

## TEST REPORT

FCC MPE Test for IT109A017A  
Certification

### APPLICANT

Innertron

### REPORT NO.

HCT-RF-2608-FC007-R1

### DATE OF ISSUE

September 4, 2026

### Tested by

Kyung Soo Kang

(signature)

### Technical Manager

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# TEST REPORT

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|                           |                                                                                                                                                                                                        |
|---------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Applicant</b>          | <b>Innertron</b><br>301, Harmony-ro, Yeonsu-gu, Incheon, Republic of Korea                                                                                                                             |
| <b>Product Name</b>       | UHF 380-512MHZ 32-CH BASE CONFIG BDA                                                                                                                                                                   |
| <b>Model Name</b>         | IT109A017A                                                                                                                                                                                             |
| <b>FCC ID</b>             | 2BCYP-IT109A017A                                                                                                                                                                                       |
| <b>Date of Test</b>       | June 29, 2026 ~ August 21, 2026                                                                                                                                                                        |
| <b>Location of Test</b>   | <input checked="" type="checkbox"/> Permanent Testing Lab <input type="checkbox"/> On Site Testing<br>(Address: 74, Seoicheon-ro 578beon-gil, Majang-myeon, Icheon-si, Gyeonggi-do, Republic of Korea) |
| <b>Test Standard Used</b> | CFR 47 Part 2.1091                                                                                                                                                                                     |
| <b>Test Results</b>       | PASS                                                                                                                                                                                                   |

## REVISION HISTORY

The revision history for this test report is shown in table.

| Revision No. | Date of Issue     | Description                        |
|--------------|-------------------|------------------------------------|
| 0            | August 21, 2026   | Initial Release                    |
| 1            | September 4, 2026 | Revised the Applicant Information. |

## Notice

| Content                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p>Engineering Statement:</p> <p>The measurements shown in this report were made in accordance with the procedures indicated, and the emissions from this equipment were found to be within the limits applicable. I assume full responsibility for the accuracy and completeness of these measurements, and for the qualifications of all persons taking them. It is further stated that upon the basis of the measurements made, the equipment tested is capable of operation in accordance with the requirements of the FCC Rules under normal use and maintenance.</p> <p>The results shown in this test report only apply to the sample(s), as received, provided by the applicant, unless otherwise stated. The test results have only been applied with the test methods required by the standard(s).</p> <p>The laboratory is not accredited for the test results marked *.</p> <p>Information provided by the applicant is marked **.</p> <p>Test results provided by external providers are marked ***.</p> <p>When confirmation of authenticity of this test report is required, please contact <a href="http://www.hct.co.kr">www.hct.co.kr</a></p> <p>The test results in this test report are not associated with the ((KS Q) ISO/IEC 17025) accreditation by KOLAS (Korea Laboratory Accreditation Scheme) / A2LA (American Association for Laboratory Accreditation) that are under the ILAC (International Laboratory Accreditation Cooperation) Mutual Recognition Agreement (MRA).</p> |

## 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

#### [Uplink]

##### - UHF (406.1 ~ 420 MHz)

|                                                             |        |                    |
|-------------------------------------------------------------|--------|--------------------|
| Maximum output Power at antenna input terminal              | 28.00  | dBm                |
| Maximum output Power at antenna input terminal              | 630.96 | mW                 |
| Prediction distance                                         | 55.00  | cm                 |
| Prediction frequency                                        | 406.10 | MHz                |
| Total Gain(typical) #                                       | 11.13  | dBi                |
| Total Gain(numeric)                                         | 12.97  | -                  |
| Power density at prediction frequency(S)                    | 0.2153 | mW/cm <sup>2</sup> |
| MPE limit for uncontrolled exposure at prediction frequency | 0.2707 | mW/cm <sup>2</sup> |

# Total Gain = Peak Antenna Gain + Cable Loss = 13 dBi – 1.87 dB = 11.13 dBi

##### - UHF (421 ~ 430 MHz)

|                                                             |        |                    |
|-------------------------------------------------------------|--------|--------------------|
| Maximum output Power at antenna input terminal              | 28.00  | dBm                |
| Maximum output Power at antenna input terminal              | 630.96 | mW                 |
| Prediction distance                                         | 55.00  | cm                 |
| Prediction frequency                                        | 421.00 | MHz                |
| Total Gain(typical) #                                       | 10.13  | dBi                |
| Total Gain(numeric)                                         | 10.30  | -                  |
| Power density at prediction frequency(S)                    | 0.1710 | mW/cm <sup>2</sup> |
| MPE limit for uncontrolled exposure at prediction frequency | 0.2807 | mW/cm <sup>2</sup> |

# Total Gain = Peak Antenna Gain + Cable Loss = 12 dBi – 1.87 dB = 10.13 dBi

##### - UHF (450 ~ 512 MHz)

|                                                             |        |                    |
|-------------------------------------------------------------|--------|--------------------|
| Maximum output Power at antenna input terminal              | 28.00  | dBm                |
| Maximum output Power at antenna input terminal              | 630.96 | mW                 |
| Prediction distance                                         | 55.00  | cm                 |
| Prediction frequency                                        | 450.00 | MHz                |
| Total Gain(typical) #                                       | 10.13  | dBi                |
| Total Gain(numeric)                                         | 10.30  | -                  |
| Power density at prediction frequency(S)                    | 0.1710 | mW/cm <sup>2</sup> |
| MPE limit for uncontrolled exposure at prediction frequency | 0.3000 | mW/cm <sup>2</sup> |

# Total Gain = Peak Antenna Gain + Cable Loss = 12 dBi – 1.87 dB = 10.13 dBi

### [Downlink]

#### - UHF (406.1 ~ 420 MHz)

|                                                             |          |                    |
|-------------------------------------------------------------|----------|--------------------|
| Maximum output Power at antenna input terminal              | 38.00    | dBm                |
| Maximum output Power at antenna input terminal              | 6 309.57 | mW                 |
| Prediction distance                                         | 55.00    | cm                 |
| Prediction frequency                                        | 406.10   | MHz                |
| Total Gain(typical) #                                       | 1.13     | dBi                |
| Total Gain(numeric)                                         | 1.30     | -                  |
| Power density at prediction frequency(S)                    | 0.2153   | mW/cm <sup>2</sup> |
| MPE limit for uncontrolled exposure at prediction frequency | 0.2707   | mW/cm <sup>2</sup> |

# Total Gain = Peak Antenna Gain + Cable Loss = 3 dBi – 1.87 dB = 1.13 dBi

#### - UHF (421 ~ 430 MHz)

|                                                             |          |                    |
|-------------------------------------------------------------|----------|--------------------|
| Maximum output Power at antenna input terminal              | 38.00    | dBm                |
| Maximum output Power at antenna input terminal              | 6 309.57 | mW                 |
| Prediction distance                                         | 55.00    | cm                 |
| Prediction frequency                                        | 421.00   | MHz                |
| Total Gain(typical) #                                       | 1.13     | dBi                |
| Total Gain(numeric)                                         | 1.30     | -                  |
| Power density at prediction frequency(S)                    | 0.2153   | mW/cm <sup>2</sup> |
| MPE limit for uncontrolled exposure at prediction frequency | 0.2807   | mW/cm <sup>2</sup> |

# Total Gain = Peak Antenna Gain + Cable Loss = 3 dBi – 1.87 dB = 1.13 dBi

#### - UHF (450 ~ 512 MHz)

|                                                             |          |                    |
|-------------------------------------------------------------|----------|--------------------|
| Maximum output Power at antenna input terminal              | 38.00    | dBm                |
| Maximum output Power at antenna input terminal              | 6 309.57 | mW                 |
| Prediction distance                                         | 55.00    | cm                 |
| Prediction frequency                                        | 450.00   | MHz                |
| Total Gain(typical) #                                       | 1.13     | dBi                |
| Total Gain(numeric)                                         | 1.30     | -                  |
| Power density at prediction frequency(S)                    | 0.2153   | mW/cm <sup>2</sup> |
| MPE limit for uncontrolled exposure at prediction frequency | 0.3000   | mW/cm <sup>2</sup> |

# Total Gain = Peak Antenna Gain + Cable Loss = 3 dBi – 1.87 dB = 1.13 dBi