

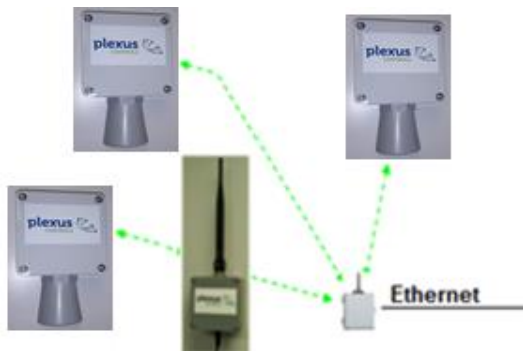


# Intelligent Wireless SCADA Monitoring Systems

## R-025U Series Industrial Distance Monitor Remote Wireless System



**IWS-R-025U-M**



### Features and Benefits

- Next generation distributed, intelligent wireless SCADA system
- Liquid & Surface distance monitor
- 0.5m - 10m to largest target with  $\pm 2$ cm accuracy
- UV protected NEMA 4x enclosure
- 2 x C battery for multi-year operation or external power option
- Internal or long range external antenna options
- Fast and simple installation
- Reliable & scalable auto mesh wireless (using repeater system if required)
- Multiple systems per gateway
- Full monitoring, alarming from site gateway and/or central SQL database

## 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, power factor, 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 Gateway for termination over Ethernet to the IWS Management Server application providing a web based GUI display, logging and alarm management.

The Remote Termination Unit R-025U is a fully integrated, self-contained radio and microcontroller package with an ultrasonic transducer sensor for measuring distance to an object or liquid surface. The R-025IU is powered using 2 x Alkaline dry batteries that can be easily changed by the user, or through the optional 110V wall adapter. The R-025U enclosure is designed to mount on a flat surface. The frequency of readings can be user changed and values logged and plotted on Plexus controls browser based gateway system. Plexus also provided an SQL database package that allows more sophisticated packages to access the data for detailed analysis.

The R-025U can be powered by 2 x C Alkaline batteries or 2 x 3.6V lithium primary batteries (not supplied). Battery life is expected to be up to 3 years depending on the frequency of the reading cycles



# Intelligent Wireless SCADA Distributed Control System

## SPECIFICATIONS

Radio Specifications	
Wireless Topology	Auto Mesh with dynamic configuration
Frequency	2.4 GHz ISM Band
Channels	16
Hops	30 max.
Power Output	+18dBm EIRP with internal antenna
RX Sens	-102 @ 10-6 BER
RF Data Rate	250kb/s
Indoor Range	up to 200ft (-M version), up to 500ft (-L version)
Outdoor Range	up to 1000ft (-M version), up to 2 miles (-L version)
Power (with current loop power)	
	IWS-R-025U
Supply Voltage	3V DC (internal 2 x C primary alkaline batteries, or low voltage wall adapter (provided))
Max. Power (Tx Active)	400mW
Max. Power (Idle/Rx)	70mW
Sleep Mode	10uA @ 3V DC
I/O	
	IWS-R-025U
	Internal only
Accuracy	
	IWS-R-025U
Measurement Distance	System Accuracy*: Approx. ±2cm
Security	
Data Encryption	AES 128bit
Management	
	Networked remote graphic display with SMS & email alarms. Browser based GUI from system gateway, Central SQL database support, Modbus TCP.
Physical, Electrical & Environmental	
Mounting Bracket	Unit mounts mounting holes provided on enclosure
Operating Temperature	-20C to +55C
Environmental	Weatherproof
Relative Humidity	0-95% (non-condensing)
Wireless Certifications	802.15.4 (2.4GHz) FCC &, IC Approvals
Enclosure	Polycarbonate (grey) 3-1/2" x 3-1/2" x 2" NEMA 4X (UV protected)
Weight	1.2lb (0.5kg) (approx) with batteries



## Intelligent Wireless SCADA Distributed Control System

### ORDERING INFORMATION

Part Number	Description
IWS-R-025U-M	Wireless distance measuring system. 2 x C cell batteries, 0.5-10m distance. Internal antenna.
IWS-U-LD	Long range upgrade for IWS-R-025 Systems. Includes 3.5dBi N type omni antenna. Up to 500ft Indoor and 1 mile outdoor



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