# **CT 3500**

Next-generation IoT telematics for streamlined refrigerated shipping container operations.

Remote management and control of reefers travelling globally in complex supply chains.



The CT 3500 is the next evolution in remote reefer management, enabling complete visibility and control of assets at every point in the supply chain on land, rail or sea. Our state-of-the-art telematics device provides shippers and carriers with comprehensive reports, analytics, alerts and remote two-way control of reefers to help streamline container operations and drive efficiencies. The CT 3500 includes unmatched global LTE coverage, supports LoRa, Bluetooth 5 and NFC technology, and has optional satellite connectivity.

# Improved Asset Visibility and Management

Vastly improve reefer container operations, decision making and business planning with cutting-edge technology that works with the ReeferConnect and VesselConnect platforms to show reefer location, status, critical data and analytics. Reduce operational costs with efficient handoffs and pre-trip inspections; minimize claims and losses by protecting temperature-sensitive cargo; improve customer experience with shipment location and status and more. The CT 3500 can be installed permanently, or temporarily with quick installation and removal for monitoring guest reefers and single trips on a vessel or while at a yard or terminal. Use an app to simplify installation, troubleshooting, and provisioning of the device and additional sensors.

## **Cargo Damage and Claim Prevention**

Mitigate costly claims with customizable alerts that notify when reefer temperature or humidity levels leave normal ranges and when malfunctions or route deviations occur. Two-way control enables quick corrective action by allowing the adjustment of set temperature, humidity, controlled atmosphere parameters, cold treatment and more, all from a centralized location. Add ORBCOMM's 24/7 monitoring service for additional support while containers are in transit.

# Streamlined Inspections

Our solution helps eliminate unnecessary delays and optimizes turn times at ports by allowing carriers to run pre-trip inspections remotely while empty reefers are on a vessel to save on labor costs, expedite cargo distribution and improve ROI.

# **Simplified Data Log Access**

Address a key industry challenge with a powerful battery that enables remotely powering up a dormant reefer's micro controller and downloading data logs without sending personnel into the field. The battery is designed to last for the life of the reefer, enabling continued visibility even when the reefer is not in use.

Advanced temperature management

Temporary or permanent installation

Complete two-way control

**Remote pre-trip inspections** 

Global cellular, satellite and LoRa connectivity



# Complete, Uninterrupted Connectivity

Featuring the ORBCOMM Global SIM, the CT 3500 delivers the most comprehensive connectivity offerings in the industry with global cellular communications in over 208 countries and 519 networks that use 4G LTE, 3G and 2G.

Monitor and collect critical data from reefers over LoRa networks on land and vessel and seamlessly switch to cellular connectivity when outside of LoRa coverage. Add satellite connectivity with our optional external satellite modem.

# Cellular Technology

- LTE FDD B1/B2/B3/B4/B5/B7/B8/ B12/B13/B18/B19/B20/B25/ B26/B28
- LTE TDD B38/B39/B40/B41
- UMTS B1/B2/B4/B5/B6/B8/B19
- GSM 850/900/1800/1900MHz

# SIM Type

Solderable SIM

## **Communication Protocols**

SMS, UDP, TCP, FTP

#### Wireless

LoRaWAN, BLE, NFC-ready, cellular

#### **Antenna**

Integrated cellular/GPS/BLE/LoRa antennas

## **GPS Technology**

- 72 channels
- Receive tracking sensitivity -157 dBm

#### **Battery**

- · Internal 2.6 Ah
- Charge temperature: 0°C to 45°C
- Discharge temperature: -20°C to 60°C
- Storage temperature: -20°C to 55°C at relative humidity 65+/-20% RH

#### 1/0

Digital I/O: 1-Wire bus

#### **Accelerometer**

- 3-axis digital accelerometer with motion detection
- · Optional impact detection

## **Power Input**

- 15-36 VAC
- 21-34 VDC
- · Max peak 60V at 10 milliseconds
- · Over-voltage protection

# **Physical Specifications**

- Dimensions
  - » 8.81 x 3.31 x 1.18 inches
  - » 223.7 x 84.1 x 30 mm
- · Plastic material: Polycarbonate
- · Color: black

# Certifications

- · FCC/IC
- PTCRB
- CE Red
- RCM (Australia)
- WEEE

## **Environmental Compliance**

- Operating temperature: -40°C to +85°C
- Internal battery operating temperature: -20°C to +60°C
- IEC 60529
- Vibration: AAR S-9401, rail car body mounted; MIL-STD-810G
- Shock: MIL-STD-810G (Sec 516.6)

### Harness/Installation/LEDs

- Universal harness for installation across all OEMs
- RMM/PLM coexistence with included PAD
- Single tricolor LED to indicate unit status (cellular/LoRa/Reefer comms)
- Permanent (VHB) and temporary (bracket) mounts
- · Magnetic reset switch

# Memory

- Storage of more than 2000 messages
- Storage of more than 5000 onboard 12-point geofences plus unlimited backend geofences
- Storage of reefer software files before updates
- Storage of data log download files before sending

#### Ingress

- IP69K
- IP67

# Flammability

- Enclosure: UL94 V-0
- Cable: UL1581 VW-1

코리아오브컴(주)

글로벌 저궤도 위성통신사업자인 미국 ORBCOMM Inc. (NASDAQ: ORBC)와의 라이센스 계약을 체결하여, 오브컴 위성과 육상기반시설을 이용하여 기기 간 통신서비스(IoT: Internet of Thing)를 제공하는 기간통신사업자입니다. 코리아오브컴(주)는 전 세계 가입자를 대상으로 IoT에 특화된 통신서비스를 합리 적인 가격에 제공하고 있습니다.

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