Connectivity

Thermo Scientific InSight

Remote monitoring and asset management solution

Proactively looking out for your samples

Thermo Scientific™ InSight is a remote monitoring and asset management solution that monitors key reliability parameters and uses advanced analytics to provide predictive indicators of possible system failures. InSight consists of Wi-Fi modules (motes), sensors, and software tools that allow you to monitor your laboratory equipment for key performance and reliability parameters and analyze data. InSight provides predictive system health indicators and asset management tools, such as reliability monitoring and repair effectiveness management, energy consumption and asset financial performance, overall asset performance, and health scoping. Alarms are issued automatically to users' email and mobile devices when threshold breaches are detected in the system.

InSight Analytics
InSight Analytics, powered by KLATU™, is a system designed to collect, analyze, and make efficiency and operating cost recommendations from multiple asset inputs and events such as:

- Lab equipment health assessment
- Energy consumption
- Door openings
- Environmental conditions (ambient temperature)

InSight Analytics monitors your compatible laboratory equipment 24 hours a day, seven days a week and alerts users when thresholds are exceeded. The data from InSight Analytics is run through a number of algorithms utilizing the InSight software. With InSight Analytics, you can determine and compare the asset performance against other similar laboratory equipment and product specifications.

How InSight Analytics works:
- Data is sent wirelessly from the InSight mote via your Wi-Fi network to InSight Cloud Platform.
- Once in the Cloud, the data is analyzed by the system, providing real-time comparison of the laboratory equipment's health to industry averages.
- This data analysis enables you to make knowledge-based asset decisions based on key performance indicators such as product service and support, service vs. buy decisions, and remote system health monitoring and trouble-shooting for service providers.

InSight asset management helps ensure the safety and integrity of the lab's most precious samples by capturing and analyzing performance data. Expert setup and quality maintenance is key in optimizing the functionality of the system. Thermo Scientific Unity Lab Services offers a full suite of installation, training, system maintenance, calibration and validation (IOQ) services – all to ensure ideal performance from your InSight monitoring system.
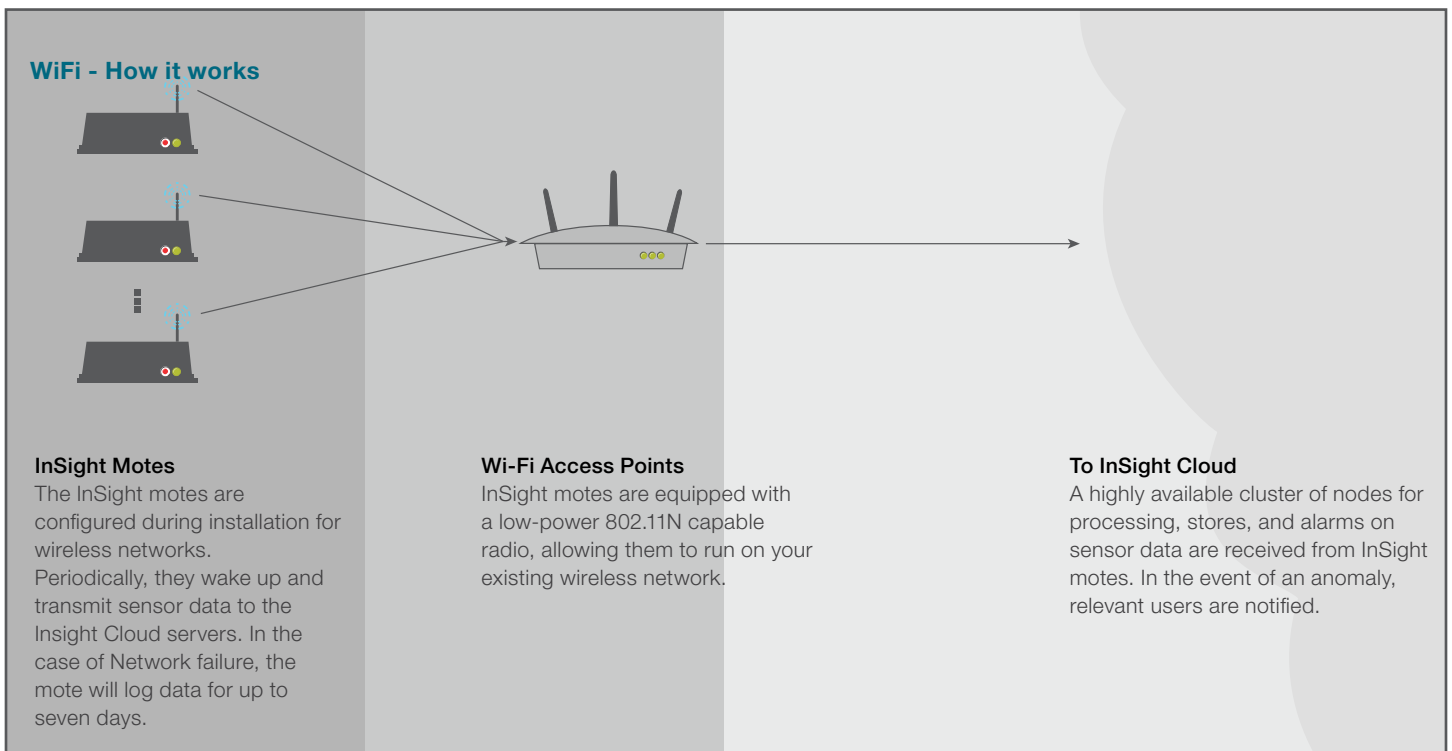
How it works

Step 1 – Connect device-specific sensors to your device

InSight remote monitoring and asset management solution mounted on your laboratory equipment.

Step 3 – Access the web app to monitor your device and receive notifications based on the thresholds configured or the advanced data analytics

InSight Analytics analyzes your laboratory equipment's vital signs.

WiFi - How it works

InSight Motes
The InSight motes are configured during installation for wireless networks. Periodically, they wake up and transmit sensor data to the Insight Cloud servers. In the case of Network failure, the mote will log data for up to seven days.

Wi-Fi Access Points
InSight motes are equipped with a low-power 802.11N capable radio, allowing them to run on your existing wireless network.

To InSight Cloud
A highly available cluster of nodes for processing, stores, and alarms on sensor data are received from InSight motes. In the event of an anomaly, relevant users are notified.

Step 2 – Set up WiFi connections and configure connection

InSight Monitoring Kits specifications and ordering information

Insight Monitoring Kits specifications		
Description	Subscription credit usage	Cat. No.
Ultra-Low Temperature (ULT), Refrigerator, and Freezer	2 credits for ULT Freezer, 1 credit for Refrigerator and Freezers	INSKTCOLD101
InSight Kit for Walk-In Freezer (single refrigeration system)	6 credits for all single refrigeration system Walk-Ins	INSKTWALK101
InSight Kit for Walk-In Freezer (dual refrigeration system)	12 credits for all dual refrigeration system Walk-Ins	INSKTWALK102
InSight Kit for Cryogenic Storage (LN$_2$)	1 credit	INSKTCRYO101
InSight Kit for Incubator (dataport only)	1 credit	INSKTINCU101
InSight Kit for Incubator (Temp/RH)	1 credit	INSKTINCU102
InSight Kit for Incubator (CO$_2$)	1 credit	INSKTINCU103
InSight Kit for Incubator (Temp/RH Condensable)	1 credit	INSKTINCU104
InSight Kit for Incubator (Temp/RH/CO$_2$)	1 credit	INSKTINCU105
InSight Kit for Incubator T/RH Condensable/CO$_2$)	1 credit	INSKTINCU106
InSight Kit for Temp/Door Switch Only	0.5 credits	INSKTTEMP101

Note: InSight Platform subscription credits sold separately. Please inquire with the sales team for subscription credit packages.

InSight subscription ordering information

Insight subscription credit packages	
Description	Cat. No.
Subscription credits package 1 credit	INSSWSUB0001
Subscription credits package 5 credits	INSSWSUB0005
Subscription credits package 20 credits	INSSWSUB0020
Subscription credits package 50 credits	INSSWSUB0050
Subscription credits package 100 credits	INSSWSUB0100
Subscription credits package 250 credits	INSSWSUB0250
Subscription credits package 500 credits	INSSWSUB0500
Subscription credits package 1000 credits	INSSWSUB1000

Accessories—sensors ordering information

InSight accessories			
Description	Cat. No.	Smart Cable required—description	Cat. No.
Temp sensor PT100	INSPTTEMP001	RTD Smart Cable	INSPTSMRT001
CT 0-50amp	INSPTCURT001	CT Smart Cable	INSPTSMRT002
CT 0-80amp	INSPTCURT002	CT Smart Cable	INSPTSMRT002
Door Switch	INSPTDOOR001		
Temp/RH (<90% humidity) sensor	INSPTHUMI001		
CO$_2$ sensor (RS232)	INSPTCO2A001		
Temp/RH sensor	INSPTMRHI002		

Note: Some sensors require smart cables - sold separately.

Accessories—data cables ordering information

InSight data cables			
Description	Cat. No.	InSight Kit compatibility	
Forma 3110 Data cable (RS232)	INSPTDATA001	INSKTINCU101-02	
Forma 3110 Data cable (USB)	INSPTDATA002	INSKTINCU101-02	INSKTINCU103-06
Infors ATR Data cable (RS232)	INSPTDATA003		INSKTINCU103-06
Infors ATR Data cable (USB)	INSPTDATA004		INSKTINCU103-06
HeraCell 150/240 Data (RS232)	INSPTDATA005		INSKTINCU103-06
HeraCell 150/240 Data(USB)	INSPTDATA006		INSKTINCU103-06
HeraCell 160i/250i Data (USB)	INSPTDATA007	INSKTINCU101-02	INSKTINCU103-06

Other cables and accessories ordering information

InSight cables and accessories	
Description	**Cat. No.**
InSight G3 Mote (spare part)	INSPTMOTE001
Optional Glycol Bottle for Sensor	80080G08
Power adapter	INSPTPWRA001
Mounting HW	INSPTMONT001
POE ethernet cable (spare part)	INSPTETHE002
7ft ethernet cable (spare part)	INSPTETHE003

InSight Service Support packages

InSight Service Support	
Installation and training	**Cat. No.**
Professional hardware installation, software configuration, user admin, and cloud setup performed by factory trained service engineer. Applicable travel charges not included. Installation service for walk-in units require custom quote.	INSGT-AddPT-INST
Temperature sensor installation in a frozen ULT.	FRZNULT-SNSRINST
4 hours webinar based training for InSight system - unlimited attendees.	INST-INSIGHT1041
Network testing	**Cat. No.**
INSIGHTlink Gateway Software Installation and Network Test (per install); Send Canary test mote. Use Canary mote to test network configuration. Install INSIGHTlink gateway software and verify good mote connectivity. Per site, 1-25 Motes.	INST-INSIGHT1045
INSIGHTlink Gateway Software Installation and Network Test (per install); Send Canary test mote. Use Canary mote to test network configuration. Install INSIGHTlink gateway software and verify good mote connectivity. Per site, 26-50 Motes.	INST-INSIGHT1046
INSIGHTlink Gateway Software Installation and Network Test (per install); Send Canary test mote. Use Canary mote to test network configuration. Install INSIGHTlink gateway software and verify good mote connectivity. Per site, 51 + Motes.	INST-INSIGHT1042
System maintenance	**Cat. No.**
InSight system inspection and evalutation, 1st point temp reference calibration, replace battery (for applicable models only). Travel included, Zone charges apply	INSGT-1stPT-PM
InSight additional point temp reference calibration and battery replacement (for applicable models only).	INSGT-ADDPT-PM
Calibrations	**Cat. No.**
ISO 9001 calibration, single monitoring probe, using NIST traceable standards. Certificate with before and after data.	CALBCRM1
ISO 9001 calibration, dual monitoring probe, using NIST traceable standards. Certificate with before and after data.	CALBCRM2
ISO 17025 accredited calibration, single monitoring probe, using NIST traceable standards. Accredited certificate with data and uncertainties.	CALPRRM1
ISO 17025 accredited calibration, dual monitoring probe, using NIST traceable standards. Accredited certificate with data and uncertainties.	CALPRRM2
IQOQ Validation Services	**Cat. No.**
Onsite qualification service for InSight	IOQP90105

Learn more at **thermofisher.com/wirelessmonitoring**