

# **ELPRO Technologies - Secure Industrial Communications**

For over 35 years, ELPRO Technologies wireless business has helped companies around the world improve the management of their assets by offering a full range of secure and reliable communications systems. ELPRO's wireless business has a full range of products to help your facility safely and reliably use wireless technology to accomplish even your most critical needs. Our products can be used in a variety of applications, including water/wastewater, oil and gas, mining, utility, solar, flood and environmental and industrial automation.

We specialize in connectivity solutions for long-haul data communication in both licenced and licence free bands including IoT technologies.

We offer scalable solutions from basic point-to-point connections to large scale mesh deployments. Our solutions also cover both machine-to-machine and field instruments to control rooms for SCADA and DCS connectivty.



Gain flexible control to streamline operations for greater quality and improved information management. We offer solutions that extend the boundary of monitoring and control into the most challenging and remote environments.

Integrate critical processes and manage the growing diversity of automation technologies. We support the integration into existing systems and environments controlled by SCADA, DCS, PLC or PC-based automation, enabling you to choose the best solution for your needs.

Safe and secure industrial wireless products include features to help customers build applications that provide a high level of data integrity and protection against malicious attacks. The builtin security features of ELPRO industrial modules include advanced encryption and filtering, multi-level authentication with user access and event logging. Increase productivity at production startup, meet compliance deadlines and resolve ongoing maintenance problems. We help you gain insight into local and remote sites, conserving your resources and budget.

**Improve safety** by reducing or eliminating the need to expose workers to existing or potential hazards. Our solutions service critical applications ranging from mine slope wall detection, Flood warning and public safety networks to safety shower alerts.

Reduce total costs with simple to complex wireless architectures, and over small or large sites. We provide wire-free economics while delivering wire-like reliability.



## Wireless I/O

ELPRO offers a full range of wireless I/O modules that can transmit both digital and analog signals over the wireless network. Cutting edge meshing capabilities provide industry leading reliability to ensure devices always stay within network. Expansion I/O is available to support even the largest of networks.



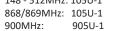
Bidirectional - Mesh I/O

- 148 174MHz: 415U-2 .
- 340 520MHz: 415U-2 896 - 960MHz: 415U-2 .
- (2022 release)



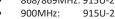
**Bidirectional - I/O** 

- 148 512MHz: 105U-1





Bidirectional - Mesh I/O 868/869MHz: 915U-2





Unidirectional - I/O

868/869MHz: 105U-L-T/R 900MHz: 905U-L-T/R



**Bidirectional - Mesh I/O** 2.4GHz: 215U-2 .



**Unidirectional - Inputs** 

- 868/869MHz: 505U-K
- 900MHz: 905U-K



Bidirectional - Battery Powered I/O

- 148 174MHz: 415U-1 340 - 520MHz: 415U-1
  - 148 174MHz: ERT-A2 896 - 960MHz: 415U-1
  - (2022 release)



Unidirectional - Battery Powered I/P

900MHz: 905U-K-IP





Expansion I/O - I/O to serial 115S-11, 12, 13

### **Wireless Fieldbus Gateways**

ELPRO offers gateways available in common industrial and environmental protocols, allowing your new wireless network to seamlessly communicate with any existing network infrastructure, making implementation of wireless solutions simple and reliable.



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#### Modbus TCP/RTU and DNP3

- 148 174MHz: 415U-2 340 - 520MHz: 415U-2
- 896 960MHz: 415U-2
- (2022 release)



#### PROFIBUS® DP (Master/Slave)

- 148 512MHz: 105U-G-PR1/2
- 868/869MHz: 105U-G-PR1/2
- 900MHz: 905U-G-PR1/2



Modbus TCP/RTU

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- 868/869MHz: 915U-2 900MHz: 915U-2
- 2.4GHz: 215U-2

#### Allan Bradley DF1, Modbus RTU

- 148 512MHz: 105U-G-MD1
- 868/869MHz: 105U-G-MD1 900MHz: 905U-G-MD1



115E-2



ALERT/ALERT2™, Modbus and DNP3 115E-2-ERT



#### EtherNet IP, Modbus TCP

- 148 512MHz: 105U-G-ET1
- 868/869MHz: 105U-G-ET1
- 900MHz: 905U-G-ET1

### Wireless Ethernet and Cellular

Ethernet is increasing in capability and importance in today's world. ELPRO is on the forefront of this technology, offering Ethernet data solutions in several radio frequency bands that provide users flexibility of selecting a technology matching their own unique application requirements. To support legacy applications, RS232 and RS485 gateway and serial server is supported in many of the products to provide interfacing with old and new assets. Full product portfolio includes licenced and licence free frequencies of Ethernet networking solutions and modems.



- Licence / Licence Free Mesh
- 148 174MHz: 415U-E
- 340 520MHz: 415U-E
- 896 960MHz: 415U-E . (2022 release)



- Licence / Licence Free
- 360 512MHz: 450U-E
- 928 960MHz: 950U-E



645M-4



Licence-free Mesh 2.4GHz

2.4GHz: 215U-2



802.11a at 5.8GHz 5.8GHz: 245U-E-A1



**Redundant Base Station and Repeater** 

- 148 174MHz: 415U-BSR-DC
- 340 520MHz: 415U-BSR-DC
- 896 960MHz: 415U-BSR-DC (2022 release)



802.11b/g at 2.4GHz

2.4GHz: 245U-E-G1



Licence-free 900MHz

900MHz: 945U-E



Licence Free - Narrow Band

- 868/869MHz: 805U-E
  - 900MHz: 905U-Е





415U-1-IoT (2022 Release)

### **Wireless Serial**

ELPRO's serial products are available in both licenced and licence free options. They connect to PLC's, SCADA, DCS and other intelligent serial devices and are highly scalable from simple point to point to large networks. In addition, many of the Wireless I/O and Ethernet products provide serial interface support.



60MHz

455U-D-60



- 868/869MHz: 805U-D
- 900MHz: 905U-D

Application notes:

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