

FCC EVALUATION REPORT FOR CERTIFICATION

KOREA Standard Technology

Test report No.: KST-FCC0541

Applicant's Name : NEW WORLD NET CO., LTD

Applicant's Address : 3F, Taehwa B/D. 1-3 Dongmun-Dong, Jung-Gu, Daegu,
Korea

Manufacturer's Name : NEW WORLD NET CO., LTD

Manufacturer's Address : 3F, Taehwa B/D. 1-3 Dongmun-Dong, Jung-Gu, Daegu,
Korea

EUT's:

FCC ID : TL8NEW-H100

Product Name : USB STORAGE

Model Number(s) : NEW-H100

Product Options : N/A

Category : FCC Part 15 subpart B

Class B Computing 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 : September 2, 2005.

Issued Date : September 5, 2005.

Tested by:



Jung, Jae-Yoon

Approved by:



Lee, Weon-Woo



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1. Description of Device

1) Kind of equipment:	USB STORAGE
2) FCC ID:	TL8NEW-H100
3) Model Name:	NEW-H100
4) Serial No.:	None
5) Type of Sample Tested:	Pre-production
6) High Frequency Used:	12.000 MHz
7) Adapter	-None
8) Power Rating:	1phase AC100-240V, 50/60Hz, 300W Output: DC 12V, 5V - PC POWER
9) Tested Power supply:	1phase AC120V, 60Hz
10) Date of Manufacture:	September 2005
11) Manufacture:	NEW WORLD NET CO., LTD.
12) Description of Operating:	UP & DOWN MODE
13) Dates of Test:	September 5, 2005
14) Place of Tests:	Korea Standard Technology EMC site
15) Test Report No:	KST-FCC0541



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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.

Korea Standard Technology (KOSTEC Co., Ltd)

Head office & Test Lab :

:180-254, Annyung-Ri, Taean-Yup, Hwasung-shi, Kyunggi-do, Korea

Telephone Number: 82-31-222-4251

Facsimile Number: 82-31-222-4252

Test Lab

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

FCC Filing Number: **525762**

VCCI Membership Number: **2005**

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

KOLAS(Korea Laboratory Accreditation Scheme) Number: **232**

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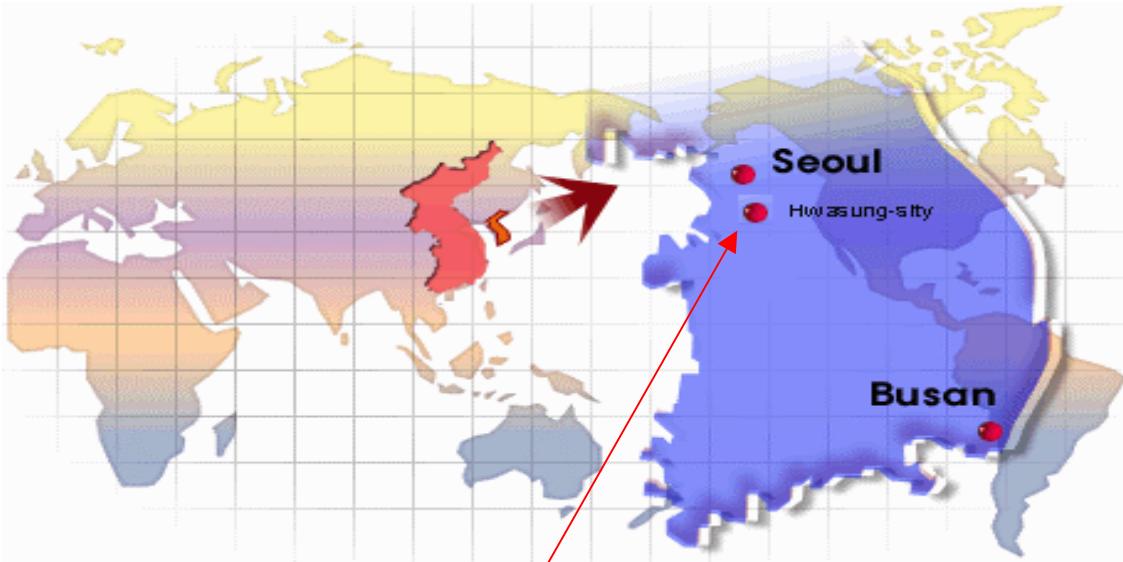
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3. MAP

Korea



Hwasung-si (open area test site)



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4. Test System Configuration

Operation Environment

	<u>Temperature</u> (° C)	<u>Humidity</u> (%)	<u>Pressure</u> (hPa)
Ambient			
10m Open Area site	28	47	1004
Shielded room:	23	38	1004

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, site 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:

$$FS = MR + LF + CL$$

MR = Meter Reading

LF = LISN Factor

CL = Cable Loss

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

The result (MR) is

$$30 + 1 + 1 = 32 \text{ dBuV}$$

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5. Description of E.U.T.

Product Description

Manufactured By:	NEW WORLD NET CO., LTD
Address:	3F, Taehwa B/D. 1-3 Dongmun-Dong, Jung-Gu, Daegu, Korea
Model:	NEW-H100
Serial Number:	None

Configuration of EUT

Description	Manufacturer	Model / Part #	Serial Number
Main Controller	NEW WORLD NET CO., LTD	None	None
HDD	Seagate	ST6502IIFX	3ME69T7Z

EUT Used cables

Cable Type	Shield	Length (m)	Ferrite	Connector	Connection Point 1	Connection Point 2
POWER	Y	1.5	-	AC INLET	PC	Main power source
USB	Y	0.5	Y	USB	EUT	PC
PS/2	Y	1.2	Y	Din	PC	Keyboard
PS/2	Y	1.5	-	Din	PC	Mouse
Parallel	Y	1.5	Y	D-sub	PC	Printer
VGA	Y	1.5	Y	D-sub	PC	Monitor
Audio	-	2.0	-	Jack	5.1 CH Headset	PC

Operating conditions

The operating mode/system were as follows in details:

Operating: After Connected from personal computer to E.U.T by USB cable. And then use to "Down & Upload" program for data transmission and continuously "Down & Upload" pattern displayed on the Monitor.

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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 40Cm 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	2006.3.15	
L.I.S.N.	ESH2-Z5	100044	R&S	2006.4.23	
	ESH3-Z5	100147	R&S	2006.8.12	

Measurement uncertainty

Conducted Emission measurement : \pm 2.4 (K=2)

Test data

FREQ. (MHz)	LEVEL(dB μ V)		LINE Pol	Loss (dB)	LIMIT(dB μ V)		MARGIN(dB)	
	QP	AV			QP	AV	QP	AV
0.154	43.85	42.58	N	0.29	65.57	55.57	22.01	13.28
0.206	41.79	41.46	L	0.29	63.53	53.53	22.03	12.36
0.306	38.38	37.74	N	0.29	60.19	50.19	22.10	12.74
0.510	31.78	30.31	N	0.90	56.00	46.00	25.12	16.59
0.818	25.11	20.27	L	0.43	56.00	46.00	31.32	26.16
12.542	18.91	11.58	L	1.52	60.00	50.00	42.61	39.94
19.430	35.26	30.14	N	1.77	60.00	50.00	26.51	21.63
25.030	30.43	27.33	N	2.32	60.00	50.00	31.89	24.99

* Level = test receiver reading value

* Loss = LISN insertion Loss + Cable Loss

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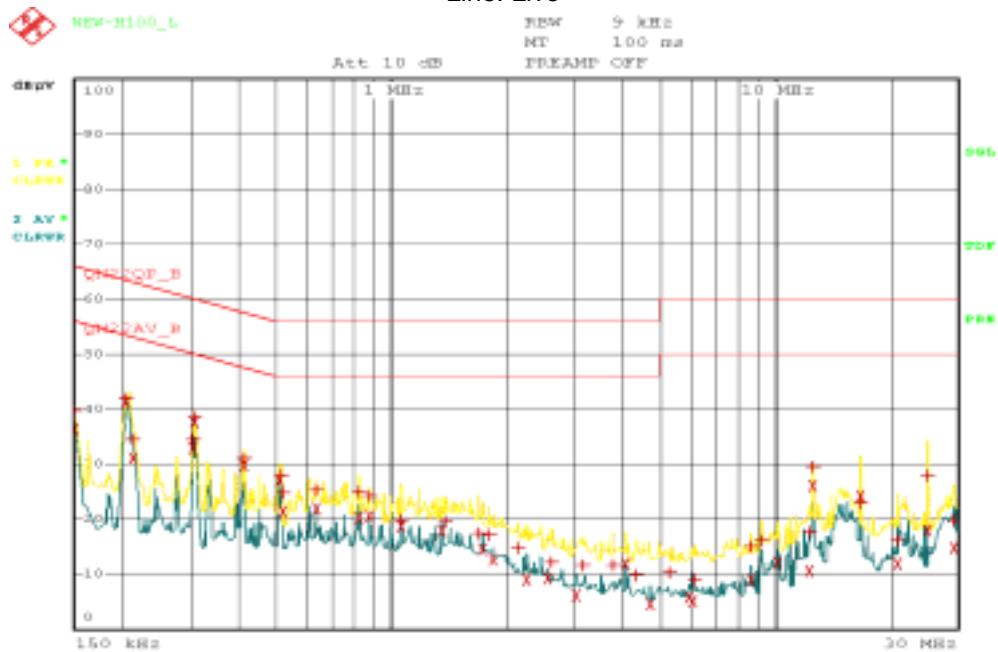
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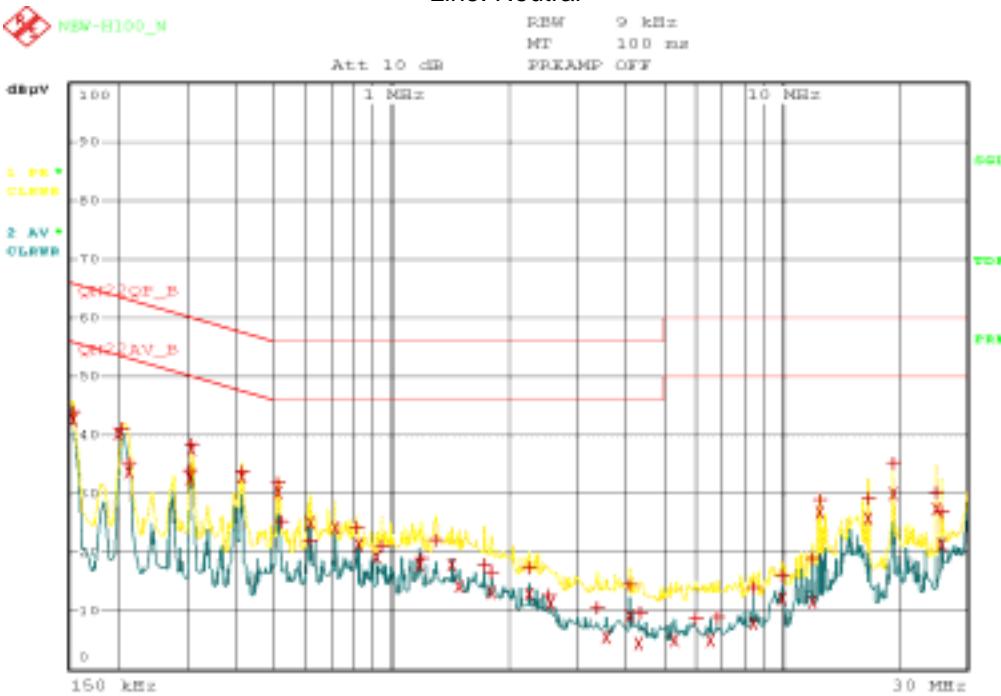
Conducted emission test graph

Line. Live



Date: 2 SEP 2005 22:31:31

Line. Neutral



Date: 2 SEP 2005 22:23:07

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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 date
Test receiver	ESCS30	100111	R&S	2006.3.17
Ultra broadband antenna	HL562	100075	R&S	2006.3.16
Matching network	RAM	358.5414.02	R&S	-
Antenna Mast	AT14	none	Daeil EMC	-
Turn Table	TT15	none	Daeil EMC	-
10 m Open area site	none	none	KOSTEC Lab	-
chamber(3 m)	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

Freq (MHz)	Reading (dBuV/m)	P (H/V)	H (m)	A (.)	Antenna (dB)	Cable Loss (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)
85.90	19.10	H	3.00	45	8.50	3.40	27.10	40.0	12.90
114.54	18.24	V	1.50	100	9.40	3.76	31.40	43.5	12.10
143.17	19.44	V	1.50	180	7.83	4.13	31.40	43.5	12.10
171.81	21.29	V	1.50	200	7.48	4.33	33.10	43.5	10.40
286.35	22.44	V	1.50	300	10.54	6.32	39.30	46.0	6.70
343.13	21.41	H	3.00	100	12.23	6.96	40.60	46.0	5.40
501.12	16.05	H	3.00	180	15.52	7.63	39.20	46.0	6.80
629.99	14.80	H	2.00	90	17.39	9.41	41.60	46.0	4.40

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

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