Report on the Testing of the

Global Traffic Technologies
Opticom GPS

In accordance with:
FCC Rule Part: 47 CFR Part 2.1091
RSS-102 Issue 5

RF Exposure Certification Exhibit - MPE

Prepared for: Global Traffic Technologies .
7800 Third Street North
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America

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Document Number: NC72189028.3 | Issue: 1

SIGNATURE			
Joel T. Schneider			
NAME	**JOB TITLE**	**RESPONSIBLE FOR**	**ISSUE DATE**
Joel Schneider	Senior EMC Engineer	**Authorized Signatory**	21 May 2023

Signatures in this approval box have checked this document in line with the requirements of TÜV SÜD America, Inc. document control rules.

FCC Accreditation Designation Number US1148 New Brighton, MN Test Laboratory	Innovation, Science, and Economic Development Canada Accreditation Site Number 4512A New Brighton, MN Test Laboratory

EXECUTIVE SUMMARY
A sample of this product was tested and found to be compliant with the standards listed above.

A2LA Cert. No. 2955.11

General Information:

Applicant: Global Traffic Technologies.
Device Category: Mobile
Environment: General Population/Uncontrolled Exposure

Technical Information:

FCC ID: VJB-OPTICOMGPS6
IC: 7275A-OPTICOM6

Configuration 1:

Antenna Type: Mobile Mark DM2-2400/1575 Monopole
Antenna Gain: 2.5 dBi

Maximum Transmitter Conducted Power: 26.57dBm, 453.94 mW
Exposure Conditions: ≥ 10 centimeters

Configuration 2:

Antenna Type: How Tsen S-001-1 Dipole
Antenna Gain: 2.6 dBi

Maximum Transmitter Conducted Power: 26.57dBm, 453.94 mW
Exposure Conditions: ≥ 10 centimeters

Configuration 3:

Antenna Type: Mobile Mark SMW-304 Omni-directional
Antenna Gain: Effective Gain -0.1 dBi

Maximum Transmitter Conducted Power: 26.57dBm, 453.94 mW
Exposure Conditions: ≥ 10 centimeters

Configuration 4:

Antenna Type: Mobile Mark LTMG511 Omni-directional
Antenna Gain: Effective Gain -0.1 dBi

Maximum Transmitter Conducted Power: 26.57dBm, 453.94 mW
Exposure Conditions: ≥ 10 centimeters

Configuration 5:

Antenna Type: Laird MAF94192 PIFA
Antenna Gain: Effective Gain -1.5 dBi

Maximum Transmitter Conducted Power: 26.57dBm, 453.94 mW
Exposure Conditions: ≥ 10 centimeters

Note: Effective gain values are based on antenna manufacturer data sheets and supplied cable lengths between the antenna and MMXC port.

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MPE Calculation FCC

The Power Density (mW/cm^2) is calculated as follows:

$$S = \frac{PG}{4\pi R^2}$$

Where:
S = power density (in appropriate units, e.g. mW/cm2)
P = power input to the antenna (in appropriate units, e.g., mW)
G = power gain of the antenna in the direction of interest relative to an isotropic radiator
R = distance to the center of radiation of the antenna (appropriate units, e.g., cm)

Table 1: MPE Calculation - FCC

Configuration	Transmit Frequency (MHz)	Radio Power (dBm)	Radio Power (mW)	Antenna Gain (dBi)	Antenna Gain (mW)	Power Density Limit (mW/Cm2))	Distance (cm)	Power Density (mW/cm^2)	Power Density Ratio (%)	Result
1	2476.8	26.57	453.94	2.5	1.778	1.00	20	0.1606	16.06	**Meets**
2	2476.8	26.57	453.94	2.6	1.820	1.00	20	0.1643	16.43	**Meets**
3	2476.8	26.57	453.94	-0.1	0.977	1.00	20	0.0882	8.82	**Meets**
4	2476.8	26.57	453.94	-0.1	0.977	1.00	20	0.0882	8.82	**Meets**
5	2476.8	26.57	453.94	-1.5	0.708	1.00	20	0.064	6.4	**Meets**

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MPE Calculation ISED

The Power Density (W/m^2) is calculated as follows:

$$S = \frac{PG}{4\pi R^2}$$

Where:
S = power density (in appropriate units, e.g. W/m2)
P = power input to the antenna (in appropriate units, e.g., W)
G = power gain of the antenna in the direction of interest relative to an isotropic radiator
R = distance to the center of radiation of the antenna (appropriate units, e.g., m)

Table 1: MPE Routine Evaluation - ISED

Configuration	Transmit Frequency (MHz)	Radio Power (dBm)	Radio Power (mW)	Antenna Gain (dBi)	Antenna Gain (mW)	Power Density Limit (W/m^2))	Distance (cm)	Power Density (W/m^2)	Power Density Ratio (%)	Result
1	2476.8	26.57	453.94	2.5	1.778	5.464	20	1.606	29.39	**Meets**
2	2476.8	26.57	453.94	2.6	1.820	5.464	20	1.643	30.08	**Meets**
3	2476.8	26.57	453.94	-0.1	0.977	5.464	20	0.883	16.15	**Meets**
4	2476.8	26.57	453.94	-0.1	0.977	5.464	20	0.883	16.15	**Meets**
5	2476.8	26.57	453.94	-1.5	0.708	5.464	20	0.639	11.70	**Meets**

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