ORBCOMM®

WHERE DATA DRIVES DECISIONS

CT 360x

Installation Guide

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CONTACT AND LEGAL INFORMATION

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ABOUT THIS INSTALLATION GUIDE

Purpose

This guide contains installation information for the CT 3600 and CT 3601 (model numbers CT3600 and CT3601) (hereafter referred to as CT 360x) on Carrier, Daikin, and Star Cool assets. The intended audience for this guide includes field support personnel, product evaluators, and certified third-party personnel. It is particularly intended for personnel who are responsible for system installation and activation. In addition, and as is appropriate, this guide can be used for customer training.

Note: Depending on your CT 3600 model and year of make, the connectors on the device may be either gray or orange. All CT 3601 devices have the gray connectors.

IMPORTANT

READ ALL INSTRUCTIONS CAREFULLY BEFORE INSTALLING. FAILURE TO DO SO MAY CAUSE PERSONAL INJURY OR DAMAGE TO PRODUCT AND/OR PROPERTY.

• Review the product package and contents prior to beginning the installation. Take care when opening the packaging and removing items. If a return is needed, you will want to return the product in its original packaging if possible. • This instruction guide is provided as a GENERAL installation guide; some assets vary dimensionally and may require additional steps. • ORBCOMM has a policy of continuous development and improvements. Therefore, products, guides, and technical information are subject to change without prior notice. • The manufacturer and / or distributors do not accept responsibility for third-party charges, labor, and / or third-party replacement modifications that are not ORBCOMM approved. Some modifications may void the factory warranty. • ORBCOMM does not accept any responsibility for installations performed by installers / third parties not approved and / or authorized by ORBCOMM. Some installations may void the factory warranty. • Exercise due diligence when installing this product. ORBCOMM does not accept any responsibility for asset damage or personal injury resulting from the installation of this product. Careless installation and operation can result in serious injury or equipment damage. • All liability for installation and use rests with the owner / operator. • Always make sure you have a clean, dry, and well-lit work area. • Always ensure products are secure during disassembly and installation. • Always take steps to protect yourself when drilling, cutting, and grinding because this may create flying particles that can cause injury. • Thoroughly inspect the area to be drilled, on both sides of material, prior to modification, and relocate any objects that may become damaged. • Always route electrical cables carefully. Avoid moving parts, parts that may become hot and rough, or sharp edges. • Make sure to fully understand the product, its intended use, and operation prior to use.

CAUTION: While ORBCOMM provides mounting hardware to assist with installations, it is the responsibility of the installer to select the proper mounting hardware for the asset's surface material where an ORBCOMM device or accessory will be mounted.

Environmental Protection

Waste electrical products should not be disposed of with household waste. Please recycle where facilities exist. Check with our local authority or retailer for recycling advice.

CAUTION: For this installation, use hand tools only. DO NOT use power tools.

Battery Safety Warnings

CAUTION: DO NOT short circuit or expose the battery to temperatures above the maximum rated temperature.

CAUTION: Always follow local disposal guidelines to properly dispose of the Lithium-ion battery and the device.

CAUTION: Store in a cool, well-ventilated area. Elevated temperatures will result in shortened battery life.

CAUTION: DO NOT throw the internal battery or the device into fire.

CAUTION: DO NOT replace the battery. Changing the battery without ORBCOMM's permission could violate regulatory conformity.

CAUTION: If shipping the device, contact your local shipping carrier for safe shipping guidelines.

1 INSTALLATION OVERVIEW

The CT 360x is a low-cost device capable of tracking, monitoring, and controlling refrigerated containers (reefers) both on land and at sea for total intermodal asset visibility. It pairs information read from the reefer controller with data from onboard sensors such as location and temperature and sends messages over cellular networks.

The CT 360x utilizes a rugged enclosure that houses all electronics and power control. External interfaces for power, communication, and antenna are available through rugged external connectors. It is designed to be mounted inside the reefer controller cabinet with cabled antenna mounted to the inside of the reefer controller box door.

1.1 Gather the Required Tools and Materials

You can order either a CT 3600 kit or a CT 3601 kit. Other than the individual device part numbers, components in the two kits are the same.

The CT 3600 kit part number is SM202983-001 and the CT 3601 kit part number is SM202983-204[1], include the following:

- CT 3600 (part number CT3600-2100-H) OR CT 3601 (part number CT3601-2100-H) (depending on the kit ordered)

- Locking Bracket (part number MD702425)

- Antenna (part number ST101651-001)

[1]At the time of this printing the CT 3601 is only available for Daikin. Contact your Account Manager for other possible kit numbers as they become available for other OEMs.

- Surface preparation kit for double-sided tape
- IoT Presence label (available in some kits)
- CT 360x Hardware Kit (part number ST101659) that includes:
  - Qty. 4 - M5 x 16 mm stainless steel pan head SEMS screws and hardware
  - Qty. 4 - M6 nylock stainless steel hex nut
  - Qty. 4 - 10-24 x ¾" pan head stainless steel black oxide
  - Qty. 1 - #8 x ⅜ pan head Plastite thread forming screw

Additional Tools Required

- #2 Phillips screwdriver or 10 mm socket (extended socket recommended) and socket wrench (depending on fasteners required for the installation).
- Cable ties
- To use ORBCOMM's mobile app, you require:
  - Android or iOS device with Wi-Fi or cellular connectivity
  - User / customer credentials for the platform where the CT 360x is registered / hosted. Contact ORBCOMM Customer Care if you require credentials.

1.2 Pre-Installation Check

1. Use ORBCOMM's mobile app to scan the device QR code.
2. After you submit the asset / reefer ID for verification, wait until the mobile app displays the "Asset Verified" message before continuing with the CT 360x installation.
3. Disconnect the reefer from power, and then to gain full access to the installation location, open the controller box door and remove any shields / protective brackets.
4. Verify that the necessary AC/COMMS harnesses have been installed. DO NOT proceed with the CT 360x installation if these harnesses are not installed.

   CAUTION: These harnesses must be installed before you can continue with the CT 360x installation. If the harnesses are not already installed in the controller box wiring, contact the reefer vendor or ORBCOMM Customer Care to identify and order the appropriate cables. Depending on the OEM, you may require 3-pin and 7-pin connectorized harnesses, or a single 7-pin harness. Ensure that you install these cables per the reefer OEM's assembly instructions. Only once these harnesses are in place should you proceed with the next step of the CT 360x installation.

1.3 Mount the Locking Bracket into the Asset

1. Use the four (4) provided nuts or screws (refer to table below for nut or screw type) to mount and secure the locking bracket into position.

Carrier:	10-24 x ¾" screws (black oxide finish)	**Daikin**:	M5 screws	**Star Cool**:	M6 hex nuts

CAUTION: For this installation, use hand tools only. DO NOT use power tools.

CAUTION: Ensure that the arrow on the locking bracket is facing towards the sky.

Carrier (screws)

Daikin (screws)

Star Cool (nuts)

2. Position the device into the locking bracket by hooking it to the bottom of the locking bracket, slightly pivot the device, and then snap it into position by gently pushing the top of the device towards the locking bracket.

Locking bracket installed

Carrier

Daikin

Star Cool

Hook the CT 360x to the bottom of the locking bracket (as shown)

Pivot the CT 360x, snap into position by pushing the top of the device towards the locking bracket

Carrier
(Final Position)

Daikin
(Final Position)

Star Cool
(Final Position)

1.4 Mount the Antenna

CAUTION: The CT 360x is designed to operate with a specific ORBCOMM antenna. Using a different antenna could violate certifications, and ORBCOMM does not recommend the use of any antenna other than what is specified in this guide.

Note: In cold weather conditions, you may want to keep the antenna surface warm before installation.

1. Review the recommended antenna mounting location based on asset type [1]. The location is different for each asset type. DO NOT mount the antenna in this step.

   For Carrier

   Mount the antenna on the inside of the cabinet door, on the display bezel (as shown).

   Flat Condenser Style - Coil Reefer

   C-Shaped Condenser - Coil Reefer

   For Daikin

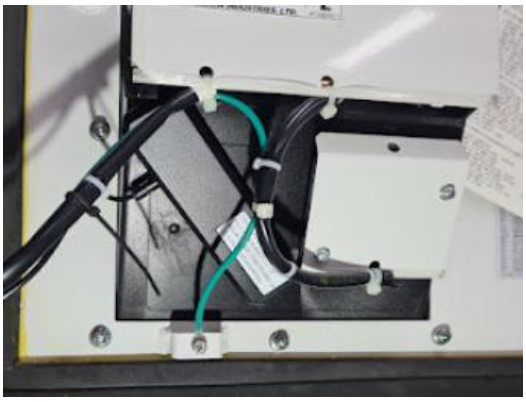
   LXE Model - Mount on the inside of the cabinet door, on the backside of the keypad panel (as shown).

   Zestia Model - Mount to the plastic part (NOT metal) on the back of the display (as shown).

[1] Figures show possible locations with antenna already mounted.

LXE Model

Zestia Model



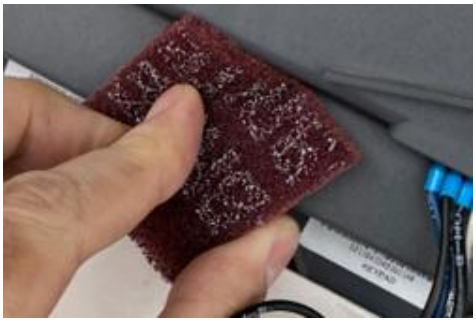
For Star Cool

Mount on the inside of the cabinet door, on the backside of the plastic display panel (CIM6 model).

2. Prepare the mounting location[1] for the antenna's double-sided tape:
    a. Use the provided cleaning supplies to prepare the mounting surface (lightly sand and clean).

    Note: Ensure that an oversized area is prepared.

[1]Figures may not reflect actual hardware. Example shown is for Star Cool.




b. Apply the provided primer to the area and wait at least 30 seconds for the primer to dry.

Note: If the mounting location temperature is below 15°C / 59°F or the mounting surface is wet, refer to Inclement Weather Guidelines for details

CAUTION: ORBCOMM strongly recommends the use of primer.

3. Remove the tape liner from the back of the antenna.

CAUTION: DO NOT touch the sticky surface of the tape.

4. Immediately place the antenna at the recommended location[1], and then **press firmly on the antenna (7 kg (15 lb) for 15 seconds)** to bond the tape to the asset[2].

Carrier

OR

Star Cool

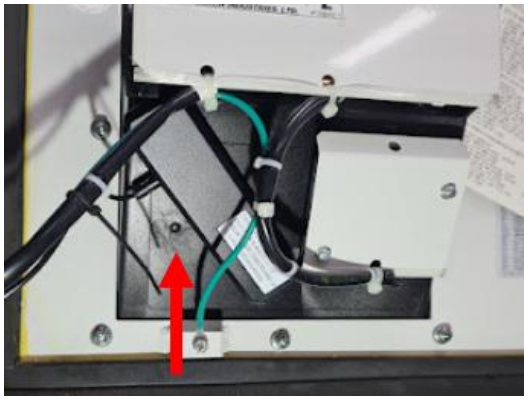
[1]Figures may not reflect actual hardware.

[2]Figure example is for a Star Cool location.

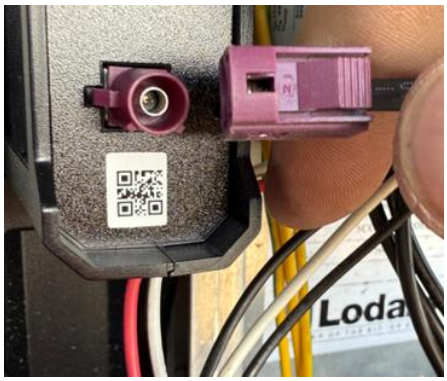
Daikin - LXE Model

Daikin - Zestria Model

CAUTION: Avoid covering the injection gate



5. Plug the antenna's FAKRA connector into the CT 360x until you hear a click or feel a tactile click. Verify that the connector is securely locked into position.

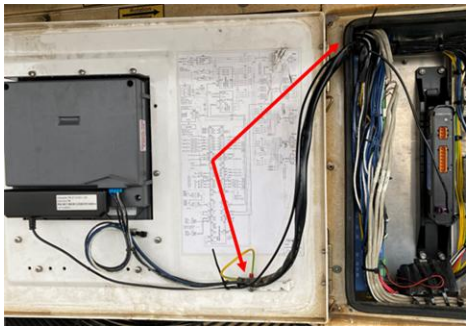


1.5 Connect and Secure the Cables

Note: For older devices with the orange connectors, you can refer to APPENDIX D for figures showing the orange connectors for the section "Connect and Secure the Cables".

1. Secure the antenna cable with cable ties as required. Star Cool example shown.

   CAUTION: Ensure that the cables do not get pinched when closing the asset door.



2. Connect the 7-position COMMS cable, and then the reefer's 3-position AC cable, to the mating connectors on the CT 360x, noting the ground position (pin 1) on the CT 360x.

   Note: Make sure all the connectors are fully pushed in (seated / good contact) before continuing with the installation.

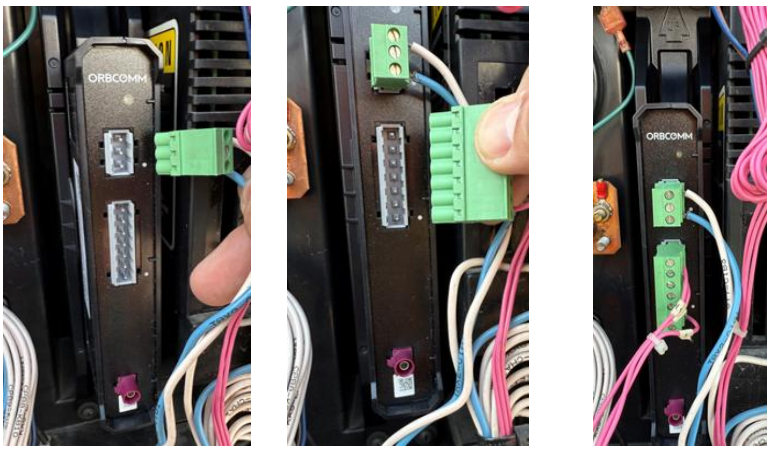
   Note: Connectors vary on different asset makes and models, so several possible configurations are shown in the examples that follow.

   CAUTION: Take note of the ground position location (pin 1) and match the device accordingly. As a precaution, ORBCOMM strongly recommends you verify the ground pin signal position on the reefer's 3-pin and 7-pin harness connectors prior to connecting them to the device (the ORBCOMM name is horizontal as shown).

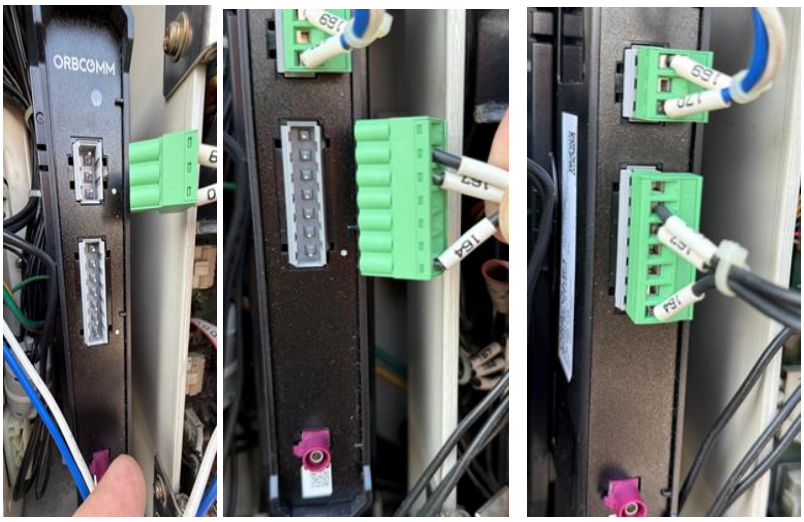
Signal	# of Circuits	Pin Position
VIN (24 VAC)	1	3
		2
Ground	1	1

Signal	# of Circuits	Pin Position
		7
Reefer RS-232 Tx	1	6
Reefer RS-232 Rx	1	5
		4
24 VAC	1	3
RMM Ground	1	2
Ground	1	1

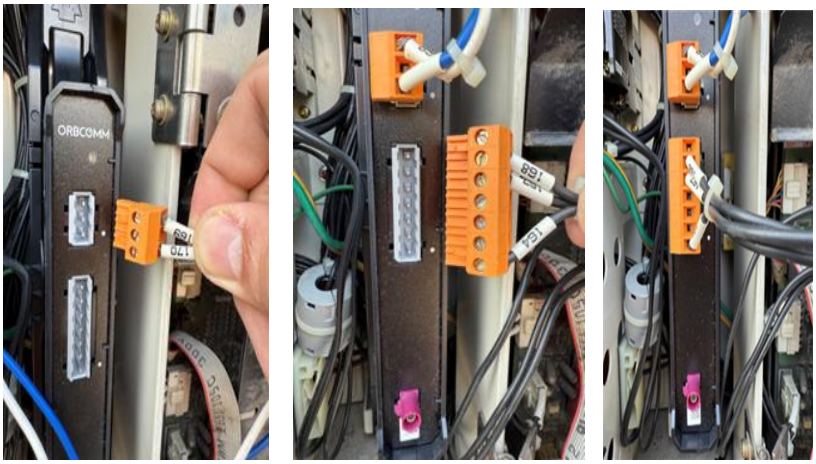
Carrier



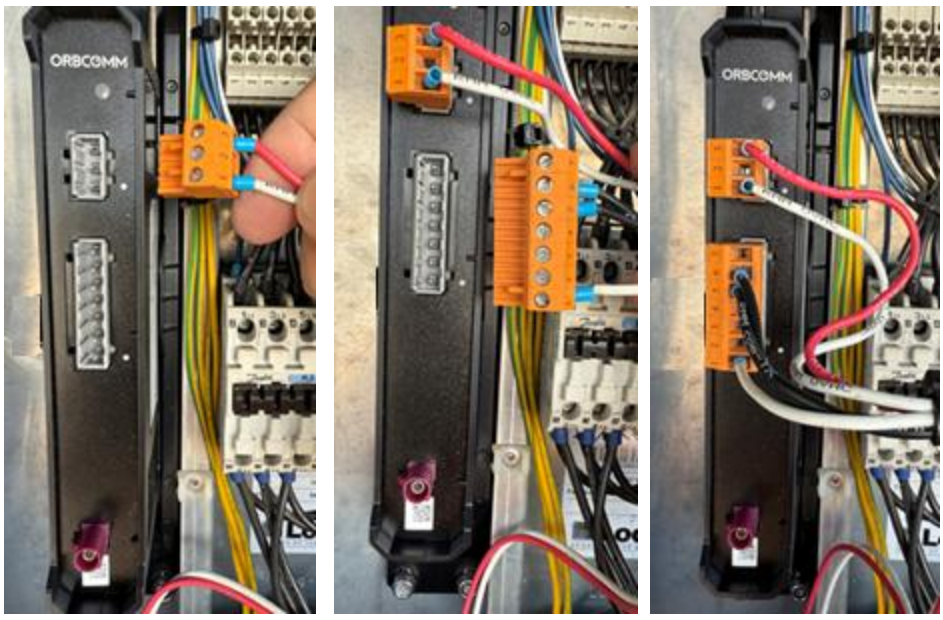
Daikin



OR



Star Cool



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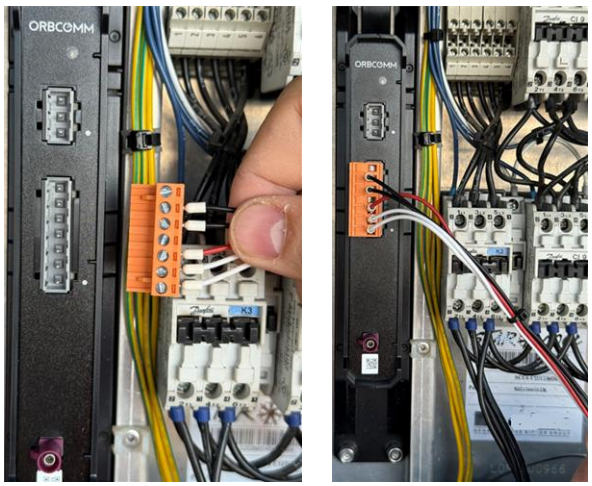


3. If an IoT Presence label is required (ships with some device models), clean the asset surface where you plan to attach the label with alcohol wipes, and then place the label on the face of the reefer above the reefer door or in the designated location.
4. Secure any loose cables with cable ties.

1.6 Commission the CT 360x

The installation is successful if you see a solid green LED on the device and the device is communicating.

1. Plug the reefer into mains power and then verify that the controller display lights up.
2. Verify that the asset / reefer ID is programmed into the controller.

   If there is no reefer ID programmed, have a certified / OEM technician enter a valid reefer ID, power cycle the reefer (power OFF at the breaker for >10 seconds and then power ON), and then check for a solid green LED (wait up to 10 minutes for a solid green LED) on the CT 360x.
3. If you have not already power cycled the reefer in one of the previous steps, power cycle the reefer at the breaker (power OFF at the breaker for >10 seconds and then power ON) or the power plug (not the ON/OFF switch), and then check for a solid green LED (wait up to 10 minutes for a solid green LED) on the CT 360x.

   If you do not see a solid green LED, refer to the troubleshooting section.
4. Use the ORBCOMM Mobile app to verify that the device is communicating by checking the **Device Information** screen for details. Items in the Status section of the screen should show green check marks and details for things like reefer temperature should be present.

   Note: **Once installed and powered ON, the CT 360x self-commissions, so no additional activation steps are required.**
5. If you removed or detached any of the protective shielding, replace these components and then close the controller door to complete the installation.

APPENDIX A INCLEMENT WEATHER GUIDELINES

One method of securing the device to an asset is double-sided tape. Proper tape application requires that the tape is kept warm (room temperature), and the asset surface is both clean and dry.

Mandatory Guidelines for Installation in Wet Weather

The installation surface on the asset must be completely clean and dry for the tape to bond. If it is raining or snowing hard enough that the surface cannot be kept dry, DO NOT proceed with the installation.

Mandatory Guidelines for Installation in Cold Weather

Below 15°C (60°F) the double-sided tape starts becoming firm which makes it more difficult to bond to the asset.

If the guidelines below are followed correctly, the device can be installed at temperatures down to -20°C (-5°F).

- At or below freezing temperatures (0°C or 32°F), both the device and the tape primer* must be kept at room temperature, for example, inside an idling vehicle or a warm building.

  *If tape primer is not provided with the device, the cold temperature installation kit (ORBCOMM p/n ST101505, suitable for up to 25 installs) MUST be used.

Example of Tape Primer

- Keep the primer warm (room temperature) until ready to apply. The primer will not dry quickly at cold temperatures however, in this situation the tape should be applied when the primer is still wet, as it improves initial bond.
- Keep the device warm (room temperature) until it is time to mount it to the asset.
- Press firmly on the entire top surface of the device (7 kg (15 lb) for 15 seconds) to bond the tape to the asset.

Failing to follow these guidelines will compromise the installation.

APPENDIX B MECHANICAL DETAILS

Parameter	Value
Weight CT 3600 CT 3601	 175 g (6 oz) 180 g (6 oz)
Bracket (only) weight	105 g (4 oz)
CT 360x enclosure	Rugged, impact, and chemical resistant plastic material

Units are shown in [millimeters] and inches.

Figure 1: CT 360x Dimensions

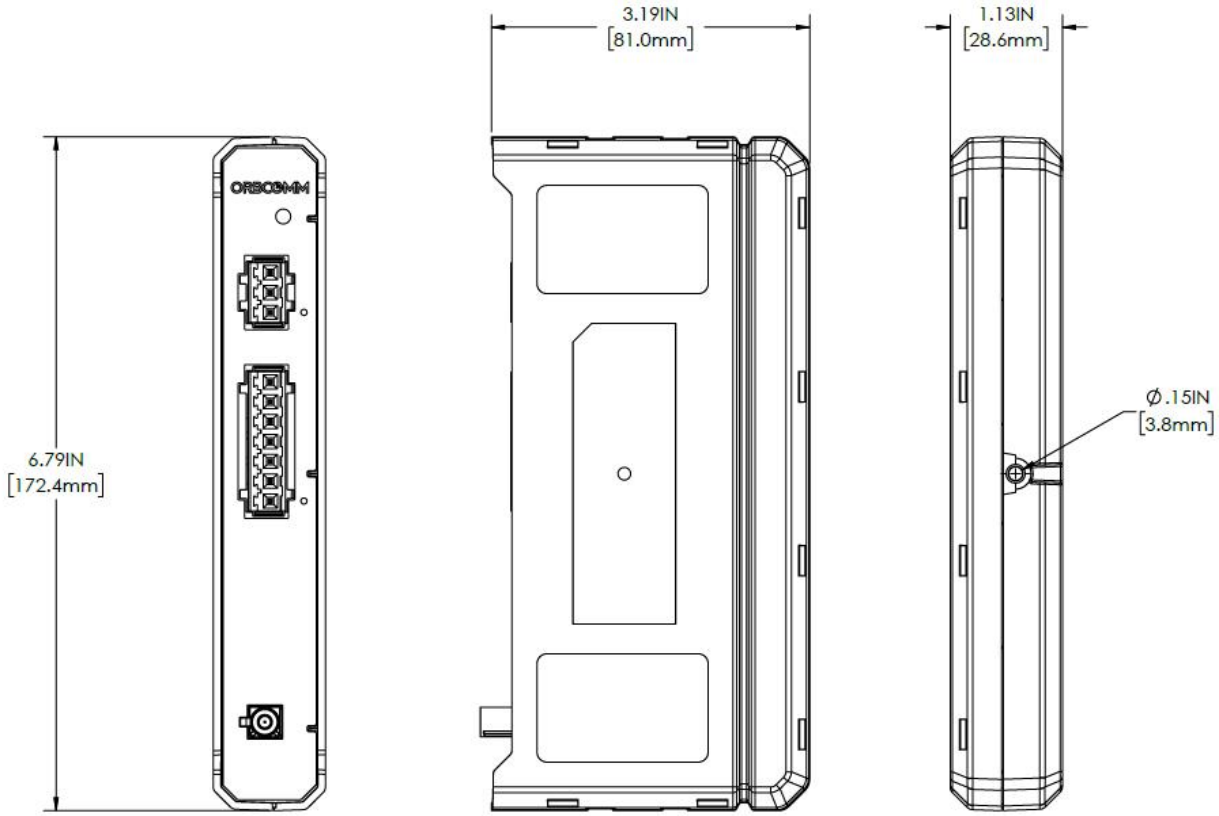
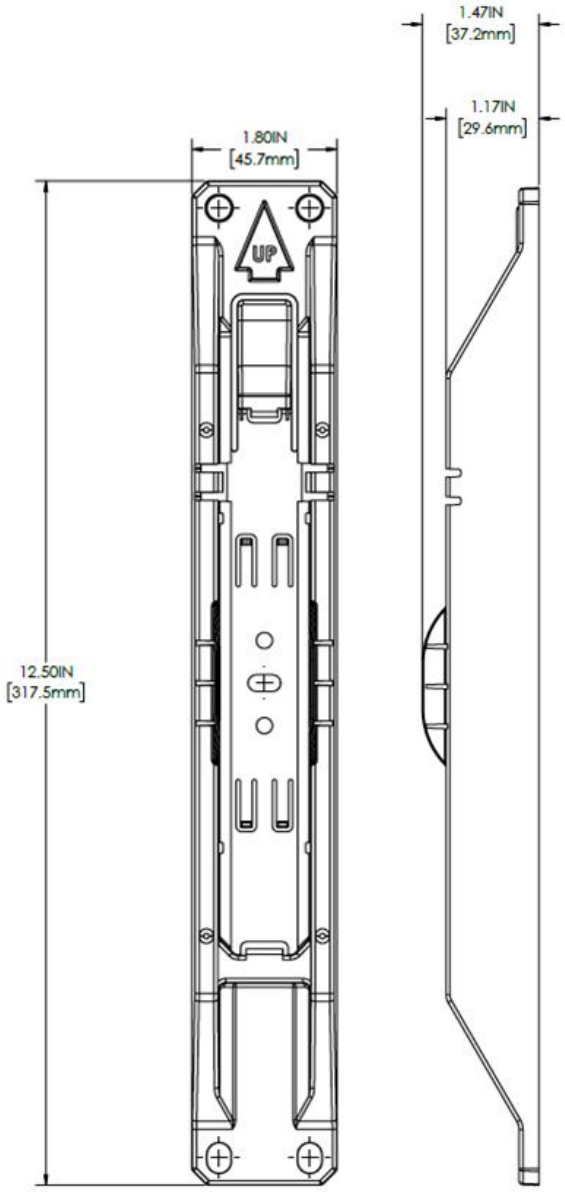
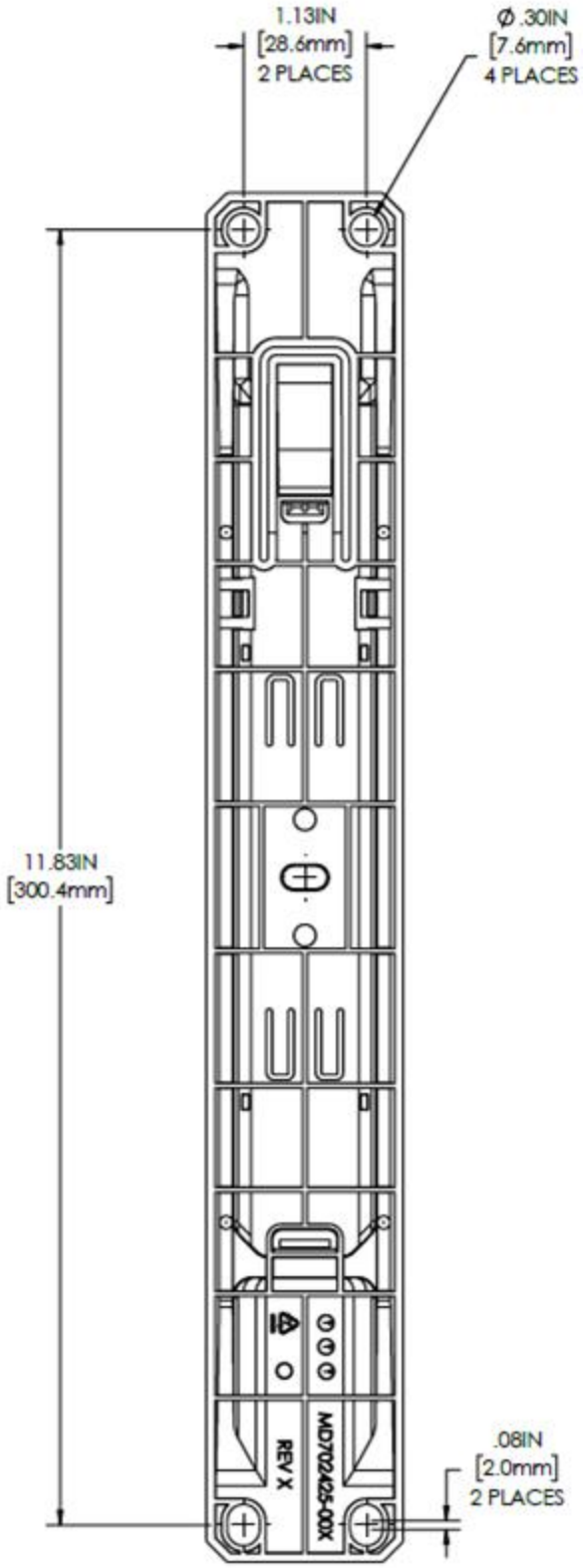


Figure 2: Locking Bracket Dimensions

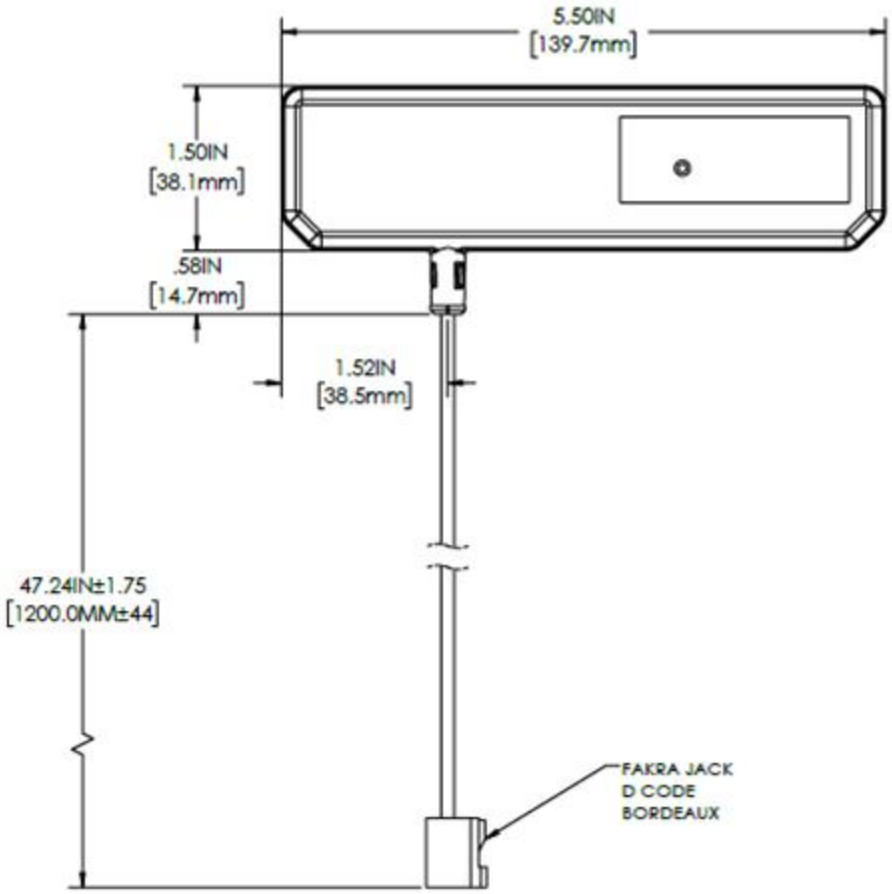


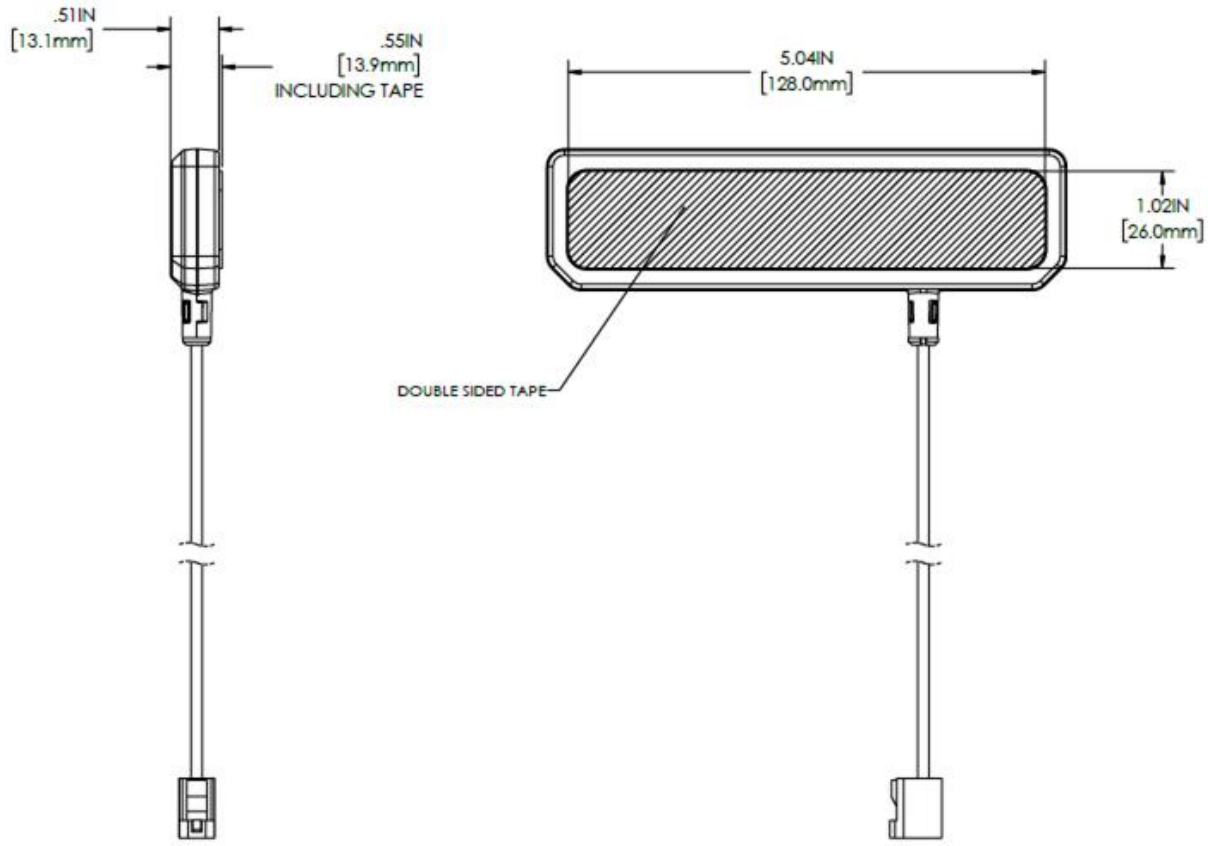


External Antenna

Parameter	Value
Antenna weight	70 g (2.5 oz)
Antenna enclosure rating	IP54.

Figure 3: External Antenna Dimensions





APPENDIX C MAGNET SWITCH

The CT 360x supports a magnet reset and other functions using a magnet.

To enable the magnet switch options:

1. Place the magnet to the right of the LED, near the ORBCOMM logo, for the time indicated in the Time Asserted column.

2. Hold the magnet over this location for at least the duration indicated in the Hold Time column for the desired action and then remove it.

Action	Hold Time	Description
Generate Message	3 to 7 seconds	The device generates a *Wake Up Button* message. If the device requires a new GPS fix, then it can take up to 4 minutes for the message to reach the ORBCOMM Maritime platform. This action is disabled while the device is either in shipping or inventory mode and guest mode has not been enabled. This action exists shipping mode and triggers reefer communication if the device has guest mode enabled.
Enter / Exit Shipping Mode	13 to 17 seconds	The device exits shipping and inventory modes if currently in one of those modes. The device enters shipping mode if it is not already in shipping or inventory mode.
Reset Device	23 to 27 seconds	The device performs a software reset.

APPENDIX D CONNECT AND SECURE THE CABLES - OLDER CT 3600 DEVICES WITH ORANGE CONNECTORS

This appendix ONLY applies to CT 3600 devices with orange connectors.

Refer to this appendix if you have older CT 3600 devices with the orange connectors. Older devices with the orange connectors refer to

- CT 3600 kits with the part number SM202884-001
- CT 3600 devices with the part number CT3600-0100-H

Note: The majority of the steps and information in this guide apply to devices with either the gray or the orange connectors. However, this appendix provides images for devices with the older orange connectors beginning from section "Connect and Secure the Cables".

Carrier
(Final Position)

Daikin
(Final Position)

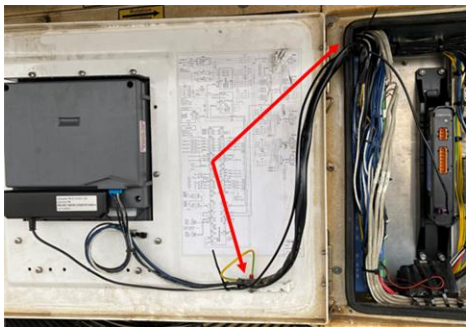
Star Cool
(Final Position)

Connect and Secure the Cables

Note: For older devices with the orange connectors, refer to APPENDIX D for the steps and figures for the section "Connect and Secure the Cables".

1. Secure the antenna cable with cable ties as required. Star Cool example shown.

   CAUTION: Ensure that the cables do not get pinched when closing the asset door.



2. Connect the 7-position COMMS cable, and then the reefer's 3-position AC cable, to the mating connectors on the CT 360x, noting ground position (pin 1) on the CT 360x.

   Note: Make sure all the connectors are fully pushed in (seated / good contact) before continuing with the installation.

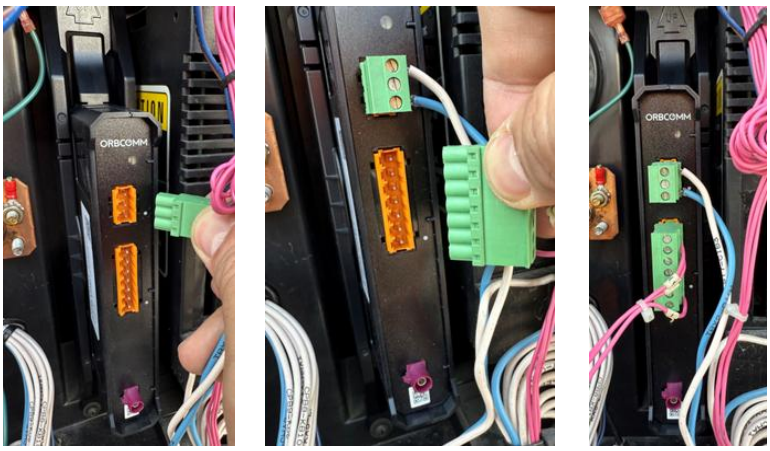
   Note: Connectors vary on different asset makes and models, so several possible configurations are shown in the examples that follow.

   CAUTION: Take note of the ground position location (pin 1) and match the device accordingly. As a precaution, ORBCOMM strongly recommends you verify the ground pin signal position on the reefer's 3-pin and 7-pin harness connectors prior to connecting them to the device (the ORBCOMM name is horizontal as shown).

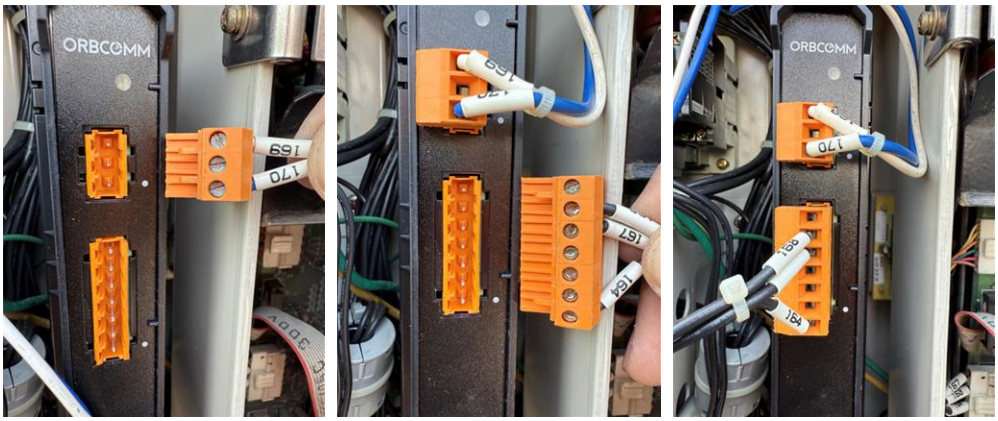
Signal	# of Circuits	Pin Position
VIN (24 VAC)	1	3
		2
Ground	1	1

Signal	# of Circuits	Pin Position
		7
Reefer RS-232 Tx	1	6
Reefer RS-232 Rx	1	5
		4
24 VAC	1	3
RMM Ground	1	2
Ground	1	1

Carrier



Daikin



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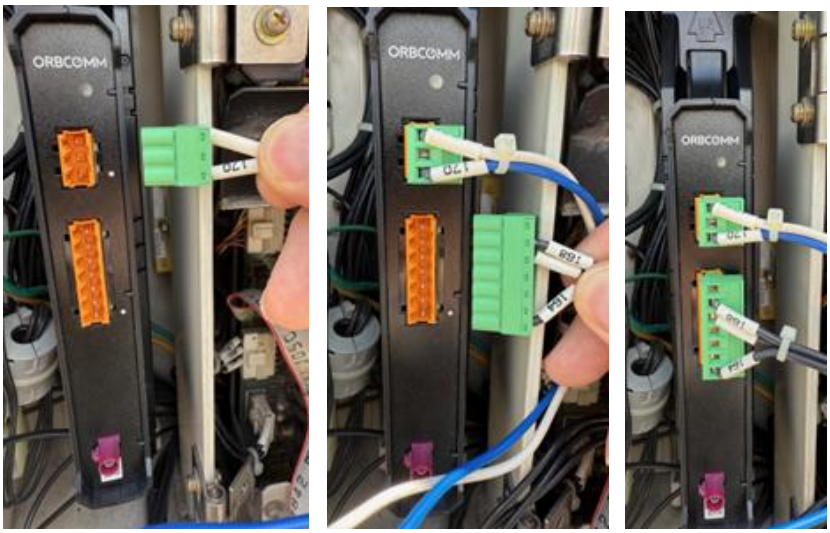
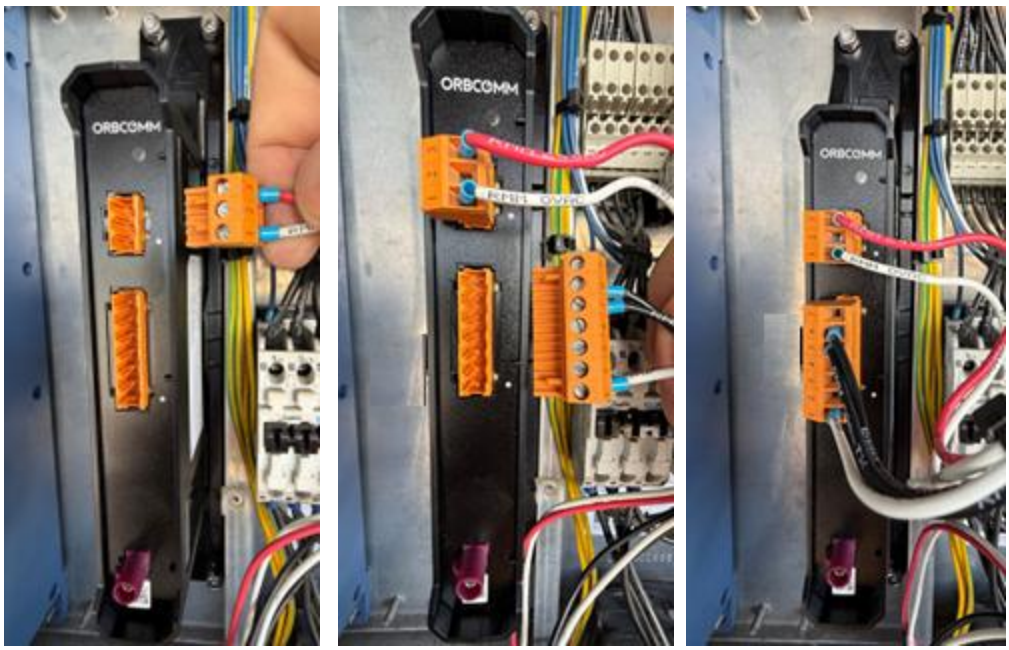


Star Cool



3. If an IoT Presence label is required (ships with some device models), clean the asset surface where you plan to attach the label with alcohol wipes, and then place the label on the face of the reefer above the reefer door or in the designated location.
4. Secure any loose cables with cable ties.

APPENDIX E TROUBLESHOOTING

Always ensure that you are using the latest version of the installation guide. Guides are available from ORBCOMM Customer Care.

CAUTION: Always follow safety guidelines when working with hardware that may be connected to a power source or removing hardware from an asset.

General Troubleshooting

<table>
<tr><th>Issue</th><th>Possible Reason</th><th>Solution</th></tr>
<tr><td>General troubleshooting

(see below for LED specific troubleshooting)</td><td>Various</td><td>Order of testing until the issue is resolved (NOTE: You may not need to perform all of these steps):

1. Check all connections to ensure they are completely pushed in (fully seated) (3-pin, 7-pin, and the FAKRA connector).

2. Apply power, switch on the reefer, and then check that the reefer controller is set to normal mode (NOT Unit OFF mode).

3. Ensure that the reefer has a programmed reefer ID. If not, have a certified / OEM technician enter a valid reefer ID.

4. Ensure that the reefer is not running a Pre-Trip Inspection (PTI) or that it is not in PIT mode.

5. Power cycle the reefer (power off at the breaker for >10 seconds and then power on again) and then check again for a solid green LED (wait up to 10 minutes for a solid green LED).

6. Verify that the Tx/Rx readings on the 7-pin are correct.
a. Disconnect the 7-pin cable from the CT 360x.
b. With the reefer powered ON, use a multimeter set to DC voltage to check the voltage on the Tx and Rx communication lines. Measure between ground and PINS 5 and 6. A correctly wired cable measures:
<table><tr><td>PIN 5 to ground</td><td>Between -4 V and -13 V (typically -5.5 V)</td></tr><tr><td>PIN 6 to ground</td><td>0 V ± 0.5 V</td></tr></table>If PIN 5 reads 0 V and PIN 6 reads between -4 V and -13 V, this means that the Tx and Rx are reversed. In this case, turn OFF the reefer, swap PINS 5 and 6, and then verify again.
7. Contact Customer Care to ensure the device has an active SIM card.

8. Check the ORBCOMM Mobile app and / or (if applicable) the ORBCOMM Maritime platform for a reefer ID and reefer data.

8. If you have reached this point and still do not see a solid green LED, power cycle the reefer and check again for a solid green LED (may need to wait up to 10 minutes). If you still do not see the solid green after the power cycle, you may need to replace the device. If removing any hardware affixed to an asset with double-sided tape, this may require a Return Material Authorization (RMA). Contact Customer Care for guidance / approval BEFORE removing any double-sided tape affixed hardware as this may damage the asset.</td></tr>
</table>

LED Troubleshooting

LED Color	Activity	Troubleshooting Steps (Order of testing until you see a solid green LED) NOTE: You may not need to perform all of these steps.
Green solid	Functioning as expected. NOTE: See the **Green** solid exception below.	No action required. The device is installed correctly, and it is reporting as expected. At your discretion, you may also want to confirm, using the ORBCOMM mobile app, that an asset / reefer ID is visible (indicating the device captured the reefer data), or (if applicable) log into the ORBCOMM Maritime platform to see that reefer data is reported.
Green solid	No reefer ID in the ORBCOMM Maritime platform.	Focus on reefer ID programming, reefer software version, cellular connection, and ORBCOMM Maritime platform maintenance. 1. Use the ORBCOMM mobile app to - check if it shows an asset / reefer ID - ping the device 2. Power cycle the reefer (power off at the breaker for >10 seconds and then power on again) and then check again for a solid green LED (wait up to 10 minutes for a solid green LED) and the reefer ID to report. 3. Move the device / asset to a location where it has a clear line-of-sight to the satellite as it may be in a poor cellular coverage area. 4. (If applicable) Check that the ORBCOMM Maritime platform is not undergoing a scheduled maintenance update. 5. (If applicable) In the ORBCOMM Maritime platform, check that the power cycle messages appear on the device page. 6. If you have reached this point and still do not see a solid green LED, you may need to submit a Return Material Authorization (RMA) request and replace the device. NOTE: You should avoid removing double-sided tape affixed devices without authorization from ORBCOMM as this may damage the asset.
Green blinking	Trying to establish a cellular connection.	Focus on cellular coverage. 1. Move the device / asset to a location where it has a clear line-of-sight to the satellite as it may be in a poor cellular coverage area. 2. Verify that the antenna's FAKRA connector is fully pushed in (hear a click).

<table>
<tr><th>LED Color</th><th>Activity</th><th>Troubleshooting Steps (Order of testing until you see a solid green LED)
NOTE: You may not need to perform all of these steps.</th></tr>
<tr><td>Red blinking</td><td>Unable to detect physical connection.</td><td>Focus on connections

1. Check the 3-pin and 7-pin connections to ensure they are completely pushed in (fully seated). Disconnect and reconnect pushing in fully.

2. Verify that the Tx/Rx readings on the 7-pin are correct.

a. Disconnect the 7-pin cable from the CT 360x.

b. With the reefer powered ON, use a multimeter set to DC voltage to check the voltage on the Tx and Rx communication lines. Measure between ground and PINS 5 and 6. A correctly wired cable measures:

<table><tr><td>PIN 5 to ground</td><td>Between -4 V and -13 V (typically -5.5 V)</td></tr><tr><td>PIN 6 to ground</td><td>0 V ± 0.5 V</td></tr></table>
If PIN 5 reads 0 V and PIN 6 reads between -4 V and -13 V, this means that the Tx and Rx are reversed. In this case, turn OFF the reefer, swap PINS 5 and 6, and then verify again.

3. Power cycle the reefer (power OFF at the breaker for >10 seconds and then power ON again) and then check again for a solid green LED (wait up to 10 minutes for a solid green LED).

4. If you have reached this point and still do not see a solid green LED, you may need to replace the device or the antenna. If removing any hardware affixed to an asset with double-sided tape, this may require a Return Material Authorization (RMA). Contact Customer Care for guidance / approval BEFORE removing any double-sided tape affixed hardware as this may damage the asset.</td></tr>
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<tr><th>LED Color</th><th>Activity</th><th>Troubleshooting Steps (Order of testing until you see a solid green LED)
NOTE: You may not need to perform all of these steps.</th></tr>
<tr><td>Red solid</td><td>Unable to communicate with reefer controller.</td><td>Focus on software items, PTI running, ON switch, connections, and wiring.
1. Ensure the reefer is not running a Pre-Trip Inspection (PTI).
2. Ensure the device is not performing a firmware update.
3. Check the 3-pin and 7-pin connections to ensure they are completely pushed in (fully seated). Disconnect and reconnect pushing in fully.
4. Verify that the Tx/Rx readings on the 7-pin are correct.
a. Disconnect the 7-pin cable from the CT 360x.
b. With the reefer powered ON, use a multimeter set to DC voltage to check the voltage on the Tx and Rx communication lines. Measure between ground and PINS 5 and 6. A correctly wired cable measures:<table><tr><td>PIN 5 to ground</td><td>Between -4 V and -13 V (typically -5.5 V)</td></tr><tr><td>PIN 6 to ground</td><td>0 V ± 0.5 V</td></tr></table>If PIN 5 reads 0 V and PIN 6 reads between -4 V and -13 V, this means that the Tx and Rx are reversed. In this case, turn OFF the reefer, swap PINS 5 and 6, and then verify again.
5. If you have reached this point and still do not see a solid green LED, you may need to replace the device or the antenna. If removing any hardware affixed to an asset with double-sided tape, this may require a Return Material Authorization (RMA). Contact Customer Care for guidance / approval BEFORE removing any double-sided tape affixed hardware as this may damage the asset.</td></tr>
<tr><td>No LED (OFF)</td><td>No activity</td><td>Focus on power issues or hardware failures.
1. Check that the reefer has power, and that the controller display lights up.
2. Verify that the reefer has power, and that the reefer is running in normal mode (Not Unit OFF mode or Pre-Trip Inspection (PTI) mode. Note: Some reefers may look powered ON, but they have a soft ON/OFF switch that must be pressed (for example., Daikin).
3. Check the 3-pin power connection is securely connected.
4. Check that the 3-pin connector is wired correctly (ground on PIN 1 - pin is marked with a dot). If the wiring is reversed, the CT 3600 may already have a tripped fuse. In this case you may need to replace the device. If removing any hardware affixed to an asset with double-sided tape, this may require a Return Material Authorization (RMA). Contact Customer Care for guidance / approval BEFORE removing any double-sided tape affixed hardware as this may damage the asset.
5. Power cycle the reefer (power OFF at the breaker for >10 seconds and then power ON again and then check again for a solid green LED (wait up to 10 minutes for a solid green LED).
6. If you have reached this point and still do not see a solid green LED, you may need to replace the device or the antenna. If removing any hardware affixed to an asset with double-sided tape, this may require a Return Material Authorization (RMA). Contact Customer Care for guidance / approval BEFORE removing any double-sided tape affixed hardware as this may damage the asset.</td></tr>
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Note: If after troubleshooting, the issue is not resolved, contact ORBCOMM Customer Care.