



FCC EVALUATION REPORT FOR CERTIFICATION

KOREA Standard Technology

Test report No.: KST-FCC-070029

Applicant's Name : NEXTO DI Inc.
Applicant's Address : E-702, Digital Empire B/D, 980-3, Youngtong-Dong,
Youngtong-Gu, Suwon, Gyeonggi-Do, Korea 443-813
Manufacturer's Name : NEXTO DI Inc.
Manufacturer's Address : E-702, Digital Empire B/D, 980-3, Youngtong-Dong,
Youngtong-Gu, Suwon, Gyeonggi-Do, Korea 443-813

EUT's:

FCC ID : SWOND2325
Product Name : NEXTO CF M1
Model Number(s) : ND 2325
Product Options : None
Category : FCC Part 15 subpart B (Class B Digital Device)

Supplementary Information

The device bearing the brand name and FCC ID specified above has been shown to comply with the applicable technical standards as indicated in the measurement report and was tested in accordance with measurement procedures specified in ANSI C63.4-2003.

I attest to the accuracy of data and all measurements reported herein were performed by or were made under my supervision and are correct to the best of my knowledge and belief. I assume full responsibility for the completeness of these measurements and vouch for the qualifications of all persons taking them.

Test Date : May 10, 2007

Issued Date : May 11, 2007

Tested by:

Jeong, seok-jin

Approved by:

Lee, Kyung-Jae

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1. Description of E.U.T

- | | |
|-------------------------------|--|
| 1) Kind of equipment: | NEXTO CF M1 |
| 2) FCC ID: | SWOND2325 |
| 3) Model Name: | ND 2325 |
| 4) Serial No.: | Proto Type |
| 5) Type of Sample Tested: | Pre-production |
| 6) High Frequency Used: | 12 MHz |
| 7) Adapter: | M/N : DSA-0101F-05 KA 1
S/N : None
Manufacturer : Dee Van Electronics (Shenzhen) Co., Ltd. |
| 8) Power : | Input : 100-240 V, 60 Hz, 0.3 A
Output : 5 V, 2.0 A |
| 9) Tested Power supply: | 1phase AC120 V, 60 Hz |
| 10) Date of Manufacture: | April, 2007 |
| 11) Manufacture: | NEXTO DI Inc. |
| 12) Description of Operating: | "Down & Upload" pattern displayed on the Monitor |
| 13) Dates of Test: | May 10, 2007 |
| 14) Place of Tests: | KOSTEC Co., Ltd. EMC site |
| 15) Test Report No: | KST-FCC-070029 |

2. Test Facility

The open field test site and conducted measurement facility are used for these testing, where are located following address and drawing. This site was fully described in a report dated November 14, 2002, that was submitted to the FCC.

KOSTEC CO., LTD. (Korea Standard Technology)

Head office & Test Lab ;

:180-254, Annyung-dong, Hwasung-shi, Gyeonggi-do, Korea

Telephone Number : 82-31-222-4251

Facsimile Number: 82-31-222-4252

MIC(Ministry of Information and Communication) Number: **KR0041**

FCC Filing Number. : **525762**

VCCI Membership Number : **2005**

VCCI Registration Number : **R-1657 / C-1763**

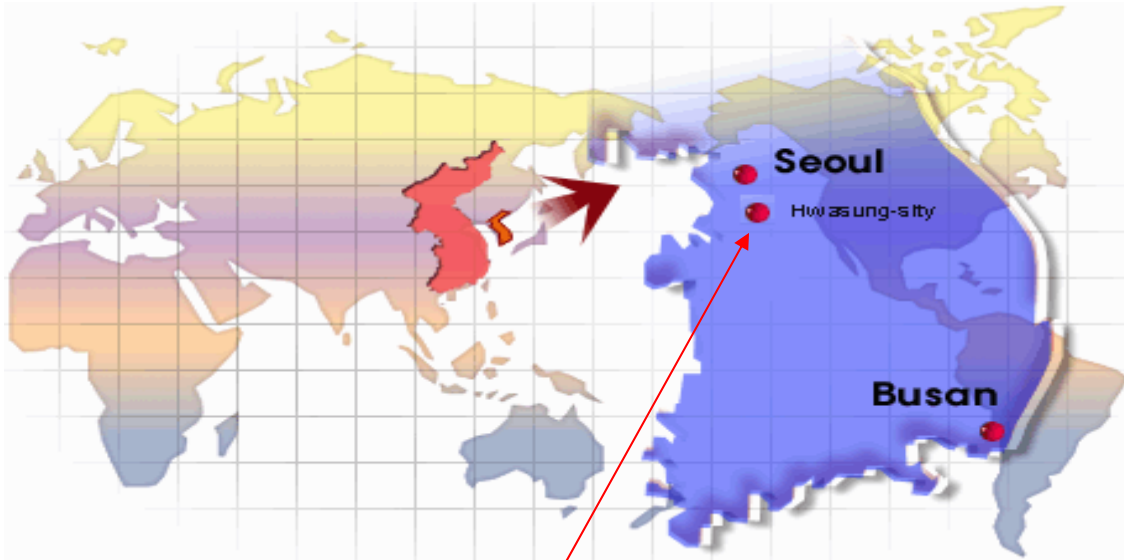
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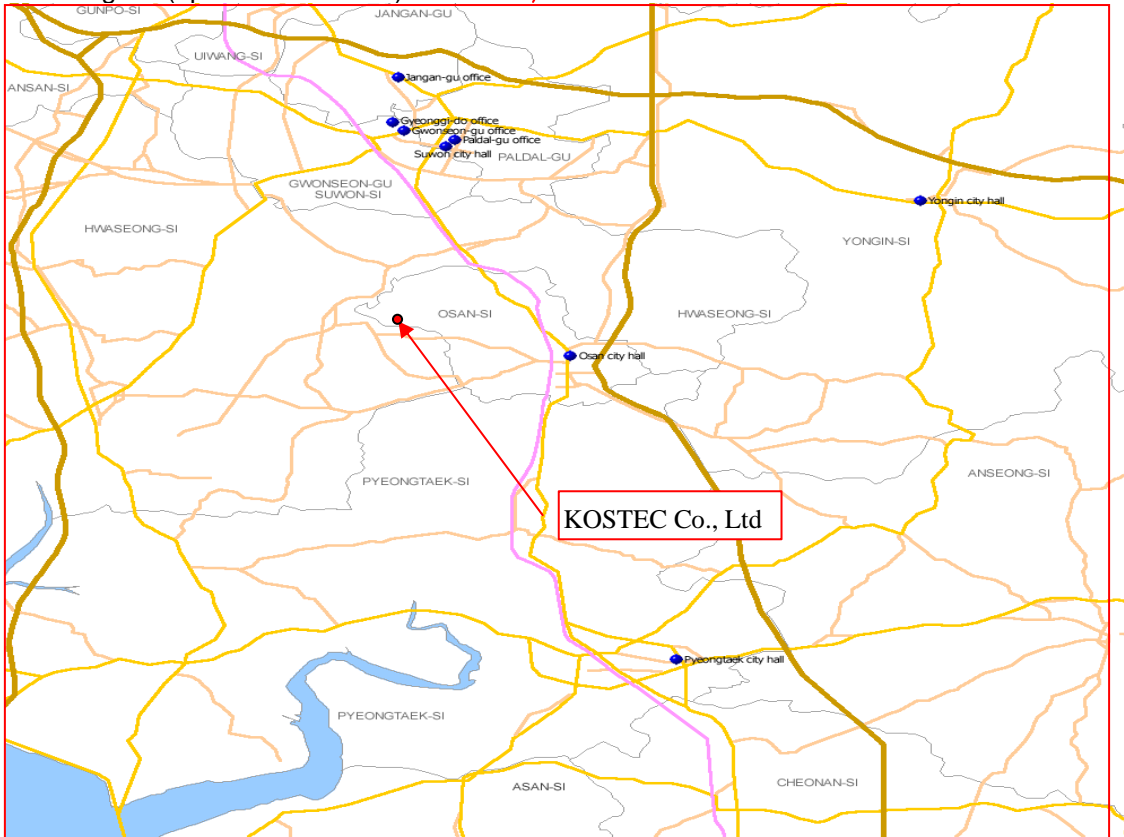
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3. MAP

Korea



Hwasung-shi (open area test site)



4. TEST SYSTEM CONFIGURATION

Operation Environment

Ambient	<u>Temperature</u> (° C)	<u>Humidity</u> (%)	<u>Pressure</u> (kPa)
10 m Open Area site	14	38	101.0
Shielded room:	21	48	101.0

Test site

These testing were performed following locations ;

Shielded room : Conducted Emission,

10 m Open Area Site: Radiated Emission

Measurement Uncertainty

All measurements involve certain levels of uncertainties, especially in field of EMC.

The factors contributing to uncertainties are test receiver, Cable loss, antenna factor calibration, Antenna directivity, antenna factor variation with height, antenna phase center variation, antenna frequency interpolation, measurement distance variation, its imperfection, mismatch, and system repeatability.

Based on NIS 80,81, The measurement uncertainty level with a 95 % confidence level were applied.

sample calculation

Conducted emission

The field strength is calculated by adding the LISN factor, cable loss from the measured reading.

The sample calculation is as follows:

$$\begin{aligned}FS &= MR + LF + CL \\MR &= \text{Meter Reading} \\LF &= \text{LISN Factor} \\CL &= \text{Cable Loss}\end{aligned}$$

If MR is 30 dB, LISN Factor 1 dB, CL 1 dB

The result (MR) is

$$30 + 1 + 1 = 32 \text{ dB}\mu\text{V}$$

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5. Description of E.U.T.

Product Description

Manufactured By:	NEXTO DI Inc.
Address:	E-702, Digital Empire B/D, 980-3, Youngtong-Dong, Youngtong-Gu, Suwon, Gyeonggi-Do, Korea 443-813
Model:	ND 2325
Serial Number:	Proto type

Configuration of EUT

Description	Manufacturer	Model/Part #	Serial Number
Main controller	NEXTO DI Inc.	Nexto M1	NEM740100010
Internal battery	None	None	None
HDD	Seagate	Momentus 5400.3	3MA02XEV

EUT Used cables

Cable Type	Shield	Length (m)	Ferrite	Connector	Connection Point 1	Connection Point 2
DC IN	Yes	1.2	Yes	Jack	EUT	Adapter
DC IN	No	0.1	No	Jack	EUT	External battery
USB	Yes	1.2	Yes	USB	EUT	PC
CF/MD Card slot	No	-	No	CF/MD Card slot type	EUT	CF Card
SD Card slot	No	-	No	CF/MD Card slot type	EUT	SD Card

Operating conditions

The operating mode/system were as follows in details:

Operating: After connected from each USB port of PC to E.U.T by USB cable, and connected from EUT to Compact Flash card & SD card. And the EUT was tested in state of data transmission continually by used "Down & Upload" program.



KST-FCC-EMC-01

KOSTEC Co., Ltd Test Lab : www.kosteclab.com
180-254, Annyung-dong, Hwasung-shi, Kyunggi-do, Korea 445-970

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FAX : 82-31-222-4252



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EMI Test Report

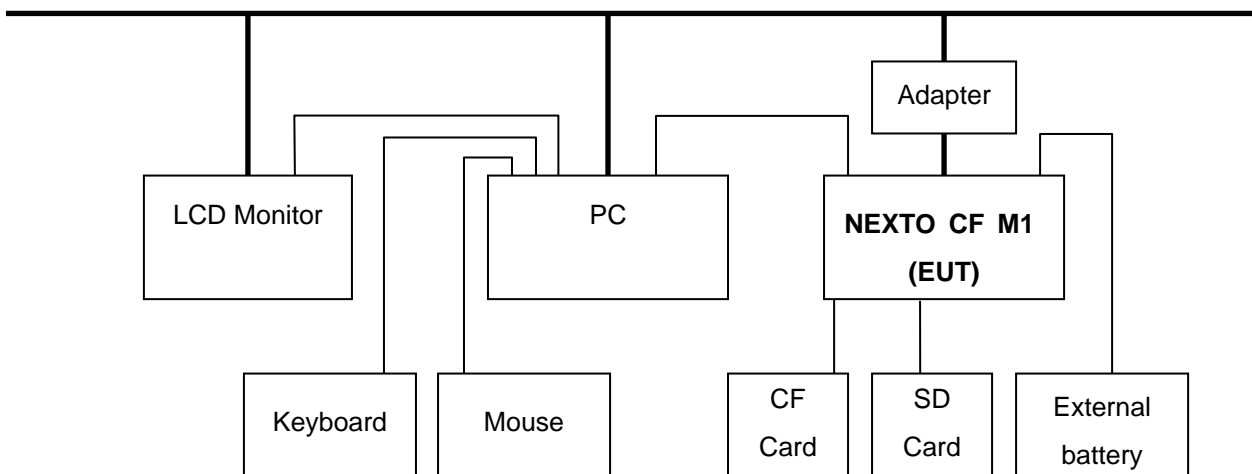
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Peripherals

No	Description	Manufacturer	Model/Part #	Serial Number
1	PC	Dell Inc.	DIMENSION 4700	8VKSD1S
2	LCD Monitor	Dell Inc.	E173FPb	CN-0C5385-46633-539-383L
3	Keyboard	SILITEK YET FOUNDATE	SK-8115	None
4	Mouse	Dell Inc.	MO56UO	526102771
5	Adapter	Dee Van Electronics (Shenzhen) Co., Ltd.	DSA-0101F-05 KA 1	None
6	External battery	None	None	None
7	SD Card	Transcend	None	None
8	CF Card	Transcend	None	None
9	NEXTO CF M1	NEXTO DI Inc.	ND 2325	Proto type

E.U.T Test Configuration (example)



6. Summary of test results

Modification to the E.U.T.

- None

Result : PASS

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7. TEST RESULTS

7.1 Conducted emission

Measurement procedure

Mains

The measurements were performed in a shielded room. EUT was placed on a non-metallic table height of 0.4 m above the reference ground plane. They were folded back and forth forming a bundle 30 cm to 40 cm long and were hanged at a 40 cm height to the ground plane.

Each EUT power lead, except ground (safety) lead, were individually connected through a LISN to input power source.

Both lines of power cord, hot and neutral, were measured.

Used equipment

Equipment	Model no.	Serial no.	Makers	Next cal date	Used
Test receiver	ESPI3	100109	R&S	2008.03.03	●
L.I.S.N.	ESH2-Z5	100044	R&S	2008.04.30	●
	ESH3-Z5	100147	R&S	2007.08.11	●

Measurement uncertainty

Conducted Emission measurement : ± 2.4 dB (K=2)

Test Data

< Class B >

FREQ. (MHz)	LEVEL(dB μ V)		LINE Pol	Loss (dB)	LIMIT(dB μ V)		MARGIN(dB μ V)	
	QP	AV			QP	AV	QP	AV
0.158	43.05	28.04	L	0.08	65.57	55.57	22.44	27.45
0.314	34.47	27.82	L	0.29	59.86	49.86	25.10	21.75
0.498	34.82	26.03	L	0.29	56.03	46.03	20.92	19.71
0.670	32.96	22.66	L	0.90	56.00	46.00	22.14	22.44
0.858	33.63	20.51	N	0.43	56.00	46.00	21.94	25.06
1.662	33.26	23.29	N	0.44	56.00	46.00	22.30	22.27
6.074	21.03	13.91	N	0.97	60.00	50.00	38.00	35.12
6.950	21.81	14.75	N	0.97	60.00	50.00	37.22	34.28
7.386	24.96	16.76	L	1.20	60.00	50.00	33.84	32.04

* Level = test receiver reading value

* Loss = LISN insertion Loss + Cable Loss



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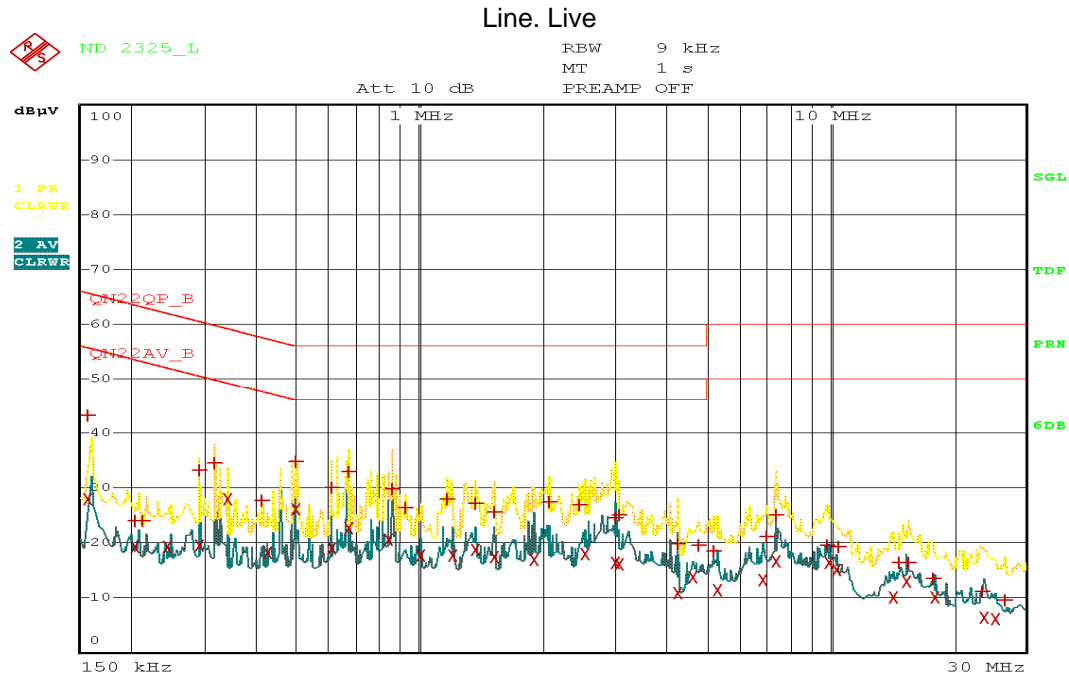
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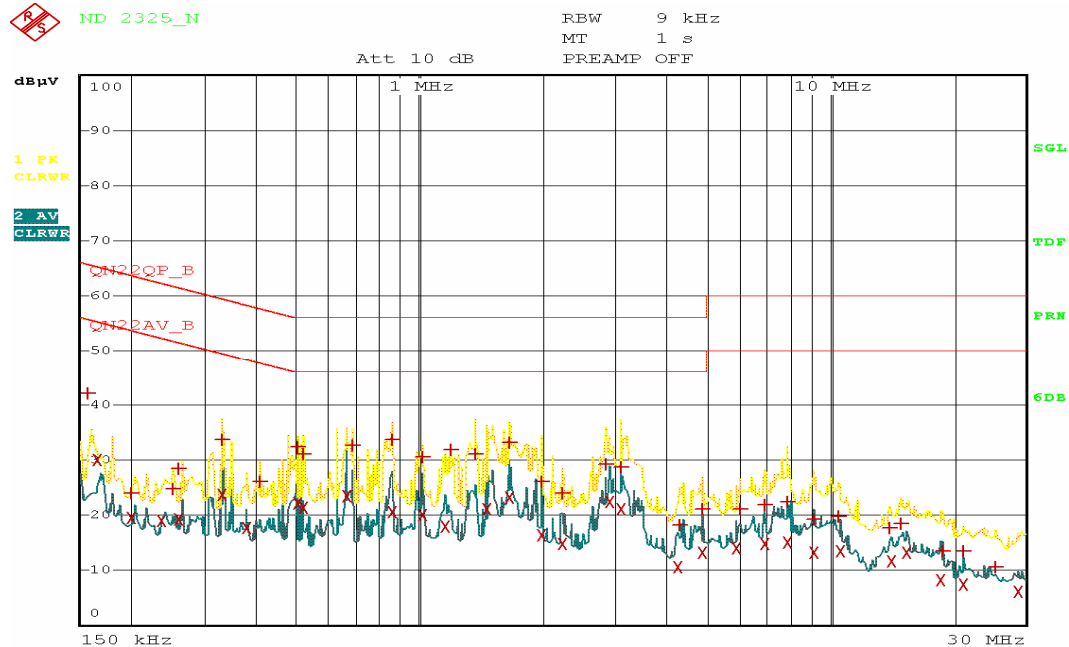
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Conducted emission test graph



Date: 10.MAY.2007 13:10:03

Line. Neutral



Date: 10.MAY.2007 13:13:04

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7.2 Radiated Emission

Measurement procedure

A pretest was performed at 3 m distances in a semi-anechoic chamber for searching correct frequency. The final test was done at a 10 m open area test site with a quasi-peak detector. EUT was placed on a non-metallic table height of 0.8 m above the reference ground plane. Cables connected to EUT were fixed to cause maximum emission. Test was made with the antenna positioned in both the horizontal and vertical planes of polarization. The measurement antenna was varied in height above the conducting ground plane to obtain the maximum signal strength.

Used equipment

Equipment	Model no.	Serial no.	Makers	Next cal	USED
Test receiver	ESCS30	100111	R&S	2008.03.07	●
Ultra broadband antenna	HL562	100075	R&S	2008.03.23	●
Antenna Mast	AT14	None	Daeil EMC	-	●
Turn Table	TT15	None	Daeil EMC	-	●
10m Open area site	None	None	KOSTEC Lab	-	●
chamber(3m)	None	None	FRANCONIA	-	-

Measurement uncertainty

Radiated Emission measurement :

30 ~ 300 MHz + 3.96 dB / -4.04 dB
300 ~ 1000 MHz + 3.04 dB / -3.00 dB

Test Data

<Class B >

Freq (MHz)	Reading (dBμV/m)	P (H/V)	H (m)	A (.)	Antenna (dB)	Cable Loss (dB)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)
36.00	18.37	V	2.50	170	16.15	2.18	36.70	40.0	3.30
85.57	19.30	V	2.50	170	8.50	3.40	31.20	40.0	8.80
120.02	12.40	V	2.50	270	9.60	3.70	25.70	43.5	17.80
144.02	15.50	V	2.20	90	7.76	4.14	27.40	43.5	16.10
210.03	14.60	H	2.40	45	7.60	5.00	27.20	43.5	16.30
240.00	18.80	H	2.40	90	9.10	5.20	33.10	46.0	12.90
304.80	13.64	H	2.20	180	11.12	6.54	31.30	46.0	14.70
443.87	9.21	H	2.20	180	14.46	7.83	31.50	46.0	14.50

Reading = Test receiver reading / P= antenna Polarization / H=antenna Height

A=turn table Angle / Antenna = antenna factor / Cable loss = used cable loss

Result = reading + antenna + loss / Margin = Limit - result

* Receiving Antenna Mode: Horizontal, Vertical / * Test site: 3 m Open area site