



## Obsessive is SMART

Non-stop, wireless monitoring of critical parameters, secure logging of data, early warning alerts and more. **Now that's smart.**

# Thermo Scientific Wireless Monitoring Solutions for 868MHz Regions

# with so much at stake

## obsessive is SMART

Let's not just talk about vials, or tubes, or even in general terms about samples. Let's talk about what they represent. They represent the promise of your research. They represent hope – for an answer, for a breakthrough, or maybe even for a cure. They represent a life's work. So there's no question that you're going to be obsessive about security. That just makes sense.

**Thermo Scientific™ Smart-View™** and **Smart-Tracker™** wireless monitor solutions can help put your mind at ease.

- ▶ COLD CHAIN SHIPPING
- ▶ REFRIGERATORS
- ▶ FREEZERS
- ▶ INCUBATORS
- ▶ TEMPERATURE CONTROL
- ▶ ENVIRONMENTAL CHAMBERS
- ▶ CLEAN ROOMS
- ▶ OVENS / CO<sub>2</sub> INCUBATORS

# Smart-Vue

**Smart-Vue Wireless Monitoring Solution gives you 24/7 monitoring of critical lab equipment parameters and instant notifications\* about any potential threats.**

All data is continuously monitored and securely logged to assist with regulatory compliance. You don't tolerate compromise in your lab. Neither does Smart-Vue.



## **NEW** – Monitor your Smart-Vue wireless sensors on the go!

The Smart-Vue mobile app is a free\*\*, easy-to-use app that displays the details of your Smart-Vue wireless datalogging networks. The mobile app connects securely to the Cloud over the Internet or Wi-Fi so you can check up on the latest sensor readings and settings, and monitor alarms anytime and anywhere.

Smart-Vue mobile app is the perfect complement to Smart-Vue, giving you direct access to your remote sensors using your Android® or iOS device.

\* Subject to network speed and availability.

\*\* Requires Cloud subscription.



# vigilant is SMART



**Continuous, 24/7/365 real-time monitoring** of critical parameters, with intelligent data logging using globally recognized radio frequency transmissions

**Easy-to-read display** of monitored set points directly on module

**Immediate notification\*** by means of your preferred alert method



**Battery operation** allows continual monitoring even during power outages

- Temperature
- Relative humidity
- CO<sub>2</sub> concentration
- Differential pressure
- 4-20 mA output
- Alarm relay/dry contacts
- Light

*Including:*

- Audible/visual siren
- Telephone
- Email
- Text message
- Fax
- New Smart-Vue mobile app

## scalable is SMART

- Single solution that can grow with you to save time and money
- Smart-Vue software can run one lab or an entire enterprise – whether across the street, or across the globe
- Easily expandable, allowing new equipment to be added to the existing system
- Compatible with multiple brands and types of laboratory equipment



## painless is SMART

- Easy to install, use, and maintain
- Simple relocation – maintaining network configurations – without the inconvenience and cost associated with rewiring



**Accessible via the Internet...  
anytime, anywhere\***

# intuitive is SMART



**What exactly is Smart-Vue, and how does it work?** Smart-Vue protects the quality of your samples by continuously monitoring equipment conditions and will remotely notify you if conditions for sample integrity are compromised.\* In addition, Smart-Vue's data logging capabilities assist with compliance to with FDA, GxP and other regulatory requirements.

## Features and benefits of Smart-Vue:

- Wireless monitoring, alerting you remotely in the event of a power or mechanical failure
- Alert systems including real-time and visual alarms on the module
- Configurable data-logging, transmission cycles and upper/lower limits
- On-board single parameter module memory for up to 3,000 readings (1,500 + 1,500 for dual modules)
- Automatic alarms for out-of-bounds conditions and technical problems
- Easy-to-read LCD display with latest reading, alerts, signal strength and battery level
- Fully integrated with Smart-Vue Client / Smart-Vue Server software suite
- 3.6V Lithium, replaceable battery (3600 mA)
- Mounting kit with plastic holder, magnet, screws, cable ties, plastic cable holders and fastener
- Type: CE EN 300-220-1, FCC, EN12830, IC (Industry Canada), WPF (India), CMIIT (China)

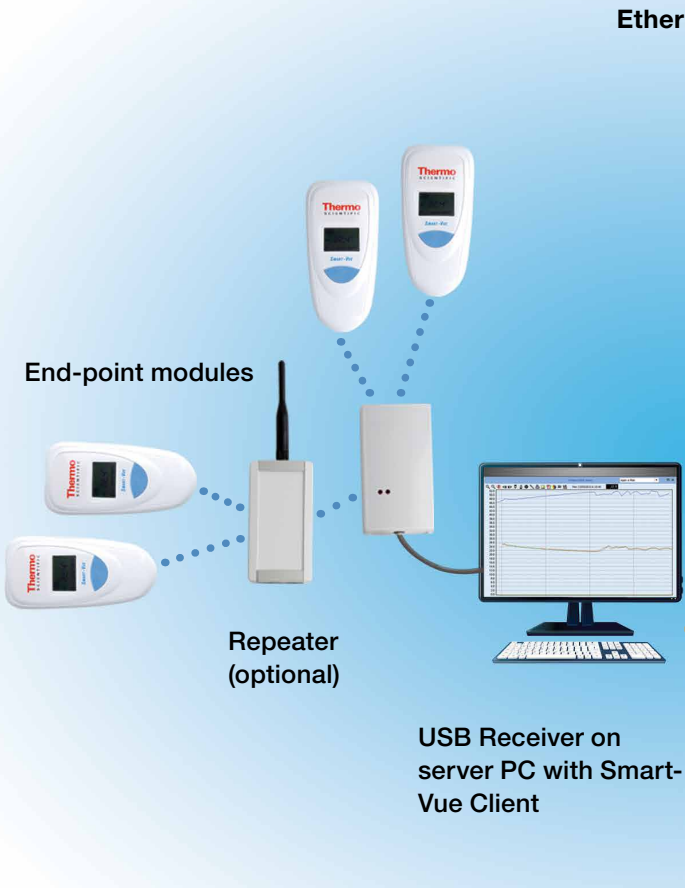
## Determining the right Smart-Vue solution:

- Smart-Vue wireless monitoring solutions are available for both USB and network receivers
- Consult your sales representative for the Smart-Vue solution that's right for your lab
- Choose from multiple end-point module and sensor combinations operating in the Industrial Scientific and Medical (ISM) band for specific Radio Frequencies (RF)

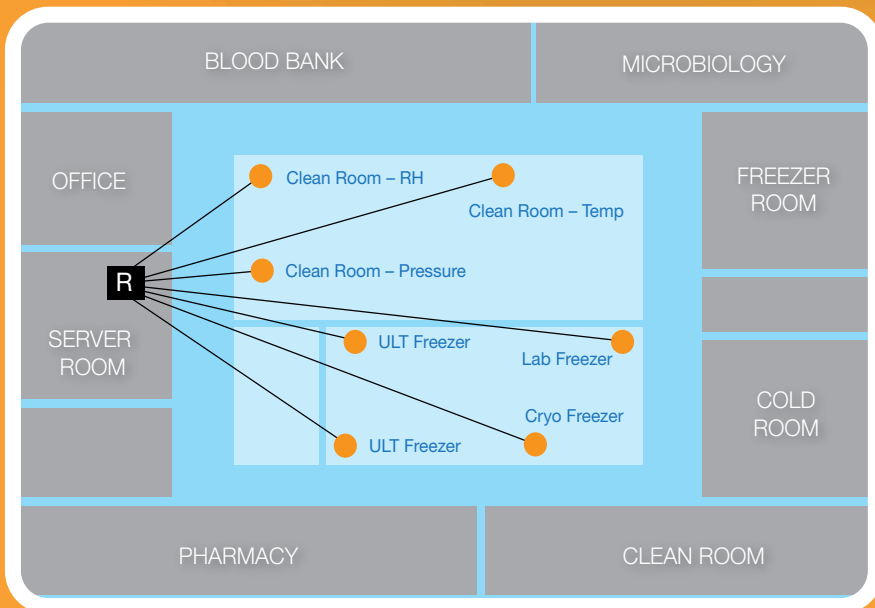
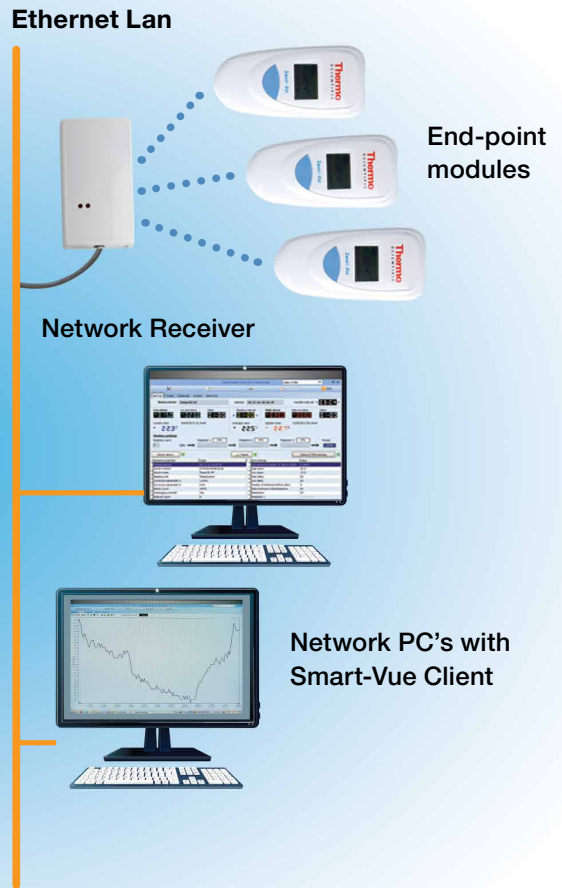
## What Smart-Vue can monitor for your lab:

<b>Ambient monitoring</b>	Temperature with internal or external sensor (177cm / 70 in.); Temperature and RH with external sensor (80cm / 32 in.)
<b>Ultra-low temperature freezers</b>	-100°C to +150°C
<b>Auto-cascade ultra-low temperature freezers</b>	-155°C to -100°C
<b>LN<sub>2</sub> / cryo storage freezers</b>	-196°C to -100°C
<b>Refrigerators</b>	0°C to 8°C (single, double and triple door)
<b>Freezers</b>	-20 to -30°C, -40°C
<b>Refrigerator / freezers combinations</b>	-30°C to 8°C; per chamber (i.e. top / bottom, left / right)
<b>Cold rooms</b>	-30°C to 8°C; -40°C or colder
<b>CO<sub>2</sub> incubators</b>	Ambient to +100°C, +120°C and humidity: 0 to 100% RH non condensing, temperature/CO <sub>2</sub> with single probe
<b>Water baths</b>	Ambient to +100°C
<b>Drying ovens / kilns</b>	Ambient to +350°C
<b>Differential pressure</b>	-500 to +500 Pa
<b>4-20 mA current loop</b>	4 to 20 mA; device with a 4-20 mA self powered output
<b>Open / closed state</b>	Dry alarm contact

**Smart-Vue architecture for USB receivers:**



**Smart-Vue architecture for Network receivers:**



**Custom is critical**

Every lab has unique needs. Smart-Vue has a range of configurations and applications for all kinds of highly controlled environments.



# simple is SMART

## Intelligent plug & play simplicity

- An installation wizard in the software walks you through the installation process, reducing time and getting Smart-Vue up and running – faster.
- For smaller installations of fewer than 15 sensors per receiver, the optional Service Discovery Protocol (SDP) automatically detects new sensors when installed, making it easy to add new equipment to your monitoring network. SDP enables every module to send a signal to the receiver and identify the most efficient route of communication based on RF signal strength.
- Software dashboard enables easy monitoring of multiple sensors on a single screen.
- Smart-Vue system displays the current alarm status as well as maximum, minimum and average sensor readings over the last 24 hours.
- Intelligent modules feature internal 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.



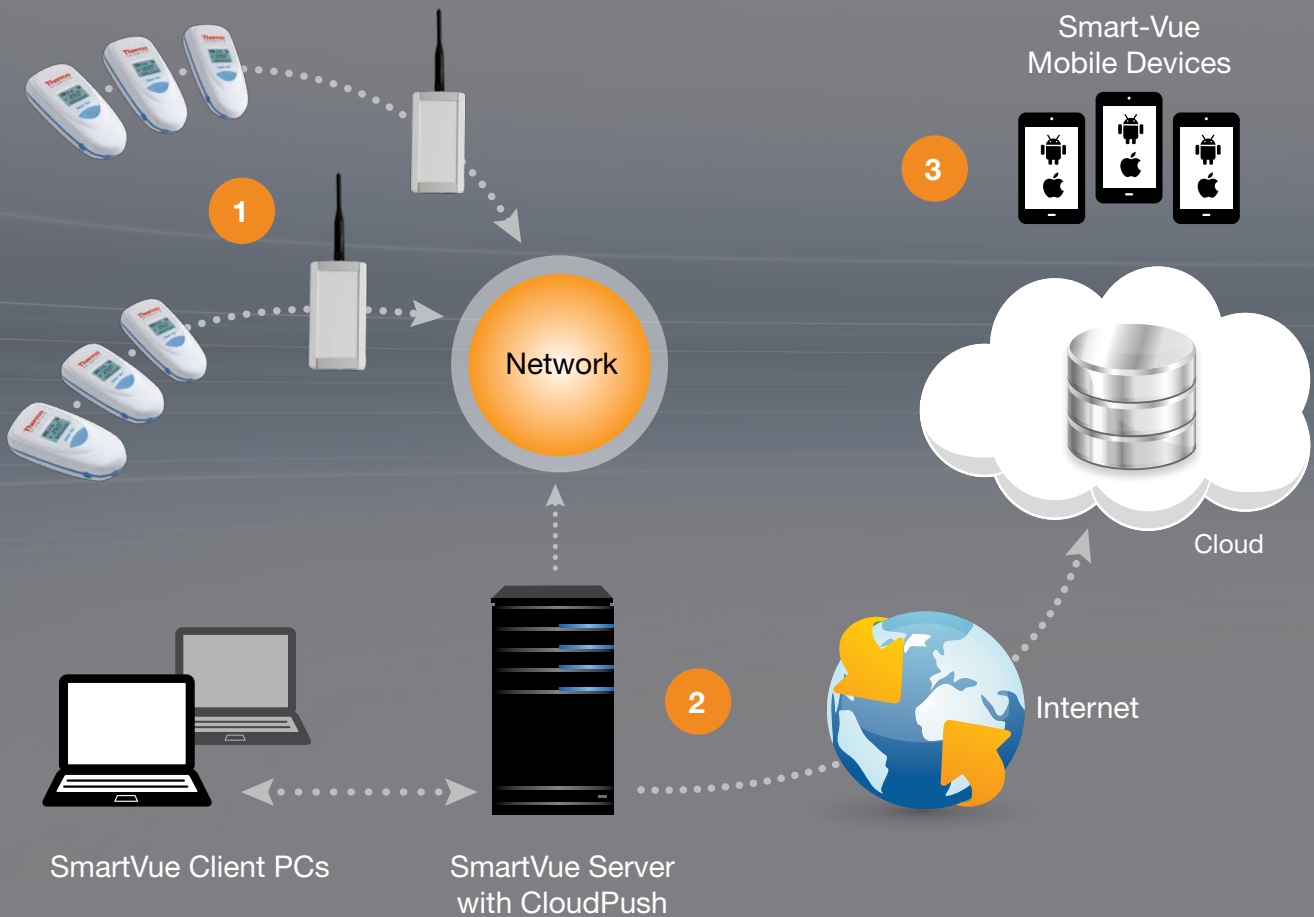
### Intuitive Dashboard

- Simplifies daily usage
- Quickly export reports to Microsoft™ Excel™, Word™ or Adobe™ PDF formats with just a click for auditing purposes
- Easily annotate charts
- Flexible creation of graphs summarizing data from individual or multiple sensors
- Visual depiction of RF signal strength as monitored by each module
- Upload customer floor plans and site pictures

### 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 set points. Notifications are transmitted to the 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, CO<sub>2</sub> 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, telephone, fax, email, text, or printed report.

### Data Traceability & Security

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

### Many Configuration Capabilities

- Combines RF and TCP/IP network technologies
- Share equipment data over entire network instantly\*
- Download simple Smart-Vue client software to visualize equipment data readings from any workstation

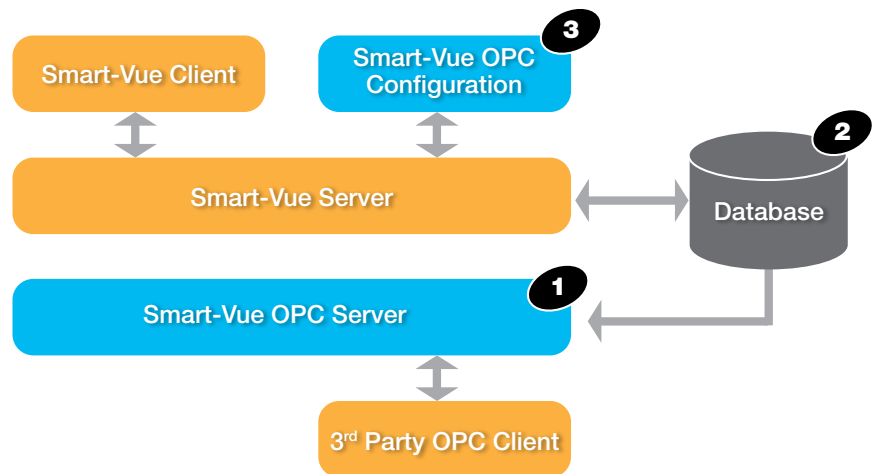
*\* Subject to network speed and availability.*

# connectivity is SMART

## Smart-Vue and OPC client software applications

Object Linking and Embedding for Process Control (OPC) Foundation is an industry consortium that creates and maintains standards for open connectivity of industrial automation devices and systems and enables hardware devices and/or software applications to transfer data. OPC is an interface specification for process control and automation applications, facilitating interoperability between OPC client applications and OPC servers. The OPC software provides an interface to the information collected by Smart-Vue Server. This tool enables you to access selected Smart-Vue data directly from within OPC software applications.

- The Smart-Vue OPC server (1) provides an interface to the Smart-Vue server database (2) without having to pass through the Smart-Vue client application.
- The Smart-Vue OPC configuration application (3) communicates through Smart-Vue server to publish selected information from the database.



### Features

- Publishes Smart-Vue Server data properties for use by OPC client software applications to be used by building management systems in hospitals, pharmaceutical, laboratories
  - >> End-point modules, receivers, groups
- Complete Smart-Vue system hierarchy presented for point-and-click configuration
- Secure configuration tool for MS Windows runs on Smart-Vue Server computer or networked client computer
- Prints status report of published fields



**Smart-Vue OPC Config**

The alarm status for receivers and groups is published automatically. Click on the "Save" button to publish all the sensors selected in the tree with the defined property list.

- Site
  - USB\_REC
  - Blood Bank
    - Refrigerator 23
    - Freezer Area
      - Freezer Area
        - Lower Lab Area
          - Ambient Temp-G2
            - RH-G-2
              - SOP-USB\_REC
                - 05-17-09-61-18-00
                - 05-17-09-60-19-09
                - 05-17-09-60-00-29
                - 05-17-09-60-00-96
                - 05-17-09-64-04-04
                - 05-17-09-64-04-04\_2
              - Upper Research Area
                - Research Area P91
                - Research Area Temp

Properties published for sensors

Serial Number	Freezer Temp
Sensor Name	05-17-50-64
Sensor ID	2
Most Recent Value	-24.6875
Most Recent Value Date	8/6/2012
High Limit	-12
Low Limit	-26
High Alarm Delay	Non Active
Low Alarm Delay	Non Active
Alarm Code	
Alarm Value	
Alarm Start Date	
Unit	Temperature P1000
Measurement interval	10
Transfer interval	60
Active	1

Smart-Vue OPC Config

The alarm status for receivers and groups is published automatically. Click on the "Save" button to publish all the sensors selected in the tree with the defined property list.

Sensors 176 to 181	Sensors 181 to 191	Sensors 191 to 200	Sensors 200 to 210	Sensors 210 to 240	Sensors 240 to 280	Sensors 280 to 320
Refrigerator 23	Freezer Temp	Ambient Temp-G2	RH-G-2	Research Area Temp	Research Area P91	
05-17-50-64	-24.6875	24.6	63.5	24.8	63.8	
2	8/6/2012	26.8	78.1	26.4	45.9	
		24.8	63.5	27.4	63.8	

Serial Number: Ambient Temp-G2  
Sensor Name: 05-17-50-64-19-16  
Sensor ID: 2  
Most Recent Value: 24.8  
High Limit: 26  
Low Alarm Delay: Non-Activated  
Low Alarm Delay: Non-Activated  
Alarm Code:  
Alarm Value:  
Alarm Start Date:  
Unit: Temperature  
Measurement interval: 10  
Transfer interval: 60  
Active: 1



### Security matters

The **Secure OPC** configuration application lets you choose which Smart-Vue sensor properties to publish for OPC clients.





# service is SMART

That's why we're pleased to offer these services for your laboratory equipment:

Installation and training | Validation | Service plans

## Protecting your investment

To improve your laboratory's efficiency, you should be free to focus on your work, not burdened with managing instrument service. We provide a complete portfolio of customized, integrated and innovative services and support solutions designed to help you improve productivity, reduce total cost of ownership and ensure compliance throughout your laboratory – from instrument and equipment acquisition to disposition. Let our expertise complement yours.

Explore all the new ways to protect your instruments and equipment at [unitylabservices.com](http://unitylabservices.com)

**Unity** Lab Services  
Part of Thermo Fisher Scientific

Support Plans | Parts and Consumables | Training, and more

**vue point**

- ISO 17025
- CE
- FCC
- IC (Industry Canada)
- WPF (India)
- CMIIT (China – radio frequency)
- EMC
- Electrical Safety

### Compliance comes first

Smart-Vue was designed with compliance in mind. Automatic and continuous data logging creates permanent record of readings, alarms and acknowledgements which 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.



▶ ▶ ▶ For a detailed outline of our protocols and field validations, specification sheets are available upon request by calling **+1-866-984-3766** or emailing: **LPG. presales@thermofisher.com**

Laboratory Refrigerators and Freezers

Model No.	Description
<b>For Ambient Temperature</b>	
SV206-101-LSB	Wireless radio module system, internal temperature probe, range: +10°C / +50°C, calibrated at 23°C. PACKAGE CONSISTS OF: module with internal sensor, 3.6V lithium battery, mounting holder with fastener, magnet and hardware.
<b>For 2 or 3 Door Refrigerator, Cold Room or -40°C Freezers</b>	
SV204-101-LSB	Wireless radio module system, external temperature probe 3.5 meters in length, range: -40°C to +80°C, calibrated at -30°, -15°, 0°, 20°, 40°C. PACKAGE CONSISTS OF: module, external sensor, 3.6V lithium battery, mounting holder with fastener, magnet and hardware, sensor mounting kit, flat extension cable.
SV204-301-LSB	Wireless radio module system, dual temperature probe 3.5 meters in length, range: -40°C to +80°C, calibrated at -30°, -15°, 0°, 20°, 40°C. PACKAGE CONSISTS OF: module, external sensor, 3.6V lithium battery, mounting holder with fastener, magnet and hardware, sensor mounting kit, flat extension cable.
SV205-301-LSB	Wireless radio module system, dual external temperature probe, range: -40°C to 120°C, (for incubators / water baths) calibrated at -30°, -60°, 80°, 100°, 105°C. PACKAGE CONSISTS OF: module, external sensor, 3.6V lithium battery, mounting holder with fastener, magnet and hardware, sensor mounting kit, flat extension cable.
<b>For Single Door Refrigerator or Freezer, Cold Room</b>	
SV203-101-LSB	Wireless radio module system, external temperature probe, 1 meter in length, range: -40°C to +80°C, calibrated at -30°, -15°, 0°, 20°, 40°C. PACKAGE CONSISTS OF: module, external sensor, 3.6V lithium battery, mounting holder with fastener, magnet and hardware, sensor mounting kit, flat extension cable.
SV203-301-LSB	Wireless radio module system, dual external temperature probe, 1 meter in length, range: -40°C to +80°C, calibrated at -30°, -15°, 0°, 20°, 40°C. PACKAGE CONSISTS OF: module, external sensor, 3.6V lithium battery, mounting holder with fastener, magnet and hardware, sensor mounting kit, flat extension cable.
<b>For Clean Room</b>	
SV208-101-LSB	Wireless radio module system, internal differential pressure sensor, range: -500 to +500 Pa., calibrated at 0 to 100 Pa with 10 Pa steps. PACKAGE CONSISTS OF: module with internal sensor, 3.6V lithium battery, mounting holder with fastener, magnet and hardware.
<b>For Incubators, Stability Cabinets, Clean Rooms</b>	
SV207-101-LSB	Wireless radio module system, external dual temperature/RH sensor, range: -40°C to +100°C, 0 - 100% RH, calibrated at 23°C and 50% RH PACKAGE CONSISTS OF: module, external sensor, 3.6V lithium battery, mounting holder with fastener, magnet and hardware, sensor mounting kit, temperature/RH flat extension cable.
SV207-301-LSB	Wireless radio module system, external dual temperature/RH sensor, range: -40°C to +100°C, 0 - 100% RH, calibrated at 23°C and 50% RH. PACKAGE CONSISTS OF: module, external sensor, 3.6V lithium battery, mounting kit, sensor mounting kit, temperature/RH flat extension cable (total cable length 2 meters).
SV217-101-LSB	Wireless radio module system, external dual temperature/RH sensor, range: -40°C to +100°C, 0 - 100% RH (typical application: stability cabinet, room); calibrated at 37°C and 90% RH. PACKAGE CONSISTS OF: module, external sensor, 3.6V lithium battery, mounting holder with fastener, magnet and hardware, sensor mounting kit, temperature/RH flat cable.
SV217-301-LSB	868MHz wireless radio module system, external dual temp/RH sensor, -40°C to +100°C, 0-100% RH (for incubator stability, cabinet, clean room), calibrated at +37°C and 90% RH. PACKAGE CONSISTS OF: module, external sensor, 3.6V lithium battery, mounting kit, sensor mounting kit, temperature and RH flat cable (2 meters)



Laboratory Refrigerators and Freezers (continued)

Model No.	Description	
<b>For Monitor 4-20 mA Analog Output Signal</b>		
SV209-101-LSB	Wireless radio module, 4 - 20 analog input, 2 wires at 2.9 meters in length: black and yellow (ground and signal), calibrated on five points: 4, 8, 12 16 and 20 mA. PACKAGE CONSISTS OF: module, 3.6V lithium battery, mounting holder with fastener, magnet and hardware.	
<b>For Monitoring Any Alarm Contact</b>		
SV212-501-LSB	Wireless radio module, dry contact input, 1 x 2 wires and 2.9 meters in length: black and yellow. PACKAGE CONSISTS OF: module, 3.6V lithium battery, mounting holder with fastener, magnet and hardware.	
<b>For Ambient Temperature, Repeater Modules</b>		
SV100-501-LSB	25mW repeater module, with universal (100v/240v) power supply, wall mounting holder with fastener, CD-ROM with Smart-Vue client software drivers and user manuals.	
SV101-501-LSB	Wireless radio module system for ambient temperature, repeater, internal temperature probe, range: +10°C to +50°C PACKAGE CONSISTS OF: module, internal sensor, 3.6V lithium battery, 5V power adapter, mounting holder with fastener.	
<b>Receivers</b>		
SV106-503-LSB	POE TCP/IP, RJ45, 25mW receiver, with universal (100v/240v) power supply, LAN cat. 5 cable, wall mounting holder with fastener, CD-ROM with software drivers and user manuals	
SV103-502-LSG	868MHz USB 1.0 or 2.0, 25mW receiver, with fastener, CD-ROM with software drivers and user manuals.	
SV104-503-LSB	TCP/IP, RJ45, 25mW receiver, with universal (100v/240v) power supply, LAN CAT 5 cable, wall mounting holder with fastener, CD-ROM with software drivers and user manuals.	
SV103-511-LSB	USB 1.0 or 2.2, 25mW receiver, with fastener, CD-ROM with Smart-Vue client software, software 2.2 license up to 20 sensors, software drivers and user manuals.	
SV103-512-LSB	USB 1.0 or 2.2, 25mW receiver, with fastener, CD-ROM with Smart-Vue client software, software 2.2 license up to 49 sensors, software drivers and user manuals.	
SV103-513-LSB	USB 1.0 or 2.2, 25mW receiver, with fastener, CD-ROM with Smart-Vue client software, software 2.2 license up to 99 sensors, software drivers and user manuals.	
SV103-514-LSB	USB 1.0 or 2.2, 25mW receiver, with fastener, CD-ROM with Smart-Vue client software, software 2.2 license unlimited sensors, software drivers and user manuals.	
<b>Audible and Visual Alarms</b>		
SV500-501-LSB	Local RF audible and visual alarm. Package consists of: universal (100v/240v) to 12 volt power supply, 3.6V lithium battery, fastener and hardware.	
<b>Power Supply</b>		
SV501-501-LSB	Power supply, 100v/240v to 6 VDC for CO <sub>2</sub> system. Comes with four inter-changeable wall plug configurations.	
SV501-500-LSB	Power supply, 100v/240v to 12 VDC for audio/visual alarm device. Comes with four inter-changeable wall plug configurations.	
SV501-502-LSB	Power supply, 100v/240v to 5 VDC for repeater or receiver. Comes with four inter-changeable wall plug configurations.	
<b>Voice and Fax Alert</b>		
SV509-500-LSB	Voice and fax alert, USB 1.0 or 2.2 powered, fits standard RJ11 telephone line.	
SMARTVUEALERT20	Smart-Vue License 1-20 Sensor	36 month software license required to send an unlimited number of text and voice call alerts. License based on the number of sensors (dual modules count as 2 sensors). Requires Smart-Vue Server / Smart-Vue Client version 2.2 and above.
SMARTVUEALERT50	Smart-Vue License 21-50 Sensor	
SMARTVUEALERT100	Smart-Vue License 51-100 Sensor	
SMARTVUEALERT999	Smart-Vue License >100 Sensor	

**Smart-Vue Alert** is an online alert platform (interfacing with the industry leader Twilio), offering an alternate solution to an analog USB modem for issuing alerts via voice and/or SMS. This is a requirement in many regions due to the phase-out of analog telephone lines. Smart-Vue Alert is a for-pay service with a subscription model.

Laboratory Refrigerators and Freezers (continued)

Model No.	Description
<b>Client Server Software Upgrade from Smart-Vue 1.0 to 2.2</b>	
<b>SV623-500-LSB</b>	Smart-Vue client server software upgrade from version 1.0 to version 2.2 up to 20, sensors with software drivers for all system receivers and repeaters, and user manuals / quick installation guides.
<b>SV624-500-LSB</b>	Smart-Vue client server software upgrade from version 1.0 to version 2.2, up to 49 sensors with software drivers for all system receivers and repeaters, and user manuals / quick installation guides.
<b>SV625-500-LSB</b>	Smart-Vue client server software upgrade from version 1.0 to version 2.2, up to 99 sensors with software drivers for all system receivers and repeaters, and user manuals / quick installation guides.
<b>SV626-500-LSB</b>	Smart-Vue client server software upgrade from version 1.0 to version 2.2, unlimited sensors with software drivers for all system receivers and repeaters, and user manuals / quick installation guides.
<b>Client Server Software</b>	
<b>SV627-500-LSB</b>	OPC Server for Smart-Vue provides OPC connectivity to connect your 'Smart-Vue' system to any OPC compliant client software such as a Building Management System. CD-ROM includes OPC Driver for Smart-Vue Server user manuals, installation guide.
<b>SV603-500-LSB</b>	Smart-Vue client server software version 2.2, up to 20 sensors with software drivers for all system receivers and repeaters, and user manuals / quick installation guides
<b>SV604-500-LSB</b>	Smart-Vue client server software version 2.2, up to 49 sensors with software drivers for all system receivers and repeaters, and user manuals / quick installation guides.
<b>SV605-500-LSB</b>	Smart-Vue client server software version 2.2, up to 99 sensors with software drivers for all system receivers and repeaters, and user manuals / quick installation guides.
<b>SV606-500-LSB</b>	Smart-Vue client server software version 2.2, unlimited sensors with software drivers for all system receivers and repeaters, and user manuals / quick installation guides.
<b>SV607-500-LSB</b>	Smart-Vue client server software version 2.2, upgrade from 20 to 49 sensors with software drivers for all system receivers and repeaters, and user manuals / quick installation guides.
<b>SV608-500-LSB</b>	Smart-Vue client server software version 2.2, upgrade from 20 to 99 sensors with software drivers for all system receivers and repeaters, and user manuals / quick installation guides.
<b>SV609-500-LSB</b>	Smart-Vue client server software version 2.2, upgrade from 20 to unlimited sensors with software drivers for all system receivers and repeaters, and user manuals / quick installation guides.
<b>SV610-500-LSB</b>	Smart-Vue client server software version 2.2, upgrade from 49 to 99 sensors with software drivers for all system receivers and repeaters, and user manuals / quick installation guides.
<b>SV611-500-LSB</b>	Smart-Vue client server software version 2.2, upgrade from 49 to unlimited sensors with software drivers for all system receivers and repeaters, and user manuals / quick installation guides.
<b>SV612-500-LSB</b>	Smart-Vue client server software version 2.2, upgrade from 99 to unlimited sensors with software drivers for all system receivers and repeaters, and user manuals / quick installation guides.
<b>Accessories</b>	
<b>SV503-500-LSB</b>	3.6v lithium battery, 3600 mA - for modules (Package of 2)
<b>SV502-503-LSB</b>	1 meter long extension cable for digital temperature probe
<b>SV502-504-LSB</b>	3 meter long extension cable for digital temperature probe
<b>SV502-505-LSB</b>	5 meter long extension cable for digital temperature probe
<b>SV502-506-LSB</b>	10 meter long extension cable for digital temperature probe

For Ultra-Low Temperature Freezers

Model No.	Description
<b>SV200-101-LSB</b>	Wireless radio module system, external PT100 temperature probe (100mm x 3mm), range: -100°C to +150°C, calibrated at -80°, -40° and 0°C. PACKAGE CONSISTS OF: Module, external sensor, 3.6V lithium battery, mounting holder with fastener, magnet and hardware, sensor mounting kit.

## For Cryogenic Storage

Model No.	Description
<b>SV201-101-LSB</b>	Wireless radio module system, external 3 wire PT100 temperature probe (150mm x 3mm). Range: -200°C to +50°C, calibrated at -196°, -80° and 0°C. PACKAGE CONSISTS OF: module, external sensor, 3.6V lithium battery, mounting holder with fastener, magnet and hardware, sensor mounting kit.

For CO<sub>2</sub> Incubators, Water Baths, Stability Cabinets & Clean Rooms

Model No.	Description
<b>For CO<sub>2</sub> Incubators</b>	
<b>SV210-101-LSB</b>	Wireless radio module system, external dual sensor, temperature and CO <sub>2</sub> , range: 0°C to +50°C, 0 - 10% CO <sub>2</sub> , calibration at 37°C, 5% CO <sub>2</sub> . PACKAGE CONSISTS OF: module, external sensor, 3.6V lithium back-up battery, mounting holder with fastener, magnet and hardware, sensor mounting kit, universal (100v/240v) power supply.
<b>For Incubators and Water Baths</b>	
<b>SV205-101-LSB</b>	Wireless radio module system, external temperature probe, range: -40°C to +120°C, calibrated at 30°, 60°, 80°, 100°, 105°C. PACKAGE CONSISTS OF: module, external sensor, 3.6V lithium battery, mounting holder with fastener, magnet and hardware, sensor mounting kit, flat extension cable.
<b>For Incubators, Stability Cabinets, Clean Rooms</b>	
<b>SV207-101-LSB</b>	Wireless radio module system, external dual temperature/RH sensor, range: -40°C to +100°C, 0 - 100%RH. Calibrated at 23°C and 50%RH. PACKAGE CONSISTS OF: module, external sensor, 3.6V lithium battery, mounting holder with fastener, magnet and hardware, sensor mounting kit, temperature/RH flat cable.

## For Ovens

Model No.	Description
<b>SV202-101-LSB</b>	Wireless radio module system, external 3 wire, PT100 temperature probe. Range: +100°C to +350°C, calibrated at 100, 200 and 350°C. PACKAGE CONSISTS OF: module, external sensor, 3.6V lithium battery, mounting holder with fastener, magnet and hardware, sensor mounting kit.



# Smart-Tracker

**Ensuring that the cold chain has been preserved, whether your products are in storage, or in transit, just makes sense. And with Thermo Scientific Smart-Tracker, it's just been made simple.**

Thermo Scientific Smart-Tracker offers specific features for mobile temperature tracking and data sharing via the Cloud. Place Smart-Tracker inside a crate or package and use the app to check it at different locations. Each time you read Smart-Tracker, the data, complete with geolocation information from your phone, can be uploaded to the Cloud and accessed from anywhere in the world.

Smart-Tracker brings temperature tracking right to your smartphone. With its Bluetooth connectivity and small size, Smart-Tracker fits easily into nearly any type of container or enclosure.

Set datalogging parameters and view complete temperature readings and history wirelessly from your smartphone from anywhere using the free smartphone app. Simply use the app to determine when you want to record temperature and set the acceptable temperature range. Smart-Tracker records ambient temperature and gives you fast access to the information wirelessly from your smartphone.

Optional multi-color rings help identify your modules easily



## General features

- Smart-Tracker wireless datalogging module with colored sensor ring and battery
- Internal temperature sensor for  $-40^{\circ}\text{C}$  to  $+85^{\circ}\text{C}$  (resolution  $0.01^{\circ}\text{C}$ )
- ISO/IEC 17025 (Cofrac) certified or traceable calibration available
- Traceable to NIST: Certification using a NIST-calibrated reference chain
- Robust wireless access even inside trucks, containers, and packaging
- Control and view Smart-Tracker with your smartphone or tablet
- Free smartphone app (flash QR code for link)
- On-board memory for up to 4,000 readings
- Long Bluetooth® SMART wireless range (line-of-sight): 50 meters (164 ft.)
- User guide

## Thermo Scientific Smart-Tracker Wireless Datalogging Module Technical Specifications

### Physical Description

- Diameter: 2 in. (50 mm)
- Thickness: 0.87 in. (22 mm)
- Weight: 1.79 oz (55.6 grams)
- Casing: ABS, polycarbonate, aluminum
- Module operating temperature range : -40°C to +85°C

### Certification – North America

- FCC ID: QOQBLE112
- IC: 5123A-BGTBLE112

### Specifications

- Red/green status indicators; blue Bluetooth communication signal
- Powered by user-replaceable lithium battery
- Two-sided magnetic mount (with “strong” and “weak” sides)
- Product protection index: IP67
- 12 month warranty
- EN12830 certification in progress
- Wireless signal and battery strength shown in software
- Immediate start, delayed start, or start on contact with magnet
- Programmable start at specific time or when the temperature drops below a specific value
- Programmable read interval from 15 seconds to 1 minute (one second steps), or 1 to 255 minutes (1 minute steps)
- 2 recording modes: cyclical or stop when memory full
- Programmable high and low limit values (with delay)
- Customizable module name: 15 characters
- Uses phone geolocation features: stores GPS coordinates and generates color map with programming information, readings, and stop details
- Readings stored on phone and Cloud (optional)
- Report generated in Excel® format
- Readings shown with local time and GMT time
- Values in °C and °F

## Thermo Scientific Smart-Tracker Wireless Datalogging Module Ordering Information



Model No.	Description
ST100-100	Smart-Tracker wireless datalogging module with internal temperature probe range -40/+85°C, calibrated at +23°C. Package consists of module with internal sensor, lithium battery, 2 colored sensor rings and 2 side magnetic mount.
ST100-101	Smart-Tracker wireless datalogging module with internal temperature probe range -40/+85°C, calibrated at +5°C. Package consists of module with internal sensor, lithium battery, 2 colored sensor rings and 2 side magnetic mount.
ST100-102	Smart-Tracker wireless datalogging module with internal temperature probe range -40/+85°C, calibrated at -30°C. Package consists of module with internal sensor, lithium battery, 2 colored sensor rings and 2 side magnetic mount.
ST101-100	Smart-Tracker wireless datalogging module with external temperature PT100 probe range -200/+200°C, 3.5M IN length, calibrated at -80°C. Package consists of module, external sensor, lithium battery, 2 colored sensor rings and 2 side magnetic mount.
ST100-200	Smart-Tracker wireless datalogging module with internal temperature probe range -40/+85°C. Package consists of module with internal sensor, lithium battery, 2 colored sensor rings and 2 side magnetic mount.
ST101-200	Smart-Tracker wireless datalogging module with external temperature PT100 probe range -200/+200°C, 3.5M IN length. Package consists of module, external sensor, lithium battery, 2 colored sensor rings and 2 side magnetic mount.

Smart-Tracker Accessories	
ST202-200	temperature sensor -200/+200°C
ST500-500	battery varta 1200mA (pack 4)
ST500-501	battery varta 600mA (pack 4)
ST501-500	5 colored rings gray
ST501-501	5 colored rings ocean blue
ST501-502	5 colored rings green
ST501-503	5 colored rings gold
ST501-504	5 colored rings red
ST501-505	5 colored rings purple
ST501-506	5 colored rings black
ST501-507	5 colored rings yellow
ST501-508	5 colored rings sky blue
ST501-509	Set of 10 rings (all colors)
ST502-500	50 stickers QR codes
ST500-500	Pack of four VARTA® batteries (1200mA) for -40/+85°C Smart-Tracker module
ST500-501	Pack of four VARTA® batteries (600mA) for -200/+200°C Smart-Tracker module



Services

FREQUENCY: 868MHz

Model No.	Description
SV-INST-TRAINING	Installation and training bundle for Smart-Vue monitoring system. Four hour user/admin and maintenance training for up to 10 people. 1 PT basic hardware/software installation (zone 1 travel charge included).
SV-INST-byPNT	Hardware installation fee for each additional Smart-Vue monitoring point. Comes with basic software connectivity and configuration.
SV-CALIBRTN1	Initial one point NIST calibration service per analog monitoring sensor. (zone 1 travel charge included).
SV-CALIBRTN2	Additional NIST calibration service for analog type Smart-Vue sensors by MON or measurement point.
IOQPCKE890036742	IQOQ field validation service for Smart-Vue wireless monitoring system. Refer to specification sheet E89003674 for a detailed list of tests and deliverables.
IOQDOCE890036742	IQOQ protocol for Smart-Vue wireless monitoring system.

Thermo Scientific Smart-Vue Wireless Monitoring Solution

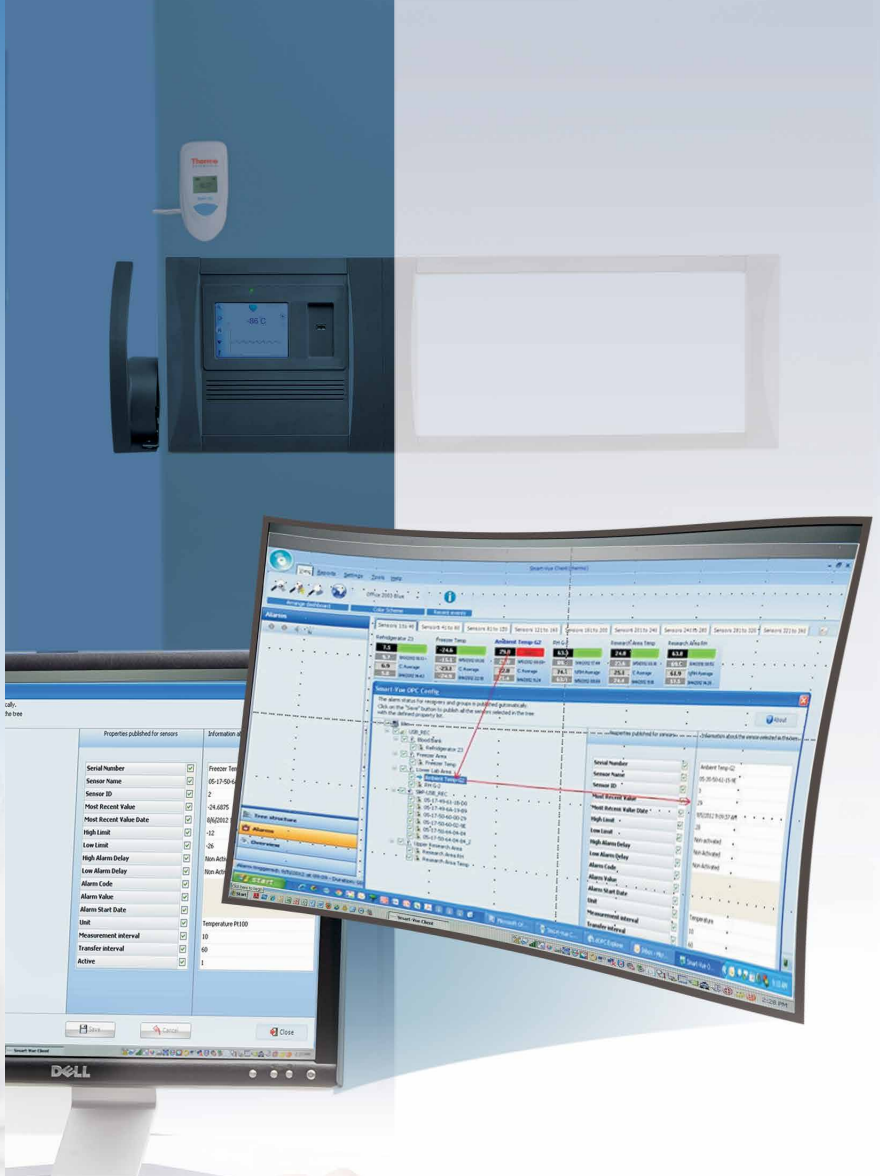
# Wireless, Tireless

Think non-stop sample safeguarding—24/7/365 even in the event of power or mechanical failure

- State-of-the-art wireless monitoring of critical equipment parameters
- Safeguarding for your critical, and irreplaceable, research samples
- Datalogging that assists with compliance to regulatory requirements such as FDA and GxP
- Instant wireless notification in the event sample integrity is threatened
- Intelligent data logging using globally recognized radio frequency transmissions



# 24/7/365



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**Australia** +61 39757 4300  
**Austria** +43 1 801 40 0  
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**China** +800 810 5118 or  
 +400 650 5118  
**France** +33 2 2803 2180  
**Germany national toll free** 0800 1 536 376  
**Germany international** +49 6184 90 6000

**India toll free** 1800 22 8374  
**India** +91 22 6716 2200  
**Italy** +39 02 95059 552  
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**Netherlands** +31 76 579 55 55  
**New Zealand** +64 9 980 6700  
**Nordic/Baltic/CIS countries**  
 +358 10 329 2200

**Russia** +7 812 703 42 15  
**Spain/Portugal** +34 93 223 09 18  
**Switzerland** +41 44 454 12 22  
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**USA/Canada** +1 866 984 3766

**Other Asian countries** +852 2885 4613  
**Countries not listed** +49 6184 90 6000

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