TEST REPORT

Dt&C

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. : DREFCC1812-0337
2. Client / Applicant
   - Name : Bluebird Inc.
   - Address : (Dogok-dong, SEI Tower 13,14)39, Eonjuro30-gil, Gangnam-gu, Seoul, South Korea
3. Use of Report : FCC Certification of Conformity Marking
4. Product Name / Model Name : Enterprise Full Touch Handheld Computer / EF501
5. Test Standard : ANSI C 63.4 : 2014
   FCC Part 15 Subpart B
   (Class B personal computers and peripherals)
6. Date of Test : Dec. 18. 2018 ~ Dec. 19. 2018
7. Testing Environment : Temperature 19 °C , Humidity (37 ~ 39) % R.H.
8. Test Result : Refer to the attached Test Result

Affirmation	Tested by	Reviewed by
	Name : YongKi Kim (Signature)	Name : JaeSeok Choi (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.

Dec. 21. 2018

DT&C Co., Ltd.

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
Site Filing	USA	FCC	KR0034 101842 678747, 596748, 804488, 165783	Accredited 2.948 Listed
	Canada	IC	5740A-3 5740A-4	Registered
	Japan	VCCI	C-1427 R-1364, R-3385, R-4076, R-4180, R-4496, T-1442, G-10338, G-754, G-10815	Registered
Certification	Korea	KC	KR0034	Designation
	Germany	TUV	CARAT 17 11 89112 005	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	Bluebird Inc. (Dogok-dong, SEI Tower 13,14)39, Eonjuro30-gil, Gangnam-gu, Seoul, South Korea
Manufacturer	Bluebird Inc. (Dogok-dong, SEI Tower 13,14)39, Eonjuro30-gil, Gangnam-gu, Seoul, South Korea
Factory	Bluebird Inc. (SSang-young IT Twin tower-B 7~8F), 531, Dunchon-daero, Jungwon-gu, Seongnam-si, Gyeonggi-do, Korea
Product Name	Enterprise Full Touch Handheld Computer
Model Name	EF501
Add Model Name	EF501R
FCC ID	SS4EF501X
SW version	R1.12
Rated Power	DC 3.8 V
Operation Frequency	26 MHz (Max)
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	'READ' & 'WRITE' & 'DELETE'	The EUT is reading, writing, and erasing internal storage

4.3 Test Configuration Mode

No.	Mode	Description
1	PC LINK	EUT was connected PC by USB cable and continuously operated

4.4 Supported Equipment

Used*	Product Type	Manufacturer	Model	Remarks
AE	Keyboard	DELL	KB212-B	SDoC
AE	Mouse	LG	SM-9023	SDoC
AE	LCD Monitor	DELL	P2417Hb	SDoC
AE	PC	DELL	DCNE	SDoC
AE	External SSD	SAMSUNG	MU-PT250B	SDoC
AE	Printer	Bixolon	SRP-770	SDoC
AE	Headset	SAMSUNG	SHS-150V/M	SDoC
AE	Earphone	IXTIN	N/A	SDoC

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

4.5 EUT In/Output Port

Name	Type*	Cable Max. >3 m	Cable Shielded	Cable Back shell	Remarks
USB	I/O	1.7	Shield	Plastic	KEYBOARD
USB	I/O	1.7	Shield	Plastic	MOUSE
Power In	AC	1.8	Non Shield	Plastic	LCD MONITOR
D-SUB	I/O	1.8	Shield	Plastic	
Power In	AC	1.8	Non Shield	Plastic	PC
D-SUB	I/O	1.8	Shield	Plastic	
Parallel	I/O	2.0	Shield	Plastic	
Serial	I/O	1.9	Shield	Plastic	
USB	I/O	1.7	Shield	Plastic	
USB	I/O	1.7	Shield	Plastic	
USB	I/O	1.8	Shield	Plastic	
USB	I/O	1.5	Non Shield	Plastic	
Stereo/Mic	I/O	2.0	Non Shield	Plastic	
USB	I/O	1.5	Shield	Plastic	External SSD
Power In	DC	1.8	Non Shield	Plastic	PRINTER
Parallel	I/O	2.0	Shield	Plastic	
Serial	I/O	1.9	Shield	Plastic	
Stereo/Mic	I/O	2.0	Non Shield	Plastic	Headset
Stereo	I/O	1.5	Non Shield	Plastic	EUT
USB	I/O	1.5	Non Shield	Plastic	

*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 (Hz)	Phases	Remarks
1	AC 120	60 Hz	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		

The data in this test report are traceable to the national or international standards.

-Conducted Disturbance

Frequency [MHz]	Phase	Result [dBµV]	Detector	Limit [dBµV]	Margin [dB]
0.20224	N	50.36	CAV	53.52	3.16

-Radiated Disturbance

Frequency [MHz]	Pol.	Result [dBµV/m]	Detector	Limit [dBµV/m]	Margin [dB]
144.002	H	37.57	QP	43.50	5.93

6. Test Environment

Test Items	Test date (YYYY-MM-DD)	Temp. (℃)	Humidity (% R.H.)	Pressure (kPa)
Conducted Disturbance	2018-12-19	19	37	100.1
Radiated Disturbance	2018-12-18	19	39	-

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 uncertainty	
Expended uncertainty *U* (95 %, Confidence level, *k* = 2)	2.61 dB

Measurement Instrument					
Description	**Model**	**Manufacturer**	**Identifier**	**Cal. Date**	**Cal. Due**
MEASUREMENT SOFTWARE	EMI-C VER. 2.00.0171	TSJ	N/A	N/A	N/A
EMI TEST RECEIVER	ESR7	ROHDE&SCHWARZ	101109	2018.10.29	2019.10.29
TWO-LINE V-NETWORK	ENV216	ROHDE&SCHWARZ	101979	2018.12.06	2019.12.06
LISN	LISN1600	TTI	197204	2018.06.07	2019.06.07
TRANSIENT LIMITER	TL-B0930A	EMCIS	11002	2018.09.05	2019.09.05
50 OHM TERMINATOR	CT-01	TME	N/A	2017.12.26	2018.12.26

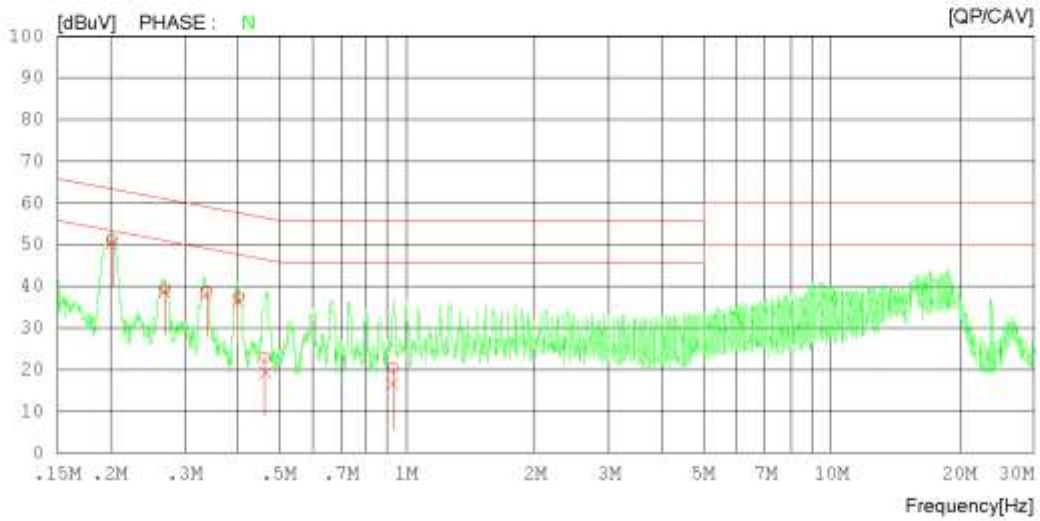
Mains terminal disturbance voltage _Measurement data			
Test configuration mode	**1**	**EUT Operation mode**	**1**
Test voltage (V)	**120**	**Test Frequency (Hz)**	**60**

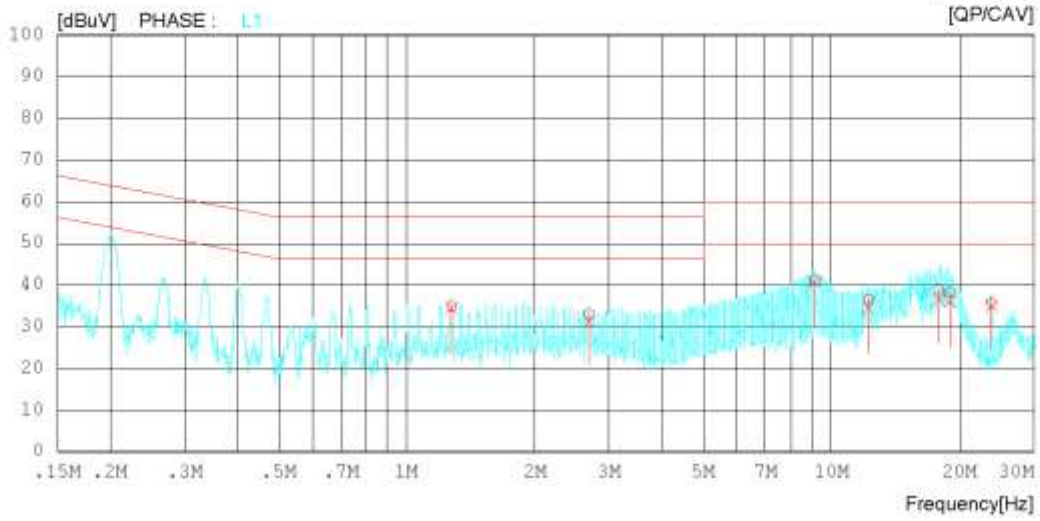
Results of Conducted Emission

DT&C
Date 2018-12-19

Order No.	DTNC1812-09293
Power Supply	120 V 60 Hz
Temp/Humi/Atm	19 'C 37 % R.H. 100.1 kPa
Test Condition	PC Link

LIMIT : CISPR22_B QP
CISPR22_B AV





Results of Conducted Emission

DT&C
Date 2018-12-19

Order No. DTNC1812-09293
Power Supply 120 V 60 Hz
Temp/Humi/Atm 19 'C 37 % R.H. 100.1 kPa
Test Condition PC Link

LIMIT : CISPR22_B QP
CISPR22_B 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	0.20224	31.34	30.34	20.02	51.36	50.36	63.52	53.52	12.16	3.16	N
2	0.26950	19.64	19.15	19.80	39.44	38.95	61.13	51.13	21.69	12.18	N
3	0.33726	18.82	18.48	19.90	38.72	38.38	59.27	49.27	20.55	10.89	N
4	0.40250	17.43	16.79	20.03	37.46	36.82	57.80	47.80	20.34	10.98	N
5	0.46350	2.94	-0.60	20.03	22.97	19.43	56.63	46.63	33.66	27.20	N
6	0.92774	0.59	-3.49	19.92	20.51	16.43	56.00	46.00	35.49	29.57	N
7	1.27505	14.79	14.24	19.92	34.71	34.16	56.00	46.00	21.29	11.84	L1
8	2.68613	12.97	11.44	19.88	32.85	31.32	56.00	46.00	23.15	14.68	L1
9	9.13649	20.55	19.94	20.52	41.07	40.46	60.00	50.00	18.93	9.54	L1
10	12.23123	15.64	13.33	20.83	36.47	34.16	60.00	50.00	23.53	15.84	L1
11	17.88687	17.89	15.53	20.97	38.86	36.50	60.00	50.00	21.14	13.50	L1
12	19.03713	17.13	14.75	20.94	38.07	35.69	60.00	50.00	21.93	14.31	L1
13	23.84584	14.88	14.46	20.56	35.44	35.02	60.00	50.00	24.56	14.98	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 or 3 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 contained in Third Edition of the International Special Committee on Radio Interference (CISPR), Pub. 22 shown.

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	5th harmonic of the highest frequency or 40 GHz, whichever is lower

Measurement uncertainty	
Expended uncertainty *U* (95 %, Confidence level, *k* = 2)	2.89 dB, (30 ~ 1 000) MHz 4.16 dB, (1 ~ 6) GHz

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	ESU	ROHDE & SCHWARZ	100469	2018.06.28	2019.06.28
BILOG ANTENNA	VULB9160	SCHWARZBECK	9160-3339	2017.04.21	2019.04.21
6DB ATTENUATOR	8491B	HP	18403	2017.04.21	2019.04.21
LOW NOISE PRE AMPLIFIER	MLA-100K01-B01-26	TSJ	1252741	2018.02.19	2019.02.19
HORN ANTENNA	3117	ETS-LINDGREN	00152093	2018.03.26	2020.03.26
HORN ANTENNA WITH PREAMPLIFIER	EM-6969	ELECTRO-METRICS	156	2017.02.10	2019.02.10
	MLA-0618-B03-34	TSJ	1785642	2018.01.02	2019.01.02
PREAMPLIFIER	8449B	AGILENT TECHNOLOGIES	3008A01590	2018.02.20	2019.02.20
(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)	**120**	**Test Frequency (Hz)**	**60**

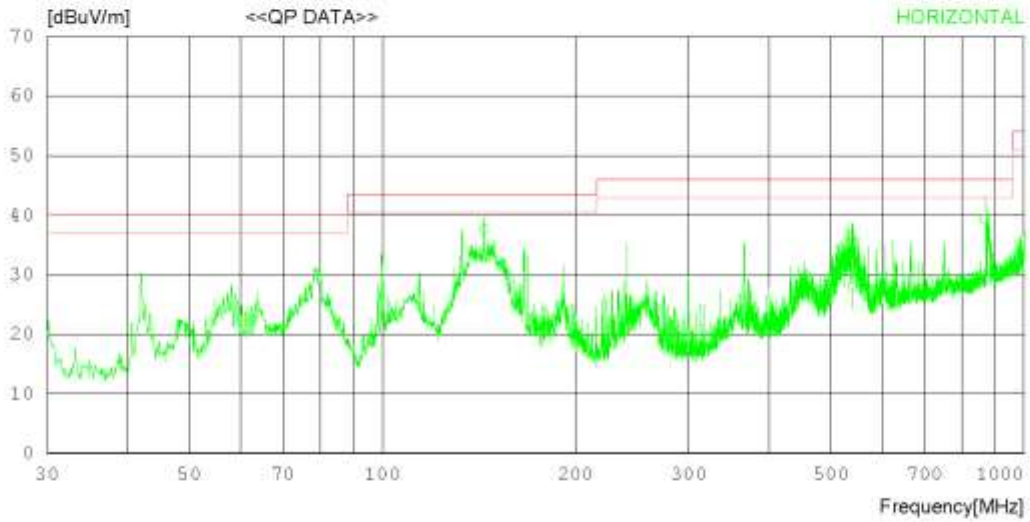
RADIATED EMISSION

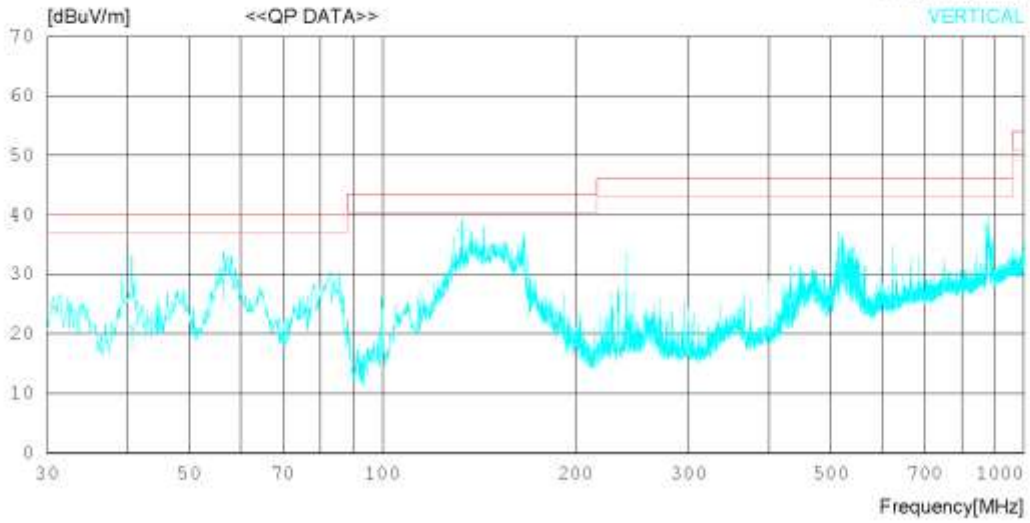
Date 2018-12-18

Order No. DTNC1812-09293
Power Supply 120 V 60 Hz
Temp/Humi 19 'C 39 % R.H.
Test Condition PC Link

Memo

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





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Power Supply 120 V 60 Hz
Temp/Humi 19 'C 39 % R.H.
Test Condition PC Link

Memo

LIMIT : FCC Part15 Subpart.B Class B (3m)
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	144.002	42.43	18.78	1.94	25.58	37.57	43.50	5.93	247	252
2	540.441	24.03	25.09	4.12	25.34	27.90	46.00	18.10	100	17
3	869.396	30.41	29.20	5.18	25.57	39.22	46.00	6.78	300	360
----- Vertical ------										
4	40.681	28.59	17.14	0.96	25.49	21.20	40.00	18.80	105	285
5	56.433	35.88	17.70	1.17	25.52	29.23	40.00	10.77	100	72
6	132.810	42.17	18.20	1.87	25.57	36.67	43.50	6.83	100	132

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

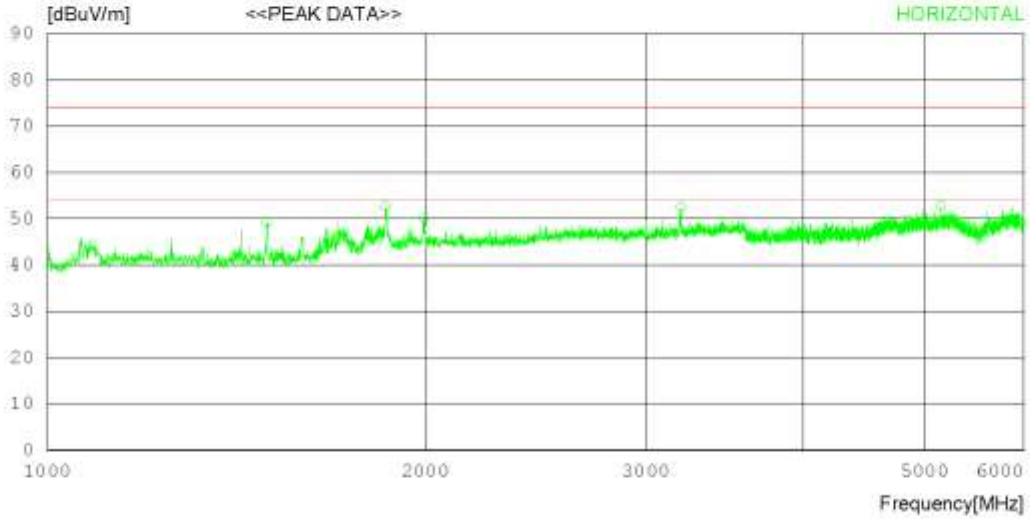
RADIATED EMISSION

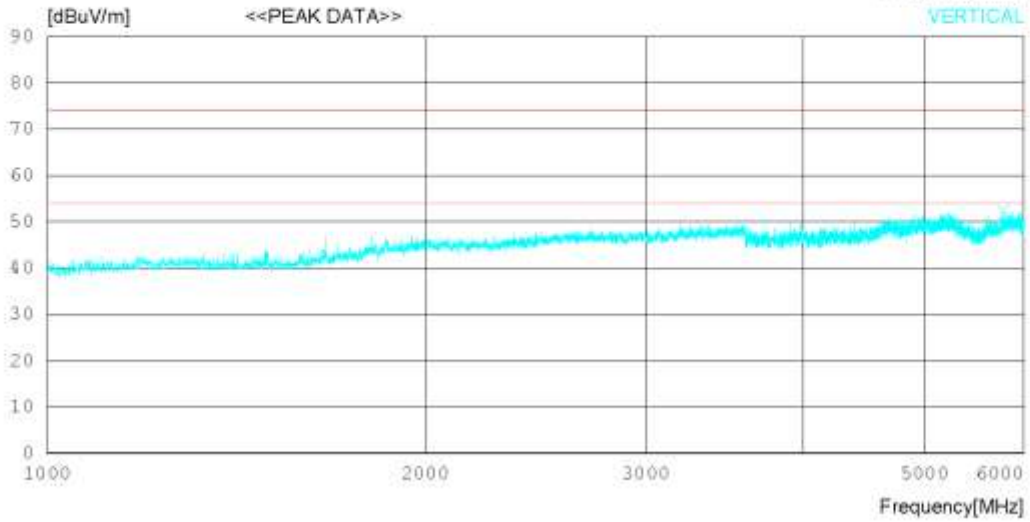
Date 2018-12-18

Order No. DTNC1812-09293
Power Supply 120 V 60 Hz
Temp/Humi 19 'C 39 % R.H.
Test Condition PC Link

Memo

LIMIT : FCC Part15 Subpart.B Class B (3m) - 18G(Peak)
FCC Part15 Subpart.B Class B (3m) - 18G(Avg)





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Power Supply 120 V 60 Hz
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Test Condition PC Link

Memo

LIMIT : FCC Part15 Subpart.B Class B (3m) - 18G(Peak)
FCC Part15 Subpart.B Class B (3m) - 18G(Avg)

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	1496.250	51.50	27.90	5.14	35.34	49.20	74.0	24.8	100	359
2	1859.375	51.40	30.69	5.55	34.96	52.68	74.0	21.32	100	91
3	1996.875	47.70	31.59	5.74	34.82	50.21	74.0	23.79	100	340
4	3198.125	47.20	33.19	6.91	34.74	52.56	74.0	21.44	100	350
5	5150.000	43.60	34.20	9.62	34.66	52.76	74.0	21.24	100	340
----- Vertical ------										
6	5776.875	42.20	34.70	10.15	34.73	52.32	74.0	21.68	100	0

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

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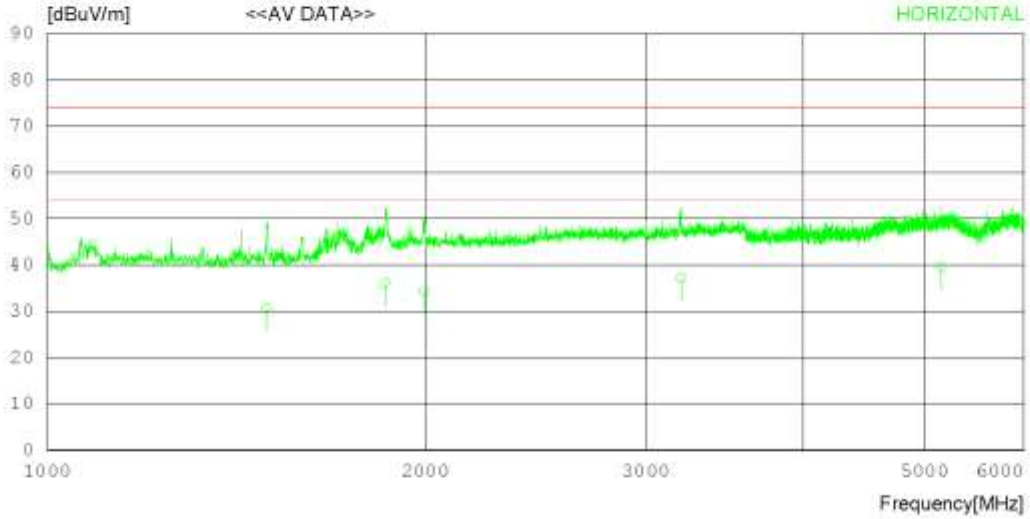
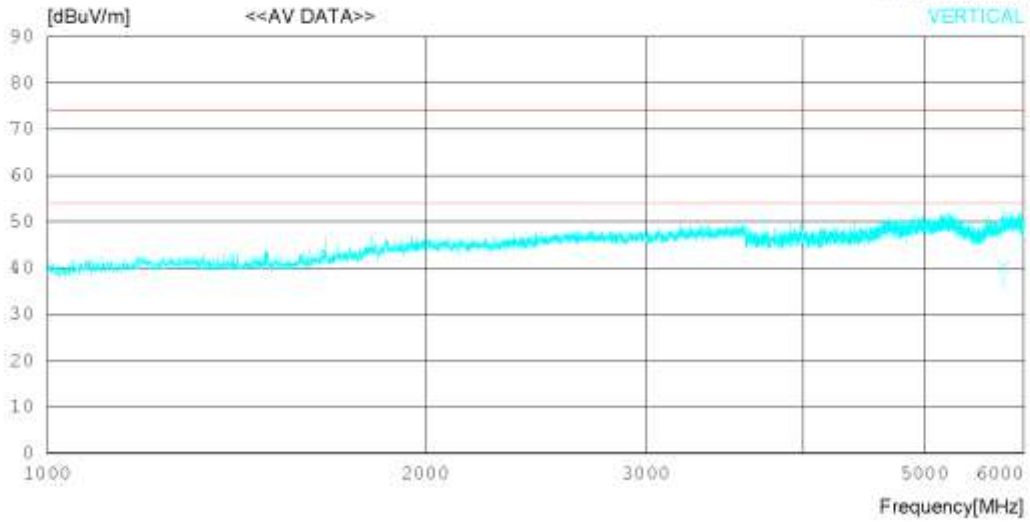
FCC Part15 Subpart.B Class B (3m) - 18G(Peak)





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Order No. DTNC1812-09293
Power Supply 120 V 60 Hz
Temp/Humi 19 'C 39 % R.H.
Test Condition PC Link

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LIMIT : FCC Part15 Subpart.B Class B (3m) - 18G(Avg)
FCC Part15 Subpart.B Class B (3m) - 18G(Peak)

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	1496.111	32.96	27.90	5.13	35.34	30.65	54.00	23.35	300	0
2	1859.331	34.72	30.69	5.55	34.96	36.00	54.00	18.00	400	310
3	1996.063	31.78	31.59	5.74	34.82	34.29	54.00	19.71	364	282
4	3198.101	31.83	33.19	6.91	34.74	37.19	54.00	16.81	391	129
5	5149.900	30.40	34.20	9.62	34.66	39.56	54.00	14.44	273	0
----- Vertical ------										
6	5776.189	30.18	34.70	10.15	34.73	40.30	54.00	13.70	100	360

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

RADIATED EMISSION

Date 2018-12-18

Order No. DTNC1812-09293
Power Supply 120 V 60 Hz
Temp/Humi 19 'C 39 % R.H.
Test Condition PC Link

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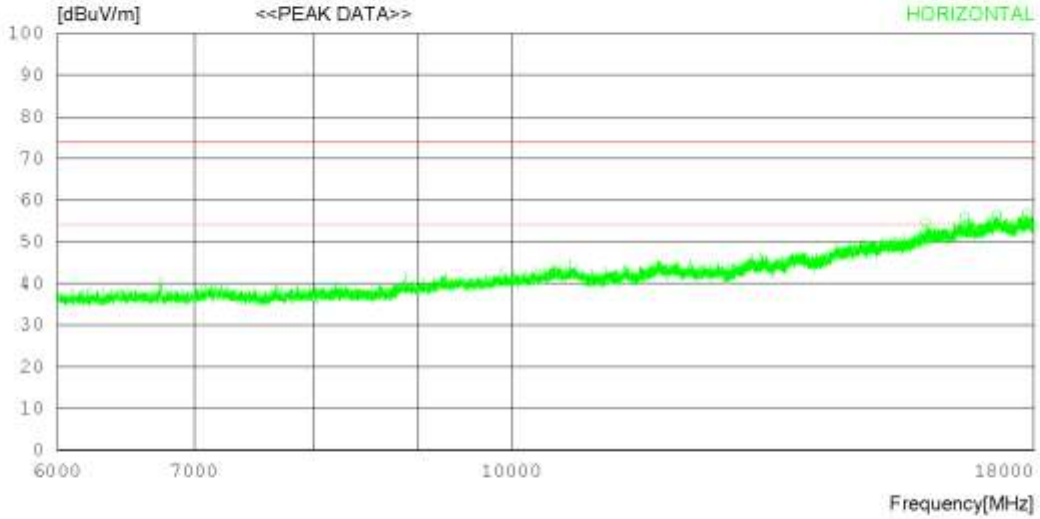
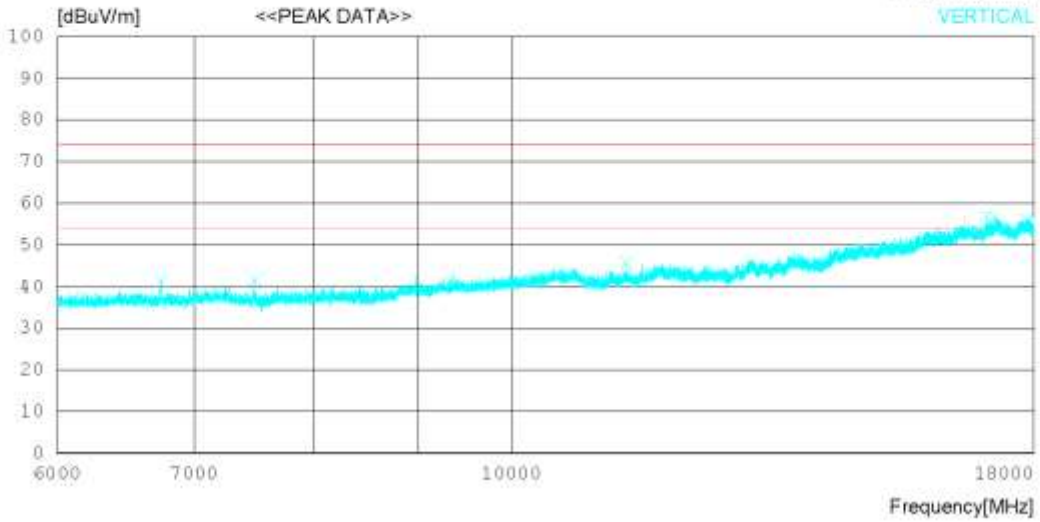
LIMIT : FCC Part15 Subpart.B Class B (3m) - 18G(Peak)
FCC Part15 Subpart.B Class B (3m) - 18G(Avg)





RADIATED EMISSION

Date 2018-12-18

Order No. DTNC1812-09293
Power Supply 120 V 60 Hz
Temp/Humi 19 'C 39 % R.H.
Test Condition PC Link

Memo

LIMIT : FCC Part15 Subpart.B Class B (3m) - 18G(Peak)
FCC Part15 Subpart.B Class B (3m) - 18G(Avg)

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	15936.000	42.30	36.29	12.63	36.65	54.57	74.0	19.43	100	1
2	16646.250	42.00	37.05	13.11	36.27	55.89	74.0	18.11	100	237
3	17254.500	41.90	37.73	13.18	36.49	56.32	74.0	17.68	100	115
4	17848.500	41.70	38.42	14.19	37.49	56.82	74.0	17.18	100	1
----- Vertical ------										
5	6744.000	41.80	31.40	6.87	38.77	41.30	74.0	32.7	100	350
6	7493.250	41.80	31.37	7.21	38.80	41.58	74.0	32.42	100	358
7	11381.250	41.20	32.86	9.28	37.58	45.76	74.0	28.24	100	242
8	17057.250	42.70	37.50	12.91	36.19	56.92	74.0	17.08	100	246
9	17218.500	42.20	37.69	13.12	36.43	56.58	74.0	17.42	100	109
10	17838.000	41.10	38.41	14.17	37.47	56.21	74.0	17.79	100	310

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

RADIATED EMISSION

Date 2018-12-18

Order No. DTNC1812-09293
Power Supply 120 V 60 Hz
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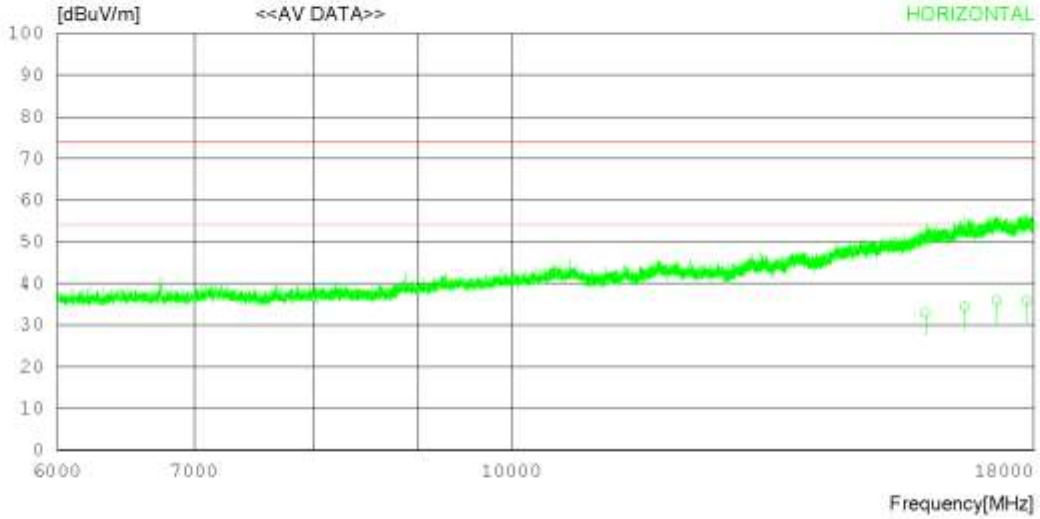
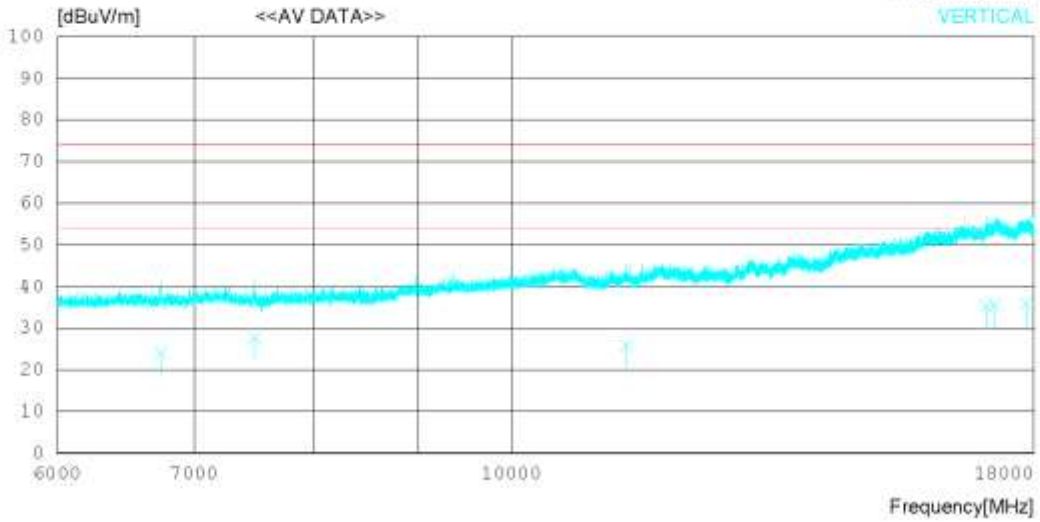
Test Condition PC Link

Memo

LIMIT : FCC Part15 Subpart.B Class B (3m) - 18G(Avg)
FCC Part15 Subpart.B Class B (3m) - 18G(Peak)





RADIATED EMISSION

Date 2018-12-18

Order No. DTNC1812-09293
Power Supply 120 V 60 Hz
Temp/Humi 19 'C 39 % R.H.
Test Condition PC Link

Memo

LIMIT : FCC Part15 Subpart.B Class B (3m) - 18G(Avg)
FCC Part15 Subpart.B Class B (3m) - 18G(Peak)

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	15935.790	20.74	36.29	12.63	36.65	33.01	54.00	20.99	391	360
2	16646.320	20.63	37.05	13.11	36.27	34.52	54.00	19.48	363	235
3	17253.630	21.42	37.73	13.18	36.49	35.84	54.00	18.16	400	121
4	17848.030	20.73	38.42	14.19	37.49	35.85	54.00	18.15	400	360
----- Vertical ------										
5	11381.250	21.32	32.86	9.28	37.58	25.88	54.00	28.12	115	292
6	17057.430	21.03	37.50	12.91	36.19	35.25	54.00	18.75	103	251
7	17218.040	21.27	37.69	13.12	36.43	35.65	54.00	18.35	128	30
8	17838.270	20.75	38.41	14.17	37.47	35.86	54.00	18.14	109	147
9	6744.301	24.61	31.40	6.87	38.77	24.11	54.00	29.89	100	302
10	7493.004	27.98	31.37	7.21	38.80	27.76	54.00	26.24	101	0

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)

8. Revision History

Date	Description	Revised By	Reviewed By
Dec. 21. 2018	Initial report	YongKi Kim	JaeSeok Choi

-End of test report-