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

- Access Point
- Bridge
- Repeater
- Client/Station
- Router
- 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.

ELPRO Technologies
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 @ 10-6 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)