



Thermo Scientific Smart-View Wireless Monitoring Solution

Smart. Scalable. Simple.

providing the protection you need
with the simplicity you deserve



Thermo Scientific Smart-Vue Wireless Monitoring Solution Optimized Sample Security

Countless hours are spent on valuable samples. Whether you are in an IVF clinic, blood bank or cutting-edge pharmaceutical laboratory, your samples are the culmination of years of work and significant investment.

Introducing Smart-Vue™, a wireless monitoring solution for laboratory equipment that safeguards the integrity of precious samples by continuously monitoring critical parameters and securely logging data to give you unprecedented peace-of-mind. This wireless solution features audit trail traceability to assist with conformance to 21 CFR part 11, and other strenuous regulatory requirements.

Entrust your lab monitoring to us. We know your equipment and understand the critical nature of your work.



Smart. Scalable. Simple.

An Excellent Choice to Ensure the Integrity of Critical Samples

Automated monitoring of these vital laboratory equipment parameters ensures the integrity of your critical samples:

- Temperature
- Relative humidity
- CO₂ concentration
- Differential pressure
- 4-20 mA output
- Alarm relay/dry contacts

Smart

- Continuous real-time monitoring of critical parameters
- Immediate notification by means of your preferred alert method. Options include Smart-Vue audible/visual siren, fax, telephone, email or text messaging
- Easy-to-read display of monitored setpoints directly on module

Scalable

- Single solution that can grow with you to save time and money
- Easily add new equipment to the existing system
- Compatible with multiple brands and types of laboratory equipment

Simple

- Easy to install, use and maintain
- Relocate equipment maintaining network configurations without the inconvenience and cost associated with rewiring
- Accessible via the Internet...anytime, anywhere



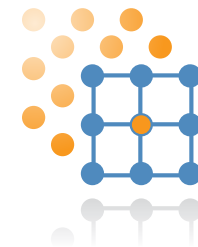
Enjoy greater peace-of-mind knowing your work is fully monitored 24x7 with immediate notifications reaching you even if you are away from the lab.

Ideal for use in highly controlled environments, including pharmaceutical production, biotechnology, IVF clinics, clinical studies and diagnostic laboratories.

MONITORING APPLICATIONS	CRITICAL PARAMETERS
Cold Storage Equipment and Ovens	Temperature (from -200 °C to +350 °C)
CO ₂ Incubators and Incubators	Temperature, CO ₂ Concentration & Relative Humidity
Clean Rooms	Differential Pressure
Storage Areas	Temperature & Relative Humidity



We monitor your equipment so you can **focus on the science**





Plug & Play Solution Intuitive Interface

Smart-Vue Wireless Monitoring Solution

Ask your sales representative to configure a customized solution based on your laboratory requirements. Choose from multiple end-point module and sensor combinations operating in the Industrial Scientific and Medical (ISM) band for specific Radio Frequencies (RF).

Smart-Vue wireless modules

- ▶ Temperature
- ▶ Relative humidity
- ▶ CO₂ concentration
- ▶ Differential pressure
- ▶ 4-20 mA output
- ▶ Alarm relay/dry contacts

Smart-Vue components

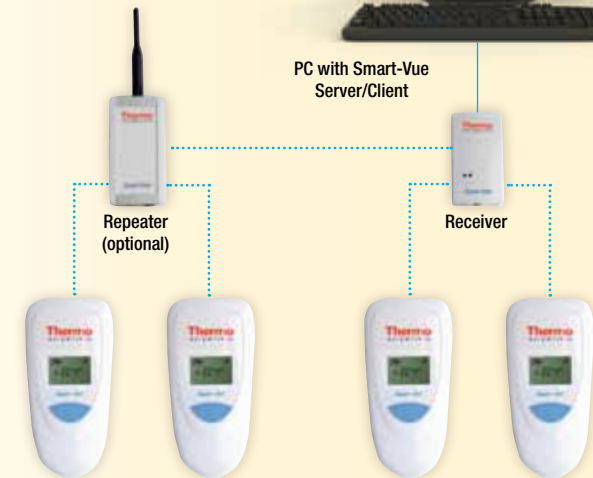
- ▶ Software
- ▶ Repeater
- ▶ Receiver
- ▶ Local audible/visual alarm



Network PCs with Smart-Vue Client



PC with Smart-Vue
Server/Client



Intelligent Plug & Play Simplicity

- An installation wizard in the software walks you through the installation process. Additionally, a Service Discovery Protocol (SDP) enables every module to send a signal to the receiver and identify the most efficient route of communication based on RF signal strength.
- RF signal strength and Quality of Service (QoS) is monitored by each module. A module that does not communicate during a 6 hour period will automatically establish a new path to the receiver via the SDP when in automatic position. If a connection can't be re-established, the module will continue to log data and the module will show off-line in the software.
- Intelligent modules feature back-up system with memory capacity up to 3000 points, incorporating uninterruptible power to ensure continuous data logging even in the event of power outages and loss of signal strength.

Intuitive Dashboard

- Simplifies daily usage
- Quickly export reports to Microsoft® Excel®, Word® or Adobe® PDF formats with just a click for auditing purposes
- Flexible creation of graphs summarizing data from individual or multiple sensors
- Visual depiction of RF signal strength and QoS as monitored by each module

Flexible Operation

- Flexible operating platform
- Check sample status anytime, anywhere
- User-defined measurement and transfer periods
- Handles variations caused by door opening/closing

Precise Monitoring

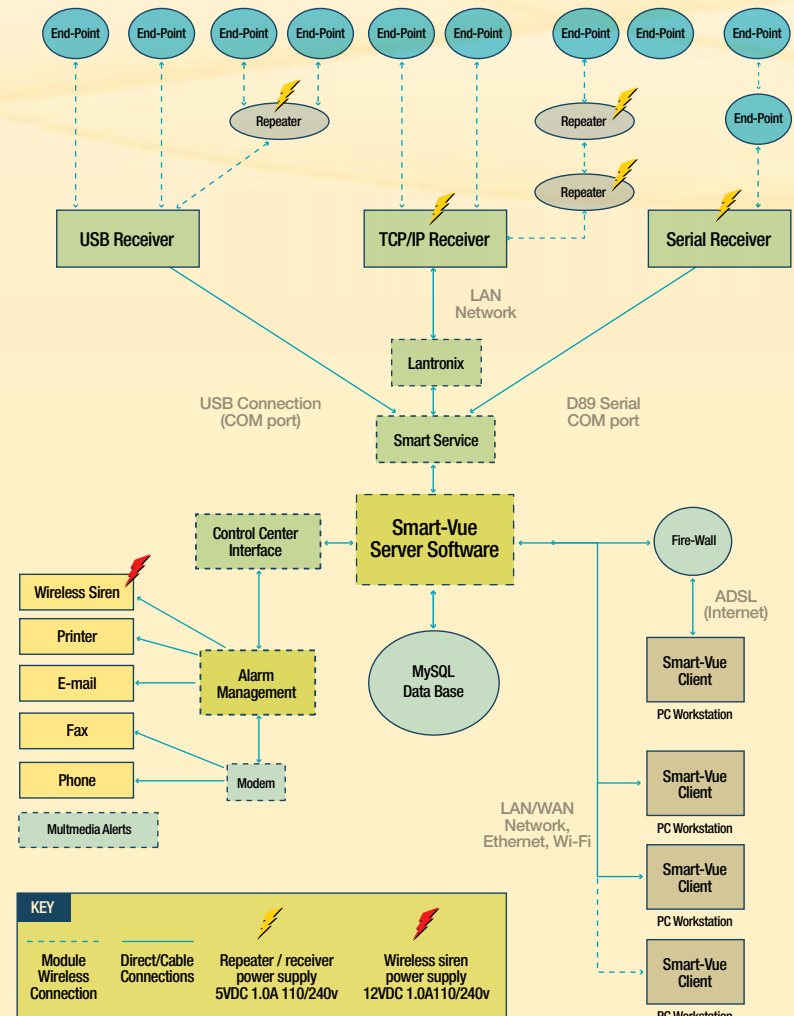
- Integrated alarm system accurately safeguards high/low setpoints. Notifications are transmitted to Smart-Vue server, permanently logged as required for auditing purposes and multimedia signals are sent immediately to prompt corrective action.
- Continuous collection of equipment parameters – temperature, relative humidity, CO₂ concentration, differential pressure, 4-20mA output, & alarm relay/dry contacts.
- Self-monitoring system activates should data point exceed high/low setpoints.
- Immediate notification by means of your preferred alert method. Options include Smart-Vue audible/visual siren, fax, telephone, email or text messaging.

Data Traceability & Security

- Secure, customized levels of user access
- Audit trails
- Archived alarms
- Password protection
- Facilitates conformance to a growing body of regulatory standards including 21 CFR part 11
- Secure digital transmission and data back-ups

Numerous Configuration Capabilities

- Combines RF and TCP/IP network technologies
- Share equipment data over entire network instantly
- Download simple plug-in to visualize equipment data readings from any workstation





Laboratory Equipment Services

Your Single Source for Exceptional Services

We understand the critical nature of your work and can offer a single source for laboratory equipment service needs.

Complementary Services

- Installation and validation services
- Annual maintenance agreements
- Calibration, inspection, battery replacement and software updates
- Qualification to support cGxP compliance needs



Designed with Compliance in Mind

Automatic and continuous data logging creates permanent record of readings, alarms and acknowledgements to help you meet regulatory requirements. Smart-Vue assists with compliance to SOP, cGxP and 21 CFR part 11 among other standards. Smart-Vue delivers the continuous monitoring, secure data logging and automatic audit trails required for regulatory compliance.

- Calibration & Certification
- IQ/OQ Protocols



Ordering Information for Smart-Vue Wireless Monitoring Solution for European Regions Transmitting at 868 MHz RF (Radio Frequency):

Ultra-low Temperature Freezer, Liquid Nitrogen (LN2) Freezer and High Temperature Oven - PT100 sensors available:

Order Number:	Description
SV200-101-LSB	868 MHz wireless system including transmission module with an external 3-wire PT100 temperature sensor (100 mm x 3 mm), 3.5 m length, range -100 °C to +150 °C, (typical application: ultra-low freezer), calibrated at -80, -40 and 0 °C, powered by a 3,6V lithium battery.
SV201-101-LSB	868 MHz wireless system including transmission module with an external 3-wire PT100 temperature sensor (150 mm x 3 mm), 1.4 m length, range -200 °C to +50 °C, (typical application: LN2 or cryogenics). Calibrated at -196, -80 and 0 °C, powered by a 3,6V lithium battery.
SV202-101-LSB	868 MHz wireless system including transmission module with an external 3-wire PT100 temperature sensor (150 mm x 3 mm), 2.0 m length, range +100 °C to +350 °C, (typical application: ovens). Calibrated at 100, 200 and 350 °C, powered by a 3,6V lithium battery.

Laboratory Freezer, Refrigerator, Ambient, Environmental Chamber, Incubator and Water Bath - digital sensors available:

Order Number:	Description
SV203-101-LSB	868 MHz wireless system including transmission module with an external temperature sensor, 94 cm length, range -40 °C to +80 °C, (typical application: single door refrigerator or freezers, cold room). Calibrated at -30, -15, 0, 20, 40 °C, powered by a 3,6V lithium battery.
SV204-101-LSB	868 MHz wireless system including transmission module with an external temperature sensor, 3.5 m length, range -40 °C to +80 °C, (typical application: 2 or 3-door refrigerator, cold room or -40 °C freezers). Calibrated at -30, -15, 0, 20, 40 °C, powered by a 3,6V lithium battery.
SV205-101-LSB	868 MHz wireless system including transmission module with an external temperature sensor, 25 cm length, range -40 °C to +120 °C, (typical application: incubator or water bath). Calibrated at 30, 60, 80, 100, 105 °C, powered by a 3,6V lithium battery.
SV206-101-LSB	868 MHz wireless system including transmission module with an internal temperature sensor, range +10 °C to +50 °C, (typical application: ambient temperature). Calibrated at 23°C, powered by a 3,6V lithium battery.
SV207-101-LSB	868 MHz wireless system including transmission module with an external dual temperature / RH (relative humidity) sensor. Range: -40 °C to +100 °C, 0 - 100% RH, (typical application: includes stability cabinet/room). Calibrated at 23 °C and 50% RH, powered by a 3,6V lithium battery.
SV210-101-LSB	868 MHz wireless system including transmission module with an external dual sensor, temperature & CO ₂ , 85 cm length, range: 0 °C to +50 °C, 0 - 10% CO ₂ . (typical application: CO ₂ incubator). Calibrated at 37 °C, 5% CO ₂ , powered by universal power supply (100/240v AC / 6V DC), integrated 3.6V lithium battery for memory back-up, protects loss of data when power fails.

Ordering Information for Smart-Vue Wireless Monitoring Solution for European Regions Transmitting at 868 MHz RF (Radio Frequency):

Clean Rooms, Analogue Signal Output for Various Parameters - dry contact options available

Order Number:	Description
SV208-101-LSB	868 MHz wireless system including transmission module with a differential pressure sensor, range: -500 to +500 Pa (Pascal), (typical application: clean room). Calibrated at 0 to 100 Pa with 10 Pa steps, powered by a 3,6V lithium battery.
SV209-101-LSB	868 MHz wireless system including transmission module with a 4-20 mA (milliamp) analogue input, 2 wires 2.9 m length: black & yellow (ground & signal), (typical application: monitor 4-20 mA analogue output signal) calibrated on 5 points: 4, 8, 12 16 and 20 mA, powered by a 3,6V lithium battery.
SV212-501-LSB	868 MHz wireless system including transmission module with a dry contact input, 1 x 2 wires & 2.9 m length: black & yellow. (typical application: monitor any alarm contacts), powered by a 3,6V lithium battery.

Receivers, repeater and software

Order Number:	Description
SV103-502-LSB	868 MHz USB (1.0 or 2.0) 25 mW receiver including Smart-Vue client server software.
SV102-503-LSB	868 MHz RS232 25 mW receiver, universal power supply (100/240V AC / 5V DC), including Smart-Vue client server software.
SV104-502-LSB*	868 MHz, TCP/IP, RJ45, 25/500 mW receiver (power supply 100/240V AC / 5V DC). *
SV600-500-LSB	Smart-Vue client server software version 1.0
SV100-501-LSB	868 MHz 25/500 mW repeater module (power supply 100/240V AC / 5V DC).

Alarm systems

Order Number:	Description
SV500-501-LSB	868 MHz, local RF audible & visual alarm powered by an universal power supply (100-240V AC / 12V DC), integrated 3.6V lithium battery for memory back-up, protects loss of data when power fails
SV509-500-LSB	Voice and fax alert, USB 1.0 or 2.0 powered, fits standard RJ11 telephone line

*TCP/IP receiver delivery does not include the Smart-Vue client server software and needs to be ordered separately.

Please ask our local sales representative to evaluate a Smart-Vue wireless monitoring solution that best meets your specific requirements. Smart-Vue modules and sensors are available for monitoring equipment in various RF regions worldwide and are compatible with multiple brands and types of laboratory equipment.

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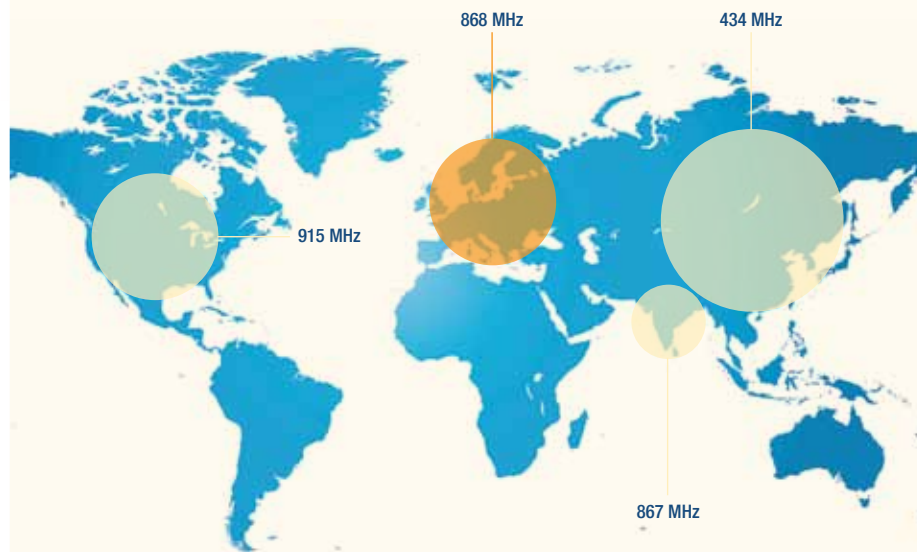
Europe: Austria +43 1 801 40 0, Belgium +32 53 73 42 41, France +33 2 2803 2180, Germany national toll free 08001-536 376, Germany international +49 6184 90 6940, Italy +39 02 95059 448, Netherlands +31 76 579 55 55, Nordic/Baltic/CIS countries +358 9 329 10200, Russia +7 812 703 42 15, Spain/Portugal +34 93 223 09 18, Switzerland +41 44 454 12 12, UK/Ireland +44 870 609 9203

Asia: Australia +61 39757 4300, China +86 21 6865 4588 or +86 10 8419 3588, India toll free 1800 22 8374, India +91 22 6716 2200, Japan +81 45 453 9220, New Zealand +64 9 980 6700, Other Asian countries +852 2885 4613 **Countries not listed:** +49 6184 90 6940

BROSVCSMARTEU 0411

Smart-Vue Covers the Globe

Wireless Solutions Customized to ISM Frequencies Operating Worldwide



*Other frequencies for use in regions outside of 868 MHz are available. Please ask your local sales representative for details.

www.thermoscientific.com/smart-vue

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