SynapSense® 900 MHz Wireless Monitoring System

SynapSense® 900 MHz Wireless Monitoring System provides a low-cost, easy-to-deploy solution to gather, communicate and visualize data in warehouses, retail spaces, and factories to improve reliability, product quality, operational efficiency and energy optimization. Robust IoT sensing technology delivers granular data at a fraction of the time and cost of wired solutions.

The system includes tools to visualize, analyze and alarm based on customer needs, easing deployment and allowing immediate use of collected data. SynapSense® 900 MHz Wireless Monitoring System is part of the Panduit® building block architecture that enables reliable end-to-end physical layer infrastructure from the enterprise to the edge, simplifying robust industrial network and IoT deployment.

Key Features	Benefits
900 MHz frequency:	Provides 250-300 foot range, non-line of sight/indoors for greater penetration through walls, ceilings and floors*, to help improve operational efficiency
Battery powered sensors:	Operate on two standard AA batteries, included, that provide up to eight years of battery life**, reducing installation and maintenance costs
PoE powered gateway:	Avoids complex cabling installations, minimizing time, labor and material costs
Simple deployment:	Easy mounting options and wireless placement of sensors at any point avoids the cost and time of installing complex or additional connectivity
Time synchronized:	Provides automatic time stamping for all sensor data to indicate and document the exact time at which an event was collected, allowing historical logs and comparison
Data acknowledgement:	Sends messages to confirm connection between gateway and sensors to ensure data integrity
Single IP address scalability:	Allows interconnect ability of up to 100 sensors on a single wireless network gateway through one single IP address, reducing the need for separate IP ports, IP capital costs and management overhead
Visual data displays:	Help manage plant operations with graphs, charts, alarms/alerts and sensor data mapping, reducing plant maintenance time and cost
Hosted software:	Provides a secure solution for customers to evaluate the system via private enterprise server or in the cloud for flexibility and ease-of-use

* Actual range may vary depending on environment.

**Battery life is determined by sensor reporting frequency and other variables.
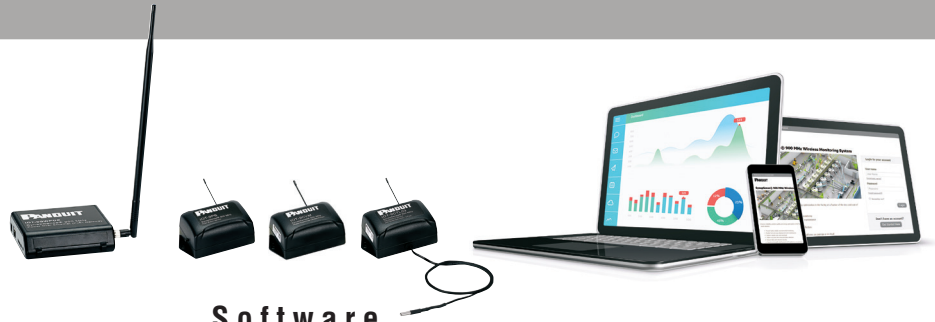
System Requirements

- Windows*** Server 2012 R2 or newer Operating System
- IIS 7 Web Server
- SQL Server® 2012 or newer Database Server, SQL express
- Microsoft .NET Framework Version 4.5
- SMTP server information
- ASP.NET MVC 4

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www.panduit.com/synapsense

Suggested Starter Kit:
- (1) Gateway
- (3-5) Sensors
- (1) IOT-9SW10DEMO or IOT-9CSW6 Software License

Gateway and Sensors

Part Number	Description
Environmental Kit	
IOT-9EMON	Monitoring kit; includes 20 IOT-9CT temperature sensors, 1 IOT-9GWPOE gateway, 1 IOT-9MT mounting kit.
Gateway	
IOT-9GWPOE	PoE gateway with power cords.
Mounting Kit	
IOT-9MT	Gateway mounting kit; includes mounting plate, lanyard, screws, cable ties and installation guide.
Sensors	
IOT-9CT	Temperature sensor.
IOT-9CT-X	Temperature sensor; 10 pack.
IOT-9CTL03	Temperature sensor with 3 foot probe.
IOT-9CTL03-X	Temperature sensor with 3 foot probe; 10 pack.
IOT-9CTHL03	Temperature/humidity sensor with 3 foot probe.
IOT-9CTHL03-X	Temperature/humidity sensor with 3 foot probe; 10 pack.
IOT-9CM20	AC current meter; 20 Amp.
IOT-9CM150	AC current meter; 150 Amp.
IOT-9CM20M	DC current meter; 20 mA.
IOT-9DC	Dry contact sensor.
IOT-9CHT	High temperature sensor.
IOT-9OC	Open/close sensor.
IOT-9OC-X	Open/close sensor; 10 pack.
IOT-9PS300	Pressure sensor; 300 PSIG.
IOT-9PB	Push button sensor.
IOT-9PC01	Pulse counter; 1-input.
IOT-9PC04	Pulse counter; 4-input.
IOT-9CVM	Vibration sensor.
IOT-9CVM-X	Vibration sensor; 10 pack.
IOT-9VM5	Voltage meter; 0-5 VDC.
IOT-9WD	Water detection sensor.

Software

Part Number	Description
Enterprise Software (On-Premise)	
IOT-9SW10DEMO	Evaluation license; 10 sensor (60 days).
IOT-9SW50S	Annual subscription license; 50 sensor.
IOT-9SW250	Perpetual license; 250 sensor.
IOT-9SW2K	Perpetual license; 2000 sensor.
IOT-9SW250M	Annual support & maintenance license; 250 sensor.
IOT-9SW2KM	Annual support & maintenance enterprise license; 2000 sensor.
Cloud Software	
IOT-9CSW6	Annual subscription license; 6 sensor.
IOT-9CSW25	Annual subscription license; 25 sensor.
IOT-9CSW50	Annual subscription license; 50 sensor.
IOT-9CSW100	Annual subscription license; 100 sensor.
IOT-9CSW500	Annual subscription license; 500 sensor.
IOT-9CSW999	Annual subscription license; 999 sensor.

*All software can be used with 900, 868, 433, and 920 MHz product

Cloud/Enterprise Software Comparison

Feature	Enterprise	Cloud
Minimum heartbeat (sensor check-in)	1 Minute	10 Minutes
Number of users supported	Unlimited	Unlimited
Number of networks supported	20	20
Number of gateways supported	1,000	1,000
Number of sensors per account	10,000	10,000
Sensor history storage	Unlimited	Unlimited
Notifications by email	✓	✓
Notifications by SMS text (email to text-carrier)	✓	✓
Notifications by dedicated SMS text		✓
Notifications by voice call		✓
Does not require internet connection	✓	

For information on the complete Panduit® SynapSense® Wireless Monitoring System offering, including 2.4 GHz, visit: www.panduit.com/synapsense

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Visit us at www.panduit.com/synapsense
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