# TEST REPORT


**DT&C Co., Ltd.**
42, Yurim-ro, 154beon-gil, Cheoin-gu, Yongin-si, Gyeonggi-do, Korea 17042
Tel : 031-321-2664, Fax : 031-321-1664


1. Report No. : DREFCC1907-0220(1)
2. Client / Applicant
   - Name : Intellian Systems, Inc.
   - Address : 7F. Dongik Building, 730, Eonju-ro, Gangnam-gu, Seoul, Republic of Korea
3. Use of Report : Grant of Certification
4. Product Name / Model Name / FCC ID : All-in-one android pc / S16N-X18K-7WN / 2ATXA-SA163PLUS
5. Test Standard : ANSI C63.4:2014
   FCC Part 15 Subpart B
   (Class A digital devices, peripherals & external switching power supplies.)
6. Date of Test : Jul. 12. 2019 ~ Jul. 29. 2019
7. Testing Environment : Temperature (23 ~ 26) °C , Humidity (49 ~ 53) % R.H.
8. Test Result : Refer to the attached Test Result

| Affirmation | Tested by | Reviewed by |
|---|---|---|
| | Name : Taehyun Choi (Signature) | Name : KyoungHwan Bae (Signature) |

The test results presented in this test report are limited only to the sample supplied by applicant and the use of this test report is inhibited other than its purpose.
This test report shall not be reproduced except in full, without the written approval of DT&C Co., Ltd.

**Sep. 02. 2019**

**DT&C Co., Ltd.**

'This test report is not related to KS Q ISO/IEC 17025 and KOLAS accreditation.'

**If this report is required to confirmation of authenticity, please contact to report@dtnc.net**

# CONTENTS

# 1. General Remarks

This report contains the result of tests performed by :

**DT&C Co., Ltd.**
42, Yurim-ro, 154beon-gil, Cheoin-gu, Yongin-si, Gyeonggi-do, Korea 17042
http://www.dtnc.net
Tel: +82-31-321-2664 Fax: +82-31-321-1664

# 2. Test Laboratory

DT&C Co., Ltd. has been accredited / filed / authorized by the agencies listed in the following table;

| Certificate | Nation | Agency | Code | Remark |
|---|---|---|---|---|
| Accreditation | Korea | KOLAS | 393 | ISO/IEC 17025 |
| | South Africa | SABS | 0006 | ISO/IEC 17025 |
| | Ghana | NCA | NCA agreement 23rd,Oct,2018 | - |
| Site Filing | USA | FCC | KR0034<br>101842<br>678747, 596748, 804488, 165783 | Accredited<br><br>2.948 Listed |
| | Canada | IC | 5740A-3<br>5740A-4 | Registered |
| | Japan | VCCI | C-1427<br>R-3385, R-4076, R-4180, R-4496, T-1442,<br>G-10338, G-754, G-10815, G-20051 | Registered |
| Certification | Korea | KC | KR0034 | Designation |
| | Germany | TUV | CARAT 17 11 89112 005 | ISO/IEC 17025 |
| | Russia | RMRS | 17.10189.296 | ISO/IEC 17025 |

Quality control in the testing laboratory is implemented as per ISO/IEC 17025 which is the “General requirements for the competent of calibration and testing laboratory”.

# 3. General Information of EUT

| | |
|---|---|
| Applicant | Intellian Systems, Inc.<br>7F. Dongik Building, 730, Eonju-ro, Gangnam-gu, Seoul, Republic of Korea |
| Manufacturer | Intellian Systems, Inc.<br>7F. Dongik Building, 730, Eonju-ro, Gangnam-gu, Seoul, Republic of Korea |
| Product Name | All-in-one android pc |
| Model Name | S16N-X18K-7WN |
| Add Model Name | None |
| Add Model Difference | None |
| Maximum Internal Frequency | 1.2 GHz |
| Software Version | Android 6.0.1 |
| Hardware Version | 3Q-V40-1.1 |
| FCC ID | 2ATXA-SA163PLUS |
| RF Module Name | None |
| Rated Power | DC 12 V, 1.6 A / 60 Hz |
| Remarks | None |

**Related Submittal(s) / Grant(s)**
**Original submittal only**

# 4. EUT Operations and Test Configurations

## 4.1 Principle of Configuration Selection

**Emission :**
The equipment under test (EUT) was configured to measure its highest possible radiation level.
The test modes were adapted accordingly in reference to the instructions for use.
For each testing mode different configurations were used,
Refer to the individual tests.

## 4.2 EUT Operation Mode

| No. | Mode | Description |
|---|---|---|
| 1 | Display mode | The EUT receives the DC voltage, reads and writes the USB memory, outputs the audio, and outputs the H-pattern image. |

## 4.3 Test Configuration Mode

| No. | Mode | Description |
|---|---|---|
| 1 | Display mode | The EUT is connected to the AC / DC adapter, the USB memory is connected to the Micro USB port, the headset is connected to the AUX port, and tested by connecting a mouse to the USB port. |

## 4.4 Supported Equipment

| Used* | Product Type | Manufacturer | Model | Remarks |
|---|---|---|---|---|
| AE | USB Memory | Sandisk | 3.0 OTG USB | None |
| AE | AC/DC Adapter | SHENZHEN YINGHUIYUAN ELECTRONICS CO., LTD | YHY-12002000 | A11712070861 |
| AE | Headset | COSY | COV903 | None |
| AE | Mouse | Logitech | B100 | 810-002149 |

*Abbreviations:
AE - Auxiliary/Associated Equipment, or
SIM - Simulator

## 4.5 EUT In/Output Port

| Name | Type* | Cable Max. >3m | Cable Shielded | Cable Back shell | Remarks |
|---|---|---|---|---|---|
| DC In | DC | 1.2 | Non shield | Plastic | None |
| Micro USB | I/O | - | Non shield | Plastic | None |
| USB | I/O | 1.0 | Non shield | Plastic | None |
| AUX | I/O | 1.5 | Non shield | Plastic | None |

*Abbreviations:
AC = AC Power Port DC = DC Power Port N/E = Non-Electrical
I/O = Signal Input or Output Port
TP = Telecommunication Ports

## 4.6 Test Voltage and Frequency

| Case | Voltage (V) | Frequency (DC/AC-Hz) | Phases | Remarks |
|---|---|---|---|---|
| 1 | AC 120 | 60 | Single | None |

# 5. Test Summary

| Test Items | Applied Standards | Results |
|---|---|---|
| Conducted Disturbance | ANSI C63.4 : 2014 | **C** |
| Radiated Disturbance | ANSI C63.4 : 2014 | **C** |
| C=Comply N/C=Not Comply N/T=Not Tested N/A=Not Applicable | | |

-Conducted Disturbance

| Frequency [MHz] | Phase | Result [dBµV] | Detector | Limit [dBµV] | Margin [dB] |
|---|---|---|---|---|---|
| 0.15209 | N | 52.76 | QP | 79.00 | 26.24 |

-Radiated Disturbance

| Frequency [MHz] | Pol. | Result [dBµV/m] | Detector | Limit [dBµV/m] | Margin [dB] |
|---|---|---|---|---|---|
| 36.790 | Vertical | 33.95 | QP | 39.00 | 5.05 |

# 6. Test Environment

| Test Items | Test date (YYYY-MM-DD) | Temp. (℃) | Humidity (% R.H.) | Pressure (kPa) |
|---|---|---|---|---|
| Conducted Disturbance | 2019-07-12 | 23 | 53 | - |
| Radiated Disturbance | 2019-07-12<br>2019-07-29 | 23<br>26 | 53<br>49 | |

# 7. Test Results : Emission

## 7.1 Conducted Disturbance

| ANSI C63.4 | Mains terminal disturbance voltage | Result |
|---|---|---|
| Method: The AMN placed 0,8 m from the boundary of the unit under test and bonded to a ground reference plane. This distance was between the closest points of the AMN and the EUT. All other units of the EUT and associated equipment were at least 0,8 m from the AMN. All power was connected to the system through Artificial Mains Network (AMN). Conducted voltage measurements on mains lines were made at the output of the AMN. The measuring port of the LISN for EUT was connected to spectrum analyzer. Using conducted emission test software, the emissions were scanned with peak detector mode. After scanning over the frequency range, suspected emissions were selected to perform final measurement. When performing final measurement, the receiver was used which has Quasi-Peak detector and CISPR Average detector. For (0.15 ~ 30) MHz frequency range, Quasi-Peak detector with 10 kHz RBW and 30 kHz VBW was used. By varying the configuration of the test sample and the cable routing it was attempted to maximize the emission. | | **Comply** |

| **Fully configured sample scanned over the following frequency range** | **Frequency range on each side of line** | **Measurement Point** |
|---|---|---|
| | **150 kHz to 30 MHz** | **Mains** |
| **EUT mode (Refer to clauses 4)** | **Test configuration mode** | **1** |
| | **EUT Operation mode** | **1** |

**Limits – Class A**

| **Frequency (MHz)** | **Limit dBµV** | |
|---|---|---|
| | **Quasi-Peak** | **Average** |
| 0.15 to 0.50 | 79 | 66 |
| 0.50 to 30 | 73 | 60 |

**Limits – Class B**

| **Frequency (MHz)** | **Limit dBµV** | |
|---|---|---|
| | **Quasi-Peak** | **Average** |
| 0.15 to 0.50 | 66 to 56 | 56 to 46 |
| 0.50 to 5 | 56 | 46 |
| 5 to 30 | 60 | 50 |

| **Measurement Instrument** | | | | | |
|---|---|---|---|---|---|
| **Description** | **Model** | **Manufacturer** | **Identifier** | **Cal. Date** | **Cal. Due** |
| MEASUREMENT SOFTWARE | EMI-C VER. 2.00.0165 | TSJ | N/A | N/A | N/A |
| EMI TEST RECEIVER | ESR | ROHDE & SCHWARZ | 101767 | 2018.12.19 | 2019.12.19 |
| LISN | NNLK 8129 | SCHWARZBECK | 8129-272 | 2018.07.31 | 2019.07.31 |
| PULSE LIMITER | ESH3-Z2 | ROHDE & SCHWARZ | 101334 | 2018.12.19 | 2019.12.19 |

| Mains terminal disturbance voltage _Measurement data | | | |
|---|---|---|---|
| **Test configuration mode** | **1** | **EUT Operation mode** | **1** |
| **Test voltage (V)** | **AC 120** | **Test Frequency (Hz)** | **60** |

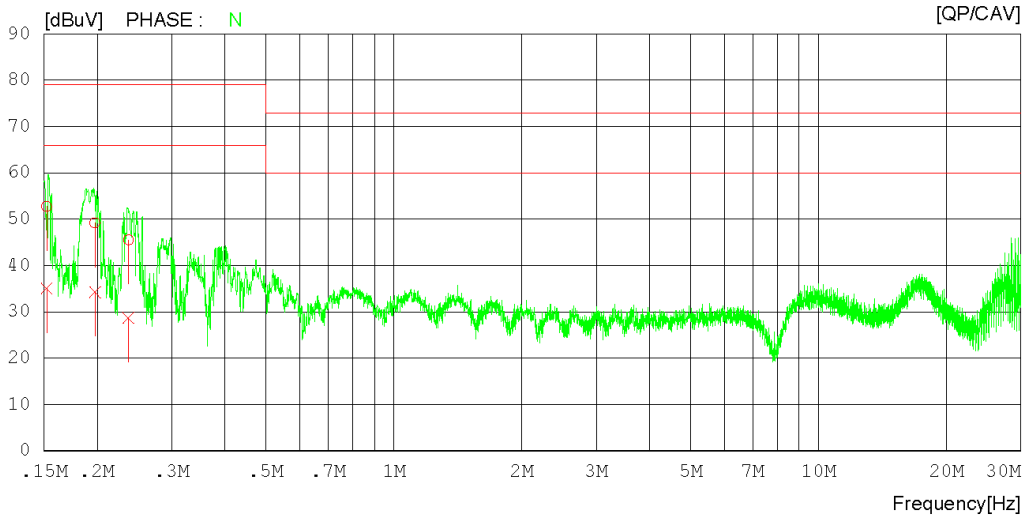
# Results of Conducted Emission

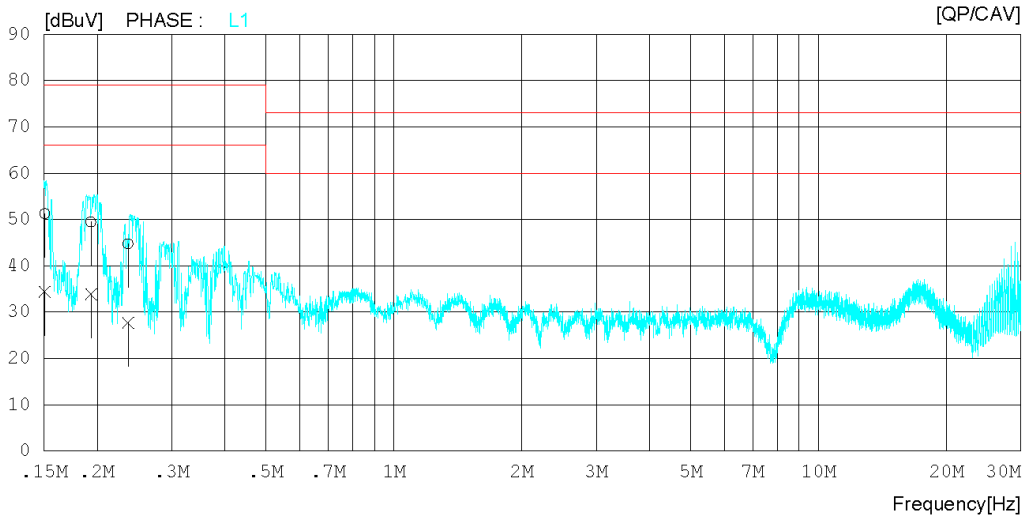
Date 2019-07-12

Orderl No. DTNC1906-05067
Power Supply AC 120 V 60 Hz
Temp/Humi. 23 'C 53 % R.H.
Test condition

Memo

LIMIT : CISPR32_A QP
CISPR32_A AV



# Results of Conducted Emission

Date 2019-07-12

Orderl No. DTNC1906-05067
Power Supply AC 120 V 60 Hz
Temp/Humi. 23 'C 53 % R.H.
Test condition

Memo

LIMIT : CISPR32_A QP
CISPR32_A AV

| NO | FREQ | READING QP | READING CAV | C.FACTOR | RESULT QP | RESULT CAV | LIMIT QP | LIMIT CAV | MARGIN QP | MARGIN CAV | PHASE |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | [MHz] | [dBuV] | [dBuV] | [dB] | [dBuV] | [dBuV] | [dBuV] | [dBuV] | [dBuV] | [dBuV] | |
| 1 | 0.15209 | 42.81 | 25.09 | 9.95 | 52.76 | 35.04 | 79.00 | 66.00 | 26.24 | 30.96 | N |
| 2 | 0.19764 | 39.29 | 24.34 | 9.94 | 49.23 | 34.28 | 79.00 | 66.00 | 29.77 | 31.72 | N |
| 3 | 0.23726 | 35.59 | 18.75 | 9.95 | 45.54 | 28.70 | 79.00 | 66.00 | 33.46 | 37.30 | N |
| 4 | 0.15050 | 41.36 | 24.45 | 9.94 | 51.30 | 34.39 | 79.00 | 66.00 | 27.70 | 31.61 | L1 |
| 5 | 0.19350 | 39.50 | 23.94 | 9.95 | 49.45 | 33.89 | 79.00 | 66.00 | 29.55 | 32.11 | L1 |
| 6 | 0.23643 | 34.82 | 17.80 | 9.94 | 44.76 | 27.74 | 79.00 | 66.00 | 34.24 | 38.26 | L1 |

**Calculation**

| |
|---|
| N : Neutral phase, L1 : Live phase |
| C.FACTOR(dB) : Pulse Limiter(dB) + Cable loss(dB) + Insertion loss of LISN(dB) |
| Result(dBμV) : Reading Value(dBμV) + C.FACTOR(dB) |
| Margin(dB) : Limit(dBμV) - Result(dBμV) |

## 7.2 Radiated Disturbance

| ANSI C63.4 | Radiated disturbance 30 MHz – 18 GHz | Result |
|---|---|---|
| Method: Preliminary (peak) measurements were performed at an antenna to EUT separation distance of 10 meter below 1GHz and 3 meter above 1GHz. The EUT was rotated 360° about its azimuth with the receive antenna located at various heights in horizontal and vertical polarities. Final measurements were then performed by rotating the EUT 360° and adjusting the receive antenna height from 1 to 4 m. All frequencies were investigated in both horizontal and vertical antenna polarity, where applicable. For final measurement below 1 GHz frequency range, Quasi-Peak detector with (RBW = 120 kHz Bandwidth) was used. For final measurement above 1 GHz frequency range, Peak detector with (RBW = 1 MHz Bandwidth) and CISPR Average detector with (RBW = 1 MHz Bandwidth) were used. | | **Comply** |

| **EUT mode** (Refer to clauses 4) | **Test configuration mode** | **1** |
|---|---|---|
| | **EUT Operation mode** | **1** |

**Radiated Disturbance below 1 000 MHz**

| **Frequency range (MHz)** | **Quasi-peak limit dBµV/m** | |
|---|---|---|
| | **Class A (10 m distance)** | **Class B (3 m distance)** |
| 30 to 88 | 39.1 | 40 |
| 88 to 216 | 43.5 | 43.5 |
| 216 to 960 | 46.4 | 46 |
| 960 to 1 000 | 49.5 | 54 |

According to 15.109(g), as an alternative to the radiated emission limit shown above, digital devices may be shown to comply with the standards(CISPR), Pub. 22 shown as below.

| **Frequency range (MHz)** | **Quasi-peak limit dBµV/m** | |
|---|---|---|
| | **Class A (10 m distance)** | **Class B (10 m distance)** |
| 30 to 230 | 40 | 30 |
| 230 to 1 000 | 47 | 37 |

**Radiated Disturbance for above 1 000 MHz at a measurement distance of 3 m**

| **Frequency range (GHz)** | **Peak limit dBµV/m** | | **Average limit dBµV/m** | |
|---|---|---|---|---|
| | **Class A** | **Class B** | **Class A** | **Class B** |
| 1 to 40 | 80 | 74 | 60 | 54 |

**The test frequency range of Radiated Disturbance measurements are listed below.**

| **Highest frequency generated or used in the device or on which the device operates or tunes (MHz)** | **Upper frequency of measurement range (MHz)** |
|---|---|
| Below 108 | 1 000 |
| 108 – 500 | 2 000 |
| 500 – 1 000 | 5 000 |
| Above 1 000 | $5^{th}$ harmonic of the highest frequency or 40 GHz, whichever is lower |

| Measurement Instrument | | | | | |
|---|---|---|---|---|---|
| **Description** | **Model** | **Manufacturer** | **Identifier** | **Cal. Date** | **Cal. Due** |
| MEASUREMENT SOFTWARE | EMI-R VER. 2.00.0177 | TSJ | N/A | N/A | N/A |
| EMI TEST RECEIVER | ESR | ROHDE & SCHWARZ | 101061 | 2019.01.30 | 2020.01.30 |
| TRILOG BROADBAND TEST-ANTENNA WITH 6DB ATT | VULB9160 | SCHWARZBECK | 9160-3363 | 2018.09.17 | 2020.09.17 |
| | 8491B | HP | 23831 | | |
| LOW NOISE PRE AMPLIFIER | MLA-010K01-B01-27 | TSJ | 1844539 | 2019.02.27 | 2020.02.27 |
| EMI TEST RECEIVER | ESU | ROHDE & SCHWARZ | 100469 | 2019.06.12 | 2020.06.12 |
| HORN ANTENNA | 3117 | ETS-LINDGREN | 00152093 | 2018.03.26 | 2020.03.26 |
| HORN ANTENNA WITH PREAMPLIFIER | EM-6969/ MLA-0618-B03-34 | ELECTRO-METRICS/ TSJ | 156/ 1785642 | 2019.02.13 | 2021.02.13 |
| | | | | 2019.01.02 | 2020.01.02 |
| (NOTE : THE MEASUREMENT ANTENNAS WERE CALIBRATED IN ACCORDANCE TO THE REQUIREMENTS OF C63.5-2017.) | | | | | |

| Radiated disturbance at (30 ~ 1000) MHz _Measurement data | | | |
|---|---|---|---|
| **Test configuration mode** | **1** | **EUT Operation mode** | **1** |
| **Test voltage (V)** | **AC 120** | **Test Frequency (Hz)** | **60** |

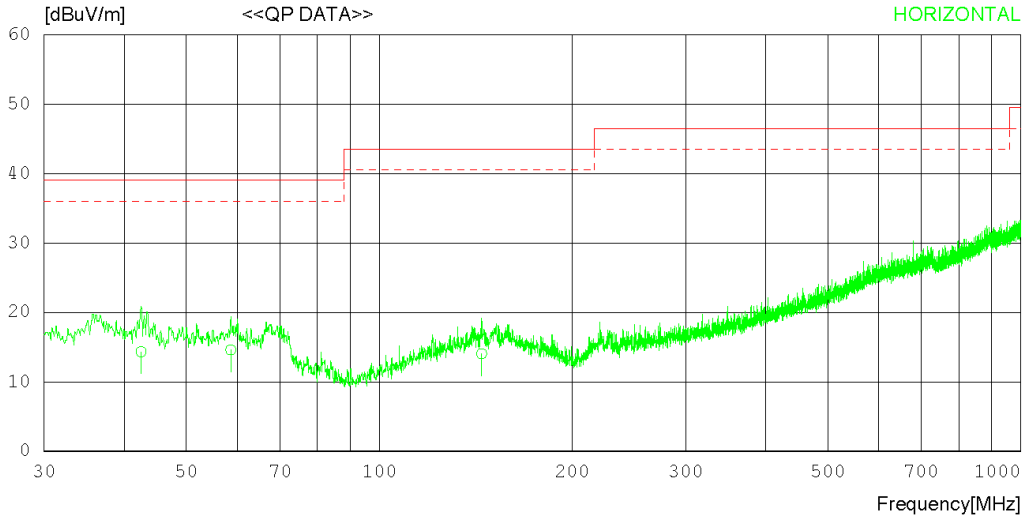
# RADIATED EMISSION

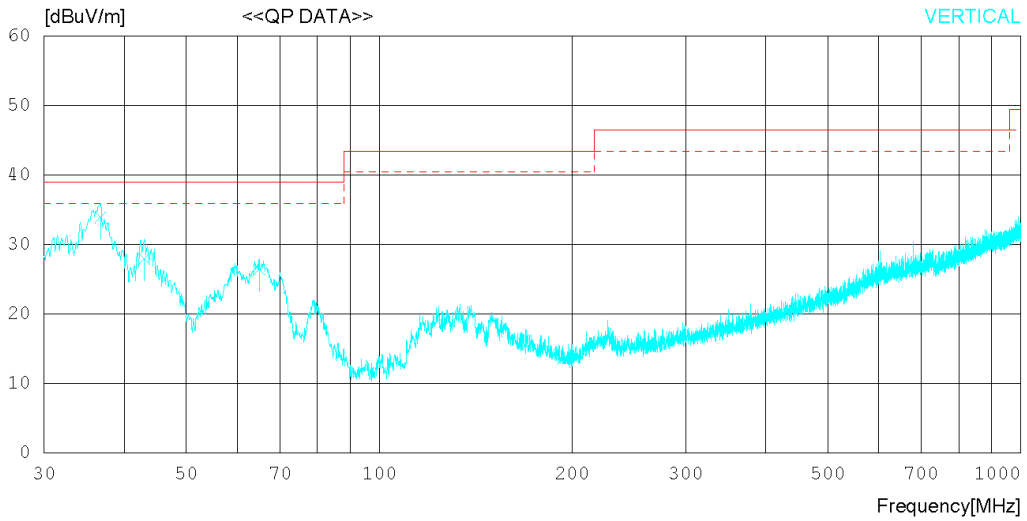
Date 2019-07-12

Model Name DTNC1906-05067
Power Supply AC 120 V 60 Hz
Temp/Humi 23 'C 53 % R.H.
Test Condition

Memo

LIMIT : FCC Part15 Subpart.B Class A (10m)
MARGIN: 3 dB



# RADIATED EMISSION

Date 2019-07-12

Model Name DTNC1906-05067
Power Supply AC 120 V 60 Hz
Temp/Humi 23 'C 53 % R.H.
Test Condition

Memo

LIMIT : FCC Part15 Subpart.B Class A (10m)
MARGIN: 3 dB

| No. | FREQ [MHz] | READING QP [dBuV] | ANT FACTOR [dB] | LOSS [dB] | GAIN [dB] | RESULT [dBuV/m] | LIMIT [dBuV/m] | MARGIN [dB] | ANTENNA [cm] | TABLE [DEG] |
|---|---|---|---|---|---|---|---|---|---|---|
| ----- Horizontal ------ | | | | | | | | | | |
| 1 | 42.489 | 22.90 | 19.90 | 2.06 | 30.54 | 14.32 | 39.00 | 24.68 | 329 | 230 |
| 2 | 58.615 | 22.80 | 19.97 | 2.31 | 30.49 | 14.59 | 39.00 | 24.41 | 310 | 200 |
| 3 | 144.336 | 23.00 | 18.29 | 2.90 | 30.15 | 14.04 | 43.50 | 29.46 | 283 | 275 |
| ----- Vertical ------ | | | | | | | | | | |
| 4 | 36.790 | 42.30 | 20.23 | 1.97 | 30.55 | 33.95 | 39.00 | 5.05 | 400 | 171 |
| 5 | 42.974 | 36.60 | 19.86 | 2.07 | 30.54 | 27.99 | 39.00 | 11.01 | 126 | 267 |
| 6 | 64.920 | 36.20 | 18.33 | 2.40 | 30.46 | 26.47 | 39.00 | 12.53 | 133 | 309 |

| Radiated disturbance at (1 ~ 6) GHz _Peak Measurement data | | | |
|---|---|---|---|
| **Test configuration mode** | **1** | **EUT Operation mode** | **1** |
| **Test voltage (V)** | **AC 120** | **Test Frequency (Hz)** | **60** |

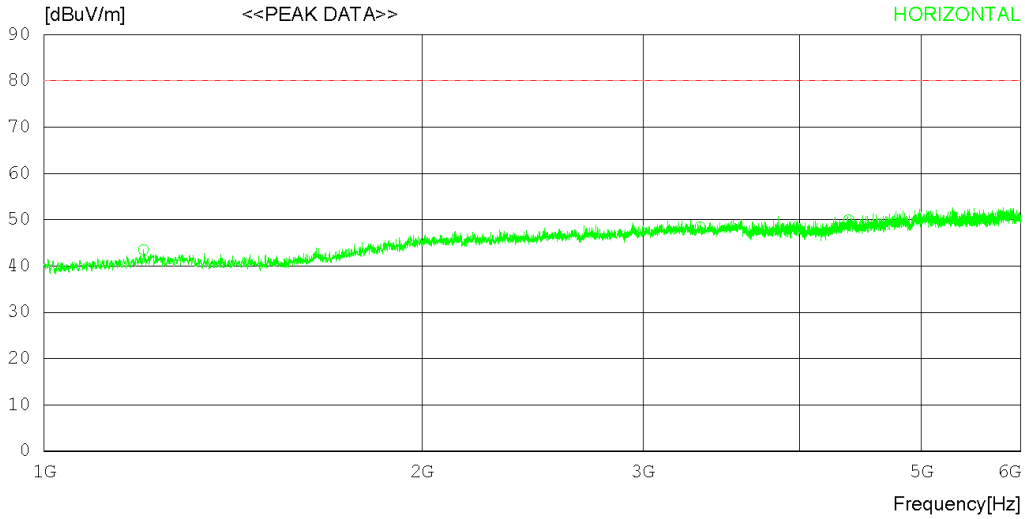
# RADIATED EMISSION

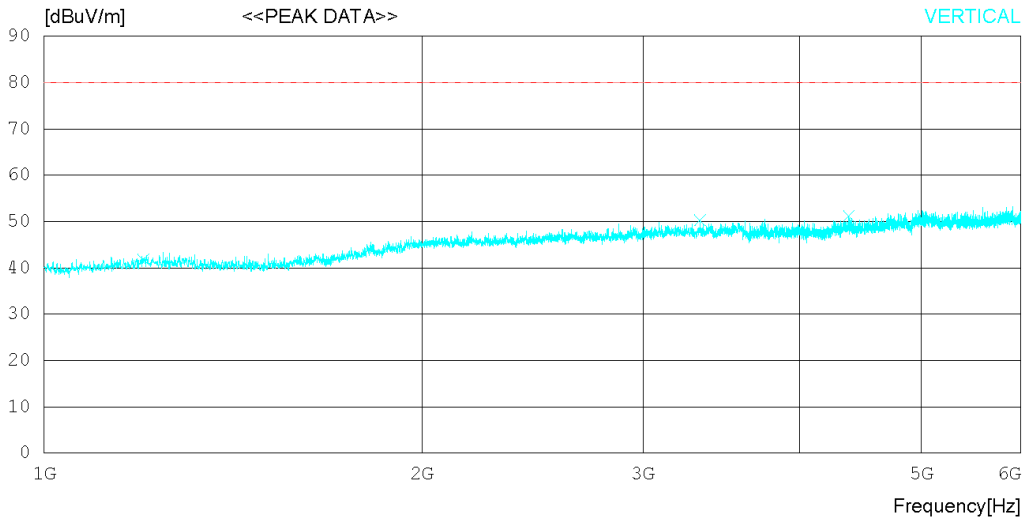
Date 2019-07-29

Order No. DTNC1906-05067
Power Supply AC 120 V 60 Hz
Temp/Humi 26 'C 49 % R.H.
Test Condition

Memo

LIMIT : FCC Part15 Subpart.B Class A (3m) - GHz(Peak)
FCC Part15 Subpart.B Class A (3m) - GHz(Peak)



# RADIATED EMISSION

Date 2019-07-29

Order No. DTNC1906-05067
Power Supply AC 120 V 60 Hz
Temp/Humi 26 'C 49 % R.H.
Test Condition

Memo

LIMIT : FCC Part15 Subpart.B Class A (3m) - GHz(Peak)
FCC Part15 Subpart.B Class A (3m) - GHz(Peak)

| No. | FREQ [MHz] | READING PEAK [dBuV] | ANT FACTOR [dB] | LOSS [dB] | GAIN [dB] | RESULT [dBuV/m] | LIMIT [dBuV/m] | MARGIN [dB] | ANTENNA [cm] | TABLE [DEG] |
|---|---|---|---|---|---|---|---|---|---|---|
| ----- Horizontal ------ | | | | | | | | | | |
| 1 | 1200.000 | 45.60 | 28.80 | 4.75 | 35.64 | 43.51 | 80.0 | 36.49 | 400 | 344 |
| 2 | 3331.250 | 42.30 | 32.84 | 7.95 | 34.67 | 48.42 | 80.0 | 31.58 | 300 | 99 |
| 3 | 4376.250 | 40.90 | 33.75 | 9.75 | 34.45 | 49.95 | 80.0 | 30.05 | 100 | 63 |
| ----- Vertical ------ | | | | | | | | | | |
| 4 | 1200.000 | 43.90 | 28.80 | 4.75 | 35.64 | 41.81 | 80.0 | 38.19 | 199 | 358 |
| 5 | 3331.250 | 44.20 | 32.84 | 7.95 | 34.67 | 50.32 | 80.0 | 29.68 | 400 | 101 |
| 6 | 4376.250 | 42.10 | 33.75 | 9.75 | 34.45 | 51.15 | 80.0 | 28.85 | 299 | 53 |

| Radiated disturbance at (1 ~ 6) GHz _Average Measurement data | | | |
|---|---|---|---|
| **Test configuration mode** | **1** | **EUT Operation mode** | **1** |
| **Test voltage (V)** | **AC 120** | **Test Frequency (Hz)** | **60** |

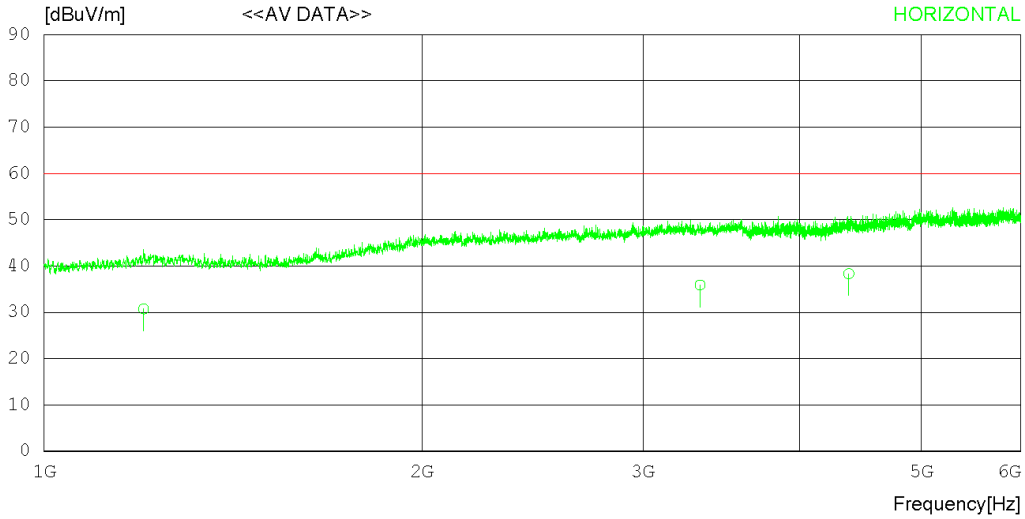
# RADIATED EMISSION

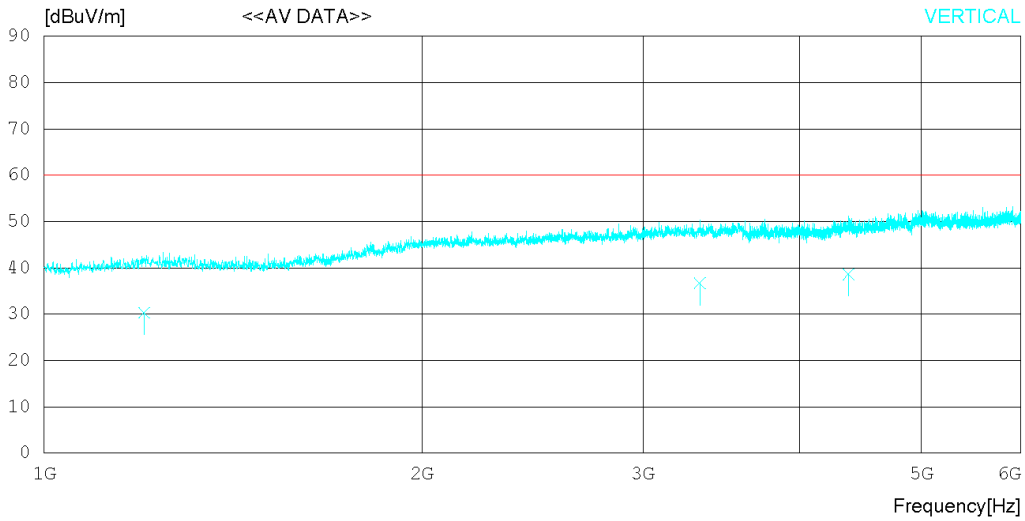
Date 2019-07-29

Order No. DTNC1906-05067
Power Supply AC 120 V 60 Hz
Temp/Humi 26 'C 49 % R.H.
Test Condition

Memo

LIMIT : FCC Part15 Subpart.B Class A (3m) - GHz(Average)
FCC Part15 Subpart.B Class A (3m) - GHz(Average)



# RADIATED EMISSION

Date 2019-07-29

Order No. DTNC1906-05067
Power Supply AC 120 V 60 Hz
Temp/Humi 26 'C 49 % R.H.
Test Condition

Memo

LIMIT : FCC Part15 Subpart.B Class A (3m) - GHz(Average)
FCC Part15 Subpart.B Class A (3m) - GHz(Average)

| No. | FREQ [MHz] | READING CAV [dBuV] | ANT FACTOR [dB] | LOSS [dB] | GAIN [dB] | RESULT [dBuV/m] | LIMIT [dBuV/m] | MARGIN [dB] | ANTENNA [cm] | TABLE [DEG] |
|---|---|---|---|---|---|---|---|---|---|---|
| ----- Horizontal ------ | | | | | | | | | | |
| 1 | 1200.261 | 32.80 | 28.80 | 4.75 | 35.64 | 30.71 | 60.00 | 29.29 | 367 | 140 |
| 2 | 3331.254 | 29.80 | 32.84 | 7.95 | 34.67 | 35.92 | 60.00 | 24.08 | 312 | 289 |
| 3 | 4376.776 | 29.30 | 33.75 | 9.75 | 34.45 | 38.35 | 60.00 | 21.65 | 152 | 136 |
| ----- Vertical ------ | | | | | | | | | | |
| 4 | 1201.370 | 32.40 | 28.80 | 4.75 | 35.64 | 30.31 | 60.00 | 29.69 | 178 | 108 |
| 5 | 3330.061 | 30.60 | 32.84 | 7.94 | 34.67 | 36.71 | 60.00 | 23.29 | 376 | 253 |
| 6 | 4375.180 | 29.60 | 33.75 | 9.75 | 34.45 | 38.65 | 60.00 | 21.35 | 282 | 116 |

| Radiated disturbance at (6 ~ 18) GHz _Peak Measurement data | | | |
|---|---|---|---|
| **Test configuration mode** | **1** | **EUT Operation mode** | **1** |
| **Test voltage (V)** | **AC 120** | **Test Frequency (Hz)** | **60** |

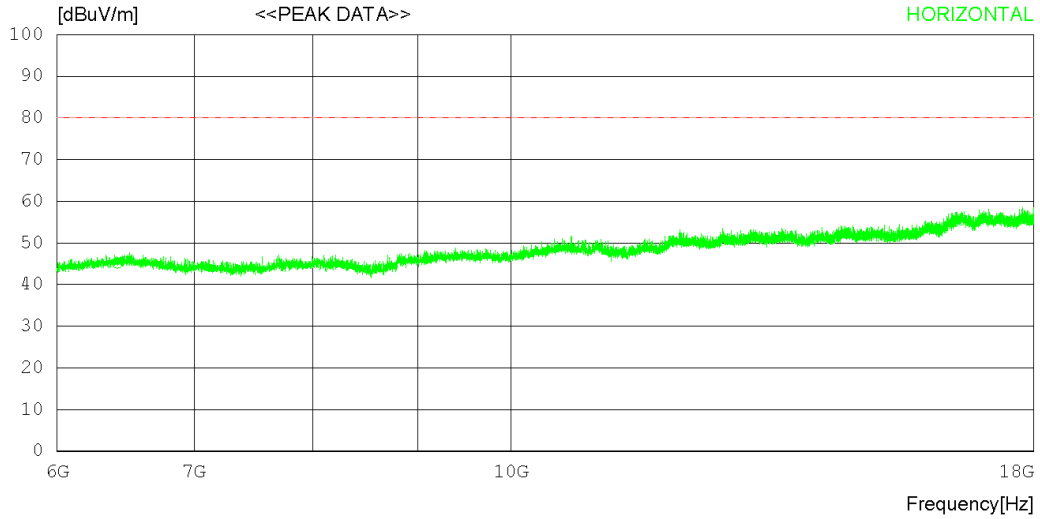
# RADIATED EMISSION

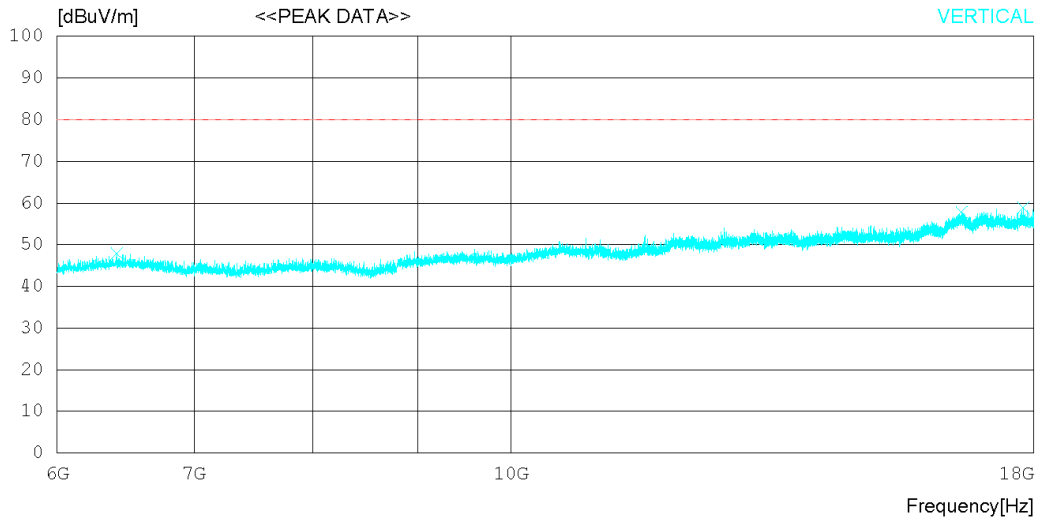
Date 2019-07-29

Order No. DTNC1906-05067
Power Supply AC 120 V 60 Hz
Temp/Humi 26 'C 49 % R.H.
Test Condition

Memo

LIMIT : FCC Part15 Subpart.B Class A (3m) - GHz(Peak)
FCC Part15 Subpart.B Class A (3m) - GHz(Peak)



# RADIATED EMISSION

Date 2019-07-29

Order No. DTNC1906-05067
Power Supply AC 120 V 60 Hz
Temp/Humi 26 'C 49 % R.H.
Test Condition

Memo

LIMIT : FCC Part15 Subpart.B Class A (3m) - GHz(Peak)
FCC Part15 Subpart.B Class A (3m) - GHz(Peak)

| No. | FREQ [MHz] | READING PEAK [dBuV] | ANT FACTOR [dB] | LOSS [dB] | GAIN [dB] | RESULT [dBuV/m] | LIMIT [dBuV/m] | MARGIN [dB] | ANTENNA [cm] | TABLE [DEG] |
|---|---|---|---|---|---|---|---|---|---|---|
| ----- Horizontal ------ | | | | | | | | | | |
| 1 | 6419.250 | 32.60 | 35.52 | 11.78 | 34.79 | 45.11 | 80.0 | 34.89 | 100 | 113 |
| 2 | 16590.750 | 26.00 | 41.64 | 22.26 | 34.41 | 55.49 | 80.0 | 24.51 | 200 | 0 |
| 3 | 17784.750 | 27.10 | 41.36 | 21.27 | 33.91 | 55.82 | 80.0 | 24.18 | 100 | 358 |
| ----- Vertical ------ | | | | | | | | | | |
| 4 | 6419.250 | 35.40 | 35.52 | 11.78 | 34.79 | 47.91 | 80.0 | 32.09 | 100 | 87 |
| 5 | 16590.750 | 28.30 | 41.64 | 22.26 | 34.41 | 57.79 | 80.0 | 22.21 | 199 | 358 |
| 6 | 17784.750 | 30.20 | 41.36 | 21.27 | 33.91 | 58.92 | 80.0 | 21.08 | 100 | 0 |

| Radiated disturbance at (6 ~18) GHz _Average Measurement data | | | |
|---|---|---|---|
| **Test configuration mode** | **1** | **EUT Operation mode** | **1** |
| **Test voltage (V)** | **AC 120** | **Test Frequency (Hz)** | **60** |

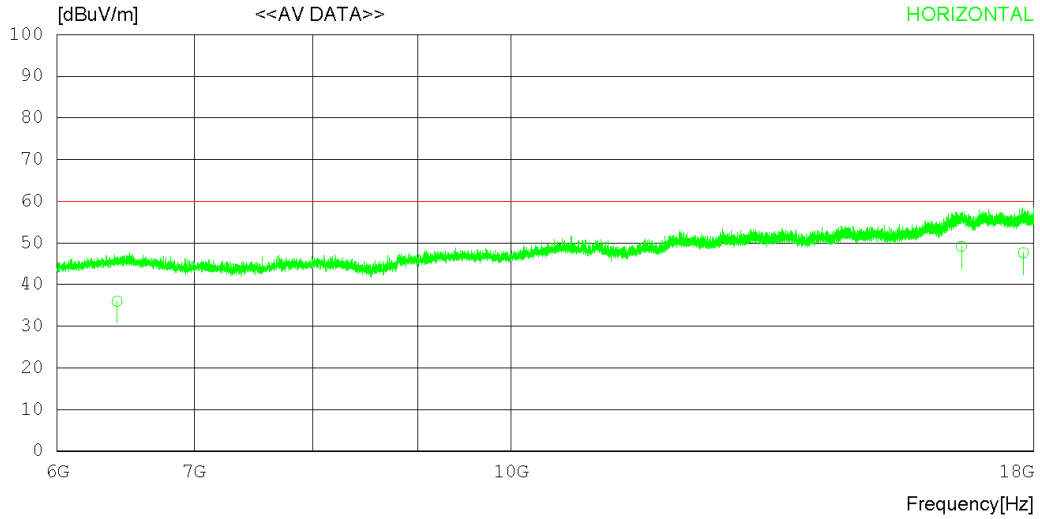
# RADIATED EMISSION

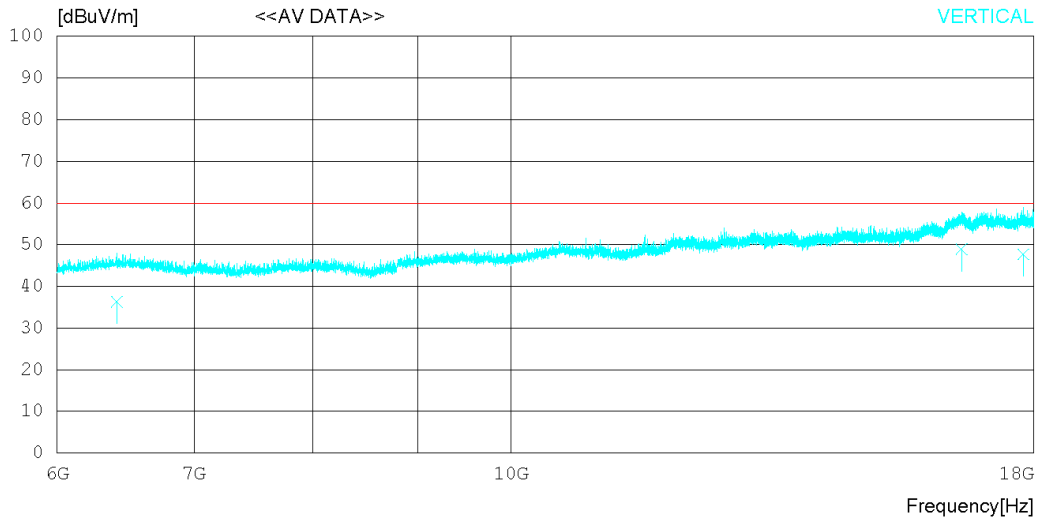
Date 2019-07-29

Order No. DTNC1906-05067
Power Supply AC 120 V 60 Hz
Temp/Humi 26 'C 49 % R.H.
Test Condition

Memo

LIMIT : FCC Part15 Subpart.B Class A (3m) - GHz(Average)
FCC Part15 Subpart.B Class A (3m) - GHz(Average)



# RADIATED EMISSION

Date 2019-07-29

Order No. DTNC1906-05067
Power Supply AC 120 V 60 Hz
Temp/Humi 26 'C 49 % R.H.
Test Condition

Memo

LIMIT : FCC Part15 Subpart.B Class A (3m) - GHz(Average)
FCC Part15 Subpart.B Class A (3m) - GHz(Average)

| No. | FREQ [MHz] | READING CAV [dBuV] | ANT FACTOR [dB] | LOSS [dB] | GAIN [dB] | RESULT [dBuV/m] | LIMIT [dBuV/m] | MARGIN [dB] | ANTENNA [cm] | TABLE [DEG] |
|---|---|---|---|---|---|---|---|---|---|---|
| ----- Horizontal ------ | | | | | | | | | | |
| 1 | 6419.125 | 23.50 | 35.52 | 11.78 | 34.79 | 36.01 | 60.00 | 23.99 | 109 | 313 |
| 2 | 16590.560 | 19.70 | 41.64 | 22.25 | 34.41 | 49.18 | 60.00 | 10.82 | 222 | 210 |
| 3 | 17784.790 | 18.90 | 41.36 | 21.27 | 33.91 | 47.62 | 60.00 | 12.38 | 162 | 184 |
| ----- Vertical ------ | | | | | | | | | | |
| 4 | 6419.270 | 23.80 | 35.52 | 11.78 | 34.79 | 36.31 | 60.00 | 23.69 | 127 | 178 |
| 5 | 16590.730 | 19.50 | 41.64 | 22.25 | 34.41 | 48.98 | 60.00 | 11.02 | 188 | 285 |
| 6 | 17784.570 | 19.00 | 41.36 | 21.27 | 33.91 | 47.72 | 60.00 | 12.28 | 136 | 89 |

**Calculation**

| |
|---|
| Result(dBμV/m) : 30 ~ 1G : Reading Value(dBμV) + Cable loss(dB) - Pre amplifier gain(dB) + Ant. Factor(dB) |
| 1 ~ 6 G : Ant. Factor = Ant. Factor - Pre amplifier gain |
| Margin(dB) : Limit(dBμV/m) - Result(dBμV/m) |

# 8. Revision History

| Date | Description | Revised By | Reviewed By |
|---|---|---|---|
| Jul. 31. 2019 | Initial report | Taehyun Choi | KyoungHwan Bae |
| Sep. 02. 2019 | Change FCC ID<br>(2ATXA-S16N-X18K-7WN<br>→ 2ATXA-SA163PLUS) | Taehyun Choi | KyoungHwan Bae |
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-End of test report-