ELPRO wireless gateways provide the interface and/or communication between similar/dissimilar industrial databus devices (e.g., Modbus to Profibus to EtherNet/IP; PLC’s to SCADA/DCS etc). Connected via RS232/RS485/RJ-45, register databus values are transmitted/received by radio to and from field and control room devices.

ELPRO’s 105U-G series multi-hop repeat five times, support a variety of industrial protocols and can be combined with ELPRO’s 105/505U-I/O and 115S products to create simple to complex I/O and databus networks.

**Product Features**

- 150/220/360-512/868-869MHz, 5mW-5W, DFSK, 3.6kbps (150-512MHz) - 19.2kbps (868/9MHz) radio communications to 35mi/56km with multi-hop repeating.*
- Able to connect similar/dissimilar industrial protocols and vendor devices (incorporating: Master/Slave, Slave/Slave, Master/Master networks).
- Simple to complex, point to multi-point communications with forward-error correction (FEC), data integrity check (CRC) and data encryption.
- Eight configurable digital I/O with I/O expansion via ELPRO 115S range.
- AC/DC/battery power options with UPS battery charger.
- Module diagnostics including read/write of register I/O, reporting of signal strength indication (RSSI), communications logging and internal measurement of low/normal and battery supply voltages.

*Module/topology/country regulation dependent.

**Application Examples**

- Similar/dissimilar databus SCADA/DCS to PLC-PLC communications.
- Moving machinery PLC-PLC/HMI connection/operation.
- Databus cable replacement.
- Smart instrument interface and connection (e.g., gas analyzer).
- Multi I/O data agglomerater/repeater for large networks.
## 105U-G WIRELESS GATEWAY

**Databus interface and conversion**

### General

<table>
<thead>
<tr>
<th>Temperature/Humidity</th>
<th>150</th>
<th>220</th>
<th>400</th>
<th>868-869 MHz</th>
<th>RH Non-condensing</th>
</tr>
</thead>
<tbody>
<tr>
<td>-10°C to +60°C</td>
<td>-40°C to +60°C</td>
<td>-40°C to +60°C</td>
<td>0-99%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>-10°C to +60°C</td>
<td>-40°C to +60°C</td>
<td>-40°C to +60°C</td>
<td>0-95%</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Housing

- Extruded aluminum: 5.1"x7.3"x2.4" (130x185x60mm)
- DIN rail mounting

### Terminal strip

- Removable: up to 2.5mm² (12 gauge AWG wires)

### LED Indication:

- RADIO TX & RX
- SERIAL TX & RX
- OK
- ACTIVE (ACT)

### Radio Transceiver

- **Modulation/band(s):** DFSK(2): 960-1100 MHz, 12.5/20/25kHz channel.
- **Modulation range:** 10MHz to 500MHz, 1.5 – 5W
- **Conforms to:** EN 300 113, EN 300 220, FCC Part 90, Part 15, RSS-119, AS4295, AS4768.1, RSS-119, AS4295, AS4768.1, RFS29.
- **Transmit power:** 0.5, 1, 2, 5W (must be available)
- **Data rate:** 3.6 kbps, 19.2kbps, 19.2kbps
- **Line of sight range (max):** (5) 10mW EIRP to 2 km; 500mW EIRP to 5 km; 5W EIRP to 50km
- **Receiver sensitivity:** -112dBm
- **Data rate:** 3.6 kbps
- **Line of sight range (max):** (5) 10mW EIRP to 2 km; 500mW EIRP to 5 km; 5W EIRP to 50km
- **Antenna connector:** BNC female coaxial (with gas discharge arrester).
- **Surge diverter:** CSD-N-6000 use with CCTAIL-BNC-M.

Note:
1. Transmission current - I/O draw dependent on number of transmission per hour.
2. DSK - Digital Frequency Shift Key.
3. RS232/485 ports used for protocol communication on MD1.
4. 0.5, 1.2, 5W radio requires 12V, 2A supply.
5. As with all radio distances quoted, these are dependant on terrain and obstacles.

### Ordering Information

Please specify frequency, RF power and channel spacing when ordering or contact your local ELPRO distributor for further information on ordering this product.

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**Contact ELPRO**

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**YOUR LOCAL PARTNER:**

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**Please Note:** Technical specifications are subject to change without notice and are correct at time of publishing. Contact your local representative for enquiries.