GT2

Product User Guide

APPLICABLE MODELS

This user guide is applicable to the following GT2 model SKUs:

GT2C

GT2C-SL-EXZ-SC(N)

GT2S

GT2S-IRD-SL-EXZ-SC(N)

GT2H

GT2H-IRD-SL-EXZ-SC(N)

NOTICES

SUMMARY OF WARRANTY TERMS

1. **GENERAL STATEMENT OF WARRANTY**

   Geoforce warrants that for one year from that date that title passes to Customer for Hardware (the "Warranty Period"), the Hardware sold will be free of defects in materials and workmanship when installed, operated, and serviced in strict accordance with Geoforce's and the manufacturer's requirements. Geoforce will, at its sole option and at no charge to Customer, refund, repair, or send a replacement for the Hardware to the location of initial export from a Geoforce affiliate noting Customer as the importer/exporter of record (if outside the US).

2. **EXCEPTIONS FROM WARRANTY COVERAGE**

   This warranty does not cover: (a) Hardware that has been tampered with or serviced without Geoforce's authorization, (b) Hardware that has been lost or stolen through no fault of Geoforce, (c) Hardware that is designed to be consumable (including batteries and battery related failures) or (d) Hardware subjected to abuse, misuse, or neglect, or (e) Hardware that has been deemed failed due to improper operational use or mis-matched to ineffective use-case by the customer. Geoforce does not warrant that the hardware will meet customer's needs or expectations or that any piece of hardware will work on any particular networks. ALL OTHER WARRANTIES ARE EXPRESSLY DISCLAIMED INCLUDING THE WARRANTY OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.

3. **ADDITIONAL WARRANTY TERMS**
   See the fully executed Geoforce purchase agreement and Statement of Warranty for a complete statement of warranty terms.

REGULATORY COMPLIANCE STATEMENT

The customer is responsible for maintaining compliance with all legal, regulatory, and safety-related requirements concerning the use of Geoforce products in the customer's applications, notwithstanding any applications related information or support that may be provided by Geoforce. Deviating from the provided installation instructions or making modifications to the equipment that are not explicitly authorized by GEOFORCE may cause the equipment to violate safety and wireless regulatory requirements, in which case, the right to operate the equipment is voided.

RIGHT TO CHANGE MATERIAL

The information and specifications in this document are subject to change without notice.
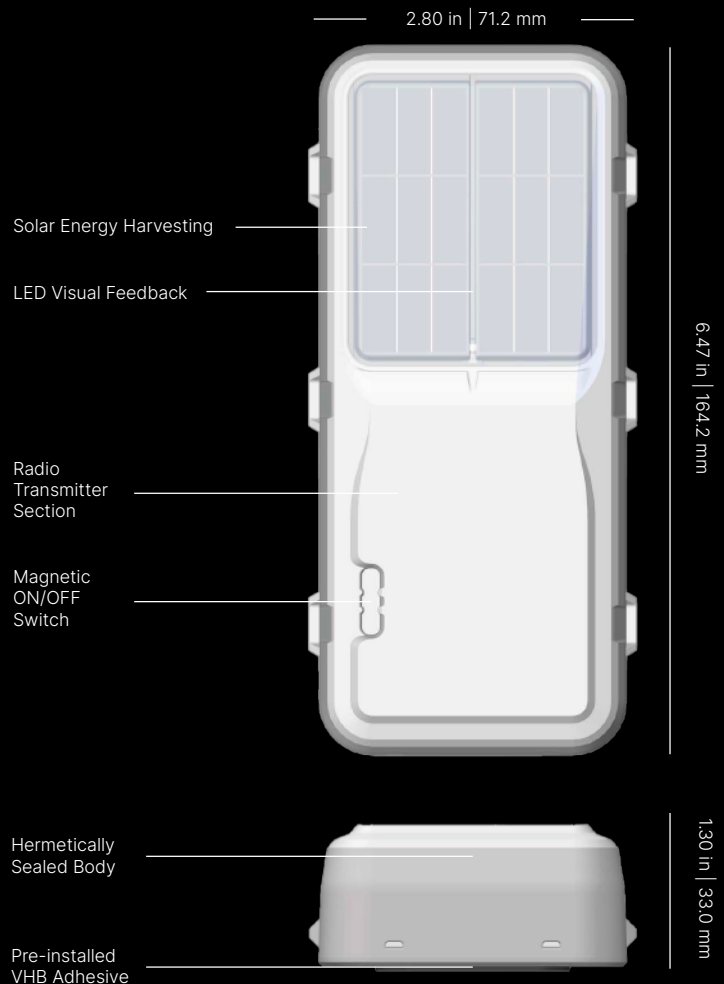
COPYRIGHT NOTICE

ABOUT THE GEOFORCE GT2

The GT2 Global Asset Tracker, is the latest in Geoforce's industry-leading line of rugged industrial grade field asset tracking devices. The GT2 has the capability of operating on LTE-M low-power cellular IoT networks with the ability to seamlessly transition to the Iridium global satellite network when cellular is not available. Its Bluetooth Low Energy capability supports wireless sensors and mobile device connectivity.

Combining the long life delivered by solar power with the reliability of a battery backup, the intrinsically safe GT2 provides asset visibility in the most challenging conditions – even when sunlight is scarce. Its rugged design carries on the Geoforce legacy for tough and reliable devices to give you confidence your data will be available when you need it, year in and year out. Combining advanced wireless technologies and smart power management, the GT2 is the most reliable global asset tracking device ever produced.

2.80 in | 71.2 mm

Solar Energy Harvesting

LED Visual Feedback

Radio Transmitter Section

Magnetic ON/OFF Switch

6.47 in | 164.2 mm

Hermetically Sealed Body

Pre-installed VHB Adhesive

1.30 in | 33.0 mm

GT2 General Installation and Mounting Guide

STEP 1: SELECT A MOUNTING LOCATION

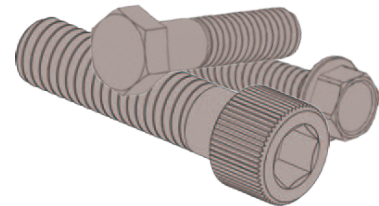**To ensure ideal performance it is advised to consider the following:**

1. Select a mounting location that provides the best view of the sky and the sun.

2. A flat horizontal mounting position (lying flat, facing skyward) is preferred but an alternate mounting orientation might be necessary depending on application and solar availability. Contact Geoforce support for additional assitance if there are questions about the best orientation needed. As orientações de montagem vertical (lado do painel solar do dispositivo voltado para o horizonte) são aceitáveis.

3. Vertical mounting orientations (solar panel side of device facing horizon) are acceptable.

4. Mount on the flattest and hardest surface possible.

5. Select a mounting location that isolates the GT2 from damage
    .
6. Recommended mounting area size is 8.5" L x 3.5" W (216mm L x 90mm W)
    .
7. Thoroughly clean the mounting area, especially if using VHB mounting.

8. DO NOT PAINT OR COVER THE GT2 - Doing so may negatively impact product performance and battery life.

9. A covered or dirty solar panel lens will reduce the GT2's ability to harvest solar energy. Sunlight limiting factors such as snow accumulation should be considered when determining GT2 mounting orientation.

10. For typical applications, a minimum of two hours of direct sunlight per day is highly recommended.

STEP 2: SELECT A MOUNTING METHOD

MECHANICAL MOUNTING
The GT2 can be mounted with the following Geoforce mounting accessories:

*   Heavy Duty Stainless Steel Mounting Bezel for GT2
    (SKU: GT2-BEZEL-SS)

*   Commercial Duty Reinforced Plastic Mounting Bezel for GT2
    (SKU: GT2-BEZEL-RP)

Additional installation information for each mechnical mounting method is available on the following pages.

VHB ADHESIVE MOUNTING
For installations that do not require a protective bezel and are isolated from abuse, extreme weather, and temperatures, the GT2 has a pre-installed set of VHB adhesive pads that can be used to "peel and stick" to any clean surface above 50°F (10°C). The Geoforce VHB Installation and Removal Guide MUST be followed to ensure proper adhesion to the asset.

VHB 'peel and stick' is not recommended if using a protective bezel mounting option.

STEP 3: ASSOCIATE THE GT2 TO THE ASSET

Using Geoforce Track and Trace Web Application

1. Record the GT2 8-digit numerical serial number (ESN).

2. Record the asset name and serial number (on to which the GT2 was installed).

3. Login to the Track and Trace application, select (or create) the asset, and assign the device ESN to the asset.

Using Geoforce Mobile Field Tools Mobile App

1. Open the Geoforce Mobile Field Tools application.

2. Select (or create) the asset in mobile field tools.

3. Scan the QR code on the top surface of the GT2 to assign the device to the asset.

For additional information on device installation, association, and using the various Geoforce applications, feel free to contact your Geoforce customer service representative.

https:/helpdesk.geoforce.com
helpdesk@geoforce.com
888.574.3878

THIS SIDE SKYWARD
DO NOT PAINT OR COVER

ESN: 70092007

STEP 4: INITIALIZE THE GT2

TO BEGIN SERVICE
Using the pull tab, remove the magnet while outdoors with a good sky view.
The GT2 will flash its LED indicator green 5 seconds after magnet pull.

TO SUSPEND DEVICE OPERATION
To put the GT2 back into inventory storage mode, reinsert the pulltab magnet back into the device magnet slot. The GT2 will flash its LED indicator red 5 seconds after magnet insertion.

NOTE: Saving the pulltab magnet is recommended for future disabling of the device.

WARNING: IF YOU DO NOT REMOVE THE MAGNET, THE GT2 WILL NOT WORK!

GT2 Metal Bezel Mounting Guide

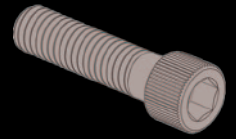## STEP 1: SELECT MOUNTING HARDWARE

SOCKET-HEAD CAP SCREWS (3/8" BOLT DIAMETER) - STRUCTURAL
For installations that can be drilled and tapped and do not have access to the back side of the mounting surface.

EXAMPLE OPTION 1 (LESS HARSH ENVIRONMENTS):
Vendor: McMaster Carr (www.mcmaster.com), Part Number: **96006A922**
Description: Black Oxide 18-8 Stainless Steel Socket Head Cap Screw 3/8"

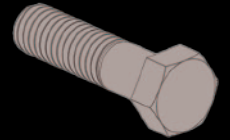**EXAMPLE OPTION 2 (MORE HARSH ENVIRONMENTS):**
Vendor: McMaster Carr (www.mcmaster.com), Part Number: **92185A677**
 Description: Type 316 Stainless Steel Socket Head Cap Screw 3/8"

HEX-HEAD CAP SCREWS (3/8" BOLT DIAMETER) - STRUCTURAL
For installations having access to the back side of the mounting surface for securing a nut.

EXAMPLE OPTION 1 (LESS HARSH ENVIRONMENTS):
Vendor: McMaster Carr (www.mcmaster.com), Part Number: **92198A628**
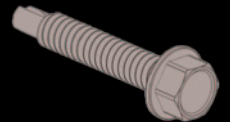Description: 18-8 Stainless Steel Hex Head Cap Screw 3/8"

EXAMPLE OPTION 2 (MORE HARSH ENVIRONMENTS):
Vendor: McMaster Carr (www.mcmaster.com), Part Number: **93190A367**
 Description: Type 316 Stainless Steel Hex Head Cap Screw 3/8"

SELF-DRILLING SHEET-METAL SCREWS (1/4" DIAMETER) - NONSTRUCTURAL
For installations with thinner mounting surfaces where a quicker less robust install is needed.

Vendor: McMaster Carr (www.mcmaster.com), Part Number: **90822A630**
Description: Stainless Steel Drilling Screw for Metal, High-Strength, 1/4"

METAL BANDING - NONSTRUCTURAL
For securing the metal mounting bezel when bolts or screws cannot be used.
Tip: This is also good for providing a security seal around the installed GT2 bezel mounting bolts.

Vendor: McMaster Carr (www.mcmaster.com)
Banding Part Number: **5422K42**
Description: Low-Profile Hose Banding Type 201 Stainless Steel, 1/4" Wide, 0.020" Thick
Buckle Part Number: **5422K43**
Description: Type 201 Stainless Steel Ear Style Buckle for 3/8" Wide Low-Profile Hose Banding
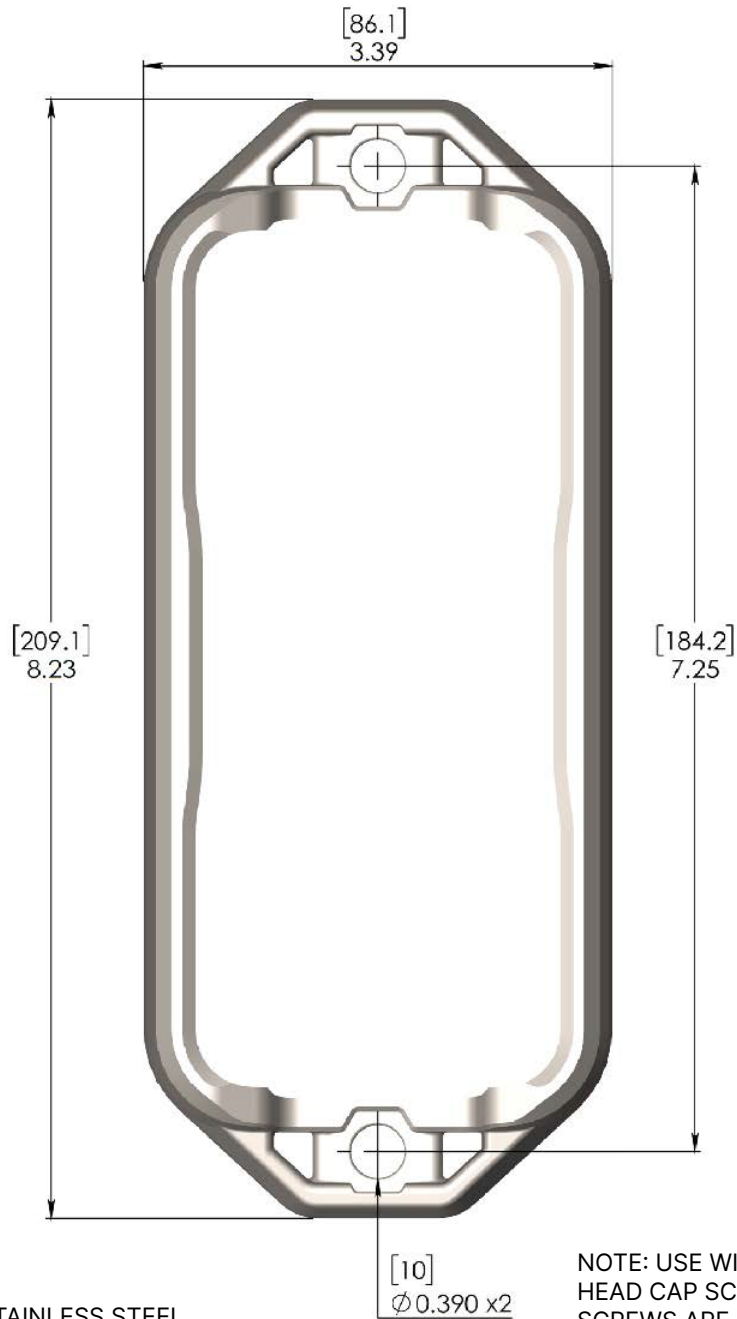Tooling Part Number: **5424K3**

STEP 2: INSTALL

1. Drill two mounting holes 7.25" (184mm) apart for 3/8" diameter bolts. Thread the holes if needed.

2. Clean the mounting surface of drill shavings.

3. Hand press the GT2 into the metal bezel and secure the assembly onto the flat mounting surface with the required hardware.

IMPORTANT NOTES

• It is highly recommended to use mounting fasteners made of a material that resists galvanic corrosion and environmental weathering such as stainless steel. This is especially important for marine applications where a high grade should be used.

• To avoid staining and discoloration, zinc coated mounting hardware should not be used.

- When using stainless steel mounting hardware, it is highly recommended to use a marine grade anti-seize material on the bolt threads as galling and seizing of stainless nuts/bolts may occur.

- Ensure all mounting hardware is compatible with the asset.

- Ensure all regulatory and asset owner policies and procedures are adhered to during installation.

- NOTE FOR EX RATED PRODUCTS: To minimize electrostatic spark concerns in hazardous locations, ensure the metal mounting bezel has metal to metal contact with the asset (mounting hardware can provide metal to metal contact as well).

BEZEL MATERIAL: 316L STAINLESS STEEL

NOTE: USE WITH 3/8" HEX OR SOCKET HEAD CAP SCREWS. NOTE: HEX HEAD CAP SCREWS ARE CAPTURED

GT2 Plastic Bezel Mounting Guide

STEP 1: SELECT MOUNTING HARDWARE

SOCKET-HEAD CAP SCREWS (3/8" BOLT DIAMETER) - STRUCTURAL
For installations that can be drilled and tapped and do not have access to the back side of
the mounting surface

EXAMPLE OPTION 1 (LESS HARSH ENVIRONMENTS):
Vendor: McMaster Carr (www.mcmaster.com), Part Number: **96006A922**
Description: Black Oxide 18-8 Stainless Steel Socket Head Cap Screw 3/8"

EXAMPLE OPTION 2 (MORE HARSH ENVIRONMENTS):
Vendor: McMaster Carr (www.mcmaster.com), Part Number: **92185A677**
Description: Type 316 Stainless Steel Socket Head Cap Screw 3/8"

PHEX-HEAD CAP SCREWS (3/8" BOLT DIAMETER) - STRUCTURAL
For installations having access to the back side of the mounting surface for securing a nut.

EXAMPLE OPTION 1 (LESS HARSH ENVIRONMENTS):
Vendor: McMaster Carr (www.mcmaster.com), Part Number: **92198A628**
Description: 18-8 Stainless Steel Hex Head Cap Screw 3/8"

EXAMPLE OPTION 2 (MORE HARSH ENVIRONMENTS):
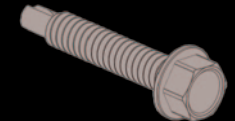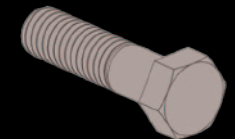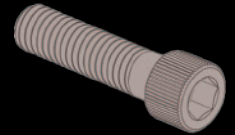Vendor: McMaster Carr (www.mcmaster.com), Part Number: **93190A367**
Description: Type 316 Stainless Steel Hex Head Cap Screw 3/8"

SELF-DRILLING SHEET-METAL SCREWS (1/4" DIAMETER) - NONSTRUCTURAL
For installations with thinner mounting surfaces where a quicker less robust install is needed.

Vendor: McMaster Carr (www.mcmaster.com), Part Number: **90822A630**
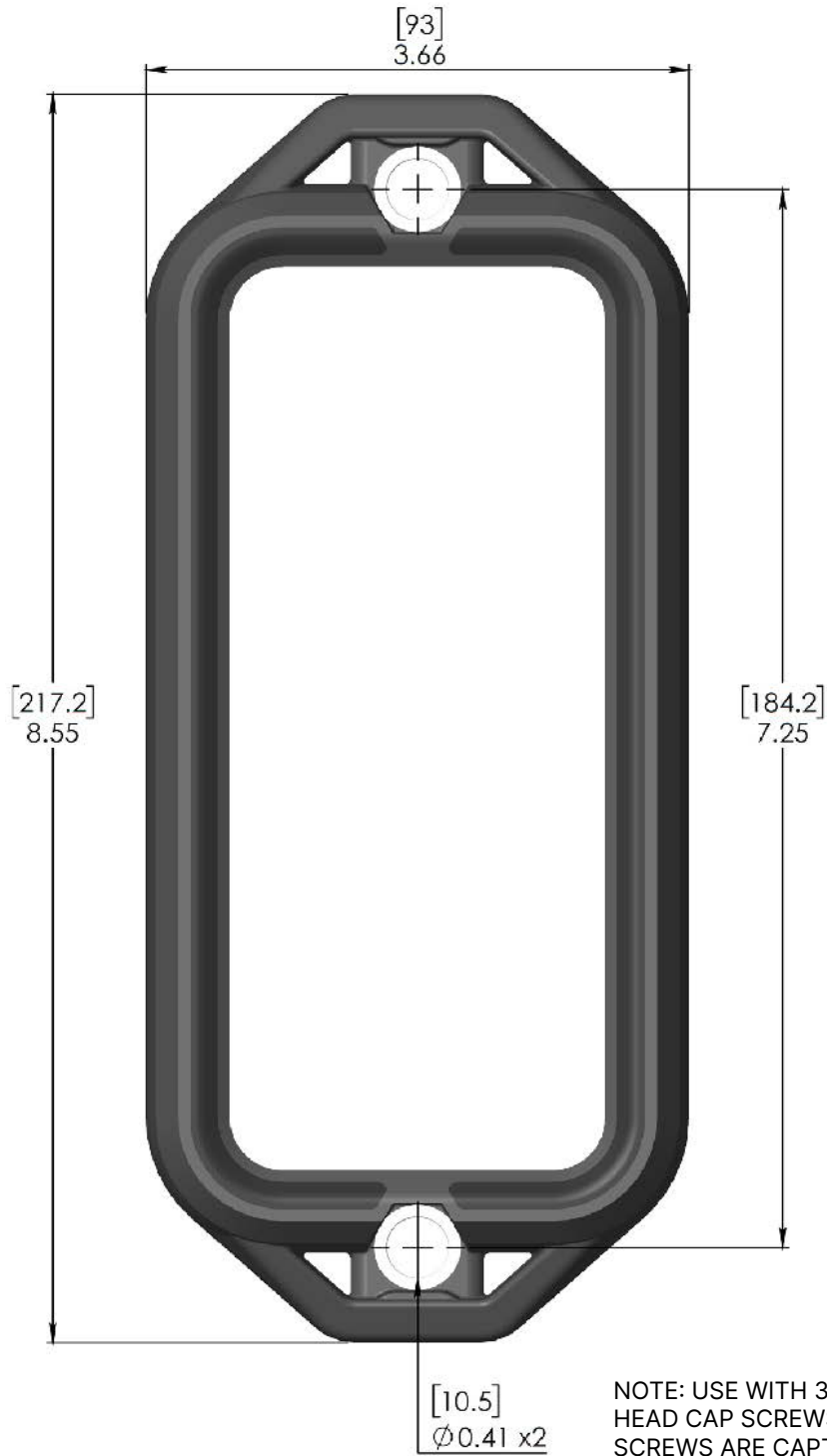Description: Stainless Steel Drilling Screw for Metal, High-Strength, 1/4"

STEP 2: INSTALL

1. Drill two mounting holes 7.25" (184mm) apart for 3/8" bolts. Thread the holes if needed.

2. Clean the mounting surface of drill shavings.

3. Hand press the GT2 into the plastic bezel until it snaps in place and secure the assembly onto the mounting surface
    with the required hardware.

IMPORTANT NOTES

*   It is highly recommended to use mounting fasteners made of a material that resists galvanic corrosion and
    environmental weathering such as stainless steel. This is especially important for marine applications where a high
    grade should be used.

*   When using stainless steel mounting hardware, it is highly recommended to use a marine grade anti-seize material on
    the bolt threads as galling and seizing of stainless nuts and stainless bolts may occur.

- Ensure all mounting hardware is compatible with the asset.

- Ensure all regulatory and asset owner policies and procedures are adhered to during installation.

NOTE: USE WITH 3/8" HEX OR SOCKET HEAD CAP SCREWS. NOTE: HEX HEAD CAP SCREWS ARE CAPTURED.

GT2 General Maintenance

GENERAL MAINTENANCE

SOLAR WINDOW CLEANLINESS
The GT2 is maintenance free other than general upkeep for cleanliness to maintain normal device operation and solar capacity. To maintain a long product life and optimal performance, the GT2 and its solar window should be kept as clean as possible of dust, dirt, grease, chemical, and other foreign matter buildups.

The GT2 solar array window will sustain scratching and surface damages over the lifetime of the product. The GT2 is designed to handle minor surface defects such as these and still maintain proper device performance over a variety of light levels. The GT2, however, must be replaced if there are any signs of severe mechanical damage such as puncturing and cracking of the GT2 housing or window, or crushing of the device itself.

In some instances, over time, areas of visible delamination on the inside surface of the solar window on the GT2 may appear. This is a separation of the internal epoxy material from the interior surface of the solar window. This does not affect the reliability or performance of the GT2 device.

DEVICE CLEANING
Clean the GT2 with mild soap and water only. Aggressive chemicals and/or corrosive agents may damage and/or deform the GT2 plastic enclosure and window.

DEVICE CLEANING FOR EX RATED PRODUCTS IN HAZARDOUS LOCATIONS
When working with or cleaning the GT2, Geoforce recommends to do so outside of hazardous locations. If this is not possible, Geoforce recommends to be mindful at all times of electro-static discharge (ESD) shock hazards and ESD avoidance by using proper grounding techniques when touching this device or the asset it is mounted on.
Clean with mild soap/water and a damp cloth only. Allow the GT2 to dry naturally.

METAL BEZEL CLEANLINESS
Light amounts of red rust may occur on the optional GT2 metal bezel. This red rust generally originates from free iron, surface deposits, and general contamination from weathering and dirt. The presence of light amounts of red rust does not affect the integrity or function of the product and does not originate from the metal part structure.

DISPOSAL NOTICE
Warning: Do not dispose of product or batteries in municipal waste areas. Geoforce recommends to dispose of old retired GT2 devices in acceptable local e-waste recycling locations.

https:/helpdesk.geoforce.com
helpdesk@geoforce.com
888.574.3878

GT2 Replacement

STEP 1: REMOVE THE OLD GT2 ASSEMBLY

1. Record the old GT2 serial number for deactivation.

2. Record the asset name and serial number (on which the GT2 was installed).

3. Remove the old GT2 assembly from its mounting position by loosening and removing its mounting bolts. Be mindful of dropped object hazards.

4. Separate the GT2 electronics assembly from the protective bezel by hand pressing the two apart.

5. If device is installed with VHB refer to the Geoforce VHB installation and removal guide for removal steps.

STEP 2: REPLACE WITH A NEW GT2 ASSEMBLY

1. Ensure the mounting bezel and its mounting surface are clean and free of dirt, grease and chemicals.

2. Install the new GT2 electronics assembly by firmly hand pressing it into its protective bezel.

STEP 3: REINSTALL THE NEW GT2 ASSEMBLY

1. Record the new GT2 serial number for activation.

2. Record the asset serial name and number (on which the GT2 was installed).

3. Reinstall the GT2 assembly back onto its mounting location and secure. Geoforce recommends using new mounting hardware to ensure long service life.

4. DO NOT PAINT OR COVER THE GT2.
   NOTE: Doing so may negatively impact product performance and battery life.

STEP 4: INITIALIZE THE GT2

TO BEGIN SERVICE

Using the pull tab, remove the magnet while outdoors with a good sky view.

NOTE: Removing the magnet indoors may lead the GT2 to enter Power Save Mode.

The GT2 will flash its LED indicator green 5 seconds after magnet pull.

WARNING: IF YOU DO NOT REMOVE THE MAGNET, THE DEVICE WILL NOT WORK!

Notes

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