

# FCC MPE REPORT

## FCC Certification

**Applicant Name:**  
FRTEK CO., LTD.

**Date of Issue:**  
March 20, 2019

**Address:**  
11-25, Simin-daero 327beon-gil, Dongan-gu, Anyang-si,  
Gyeonggi-do, Republic of Korea

**Location of test lab:**  
HCT CO., LTD.,  
74, Seoicheon-ro 578beon-gil, Majang-myeon,  
Icheon-si, Gyeonggi-do, 17383, Rep. of KOREA

**Report No.:** HCT-RF-1904-FC004

**FCC ID:** 2AFEG-2100-24

**APPLICANT:** FRTEK CO., LTD.

**Model:** ROTECH2100-70FRT

**EUT Type:** INOVA ERU

The measurements shown in this report were made in accordance with the procedures specified in §2.947. I assume full responsibility for the accuracy and completeness of these measurements, and for the qualifications of all persons taking them.

**HCT CO., LTD.** Certifies that no party to this application has subject to a denial of Federal benefits that includes FCC benefits pursuant to section 5301 of the Anti-Drug Abuse Act of 1998, 21 U.S.C. 853(a)



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**Approved by : Yong Hyun Lee**  
**Manager of Telecommunication testing center**

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## Version

| TEST REPORT NO.   | DATE           | DESCRIPTION             |
|-------------------|----------------|-------------------------|
| HCT-RF-1904-FC004 | March 20, 2019 | - First Approval Report |
|                   |                |                         |
|                   |                |                         |
|                   |                |                         |

# RF Exposure Statement

## 1. LIMITS

According to §1.1310 and §2.1091 RF exposure is calculated.

### (B) Limits for General Population/Uncontrolled Exposures

| Frequency range<br>(MHz) | Electric field<br>Strength (V/m) | Magnetic field<br>Strength (A/m) | Power density<br>(mW/cm <sup>2</sup> ) | Averaging time<br>(minutes) |
|--------------------------|----------------------------------|----------------------------------|----------------------------------------|-----------------------------|
| 0.3 - 1.34.....          | 614                              | 1.63                             | *(100)                                 | 30                          |
| 1.34 - 30.....           | 824/f                            | 2.19/f                           | *(180/ f <sup>2</sup> )                | 30                          |
| 30 - 300.....            | 27.5                             | 0.073                            | 0.2                                    | 30                          |
| 300 - 1500.....          | .....                            | .....                            | f/1500                                 | 30                          |
| 1500 - 100.000.....      | .....                            | .....                            | 1.0                                    | 30                          |

F = frequency in MHz

\* = Plane-wave equivalent power density

## 2. MAXIMUM PERMISSIBLE EXPOSURE Prediction

Prediction of MPE limit at a given distance

$$S = PG/4\pi R^2$$

S = Power density

P = power input to antenna

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

### **3. RESULTS**

- AWS

|                                                             |          |                    |
|-------------------------------------------------------------|----------|--------------------|
| Max Peak output Power at antenna input terminal             | 25.000   | dBm                |
| Max Peak output Power at antenna input terminal             | 316.23   | mW                 |
| Prediction distance                                         | 20.00    | cm                 |
| Prediction frequency                                        | 2 112.50 | MHz                |
| Antenna Gain(typical)                                       | 6.000    | dBi                |
| Antenna Gain(numeric)                                       | 3.981    | -                  |
| Power density at prediction frequency( S)                   | 0.250    | mW/cm <sup>2</sup> |
| MPE limit for uncontrolled exposure at prediction frequency | 1.000    | mW/cm2             |