this interface can be connected telephone switchboards, barcode scanners, modems, scales, magnetic card readers, etc. It is adapted to supply an external voltage source in scope from 10V= to 30V= and 4W power. The server has protection against power supply reverse connection and ESD 15kV short-circuit protection and surge on RS232 interface lines. The range of transmission in the wireless network Wi-Fi (IEEE 802.11b):

- in buildings from 30m to 150m,
- in open area to 300m,

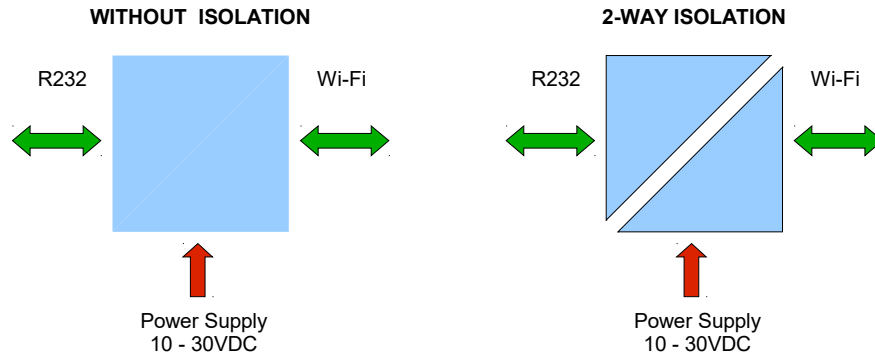
The transmission range can be increased after the application of additional directional antennas.

ADA-14110 is sold with drivers, which after installation, create in operating system additional COM port – virtual.

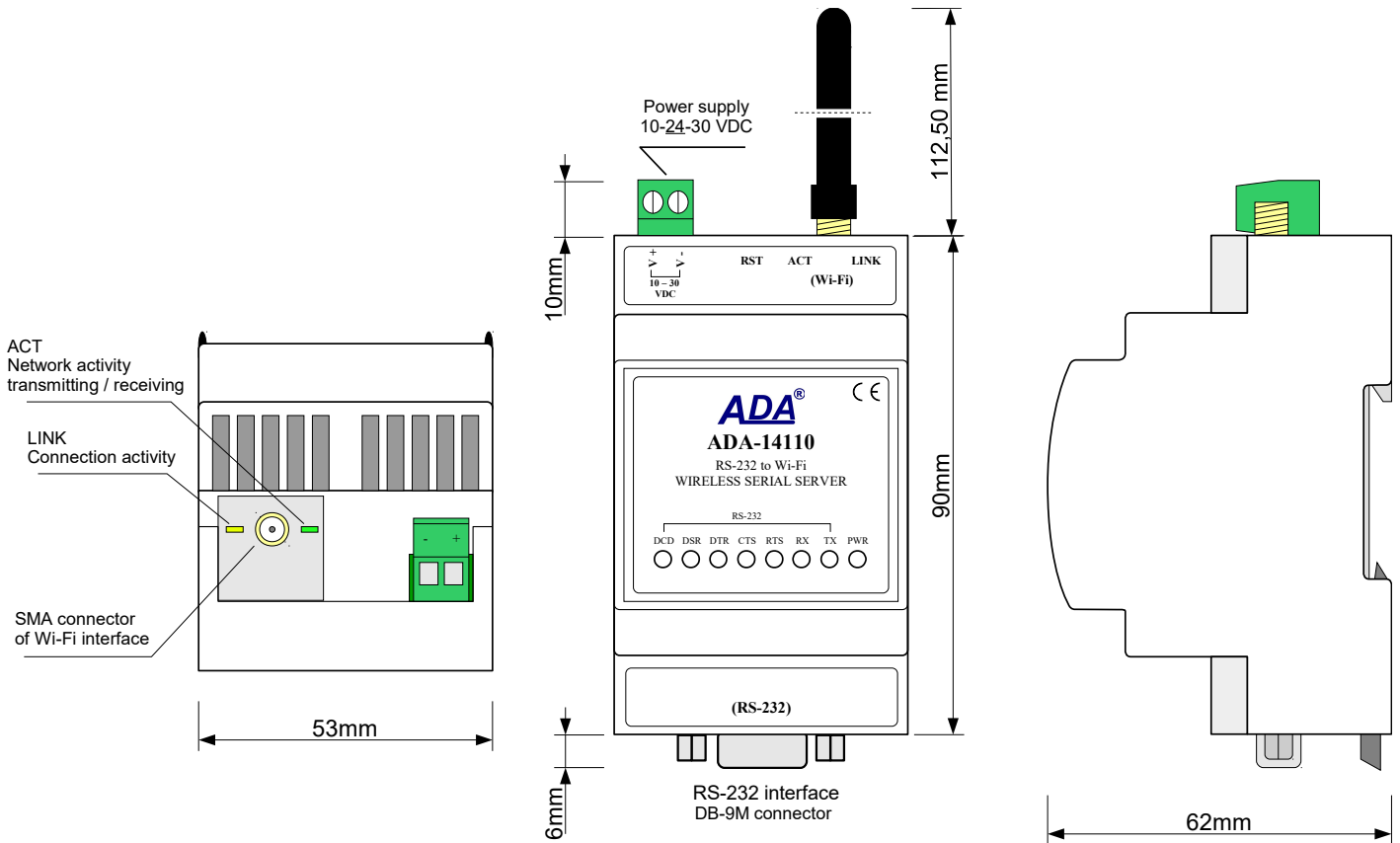
TECHNICAL DATA

Transmission Parameters		
Interface	Wi-Fi (802.11b)	RS232
Connector	SMA–plug + Antenna	DB-9M (Mail)
Max. Line length	- inside building – from 30m to 150m, - open area up to 300m, - open area with use of additional antenna - up to 8000m.	Up to 15 m
Max. number of connected device	Depend on addressing type in network	1
Transmission line	CAB-DB9F/DB9M-S-1,8m cable	
Standards	IEEE 802.3, IEEE 802.11b (2.4GHz)	EIA-232, CCITT V.24
Baud rate	11 Mbit/s	do 230,4 kbps
Transmission type	Asynchronism half duplex or full duplex,	
Optical Signalization	<ul style="list-style-type: none"> • PWR green LED – power supply, • RX red LED - receive data on RS232 port, • TX yellow LED - transmit data on RS232 port, • RTS yellow LED – outgoing signal on RS232 port, • CTS red LED - incoming signal on RS232 port, (version without isolation), • CTS red LED - incoming signal on RS232 port, (version without isolation), • DTR yellow LED – outgoing signal on RS232 port, (version without isolation), • DSR red LED - incoming signal on RS232 port, (version without isolation), • DCD red LED - incoming signal on RS232 port, (version without isolation), 	
Electrical Parameters		
Power requirements	10 - 24 – 30 V DC	
Power Cable	Recommended length of power cable – up to 3m	
Power	4W	
Protection from reverse power polarization	YES	
Galvanic Isolation	1kVDC or 3kVDC 2-WAY depend on version	
Optoisolation	~3kVDC between interfaces Wi-Fi and RS232	
Electromagnetic compatibility	Resistance to disruptions PN-EN 55024. Emission of disruptions PN-EN 55022 A class. PN-EN 301 489-3 v1.4.1:2006, PN-EN 300 328 v1.7.1:2007.	
Safety requiring	According to the PN-EN60950 norm.	
Environment	Commercial and light industrial. Devices A class.	
Environmental Parameters		
Operating temperature	-30 ÷ 50°C	
Humidity	5 ÷ 95% - non-condensing	
Storage temperature	-40 ÷ 70°C	
Casing		
Dimensions (W x D x H)	53mm x 90mm x 62 mm	
Material	Noryl UL. 94 V-O	
Degree of casing protection	IP40	
Degree of terminal protection	IP20	
Weight	0,10 kg	
According to standards	DIN EN50022, DIN EN43880	
Location during work	Free	
Mounting method	On the rail compliant with DIN35 / TS35 standard.	

GALVANIC ISOLATION



DIMENSIONS AND CONNECTION



VERSIONS

Electronic versions:	ADA-14110 -
Basic	1
Galvanic isolation of RS232 interface:	
No isolation – transmitted signals of RS232: Tx, Rx, RTS, CTS, DTR, DSR, DCD, GND .	1
1kV DC – transmitted signals of RS232: Tx, Rx, RTS, GND .	2
3kV DC – transmitted signals of RS232: Tx, Rx, RTS, GND .	3
Terminal & Terminal Cover:	
Cover without inlets, screw terminal block	1
Cover with inlets, screw terminal block	2
Cover without inlets, plug-in screw terminal block	3

Order example:

Product Symbol: **ADA-14110-1-1-3**

- 1 – basic version of electronic,
- 1 – non galvanic isolation,
- 3 – cover without inlets, plug-in screw terminal block,