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Report No.: 1806RSU011-U2 Report Version: V01 Issue Date: 07-12-2018

RF Exposure Evaluation Declaration

FCC ID: 2AEB4AMV01

APPLICANT: Connected Holdings LLC

Application Type: Certification

Product: LTE Cat-M GPS Tracker

Model No.: AR-4MA

Marketing Name: Arrow-M

FCC Classification: Licensed Non-Broadcast Station Transmitter (TNB)

Reviewed By : Com Como

(Kevin Guo)

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(Robin Wu)



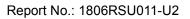


The test results relate only to the samples tested.

The test results shown in the test report are traceable to the national/international standards through the calibration of the equipment and evaluated measurement uncertainty herein.

The test report shall not be reproduced except in full without the written approval of MRT Technology (Suzhou) Co., Ltd.

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Revision History

| Report No. | Version | Description | Issue Date | Note |
|---------------|---------|----------------|------------|-------|
| 1806RSU011-U1 | Rev. 01 | Initial report | 07-12-2018 | Valid |
| | | | | |

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1. PRODUCT INFORMATION

1.1. Equipment Description

| Product Name: | LTE Cat-M GPS Tracker |
|---------------------|-----------------------|
| Model No.: | AR-4MA |
| Marketing Name: | Arrow-M |
| Hardware Version: | P1 |
| Software Version: | V1 |
| LTE Cat-M Operation | FDD Band 4 / 13 |
| Band (s): | FDD Ballu 47 13 |
| GPS: | 1575.42MHz |
| Working Voltage | DC 12V |

1.2. Product Specification Subjective to this Report

| Tx Frequency Range | Band 4: 1710.7MHz ~ 1754.3MHz |
|--------------------|-------------------------------|
| | Band 13: 779.5MHz ~ 784.5MHz |
| Rx Frequency Range | Band 4: 2110.7MHz ~ 2154.3MHz |
| | Band 13: 748.5MHz ~ 753.5MHz |
| Bandwidth | Band 4: 1.4MHz |
| | Band 13: 1.4MHz |
| Type of Modulation | QPSK / 16-QAM |

1.3. Description of Available Antennas

| Antenna Type | Frequency Band | Max Peak Gain (dBi) | | | |
|----------------------------|----------------|------------------------|--|--|--|
| GPS Internal Antenna | | | | | |
| Chip | 1575.42MHz | 2 | | | |
| LTE Cat-M Internal Antenna | | | | | |
| Chip | FDD-Band 4 | 1 | | | |
| | FDD- Band 13 | 1 | | | |

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2. RF Exposure Evaluation

2.1. Limits

According to FCC 1.1310: The criteria listed in the following table shall be used to evaluate the environment impact of human exposure to radio frequency (RF) radiation as specified in 1.1307(b)

LIMITS FOR MAXIMUM PERMISSIBLE EXPOSURE (MPE)

| Frequency Range | Electric Field | Magnetic Field Power Density | | Average Time | | |
|---|----------------|------------------------------|----------|--------------|--|--|
| (MHz) | Strength (V/m) | Strength (A/m) (mW/cm²) | | (Minutes) | | |
| (A) Limits for Occupational/ Control Exposures | | | | | | |
| 300-1500 | | | f/300 6 | | | |
| 1500-100,000 | | | 5 | 6 | | |
| (B) Limits for General Population/ Uncontrolled Exposures | | | | | | |
| 300-1500 | | | f/1500 6 | | | |
| 1500-100,000 | | 1 | | 30 | | |

f= Frequency in MHz

Calculation Formula: $Pd = (Pout*G)/(4*pi*r^2)$

Where

Pd = power density in mW/cm²

Pout = output power to antenna in mW

G = gain of antenna in linear scale

Pi = 3.1416

r = distance between observation point and center of the radiator in cm

Pd is the limit of MPE, 1mW/cm². If we know the maximum gain of the antenna and the total power input to the antenna, through the calculation, we will know the distance r where the MPE limit is reached.

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2.2. Test Result of RF Exposure Evaluation

| Product | LTE Cat-M GPS Tracker | |
|-----------|------------------------|--|
| Test Item | RF Exposure Evaluation | |

| Test Mode | Frequency | Maximum | Maximum | Power Density | Limit |
|-----------|----------------|-----------|---------|-----------------------|-----------------------|
| | Band (MHz) | Out power | EIRP | at | (mW/cm ²) |
| | | (dBm) | (dBm) | R = 20 cm | |
| | | | | (mW/cm ²) | |
| Band 4 | 1710.7 ~1754.3 | 23.90 | 24.90 | 0.0615 | 1 |
| Band 13 | 779.5 ~784.5 | 23.16 | 24.14 | 0.0516 | 0.52 |

CONCULISON:

The max Power Density at R (20 cm) = 0.0615mW/cm² < 1 mW/cm² for Cat-M Band.

Therefore, the Min Safety Distance is 20cm.

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The End