

ELPRO Technologies

CONDOR

ELPRO EL-115E-2
ETHERNET NETWORKING I/O & GATEWAY

industrial Ethernet I/O module for reliable and secure LAN based connectivity

DESCRIPTION

The ELPRO 115E-2 Ethernet Networking I/O and Gateway is a multiple I/O node that extends communications to sensors and actuators in local, remote, or difficult to reach locations. Designed to work with wired and wireless devices, the ELPRO 115E-2 is capable of providing IP-based I/O across sprawling industrial environments typical of industrial applications.

The 115E-2 can serve as an end node or network gateway and is scalable to thousands of nodes. Gather-scatter and block mapping technology offers the efficient use of network resources, allowing point-to-point transfer of process signal within complex monitoring and control systems. Integrated Modbus® server capability allows further I/O expansion through the use of ELPRO 115S expansion modules

The 115E-2 feature key options provides functionality for DNP3 I/O Outstation allowing for connectivity to DNP3 SCADA applications. With the combination of DNP3 and Modbus the 115E-2 also functions as a Modbus to DNP3 gateway converting legacy Modbus devices to DNP3 I/O tags.

APPLICATIONS

- **Water and wastewater:** flows, levels, pumps
- **Renewables:** solar farms, wind turbines, hydro
- **Irrigation:** slew gate controls, levels
- **Oil and gas networks:** gas well production, lift pump
- **Environmental:** storm warning, smoke stacks, filters
- **Mining infrastructure:** conveyor, re-claimer, pumps

FEATURES

- 10/100BaseT IEEE 802.3 Ethernet communications
- Configurable digital, pulse, and analog I/O to 14-bit resolution
- Gather-scatter/block mapping and integrity checking transmissions for efficient event triggered peer-to-peer I/O
- Expandable I/O for local alarms and inputs/outputs
- Internal user configurable Web dashboard to display I/O and Diagnostics
- IO Plus Logic engine for basic controlling of I/O points
- DNP3 I/O gateway, including internal status registers
- IoT connectivity with MQTT Sparkplug B Gateway
- Modbus TCP and RTU I/O gateway
- Serial client/server/multicast Modbus TCP to RTU gateway
- Port Forwarding: Advanced network Port Forward configuration for connected Ethernet devices.
- Network diagnostics and configuration.

SPECIFICATIONS

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ETHERNET NETWORKING I/O & GATEWAY

Ethernet	
Ethernet Port	1 x 10/100Base-T auto-MDIX RJ-45
Link Activity	Link, 100BaseT, on port LED's
Serial	
RS-232	EIA-562 (RJ-45 connector)
RS-485	2-pin terminal block, non-isolated
Data rate (bps)	1200, 2400, 9600, 14400, 19200, 38400, 57600, 76800, 115200, 230400 baud
Serial settings	7/8 data bits, Stop/start/parity (configururable)
Protocols and configuration	
Networking protocols	TCP/IP, UDP, ARP, DHCP, DNS, ICMP, HTTP, VLAN 802.1Q, IPv6 pass through
Industrial protocols	Gateway: MQTT, SparkplugB, Modbus RTU, Modbus TCP, DNP3 I/O, HART to Modbus Pass through: EtherNet/IP, Profinet, DNP, IEC 61850, and others
Configurable parameters	Unit details, I/O mappings, I/O parameters, radio settings, Dashboard, IO Plus logic DNP3 I/O and gateway (level 2+) Modbus TCP/RTU gateway support for MTL HART MUX Communication Embedded Modbus master/slave for I/O transfer I/O mapping to other Elpro devices.
User configuration	Network access: USB or Ethernet
Security	Secure HTTP protocol, Webserver disable, multilevel User mangment and password protected configuration
Advanced Networking	IP Routing, Port Forwarding
LED Indications & Diagnostics	
LED Indication	Power/OK, RS-232, RS-485, digital I/O, analog I/O status
Reported diagnostics	Connectivity information / statistics, system log file.
Network diagnostics	Diagnostic capture to Wireshark™ format file, Network Ping
Logging	Optional internal data logging for I/O and events. Logging memory 1 MB
Input and output	
Discrete input[a]	8 digital I/O (1-4 configurable as PI or PO) On-state voltage: <2.1 Vdc Wetting current: 5 mA Max. I/P pulse rate: PI 1/2:50 kHz, PI 3/4: 1kHz Max. I/P pulse width: PI 1/2: 10 µs, PI 3/4: 0.2ms
Discrete output[a]	8 digital I/O (1-4 configurable as PI or PO) Working voltage maximum: 30 Vdc Working current maximum: 200 mA Max. O/P pulse rate: 1 kHz
Analog inputs	4 AI (2 differential, 2 single ended) Current range: 0-24 mA Voltage input range: AI 1/2: 0–25 V, AI 3/4: 0–5 V Accuracy: 0.1% Resolution: 14 bits
Analog outputs	2 AO 2 (sourcing) Current range: 0-24 mA Accuracy: 0.1% Resolution: 13 bits
Thermocouple input	Supported types J,K and T[b]
Analog Loop Power	+24 Vdc output provided to power loop devices Max. Current 100mA - Current Limited
Expansion	115S series Modbus I/O modules
Compliance	
EMC	FCC Part 15, EN 55022, AS 3548, CE
Safety	IEC 60950 (RoHS compliant)
Hazardous area	UL/CSA Class I, Division 2; Pending IEC EX Zone 2; ATEX Zone 2
Power supply	
Nominal supply	10.8-30 Vdc, undervoltage/overvoltage protection
Battery charger	Sealed lead-acid or gel cell backup, 500 mA charge
Average current draw	220 mA at 13.8 V (idle), 110 mA at 24 V (idle)
General	
Size (H x W x D)	7.09 x 1.38 x 5.91 inches (180 x 35 x 150 mm)
Housing	IP20 rated high-density thermoplastic
Terminal blocks	Removable, max. conductor 12 AWG
Mounting	DIN rail
Temperature rating	-40 to +140°F (-40 to +60°C)
Humidity rating	0-90% RH non condensing
Weight	1.1 lb (0.5 kg)

[a] Discrete input and output function shared for total of 8 discrete inputs and outputs.

[b] Optional, see 915U-TCP datasheet.

Specifications subject to change

Order Codes	
EL-115E-2	Ethernet I/O & Gateway
EL-115E-2-A2	Ethernet I/O & Gateway with Alert Gateway Feature Key

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HOW TO ORDER

Simply send us an email at **sales@elprotech.com**, contact your local distributor, or phone **+61 7 3352 8600**

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