GT1

Product Regulatory Guide

geoforce

We believe nothing should be lost.

GT1 Regulatory Guide

Document # HW-IS-0-0159
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01-JUL-2025

APPLICABLE MODELS

This user guide is applicable to the following GT1 product model SKUs:

GT1s (OWA1S52)	GT1c (OWA1C00)
GT1S-GST-EXZ-SC(N) - EX Rated	GT1C-MD1-EXZ-SC(N) - EX Rated
GT1S-GST-NE-SC(N) - Non-EX Rated	GT1C-MD1-NE-SC(N) - Non-EX Rated

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.

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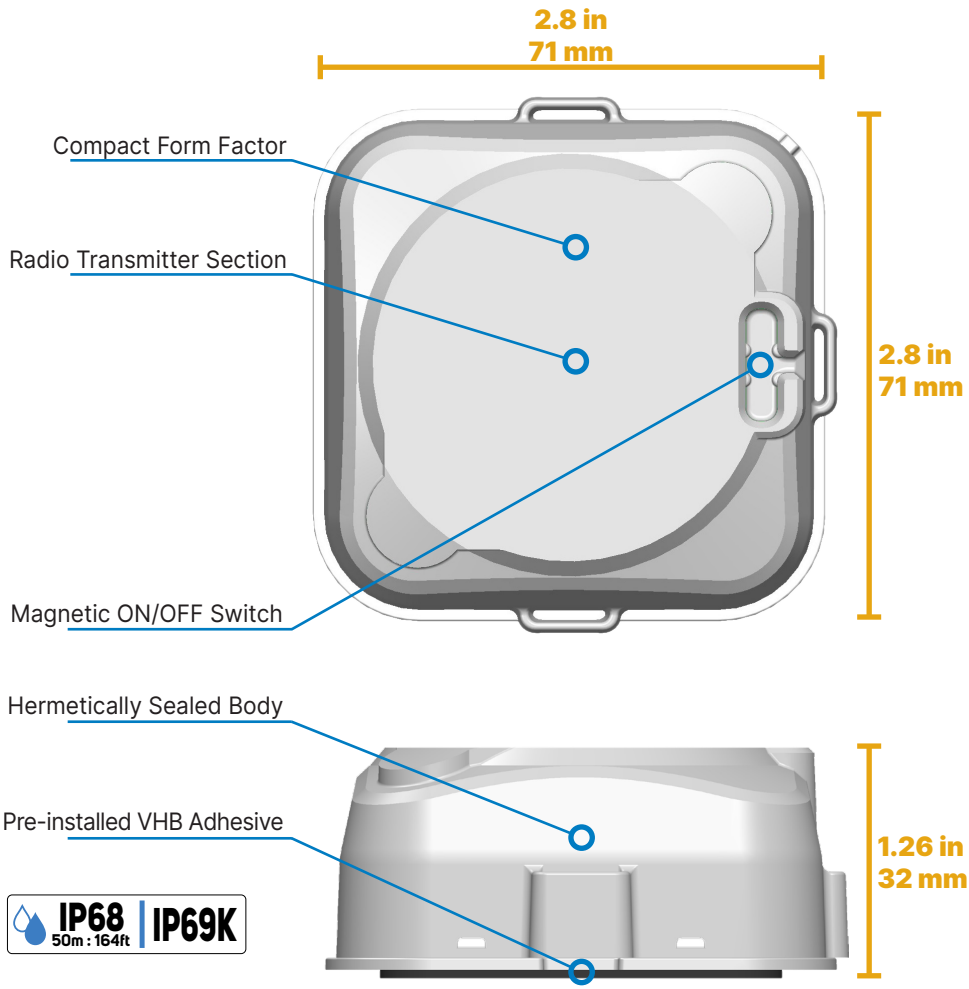
Satellite and cellular based GPS equipment tracking has been around for years, but for many equipment types, previous hardware options were too big or expensive. With its compact size and tough build, the GT1 is ideal for all types of field equipment and shipping containers. The device, paired with Geoforce's Track and Trace web-based software, helps minimize lost revenue, recover lost and misplaced equipment, reduce underutilized equipment, verify billing, and efficiently retrieve and manage inventory.

The versatile GT1 tracks assets in locations too challenging for other GPS devices. The GT1's unique rugged metal bezel and hermetically-sealed construction provides durable protection from extreme temperatures, forces and chemicals. The GT1 is not only the world's most rugged device, but also its safest, as it has achieved the highest IECEx/ATEX Zone 0 rating.



Shipping and Transport Guidance

TRANSPORT AND EXPORT CONTROL CODES

US ECCN - EXPORT CONTROL CLASSIFICATION NUMBER

EAR99: NON-LISTED

US CENSUS BUREAU "SCHEDULE B" CODE

8526.91.0000: RADIO NAVIGATIONAL AID APPARATUS

FOR WARRANTY RETURNS: 9801.10.0000

HTS/HS - INTERNATIONAL HARMONIZED TARIFF CODE

8526.91.0000: RADIO NAVIGATIONAL AID APPARATUS

FOR WARRANTY RETURNS: 9801.10.0000

ITAR - INTERNATIONAL TRAFFIC IN ARMS REGULATIONS

Geoforce GT1 devices are not classified as a "defense article" or as "dual use" and does not require an export license under ITAR regulations.

GT1 OPERATIONS DURING AIRLINE SHIPMENTS

GT1s devices have been tested and evaluated under normal operations to DO-160G guidelines for non-interference with aircraft systems during aircraft transport. (GT1c pending) Normal operations with a single installed device are typically acceptable.

For bulk shipments the GT1 is shipped in radio silence mode.

ENABLING RADIO SILENCE MODE

Firmly insert and leave the GT1 magnet pull tab into the magnet slot on the GT1 upper housing to initiate Radio Silence.

This magnet insertion aborts any ongoing radio message event and prevents any new radio message events from starting. This is equivalent to the OFF state.

NOTE: The BLE low-power communications interface remains active while in the OFF state. During this state the maximum ERP wireless power emitted by the GT1 is 0.794 mW (-1.0 dBm) at 0.02% duty cycle.

For questions or any additional information related to GT1 operation during airline shipments and operations, contact Geoforce.

GT1 OPERATIONS NEAR EXPLOSIVES

GT1s devices have been tested and evaluated to DOE M 440.1-1 guidelines for explosives safety while being in proximity to explosives and explosive detonators. (GT1c pending)

For questions or any additional information related to GT1 operation with explosives, contact Geoforce.

Battery Transport and Disposal Guidance

LITHIUM BATTERY REGULATORY INFORMATION

Li METAL

LITHIUM METAL PRIMARY CELLS

Lithium Battery Cell Type	Lithium Metal Batteries Contained in Equipment
Cell Voltage	3.6VDC
Cell Chemistry	Lithium-Thionyl-Chloride
Individual Cell Lithium Mass	0.71 grams (GT1s), 0.91 grams (GT1c)
Cell Installation Method	3 AA cells (GT1s), 2 A cells (GT1c) Permanently installed, non-serviceable
IATA Regulated Packing Instruction	UN3091, PI 970, Section 2

NOTE: GT1 products are packaged from Geoforce in packaging acceptable for air cargo shipments of lithium batteries contained in equipment. If the GT1 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

RoHS

Geoforce GT1 devices are compliant with the Restriction of Hazardous Substances (RoHS) Directive (2011/65/EU, EU 2015/863). This signifies that all Geoforce GT1 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).

Geoforce GT1 devices are 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 GT1 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 ISED, CISPR Publication 22, and Radio Eqmt. Directive 2014/53/EU

- Satellite Transmitter Maximum ERP and Operating Frequency (GT1s ONLY)
  200 mW (23.0 dBm +/- 1.0 dBm), 1611.25 - 1618.75 MHz
- LTE Cat-M1 / Cat-NB1 Transmitter Maximum EIRP and Operating Frequencies (GT1c ONLY)
  0.251 W (24.0 dBm), All Bands (700MHz, 800MHz, 900MHz, 1800MHz, 1900MHz)
- Bluetooth LE Transmitter Maximum EIRP and Operating Frequencies (All models)
  2.2 mW (3.39 dBm+/- 1.0 dBm), 2402 - 2480 MHz
- GPS Receiver Frequencies Utilized (All models)
  1575.42, 1602.00, 1561.00 MHz (Receive Only)

ID: C-17690

CIDF17000088

Indonesia SDPPI 50712/ SDPPI/2017

RAMATEL C-32093

ID DECLARATIONS

GT1s PRODUCTS

MODEL: OWA1S52
FCCID: OWA00GT1X
IC: 10540A-00GT1X

GT1c PRODUCTS

MODEL: OWA1C00
FCCID: OWA00GT1C
IC: 10540A-00GT1C

REGULATORY NOTICES

GT1s FCC ID: OWA00GT1X
GT1c FCC ID: OWA00GT1C

UNITED STATES FCC PART 15/25

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.

EUROPEAN UNION CE NOTICES (GT1s ONLY)

Geoforce GT1 devices have been constructed such that the product complies with the requirement of RED Article 10.2 as it can be operated in at least one Member State as examined. Additionally, GT1 devices are compliant with Article 10.10 as it has no restrictions on being put into service in all of the EU.

Refer to the GT1 EU Declaration of Conformity (Geoforce document HW-RD-0-0144) for full compliance statements.

REGULATORY NOTICES

CANADA ISED

GT1s IC: 10540A-00GT1X
GT1c IC: 10540A-00GT1C

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.

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

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.

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.

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

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.

BRAZIL ANATEL

GT1s ANATEL HOMOLOGATION NO: 09123-24-09043

Este equipamento não tem direito à proteção contra interferência prejudicial e não pode causar interferência em sistemas devidamente autorizados.

O produto é alimentado por bateria interna.

Caso o equipamento utilize antenas de transmissão com ganho direcional superior a 6 dBi, devem ter a potência de pico máxima na saída do transmissor reduzida para valores abaixo daqueles especificados pela quantidade em dB que o ganho direcional da antena exceder a 6 dBi.

O dispositivo deve ser operado em distâncias superiores a 20 cm do corpo do usuário.

MEXICO IFETEL/NOM

GT1s IFETEL HOMOLOGATION NO: RCSGEGT15-1231
GT1s NOM-121 CERTIFICATE NO: 201501C06097

IFT (México): La operación de este equipo está sujeta a las siguientes dos condiciones: (1) es posible que este equipo o dispositivo no cause interferencia perjudicial y (2) este equipo o dispositivo debe aceptar cualquier Interferencia, incluyendo la que pueda causar su operación no deseada."

Los números IMEI del producto se pueden encontrar grabados directamente en la superficie inferior del producto.

ORDINARY LOCATIONS SAFETY

All Geoforce GT1 products are conformant, recognized and certified in a variety of industrial operating environments including ordinary locations.

Intertek
5002424

Conforms to:

UL STD 62368-1: 2019 Ed. 3

Certified to:

CSA STD C22.2 #62368-1: 2019 Ed. 3

CB Certified to:

IEC 62368-1: 2023 Ed. 4

EN 62368-1: 2023 Ed. 4

HAZARDOUS LOCATIONS SAFETY

In addition to Ordinary Locations operations, the following GT1 SKU codes are conformant for operation in classified Hazardous Locations:

GT1s	GT1c PENDING
GT1S-GST-EXZ-SC(N)	GT1C-MD1-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 2022

UL 60079-0: 2019/2020 Ed. 7

UL 60079-11: 2013/2018 Ed. 6

ABNT NBR IEC 60079-0: 2013/2016

ABNT NBR IEC 60079-11: 2013/2017

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 MODEL SKUs

GT1s	GT1c PENDING
GT1S-GST-EXZ-SC(N)	GT1C-MD1-EXZ-SC(N)

INTRINSICALLY SAFE

IECEx

IECEx CERTIFICATE NUMBER: ETL15.0026X

Ex ia IIC T4 Ga

-40°C ≤ T_{amb} ≤ +65°C IP68

BRAZIL INMETRO

Ex ia IIC T4 Ga

-40°C ≤ T_{amb} ≤ +65°C IP68

Segurança
OCP 0034 INMETRO

Ex ia IIC T4 Ga
-40°C ≤ T_{amb} ≤ +65°C
NCC 16.0030X

EU (ATEX)

ATEX CERTIFICATE NUMBER: ETL24ATEX0393X

CE 2903 **II 1 G Ex ia IIC T4 Ga**

-40°C ≤ T_{amb} ≤ +65°C IP68

UNITED KINGDOM

UK EX CERTIFICATE NUMBER: ITS21UKEX0259X

UKCA 0359 **II 1 G Ex ia IIC T4 Ga**

-40°C ≤ T_{amb} ≤ +65°C IP68

NORTH AMERICA

Intertek 5002424

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°C ≤ T_{amb} ≤ +65°C IP68

EX MARKING BREAKDOWN

Ex:
Explosion Protection "Ex" for equipment certified for Hazardous Locations
Equipment Group:
"II" for non-mining applications
Equipment Category:
"1" 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°C ≤ T_{amb} ≤ +65°C" Approved for EX operation within this ambient temperature range
Ingress Protection Code:
"IP68" for Dust Tightness and Submersion to 50 meters or 164 foot depth.

HAZARDOUS LOCATIONS REGULATORY NOTICES

IT IS THE INSTALLER'S RESPONSIBILITY TO DETERMINE SAFE USE WHEN INSTALLING IN A HAZARDOUS LOCATION WHERE THE ASSEMBLY MUST BE ISOLATED FROM THE MOUNTING SURFACE. WHERE ISOLATION IS NOT REQUIRED THE PRODUCT ASSEMBLY SHALL MAINTAIN CONDUCTIVE CONTACT WITH THE MOUNTING SURFACE. REFER TO THE PRODUCT'S INSTRUCTIONS MANUAL FOR PROPER GROUNDING TECHNIQUES AND IEC TS 60079-32-1 FOR FURTHER GUIDANCE.

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'UNITE OU PERSONNEL DEVRAIT SE TERRE APPROPRIÉE AVANT DE TOUCHER SURFACES DE CE PRODUIT TOUT UN ENVIRONNEMENT EXPLOSIF OU DANGEREUX EST PRÉSENT. LAVER 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 GT1 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.

MANUFACTURER'S POSTAL ADDRESS INFORMATION

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

NOTES

© 2022 Geoforce Inc.
www.geoforce.com
5830 Granite Parkway, Suite 1200
Plano, TX 75024 USA

We believe nothing should be lost.