

# Industrial Wireless Ethernet

## ELPRO 905U-E

### Ethernet connectivity without the wiring

The 905U-E is an ideal solution for Ethernet and serial connections in process control and automation applications - PLC's, DCS, SCADA, data acquisition, wireless video ... the 905U-E can handle multiple applications simultaneously.

### All in the same unit ...

Maximum flexibility, while saving expensive wiring costs. Each module can be configured as a

- |  |  |   |
|--|--|---|
| <input checked="" type="checkbox"/> Access Point   | <input checked="" type="checkbox"/> Bridge | <input checked="" type="checkbox"/> Repeater      |
| <input checked="" type="checkbox"/> Client/Station | <input checked="" type="checkbox"/> Router | <input checked="" type="checkbox"/> Serial server |

- 10/100 BaseT Ethernet, wireless data up to 200 Kbits/sec
- *ELPRO's* proven Industrial Strength 900MHz FHSS technology with high immunity to interference

### Long and short range applications ...

- range 60 miles (100km), license-free\* - repeater functionality increases wireless range even further
- excellent penetration in congested industrial environments  
- over 3000 feet (1 km) through buildings, factory walls and steelwork.

### Security, reliability, redundancy ...

- multiple layers of error-detection and correction
- automatic changeover to another Access Point if the wireless link fails
- military-grade AES security encryption of wireless data

### Ethernet and Serial ...

- three connection ports - Ethernet and two serial interfaces, RS232 and RS485 - can be used simultaneously
- serial server functionality, serial to serial, serial to Ethernet, point to multi-point, Modbus serial to Modbus TCP
- discrete channel for status I/O, for failure status or external status transfer.

### Firewall protection and efficient wireless management ...

- secure Firewall protection
- message filtering at MAC and/or IP address level

### Easy to use configuration and powerful diagnostics ...

- configuration and diagnostics via web-browser
- remote configuration and diagnostics via the wireless link.



# 905U-E Wireless Ethernet

## SPECIFICATIONS

### Ethernet

10/100 BaseT RJ45, IEEE 802.3 compliant  
Bridge/router functions work with all Ethernet protocols  
Embedded Protocols:  
TCP/IP, UDP ARP, PPP, ICMP, HTTP, FTP, TFTP, TELNET

### Serial

RS232 V.24 DCE 1.2 - 115.2 Kb/s, RS485 1.2 to 115.2 Kb/s  
Serial server functionality provides multiple connectivity modes - serial to serial, serial to Ethernet, Modbus serial to Modbus TCP, and point to multipoint.

### Discrete I/O

One I/O channel, Input voltage-free contact / Output FET 30VDC 500mA  
Used to transfer input to output status or communications failure output.

### Networking

Configurable as Access Point or Client, Bridge or Router  
Point-to-point, Point-to-multipoint, user configurable addressing  
Repeater functionality  
Address Filtering - whitelist or blacklist - MAC and / or IP address.

### Radio

Frequency hopping spread spectrum

Frequency bands

USA/Canada 902 - 928 MHz

Australia 915 - 928 MHz

New Zealand 921 - 928 MHz

For other countries, refer to ELPRO

Transmit power 0.1 – 1W (20 – 30 dBm) configurable

System gain 140 dB

Receiver sensitivity -108 dBm @ 10<sup>-6</sup> BER

Data rates 19.2, 38.4, 100, 200 Kb/s or auto rate selection

Protocol CSMA/CA with 32 bit CRC and auto-correction

Radio range 60 miles / 100 km line-of-sight using high gain antennas

\*(USA/Canada only with 4W ERP)

Range may be extended using repeater features

SMA coaxial antenna connection

### Security

128 bit AES encryption or 64 bit proprietary encryption (configurable)

MAC and / or IP filtering Password protected configuration

### On-line Configuration and Diagnostics

HTTP with remote configuration via wireless link

RF signal strength, Bit Error Rate, connection monitoring and statistics

PPP Protocol Access to diagnostics

### General

Temperature -40 to 140 degF, -40 to +60 degC

Humidity 99% non-condensing

Power Supply 10 – 30VDC

Current Normal 280mA (12V), 150mA (24V)

Transmit (1W) 500mA (12V), 300mA (24V)

Case, heavy duty painted aluminum, DIN rail mounting

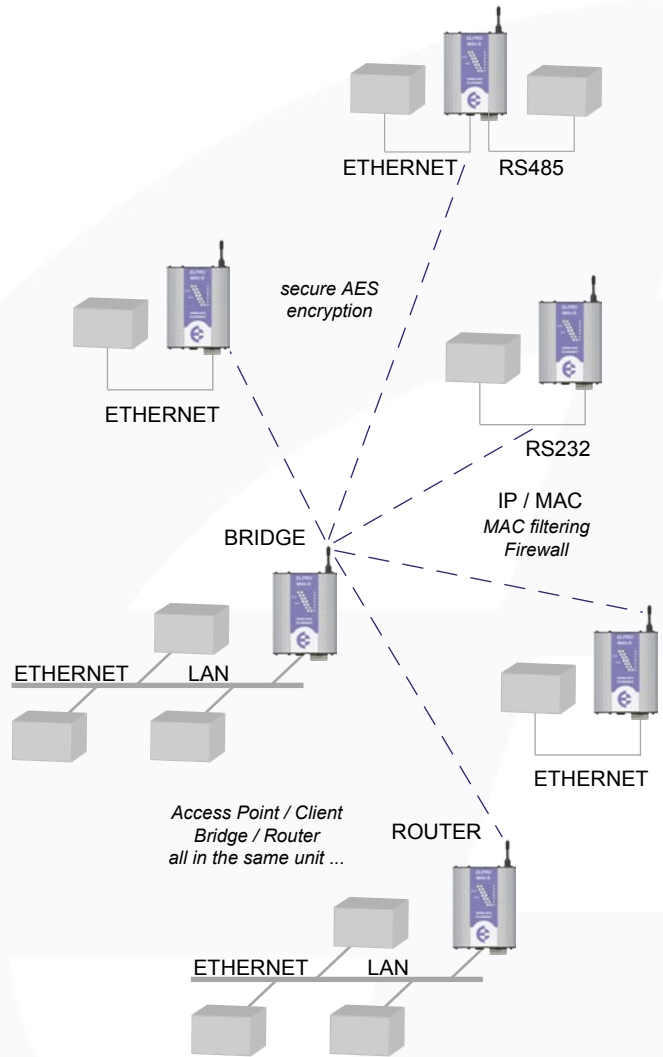
Size 4.5 x 5.5 x 1.2 in. / 114 x 140 x 30 mm

Weight < 0.8 lb / 0.4 kg

Indicators: Power/OK, Radio Rx and Tx, Radio Link, LAN Link/Activity,  
Serial Activity, Digital I/O, LAN 10/100Mbit Link

Approvals FCC 15.247, RS210

Hazardous area CSA Class 1 Div 2 (pending)



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