# FCC REPORT

| | | |
|---|---|---|
| **Report Reference No. ..... :** | **CHTEW20120067** | Report verification: |
| **Project No. ..... :** | **SHT2009099801EW** | |
| **FCC ID ..... :** | **2AXDV-N402** | |
| **Applicant's name ..... :** | **NEXT4** | |
| Address ..... : | 3 avenue Didier Daurat 31400 TOULOUSE, France | |
| Manufacturer ..... : | NEXT4 | |
| Address ..... : | 3 avenue Didier Daurat 31400 TOULOUSE, France | |
| **Test item description ..... :** | **N402** | |
| Trade Mark ..... : | - | |
| Model/Type reference ..... : | N402 | |
| Listed Model(s) ..... : | **-** | |
| **Standard ..... :** | **FCC CFR Title 47 Part 2**<br>**FCC CFR Title 47 Part 22**<br>**FCC CFR Title 47 Part 24** | |
| Date of receipt of test sample ..... : | Oct. 23, 2020 | |
| Date of testing ..... : | Oct. 24, 2020- Dec. 08, 2020 | |
| Date of issue ..... : | Dec. 09, 2020 | |
| **Result ..... ..... :** | **Pass** | |

| | | |
|---|---|---|
| Compiled by ( position+printedname+signature)... : | File administrators Silvia Li | Silvia Li |
| Supervised by (position+printedname+signature).... : | Project Engineer Aaron Fang | Aaron.Fang |
| Approved by (position+printedname+signature).... : | Manager Hans Hu | Hans Hu |

| | |
|---|---|
| **Testing Laboratory Name ..... :** | **Shenzhen Huatongwei International Inspection Co., Ltd.** |
| Address ..... : | 1/F, Bldg 3, Hongfa Hi-tech Industrial Park, Genyu Road, Tianliao, Gongming, Shenzhen, China |

# Contents

# 1. TEST STANDARDS AND REPORT VERSION

## 1.1. Applicable Standards

The tests were performed according to following standards:

FCC Rules Part 2: FREQUENCY ALLOCATIONS AND RADIO TREATY MATTERS; GENERAL RULES AND REGULATIONS
FCC Rules Part 22: PUBLIC MOBILE SERVICES
FCC Rules Part 24: PERSONAL COMMUNICATIONS SERVICES
TIA/EIA 603 E March 2016: Land Mobile FM or PM Communications Equipment Measurement and Performance Standards.
ANSI C63.26-2015: American National Standard for Compliance Testing of Transmitters Used in Licensed Radio Services
KDB 971168 D01 Power Meas License Digital Systems v03: MEASUREMENT GUIDANCE FOR CERTIFICATION OF LICENSED DIGITAL TRANSMITTERS

## 1.2. Report version information

| Revision No. | Date of issue | Description |
|---|---|---|
| N/A | 2020-12-09 | Original |
| | | |
| | | |
| | | |
| | | |

# 2. Test Description

| Test Item | Section in CFR 47 | Result | Test Engineer |
|---|---|---|---|
| Conducted Output Power | Part 2.1046<br>Part 22.913(a)<br>Part 24.232(c) | Pass* | N/A |
| Peak-to-Average Ratio | Part 24.232 | Pass* | N/A |
| 99% Occupied Bandwidth & 26 dB Bandwidth | Part 2.1049<br>Part 22.917(b)<br>Part 24.238(b) | Pass* | N/A |
| Band Edge | Part 2.1051<br>Part 22.917<br>Part 24.238 | Pass* | N/A |
| Conducted Spurious Emissions | Part 2.1051<br>Part 22.917<br>Part 24.238 | Pass* | N/A |
| Frequency stability VS Temperature | Part 2.1055(a)(1)(b)<br>Part 22.355<br>Part 24.235 | Pass* | N/A |
| Frequency stability VS Voltage | Part 2.1055(d)(1)(2)<br>Part 22.355<br>Part 24.235 | Pass* | N/A |
| ERP and EIRP | Part 22.913(a)<br>Part 24.232(b) | Pass | Pan Xie |
| Radiated Spurious Emissions | Part 2.1053<br>Part 22.917<br>Part 24.238 | Pass | Pan Xie |

Note:
1. The measurement uncertainty is not included in the test result.
2. * reference to module report , which FCC ID is XMR201707BG96

# 3. SUMMARY

## 3.1. Client Information

| | |
|---|---|
| Applicant: | NEXT4 |
| Address: | 3 avenue Didier Daurat 31400 TOULOUSE, France |
| Manufacturer: | NEXT4 |
| Address: | 3 avenue Didier Daurat 31400 TOULOUSE, France |

## 3.2. Product Description

| | |
|---|---|
| Name of EUT: | NEXT4 |
| Trade Mark: | - |
| Model No.: | N402 |
| Listed Model(s): | - |
| SIM Information: | Support One eSIM Card |
| Power supply: | DC4.5V by 3*AA battery |
| Hardware version: | 2.2.b |
| Software version: | 1.3.0 |
| **2G:** | |
| Support Network: | GPRS, EGPRS |
| Support Band: | GSM850, PCS1900 |
| Modulation: | GPRS: GMSK<br>EGPRS: 8PSK |
| Transmit Frequency: | GSM850: 824.20MHz-848.80MHz<br>PCS1900: 1850.20MHz-1909.80MHz |
| Receive Frequency: | GSM850: 869.20MHz-893.80MHz<br>PCS1900: 1930.20MHz-1989.80MHz |
| GPRS Multislot Class: | 12 |
| EGPRS Multislot Class: | 12 |
| Antenna type: | Flex Antenna |
| Antenna gain: | GSM850: -2.0dBi<br>PCS1900: -2.0dBi |

## 3.3. Operation state

➢ **Test frequency list**

| GSM850 | | PCS1900 | |
|---|---|---|---|
| Channel | Frequency (MHz) | Channel | Frequency (MHz) |
| 128 | 824.20 | 512 | 1850.20 |
| 190 | 836.60 | 661 | 1880.00 |
| 251 | 848.80 | 810 | 1909.80 |

➢ **Test mode**

Antenna port conducted and radiated test items were performed according to KDB 971168 D01 Power Meas. License Digital Systems v03 and ANSI C63.26-2015 with maximum output power.

Radiated measurements were performed with rotating EUT in different three orthogonal test planes to find the maximum emission.

Radiated emissions were investigated as following frequency range:

30 MHz to 10th harmonic for GSM850, PCS1900.

All modes and data rates and positions were investigated.

Test modes are chosen to be reported as the worst case configuration below:

| Test modes | | |
|---|---|---|
| **Band** | **Radiated** | **Conducted** |
| **GSM 850** | ■ GPRS Class 8 link<br>■ EGPRS Class 8 link | ■ GPRS Class 8 link<br>■ EGPRS Class 8 link |
| **PCS 1900** | ■ GPRS Class 8 link<br>■ EGPRS Class 8 link | ■ GPRS Class 8 link<br>■ EGPRS Class 8 link |

## 3.4. EUT configuration

**The following peripheral devices and interface cables were connected during the measurement:**

● - supplied by the manufacturer

○ - supplied by the lab

| | | | |
|---|---|---|---|
| ○ | / | Manufacturer: | / |
| | | Model No.: | / |
| ○ | / | Manufacturer: | / |
| | | Model No.: | / |

## 3.5. Modifications

No modifications were implemented to meet testing criteria.

# 4. TEST ENVIRONMENT

## 4.1. Address of the test laboratory

Laboratory: Shenzhen Huatongwei International Inspection Co., Ltd.
Address: 1/F, Bldg 3, Hongfa Hi-tech Industrial Park, Genyu Road, Tianliao, Gongming, Shenzhen, China

## 4.2. Test Facility

**CNAS-Lab Code: L1225**

Shenzhen Huatongwei International Inspection Co., Ltd. has been assessed and proved to be in compliance with CNAS-CL01 Accreditation Criteria for Testing and Calibration Laboratories (identical to ISO/IEC17025: 2005 General Requirements) for the Competence of Testing and Calibration Laboratories.

**A2LA-Lab Cert. No.: 3902.01**

Shenzhen Huatongwei International Inspection Co., Ltd. EMC Laboratory has been accredited by A2LA for technical competence in the field of electrical testing, and proved to be in compliance with ISO/IEC 17025: 2005 General Requirements for the Competence of Testing and Calibration Laboratories and any additional program requirements in the identified field of testing.

**FCC-Registration No.: 762235**

Shenzhen Huatongwei International Inspection Co., Ltd. EMC Laboratory has been registered and fully described in a report filed with the FCC (Federal Communications Commission). The acceptance letter from the FCC is maintained in our files.

**IC-Registration No.:5377A**

Two 3m Alternate Test Site of Shenzhen Huatongwei International Inspection Co., Ltd. has been registered by Certification and Engineering Bureau of Industry Canada for the performance of radiated measurements with Registration No.: 5377A.

**ACA**

Shenzhen Huatongwei International Inspection Co., Ltd. EMC Laboratory can also perform testing for the Australian C-Tick mark as a result of our A2LA accreditation.

## 4.3. Equipments Used during the Test

| Used | Test Equipment | Manufacturer | Equipment No. | Model No. | Serial No. | Last Cal. Date (YY-MM-DD) | Next Cal. Date (YY-MM-DD) |
|---|---|---|---|---|---|---|---|
| ● | Signal and spectrum Analyzer | R&S | HTWE0242 | FSV40 | 100048 | 2020/10/19 | 2021/10/18 |
| ● | Signal & Spectrum Analyzer | R&S | HTWE0262 | FSW26 | 103440 | 2020/10/19 | 2021/10/18 |
| ● | Spectrum Analyzer | Agilent | HTWE0286 | N9020A | MY50510187 | 2020/10/19 | 2021/10/18 |
| ● | Radio communication tester | R&S | HTWE0287 | CMW500 | 137688-Lv | 2020/10/19 | 2021/10/18 |
| ● | Test software | Tonscend | N/A | JS1120 | N/A | N/A | N/A |

| ● Radiated Spurious Emission | | | | | | | |
|---|---|---|---|---|---|---|---|
| Used | Test Equipment | Manufacturer | Equipment No. | Model No. | Serial No. | Last Cal. Date (YY-MM-DD) | Next Cal. Date (YY-MM-DD) |
| ● | Semi-Anechoic Chamber | Albatross projects | HTWE0122 | SAC-3m-01 | N/A | 2018/09/27 | 2021/09/26 |
| ● | Spectrum Analyzer | R&S | HTWE0098 | FSP40 | 100597 | 2020/10/20 | 2021/10/19 |
| ● | Loop Antenna | R&S | HTWE0170 | HFH2-Z2 | 100020 | 2018/04/02 | 2021/04/01 |
| ● | Broadband Horn Antenna | SCHWARZBECK | HTWE0103 | BBHA9170 | BBHA9170472 | 2018/10/12 | 2021/10/11 |
| ● | Ultra-Broadband Antenna | SCHWARZBECK | HTWE0123 | VULB9163 | 538 | 2018/04/04 | 2021/04/03 |
| ● | Horn Antenna | SCHWARZBECK | HTWE0126 | 9120D | 1011 | 2020/04/01 | 2023/03/31 |
| ● | Pre-amplifier | CD | HTWE0071 | PAP-0102 | 12004 | 2020/11/12 | 2021/11/11 |
| ● | Broadband Preamplifier | SCHWARZBECK | HTWE0201 | BBV 9718 | 9718-248 | 2020/05/10 | 2021/05/09 |
| ● | RF Connection Cable | HUBER+SUHNER | HTWE0120-01 | 6m 18GHz S Serisa | N/A | 2020/05/10 | 2021/05/09 |
| ● | RF Connection Cable | HUBER+SUHNER | HTWE0120-02 | 6m 3GHz RG Serisa | N/A | 2020/05/10 | 2021/05/09 |
| ● | RF Connection Cable | HUBER+SUHNER | HTWE0120-03 | 6m 3GHz RG Serisa | N/A | 2020/05/10 | 2021/05/09 |
| ● | RF Connection Cable | HUBER+SUHNER | HTWE0120-04 | 6m 3GHz RG Serisa | N/A | 2020/05/10 | 2021/05/09 |
| ● | RF Connection Cable | HUBER+SUHNER | HTWE0121-01 | 6m 18GHz S Serisa | N/A | 2020/05/10 | 2021/05/09 |
| ● | EMI Test Software | Audix | N/A | E3 | N/A | N/A | N/A |

| ● Auxiliary Equipment | | | | | | | |
|---|---|---|---|---|---|---|---|
| Used | Test Equipment | Manufacturer | Equipment No. | Model No. | Serial No. | Last Cal. Date (YY-MM-DD) | Next Cal. Date (YY-MM-DD) |
| ● | Climate chamber | ESPEC | HTWE0254 | GPL-2 | N/A | 2020/10/21 | 2021/10/20 |
| ● | DC Power Supply | Gwinstek | HTWE0274 | SPS-2415 | GER835793 | N/A | N/A |

## 4.4. Environmental conditions

During the measurement the environmental conditions were within the listed ranges:

| | | |
|---|---|---|
| Voltage | VN=Nominal Voltage | DC 4.50V |
| | VL=Lower Voltage | DC 4.05V |
| | VH=Higher Voltage | DC 4.95V |
| Temperature | TN=Normal Temperature | 25 °C |
| | Extreme Temperature | From −30° to + 50° centigrade |
| Humidity | 30~60 % | |
| Air Pressure | 950-1050 hPa | |

## 4.5. Statement of the measurement uncertainty

The data and results referenced in this document are true and accurate. The reader is cautioned that there may be errors within the calibration limits of the equipment and facilities. The measurement uncertainty was calculated for all measurements listed in this test report acc. to TR-100028-01"Electromagnetic compatibilityand Radio spectrum Matters (ERM);Uncertainties in the measurementof mobile radio equipment characteristics;Part 1"and TR-100028-02 "Electromagnetic compatibilityand Radio spectrum Matters (ERM);Uncertainties in the measurementof mobile radio equipment characteristics;Part 2 " and is documented in the Shenzhen Huatongwei International Inspection Co., Ltd quality system acc. to DIN EN ISO/IEC 17025. Furthermore, component and process variability of devices similar to that tested may result in additional deviation. The manufacturer has the sole responsibility of continued compliance of the device.

Hereafter the best measurement capability for Shenzhen Huatongwei laboratory is reported:

| Test Items | Measurement Uncertainty | Notes |
|---|---|---|
| Transmitter power conducted | 0.51 dB | (1) |
| Transmitter power Radiated | 2.66dB for <1GHz<br>3.44dB for >1GHz | (1) |
| Conducted spurious emissions 9kHz~40GHz | 0.51 dB | (1) |
| Radiated spurious emissions | 2.66dB for <1GHz<br>3.44dB for >1GHz | (1) |
| Occupied Bandwidth | 15Hz for <1GHz<br>70Hz for >1GHz | (1) |
| Frequency error | 15Hz for <1GHz<br>70Hz for >1GHz | (1) |

(1) This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=1.96.

# 5. TEST CONDITIONS AND RESULTS

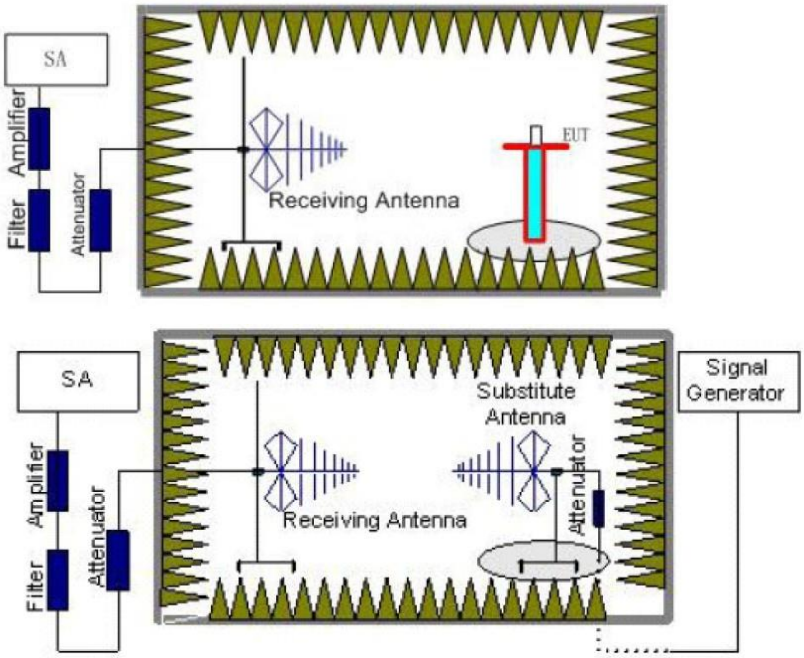
## 5.1. ERP and EIRP

**LIMIT**

GSM850: 7W (38.45dBm) ERP

PCS1900: 2W (33dBm) EIRP

**TEST CONFIGURATION**




**TEST PROCEDURE**

1. Place the EUT in the center of the turntable.
   a) For radiated emissions measurements performed at frequencies less than or equal to 1 GHz, the EUT shall be placed on a RF-transparent table at a nominal height of 80 cm above the reference ground plane
   b) For radiated measurements performed at frequencies above 1 GHz, the EUT shall be placed on an RF transparent table at a nominal height of 1.5 m above the ground plane.
2. Unless the EUT uses an integral antenna, the EUT shall be terminated with a non-radiating transmitter load. In cases where the EUT uses an adjustable antenna, the antenna shall be adjusted through typical positions and lengths to maximize emissions levels.
3. The EUT shall be tested while operating on the frequency per manufacturer specification. Set the transmitter to operate in continuous transmit mode.
4. Receiver or Spectrum set as follow:
   Below 1GHz, RBW=100kHz, VBW=300kHz, Detector=Peak, Sweep time=Auto
   Above 1GHz, RBW=1MHz, VBW=3MHz, Detector=Peck, Sweep time=Auto
5. Each emission under consideration shall be evaluated:
   a) Raise and lower the measurement antenna from 1 m to 4 m, as necessary to enable detection of the maximum emission amplitude relative to measurement antenna height.
   b) Rotate the EUT through 360° to determine the maximum emission level relative to the axial position.
   c) Return the turntable to the azimuth where the highest emission amplitude level was observed.
   d) Vary the measurement antenna height again through 1 m to 4 m again to find the height associated with the maximum emission amplitude.
   e) Record the measured emission amplitude level and frequency
6. Repeat step 5 for each emission frequency with the measurement antenna oriented in both the horizontal and vertical polarizations to determine the orientation that gives the maximum emissions amplitude.
7. Set-up the substitution measurement with the reference point of the substitution antenna located as near as possible to where the center of the EUT radiating element was located during the initial EUT measurement.

8. Maintain the previous measurement instrument settings and test set-up, with the exception that the EUT is removed and replaced by the substitution antenna.
9. Connect a signal generator to the substitution antenna; locate the signal generator so as to minimize any potential influences on the measurement results. Set the signal generator to the frequency where emissions are detected, and set an output power level such that the radiated signal can be detected by the measurement instrument, with sufficient dynamic range relative to the noise floor.
10. For each emission that was detected and measured in the initial test
    a) Vary the measurement antenna height between 1 m to 4 m to maximize the received (measured) signal amplitude.
    b) Adjust the signal generator output power level until the amplitude detected by the measurement instrument equals the amplitude level of the emission previously measured directly in step 5 and step 6.
    c) Record the output power level of the signal generator when equivalence is achieved in step b).
11. Repeat step 8 through step 10 with the measurement antenna oriented in the opposite polarization.
12. Calculate the emission power in dBm referenced to a half-wave dipole using the following equation:
    Pe = Ps(dBm) − cable loss (dB) + antenna gain (dBd)
    where
    Pe = equivalent emission power in dBm
    Ps = source (signal generator) power in dBm
    *NOTE—dBd refers to the measured antenna gain in decibels relative to a half-wave dipole.*
13. Correct the antenna gain of the substitution antenna if necessary to reference the emission power to a half-wave dipole. When using measurement antennas with the gain specified in dBi, the equivalent dipole-referenced gain can be determined from:
    gain (dBd) = gain (dBi) − 2.15 dB.
    If necessary, the antenna gain can be calculated from calibrated antenna factor information
14. Provide the complete measurement results as a part of the test report.

**TEST MODE:**

Please refer to the clause 3.3

**TEST RESULTS**

☒ **Passed** ☐ **Not Applicable**

| Mode | Channel | Antenna Pol. | ERP | Limit (dBm) | Result |
|---|---|---|---|---|---|
| GPRS850 | 128 | V | 28.24 | <38.45 | Pass |
| | | H | 19.95 | | |
| | 190 | V | 28.58 | | |
| | | H | 20.45 | | |
| | 251 | V | 28.47 | | |
| | | H | 18.74 | | |
| EGPRS850 | 128 | V | 21.61 | <38.45 | Pass |
| | | H | 12.23 | | |
| | 190 | V | 21.79 | | |
| | | H | 12.84 | | |
| | 251 | V | 21.70 | | |
| | | H | 11.66 | | |

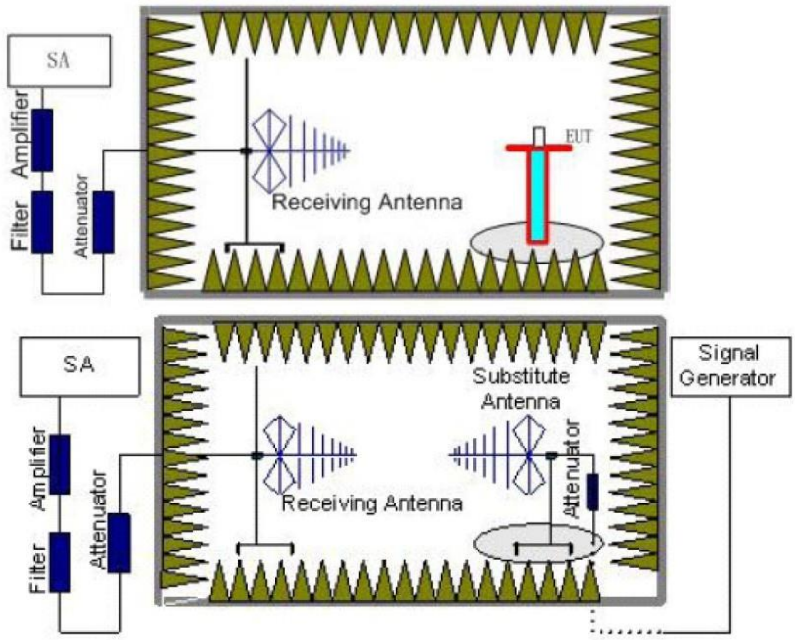
| Mode | Channel | Antenna Pol. | EIRP | Limit (dBm) | Result |
|---|---|---|---|---|---|
| GPRS1900 | 512 | V | 22.04 | <33.00 | Pass |
| | | H | 25.15 | | |
| | 661 | V | 22.45 | | |
| | | H | 25.12 | | |
| | 810 | V | 23.22 | | |
| | | H | 25.91 | | |
| EGPRS1900 | 512 | V | 16.34 | <33.00 | Pass |
| | | H | 20.10 | | |
| | 661 | V | 16.71 | | |
| | | H | 19.42 | | |
| | 810 | V | 16.11 | | |
| | | H | 20.58 | | |

## 5.2. Radiated Spurious Emission

**LIMIT**

-13dBm

**TEST CONFIGURATION**




**TEST PROCEDURE**

1. Place the EUT in the center of the turntable.
   a) For radiated emissions measurements performed at frequencies less than or equal to 1 GHz, the EUT shall be placed on a RF-transparent table at a nominal height of 80 cm above the reference ground plane
   b) For radiated measurements performed at frequencies above 1 GHz, the EUT shall be placed on an RF transparent table at a nominal height of 1.5 m above the ground plane.
2. Unless the EUT uses an integral antenna, the EUT shall be terminated with a non-radiating transmitter load. In cases where the EUT uses an adjustable antenna, the antenna shall be adjusted through typical positions and lengths to maximize emissions levels.
3. The EUT shall be tested while operating on the frequency per manufacturer specification. Set the transmitter to operate in continuous transmit mode.
4. Receiver or Spectrum set as follow:
   Below 1GHz, RBW=100kHz, VBW=300kHz, Detector=Peak, Sweep time=Auto
   Above 1GHz, RBW=1MHz, VBW=3MHz, Detector=Peck, Sweep time=Auto
5. Each emission under consideration shall be evaluated:
   a) Raise and lower the measurement antenna from 1 m to 4 m, as necessary to enable detection of the maximum emission amplitude relative to measurement antenna height.
   b) Rotate the EUT through 360° to determine the maximum emission level relative to the axial position.
   c) Return the turntable to the azimuth where the highest emission amplitude level was observed.
   d) Vary the measurement antenna height again through 1 m to 4 m again to find the height associated with the maximum emission amplitude.
   e) Record the measured emission amplitude level and frequency
6. Repeat step 5 for each emission frequency with the measurement antenna oriented in both the horizontal and vertical polarizations to determine the orientation that gives the maximum emissions amplitude.
7. Set-up the substitution measurement with the reference point of the substitution antenna located as near as possible to where the center of the EUT radiating element was located during the initial EUT measurement.
8. Maintain the previous measurement instrument settings and test set-up, with the exception that the EUT is removed and replaced by the substitution antenna.
9. Connect a signal generator to the substitution antenna; locate the signal generator so as to minimize any potential influences on the measurement results. Set the signal generator to the frequency where emissions are detected, and set an output power level such that the radiated signal can be detected by

the measurement instrument, with sufficient dynamic range relative to the noise floor.

10. For each emission that was detected and measured in the initial test
    a) Vary the measurement antenna height between 1 m to 4 m to maximize the received (measured) signal amplitude.
    b) Adjust the signal generator output power level until the amplitude detected by the measurement instrument equals the amplitude level of the emission previously measured directly in step 5 and step 6.
    c) Record the output power level of the signal generator when equivalence is achieved in step b).
11. Repeat step 8 through step 10 with the measurement antenna oriented in the opposite polarization.
12. Calculate the emission power in dBm referenced to a half-wave dipole using the following equation:
    Pe = Ps(dBm) − cable loss (dB) + antenna gain (dBd)
    where
    Pe = equivalent emission power in dBm
    Ps = source (signal generator) power in dBm
    *NOTE—dBd refers to the measured antenna gain in decibels relative to a half-wave dipole.*
13. Correct the antenna gain of the substitution antenna if necessary to reference the emission power to a half-wave dipole. When using measurement antennas with the gain specified in dBi, the equivalent dipole-referenced gain can be determined from:
    gain (dBd) = gain (dBi) − 2.15 dB.
    If necessary, the antenna gain can be calculated from calibrated antenna factor information
14. Provide the complete measurement results as a part of the test report.

**TEST MODE:**

Please refer to the clause 3.3

**TEST RESULTS**

☒ **Passed** ☐ **Not Applicable**

Note: Worst case at GPRS850/GPRS1900

Channel: 251 | Polarization: Horizontal

| Mark | Frequency MHz | Reading dBuV/m | Antenna dB | Cable dB | Preamp dB | Level dBuV/m | Limit dBuV/m | Over limit | Remark |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 37.18 | -73.74 | 28.64 | 6.53 | 30.78 | -69.35 | -13.00 | -56.35 | Peak |
| 2 | 446.69 | -72.09 | 26.14 | 8.48 | 30.34 | -67.81 | -13.00 | -54.81 | Peak |
| 3 | 1698.14 | -64.80 | 36.34 | 11.70 | 29.08 | -45.84 | -13.00 | -32.84 | Peak |
| 4 | 2330.15 | -69.64 | 40.21 | 12.97 | 29.01 | -45.47 | -13.00 | -32.47 | Peak |
| 5 | 4240.94 | -72.35 | 42.42 | 10.44 | 36.09 | -55.58 | -13.00 | -42.58 | Peak |
| 6 | 7498.75 | -75.23 | 48.09 | 14.12 | 33.93 | -46.95 | -13.00 | -33.95 | Peak |

Channel: 251 | Polarization: Vertical

| Mark | Frequency MHz | Reading dBuV/m | Antenna dB | Cable dB | Preamp dB | Level dBuV/m | Limit dBuV/m | Over limit | Remark |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 88.30 | -78.73 | 27.63 | 6.91 | 30.68 | -74.87 | -13.00 | -61.87 | Peak |
| 2 | 690.85 | -70.13 | 28.69 | 9.24 | 31.47 | -63.67 | -13.00 | -50.67 | Peak |
| 3 | 1698.14 | -68.13 | 36.23 | 11.70 | 29.08 | -49.28 | -13.00 | -36.28 | Peak |
| 4 | 2212.88 | -70.27 | 41.57 | 12.63 | 29.61 | -45.68 | -13.00 | -32.68 | Peak |
| 5 | 3276.05 | -71.10 | 40.74 | 8.95 | 36.84 | -58.25 | -13.00 | -45.25 | Peak |
| 6 | 7685.93 | -76.37 | 48.38 | 14.72 | 33.16 | -46.43 | -13.00 | -33.43 | Peak |

Channel: 190 | Polarization: Horizontal

| Mark | Frequency MHz | Reading dBuV/m | Antenna dB | Cable dB | Preamp dB | Level dBuV/m | Limit dBuV/m | Over limit | Remark |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 37.05 | -73.00 | 28.65 | 6.53 | 30.78 | -68.60 | -13.00 | -55.60 | Peak |
| 2 | 446.69 | -71.38 | 26.14 | 8.48 | 30.34 | -67.10 | -13.00 | -54.10 | Peak |
| 3 | 1674.06 | -64.76 | 36.25 | 11.68 | 29.07 | -45.90 | -13.00 | -32.90 | Peak |
| 4 | 2327.59 | -69.77 | 40.22 | 12.97 | 29.04 | -45.62 | -13.00 | -32.62 | Peak |
| 5 | 3605.13 | -73.90 | 42.38 | 10.08 | 36.95 | -58.39 | -13.00 | -45.39 | Peak |
| 6 | 8027.71 | -75.39 | 48.03 | 14.28 | 33.31 | -46.39 | -13.00 | -33.39 | Peak |

Channel: 190 | Polarization: Vertical

| Mark | Frequency MHz | Reading dBuV/m | Antenna dB | Cable dB | Preamp dB | Level dBuV/m | Limit dBuV/m | Over limit | Remark |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 89.55 | -78.31 | 28.12 | 6.92 | 30.67 | -73.94 | -13.00 | -60.94 | Peak |
| 2 | 610.85 | -69.89 | 27.90 | 8.98 | 31.19 | -64.20 | -13.00 | -51.20 | Peak |
| 3 | 1674.06 | -66.90 | 36.17 | 11.68 | 29.07 | -48.12 | -13.00 | -35.12 | Peak |
| 4 | 2297.11 | -69.68 | 40.53 | 12.87 | 29.34 | -45.62 | -13.00 | -32.62 | Peak |
| 5 | 3276.05 | -70.39 | 40.74 | 8.95 | 36.84 | -57.54 | -13.00 | -44.54 | Peak |
| 6 | 4179.88 | -71.70 | 42.43 | 10.22 | 36.25 | -55.30 | -13.00 | -42.30 | Peak |

Channel: 128 | Polarization: Horizontal

| Mark | Frequency MHz | Reading dBuV/m | Antenna dB | Cable dB | Preamp dB | Level dBuV/m | Limit dBuV/m | Over limit | Remark |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 37.18 | -72.84 | 28.64 | 6.53 | 30.78 | -68.45 | -13.00 | -55.45 | Peak |
| 2 | 406.23 | -78.52 | 26.11 | 8.33 | 30.14 | -74.22 | -13.00 | -61.22 | Peak |
| 3 | 1648.51 | -62.85 | 36.15 | 11.67 | 29.05 | -44.08 | -13.00 | -31.08 | Peak |
| 4 | 2376.69 | -70.62 | 39.95 | 13.12 | 28.53 | -46.08 | -13.00 | -33.08 | Peak |
| 5 | 4474.73 | -75.12 | 43.13 | 10.65 | 36.23 | -57.57 | -13.00 | -44.57 | Peak |
| 6 | 10869.96 | -75.48 | 52.60 | 16.67 | 36.78 | -42.99 | -13.00 | -29.99 | Peak |

Channel: 128 | Polarization: Vertical

| Mark | Frequency MHz | Reading dBuV/m | Antenna dB | Cable dB | Preamp dB | Level dBuV/m | Limit dBuV/m | Over limit | Remark |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 87.38 | -77.75 | 27.26 | 6.90 | 30.68 | -74.27 | -13.00 | -61.27 | Peak |
| 2 | 610.85 | -70.30 | 27.90 | 8.98 | 31.19 | -64.61 | -13.00 | -51.61 | Peak |
| 3 | 1648.51 | -66.08 | 36.11 | 11.67 | 29.05 | -47.35 | -13.00 | -34.35 | Peak |
| 4 | 2225.07 | -69.44 | 41.42 | 12.66 | 29.57 | -44.93 | -13.00 | -31.93 | Peak |
| 5 | 4119.70 | -72.40 | 42.13 | 10.21 | 36.28 | -56.34 | -13.00 | -43.34 | Peak |
| 6 | 7697.08 | -76.21 | 48.40 | 14.73 | 33.15 | -46.23 | -13.00 | -33.23 | Peak |

Remark:
1. The emission behaviour belongs to narrowband spurious emission.
2. The emission levels of not record in the report are very lower than the limit and not show in test report.

| Channel: 810 | Polarization: Horizontal |
|---|---|

| Mark | Frequency MHz | Reading dBuV/m | Antenna dB | Cable dB | Preamp dB | Level dBuV/m | Limit dBuV/m | Over limit | Remark |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 38.37 | -73.41 | 28.62 | 6.54 | 30.82 | -69.07 | -13.00 | -56.07 | Peak |
| 2 | 610.85 | -71.60 | 28.36 | 8.98 | 31.19 | -65.45 | -13.00 | -52.45 | Peak |
| 3 | 1324.78 | -69.92 | 37.01 | 12.83 | 29.32 | -49.40 | -13.00 | -36.40 | Peak |
| 4 | 2237.33 | -70.48 | 40.75 | 12.70 | 29.53 | -46.56 | -13.00 | -33.56 | Peak |
| 5 | 3663.10 | -73.58 | 42.33 | 9.90 | 37.02 | -58.37 | -13.00 | -45.37 | Peak |
| 6 | 8004.46 | -75.54 | 48.11 | 14.29 | 33.31 | -46.45 | -13.00 | -33.45 | Peak |

| Channel: 810 | Polarization: Vertical |
|---|---|

| Mark | Frequency MHz | Reading dBuV/m | Antenna dB | Cable dB | Preamp dB | Level dBuV/m | Limit dBuV/m | Over limit | Remark |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 89.87 | -78.20 | 28.24 | 6.92 | 30.67 | -73.71 | -13.00 | -60.71 | Peak |
| 2 | 773.13 | -70.49 | 29.37 | 9.45 | 30.52 | -62.19 | -13.00 | -49.19 | Peak |
| 3 | 1358.68 | -69.49 | 37.58 | 12.65 | 29.22 | -48.48 | -13.00 | -35.48 | Peak |
| 4 | 2252.13 | -69.97 | 41.08 | 12.74 | 29.48 | -45.63 | -13.00 | -32.63 | Peak |
| 5 | 3276.05 | -71.03 | 40.74 | 8.95 | 36.84 | -58.18 | -13.00 | -45.18 | Peak |
| 6 | 7877.78 | -75.50 | 48.19 | 14.54 | 33.30 | -46.07 | -13.00 | -33.07 | Peak |

| Channel: 661 | Polarization: Horizontal |
|---|---|

| Mark | Frequency MHz | Reading dBuV/m | Antenna dB | Cable dB | Preamp dB | Level dBuV/m | Limit dBuV/m | Over limit | Remark |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 37.18 | -72.83 | 28.64 | 6.53 | 30.78 | -68.44 | -13.00 | -55.44 | Peak |
| 2 | 610.85 | -71.65 | 28.36 | 8.98 | 31.19 | -65.50 | -13.00 | -52.50 | Peak |
| 3 | 1381.25 | -69.74 | 37.12 | 12.53 | 29.15 | -49.24 | -13.00 | -36.24 | Peak |
| 4 | 2254.60 | -69.96 | 40.65 | 12.75 | 29.47 | -46.03 | -13.00 | -33.03 | Peak |
| 5 | 4302.90 | -73.99 | 42.62 | 10.75 | 36.10 | -56.72 | -13.00 | -43.72 | Peak |
| 6 | 7969.71 | -75.92 | 48.09 | 14.38 | 33.32 | -46.77 | -13.00 | -33.77 | Peak |

| Channel: 661 | Polarization: Vertical |
|---|---|

| Mark | Frequency MHz | Reading dBuV/m | Antenna dB | Cable dB | Preamp dB | Level dBuV/m | Limit dBuV/m | Over limit | Remark |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 90.19 | -78.93 | 28.23 | 6.92 | 30.67 | -74.45 | -13.00 | -61.45 | Peak |
| 2 | 773.13 | -70.34 | 29.37 | 9.45 | 30.52 | -62.04 | -13.00 | -49.04 | Peak |
| 3 | 1343.83 | -69.68 | 37.52 | 12.73 | 29.26 | -48.69 | -13.00 | -35.69 | Peak |
| 4 | 2254.60 | -69.76 | 41.05 | 12.75 | 29.47 | -45.43 | -13.00 | -32.43 | Peak |
| 5 | 4340.50 | -75.26 | 42.87 | 10.71 | 36.21 | -57.89 | -13.00 | -44.89 | Peak |
| 6 | 7498.75 | -75.26 | 48.42 | 14.12 | 33.93 | -46.65 | -13.00 | -33.65 | Peak |

| Channel: 512 | Polarization: Horizontal |
|---|---|

| Mark | Frequency MHz | Reading dBuV/m | Antenna dB | Cable dB | Preamp dB | Level dBuV/m | Limit dBuV/m | Over limit | Remark |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 37.97 | -72.23 | 28.63 | 6.54 | 30.81 | -67.87 | -13.00 | -54.87 | Peak |
| 2 | 610.85 | -71.55 | 28.36 | 8.98 | 31.19 | -65.40 | -13.00 | -52.40 | Peak |
| 3 | 1366.16 | -70.13 | 37.09 | 12.61 | 29.20 | -49.63 | -13.00 | -36.63 | Peak |
| 4 | 2335.27 | -70.59 | 40.18 | 12.99 | 28.96 | -46.38 | -13.00 | -33.38 | Peak |
| 5 | 4735.11 | -75.76 | 43.59 | 11.26 | 35.58 | -56.49 | -13.00 | -43.49 | Peak |
| 6 | 7969.71 | -75.79 | 48.09 | 14.38 | 33.32 | -46.64 | -13.00 | -33.64 | Peak |

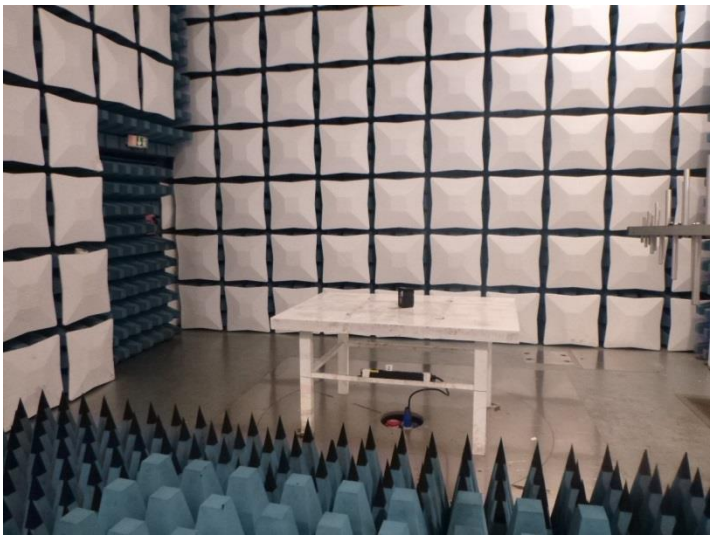
| Channel: 512 | Polarization: Vertical |
|---|---|

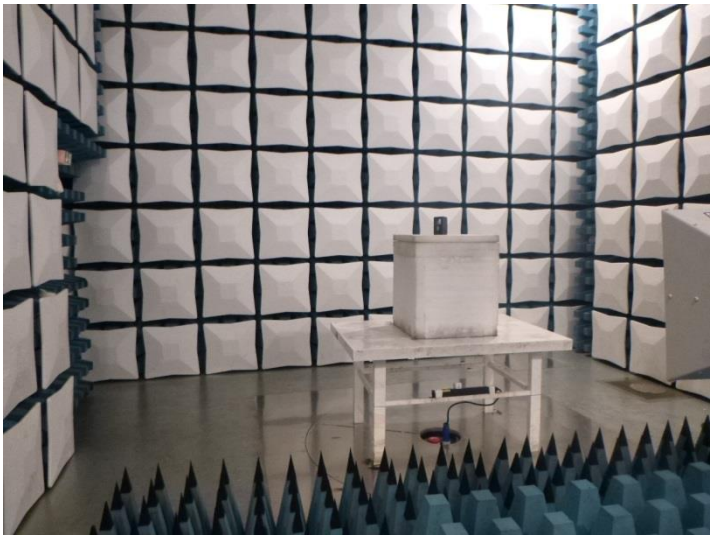
| Mark | Frequency MHz | Reading dBuV/m | Antenna dB | Cable dB | Preamp dB | Level dBuV/m | Limit dBuV/m | Over limit | Remark |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 91.78 | -78.18 | 27.72 | 6.93 | 30.67 | -74.20 | -13.00 | -61.20 | Peak |
| 2 | 773.13 | -70.73 | 29.37 | 9.45 | 30.52 | -62.43 | -13.00 | -49.43 | Peak |
| 3 | 1415.05 | -69.40 | 37.76 | 12.33 | 29.10 | -48.41 | -13.00 | -35.41 | Peak |
| 4 | 2220.19 | -70.32 | 41.48 | 12.65 | 29.58 | -45.77 | -13.00 | -32.77 | Peak |
| 5 | 4573.14 | -74.77 | 43.44 | 10.80 | 36.16 | -56.69 | -13.00 | -43.69 | Peak |
| 6 | 7641.47 | -76.82 | 48.31 | 14.69 | 33.17 | -46.99 | -13.00 | -33.99 | Peak |

Remark:
1. The emission behaviour belongs to narrowband spurious emission.
2. The emission levels of not record in the report are very lower than the limit and not show in test report

# 6. TEST SETUP PHOTOS OF THE EUT

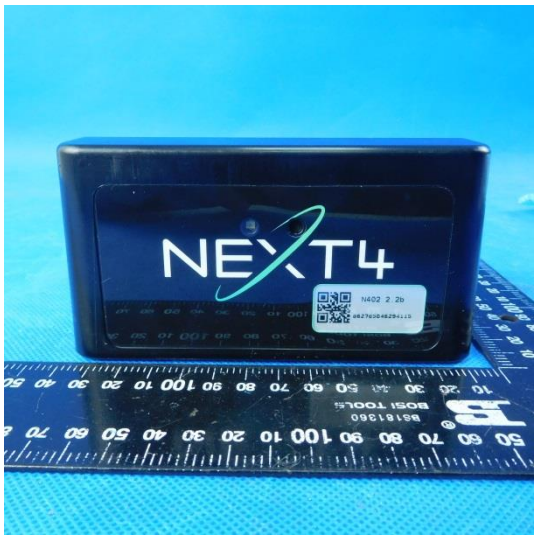
Radiated emission:

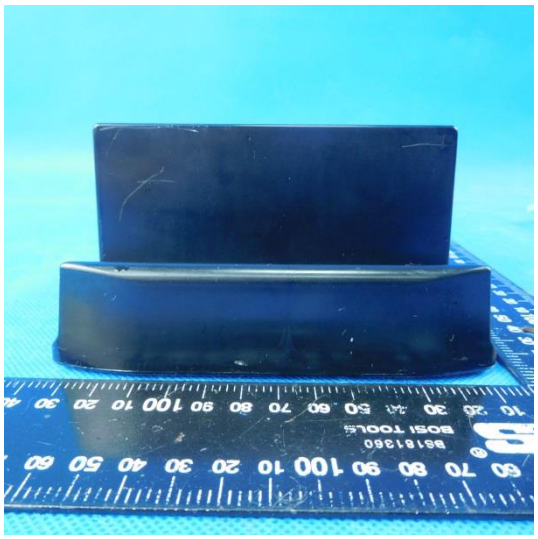


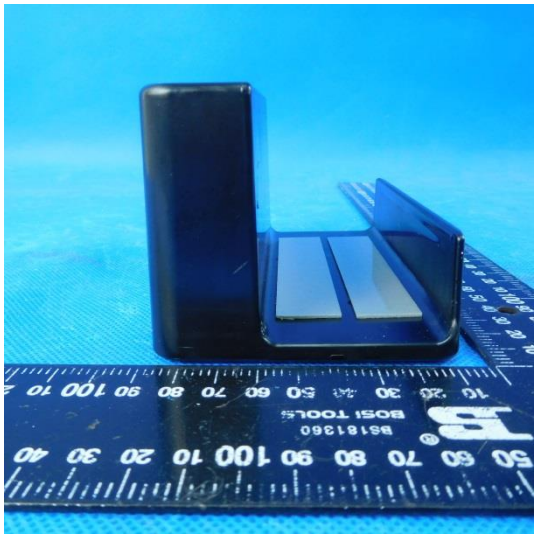


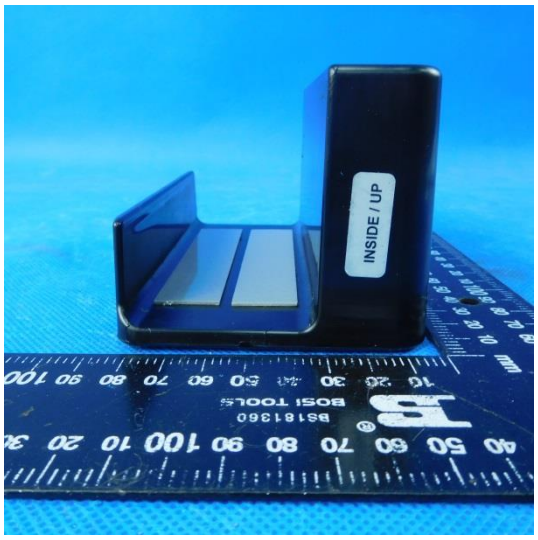
# 7. EXTERNAL AND INTERNAL PHOTOS OF THE EUT

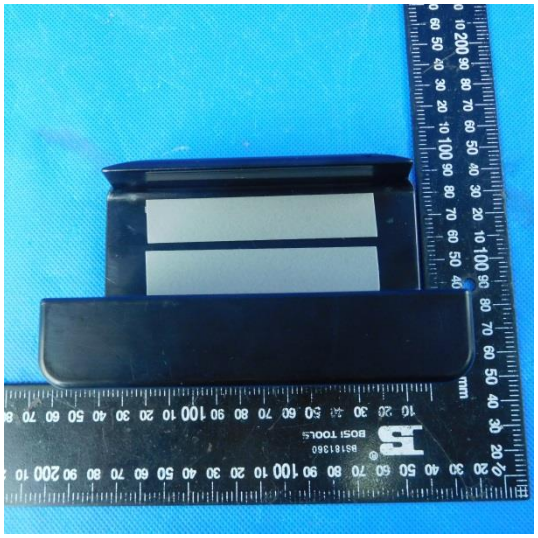
## External photos of the EUT

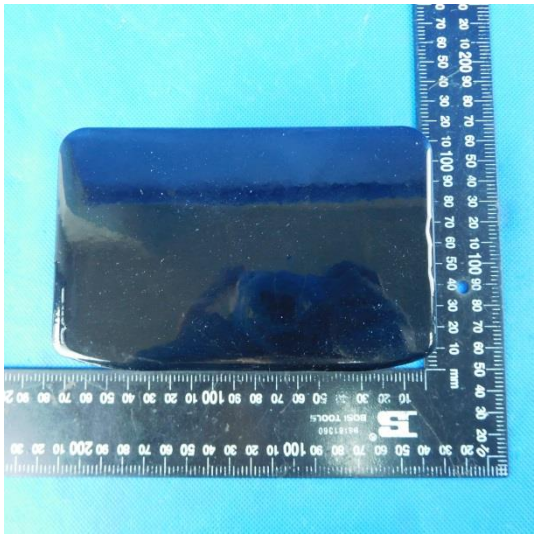




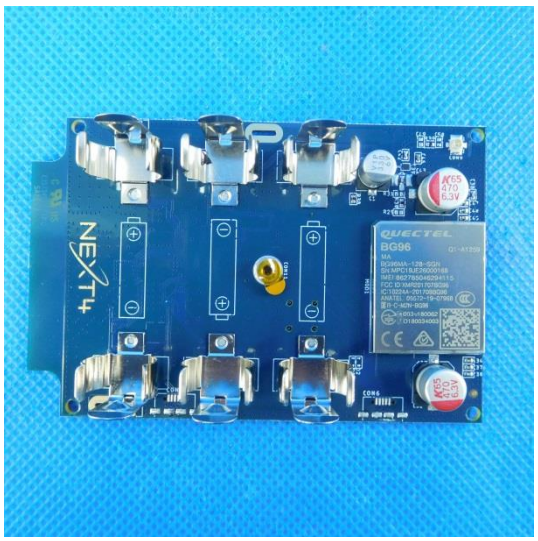

INSIDE / UP

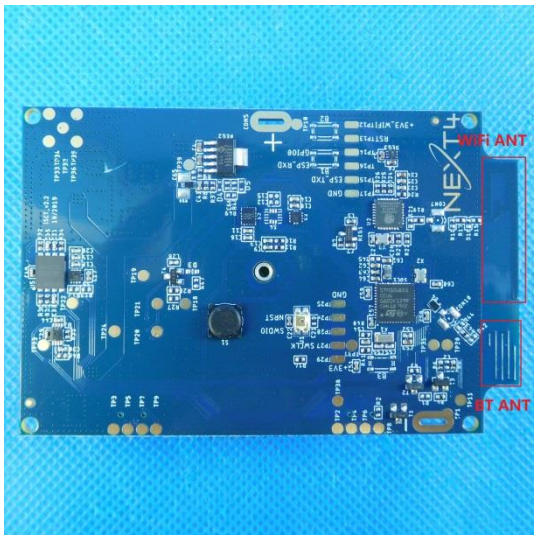


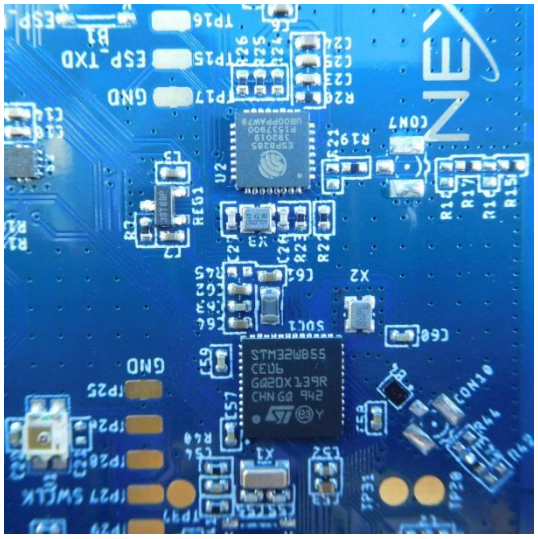


## Internal photos of the EUT









## 8. APPENDIX REPORT