Oceasoft™

PRODUCTS & SERVICES 2019

WIRELESS MONITORING, CALIBRATION, TRAINING, AND SUPPORT

"Innovating for a safer world"

Contents

Oceasoft™

OCEASOFT is a leading provider of connected solutions for monitoring and tracking critical physical parameters such as temperature, humidity, CO_2 levels, and more. Our goal is to help ensure integrity and compliance for sensitive products during storage, production, and shipping phases, as well as your equipment. OCEASOFT's remote monitoring solutions enable you to keep a close eye on physical parameters that can impact the quality of your products.

Commitment

Respect

Expertise

Challenge

Innovation

OCEASOFT is committed to providing reliable solutions for your monitoring challenges, respecting industry standards and satisfying the quality requirements that are important for you. With better peace-of-mind, our goal is to allow you to spend more time concentrating on your core activities.

RECOMMENDED APPLICATIONS	Cobalt X1 / X2 p. 8	Cobalt ML3 p. 10	Cobalt L3 p. 12	Cobalt 2 p. 14	Cobalt T p. 16	Emerald p. 18	Atlas / Phoenix p. 19
Life sciences (Pharma / Lab /Health)	●		●	●	●	●	
Agri-food		●	●	●			
Transport & logistics		●				●	●
Retail / restaurants		●	●			●	
ENVIRONMENTS							
Ambient temperature	●	●	●	●	●	●	●
Shipping, packages		●	●			●	●
Cold rooms		●	●	●		●	●
Refrigerators	●	○	●	●		●	●
Freezers	●	○	●	●			
Deep freezers (-80°C)	●		●	●			
Nitrogen tanks	●		●	●		●	
Water baths, autoclaves	●		●	●		●	
Incubators	●		●	●		●	●
Ovens	●		●	●			
Clean rooms	●		●	●		●	●
Detection systems (on/off, open/close)	●			●			
Animal laboratory facilities					●		
MONITORING							
Products in packaging							●
Goods, merchandise						●	●
Vehicles		●				●	●
Material and equipment	●	●	●	●		●	○
TECHNOLOGIES							
OCEASOFT wireless solution				●	●		
LoRaWAN	●	●	●				
Bluetooth	●	●	●			●	●

● Recommended applications   ○ Possible applications

OCEASOFT provides a complete vertical offering, from sensors to data integration in customers' back-end information systems, with expertise covering three key areas: sensors and calibration, wireless data transmission, and related software for web, PC, and mobile platforms.

Fixed and mobile wireless data loggers

Calibration by accredited in-house metrology laboratory

Analog and digital sensors, All-digital Smart-Sensors

Installation, training, technical support

Back-end data management and alert system

Web and mobile applications
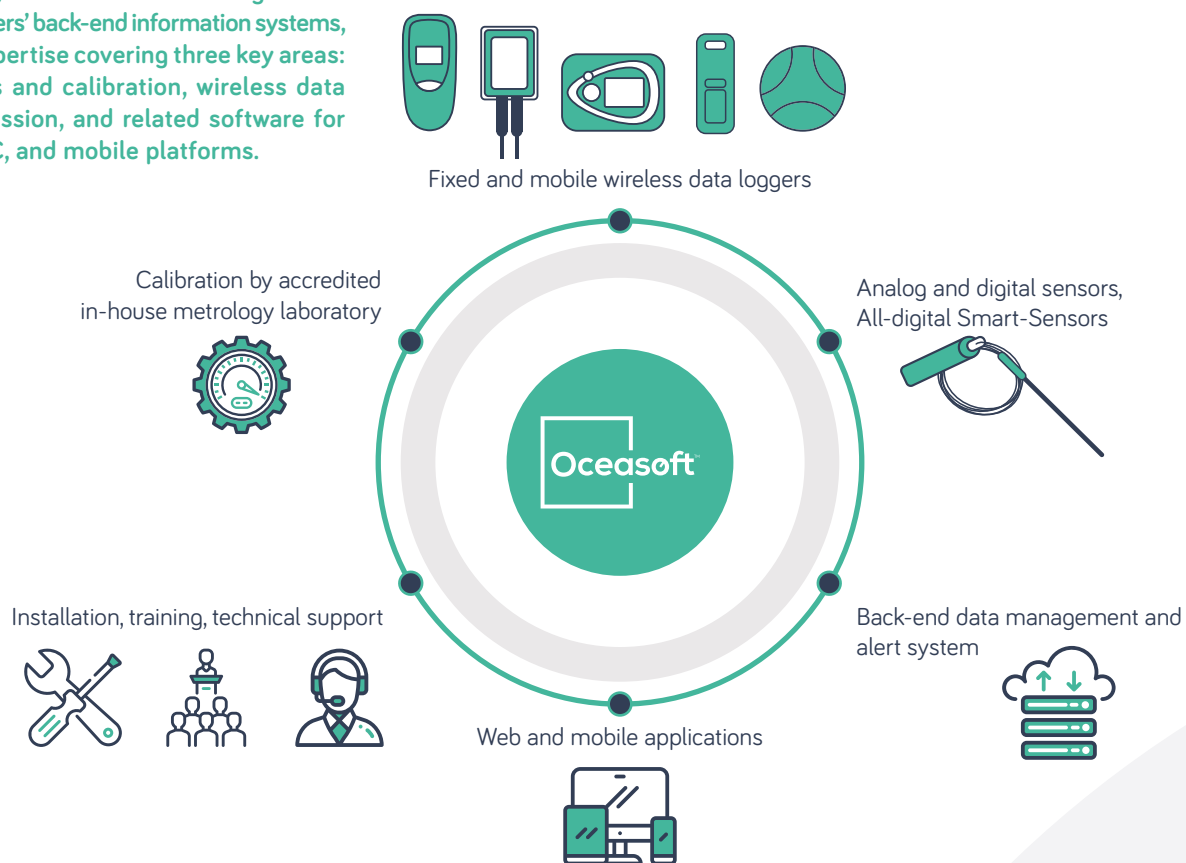
OCEASOFT's technical and human expertise, and the quality of its ongoing services for customers, are further demonstrated by its ISO 9001:2015 certification and in-house metrology laboratory, accredited ISO/IEC 17025.

OCEASOFT has invested heavily in R&D for many years to satisfy customer needs, notably integrating cutting-edge Internet-of-Things technologies such as LoRaWAN™, LTE, NFC, Bluetooth®, and more, to provide relevant monitoring solutions for today and in the future. Listed on the Euronext Growth® market since January 28, 2015, OCEASOFT continues to expand and supply its customers throughout the EMEA, North America, and APAC regions. The company opened a subsidiary in New Jersey in 2016.

- ● Main office
- ○ Subsidiary
- ● Distributors

MONITORING SOLUTIONS

OCEASOFT fixed and mobile monitoring solutions cover all your sensor monitoring needs from life science laboratories and equipment to food and product storage facilities to logistics and shipping phases. You benefit from easy installation, a wide range of sensors, and robust wireless connectivity to keep close track of critical environment parameters at all times and rest assured with respect to traceability, auditability, and regulatory compliance.

WIRELESS DATA LOGGERS

OCEASOFT provides connected data loggers adapted to a wide variety of monitoring situations. Our products use the latest communication and sensor technologies for maximum flexibility and reliability, while respecting your need for easy-to-use solutions that help protect your goods and enable you to refocus your attention on your core activity. To keep up with a growing need for mobility, our solutions monitor your sensitive shipments at the bulk, palette, and product levels can be integrated with your fixed monitoring system or used independently, leveraging wireless connectivity to receive alert notifications and access data via the Cloud 24/7.

Cobalt X1 / Cobalt X2

Simplicity and performance in a new-generation data logger featuring up to four wired and wireless sensor channels for monitoring temperature, humidity, CO_2 levels, and more

Cobalt X1 and Cobalt X2 provide a flexible solution for monitoring key environment parameters simultaneously on several pieces of equipment in your lab or storage facilities. Network/Cloud connectivity with LoRaWAN™ wireless communication makes it easy to get your data anywhere, and your alerts fast.

- Simple solution for monitoring wired and/or Bluetooth® wireless sensors (any combination of up to four sensors with X2; up to two sensors with X1)
- Audio and visual alarms on module in real-time; e-mail, voice, and text alerts sent by Cloud platform
- Interactive touch-screen display, with alarm acknowledgment directly on the module
- Long-lasting performance with low power consumption and long-range LoRaWAN™ wireless connectivity on private networks or LoRaWAN™ operator networks
- Data and system management with OCEAView web application

HOW IT WORKS

1. Set up Cobalt X1 / X2 modules at your site, then plug in wired sensors (which are recognized automatically) and/or pair Bluetooth® sensors.
2. Use the module's touch screen to connect wirelessly to your on-premises LoRaWAN™ receiver or a public network.
3. Login to the OCEAView web application, set up the X1/X2 module and configure data logging settings, such as upper and lower limit values. The module is updated and data logging begins.
4. The data logger module collects data from its sensors and transfers the information to the Cloud or your server as programmed.
5. Readings are shown on the screen; alerts are indicated directly on the module or sent as notifications via SMS, e-mail, and voice message.

RELATED PRODUCTS

Sensors

LoRaWAN receiver

Alarms & Alerts

Atlas/Emerald/Phoenix

OCEAView for X1/X2

KEY FEATURES

- For monitoring wide temperature ranges, humidity, CO_2, differential pressure, 4-20 mA, 0-5 V, 0-10 V, and dry contact
- Supports OCEASOFT Smart-Sensors, digital and Pt100 sensors, and OCEASOFT Atlas and Emerald wireless modules
- **Cobalt X1**: up to 2 sensor channels (1 physical connector)
  Cobalt X2: up to 4 sensor channels (2 physical connectors)
- 2.4" (6.1 cm) glove-compatible, color touch-screen for easy setup, latest readings, alarm status, alarm acknowledgment with PIN code
- Alarms indicated by flashing lights and buzzer (sound only when on AC power), and transmitted to OCEAView platform for fast user notification
- Dry contact output for use with external alert devices
- Temperature displayed in °C or °F
- Continuous monitoring with configurable read interval from 4 minutes to 4 hours, or 10 minutes to 4 hours on public LoRaWAN™ networks

Module details

- Operating conditions: 0°C to +50°C, 0% to 90% RH (non-condensing)
- Power: USB (AC adapter included) or 2 x replaceable Lithium-Thionyl Chloride batteries[2] (available in packs of 6)
- Dimensions: 100.8 x 110.8 x 29.6 mm (4.0 x 4.4 x 1.1 in.)
- Weight with batteries: 180 g (6.4 oz.)
- Mounting kit (plastic holder, screws, magnet, lockable)
- Protection index: IP30, ABS casing

Data management

- Unlimited storage in OCEAView, module memory for up 4,000 readings per channel (8,000 total on X1; 16,000 total on X2)
- Module respects 21 CFR Part 11 guidelines with passkey protection and event tracking in audit trail

Connectivity

- LoRaWAN™ wireless technology: network and Cloud access via local receiver or public LoRaWAN™ operator network. Very strong indoor coverage, with line-of-sight range up to 10 miles (16 km)*
- LoRaWAN™ regional channel plans in ISM radio spectrum: EU868, US915, AU915, AS923, KR920, IN865
- Bluetooth® Low Energy wireless technology to connect OCEASOFT wireless sensors; range up to 50 meters line-of-sight

* LOS (Line-of-sight) estimate, depending on the environment and receiver antenna orientation

PART NUMBER[1]	DESCRIPTION	SENSORS
Cobalt X1 / X2 modules for use with external sensors to be ordered separately (see Sensors on page 26)		
ENR.X1#.P001	Cobalt X1 module (without sensors)	up to 2
ENR.X2#.P001	Cobalt X2 module (without sensors)	up to 4

(1) Please specify your geographical region when ordering. (2) Contact us if you need to order without batteries.

Cobalt ML3

Wireless data logger featuring long-range LoRaWAN™ connectivity for temperature monitoring in shipping and transport scenarios.

Cobalt ML3 offers a robust and scalable solution to help cold-chain logistics professionals meet the challenges of mobile monitoring. With its easy-to-read LCD screen and specially adapted LoRaWAN™ connectivity, this module is ideal for use at large sites and when transporting products between multiple sites.

- Designed for mobile monitoring of sensitive products
- Detects LoRaWAN™ receivers automatically and uploads readings and alarms when connected to public or private LoRaWAN™ operator networks
- Long-range wireless connectivity keeps infrastructure costs down
- Integrated Bluetooth Smart® connectivity enables Cobalt ML3 to be used with Watch Mode monitoring in OCEAView Mobile for convenient tracking in the field

HOW IT WORKS

1. Configure your Cobalt ML3 module with the CobaltSet mobile app on your smartphone.
2. When you activate the module, it connects either to your private LoRaWAN™ network or to a public network operated by a LoRa Alliance network operator.
3. When connected to your private LoRaWAN™ network, the module reads its sensor and transmits the data automatically every 8 readings. When connectivity is not available because the module is on the move, up to 4,000 readings are stored in memory (about 28 days with readings every 10 minutes). The data is uploaded wirelessly when LoRaWAN™ connectivity is reestablished, even at another location.
4. When configured to use a public network, the module connects and sends data whenever a connection is available. Otherwise it stores readings in memory.
5. Alert is sent immediately when alarm is detected if the module is connected without waiting for the programmed transfer period.

Bluetooth SMART   LoRaWAN™   machineQ A COMCAST SERVICE   Objenious by Bouygues Telecom

RELATED PRODUCTS

Sensors
p. 22

LoRaWAN receiver
p. 33

OCEAlert
p. 36

OCEAView Mobile
p. 44

CobaltView
p. 46

KEY FEATURES

- High-visibility LCD display, slightly inclined for easy reading, with temperatures displayed in °C or °F
- **Module with internal sensor**: temperature (0°C to +50°C) **Module with connector for Smart-Sensors** (see p. 22)
- Configurable sensor read interval from 4 minutes to 4 hours (10 minute minimum transfer interval on public LoRaWAN™ networks)
- Automatic geotagging when connected to LoRaWAN™ network
- Calibration options by OCEASOFT laboratory: ISO/IEC 17025 (COFRAC) accredited, OCEASOFT certified, or NIST traceable

Data, alarms, and alerts

- Complete integration with CobaltView web application and OCEAlert notification platform
- Memory for 4,000 readings, unlimited storage with CobaltView web application (OCEACloud platform)
- Alarms for excursions, low battery, and technical issues
- Alarm status displayed with color indicators on module LCD; automatic alert transmission by e-mail via CobaltView platform; voice message and SMS/text notification via OCEAlert

Connectivity

- LoRaWAN™ wireless protocol for long-range connectivity up to 16 km (10 mi.) LOS*
- Specially adapted for mobile use
- Data sent automatically to public LoRaWAN™ operator network or private (on-premises) LoRaWAN™ receiver, uploaded to CobaltView/OCEACloud via Ethernet, Wi-Fi, or cellular network
- LoRaWAN™ regional channel plans in ISM radio spectrum: EU868, US915, AU915, AS923, KR920, IN865
- Bluetooth Smart® for setup with CobaltSet mobile application (free for iOS and Android) and Watch Mode in OCEAView Mobile

Module details

- Operating conditions: standard 0°C to +50°C, 0% to 90% RH; with IP67 protective casing -30°C to +50°C
- Dimensions: 86 x 64 x 29.6 mm (3.4 x 2.5 x 1.2 in.), 87.8 g (3.1 oz.)
- Protection index: IP65 with ABS casing, IP67 with external case
- 3.6 V Lithium battery (3600 mAh), up to 1 year battery life**, user-replaceable (available in 5-packs: p/n ACC.ENR.0004)
- Mounting kit (holder, cable clips, screws, Velcro®, magnet, lockable)

* Actual range depends on the environment. Site survey for wireless performance recommended.
** Depending on sensor type and usage
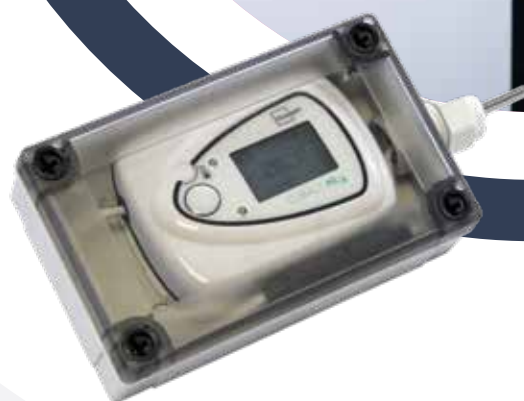
PART NUMBER	DESCRIPTION	SENSOR(S)
Cobalt ML3 module with integrated sensor		
ENR.ML#.P001	Module with internal temperature sensor (IP65, 0°C to +50°C)	1
Cobalt ML3 module for use with sensor to be ordered separately (see Sensors)		
ENR.ML#.P002	Module for external sensor (IP67 casing, 1 connector)	1 or 2
ENR.ML#.P003	Module for external sensor (IP65, 1 connector)	1 or 2
ACC.ENR.0043	Waterproof casing, clear plastic, IP67	n/a

(1) Please specify your geographical region when ordering. (2) Contact us if you need to order without batteries.

Cobalt L3

Temperature and humidity data logger featuring long-range LoRaWAN™ wireless connectivity

Cobalt L3 is a wireless data logger that monitoring temperature and humidity conditions to help protect your sensitive products and facilities. This module features LoRaWAN™ connectivity for wireless range up to 10 miles (16 km) to simplify setup at even the largest sites.

- Real-time alarms and alerts
- Secure access to data
- Long-range wireless connectivity, cost-effective operation
- Combine with Cobalt ML3 for a monitoring solution that covers both storage and transport phases (page 10)
- Long-lasting performance with low power consumption and long-range LoRaWAN™ wireless connectivity on private networks or LoRaWAN™ operator networks

HOW IT WORKS

1. Featuring LoRaWAN® connectivity, Cobalt L3 is very easy to install, with your whole site generally needing only a single receiver to collect data wirelessly from all locations.
2. Cobalt L3 may be equipped with several different types of sensors, including selected OCEASOFT Smart-Sensors for easy recalibration and maintenance via our metrology laboratory's sensor exchange service.
3. Data is stored in module memory and uploaded automatically at regular intervals to OCEACloud, which interacts with the responsive CobaltView web application for remote viewing and management using a smartphone, tablet, or computer.
4. In case of excursions or technical issues, the system sends alerts via e-mail or via SMS/text or voice message using the optional OCEAlert Internet-based platform.

Bluetooth SMART   **LoRaWAN**™   machineQ™ A COMCAST SERVICE   Objenious by Bouygues Telecom

RELATED PRODUCTS

KEY FEATURES

- High-visibility LCD display with temperatures displayed in °C or °F
- **Module with internal sensor**: temperature (0°C to +50°C)
  Module with connector for external sensors (see p. 22)
- Configurable sensor read interval from 4 minutes to 4 hours;
  transfer interval from 32 minutes to 32 hours)
- Calibration options by OCEASOFT laboratory: ISO/IEC 17025
  (COFRAC) accredited, OCEASOFT certified, or NIST traceable

Data, alarms, and alerts

- Complete integration with CobaltView web application
  and OCEAlert Alarm Management System
- Memory for 4,000 readings (2,000 + 2,000 on dual sensor
  modules), unlimited storage with CobaltView web application
- Alarms for excursions, low battery, and technical issues
- Alarm status displayed on module LCD, automatic alert
  transmission by e-mail via CobaltView platform,
  or voice message or SMS/text via OCEAlert

Connectivity

- LoRaWAN™ wireless protocol for long-range connectivity
  up to 16 km (10 mi.) LOS*
- Data sent automatically to public LoRaWAN™ operator network
  or private (on-premises) LoRaWAN™ receiver, uploaded to
  CobaltView/OCEACloud via Ethernet, Wi-Fi, or cellular network
- LoRaWAN™ regional channel plans in ISM radio spectrum: EU868,
  US915, AU915, AS923, KR920, IN865
- Bluetooth Smart® for setup with CobaltSet mobile application
  (free for iOS and Android)

Module details

- Operating conditions: standard 0°C to +50°C, 0% to 90% RH;
  with IP67 protective casing -30°C to +50°C
- Dimensions: 208 x 34 x 64 mm (8.1 x 1.3 x 2.5 in.), 150 g (5.3 oz.)
- Protection index: IP61 with ABS casing, IP67 with external case
- 3.6 V Lithium battery (3600 mAh), up to 2 years battery life**,
  user-replaceable (available in 5-packs: p/n ACC.ENR.0004)
- Mounting kit (plastic holder, cable clips, screws, Velcro®, magnet)

* Actual range depends on the environment. Site survey for wireless
performance recommended.
** Depending on sensor type and usage

PART NUMBER	DESCRIPTION	SENSOR(S)
Cobalt L3 module with integrated sensor		
ENR.L3#.P003	Module with internal temperature sensor (0°C to +50°C)	1
Cobalt L3 module for use with sensors to be ordered separately (see Sensors)		
ENR.L3#.P001	Module for external sensor (1.5 m / cable, 1 connector)	1 or 2
ACC.ENR.0030	IP67 casing for Cobalt L3 with external sensor	n/a

(1) Please specify your geographical region when ordering. (2) Contact us if you need to order without batteries.

Cobalt 2

Wireless data logger supporting a wide range of temperature, relative humidity, CO_2, differential pressure, dry contact, 4-20 mA, 0-5 V sensors

Cobalt 2 is a wireless sensor-based data logger for temperature and other key environment parameters, perfect for monitoring your refrigerators, cold rooms, freezers and deep freezers (-80°C), incubators, Nitrogen tanks, blood banks, clean rooms, and much more...

- Enables you to monitor a variety of environment parameters effortlessly
- Fully integrated with ThermoServer-ThermoClient software suite and real-time alarm management system
- Data uploaded automatically to central server
- Robust long-range wireless performance for easy on-site connectivity

HOW IT WORKS

1. Choose a ready-to-use module with sensor already attached or connect the desired sensor to your Cobalt 2 module.
2. Configure settings with the ThermoClient software, including sensor read and data transfer intervals, as well as upper and lower value limits to trigger alarms in case of excursions.
3. Modules read their sensor(s) and store the data in memory, transferring it to the ThermoServer system wirelessly as programmed.
4. Any time an alarm or technical issue occurs, 24/7, the system sends e-mail alerts or alerts via the optional OCEAlert platform by SMS/text or voice message.
5. Users can access sensor data, details, and alarms remotely via ThermoClient, or data can be synchronized with the OCEACloud platform (optional) for viewing on smartphones and tablets.

Over
160,000 modules
deployed worldwide

MODULE VARIATIONS

4-20 mA or 0-5 V

This module connects with all industry-standard equipment that generates an active output current of 4-20 mA or 0-5V. Current is measured and interpreted to provide information for various applications, such as measuring wind speed, position angles, particle counters, fill-levels, etc.

Dry contact input

This module connects with standard industry devices that are equipped with a dry contact output. The Cobalt 2 dry contact module emits a low electrical current to detect whether the switch in the other device is open or closed.

Differential pressure

Measures relative pressure between two zones. With module in "normal" pressure space, the input tube monitors another space for over- or underpressure: -500 to +500 Pa (-5 to + 5 cm in H_2O); tube: L: 50 cm, Ø: 4 mm (4-5 mm adapter); full compatibility in air, Nitrogen (limited in O_2); up to 1 bar overpressure.

RELATED PRODUCTS

KEY FEATURES

- High-visibility LCD display
- **Modules with internal sensor**: temperature (0°C to +50°C), differential pressure (-500 Pa to +500 Pa)
  Modules with input wires for industry standard dry contact, 4-20 mA or 0-5 V devices
  Modules with connector(s) for external sensor(s): Pt100 sensors (-200°C to +350°C), digital sensors (-40°C to +120°C), relative humidity, CO_2
- Configurable read interval from 4 minutes to 4 hours
- Calibration options by OCEASOFT laboratory: ISO/IEC 17025 (COFRAC) accredited, OCEASOFT certified, or NIST traceable

Data, alarms, and alerts

- Complete integration with ThermoClient/ThermoServer suite and advanced Alarm Management System/OCEAlert
- Memory for 3,000 readings (1500 + 1500 on dual sensor modules), unlimited storage with ThermoServer
- Alarms for excursions, low battery, and technical issues
- Alarm status displayed on module LCD, automatic alert transmission by ThermoServer via USB modem or OCEAlert

Connectivity

- Wireless range up to 700 m (2,300 ft. line-of-sight*)
- Up to 3 may be used as wireless repeaters for other modules
- ISM frequency bands with 4 international options: 915 MHz (US/CAN), 868 MHz (Europe), 434 MHz (Asia/Pacific), 867 MHz (India)

Module details

- Operating conditions: standard 0°C to +50°C, 0% to 90% RH; with IP67 protective casing -30°C to +50°C
- Dimensions: 208 x 34 x 64 mm (8.1 x 1.3 x 2.5 in.), 150 g (5.3 oz.)
- Protection index: IP65 ABS casing, IP67 with external case
- 3.6 V Lithium battery (3600 mAh), up to 2 years battery life**, user-replaceable (available in 5-packs: p/n ACC.ENR.0004)
- Mounting kit (plastic holder, cable clips, screws, Velcro®, magnet)
- FCC, CE, IC, CMII, WPF certifications

* Actual range depends on the environment. Site survey for wireless performance recommended. ** Depending on sensor type and usage

PART NUMBER[1]	DESCRIPTION	NOTES	SENSOR(S)
Cobalt 2 modules with integrated sensor			
ENR.C2#.P001	Module with internal temperature sensor (0°C to +50°C)		1
ENR.C2#.P010	Cobalt 2 with internal differential pressure sensor (*see left page*)		1
Cobalt 2 modules for use with external sensors to be ordered separately (see Sensors)			
ENR.C2#.P002	Digital temperature module (1.5 m/5 ft cable, 1 connector)	Kit includes 20 cm/7.9 in. flat cable Module in IP67 case: ENR.C2#.P003	1
ENR.C2#.P005	Dual digital temperature module (2 x 1.5 m/5 ft cables, 2 connectors)	Kit includes 20 cm/7.9 in. flat cables	2
ENR.C2#.P006	Dual temperature / humidity module (1 m/3.3 ft cable , 1 connector)	Module in IP67 case: ENR.C2#.P007	2
ENR.C2#.P008	Analog Pt100 temperature module (1.5 m/5 ft cable , 1 connector)		1
ENR.C2#.P009	Dual temperature / CO_2 module (1 m/3.3 ft cable, 1 connector)		2
Cobalt 2 modules for standard third-party devices[2]			
ENR.C2#.P011	4-20 mA input module for active loop (2.9 m/9.5 ft cable, 2 wires)	External IP67 case ACC.ENR.0006	1
ENR.C2#.P012	0-5 V input module (2.9 m/9.5 ft cable, 2 wires)		1
ENR.C2#.P013	Dry contact - binary input module (2.9 m/9.5 ft cable, 2 wires)		1

(1) Replace "#" in part number with wireless frequency for your geographic region: 4 = 434 MHz, 5 = 915 MHz, 7 = 867 MHz, 8 = 868 MHz.
(2) Please contact us if you need to order without batteries.

Cobalt T

Multi-parameter wireless data logger for animal laboratory facilities

Specifically designed to meet the requirements of European Union legislation 2010/63/EU directive concerning the protection of animals used for scientific purposes, Cobalt T simultaneously measures temperature, relative humidity and day/night light cycles.

- Triple-sensor data logger for temperature, humidity, and day/night cycles
- Compatible with ThermoServer-ThermoClient solution
- Data uploaded automatically to central server
- Robust long-range wireless performance for easy on-site connectivity

KEY FEATURES

- High-visibility LCD display, inclined for easy reading
- **Monitoring ranges:** Temperature: -30°C to +50°C; relative humidity: 5% to 95% (non-condensing)
- Configurable read and transfer interval
- Calibration options by OCEASOFT laboratory: ISO/IEC 17025 (COFRAC) accredited, OCEASOFT certified, or NIST traceable

Data, alarms, and alerts

- For use with ThermoClient/ThermoServer suite
- Memory for 3,000 readings, unlimited storage with ThermoServer
- Alarms for excursions, low battery, technical issues
- Alarm status displayed on module LCD, alert transmission by ThermoServer/OCEAlert

Connectivity

- Wireless range up to 400 m (1,300 ft. line-of-sight*)
- ISM frequency bands with 4 international options: 915 MHz (US/CAN), 868 MHz (Europe), 434 MHz (Asia/Pacific), 867 MHz (India)

Module details

- Operating conditions:
  -30°C to +50°C, 0% to 90% RH
- Dimensions: 86 x 64 x 29.6 mm (3.4 x 2.5 x 1.2 in.), 87.8 g (3.1 oz.)
- Protection index: IP65
- 3.6 V Lithium battery (3600 mAh), up to 1 year battery life** , user-replaceable (available in 5-packs: p/n ACC. ENR.0004)
- Mounting kit (holder, cable clips, screws, Velcro®, magnet, lockable)

* Actual range depends on the environment. Site survey for wireless performance recommended. ** Depending on usage.

HOW IT WORKS

1. Configure settings with the ThermoClient software, including sensor read and data transfer intervals, as well as upper and lower value limits to trigger alarms in case of excursions.
2. Modules read their sensor(s) and store the data in memory, transferring it to the ThermoServer system wirelessly as programmed.
3. Any time an alarm or technical issue occurs, 24/7, the system sends e-mail alerts or alerts via the optional OCEAlert platform by SMS/text or voice message.
4. Users can access sensor data, details, and alarms remotely via ThermoClient, or data can be synchronized with the OCEACloud platform (optional) for viewing on smartphones and tablets.

PART NUMBER	DESCRIPTION
Cobalt T module[1]	
ENR.CBT.P#01	Triple sensor data logger (T°, relative humidity, light)

(1) Replace "#" in part number with wireless frequency for your geographic region:
4 = 434 MHz, 5 = 915 MHz, 7 = 867 MHz, 8 = 868 MHz.
(2) Please contact us if you need to order without batteries.

RELATED PRODUCTS

OCEAHost
p. 55

Alarms & Alerts
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Receivers & repeaters
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ThermoServer-ThermoClient
p. 48

Testimonial

"

By setting up Cobalt X2 modules, we can now manage alarms remotely using a smartphone, which is an undeniable benefit for us in terms of protection and operational practicality, especially for on-call staff. In addition, we can handle installation by ourselves, unlike a previous system that required our IT department to get involved to manage a special temperature server," adds Hélène Blanché-Koch.

Hélène Blanché-Koch, Head of Biological Resources Centre Fondation Jean Dausset - CEPH (Human Polymorphism Study Center)

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Emerald

Small-footprint temperature data logger featuring Bluetooth® wireless connectivity

Specially designed to meet your cold-chain logistics needs, Emerald ensures temperature traceability on the move. From storage to delivery, Emerald helps you protect sensitive and perishable products.

- Robust construction for use in harsh transport scenarios
- Compatible as a wireless sensor for Cobalt X2
- Fits neatly inside nearly any type of container, compartment, or enclosure
- Automated data transfer to Cloud platform via OCEABridge
- Data access, monitoring, and alerts with OCEAView mobile or web application

KEY FEATURES

- **Module with internal sensor**: -40°C to +85°C (resolution 0.0625°C)
  Module with connector for external sensor: Pt100 sensor -50°C to +200°C or -200°C to +50°C
- Immediate, delayed, or programmed data logging start
- Calibration options by OCEASOFT laboratory: ISO/IEC 17025 (COFRAC) accredited, OCEASOFT certified, or NIST traceable

Data, alarms, and alerts

- Configurable read interval (15 seconds to 4 hours)
- Up to 16,000 readings in internal memory; unlimited storage on Cloud (voucher purchase required)
- E-mail alerts via OCEAView Web application

Connectivity

- Bluetooth® Smart 5.0 wireless technology: LOS range up to 50 meters*
- Recognized by Cobalt X2 as wireless sensor
- NFC for fast wireless programming on OCEABench

Module details

- EN 12830 certified for the transport, storage, and distribution of frozen and chilled food
- Operating conditions: -40°C to +85°C; 0 to 90% relative humidity non-condensing
- Dimensions: Ø 50 mm x 20 mm (Ø 1.9 x 0.8 in.), 48 g (11.5 oz.)
- Protection index: IP67 with internal sensor, IP40 with external sensor
- 1/2 AA battery (1200 mAh), lasts up to 1 year**, user-replaceable
- Mounting kit (screw/magnetic mount)
- FCC, EC, IC, Japan, Australia, New Zealand modular approvals

HOW IT WORKS

1. Configure your Emerald module with the OCEAView mobile app on your smartphone, or use OCEABench for high-volume scenarios.
2. Place the Emerald module in the space to be monitored. With Bluetooth® wireless technology, sensor readings can be collected, even through packaging, at any time.
3. Data is recorded in module memory, then typically transmitted to the OCEAView Cloud platform via OCEAView Mobile or OCEABridge at any point along the logistics chain.
4. Alerts are displayed in the mobile app or sent by e-mail immediately when detected by the OCEAView Cloud platform.

PART NUMBER	DESCRIPTION
Module with internal sensor	
ENR.EMD.P002	Internal sensor (-40°C to + 85°C)
Emerald module for use with Standard Sensors (see Sensors)	
ENR.EMD.P003	Module for external Pt100 sensor
Accessories	
Contact us	Color identification rings (5- or 10-pack)
ACC.EMD.0012	Set of 4 x 1/2 AA (LR6) batteries (one per module)
ACC.EMD.0013	QR code app download stickers (50)

* Actual range depends on the environment. ** Depending on usage.

RELATED PRODUCTS

Atlas

Transport　　**Logistics**

Compact, limited duration data logger featuring Bluetooth® wireless connectivity

Atlas meets the needs of supply chain stakeholders for continuously monitoring temperature in close proximity to products. Atlas enables end-to-end traceability for sensitive products from their point of origin to their final destination.

- Small design enables monitoring ambient temperature directly inside packaging
- Compatible as a wireless sensor for Cobalt X2
- Automated data transfer to Cloud platform via OCEABridge
- Data access, monitoring, and alerts with OCEAView mobile or web application
- Cost-effective solution reusable up to 1 year

ATLAS

SERIAL NUMBER
E204020007XX

HOW IT WORKS

1. Configure your Atlas module with the OCEAView mobile app on your smartphone, or use OCEABench for high-volume scenarios.
2. Integrate Atlas directly in your production line to monitor temperature-sensitive products over their entire lifecycle. With Bluetooth wireless technology, sensor readings can be collected, without having to open packaging.
3. Use OCEAView Mobile or OCEABridge to read and upload data to the OCEAView Cloud platform or on-premises server at any point in the logistics chain.
4. Alerts are displayed in the mobile app or sent by e-mail immediately when detected by the OCEAView Cloud platform.

KEY FEATURES

- **Module with internal sensor**: -30°C to +70°C (resolution 0.01°C)
- Immediate, delayed, or programmed data logging start
- Calibration options by OCEASOFT laboratory: ISO/IEC 17025 (COFRAC) accredited, OCEASOFT certified, or NIST traceable

Data, alarms, and alerts

- Configurable read interval (15 seconds to 4 hours)
- Up to 16,000 readings stored in internal memory; unlimited storage on Cloud platform (Cloud-enabled by default, no voucher purchase required)
- E-mail alerts via OCEAView Web application

Connectivity

- Bluetooth® Smart 5.0 wireless technology: LOS range up to 50 meters*
- Recognized by Cobalt X2 as wireless sensor
- NFC (Near Field Communication) for fast wireless programming on OCEABench

Module details

- DO-160 standard compliant (Environmental Conditions and Test Procedures for Airborne Equipment)
- Operating conditions: -40°C to +85°C; 0 to 90% relative humidity non-condensing
- Dimensions: 81 x 43 x 8 mm (3.2 x 1.4 x 0.3 in), 48 g (11.5 oz.)
- Protection index: IP30
- Lithium battery, duration at least 1 year**, non-replaceable
- FCC, EC, IC, Japan, Australia, New Zealand modular approvals

PART NUMBER	DESCRIPTION
Module with internal sensor	
ENR.ATL.0003	Internal sensor (-30°C to + 70°C)

* Actual range depends on the environment. ** Depending on configuration and ambient temperature (example: expected operation of 440 days at 0°C, with 1 reading per minute).

RELATED PRODUCTS

Cobalt X
p. 8

OCEAView Web
p. 45

OCEAlert
p. 36

OCEABench
p. 28

OCEAView Mobile
p. 44

OCEABridge
p. 29

Phoenix

Credit card format data logger featuring Bluetooth® wireless connectivity

With its ultra-thin design and long battery life, Phoenix is ideal for monitoring temperature-sensitive products during transportation and storage according to parameters that you can define for your specific needs.

- Credit card format designed to fit inside product packaging
- Alarm status indicated by simple button press
- Ideal for use with OCEABench for volume programming and and OCEABridge for automated data collection
- Compatible as a wireless sensor for Cobalt X2
- Also available with support for stability profile monitoring

KEY FEATURES

- **Module with internal sensor**: -5°C to +50°C (resolution 0.0625°C, expanded uncertainty ± 0.5°C)
- Immediate, delayed, or programmed data logging start
- Automatic low-power mode to stop wireless activity during airline flight
- Calibration options by OCEASOFT laboratory: ISO/IEC 17025 (COFRAC) accredited, OCEASOFT certified, or NIST traceable

Data, alarms, and alerts

- Configurable read interval (15 seconds to 4 hours)
- LED indicator for alarm status
- Up to 16,000 readings stored in internal memory; unlimited storage on Cloud platform (Cloud-enabled by default, no voucher purchase required)
- E-mail alerts via OCEAView Web application

Connectivity

- Bluetooth® Smart 5.0 wireless technology: LOS range up to 20 meters (60 ft)*
- Recognized by Cobalt X2 as wireless sensor
- NFC for fast wireless programming on OCEABench

Module details

- DO-160 standard compliant (Environmental Conditions and Test Procedures for Airborne Equipment)
- Operating conditions: -5°C to +50°C; 0 to 99.99% relative humidity non-condensing
- Dimensions: 85.6 x 48 x 4.3 mm (3.4x 1.9x 0.2), 31 g (1 oz.)
- Protection index: IP54
- Lithium batteries, non-replaceable, duration up to 3 years (with 1 year shelf life)**
- FCC, EC, CB certification

HOW IT WORKS

1. With its simple pushbutton and LED interface, Phoenix data loggers are programmed via companion software and hardware tools.
2. The OCEABench programming tool is ideal for high-volume and production-line scenarios. OCEAView Mobile better adapted for handling a few modules.
3. With Bluetooth® wireless technology, sensor readings can be collected and pushed to the OCEACloud platform or on premises server at any point in the product lifecycle, without having to open packaging, using OCEAView Mobile or OCEABridge.
4. Alerts are displayed in the mobile app or sent by e-mail immediately when detected by the Cloud platform.

PART NUMBER	DESCRIPTION
Module with internal sensor	
Contact us	Internal sensor (-5°C to + 50°C)
Contact us	Parexel compatible stability profile monitoring

* Actual range depends on the environment. ** 3-year battery life under standard operating conditions of 2°C to 8°C, with storage before use from 10°C to 20°C. Deployment in extremely cold or hot temperatures may significantly reduce battery life.

RELATED PRODUCTS

SENSORS

Sensors are at the heart of all OCEASOFT monitoring solutions. Our data loggers are equipped with the industry's most advanced and reliable sensors, tightly integrated with wireless data loggers to ensure optimal control over your critical environment parameters in a wide variety of applications.

Sensors

OCEASOFT offers a wide range of external sensors for use with Cobalt and Emerald data loggers, enabling you to monitor a wide range of physical parameters in both fixed and mobile scenarios, with calibration performed expertly by OCEASOFT's metrology laboratory.

OCEASOFT all-digital sensors are designed for Cobalt X-series, L3, and ML3 data loggers, bringing unprecedented simplicity for your new-generation data loggers.

- Sensor memory contains calibration correction coefficients (a/b or a/b/c), measurement uncertainty after calibration, drift after 1 year, and sensor serial number
- Simple plug-and-play operation without any configuration required on supported data logger modules
- At recalibration time, swap with freshly calibrated sensor without any data loss or down time
- Automatic recognition in supported Cobalt modules
- All-digital technology for maximum reliability

OCEASOFT's standard sensors include a wide range of options to cover your monitoring needs with Cobalt 2, Emerald, and selected LoRaWAN™ enabled data loggers.

- Digital and analog sensors covering a wide range of physical parameters
- Robust solutions for a variety of applications

Smart-Sensors

MONITORING	TYPE	DETAILS	
TEMPERATURE *-80°C freezers, industrial applications*	**Pt100**	• **-100°C to +200°C** • Dimensions: Ø 3 mm, L: 100 mm • Stainless steel • Class B (Class A upon request) • 3-wire PTFE cable (4-wire upon request) • Cable length: 350 cm (w/connector) • IP66	**SENSOR PART NUMBER** • SON.TPT.0009 **COMPATIBILITY** • Cobalt X1: ENR.X1#.P001 • Cobalt X2: ENR.X2#.P001 • Cobalt ML3: ENR.ML#.P002 • Cobalt L3: ENR.L3#.P001/4
RESOLUTION	**EXPANDED UNCERTAINTY**		
0.03°C	± 0.08°C to 0.3°C		

MONITORING	TYPE	DETAILS	
TEMPERATURE *Cryogenic freezers, liquid Nitrogen tanks*	**Pt100**	• **-200°C to +50°C** • Dimensions: Ø 3 mm, junction Ø 6 mm, L: 100 mm • Stainless steel • Class B • 3-wire PTFE cable • Cable length: 140 cm (w/connector) • IP66	**SENSOR PART NUMBER** • SON.TPT.0010 **COMPATIBILITY** • Cobalt X1: ENR.X1#.P001 • Cobalt X2: ENR.X2#.P001 • Cobalt ML3: ENR.ML#.P002 • Cobalt L3: ENR.L3#.P001/4
RESOLUTION	**EXPANDED UNCERTAINTY**		
0.03°C	± 0.08°C to 0.3°C		

Note: the values provided for Expanded Uncertainty are those that are generally observed by the OCEASOFT metrology laboratory

Smart-Sensors

MONITORING	TYPE	DETAILS	
TEMPERATURE RELATIVE HUMIDITY *Storage facilities, stability chambers*	**Dual digital sensor**	• **-40°C to +100°C** • **0 to 99.9% RH** • Dimensions: 33 x 11.6 mm • PTFE filter • Flat cable: 20 cm (w/connector) (IP40) • Standard cable: 80 cm (w/connector) • Protection index: IP65	**SENSOR PART NUMBER** • SON.HYG.0003 **COMPATIBILITY** • Cobalt X1: ENR.X1#.P001 • Cobalt X2: ENR.X2#.P001 • Cobalt ML3: ENR.ML#.P002 • Cobalt L3: ENR.L3#.P001/4
RESOLUTION	EXPANDED UNCERTAINTY		
0.01°C 0.05% RH	± 0.3°C to ± 0.5°C ± 4% RH		

MONITORING	TYPE	DETAILS	
CO2, TEMPERATURE, RELATIVE HUMIDITY *Incubators*	**Triple digital sensor**	• **0 to 9.99% CO_2** • **0°C to +50°C** • **0 to 99.9% RH** • Dimensions: 79.5 x 76.5 x 45.5 mm • ABS plastic and polycarbonate casing, PTFE filter • Operating range: 0°C to 50°C, 0 to 95% relative humidity (non-condensing) • Flat cable length: 240 cm (w/connector) • Protection index: IP44	**SENSOR PART NUMBER** • SON.CO2.0005 **COMPATIBILITY** • Cobalt X1: ENR.X1#.P001 • Cobalt X2: ENR.X2#.P001
RESOLUTION	EXPANDED UNCERTAINTY		
0.1% CO_2 0.01°C 0.05% RH	± 0.3% CO_2 ± 0.3°C to ± 0.5°C ± 4% RH		

MONITORING	TYPE	DETAILS	
4-20 mA / 0-5 V / 0-10 V *Current levels, industry standard equipment with 4-20 mA, 0-5 V, or 0-10 V output*	**Single digital sensor**	• **4-20 mA, 0 - 5 V, or 0 - 10 V** • 2-wire cable • Cable length: 290 cm	**SENSOR PART NUMBER** • Contact us **COMPATIBILITY** • Cobalt X1: ENR.X1#.P001 • Cobalt X2: ENR.X2#.P001
RESOLUTION	EXPANDED UNCERTAINTY		
0.01 mA or 0.01 V	Depends on connected device		

MONITORING	TYPE	DETAILS	
DIFFERENTIAL PRESSURE *Laboratories, pressure difference between "clean" and "dirty" spaces*	**Digital sensor**	• -500 to +500 Pa (-5 to + 5 cm in H_2O) • Tube: L: 50 cm, Ø 4 mm (4-5 mm adapter included) • Full compatibility: air, Nitrogen • Limited compatibility: O_2 • Supported overpressure: 1 bar (100 kPa, 400 inches H_2O)	**SENSOR PART NUMBER** • Contact us **COMPATIBILITY** • Cobalt X1: ENR.X1#.P001 • Cobalt X2: ENR.X2#.P001
RESOLUTION	EXPANDED UNCERTAINTY		
Contact us	Contact us		

Sensors

Standard sensors

MONITORING	TYPE	DETAILS	
TEMPERATURE *Refrigerators, cold rooms, freezers, ovens, incubators* *Optional metal pipe contact tip for monitoring Legionella conditions*	**Digital sensor**	• **-40°C to +80°C** • Dimensions: Ø 6 mm, L: 30 mm • Stainless steel • Cable lengths: 27, 100, or 350 cm (w/connector) • Protection index: IP67 • Optional contact tip (ACC.SON.0001)	**SENSOR PART NUMBERS** • SON.TNU.0001 (27 cm cable) • SON.TNU.0002 (100 cm cable) • SON.TNU.0003 (350 cm cable) **COMPATIBILITY** • Cobalt X1: ENR.X1#.P001 • Cobalt X2: ENR.X2#.P001 • Cobalt ML3: ENR.ML#.P002 • Cobalt L3: ENR.L3#.P001/4 • Cobalt 2: ENR.C2#x.P002/P003/P005
RESOLUTION	**EXPANDED UNCERTAINTY**		
0.0625°C	± 0.06°C to 0.25°C		

MONITORING	TYPE	DETAILS	
TEMPERATURE *Ovens, incubators, water baths*	**Digital sensor**	• **-40°C to +120°C** • Dimensions: Ø 6 mm, L: 30 mm • Stainless steel • Cable length: 100 cm (w/connector) • Protection index: IP67 **Submersible version** Dimensions: Ø 6 mm, L: 30 mm Cable length: 200 cm (w/conn.)	**SENSOR PART NUMBERS** • SON.TNU.0005 • Submersible version: contact us **COMPATIBILITY** • Cobalt X1: ENR.X1#.P001 • Cobalt X2: ENR.X2#.P001 • Cobalt ML3: ENR.ML#.P002 • Cobalt L3: ENR.L3#.P001/4 • Cobalt 2: ENR.C2#.P002/P003/P005
RESOLUTION	**EXPANDED UNCERTAINTY**		
0.0625°C	± 0.06°C to 0.25°C		

MONITORING	TYPE	DETAILS	
TEMPERATURE *Food products*	**Digital insertion probe**	• **-40°C to +120°C** • Dimensions: Ø 6 mm, L: 150 mm + handle (100 mm) • Stainless steel • Cable length: 200 cm (w/connector) • Protection index: IP67	**SENSOR PART NUMBER** • SON.TNU.0009 **COMPATIBILITY** • Cobalt X1: ENR.X1#.P001 • Cobalt X2: ENR.X2#.P001 • Cobalt ML3: ENR.ML#.P002 • Cobalt L3: ENR.L3#.P001/4 • Cobalt 2: ENR.C2#.P002/P003/P005
RESOLUTION	**EXPANDED UNCERTAINTY**		
0.0625°	± 0.06°C to 0.25°C		

MONITORING	TYPE	DETAILS	
CO_2 / TEMPERATURE *Incubators*	**Dual digital sensor**	• **0 to 9.99% CO_2** • **0°C to +50°C** • Dimensions: 79.5 x 76.5 x 45.5 mm • ABS plastic and polycarbonate casing, PTFE filter • Operating range: 0°C to 50°C, 0 to 95% relative humidity (non-condensing) • Flat cable length: 240 cm (w/connector) • Protection index: IP 44	**SENSOR PART NUMBER** • SON.CO2.0002 **COMPATIBILITY** • Cobalt 2: ENR.C2#.P009
RESOLUTION	**EXPANDED UNCERTAINTY**		
0.1% CO_2 0.0625°C	± 0.3% CO_2 ± 0.3°C to ± 0.5°C		

Standard sensors

MONITORING	TYPE	DETAILS	
TEMPERATURE RELATIVE HUMIDITY *Storage facilities, stability chambers*	**Dual digital sensor**	• **-40°C to +100°C** • **0 à 99.9% RH** • Dimensions: Ø 12, L: 36.5 mm • Protection index: IP65 • PTFE filter • Optional flat extension cable: 50 cm (contact us)	**SENSOR PART NUMBER** • SON.HYG.0001 **COMPATIBILITY** • Cobalt 2: ENR.C2#.P006
RESOLUTION	**EXPANDED UNCERTAINTY**		
0.0625°C 0.025% RH	± 0.3°C to ± 0.5°C ± 4% RH		

MONITORING	SENSOR	DETAILS	
PT100 TEMPERATURE *Cryogenic freezers, liquid Nitrogen tanks*	**Analog sensor**	• **-200°C to +50°C** • Dimensions: Ø 3 mm, junction Ø 6 mm, L: 150 mm • Stainless steel • Class B • 3-wire PTFE cable • Cable length: 140 cm (w/connector) • IP66	**SENSOR PART NUMBER** • SON.TPT.0002 **COMPATIBILITY** • Cobalt 2: ENR.C2#.P008
RESOLUTION	**EXPANDED UNCERTAINTY**		
0.0625°C	± 0.3°C		

MONITORING	TYPE	DETAILS	
PT100 TEMPERATURE *Ultra-low temperature freezers*	**Analog sensor**	• **-100°C to +150°C** • Dimensions: Ø 3 mm, L: 100 mm • Stainless steel • Class B • 3-wire PTFE cable • Cable length: 350 cm (w/connector) • IP66	**SENSOR PART NUMBER** • SON.TPT.0001 **COMPATIBILITY** • Cobalt 2: ENR.C2#.P008
RESOLUTION	**EXPANDED UNCERTAINTY**		
0.0625°C	± 0.08°C to 0.3°C		

MONITORING	TYPE	DETAILS	
PT100 TEMPERATURE *Incubators, ovens*	**Analog sensor**	• **+100°C to +350°C** • Dimensions: Ø 3 mm, junction Ø 6 mm, L: 150 mm • Stainless steel • Class B • 3-wire glass silk cable • Cable length: 200 cm (w/connector) • IP66	**SENSOR PART NUMBER** • SON.TPT.0003 **COMPATIBILITY** • Cobalt 2: ENR.C2#.P008
RESOLUTION	**EXPANDED UNCERTAINTY**		
0.0625°C	± 0.08°C to 0.5°C		

Sensors & accessories

Standard sensors

MONITORING	TYPE	DETAILS	
PT100 TEMPERATURE *Cryogenic freezers, liquid nitrogen tanks.* *Transport applications when used with Emerald module.*	**Analog sensor**	• **-200°C to +50°C** • Dimensions: Ø 3 mm, L: 40 mm • Stainless steel • Class B • 3-wire PTFE cable • Cable length: 100 cm (w/connector) • Protection index: IP66	**SENSOR PART NUMBER** • SON.TNU.0006 **COMPATIBILITY** • Cobalt 2: ENR.C2#.P002/P003/P005 • Emerald: ENR.EMD.P003

RESOLUTION	EXPANDED UNCERTAINTY
Emerald: 0.03°C Cobalt 2: 0.0625°C	± 0.05°C to 0.25°C

MONITORING	SENSOR	DETAILS	
PT100 TEMPERATURE *Incubators, ovens* *Transport applications when used with Emerald module.*	**Analog sensor**	• **-50°C to +200°C** • Dimensions: Ø 3 mm, L: 40 mm • Stainless steel • Class B • 3-wire PTFE cable • Cable length: 100 cm (w/connector) • Protection index: IP66	**SENSOR PART NUMBER** • SON.TNU.0012 **COMPATIBILITY** • Cobalt 2: ENR.C2#.P002/P003/P005 • Emerald: ENR.EMD.P003

RESOLUTION	EXPANDED UNCERTAINTY
Emerald: 0.03°C Cobalt 2: 0.0625°C	± 0.05°C to 0.25°C

Module and sensor accessories

PART NUMBER	DESCRIPTION	COMPATIBILITY
Extension cables		
ACC.ENR.0014	1 meter extension cable for digital sensors	Cobalt 2: ENR.C2#.P002/P005
ACC.ENR.0015	3 meter extension cable for digital sensors	
ACC.ENR.0016	5 meter extension cable for digital sensor	
ACC.ENR.0017	10 meter extension cable for digital sensors	
Contact us	1.5 meter extension cable for Smart-Sensors	Cobalt X2: ENR.X2#.P001
Contact us	50 cm flat extension cable for temperature/humidity sensor	Cobalt 2: ENR.C2#.P006
Protection		
ACC.ENR.0043	Waterproof casing, clear plastic, IP67, for Cobalt ML3	Cobalt ML3: ENR.C2#.P008
ACC.ENR.0030	Waterproof casing, clear plastic, IP67, for Cobalt L3	Cobalt L3: ENR.L3#.P001
ACC.ENR.0006	Waterproof casing, clear plastic, IP67, for Cobalt 2	Cobalt 2: ENR.C2#.P008
Calibration		
All sensors can be calibrated by the OCEASOFT metrology laboratory. Please see Calibration section (p. 54).		

AUTOMATION TOOLS

OCEASOFT provides tools that streamline your use of Atlas, Emerald, and Phoenix Bluetooth® enabled data loggers. Perfect for high-volume scenarios, these tools automate configuration and data collection procedures for maximum efficiency.

OCEABench

Automated data logger programming tool for Atlas, Emerald, and Phoenix modules

With its embedded OCEABench software application, this device enables you to program OCEASOFT Atlas, Emerald, and Phoenix data logger modules wirelessly in just a few seconds. The OCEABench solution is designed to facilitate efficient preparation of any quantity of data loggers, from a few modules to high volumes. "Place-and-play" operation makes OCEABench a robust and streamlined tool in any production environment.

- Fast and efficient batch programming
- Easy setup and configuration
- Configurable mission templates for worry-free operation
- Automatic reports for each batch

KEY FEATURES

- Integrated web app for easy module setup, template management, and reports
- Enables high-volume use of Atlas, Emerald, and Phoenix modules
- Automatic module detection and hardware check

Connectivity

- Ethernet (2 m/6.6 ft cable included) for Internet access
- Bluetooth® Smart low-energy technology
- Near-field communication (NFC) contactless technology

Product details

- Operating conditions: 0° C to +60° C (storage: -20°C to +70°C; 0% to 90% RH, non-condensing)
- Dimensions: 155 x 155 x 40 mm (6.1 x 6.1 x 1.6 in.)
- Weight: 500 g (11.5 oz.), ABS plastic casing
- Protection index: IP63 for indoor use only
- Power input (adapter included): 110-240 V, 50/60 Hz, 0.5 A, international plugs (North America, Australia, Europe, United Kingdom)

HOW IT WORKS

1. Login to OCEABench software to open, create, or modify mission template. The OCEAView web platform is used to authenticate users and store mission templates.
2. Place your data logger on OCEABench. The tool detects it automatically and "wakes up" the device for programming.
3. OCEABench uploads mission settings, tests Bluetooth operation, then beeps when done. The entire process takes about 2 seconds per module.
4. OCEABench sequentially programs each module in the batch, with easy-to-follow instructions on your computer screen.
5. A summary report is sent by e-mail to the current user and/or another designated user.

PART NUMBER	DESCRIPTION
OCEABench programming tool	
ACC.ENR.042	For Atlas and Emerald modules
Contact us	For Phoenix modules

RELATED PRODUCTS

OCEABridge

Collecting data from Atlas, Emerald, and Phoenix modules automatically

OCEABridge collects the sensor readings stored by OCEASOFT Atlas, Emerald, and Phoenix data loggers, such as during product transport or shipping.

- Collects and data logger readings automatically and forwards to OCEACloud platform
- Easy setup and installation
- Bluetooth® Smart, Ethernet/Wi-Fi (and/or cellular network)
- Reduces manual intervention required to read data, lowers operating costs

HOW IT WORKS

1. Installed at a central location in your storage or shipping area, the OCEABridge receiver automatically collects sensor data via Bluetooth® from Atlas, Emerald, and Phoenix devices within wireless range.
2. Once collected, the information is relayed immediately to the secure OCEACloud platform where it is accessible via OCEAView.
3. OCEABridge may be connected to your local network via Ethernet or WiFi, or to the cellular data network.

KEY FEATURES

- LED activity indicators
- Bluetooth® Smart connectivity for low-energy communication and secure exchange with data loggers, range from up to 50 meters (about 150 ft.)
- Internet connectivity via Ethernet (RJ45 10/100 Base-T), Wi-Fi (integrated, 2.4 GHz, WEP and WPA security); or cellular network (standard 2FF SIM card; EDGE, GPRS, GSM, UMTS, HSUPA, HSDPA networks)
- Automatic detection of data loggers within Bluetooth® wireless range
- Automatic data transfer to OCEACloud
- Unlimited storage on OCEACloud
- Easy configuration with integrated administrator interface
- 110-240 VAC / 5 V power adapter (2.5 A)
- Operating conditions: 0°C to +50°C; 0 to 90% RH (non-condensing)
- Dimensions: 120 x 85 x 30 mm (4.7 x 3.3 x 1.2 in.)
- Protection index: IP40, ABS casing
- Weight: 150 g
- Approvals
  Blueooth®: FCC, IC, EC, KCC, MIC, Anatel
  WiFi: FCC, EC
  3G/4G: FCC, EC, DoC, CCC/SRRC/NAL, KC/SKT, NCC, ICASA, Anatel

PART NUMBER	DESCRIPTION
OCEABridge for Atlas, Emerald, and Phoenix modules	
GSR.REC.0001	OCEABridge wireless data collector (Ethernet/WiFi)
GSR.REC.0002	OCEABridge wireless data collector (GSM cellular data)[1]

(1) Please contact us regarding regional specifics

Testimonial

"

We made the right choice by choosing OCEASOFT. They always shared their expertise, both throughout the project preparation phase and with their assistance, then during the progression expansion of our system for monitoring and centralizing temperature data.

Pierre Mignon, Biomedical Engineer, Biomedical Department,
Pierre Oudot Hospital Center, Nord-Dauphiné Hospital Group, France

"

RECEIVERS & NETWORK EQUIPMENT

OCEASOFT wireless receivers and repeaters relay the data from your sensor modules via your local network or the Internet to their back-end management platform, either on OCEACloud or your local server, giving you a simple and robust end-to-end infrastructure for your monitoring solution.

Cobalt 2 receivers & repeaters

Linking your Cobalt 2 data loggers with the ThermoServer platform and applications

Plugged into your network or ThermoServer host computer, receivers collect data wirelessly from your Cobalt monitoring modules and transfer it to the ThermoServer data monitoring software. Repeaters may be used when extra range is needed.

- TCP/IP and USB receivers depending on topology
- ThermoServer system supports unlimited number of TCP/IP receivers to monitor all your sites with a centralized solution
- Link up to three wireless repeaters to extend coverage between remote sensors and receiver

KEY FEATURES

- Wireless equipment to collect data or extend wireless range
- Receivers installed on your network or server computer
- Support for a nearly unlimited number of data loggers

TCP/IP receiver

- Antenna, 10/100BT RJ-45 connector, mounting kit
- AC adapter for standard version (Power-over-Ethernet version powered by Ethernet router)
- Dimensions: 190 x 52 x 30 mm (7.4 x 2 x 1.2 in.)
- Wireless range: 25-100 meters (65-325 ft.) indoors; up to about 700 meters (2,300 ft.) in line of sight for 25 mW device; up to 3 km (1.9 miles) in line of sight for 25/500 mW device
- Output power*: 25 mW for 867/868/915 MHz regions; 10 mW for 434 MHz regions

USB receiver

- Automatically detected by software installation wizard
- Includes mounting kit
- Wireless range: 25-100 meters (65-325 ft.) indoors ; up to about 700 meters (2,300 ft.) in line of sight
- Dimensions: 90 x 50 x 25 mm (7.4 x 2 x 1.2 in.)
- Output power*: 25 mW for 867/868/915 MHz regions; 10 mW for 434 MHz regions

Repeater

- Antenna, mounting kit, 110/240 V AC adapter
- Wireless range: 25-100 meters (65-325 ft.) indoors or up to 400 meters (1,312 ft.) with 3 linked repeaters
- Wireless range (line of sight): up to 700 meters (2,300 ft.)

* Cobalt 2 sensor modules communicate with 25 mW in 867/868/915 MHz regions; repeaters support automatic 25/500 mW switching for extra range to reach a 25/500 mW receiver. Please check with us for more details on defining network topology.

HOW IT WORKS

1. Cobalt 2 modules are set up where they need to monitor equipment, storage facilities, laboratories, etc.
2. Use ThermoClient to configure your monitoring system with at least one receiver to collect data wirelessly.
3. Place as many TCP/IP receivers as you need anywhere on your network, even at remote locations and different buildings. A USB receiver may be plugged directly into your server computer if the Cobalt 2 modules are within range.
4. If your modules are too far from the nearest receiver, you may use up to three repeaters to cover the distance.
5. Data is centralized in your ThermoServer-ThermoClient system for monitoring and overall system management.

PART NUMBER	DESCRIPTION	FREQ. (MHz)
RECEIVERS[1]		
GSR.REC.#003	TCP/IP standard (25/500 mW)	867, 868, 915
GSR.REC.#002	TCP/IP standard (25 mW)	867, 868, 915
GSR.REC.4002	TCP/IP standard (10 mW)	434
GSR.REC.#004	TCP/IP Power-over-Ethernet (25 mW)	867, 868, 915
GSR.REC.4004	TCP/IP Power-over-Ethernet (10 mW)	434
GRS.REC#001	USB receiver (25 mW)	867, 868, 915
GRS.REC.4001	USB receiver (10 mW)	434
REPEATERS[1]		
GRS.REP.#001	Repeater with antenna (25/500 mW)	867, 868, 915
GSR.REP.#002	Cobalt 2 repeater (25 mW)	867, 868, 915
GSR.REP.4002	Cobalt 2 repeater (10 mW)	434

(1) Replace # for your geographical zone in product references: 5 = 915 MHz, 7 = 867 MHz, 8 = 868 MHz.

LoRaWAN™ enabled receiver

Collecting data from Cobalt wireless data loggers equipped with LoRaWAN™ long-range connectivity technology

This receiver connects to your local network via an Ethernet or Wi-Fi connection, or to a cellular data network with the optional cellular data option to push sensor data to the Cloud.

- Exceptionally long-range wireless connectivity enables a single receiver to cover large areas
- Relays sensor data and other information to the OCEACloud platform for use with monitoring web applications
- Support for up to 1,000 data loggers*

HOW IT WORKS

1. Installed at your site, this LoRaWAN™ connected receiver collects and forwards data from your Cobalt L3, Cobalt ML3, and Cobalt X-series data loggers within wireless range.
2. The receiver uses WiFi or 3G/4G to link via the Internet with OCEACloud, the secure OCEASOFT Cloud platform.
3. Sensor data and related information is then accessed using the CobaltView (Cobalt L3 and Cobalt ML3) or OCEAView (Cobalt X-series) web application.

KEY FEATURES

- Collects data from Cobalt X1/X2, ML3, and Cobalt L3 wireless data loggers
- Low energy technology preserves battery life in data loggers

Connectivity

- Ethernet / WiFi or optional 3G/4G cellular data
- Long wireless range: up to 16 km (10 miles) line-of-sight using LoRaWAN™ communication protocol
- LoRaWAN™ regional channel plans in ISM radio spectrum: EU868, US915, AU915, AS923, KR920, IN865
- Two-way wireless communication

Device details

- 110-240 V AC adapter,
- Antenna
- Online documentation
- Dimensions: 160 x 95 x 40 mm (6.3 x 3.8 x 1.6 in.)
- Weight: 500 g (18 oz.)

* Sites with a very large number of sensors may require more than one OCEASOFT LoRaWAN™ enabled gateway. Please check with us for more details.

PART NUMBER[1]	DESCRIPTION
LoRaWAN™ enabled receiver	
GSR.REC.8005	Ethernet / WiFi connectivity
GSR.REC.8008	3G/4G cellular connectivity

(1) Please specify your geographical region when ordering.

RELATED PRODUCTS

Testimonial

"

The solution fully satisfied our requirements for traceability and our metrology needs. A calibration certificate is provided with each sensor.

Bruno Cailleux, Equipment Group Manager
Institut Pasteur Technical Department, France

"

ALARMS & ALERTS

Monitoring your critical environment parameters with wireless data loggers is just one piece of the puzzle. In most cases, the most important aspect of a monitoring solution is the handling of alarms and alerts. OCEASOFT provides connected solutions to keep you aware of anomalies that may occur in the environments you monitor at all times so you can take appropriate action fast.

OCEAlert

Real-time alert platform for Cobalt monitoring systems with alerts by voice call and SMS/text messages

Designed in collaboration with one of the world's leading experts in information generation, the OCEAlert platform automatically sends you alerts for monitored products in real-time.

- Works with all Cobalt monitoring solutions (OCEAView Web for X1/X2, CobaltView, and ThermoServer-ThermoClient)[1]
- Handles alerts in real-time 24/7
- Reliable and secure
- Cost-effective and easy to set up
- Developed in accordance with FDA 21 CFR Part 11 guidelines

KEY FEATURES

- Alerts with subscription license on number of sensors in system
- SMS/text message describing the alert (including alarm value and time, alarm type, and site, equipment, and sensor names)
- 99.7% service reliability with worldwide coverage (in supported countries)
- Sequential call-out to contact multiple users if necessary
- Message confirmation secure personal code
- Compatible with Cobalt X1/X2, Cobalt L3/ML3, and Cobalt 2 monitoring solutions
- License granted per OCEAView or CobaltView server instance or ThermoServer instance

HOW IT WORKS

1. When your monitoring system detects an alarm, such as a temperature excursion or equipment failure, the information is sent to the OCEAlert platform.
2. OCEAlert immediately sends the alert by text message (SMS) or voice message to a configured list of users, 24/7.
3. Users receive clear and timely information regarding the cause and location of the anomaly. When a notification message is received, the user can acknowledge receipt of the alert directly from their mobile device and take appropriate action to address the problem.
4. Once the problem is resolved, the alarm can be acknowledged in your monitoring software.

PART NUMBER	DESCRIPTION	SENSORS
OCEAlert license for voice & SMS/text messages (per server instance)		
CTR.000.0010_20	OCEAlert for 1-20 sensors	1 - 20
CTR.000.0010_50	OCEAlert for 21-50 sensors	21 - 50
CTR.000.0010_100	OCEAlert for 51 to 100	51 - 100
CTR.000.0010_250	OCEAlert for 101 to 250	101 - 250
CTR.000.0010_500	OCEAlert for 251 to 500	251 - 500
Contact us	Over 500	> 500

(1) Requires Internet connection

RELATED PRODUCTS

Wireless data loggers
p. 7

OCEAView
p. 42

CobaltView
p. 46

ThermoServer-ThermoClient
p. 48

USB Modem

Voice and fax alerts for your Cobalt 2 monitoring system

As part of your Cobalt Alarm Management System, the OCEASOFT USB modem is connected to a dedicated analog phone line to notify users in case anomalies are detected by Cobalt 2 modules. Designed by US Robotics, the modem has been optimized in cooperation with OCEASOFT to properly support the alert types required by ThermoServer software.

- Voice call and fax alerts for ThermoServer-ThermoClient Alarm Management System
- Custom-designed US Robotics modem

HOW IT WORKS

1. Install the OCEASOFT USB modem on your ThermoServer computer and connect it to a dedicated phone line.
2. Use ThermoClient to set up alert strategies for users and/or call groups in your monitoring system.
3. The modem notifies users by voice or fax when anomalies detected by Cobalt 2 wireless modules are received by the system.

KEY FEATURES

- Sends alerts via voice call and fax
- Power and data transmission LED indicators
- USB plug and RJ-11 phone socket
- Requires analog/PSTN phone line (does not work with digital lines)

PART NUMBER	DESCRIPTION
ACC.ALE.0002	USB telephone modem

RELATED PRODUCTS

Cobalt 2
p. 14

Cobalt T
p. 16

ThermoServer-ThermoClient
p. 48

Wireless siren

Wireless siren with lights and sound, triggered if alarm conditions are detected on the modules in your Cobalt wireless monitoring system.

With its bright red lights and adjustable sound, this wireless siren is sure to attract people's attention on-site when alarms are detected.

- Reinforces protection for equipment, site, and facilities
- For use with Cobalt X1/X2 LoRaWAN™ and Cobalt 2 / Cobalt T systems

KEY FEATURES

- Adjustable siren volume from 60 dBA to 100 dBA (± 10%)
- Wireless range same as the Cobalt modules in your system (see product page for details)
- Operating range: 0°C to +50°C
- Casing: ABS and polycarbonate plastic
- Protection index: IP54 protection rating
- Includes 110/240V power adapter and international plugs
- Mounting kit
- Optional: car cigarette lighter adapter for in-vehicle use
- Dimensions: 160 x 80 x 83 mm (6.3 x 3.2 x 3.3 in.)
- Weight: 400 g (14.1 oz.)

HOW IT WORKS

1. Depending on your solution, use ThermoClient or OCEAView software to define an alert strategy that includes notification using the wireless siren.
2. If a Cobalt module detects an alarm condition, such as a temperature excursion of out-of-range CO_2 reading, it notifies the server immediately and the server activates the siren wirelessly.

OCEASOFT Wireless solution — LoRaWAN™

PART NUMBER	DESCRIPTION
Audio-visual siren[1]	
ACC.ALE.#003	Wireless alert device for X1/X2 LoRaWAN™ solution
ACC.ALE.#001	Wireless alert device for ThermoServer-ThermoClient solution

(1) For LoRaWAN™, please specify your geographical region when ordering. For Thermo-Server, replace "#" in part number with wireless frequency for your geographic region: 4 = 434 MHz, 5 = 915 MHz, 7 = 867 MHz, 8 = 868 MHz.

RELATED PRODUCTS

Cobalt 2
p. 14

OCEAView
p. 42

Cobalt T
p. 16

Cobalt X
p. 8

ThermoServer-ThermoClient
p. 48

Dry contact alarm

Dry contact alarm device for Cobalt monitoring systems

As part of your alarm management solution, the OCEASOFT Dry Contact alarm controller triggers alerts on one or two external dry contact devices when the system detects alarms from data loggers.

- For use with Cobalt X1/X2 systems via LoRaWAN™ communication protocol
- For use Cobalt 2 / Cobalt T systems via TCP/IP
- Triggers one or two connected alert devices
- Reliable alert transmission

HOW IT WORKS

1. As part of your Cobalt monitoring system, the Dry Contact alarm controller triggers alerts on one or two external dry contact devices when the system detects alarms from end-point modules.
2. For example, configure a Cobalt data logger to trigger an alarm if the temperature exceeds, or drops below, a specified limit.
3. The Dry Contact device receives the alarm signal wireless or over the TCP/IP (Ethernet) network and triggers the alarm on a connected dry contact device.

KEY FEATURES

- Two simultaneous dry contact outputs, configurable as "normal open" or normal "closed"
- Two models, depending on your monitoring system:
  TCP/IP device: for ThermoServer solution with Cobalt 2 modules (includes RJ-45 Ethernet cable – 2 meters/6.5 ft.)
  Wireless device: for OCEAView with Cobalt X1/X2 modules in a LoRaWAN™ wireless solution
- 100/240 V AC power adapter with international plugs and 1 meter (3.3 ft.) cable
- AC adapter: 24V DC - 0.4 A
- Dimensions: 102 x 54 x 30 mm (4 x 2.1 x 1.2 in.)
- Plastic enclosure: ABS (UL 94HB) RAL 9002/7032 with IP43 protection for indoor use
- Operating conditions: 0°C to +60°C (+32°F to +140°F)

PART NUMBER	DESCRIPTION
Dry contact alert controller[1]	
Contact us	Wireless alert device for X1/X2 LoRaWAN™ solution
ACC.ALE.0001	TCP/IP alert device for ThermoServer-ThermoClient solution[2]

(1) For LoRaWAN™, please specify your geographical region when ordering. (2) Please indicate the desired IP address information for your network when you place your order.

RELATED PRODUCTS

Cobalt 2
p. 14

Cobalt X
p. 8

Cobalt T
p. 16

OCEAView
p. 42

ThermoServer-ThermoClient
p. 48

Testimonial

"

We are very pleased with the OCEASOFT solution. The system is very easy to use. The quality of their project follow-up and support services also help significantly. Each of our entities is independent, free to handle its own organization and management. Everything is automatic, including daily printouts, archives, alerts…

Christine Moat, Senior Executive in the Molecular Genetics Department, Biological Immunology, and Pharmacology-Toxicology Georges Pompidou European Hospital, France

"
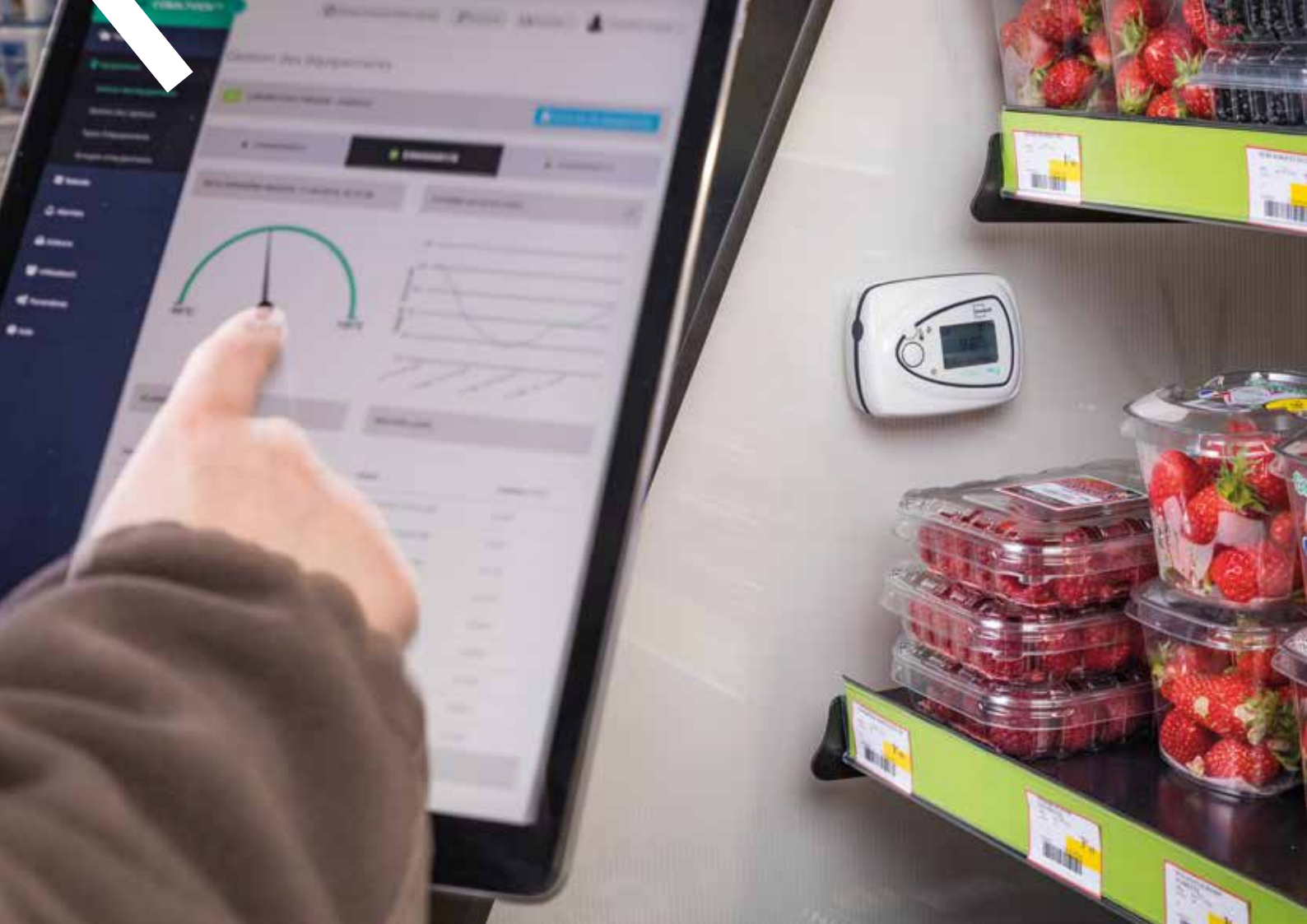
MONITORING APPLICATIONS

OCEASOFT provides a comprehensive range of web, mobile, and computer applications for monitoring and managing connected OCEASOFT data loggers. The cornerstone of your monitoring solution, these applications give you easy and secure access to all your critical sensor and equipment data around the clock.

OCEAView Web for Cobalt X-series

OCEAView for Cobalt X-series data loggers is a complete web-based platform with all the configuration and monitoring functions you need for your Cobalt X-series equipment monitoring system.

- Centralizes sensor readings, alarms, and other information sent by Cobalt X-series modules
- Live dashboard lets you see system health and latest readings at a glance, with complete details, graphs, and audit trail
- Management and daily use of your entire solution: sensors, data logging settings, alerts, equipment, configuration, users, reports, and more
- Integrated with secure OCEACloud online platform, or installed on-premises on MS Windows web server at your own site

HOW IT WORKS

1. Start by creating your company account in the OCEAView for CobaltX web application and entering your voucher number to access Cloud services.
2. Use the interface to enter sensor serial numbers, describe the equipment you are monitoring, adjust data logging parameters, and add users.
3. When your Cobalt X modules establish their LoRaWAN™ network connection, their settings are updated, and data is loaded automatically into OCEAView.
4. Fine-tune your system settings in OCEAView for alerts, call-groups and scheduling, reports, calibration, site maps, and more.

- Developed in accordance with 21 CFR Part 11, GxP, HACCP & FSMA guidelines
- Audit trail, user-level security compliant with FDA 21 CFR Part 11
- Available as Cloud-based or on-premises solution

- Auditable and customizable reports
- Interface with third-party systems via API
- Data logging with a focus on the equipment being monitored

RELATED PRODUCTS

Cobalt X
p. 8

Alarms & Alerts
p. 35

OCEACloud
p. 55

KEY FEATURES

- Complete Cobalt X module configuration with reusable templates, including sensor read frequency, transfer intervals, sensor value ranges and tolerance
- Fast 24/7 access to data logging information sent by Cobalt X modules, with detailed data, events, and graphs
- Associates sensors with equipment for intuitive everyday use

Application details

- Responsive design for use in standard web browsers
- Company management, user profiles, and access control
- Regional preferences (date/time, decimal separator, °C/°F)
- Equipment management and life-cycle tracking
- Sensor calibration and reminder

Data management

- Unlimited storage (when used with OCEACloud platform)
- Sensor data includes Mean Kinetic Temperature (MKT)
- Complete reports in PDF, XLS, and CSV formats

Alarms and alerts

- Programmable alarm conditions: 3 high and 3 low limits for flexible excursion management
- Technical, sensor, communication and power outage alarms
- Real-time notification: alarms immediately visible on dashboard and sent by e-mail (directly via OCEAView system), SMS/text, and voice message (via optional OCEAlert platform)
- Sequential notification to call groups via OCEAlert platform
- Flexible alert scheduling for work-days, weekends, night time, holidays, periods without alerts

PART NUMBER	DESCRIPTION
OCEAVIEW (OCEACLOUD PLATFORM)	
PRE.CLO.0001	OCEACloud yearly service subscription, per sensor
OCEAVIEW FOR MS WINDOWS SERVER (FOG PLATFORM)	
LOG.WEB.001_20	1 to 20 sensors, unlimited users
LOG.WEB.001_50	21 to 50 sensors, unlimited users
LOG.WEB.001_100	51 to 100 sensors, unlimited users
LOG.WEB.001_250	101 to 250 sensors, unlimited users
LOG.WEB.001_500	251 to 500 sensors, unlimited users
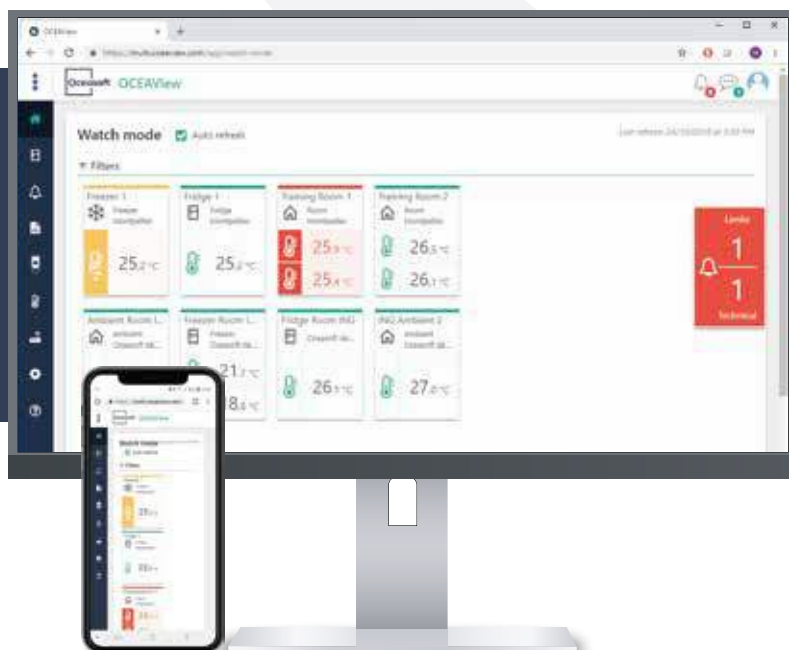
OCEAView Mobile

OCEAView Mobile for iOS and Android enables you to configure and monitor OCEASOFT Atlas, Emerald, and Phoenix modules equipped with Bluetooth® technology, providing an easy solution for using your smartphone or tablet to check up on temperature sensitive packages, refrigerated trucks, laboratories, storage facilities, and more. The application also supports Cobalt X and ML3 modules in its live-tile Watch Mode.

- Free mobile app for iOS and Android
- Provides complete control over all data logging settings on Atlas, Emerald, and Phoenix devices
- Live-tile Watch Mode for monitoring Atlas, Emerald, Phoenix, Cobalt X, and Cobalt ML3 modules
- Detailed sensor information at the touch of a button
- Sends Atlas, Emerald, and Phoenix data to OCEAView web application and by e-mail

KEY FEATURES

- Programs high/low temperature limits, read intervals, alarm delays, startup options, flight mode
- Watch Mode feature for live tile-based view to monitor data loggers continually and send data to online platform
- Displays data from all compatible modules within wireless range
- Reusable templates for easy Atlas and Emerald programming
- Data geotagging with smartphone GPS
- Manages A & B calibration coefficients
- Password protection to prevent stopping or programming modules
- Displays values in °C or °F, in GMT or local time
- Available in English, French, and Spanish

Data management

- Data management
- Any user can upload data via their device's Wi-Fi or cellular connection to the secure OCEAView web application (data transfer can also be automated with OCEABridge)
- Sends reports in .CSV and secure PDF formats by e-mail, with graph image
- Stores up to 5 data logging sessions in local memory
- On-screen alarm indication in List and Watch Mode (also with audio alert)

MOBILE APPLICATION FOR iOS AND ANDROID PLATFORMS
Free download on Apple App Store® and Google Play®

HOW IT WORKS

1. With Bluetooth® activated on your mobile device, simply connect to your Atlas and Emerald data loggers and configure them as needed for your monitoring scenario.
2. Create an OCEAView Cloud account if you want to be able to view and share data logger information online, or to generate PDF reports.
3. OCEAView Mobile detects and lists all data loggers within wireless range, enabling you to access stored sensor readings at any time.
4. You can use OCEAView to push data logger information to the Cloud manually, or automatically in Watch Mode.

❭ Watch Mode perfect for in-vehicle use to provide continuous monitoring while transporting temperature sensitive products

❭ Location information from your mobile device (if allowed) used to create route map showing details for start, stop, and read points.

❭ Allows you to adjust calibration coefficients directly

❭ Practical solution for checking up on goods on-the-move and sharing information with colleagues and partners via the web

❭ Developed in accordance with 21 CFR Part 11 guidelines

RELATED PRODUCTS

| Cobalt X	Cobalt ML3	OCEAView Web	Atlas/Emerald/Phoenix	OCEACloud
p. 8	p. 10	p. 45	p. 18	p. 55

OCEAView Web for Atlas/Emerald/Phoenix

OCEAView for Atlas, Emerald, and Phoenix is a web application that centralizes data from your mobile Bluetooth® data loggers, sent by OCEAView Mobile or via the OCEABridge gateway.

- Shows detailed data from your remote Atlas, Emerald, and Phoenix modules in a convenient web-based solution
- Offers live view of modules monitored in OCEAView Mobile's Watch mode or by the OCEABridge gateway
- Generates reports in PDF, MS Excel, and .CSV formats
- Based on the secure OCEACloud online platform
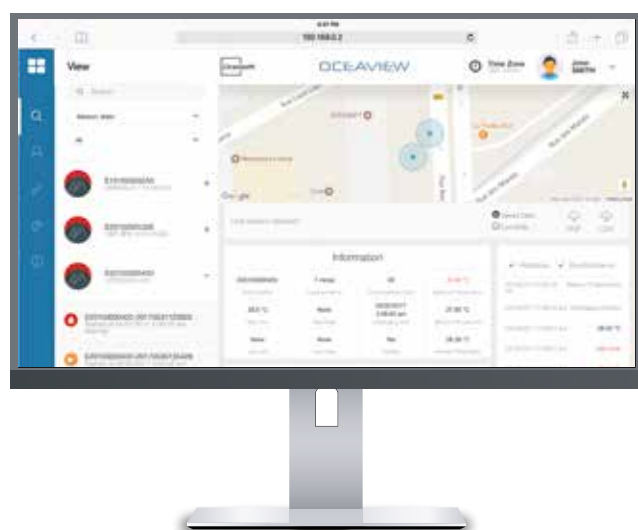
KEY FEATURES

- Displays data saved and forwarded from module memory, or "Live" data from modules being monitored in Watch Mode with OCEAView, or uploaded via OCEABridge
- Simple interface for company and user account management
- Graphs with sensor readings and time-stamps
- Reports in CSV, PDF or XLS format
- Filters for dates, readings, events, and alarm types
- Customizable date/time, temperature, decimal separator
- Batch addition of new modules
- Available in English, French, and Spanish

Data management

- Complete readings, details, and events from module (serial number, high/low temperature limits, reading interval, min/max temperature values, presence of alarms…)
- Geotagging using mobile device's GPS, representing each event with an indicator on the map using color coding to show mission status

Alarms and alerts

- Color coding indicates sensor alarm status at a glance
- Sends alarm notification automatically via e-mail when excursions are detected

PART NUMBER	DESCRIPTION
OCEAView web application for Emerald modules	
PRE.CLO.0002	Annual subscription (pricing per sensor)
OCEAView web application for Atlas modules	
Free access to **www.oceaview.com**, no subscription required	

HOW IT WORKS

1. Create your company account and your add Atlas, Emerald, and Phoenix modules (Emerald modules require a voucher for Cloud services).
2. Data loggers send data via OCEAView Mobile (manually or Watch Mode) or the OCEABridge data collector/gateway.
3. Users log in to the secure web application to access detailed sensor readings and events.
4. Using geotagging on your mobile device(s), a map shows when and where data logging was started or stopped, and when and where the module was read.

- Enables people in different parts of the world to check up on temperature sensitive shipments
- Centralizes Atlas/Emerald/Phoenix data from different locations
- Developed in accordance with 21 CFR Part 11 guidelines

- Perfect for tracking temperature conditions in packages or goods/services on-the-move
- Emerald modules require a voucher for OCEACloud services. Please contact your sales representative to obtain a voucher. Atlas modules are Cloud-enabled free of charge.

RELATED PRODUCTS

Atlas/Emerald/Phoenix
p. 18

OCEAView Mobile
p. 44

OCEACloud
p. 55

CobaltView for Cobalt L3/ML3

CobaltView is a web application that enables you to manage your Cobalt L3 and ML3 data loggers and collected sensor data. CobaltView offers a complete management interface to handle all aspects of monitoring configuration and system administration. Your data is available 24/7 so you can keep close track of the conditions surrounding your sensitive products.

- Secure access to uploaded Cobalt L3 and Cobalt ML3 sensor data
- Color-coded dashboard shows readings, status, and system health at a glance
- Intuitive sensor set-up
- Advanced multi-user management
- Responsive web design for use on a variety of screen sizes

HOW IT WORKS

1. Start by configuring your data logger modules in CobaltView, then use the companion CobaltSet mobile app to transfer settings to your modules.
2. When connected to their LoRaWAN™ receiver, Cobalt L3 and ML3 data loggers transmit recorded sensor readings to the secure CobaltView/OCEACloud platform.
3. The CobaltView web application enables you to manage both fixed equipment and transport scenarios, and access data logger details and data at any time.
4. Alarms such as temperature excursions or technical problems are displayed in real-time on the module display and in CobaltView. E-mail alerts are sent directly by the system; SMS/text or voice messages are sent via the optional OCEAlert platform.

❯ Developed in accordance with 21 CFR Part 11, GxP, HACCP and FSMA guidelines

❯ Unlimited license seats and users

❯ Interface with third-party systems via API

❯ Equipment-centric design with lifecycle management feature

❯ Set-up wizard for easy module configuration

❯ Complete audit trail

❯ Free CobaltSet companion mobile application for iOS and Android

❯ Equipment geotagging when using public LoRaWAN™ network

RELATED PRODUCTS

Cobalt L3 / ML3
p. 10 - 12

LoRaWAN receiver
p. 33

OCEAlert
p. 36

OCEACloud
p. 55

KEY FEATURES

- Complete Cobalt L3 and Cobalt ML3 module configuration, including sensor read frequency, transfer intervals, sensor value ranges and tolerance
- Fast 24/7 access to all information sent by your remote Cobalt L3 and ML3 modules, with detailed data, events, and graphs
- Associates sensors with equipment for intuitive everyday use

Application details

- Responsive design for use in standard web browsers
- Company management, user profiles, and access control
- Regional display preferences (date/time, decimal separator, °C/°F)
- Equipment management and life-cycle tracking
- Map view with module geotagging (as supported by LoRaWAN™ network equipment/operator)

Data management

- Unlimited storage (when used with secure OCEACloud platform) and data backup
- Complete reports in PDF, XLS, and CSV formats

Alarms and alerts

- Programmable alarm conditions for flexible excursion management
- Limit, battery, communication, and technical alarms
- Real-time notification: alarms immediately visible on dashboard and sent by e-mail (directly via OCEAView system), SMS/text, and voice message (via optional OCEAlert platform)
- Sequential notification to call groups via OCEAlert
- Flexible alert scheduling for work-days, weekends, night time, holidays, periods without alerts

PART NUMBER	DESCRIPTION
CobaltView subscription	
PRE.CLO.0001	Annual subscription (pricing per sensor)
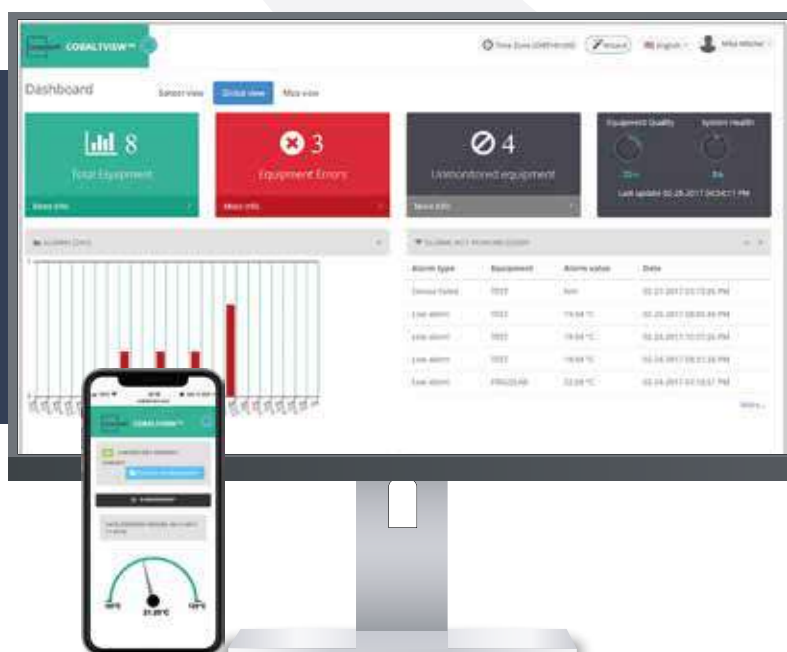
ThermoServer-ThermoClient for Cobalt 2

ThermoServer-ThermoClient is a complete software suite for monitoring and managing every aspect of your Cobalt 2 sensor data logger solution. As the cornerstone of your monitoring system, ThermoServer-ThermoClient gives you total control over everything from sensors to data, from wireless module, receiver, and repeater setup to automated data collection, report generation, audit trail management, and much more.

- Centralized management for your entire monitoring system and users
- Interactive visual dashboard with secure access to your data 24/7
- Scalable to support any number of sensors and multiple sites
- Complete administrator interface to manage wireless devices, calibration, data logging settings, alarm limits, alerts, and users
- Fast alerts 24/7 via e-mail, voice message, or SMS/text message in case of limit excursions or technical problems
- On-premises installation on your server or fully hosted via OCEAHost service on OCEACloud
- Free ThermoClient Mobile app to view alarms and data on your smartphone or tablet

HOW IT WORKS

1. With ThermoServer on a local server or Cloud-hosted via the OCEAHost service, a system administrator uses ThermoClient software to set up modules, receivers and repeaters (as needed), alert strategies, and users. Depending on access rights, users may configure Cobalt 2 modules, view them, and/or acknowledge alarms.

2. Wireless receivers connected to the server collect data from sensors within range and forward it to the centralized ThermoServer SQL database. Receivers on remote sites can be accessed via TCP/IP to create multi-site solutions.

3. ThermoClient gives users secure 24/7 access to data via a customizable tile-based dashboard. Technical problems and excursion alarms are highlighted in color, and corresponding alerts are generated on local devices (audiovisual siren, dry contact controller, printouts) and/or sent via e-mail, voice message, and SMS/text message. ThermoClient Mobile shows key information on your iOS or Android mobile device.

4. A dedicated calibration feature creates reminders when it's time to recalibrate the sensors in your system, based on your standard operating procedure.

❯ Multi-tiered server license based on number of sensors, unlimited number of client software end-users

❯ Interfaces with OCEAlert Internet-based voice and text message alert system

❯ Respects FDA 21 CFR Part 11, GxP, HACCP, and FSMA guidelines, including complete Audit Trail

❯ Installation/Operational Qualification (IQ/OQ) package

❯ Standalone ThermoClient executable for installation-free use on unlimited number of PCs

❯ Dedicated metrology features for managing calibration parameters, certificates, and recalibration

❯ Data interface with third-party systems via OPC connector

❯ Option to replicate data and alarms on OCEASOFT Cloud platform to use free ThermoClient Mobile for iOS and Android

RELATED PRODUCTS

Cobalt 2
p. 14

Cobalt T
p. 16

OCEAHost
p. 55

Alarms & Alerts
p. 35

Receivers & repeaters
p. 32

KEY FEATURES

ThermoServer

- Actively collects data 24/7 from Cobalt 2 wireless data loggers
- Tight integration with Alarm Management System and OCEAlert platform for generating and sending alerts
- Client-server SQL architecture with robust 24/7 operation as MS Windows® services, including regular system checks and module synchronization

ThermoClient

- Complete monitoring and configuration interface (MS Windows®)
- Anytime access to recorded data, remote reading
- Adjusts alarm limits, delays, read and transfer intervals
- User management, access level, and contact information
- Visual floor plan showing sensor and receiver locations
- Wide variety of reports in PDF, Word, XLS, and CSV formats
- Sensor calibration information, correction parameters, reminders
- Tests communication, battery levels, sensor status, alerts

Alarms and alerts

- Notification via e-mail, SMS/text, printout, fax, or voice message
- Support for wireless siren and dry contact alert devices
- Alert management and acknowledgment via ThermoClient
- Flexible strategies based on workdays, weekends, holidays, call-groups

ThermoClient Mobile

- Free mobile application for iOS and Android
- Shows sensor data and alarm satus

PART NUMBER	DESCRIPTION
ThermoServer-ThermoClient Software [1]	
LOG.COB.0003_20	License for 1-20 sensors
LOG.COB.0003_50	License for 21-50 sensors
LOG.COB.0003_100	License for 1-100 sensors
LOG.COB.0003_XX	License for unlimited sensors
OPC CONNECTOR	
LOG.COB.0006	OPC add-on for ThermoServer

(1) Contact us if you need to upgrade or expand your system

Thermo Calibration

ThermoCalibration is a software-based kit for calibrating temperature sensors, based on a digital interface API.

- For your custom calibration needs
- Simultaneous analysis of up to 10 digital or analog external sensors
- Customizable compliance reports

KEY FEATURES

- Calculates correction parameters and uncertainty
- Automatic control for Julabo water baths using RS-232 interface (depending on model)
- Includes connector cable for 10 sensors (external digital or analog temperature sensors), with 1.5 m USB connector
- Options: Pt100 reference chain (-100°C/+150°C, - 0.05°C uncertainty, 4-wire, Class A), carrying case, wireless USB receiver, USB connector unit for 10 Cobalt data loggers (contact us for details)

PART NUMBER	DESCRIPTION
ThermoCalibration solution	
LOG.MTR.0002	Software + 1 data logger/Pt100 + 10-sensor connector

HOW IT WORKS

1. The software reads parameters from the reference sensor, typically calibrated by OCEASOFT's in-house metrology laboratory.
2. The system then compares data from up to 10 external sensors.
3. Operators can use these results to determine sensor compliance using their own preferred measurement points and calculation methods.

❯ Automatically reads up to 10 connected sensors

❯ Custom automatic calculation of correction and uncertainty parameters

❯ Includes calibrated high-precision Pt100 reference sensor and Cobalt wireless module

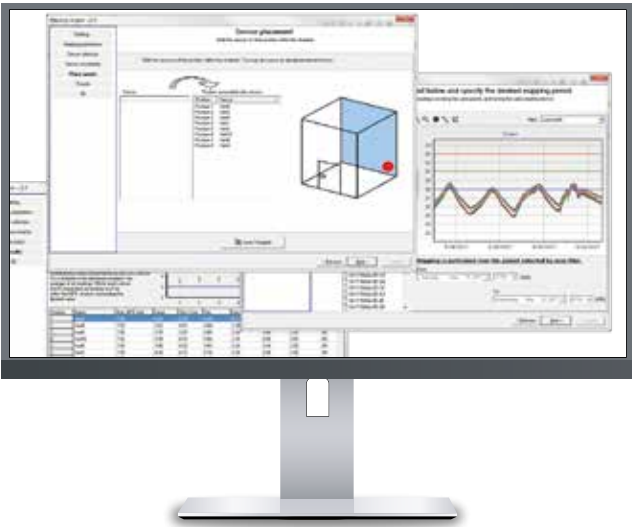❯ Generates customized compliance reports

RELATED PRODUCTS

Cobalt 2
p. 14

Sensors
p. 22

OCEAMap

Compatible with the FD X 15-140 standard, this unique thermal mapping system enables you to characterize and qualify temperature behavior within temperature-controlled chambers such as pharmaceutical freezers, refrigerators, and cold rooms.

- Turnkey solution
- Automated sensor reading system
- Compliance reports

KEY FEATURES

- Measures consistency and stability of temperature-controlled enclosures
- Evaluates Maximum Permissible Error (MPE)
- Automatically generates compliance reports
- Complete hardware and software solution to perform your thermal mapping
- Carrying case with wireless receiver, mapping software, and 9, 15, or 32 wireless data loggers with digital or analog sensor
- Optional calibration by OCEASOFT accredited metrology laboratory
- Results compliant with FD X 15-140

PART NUMBER	DESCRIPTION
OCEAMap solution	
LOG.MTR.0001	Complete kit with software and sensors

HOW IT WORKS

1. Simply place the provided sensors inside the target space.
2. The system records sensor readings and creates a 3-D map for you.
3. A report is generated automatically, including all necessary information: compliance or non-compliance, maximum consistency, maximum stability, individual and multi-curve graphs, targets, deviation, displayed values, and control values.
4. If you don't have time to take care of thermal mapping yourself, please free to contact us for more information.

❯ Complete carrying case with wireless receiver, mapping software, and 9, 15, or 32 wireless data loggers with digital or analog sensor

❯ Optional ISO IEC 17025 certified calibration

RELATED PRODUCTS

Cobalt 2
p. 14

Testimonial

“

Hellmann Calipar Healthcare Logistics trusts OCEASOFT software and systems to keep an eye on stored products. It made sense for HCHL to choose OCEASOFT, notably for its compliance, reliability, and services, all of which are key points in the decision-making process for this type of solution in our target market.

Cindy Engelbart, General Manager
Hellmann Calipar Healthcare Logistics, United Arab Emirates

”

OCEASOFT SERVICES

OCEASOFT is proud to offer a wide range of technical, training, and sales services to accompany you daily with the expertise you need. Please contact us for specific details regarding services.

Calibration and metrology

Accredited OCEASOFT laboratory

OCEASOFT has its own metrology laboratory to calibrate sensors for all your target ranges and applications. Meeting the highest industry standards, the laboratory is accredited by the COFRAC certification body as complying with the rigorous ISO/IEC 17025 international standard.

The following calibration options are available, depending on your products and requirements:

- ISO/CEI 17025: COFRAC[1] accredited calibration by the OCEASOFT laboratory for customers with specific quality system requirements
- OCEASOFT certification: OCEASOFT certification using a COFRAC-calibrated reference chain
- NIST-traceable[2]: OCEASOFT certification using a NIST-calibrated reference chain

Our sensors are typically calibrated by the OCEASOFT laboratory before being shipped to customers. A calibration certificate is provided, with correction parameters for use in OCEASOFT monitoring software.

SENSOR EXCHANGE PROGRAM FOR RECALIBRATION

- External digital temperature and dual temperature/humidity sensors may be recalibrated by exchanging the sensor.
- OCEASOFT sends you a new sensor and you return your old sensor after swapping them at your site. This avoids both down-time and traceability interruptions[3].
- Pt100 Smart Sensors are also recalibrated via exchange, whereas standard Pt100 sensors are generally recalibrated at your site by a qualified technician.

Sensor drift may also be calculated to establish consistency over time for external temperature sensors.

(1) French National Accreditation Committee, France. (2) National Institute of Standards and Technology, federal technology agency, United States. (3) The sensor exchange option is only available for external digital sensors and OCEASOFT Smart Sensors, as the entire measurement chain is contained within the sensor unit itself, independently of the Cobalt module that transmits the signal transparently. A decontamination certificate is required. See related pages for specific product details.

- ❯ OCEASOFT in-house metrology laboratory, COFRAC-accredited in accordance with the ISO/IEC 17025 standard
- ❯ ISO/IEC 17025 calibration certificates provided in paper format with each sensor; OCEASOFT certified calibration certificates available via software
- ❯ Sensor exchange simplifies recalibration process for Smart Sensors and external digital temperature and temperature / humidity sensors
- ❯ Metrology training options offered by expert OCEASOFT technicians

COLLÈGE FRANÇAIS DE **METROLOGIE**

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Cloud / Hosted solution

OCEACloud

ONLINE PLATFORM FOR CENTRALIZING SENSOR DATA

OCEACloud is a Cloud service platform used by OCEASOFT monitoring solutions. Data from compatible data loggers is uploaded to OCEACloud, where it is accessed by our user-facing web applications.

The service platform uses the industry-leading Amazon Web Service for optimal reliability and security.

KEY BENEFITS

- Centralized data collection platform for OCEASOFT Web applications
- Unlimited space for sensor data, with automated backup and no time expiration for data storage
- Interfaces with OCEAlert connected alert delivery system

❱ Data hosting service with annual subscription based on number of installed sensors

❱ API access for third-party applications

❱ OCEACloud platform used by Cobalt LoRaWAN™, Atlas, Emerald, and Phoenix data loggers

❱ Completely online solution keeps your internal IT costs down

❱ Scalable without having to worry about server resources

❱ Accessible worldwide 24/7/365

OCEAHost

FULLY HOSTED THERMOSERVER SOLUTION

OCEAHost eliminates the need to manage ThermoServer, the heart of your Cobalt 2 wireless monitoring system, on a dedicated on-premises server. With OCEAHost, your data is stored safely on the Cloud. Your entire ThermoServer application, including its database, is installed on a highly reliable Cloud server that is easily accessible for authorized users with ThermoClient via the Internet. ThermoClient can be copied to your computers with just a single file, no installation procedure required.

KEY BENEFITS

- Simplifies your responsibilities and increases system reliability
- No hidden or unexpected costs, with pricing is based on the number of sensors in your network
- Secure GDP/GMP Cloud platform, developed in accordance with 21 CFR Part 11 guidelines
- Secure access for your monitoring staff and service technicians

❱ Eliminates the need for a dedicated server at your site

❱ Server software and operating system environment upgraded automatically

❱ Includes data maintenance, backup and restore

❱ 99.9% reliable operation (highly reliable professional infrastructure)

Services

Monitoring system installation

YOUR SOLUTION HANDLED BY EXPERIENCED PROFESSIONALS

Depending on the configuration, site complexity, and available technical resources, customers may choose to have OCEASOFT qualified technicians or partners handle the installation process for them. We offer complete installation and set up services for all OCEASOFT data loggers, applications, alert solutions, and wireless network components. Two options are available for installation services:

- On-site installation and qualification of all hardware and software
- Installation via remote Internet connection (when appropriate)

KEY BENEFITS

- Turnkey monitoring solution
- Service by highly qualified technicians
- Benefit from a ready-to-use monitoring system
- Enjoy peace-of-mind without technical hassles

❱ Installation handled at your site or via a remote connection

❱ Attentive technicians work with you to ensure optimal configuration of all your sensors, users, groups, alert scenarios, and more

❱ Unparalleled expertise installing and maintaining solutions for monitoring temperature and other physical parameters

❱ Get the most out of your fixed and mobile monitoring solutions

Site surveys

PRE-INSTALLATION WIRELESS PERFORMANCE ANALYSIS

Project planning may be a detailed and complex process, depending on site. In many cases, system requirements and optimal solution recommendations are best determined by performing a site survey before ordering and installing products. OCEASOFT technicians perform tests under real conditions to determine the solution for reliable coverage at your site. Surveys and real-world planning save you both time and money while ensuring the most effective monitoring system possible.

KEY BENEFITS

- No additional cost for customers
- Speeds up deployment
- Optimizes all aspects of system equipment and configuration
- Helps minimize overall system costs

❱ No additional cost for customers

❱ Speeds up deployment of most effective solution

❱ Optimizes all aspects of system equipment and configuration

❱ Helps minimize overall system costs

IQ/OQ: Installation Quality / Operational Quality

VALIDATION PACK FOR FULL IQ/OQ OF YOUR SYSTEM

Working in an environment governed by Good Manufacturing Practices (GMP) and Good Laboratory Practices (GLP), you may be subject to external audits by authorities such as the Food and Drug Administration (FDA), European Food Safety Authority (EFSA), or local safety agencies. Audits generally include your monitoring equipment. To ensure that your installation complies with applicable requirements and specifications, OCEASOFT has elaborated a series of Installation Qualification and Operational Qualification documents. These documents may be customized for your specific situation, guiding you through rigorous end-to-end testing of your monitoring solution.

KEY BENEFITS

- Recommended procedure to ensure maximum system reliability
- Test scenarios leveraging OCEASOFT's extensive expertise on the topic
- Adapted to satisfy GxP requirements
- IQ/OQ documents for your own use or with expert technical assistance from OCEASOFT

❯ Complete validation package complete with detailed IQ and OQ documents

❯ Individual - and system-level tests

❯ Oversight and verification to ensure that all aspects of your solution match specifications and that every component and feature functions as expected

Spare parts

ADDITIONAL AND REPLACEMENT EQUIPMENT

As your site grows, you may need to add new components to your system.

OCEASOFT offers spare and replacement parts for all your OCEASOFT solutions to ensure the best possible long-term maintenance of your monitoring system.

Don't hesitate to contact us for details!

KEY BENEFITS

- Approved batteries
- Additional / replacement sensors
- Equipment to expand your solution
- Protective casing
- Mounting kits
- Cables
- And much more…

❯ Original manufacturer equipment for your existing solution

❯ Extending the life of your monitoring system

❯ Fast delivery available

Training

Customer and partner training

FROM BEGINNER TO ADVANCED LEVELS ON EVERY ASPECT OF OCEASOFT'S HARDWARE AND SERVICE OFFERING

OCEASOFT provides complete user training to help ensure the ongoing efficiency of your solution. After a monitoring solution is installed, our technicians tell you and your teams everything about it, with training sessions tailored to users' real needs. This includes equipment maintenance (such as battery and sensor replacement), IT integration (such as with ThermoServer™ and OCEAlert services), data analysis and reports, alarm acknowledgment, metrology aspects, and more.

OCEASOFT has a team of experienced training professionals at your service. The team includes product specialists, with in-depth equipment, software, and application knowledge, as well as metrology experts who are always ready to share their knowledge.

- Fully understand OCEASOFT solutions
- Become a technical expert
- Manage your own systems independently

SESSIONS ADAPTED TO MEET YOUR NEEDS

- Training on administration and everyday use of your monitoring solutions
- Expand your metrology knowledge
- Understand calibration and thermal enclosure mapping in detail
- Groups sessions or one-on-one

❯ Training can take place at customer site or OCEASOFT offices

❯ Teaching materials provided

❯ Courses include both theoretical explanations and hands-on time experimenting with hardware and software

❯ Prerequisites generally start with basic computer knowledge for "User" level training, with more proficient system knowledge recommended for "Administrator" and "Metrology" level training.

❯ Training course vary in length from 1/2 day to a full day.

LoRaWAN™ technology solutions

ADMINISTRATION FOR COBALT LORAWAN™ EQUIPPED DATA LOGGERS AND WEB APPLICATIONS

OCEASOFT offers a complete line of wireless monitoring devices and equipment integrating LoRaWAN™ connectivity, including Cobalt X1, Cobalt X2, Cobalt L3, and Cobalt ML3 data loggers.

After taking this course, you will be able to deploy OCEASOFT monitoring solutions and use related web and mobile applications.

- Cobalt X1, Cobalt X2, Cobalt L3, Cobalt ML3
- OCEAView Web for X1/X2, CobaltView

COURSE TOPICS

- LoRaWAN™ communication protocol
- Solution architecture and hardware presentation
- Wireless communication
- Using web and mobile applications
- User account configuration
- Adding sensors
- Accessing sensor data
- Managing alarms and technical issues
- Managing alerts
- Using map view
- Troubleshooting and help with web applications

❯ Teaching tools: course materials, hands-on exercises

❯ Target audience: users and administrators of OCEASOFT LoRaWAN™ based solutions

❯ Prerequisites: basic computer knowledge

❯ Duration: 1 day

OCEASOFT Bluetooth® based monitoring solutions

MANAGING OCEASOFT'S MOBILE BLUETOOTH-BASED DATA LOGGING SOLUTIONS

This training course will teach you how to use OCEASOFT data logger solutions using Bluetooth® wireless technology for seamless mobile monitoring of temperature-sensitive products. An OCEASOFT expert will explain how to program data loggers, collect recorded data, generate reports using web and mobile applications, and how to use specially designed automation tools.

COURSE TOPICS

- Solution architecture
- Data loggers with Bluetooth® wireless technology
- Wireless communication
- Managing Cloud accounts
- Mobile application for iOS and Android platforms
- Looking up stored data with web application
- Using the OCEABridge wireless data collector
- Using the OCEABench data logger programming tool
- Managing alarms and technical issues

❯ Teaching tools: course materials, hands-on exercises

❯ Target audience: users and administrators of OCEASOFT Bluetooth®-based solutions

❯ Prerequisites: basic computer knowledge

❯ Duration: 1 day

Training

ThermoServer-ThermoClient

FOR USERS AND ADMINISTRATORS

Learn everything you need to know about ThermoServer-ThermoClient, the cornerstone of your Cobalt 2 wireless monitoring system, with two targeted training sessions:

- **User training**: this course enables you to master the everyday use of monitoring software features and data logger management with the ThermoClient application.
- **Administrator training**: this course covers everything from monitoring system installation to long-term maintenance, including alarm and user configuration, so that you can get the most out of your ThermoServer-ThermoClient solution.

COURSE TOPICS

- Software architecture and installation
- Hardware presentation
- Wireless communication
- ThermoClient software
  - *Maintaining the system and printing reports*
  - *User management*
  - *Managing modules and sensors*
  - *Looking-up and analyzing data*
  - *Managing alarms and alerts*
  - *System maintenance and reports*

❯ Teaching tools: course materials, hands-on exercises, case studies

❯ Target audiences: regular software users wishing to track sensor activity and acknowledge alarms; or advanced users and administrators wishing to learn the finer points of system functionality.

❯ Prerequisites: basic computer knowledge required for basic users; more advanced familiarity with computer systems, databases, and ThermoClient for the Administrator course.

❯ Duration: 1 day per topic; shorter half-day session available for user training.

Metrology basics

INTRODUCTORY COURSE ON METROLOGY

This training course is presented by experts from OCEASOFT's ISO/IEC 17025 accredited metrology laboratory. You will learn the foundations of temperature metrology and understand calibration certificates and characterization reports to make your laboratory life easier.

Course content focuses in particular on standardized and internationally accepted Quality methods.

COURSE CONTENT

- Various sensor technologies
- International Temperature Scale of 1990 (ITS-90)
- Standards related to temperature metrology
- Metrology terms (International Vocabulary of Metrology)
- Introduction to uncertainty
- Calibration certificates and verification certificates
- Climatic chamber characterization
- Sub-contractors

❯ Teaching tools: course materials, laboratory tour (for training performed at OCEASOFT facilities)

❯ Target audience: open to all

❯ Prerequisites: basic computer knowledge

❯ Duration: 1 day

Calibrating temperature sensors

HANDS-ON EXPERIENCE WITH CALIBRATION

Presented by an expert from OCEASOFT's ISO/IEC 17025 accredited metrology laboratory, the training course will teach you how to calibrate temperature sensors and use the results.

For sessions taking place at OCEASOFT's facilities, the course features hands-on exercises using professional calibration equipment such as reference probes and temperature-controlled baths.

COURSE TOPICS

- Determining needs
- Overview of the main standards
- Prerequisites before calibration
- Establishing an uncertainty report
- Calibration certificates
- Calibration process using OCEASOFT ThermoCalibration software
- Using results
- Controlling sensors over time

> Teaching tools: course materials, preparing calibration, laboratory tour (for training taking place at OCEASOFT facilities)

> Target audience: all people who need to perform temperature calibrations

> Prerequisites: OCEASOFT Metrology Basics training or equivalent basic metrology knowledge

> Duration: 1 day

Characterizing climatic chambers

LEARN HOW TO PERFORM THERMAL MAPPING

By taking this course on characterizing temperature-controlled chambers, you will learn how to use professional measurement tools from an expert in OCEASOFT's ISO/IEC 17025 accredited metrology laboratory. You will use OCEASOFT's thermal mapping software in practical exercise.

The course will teach you how to characterize climatic chambers in accordance with the FD X 15-140 standard.

COURSE TOPICS

- Purpose of characterization
- Standards related to characterizing chambers (thermal or climatic)
- Overview of metrology basics
- FD X 15-140 standard
- Data acquisition software (ThermoClient)
- OCEASOFT thermal mapping software
- Mapping report and compliance declaration
- Practical exercise with OCEASOFT thermal mapping software

> Teaching tools: course materials, laboratory tour (for training performed at OCEASOFT facilities)

> Target audience: users and future users of the OCEASOFT thermal mapping kit

> Prerequisites: basic metrology knowledge and familiarity with ThermoClient software

> Duration: 1 day

Maintenance / Support

Keeping your solution healthy

MAINTENANCE AND TECHNICAL SUPPORT CONTRACTS

The OCEASOFT team has unmatched expertise assisting customers with their monitoring, system, and maintenance issues. Three maintenance contract options are available – Basic, Silver, and Gold – to keep your Cobalt wireless monitoring solutions up and running reliably over the long run.

Services	Basic	Silver	Gold
Remote			
Hotline (2-hr callback), troubleshooting, problem analysis	●	●	●
E-mail technical support	●	●	●
Module configuration assistance	●	●	●
Downloads/Tools/FAQs	●	●	●
Minor ThermoClient software upgrades	●	●	●
Replacement installation media CD-ROM if lost/damaged	●	●	●
Remote installation services	●	●	●
On-site			
Annual preventive maintenance visit, functional checks			
• Annual sensor calibration[1]/certificates, configuration		●	●
• Battery change in all wireless modules if necessary		●	●
• Minor ThermoServer software upgrade		●	●
• Technical training on upgrades		●	●
• 25% discount off OCEASOFT training courses		●	●
• Major ThermoServer software upgrades			●
• Database maintenance, data archive on CD/DVD			●
• Equipment loan if repair required			●
Up to 3 corrective maintenance visits per year			●
Server migration and major software upgrades			●
Other			
Warranty extension for duration of contract			●
Technical training			●
Duration (months)	12	36	36

Often, the most effective way to serve customers is to connect remotely to their system and troubleshoot problems directly. In order to benefit from an OCEASOFT Technical Support Contract, you must allow limited remote access to your system, used exclusively under your direct supervision:

- Priority support for maintaining your monitoring system
- All maintenance and support services are provided by experienced and dedicated OCEASOFT technicians
- Remote connections for fast and direct service, with your permission
- Contracts adapted to match your needs, budget, and solution

PART NUMBER	DESCRIPTION
Maintenance and technical support contracts	
CTR.000.0001_20	Basic (with remote access) 1-20 sensors
CTR.000.0001_50	Basic (with remote access) 21-50 sensors
CTR.000.0001_100	Basic (with remote access) 51-100 sensors
CTR.000.0001_XXX	Basic (with remote access) > 100 sensors
CTR.000.0002	Silver
CTR.000.0007	Gold

(1) Digital sensors calibrated via exchange. Analog sensors calibrated at customer site or by return to OCEASOFT laboratory.

Testimonial

"

This solution works with all the specific configurations at each of our sites around the world. With this system, we are able to avoid wasting finished products. More importantly, it enables us to be proactive in our manufacturing and storage process in order to limit missed sales opportunities. Above all, our new system brought peace-of-mind for our users and administrators.

Quality and Regulatory Affairs Manager,
major North American pharmaceutical laboratory

"

SALES INFORMATION

OCEASOFT customers and partners span the globe, comprising a highly diverse ecosystem deploying monitoring systems that help protect all types of goods and service operations.

CONTACT

When you need any additional information about OCEASOFT products, to request a quotation, or if you have any questions at all, please do not hesitate to contact us directly.

Contact

OCEASOFT is an international leader in temperature and other physical parameters tracking solutions for sensitive products. Our products and services help protect your products from undesired or unexpected variations in ambient storage and shipping conditions. Every day, thousands of people rely on OCEASOFT hardware and software solutions to monitor their laboratories, clinics, warehouses, transportation equipment, and much more.

OCEASOFT's mission focuses on enabling customers to monitor the most critical physical parameters. In today's regulatory and economic context, our solutions and our background of over 19 years' experience combine to enable you to meet the challenge of a reliable and constant monitoring of your sensitive products.

OCEASOFT was listed on January 28, 2015 on Euronext Growth Paris (ISIN: FR0012407096 - ticker symbol: ALOCA).
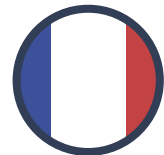
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Warranties, delivery, notices

OCEASOFT WARRANTY INFORMATION

- OCEASOFT products are covered by a Limited Warranty. Warranty service for eligible repairs is available at no charge during the warranty period, excluding shipping costs, starting from the invoice date. Products under warranty must be returned to OCEASOFT for repair.

HARDWARE WARRANTIES

- Cobalt data loggers, receivers, repeaters, alert devices, and sensors are covered by the Limited Warranty for a period of two years.
- Emerald and Phoenix data loggers are covered by the Limited Warranty for a period of one year.
- Atlas data loggers are covered by the Limited Warranty for a period of one year (based on the products' intended battery life).

ACCESSORY WARRANTIES

- Accessory products such as cables and casing are covered by the Limited Warranty for a period of one year.
- Please do not hesitate to contact OCEASOFT for more information on Warranty coverage, out-of-warranty repairs, and replacement parts.

DELIVERY

- OCEASOFT solutions can be shipped nearly anywhere (please contact your sales representative).
- We keep a large quantity of products in stock in order to meet your needs as quickly as possible. Products that require assembly and calibration may take longer to deliver.

EXCLUSIONS

- OCEASOFT assumes no liability for any loss or claims by third parties which may arise through the use of the products or services described in this catalog. This document is non-contractual and subject to change without notice.

- OCEASOFT and its distributors shall not be held liable either directly or indirectly for cost, damage, expenses and legal fees, or personal injury related to the use of OCEASOFT solutions, even in the case of faulty design or manufacturing of said solutions. OCEASOFT solutions, including accessories and replacement parts, are provided as-is without any additional warranty, explicit or implied, with respect to files, their suitability for a particular application, their quality, their commercialization or any other related aspect.

- The liability of the seller and/or creator with respect to the solution warranty is strictly limited the amount paid by the client for said solution. Under no circumstances shall the seller or creator assume responsibility for any damage or prejudice whatsoever, direct or indirect, specific or consequential, particularly with respect to any down-time, loss of data, or any other financial loss resulting from the use or impossibility to use the solutions, even if OCEASOFT is aware of the potential occurrence of said prejudice. The product seller and creator advise each solution user to verify the results of using these files, and neither the seller nor the creator shall be held liable for any damage related to using the delivered solution. OCEASOFT informs all future buyers and users of its solutions that OCEASOFT solutions would not be able to exist without the above limitations.

NOTICES

- Do not use OCEASOFT solutions for protection or as part of automated emergency system or for any other application that involves protecting the lives of people and/or the security and/or safety of property. Customers and users of OCEASOFT solutions are responsible for making sure that said solutions are fit for the intended usage.

- Do not open the product casing and do not disassemble or modify internal components in any manner.

- OCEASOFT solutions do not contain any internal components that require user intervention or repair. If the device shows signs of improper operation, disconnect it immediately from its power source, or remove the battery, and contact OCEASOFT technical services.

- All OCEASOFT solutions and software components are tested thoroughly. However, it is not feasible or realistic to test and qualify all computers, devices, operating systems, and configurations. Our experience has shown there are some variations in USB implementations by computer manufacturers; also, computer and mobile device operating systems are subject to frequent evolution. It is therefore important for users to avoid unnecessary risk by testing the products and validating processes internally to ensure stability and reliability of both wired and wireless communications in their environment.

Glossary

GENERAL TERMS AND REFERENCES

ABS plastic — Acrylonitrile Butadiene Styrene, a highly shock-resistant thermoplastic polymer.

Alarm (condition) — An alarm is a state that occurs when the system observes a sensor reading that is out-of-bounds, such as a temperature reading that is too high or too low with respect to programmed range limits. The system can notify users when alarms occur by sending alerts.

21 CFR Part 11 (FDA) — Food and Drug Administration guidelines establishing regulations regarding electronic records and electronic signatures to ensure that those records and signatures are considered trustworthy, reliable, and equivalent to paper records.

Alert (action) — An alert is a notification issued by the system and sent to users when the system observes an alarm condition or potential problem.

Bluetooth® — A short-range wireless communication technology that allows devices such as data loggers, smartphones, computers, and peripherals to transmit data wirelessly over a short distance. Bluetooth Smart® offers a range of about 50 m (about 160 ft).

Client software — Application that provides a user-facing interface to information stored on a server.

Cloud — A global network of remote servers accessed via the Internet. Cloud platforms store and manage data and host software applications.

Correction — Compensation of a known sensor measurement effect through mathematical adjustment.

Data logging — The process of using an electronic device to record data from a built-in or external sensor over time.

Data logger — Wireless module that logs sensor data on a regular basis and transmits it to the server.

Drift (sensor) — Variation over time of sensor readings due to variations in the metrology properties of measurement instruments.

Equipment — The material or space being monitored with a data logger module

Expanded uncertainty — Expression of uncertainty of measurement results with a confidence level of 95% (K=2).

Installation Quality (IQ) — The first step in qualifying new equipment. A documented process that verifies that all aspects that affect product quality with respect to approved design specifications, and that the piece of equipment or instrument has been delivered, installed, and configured correctly.

IP Protection Index — Classifies the degree of protection provided against intrusion, dust, accidental contact, and water by mechanical casings and electrical enclosures.

ISM bands — License-free wireless frequencies for Industrial Medical Scientific applications around the world.

Line-of-sight (LOS) — An indication of the maximum wireless range between two points without any obstacles.

LoRaWAN™ — A long-range, low-power networking protocol designed to wirelessly connect devices, offering line-of-sight range up to nearly 16 km (10 miles).

Measurement chain — All the elements in a data logger device comprising the path taken by the signal from the sensor to its wireless transmission.

Measurement interval — Time period between two sensor readings

MKT (Mean Kinetic Temperature) — Simplified expression of the overall effect of temperature fluctuations during storage or transit of perishable goods.

Module — Another term for data logger.

Network — Computers, data loggers, and infrastructure equipment such as receivers and repeaters, connected with servers. Networks can be "local" (LAN) within a specific area or building, or "wide area" (WAN), covering geographically separated locations as well as Cloud platforms.

OCEACloud — Internet-based platform on which data is stored and accessed via web application

OCEAlert — Internet-based platform that delivers alerts via voice message and SMS/text messages.

Operational qualification (OQ) — The testing of every component in the system. Once the equipment has passed the IQ phase the operational requirements, as well as the operational consistency of the equipment, must be put to the test.

PTFE — Polytetrafluorethylene: Polymer with remarkable insulation properties (temperatures up to +380°C) and protection from humidity.

Receiver — Device that collects sensor and other information from data loggers and forwards it to a server or Cloud platform.

Reference (calibration) — Reliable and stable measurement chain that can be used to calibrate measurement chains (sensors).

Repeater — Device that transparently relays the wireless signal from more distant devices to extend overall range.

Resolution (sensor) — Smallest change in quantity being measured that causes a perceptible change in the corresponding indication.

SEA (Spontaneous Emission of Alarms) — A Cobalt feature that raises an alarm with the server or back-end software immediately upon detection of an out-of-bounds condition or technical problem in order to generate an alert (notification).

Sensor — Device that measures physical parameters such as temperature, humidity, CO_2 levels, electrical current, etc.

Server — Computer that collects data from data loggers.

Stability profile monitoring — Provides evidence regarding the quality of a drug substance or drug product temperature conditions as related to recommended storage conditions.

Web application — Solution runs on Cloud platform, with user interface in a browser without having to install other software.

Notes

Notes

Oceasoft™

OCEASOFT.COM