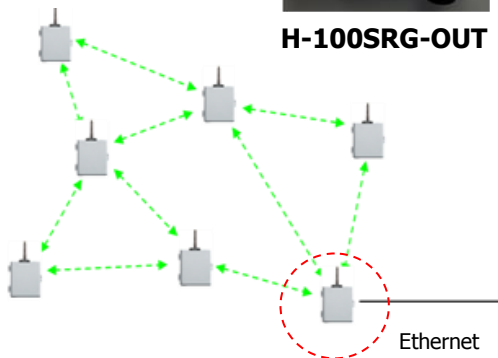




**H-100SRG-IN**



**H-100SRG-OUT**



## IWS System Gateway Hub HM4

### Features and Benefits

- Provides Network Interface, Data Logging for Next generation distributed, intelligent wireless SCADA system
- Ethernet with PoE for connection to wired or wireless networks
- Internal time-stamped data logging
- Data display using Web browser, MODBUS TCP or Custom GUI Application
- Full Web GUI including map import function for Data view, RTU Configuration and RTU status
- Audi and Visual alarm tools, with email and sms notification
- Full monitoring, control and back office support using SQL Database
- Rugged construction (NEMA6) for all weather conditions (H-100SRG-OUT)

## DESCRIPTION

The Intelligent Wireless System (IWS) nodes comprise of a range of distributed wireless products from Plexus Controls providing advanced supervisory, control and data acquisition (SCADA) functionality for commercial and industrial applications.

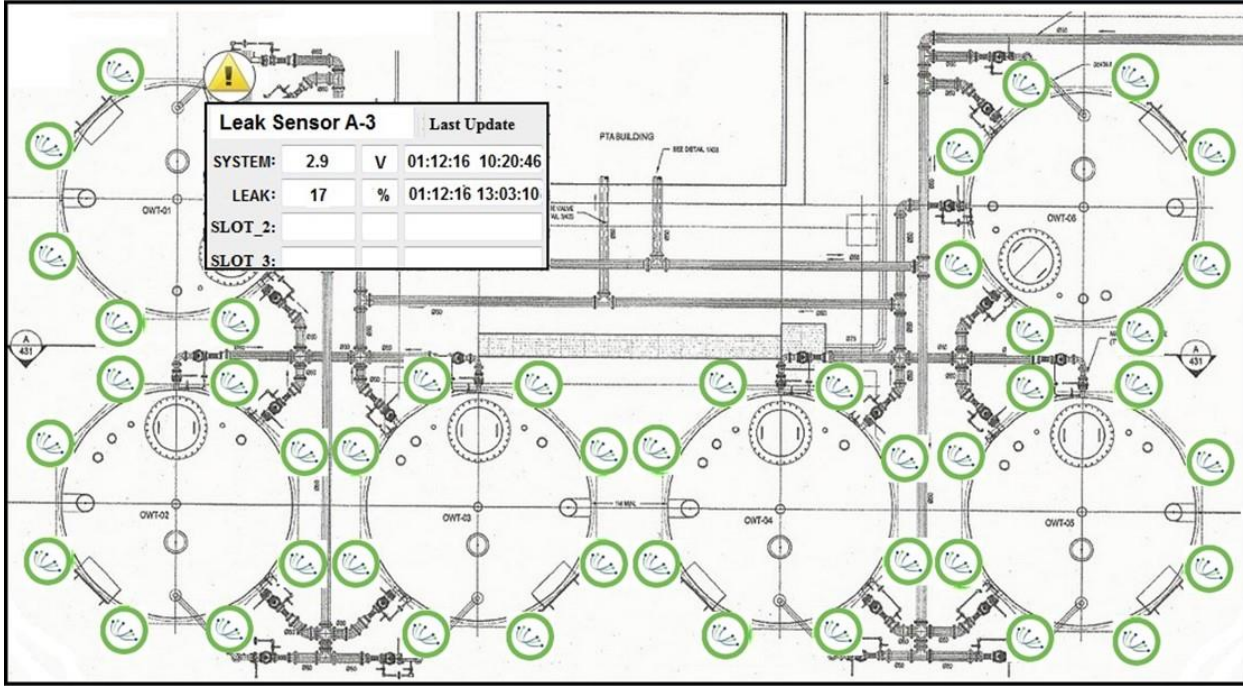
With 'out the box' auto mesh wireless functionality, IWS nodes can be easily installed at a remote location and connected to standard sensors, supporting 4-20mA, 0-5V, 0-10V, HART, temperature, pressure and many other interfaces. Either through a direct wireless connection or automatically hopping through a series of repeater IWS nodes, the sensor data is relayed back to the IWS Hub for termination over Ethernet to the IWS Management Server application for display, logging and alarm management.

The IWS Hub provides a secure connection to terminate all wireless remote system traffic and provide gateway functionality to the network through an Ethernet connection.

The hub system includes data storage capability including a real time clock that timestamps and sequences all logged data. Data can be retrieved from internal memory and archived using standard FTP.

Real-time data can be accessed in 5 ways, 1. Plexus Web GUI through browser access. e.g. over a cellular data connection to a smartphone or any Tablet, PC or other device that supports a standard web browser, or 2. using any third party application that supports standard MODBUS TCP protocol or 3. Telnet or 4. FTP File download or 5. Plexus SQLdatabase central management software.

## GUI Screenshot Example



## System Setup Screenshot Examples

**Select interface (RTU must be awake)**

Status: RTU Selected...Make sure it is Awake

Select RTU: 05BFD5\_0 Update

Select Slot: 0

Current Tag: 302

**Edit/Update Tag Information (RTU must be awake)**

Enter Tag (3 Numbers):

Enter Calculation (x):

Enter Units:

Save/Update Tag Table

Save/Update RTU Tag

**Current Tag Table** Load/Reload

Remove RTU From map (reboot RTU to replace on map)

| SLOT   | Red Alarm | Amber Alarm | Current | Amber Alarm | Red Alarm | Last Update       | Units | Network Alarm          |
|--------|-----------|-------------|---------|-------------|-----------|-------------------|-------|------------------------|
| SLOT_0 | 2.3       | 2.4         | 2.9     |             |           | 01:12:16 10:20:46 | V     | On Red Alarm           |
| SLOT_1 |           |             | 17      | 15          | 20        | 01:12:16 13:03:10 | %     | On Amber and Red Alarm |
| SLOT_2 |           |             |         |             |           |                   |       | None                   |
| SLOT_3 |           |             |         |             |           |                   |       | None                   |

CANCEL & RETURN SAVE & RETURN

**Status:**

**Modbus Address**

Slave Address: 1

Total RTUs: 6 Rebuild All

Select RTU: 07ADEA\_0 Update RTU List

| Slot | Start Address(hex) | Start Address(dec) |
|------|--------------------|--------------------|
| 0    | 0x1300             | 4864               |
| 1    | 0x1310             | 4880               |
| 2    | 0x1320             | 4896               |
| 3    | 0x1330             | 4912               |

**Address Offset** Expand/Collapse

| Offset | Description                           | Type   |
|--------|---------------------------------------|--------|
| 0      | Input tag ID                          | 16 bit |
| 1      | Input data (lower 2 bytes)            | 16 bit |
| 2      | year                                  | 16 bit |
| 3      | month                                 | 16 bit |
| 4      | day                                   | 16 bit |
| 5      | hour                                  | 16 bit |
| 6      | minute                                | 16 bit |
| 7      | second                                | 16 bit |
| 8      | Input data (upper 2 bytes)            | 16 bit |
| 9      | calculated input data (lower 2 bytes) | 16 bit |
| 10     | calculated input data (upper bytes)   | 16 bit |



# Intelligent Wireless SCADA Distributed Control System IWS Gateway Hub

## SPECIFICATIONS

| Radio Specifications                 |                                                                                                                                                                                                                                                                                                                       |                                                                 |
|--------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------|
| Wireless Topology                    | Auto Mesh with dynamic configuration                                                                                                                                                                                                                                                                                  |                                                                 |
| Frequency                            | 2.4 GHz ISM Band                                                                                                                                                                                                                                                                                                      |                                                                 |
| Channels                             | 16                                                                                                                                                                                                                                                                                                                    |                                                                 |
| Hops                                 | 30 max.                                                                                                                                                                                                                                                                                                               |                                                                 |
| Power Output                         | +18dBm (antenna port), +23dBm max. EIRP with antenna supplied                                                                                                                                                                                                                                                         |                                                                 |
| RX Sens                              | -102 @ 10-6 BER                                                                                                                                                                                                                                                                                                       |                                                                 |
| RF Data Rate                         | 2Mbps                                                                                                                                                                                                                                                                                                                 |                                                                 |
| Indoor Range                         | up to 500ft                                                                                                                                                                                                                                                                                                           |                                                                 |
| Outdoor Range                        | up to 2 miles                                                                                                                                                                                                                                                                                                         |                                                                 |
| Power Consumption                    |                                                                                                                                                                                                                                                                                                                       |                                                                 |
| Supply Voltage                       | <b>IWS-H-100SRG-OUT</b>                                                                                                                                                                                                                                                                                               | <b>IWS-H-100SRG-IN</b>                                          |
|                                      | 110/220V input adapter (provided)<br>12V 0.5A Output (DC Plug)                                                                                                                                                                                                                                                        | 110/220V input adapter (provided)<br>5V 0.5A Output (micro USB) |
|                                      | PoE injector (provided)                                                                                                                                                                                                                                                                                               | PoE injector (provided)                                         |
| Security                             |                                                                                                                                                                                                                                                                                                                       |                                                                 |
| Data Encryption                      | <b>IWS-H-100SRG- OUT &amp; IWS-H-100SRG- IN</b><br>AES 128bit over wireless links (optional)                                                                                                                                                                                                                          |                                                                 |
| Management                           |                                                                                                                                                                                                                                                                                                                       |                                                                 |
|                                      | <b>IWS-H-100SRG- OUT &amp; IWS-H-100SRG- IN</b><br>Standalone Management via internal web GUI                                                                                                                                                                                                                         |                                                                 |
| Data Storage/Retrieval               |                                                                                                                                                                                                                                                                                                                       |                                                                 |
|                                      | <b>IWS-H-100SRG- OUT &amp; IWS-H-100SRG- IN</b><br>Real-Time Data Logging and file archival ( up to 8GB)<br>Real-Time Clock with NTP synchronization and multi-time zone support<br>Standard CSV format file structure<br>FTP Server built-in to allow standard FTP<br>Web Data Display with map import<br>MODBUS TCP |                                                                 |
| Physical, Electrical & Environmental |                                                                                                                                                                                                                                                                                                                       |                                                                 |
| Mounting                             | <b>IWS-H-100SRG-OUT</b>                                                                                                                                                                                                                                                                                               | <b>IWS-H-100SRG-IN</b>                                          |
|                                      | Pole (1-1/2" or 2") or direct wall mount                                                                                                                                                                                                                                                                              | Flat surface (allow clearance for sma mounted antenna)          |
| Operating Temperature                | -40C to +55C                                                                                                                                                                                                                                                                                                          | -40C to +55C                                                    |
| Relative Humidity                    | 0-100%                                                                                                                                                                                                                                                                                                                | 0-100% (non condensing)                                         |
| Wireless Certifications              | 802.15.4 (2.4GHz) FCC &, IC                                                                                                                                                                                                                                                                                           | 802.15.4 (2.4GHz) FCC &, IC                                     |
| Enclosure                            | 7-1/8" (w) x 10" (h) x 2-1/4" (d)<br>(180mm x 254mm x 57mm)                                                                                                                                                                                                                                                           | 6-1/2" (w) x 4-1/4" (h) x 2-1/4" (d)<br>(88mm x 82mm x 32mm)    |
| Weight                               | 3.3lbs (1.5kg) (approx)                                                                                                                                                                                                                                                                                               | 2lb (0.45kg) (approx)                                           |

## ORDERING INFORMATION

| Part Number      | Description                                                                                                                                            |
|------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------|
| IWS-H-100SRG-IN  | ABS enclosed Wireless Gateway hub complete with external antenna and passive PoE kit with AC Wall Adapter. Includes 8GB NV memory for data.            |
| IWS-H-100SRG-OUT | Cast Aluminium enclosed Wireless Gateway hub complete with external antenna and passive PoE kit with AC Wall Adapter. Includes 8GB NV memory for data. |



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