



EROAD

CoreHub Xtreme Install Guide (USA) - Thermo King



Technical support

North America	1-855-503-7623	support@eroad.com
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Australia	1800 437 623	support@eroad.com.au
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New Zealand	0800 437 623	support@eroad.co.nz
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Parts and equipment

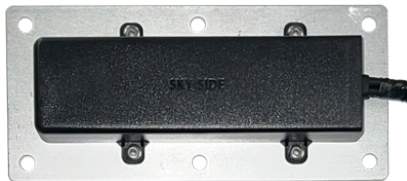
Included with the CoreHub Xtreme Install Kit:



CoreHub Xtreme (the "unit")



Trailer & reefer Smart harness



External antenna



Bracket

Zip ties, screws

Required tools

- 10, 12, 13, 14, and 17 mm deep well sockets and wrenches
- Diagonal flush cutters
- Impact driver and 5/16ths bit for self-tapping screws
- 18/20ga butt splice crimping tool
- Propane torch
- Platform to safely reach the top of the reefer

A ladder is fine for heights up to 2 m (7 ft) **but should not be considered safe for reaching the top of a reefer**. Where possible, use a scissor-lift, forklift basket, or similar stable, load-bearing platform.

Pre-prep

- Start the reefer to ensure it's working with no console alarms.

- Ensure the reefer has its iBOX/REB/BlueBox.
Note for BlueBox: If there's no data flowing after installation, take a picture of the serial number and contact Thermo King's tech support (855-663-2558 / tracking@thermoking.com) to ensure that it's activated.
- Use the Safety Lockout Procedure; disconnect any AC power source and battery NEGATIVE terminal.

Mount the unit

For SR4 units, mount the unit to the front of the trailer above the battery.



Bracket



Precedent



Legacy units

- For legacy units (SR3 and older), mount the unit vertically on the upper half of the reefer next to the condenser inflow (above the display).
- Keep the unit and cables away from hot or moving parts, and high voltage lines (usually colored orange).

Mount the antenna

- Attach the antenna to the top of the reefer or the side front of the trailer. To function properly, it should directly see the sky.



Run the cables into the controller enclosure

- Open the Precedent control compartment cover. Unscrew the cable cover to push the cables through to reach the power and data connections. In legacy models, remove the fuse cap to push the cables through a round hole.



Precedent



Legacy

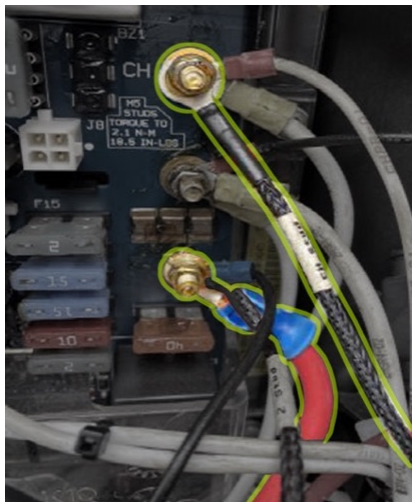
Plug the unit into the reefer third-party port

- The unit's harness has connectors for reefer data and fuel sensor. The data plugs into the third-party six-pin connector located inside the reefer controller module.
- Depending on the reefer type and readiness for telematics it may be necessary to do additional work to add this port to the reefer. This is described in additional documentation covering legacy, I-Box, REB, and BlueBox connections.



Connect reefer power

- Connect the **BLACK** Ground ring to the "CH" stud on the reefer controller board.
- Connect the **RED** Power ring at the "2" stud on the reefer controller board.



Note: Power and Ground aren't used in all trailers.

Optional: Connect to trailer ABS module from the 7-way connector

This step refers to using the optional trailer ABS harness (part number HHXTR7) if each axel's odometer reading will be gathered for maintenance purposes.

- The unit receives data from the 7-way connector.
- Push the wires through the grommet. To help this – especially if the rings are already terminated – loosen the housing to

decompress the grommet, and then loop a wire through the rings to pull them through.

- Connect to the blue, brown, and white wires on the harness to the corresponding blue, brown, and white power studs on the 7-way. Deep 3/8-inch sockets can help tighten the nuts. **Do not over-tighten as the studs can break.**

Reefer on; look for a solid red light

- Reconnect the battery.
- Use the displayed table to troubleshoot the unit's status.

LED Color	Flash Pattern	Description
Light Pink	Solid	Bootup
Blue	Solid	Starting Services
Green	Solid/ Ignition On	Disconnected from Cloud
Red	Flashing/ Ignition Off	Connecting to Cloud
Red	Solid/ Ignition Off	Connected to Cloud
Orange	Flashing/ Ignition On	Connecting to Cloud
Orange	Solid/ Ignition On	Connected to Cloud

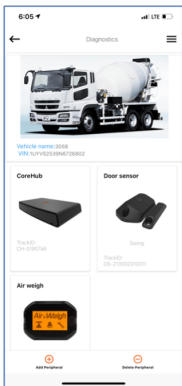
Use the Installer app to activate the unit and any wireless sensors

- Scan the QR code to download the app or search for the app in Google Play or Apple's App store.

You can also find the QR code in the box the unit came in and on the back of the unit itself. For convenience, place the QR code on the inside of the APX display door.



- Log in to the app using your 360 credentials.
- Turn on the reefer and verify that the unit's status LED is solid red and that you are within close Bluetooth range of the unit.
- On the home screen, select **Install**.
- Use the QR code to identify the unit to the app.
- Enter the trailer and reefer information.



- Add sensors one at a time by scanning their QR codes. Each sensor has diagnostics.
- Optionally, photo-document your work as described below.

Photo verification

Installers are encouraged to photo-document their work to assist in supporting work order documents. Any digital camera may be used for 2 or 3 images per site, but images must:

- Show the device clearly, mounted in place, oriented appropriately.
- Show connections and wiring secure and tidily managed.
- Indicate the environment in which the device is installed (its position in the cab, or on the asset).
- You may also wish to note the vehicle make/model for future reference.



Photos are evidence of a compliant install. They protect EROAD's and the Installer's liability, should a future 3rd party or incident affect compliance integrity.

Addendum: Migrating from a TMU to CoreHub Xtreme

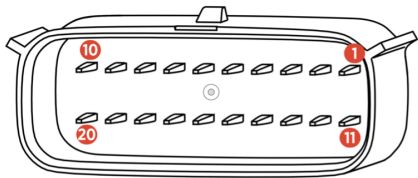
1. **Unplug the TMU unit from all cabling.**
2. **Take photos of the installation beyond this step.** Any digital camera may be used. Record/confirm the serial number of the TMU before moving on.
3. **Except for the fuel sensor and its cabling,** remove the antenna and any connected TMU-related hardware (harnesses, door sensors, etc.).
4. If installed, **carefully remove the old TMU switch attached to the TK controller unit.**
 - a. This controller houses delicate components, and some plastics become brittle with age. Avoid forcing or prying the TMU switch from the controller.
 - b. Once removed, **fill holes with appropriate grommets, and weatherproof with silicone.**
5. **Mount CoreHub Xtreme.** Follow the steps detailed in this guide, with the following call-outs:
 - a. If using the same TMU locations for CoreHub Xtreme and its antenna: re-use the existing site as much as possible. Holes, braces/supports, etc.

- b. Be mindful of alterations to the reefer since the TMU's installation: additional peripherals, special structures, etc., that may affect CoreHub Xtreme's installation, its performance, or its structural integrity.
- c. If using a door sensor, a new wireless door sensor will need to be installed. (Wired door sensors are no longer supported.)

Specifications

Cellular	4G LTE
WiFi	2.4 & 5 GHz 802.11 a/b/g/n, 150 Mbps
Bluetooth	Classic+BLE 4.2
GPS	GPS, BEIDOU, GLONASS, Galileo
Power	12 V, 0.5 A 24 V, 0.25 A
Int. Battery	Lion rechargeable, or Li-hybrid Supercap (Optional)
Dimensions	160 x 90 x 25 mm (6.3 x 3.5 x 1 in) 250–400 g (0.5–0.8 lb)
Temperature	-40 – +70°C
IP Rating	IP66K

Pinout



PIN	Function	PIN	Function
1	RX2 (normally debug)	11	ADIO 5
2	TX2 (normally debug)	12	ADIO 4
3	RX1 (shared J1708)	13	ADIO 3
4	TX1 (shared J1708)	14	ADIO 2
5	CAN LOW	15	ADIO 1
6	CAN HIGH	16	GND
7	1708-/ CAN1 LOW	17	1-Wire
8	1708+/ CAN1 HIGH	18	EXT 5/ 5 V SW
9	-VIN/ Solar Panel -	19	EX 12/ 12 V SW
10	+VIN	20	Solar Panel +

Health and safety

There are no user-serviceable parts.

This device was designed to track land-based Assets that may be subjected to rain, light impacts and general mud and dust. Installation in or on water-borne equipment is not recommended and is not covered by EROAD's warranty.

This device is factory-sealed; tampering will void the warranty.

Before installing EROAD equipment in a vehicle you must be, in Australia, an approved EROAD installer and, in New Zealand, an accredited EROAD installer. EROAD expects installers and contractors to understand and follow all relevant health and safety regulatory requirements.

The installer must wear appropriate Personal Protective Equipment (PPE) for the install risk and customer requirements. PPE may include safety glasses, safety shoes, work gloves, hard hat, high visibility vest, sun cream, sun hat and coveralls. You must understand and comply with the safety requirements of customers or third parties.

Avoid fitting EROAD equipment in locations that could impede or cause injury to people. This includes potential head strike zones on the windshield or dashboard, airbag deployment locations, seatbelts, and other safety-relevant devices.

The vehicle must be parked and level, with the parking brake engaged.

Before installation, check that other safety-relevant equipment is working properly and report any issues to the customer.

Before installers are permitted to work under or around suspended equipment – held aloft with slings, hoists, or jacks – ensure the equipment is secured to prevent collapse or falls.

Avoid running cables close to heat sources, sharp edges, obstacles or safety-relevant devices.

After installation, check that all other safety-relevant equipment continues to work properly.

While EROAD hardware is comprehensively tested against corrosion and ingress, devices are not invulnerable to water, fire or impact damage. Do not subject EROAD devices to extreme heat, high-pressure water force or other intense physical forces.

Protect this device and other EROAD devices from extreme temperatures. Operating temperatures for the equipment related to this guide are found in the specifications page.

Installers must ensure they fully understand these instructions before installing an EROAD-supported device and immediately seek advice from a Regional Installation Manager on any matter that is not understood.

Legal

The legislation and rules concerning the installation and operation of GPS driver aids vary. You are required to be familiar with the applicable laws of the jurisdiction(s) in which the vehicle will be operated. This includes the rules governing installation of GPS driver aids, distracted driving legislation and other road rules.

It is your and your vehicle driver's sole responsibility to install and use the device in a manner that complies with the law and will not cause accidents, personal injury or property damage. To the fullest extent permitted by law, EROAD disclaims all liability and excludes all

warranties for installation or use of this device in a way that may violate such laws and regulations.

As EROAD is continuously improving its products, EROAD may make changes to this device at any time, which may not be reflected in this document. Please contact your nearest EROAD office if you require any further assistance.

If you think that the installation of this device may have caused your vehicle's performance to be impeded, please contact EROAD Technical Support immediately to resolve the issue. EROAD is not liable for any costs or expenses incurred by engaging a third party to repair the fault without EROAD's prior consent.