

# GT2

## Product Regulatory Guide



Because field operations don't have to be chaotic



# **GT2 Product Regulatory Guide**

## APPLICABLE MODELS

This regulatory guide is applicable to the following GT2 model codes:

### **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.

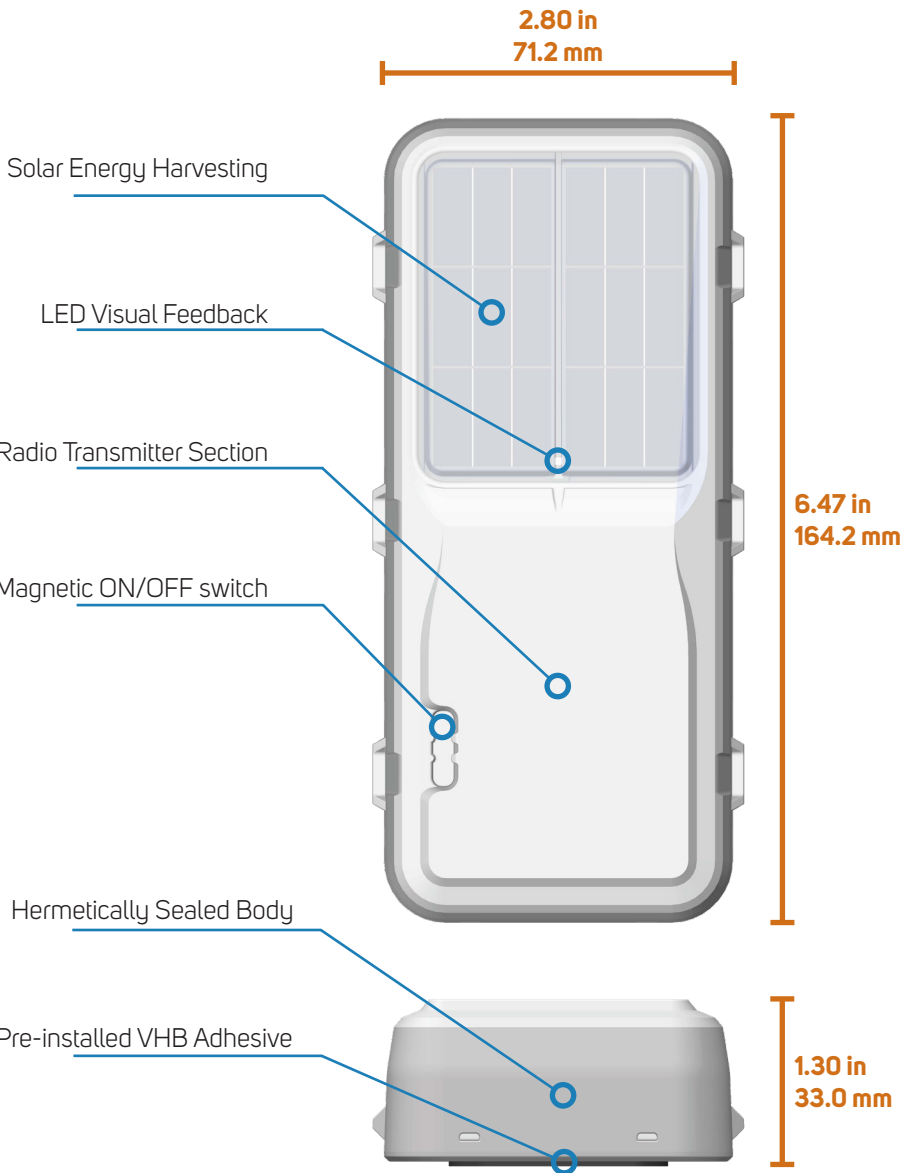
### COPYRIGHT NOTICE

© 2020, Geoforce Inc. - All Rights Reserved. No portion of this media may be reproduced in any form without permission from Geoforce, except as permitted by U.S. copyright law. For permissions contact Geoforce at [www.geoforce.com](http://www.geoforce.com).



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.



# Shipping and Transport Guidance

## TRANSPORT AND EXPORT CONTROL CODES

### US ECCN - EXPORT CONTROL CLASSIFICATION NUMBER

**5A991.B.3:** TELECOMMUNICATION EQUIPMENT, NOT CONTROLLED BY 5A001 "TELECOMMUNICATIONS SYSTEMS, EQUIPMENT, COMPONENTS AND ACCESSORIES"

### US CENSUS BUREAU "SCHEDULE B" CODE

**8517.62.0090:** DIGITAL (MODEMS, SWITCHES, ETC.) AND RF PRODUCTS  
FOR WARRANTY RETURNS: 9801.10.0000

### HTS/HS - INTERNATIONAL HARMONIZED TARIFF CODE

**8517.62.0050:** DIGITAL (MODEMS, SWITCHES, ETC.) AND RF PRODUCTS  
FOR WARRANTY RETURNS: 9801.10.0000

### ITAR - INTERNATIONAL TRAFFIC IN ARMS REGULATIONS

The GeForce GT2 is not classified as a "defense article" or as "dual use" and does not require an export license under ITAR regulations.



# Battery Transport and Disposal Guidance

## LITHIUM BATTERY REGULATORY INFORMATION

### LITHIUM METAL PRIMARY CELLS



Lithium Battery Cell Type .....	Lithium Metal Batteries Contained in Equipment
Cell Chemistry .....	Lithium-Thionyl-Chloride
Individual Cell Lithium Mass .....	0.66 grams
Cell Installation Method .....	4 cells, permanently installed, non-serviceable
IATA Regulated Packing Instruction .....	UN3091, PI 970, Section 2

NOTE: GT2 products are packaged from Geoforce in packaging acceptable for air cargo shipments of lithium batteries contained in equipment. If the GT2 product is repackaged it is the responsibility and liability of the shipper to ship according to all applicable laws and regulations for shipping lithium batteries.

Battery manufacturer's SDS is available upon request.

## LITHIUM BATTERY DISPOSAL GUIDANCE

Electrochemical primary cells and batteries require special handling for disposal. Disposal requirements are region specific and many waste handlers have further requirements that need to be followed when disposing of cells or batteries.


Primary cells and batteries can be recycled or disposed of as a hazardous waste.


General best practices that should be followed when packaging a cell or battery for disposal or recycling include:

- Secure terminals to prevent short circuiting
- Package each cell or battery in a manner that prevents shorting with the container or another cell/battery
- Package leaking cells/batteries in a manner that contains the leak
- Use packaging material that is in compliance with local regulations
- All dented battery cells should be disposed, regardless of electrolyte leakage. Denting of sides or ends increases the likelihood of developing an internal short circuit at a later time.

Refer to the battery manufacturer's SDS for additional safety and disposal information.

## ROHS (2011/65/EC, EU 2015/863), WEEE (2012/19/EU) GUIDANCE

 The Geoforce GT2 is compliant with the Restriction of Hazardous Substances (RoHS) Directive (2011/65/EU, EU 2015/863). This signifies that all Geoforce GT2 devices are RoHS compliant for restricted and hazardous substances. The RoHS Directive prevents all new electrical and electronic equipment placed on the market in the European Economic Area from containing more than agreed levels of lead, cadmium, mercury, hexavalent chromium, poly-brominated biphenyls (PBB) and poly-brominated diphenyl esters (PBDE).

 The Geoforce GT2 is compliant with the Waste Electrical and Electronic Equipment (WEEE) Directive (2012/19/EU) disposal symbol and is classified in the WEEE Directive as Category 9 EEE: Monitoring and Control Instruments. This signifies that all Geoforce GT2 devices are classified as Electrical and Electronic Equipment (EEE) and should NOT be disposed of in municipal waste areas. All local regulations must be followed in the disposal and disposition process of EEE.



# RF Regulatory Notices

## RF TECHNICAL DECLARATIONS

Meets FCC Part 15/25 regulations, Canada ISCED, CISPR Publication 22, and Radio Eqmt. Directive 2014/53/EU

- Satellite Transmitter Maximum EIRP and Operating Frequencies (GT2s and GT2h ONLY)  
1.479 W (31.7 dBm), 1616MHz to 1626.5 MHz
- LTE Cat-M1 / Cat-NB1 Transmitter Maximum EIRP and Operating Frequencies (GT2c and GT2h ONLY)  
0.251 W (24.0 dBm), All Bands (700MHz, 800MHz, 900MHz, 1800MHz, 1900MHz)
- Bluetooth LE Transmitter Maximum EIRP and Operating Frequencies (All models)  
0.794 mW (-1.0 dBm), 2402 - 2480 MHz
- Wi-Fi Receiver Frequencies Utilized (GT2c and GT2h ONLY)  
2400 - 2483.5 MHz (Receive Only)
- GPS Receiver Frequencies Utilized (All models)  
1575.42 MHz, 1227.60 MHz (Receive Only)



## ID DECLARATIONS

### GT2c PRODUCTS

RADIO MODEL: OWAC00  
HOST FCCID: OWA00GT2X  
HOST ICID: 10540A-00GT2X

#### CONTAINS FCCID(s):

2ANPO00NRF9160

XPYNINAW15

#### CONTAINS ICID(s):

24529-NRF9160

8595A-NINAW15

### GT2s PRODUCTS

RADIO MODEL: OWAS86  
HOST FCCID: OWA00GT2X  
HOST ICID: 10540A-00GT2X

#### CONTAINS FCCID(s):

Q639603N

#### CONTAINS ICID(s):

4629A-9603N

### GT2h PRODUCTS

RADIO MODEL: OWAH86  
HOST FCCID: OWA00GT2X  
HOST ICID: 10540A-00GT2X

#### CONTAINS FCCID(s):

2ANPO00NRF9160

Q639603N

#### CONTAINS ICID(s):

24529-NRF9160

4629A-9603N

8595A-NINAW15

## REGULATORY NOTICES

### UNITED STATES FCC PART 15/25

**FCC ID: OWA00GT2X**

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment. The manufacturer is not responsible for any radio or television interference caused by un-authorized modifications to this equipment. Such modifications could void the user's authority to operate the equipment.

NOTE: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates uses and can radiate radio frequency energy and, if not in-stalled and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/ TV technician for help.

NOTE: This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

### FCC RF RADIATION EXPOSURE STATEMENT

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. End users must follow the specific operating instructions for satisfying RF exposure compliance. The antenna(s) used for this transmitter must be installed to provide a separation distance of at least 20 cm from all persons and must not be co-located or operating in conjunction with any other antenna or transmitter.



# RF Regulatory Notices

## REGULATORY NOTICES



**CANADAISED**

**ICID:10540A-00GT2X**

Under Industry Canada regulations, this radio transmitter may only operate using an antenna of a type and maximum (or lesser) gain approved for the transmitter by Industry Canada. To reduce potential radio interference to other users, the antenna type and its gain should be so chosen that the equivalent isotropically radiated power (EIRP) is not more than that necessary for successful communication.

Conformément à la réglementation d'Industrie Canada, le présent émetteur radio peut fonctionner avec une antenne d'un type et d'un gain maximal (ou inférieur) approuvé pour l'émetteur par Industrie Canada. Dans le but de réduire les risques de brouillage radioélectrique à l'intention des autres utilisateurs, il faut choisir le type d'antenne et son gain de sorte que la puissance isotrope rayonnée équivalente (p.i.r.e.) ne dépasse pas l'intensité nécessaire à l'établissement d'une communication satisfaisante.

This Class B digital apparatus complies with Canadian ICES-003.

Cet appareil numérique de la classe B est conforme à la norme NMB-003 du Canada.

This device complies with Industry Canada license-exempt RSS standard(s). Operation is subject to the following two conditions: (1) this device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation of the device.

Le présent appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes : (1) l'appareil ne doit pas produire de brouillage, et (2) l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.





# Safety Regulatory Guidance

## ORDINARY LOCATIONS SAFETY

All Geoforce GT2 products are conformant, recognized and certified in a variety of industrial operating environments including ordinary locations.

### Conforms to:

UL STD 62368-1: 2014 Ed. 2

UL STD 60950-22: 2007 Ed. 1

### Certified to:

CSA STD C22.2 #62368-1: 2014 Ed. 2

CSA STD C22.2 #60950-22: 2007 Ed. 1

### CB Certified to:

IEC 62368-1: 2014

EN 62368-1: 2014



## HAZARDOUS LOCATIONS SAFETY

In addition to Ordinary Locations operations, the following GT2 model codes are conformant for operation in classified Hazardous Locations:

### GT2c

GT2C-SL-EXZ-SC(N)

### GT2s

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

### GT2h

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

These device models are Intrinsically Safe for operation in Zone 0 environments for all Gas Groups.

### Conforms to:

UL 913: 2013 Ed. 8

UL 60079-0: 2019 Ed. 7

UL 60079-11: 2013 Ed. 6

### Certified to:

CSA C22.2# 157: 1992 Ed. 3

CSA C22.2# 60079-0: 2019 Ed. 4

CSA C22.2# 60079-11: 2014 Ed. 2

### CB Certified to:

IEC 60079-0: 2017

IEC 60079-11: 2011

EN 60079-0: 2018

EN 60079-11: 2012



# Safety Regulatory Guidance

## HAZARDOUS LOCATIONS MARKINGS APPLIED

### APPLICABLE MODELS

## INTRINSICALLY SAFE

**GT2c**


GT2C-SL-EXZ-SC(N)

**GT2s**

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

**GT2h**

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

**IECEX****IECEX CERTIFICATE NUMBER: ETL21.0042X****Ex ia IIC T4 Ga** $-40^{\circ}\text{C} \leq T_{\text{amb}} \leq +65^{\circ}\text{C}$ **EU (ATEX)****ATEX CERTIFICATE NUMBER: ETL21ATEX0022X****CE** 2575  **II 1 G Ex ia IIC T4 Ga**  
 $-40^{\circ}\text{C} \leq T_{\text{amb}} \leq +65^{\circ}\text{C}$ **UNITED KINGDOM****UK EX CERTIFICATE NUMBER: ITS21UKEX0258X****UK** 0359  **II 1 G Ex ia IIC T4 Ga**  
 $-40^{\circ}\text{C} \leq T_{\text{amb}} \leq +65^{\circ}\text{C}$ **NORTH AMERICA****CANADA CERTIFICATE NUMBER: ETL21CA104612377X****US NEC 500 Marking: Class I, Division 1 | Groups A-D T4****US NEC 505 Marking: Class I, Zone 0 | AEx ia IIC T4 Ga****CAN CSA Marking: Class I, Zone 0 | Ex ia IIC T4 Ga**  $-40^{\circ}\text{C} \leq T_{\text{amb}} \leq +65^{\circ}\text{C}$ 

## MARKINGS SENTENCE BREAKDOWN

**Ex:**

Explosion Protection "Ex" for equipment certified for Hazardous Locations

**Equipment Group:**

"II" for non-mining applications

**Equipment Category:**

"I" for equipment suitable for Gas, Vapor, Mist and Dust Environments

**Protection Method:**

"ia" for Intrinsic Safety

**Gas Group:**

"IIC" for all Gas Groups (IIA, IIB and IIC)

**Temperature Classification:**

"T4"

**Equipment Protection Level:**

"Ga" Standard protection suitable for Zone 2 Gas Environments

**Ambient Temperature Range:** $-40^{\circ}\text{C} \leq T_{\text{amb}} \leq +65^{\circ}\text{C}$  Approved for EX operation within this ambient temperature range

# Safety Regulatory Guidance

## HAZARDOUS LOCATIONS REGULATORY NOTICES

### EX WARNING FOR ELECTRO-STATIC DISCHARGE HAZARDS FROM SURFACE RUBBING AND CLEANING ACTIVITIES:

**ESD WARNING:** RISK OF ELECTRO-STATIC DISCHARGE! TO REDUCE THE RISK OF IGNITION DUE TO ELECTROSTATIC DISCHARGE, AVOID CONTACT WITH THIS PRODUCT OR PERSONNEL SHOULD PROPERLY GROUND THEMSELVES PRIOR TO TOUCHING SURFACES OF THIS PRODUCT WHILE AN EXPLOSIVE OR HAZARDOUS ENVIRONMENT IS PRESENT.

**ESD AVERTISSEMENT:** RISQUE DE LA DÉCHARGE ÉLECTROSTATIQUE! ÉVITER LE CONTACT AVEC L'UNITÉ OU PERSONNEL DEVRAIT SE TERRE APPROPRIÉE AVANT DE TOUCHER SURFACES DE CE PRODUIT TOUT UN ENVIRONNEMENT EXPLOSIF OU DANGEREUX EST PRÉSENT. L'AVER EXCLUSIVEMENT AVEC UN CHIFFON HUMIDE. NE PAS UTILISER DE NETTOYANTS CHIMIQUES.

**NOTE:** Synthetic fabrics used in cloths for cleaning or wiping can develop sufficient static electric charge to produce discharges capable of igniting solvent vapors. Typically, charge generation increases with the speed and vigor of the wiping action. The material being cleaned or wiped, if insulating, also can accumulate sufficient charge to produce an incendive discharge. Cotton or synthetic fabric treated with a static dissipative compound may be required if static electric charge generation needs to be controlled, especially if flammable insulating solvents are being used for cleaning or wiping.

“WARNING – Clean with mild soap/water and a damp cloth only. Allow to dry naturally”

**NOTE:** To prevent the risk of metal fires, any accessory or fastener used with the GT2 product shall possess less than 7.5% by mass of Aluminum, Zirconium, Magnesium, and Titanium in total. Any metallic accessory shall maintain metal to metal contact with its mounting surface.



# Safety Regulatory Guidance

## MANUFACTURER'S REGULATORY NOTICES

### MANUFACTURER'S POSTAL ADDRESS INFORMATION

GEOFORCE INC.  
5830 GRANITE PARKWAY, SUITE 1200  
PLANO TX 75024  
USA



[illegible]



© 2020, Geoforce Inc.

[www.geoforce.com](http://www.geoforce.com)  
5830 Granite Parkway, Suite 1200  
Plano, TX 75024

**Because field operations don't have to be chaotic**