



Connectivity

The DeviceLink Connect system

Remote monitoring and asset
management solution



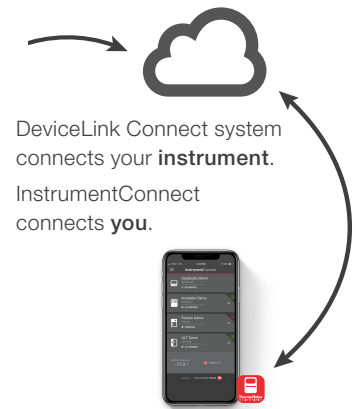
Accelerating scientific discovery and increasing lab productivity



Today's labs must be productive and efficient.

The Thermo Scientific™ DeviceLink™ Connect remote monitoring solution helps provide peace of mind by enabling you to keep track of your equipment anytime, anywhere. The DeviceLink Connect system utilizes the Thermo Fisher™ Connect Platform, which enables you to view the condition of your laboratory equipment using the InstrumentConnect app.

- For cold storage equipment, the DeviceLink Connect system reports ambient and cabinet temperature data recorded by resistance temperature detectors (RTDs) built into the unit; the remote monitoring system also reports alarms and events, as well as other system-based diagnostic data points
- For CO₂ incubators, the DeviceLink Connect system reports chamber temperatures, gas levels, alarms, and alerts received via the incubator data output connection



Help improve productivity with automated data collection, storage, and mobile access

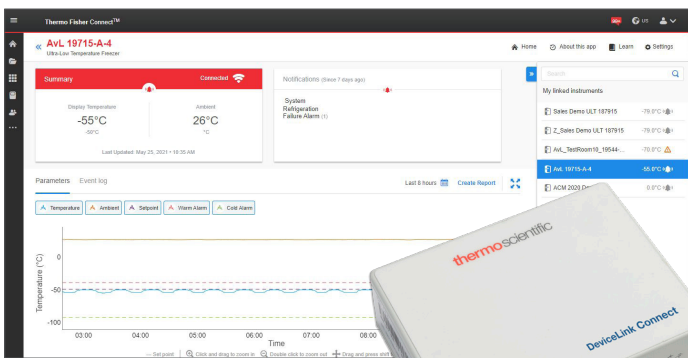
- The DeviceLink Connect monitoring solution allows 24/7 access to data and alarms from monitored lab equipment
- Data is securely stored in the cloud and sent to users via email and mobile phone notifications
- Streamlined dashboard-style reports reduce time spent interpreting data

Easy setup with self-installation

- The DeviceLink Connect monitoring solution operates on a cloud-based platform with minimal IT support
- The plug-in dataport connection receives data directly from factory-installed sensors in the equipment

After establishing an account on the Connect Platform, follow this three-step installation and configuration procedure:

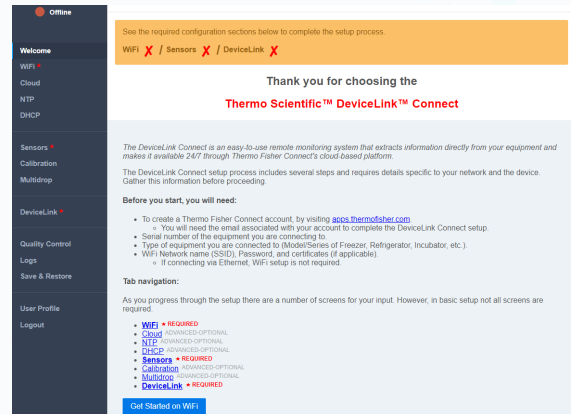
1. Plug in and power on the device.
2. Connect the DeviceLink Connect hardware to your equipment.
3. Configure the DeviceLink Connect system through the easy-to-use mobile or desktop commissioner interface.



How it works

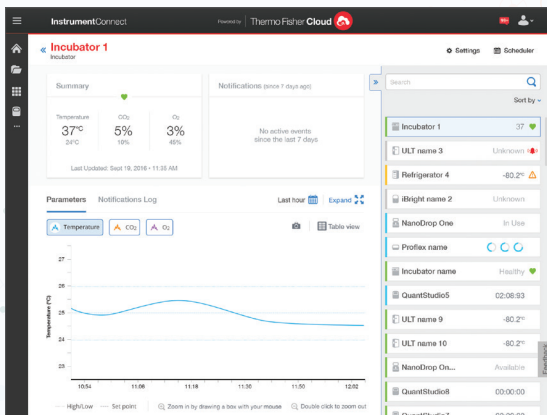


1. Connect your DeviceLink Connect system to your equipment with the provided serial port cable. You can also install independent sensors and connect them to the DeviceLink Connect system. This enables the system to provide cloud-based monitoring for devices that either do not have built-in sensors or are not currently on the DeviceLink Connect compatibility list.

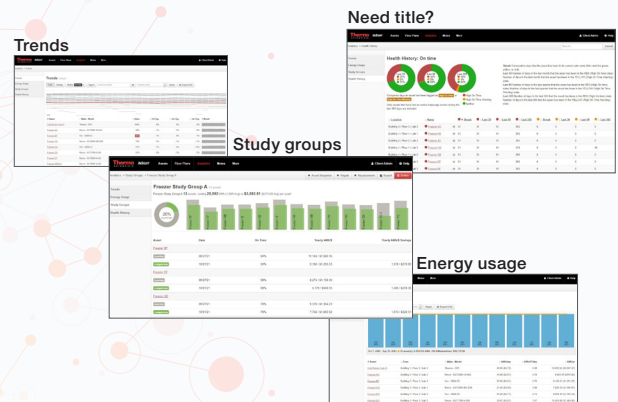


2. Configure your system with the provided DeviceLink Connect commissioner application. The process defines the network connection information, and the device and sensors being used, and links the DeviceLink Connect system to your account on the Connect Platform.

The DeviceLink Connect system can be connected to your facility's network via Wi-Fi or Ethernet cable.



3. Monitor your equipment via the InstrumentConnect app on the Connect Platform. You can access this app on both Apple™ and Android™ mobile platforms and through the web-based interface. With the InstrumentConnect app, you can manage your equipment, configure notification settings, and download reports.



4. Thermo Scientific™ InSight Analytics can provide additional asset management capability. With the purchase of Thermo Scientific™ InSight Analytics, powered by Klatu™ Networks, you get the benefit of expanded predictive capability and recommendations for managing efficiency and operating costs, which can be accessed through the InstrumentConnect app.

Security and technology you can count on

Our commitment to data security

Security is our highest priority. We understand that the security of your data and protocols is critical for both your research and the publication process. To help ensure high levels of protection and security, we've built the Connect Platform on the world-class Amazon Web Services™ (AWS™) cloud computing platform.

All of your data are stored in highly secure AWS data centers managed by compliance programs with audit safeguards.

Security features include:

- Data encryption
- Network firewalls
- Scheduled audits
- Data backup and recovery

Technical specifications for the DeviceLink Connect system

Item	Description
Compliance	Contains FCC ID: 2ABCB-RPI3BP Contains IC: 20953-RPI3P
Sensor type	Serial or USB connection to equipment; various independent sensor types also available
Operating conditions	Temperature range: 0°C to 45°C (32°F to 113°F) Relative humidity (RH): 0% to 95% non-condensing RH
Data cable length	RS-to-USB cable: 1.8 m (5.9 ft); USB-to-USB cable: 3 m (9.8 ft)
Internal device storage	8 GB; up to 7 days of data storage during a network outage
Connection type	Wi-Fi or Ethernet
Supported Wi-Fi protocols	WPA Enterprise and WPA2-PSK
Power supply	Power-over-Ethernet (POE); conforms to standard IEEE802.3af
Data interval	60 seconds (default, configurable)
Backup battery	2,600 mAh, 3.6 V lithium-ion battery; up to 3 hours backup power during continuous operation

Technical specifications for the InstrumentConnect app

Item	Description
Browser requirement	Internet Explorer™ (10 and later), Google Chrome™ (25 and later), Mozilla Firefox™ (16 and later), Apple Safari™ (7 and later)
Cloud service	Connect Platform
Hosting	Web and cloud
Language	English
User linkage	The user linked to the system during the commissioning process is the administrator; the administrator can easily share connected equipment with other users via the InstrumentConnect app
Network outage data logs	Data logged by the DeviceLink Connect system are uploaded to the cloud when a network connection is re-established; cloud-based application provides seamless data
Fleet view	Connected equipment can be filtered and sorted by instrument type, device status, and location
Dashboard	Manage (add, delete, and rename); group; sort (A–Z, Z–A) by instrument type, status, or favorites
Device details screen	<ul style="list-style-type: none"> • View current device state; alarm and warning notifications; telemetry graph; tabular data; and statistics • Download data in .csv or .pdf format • Quickly navigate between units • View device setpoints, alarm settings, and asset identification information
Alarms and warnings	Various system alarms generated by connected lab equipment
Equipment status	Normal, alarm, or warning
Notifications	Email, in-application (web and mobile), and mobile push notifications
User roles	Administrator can grant or revoke access to device(s) and grant administrator privileges to secondary users; secondary users have view-only access to device information and monitoring

Ordering information

DeviceLink Connect kits*

Description	Cat. No.
DeviceLink Connect kit for:	
Ultra-low temperature freezers	DLCKTULTS101
Refrigerators and freezers	DLCKTLRFZ101
Heracell CO ₂ incubator (serial)	DLCKTCO21101
Heracell VIOS, Forma i160, Forma i250, and Forma Series 3 CO ₂ incubators (USB)	DLCKTCO21102
DeviceLink Connect basic mote kit	DLCKTMOTE001**

* Each kit includes a DeviceLink Connect system, one-year basic monitoring subscription, power cable, commissioner USB, mounting hardware, and an applicable serial or USB cable.

** If you have a piece of equipment that is not on the compatibility list (thermofisher.com/dlcequipment) and you are using independent sensors, you will need to purchase the DeviceLink Connect basic mote kit. The kit includes a DeviceLink Connect mote, POE power supply, USB commissioning dongle, cable mounting ties, and one-year DeviceLink Connect subscription.

Independent sensors

Type	Description	Cat. No.
Temp-RH	Temperature and relative humidity sensor: -17°C to 49°C and 2% to 90% RH	DLCPTHUMI001
Temp-RH	Temperature and relative humidity sensor: -40°C to 60°C and 0% to 100% RH	DLCPTMRI002
Temp PT100	Temperature sensor: -200°C to 600°C (requires RTD Smart-Cable)	DLCPTTEMP001
Splitter connector cable	This cable enables the connection of both CO ₂ and temp-RH sensors to a single mote via the RS232/RS485 connection port	DLCPTSPLI001
CO ₂	CO ₂ sensor: 0% to 20% CO ₂	DLCPTCO2A001
CT 0–50 amp	Split core current transducer: 0–50 A (requires CT Smart-Cable)	DLCPTCURT001
CT 0–80 amp	Split core current transducer: 0–80 A (requires CT Smart-Cable)	DLCPTCURT002
Door switch	Door switch	DLCPTDOOR001
RTD Smart-Cable	RTD Smart-Cable connects a Temp PT100 to the DeviceLink Connect system	DLCPTSMRT001
CT Smart-Cable	CT Smart-Cable connects a current transducer to the DeviceLink Connect system	DLCPTSMRT002

Independent sensor kits

Type	Description	Cat. No.
CT (0–50 amp) + Smart-Cable	DeviceLink Connect current transducer (0–50 amp) with required Smart-Cable	DLCSKCURT001
CT (0–80 amp) + Smart-Cable	DeviceLink Connect current transducer (0–80 amp) with required Smart-Cable	DLCSKCURT002
PT100 sensor + Smart-Cable	DeviceLink Connect temperature sensor (PT100) with required Smart-Cable	DLCSKTEMP001

Replacement components and hardware

Description	Cat. No.
DeviceLink Connect (mote only)	DLCPTMOTE001
Power cable	DLCPTPWRC001
Commissioner USB	DLCSWCOMM001
ULT serial cable	DLCPTDATA101
Refrigerator/freezer serial cable	DLCPTDATA102
Heracell incubator serial cable	DLCPTDATA103
Heracell VIOS incubator USB cable	DLCPTDATA104
LN ₂ sensor bracket	DLCPTBRKT001
Ethernet cable, 7 ft (2.1 m)	DLCPTETHE003
Mounting hardware	DLCPTMONT001
Optional glycol bottle for sensor	80080G08

Subscriptions and services

The basic analytics package for the Connect Platform requires an annual subscription. A one-year subscription comes with each purchase of a DeviceLink Connect system. In subsequent years, subscriptions can be processed through your Connect Platform account.

DeviceLink Connect subscription and services

Description	Cat. No.
Annual DeviceLink Connect subscription	
DeviceLink Connect annual subscription	DLCSBYEAR001
Installation	
Installation and commissioning of one DeviceLink Connect mote; travel not included; sensor installation charged separately	INSTRMMODULE
Installation and commissioning of one DeviceLink Connect sensor; travel not included; mote installation charged separately	INSTRMSENSOR
Extended warranty	
Extended warranty plan for DeviceLink Connect; covers one year; priced per DeviceLink Connect module and covers mote, cables, and basic sensors; does not cover temp-RH or CO ₂ sensors	EWPRMMODULE
Extended warranty plan for DeviceLink Connect advanced remote monitoring sensors, including temp-RH and CO ₂ sensors; covers one sensor for one year	EWPRMSENSOR
Calibration	
ISO 9001 calibration (single monitoring probe) using NIST-traceable standards and certificate with before-and-after data	CALBCRM1
ISO 9001 calibration (dual monitoring probe) using NIST-traceable standards and certificate with before-and-after data	CALBCRM2
ISO 17025 accredited calibration (single monitoring probe) using NIST-traceable standards and accredited certificate with data and uncertainties	CALPRRM1
ISO 17025 accredited calibration (dual monitoring probe) using NIST-traceable standards and accredited certificate with data and uncertainties	CALPRRM2

Subscriptions and services

Upgrade your DeviceLink Connect system to utilize Thermo Scientific™ InSight Analytics software by simply adding a license and subscription.

Each license is a one-time purchase for a single DeviceLink Connect module. An annual subscription is required for the analytics service. Speak with your Thermo Scientific representative for more details.

Optional InSight Analytics subscription and services upgrade

License name	Description	Subscription credits required	Cat. No.
InSight Analytics software licenses and subscriptions			
Pulse License	One-point monitoring with customizable alarms	0.5	INSSW-LICEN-1014
Pulse Plus License	One- to two-point monitoring with customizable alarms	1	INSSW-LICEN-1015
Labs License	One- to two-point monitoring with alarms and trending analysis	1.5	INSSW-LICEN-1016
EKG License	One- to four-point monitoring with alarms, trending analysis, and predictive analytics	2	INSSW-LICEN-1018

InSight subscription ordering information

Description	Cat. No.
InSight subscription credit packages	
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: 1,000 credits	INSSWSUB1000

InSight service support packages

Description	Cat. No.
Installation and training	
Four hours of webinar-based training for InSight system—unlimited attendees	INST-INSIGHT1041
System configuration and network testing	
Software configuration and network test (per install); send Canary test mote; use Canary mote to test network configuration; configure software and verify good mote connectivity; per site, 1–25 motes	INST-INSIGHT1045
Software configuration and network test (per install); send Canary test mote; use Canary mote to test network configuration; configure software and verify good mote connectivity; per site, 26–50 motes	INST-INSIGHT1046
Software configuration and network test (per install); send Canary test mote; use Canary mote to test network configuration; configure software and verify good mote connectivity; per site, more than 51 motes	INST-INSIGHT1042

Compatible equipment

Device compatibility with the DeviceLink Connect system with on-board serial and USB port connections

Type of equipment	Model series
Ultra-low temperature freezers (-50°C to -80°C)	TSX Series, TDE Series, TLE Series, TSU Series
	Revco RDE Series, RLE Series, UxF Series
	Forma FDE Series, 89000 Series, 88000 Series
	HERAfreeze HDE Series, HLE Series, HFU-T Series
Ultra-low temperature freezers (-10°C to -40°C)	TDE Series
	Revco RDE Series
	Forma FDE Series HERAfreeze HDE Series
High-performance refrigerators (2°C to 8°C)	TSX Series
High-performance freezers (-20°C, -30°C)	
CO ₂ incubators	Heracell 150i and 240i Series (standard RS-232 connection)
	Heracell VIOS 160i and 250i Series (standard USB connection)
	Forma i160, i250, Series 3 (standard USB connection)

Contact your Thermo Scientific sales representative for additional wireless monitoring solutions for equipment not listed here.



For a complete list of compatible equipment by model number, go to thermofisher.com/dlcequipment

Learn more at thermofisher.com/dlc

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