



EMC - Test Report

Model : NPU-10

FCC ID	O8UNPU-10		
Product type	USB PC CAMERA	Serial No.	-
Applicant	NETPOWER CO., LTD.		
Address	Baekam Bldg., 6F 123, Karak-Dong, Songpa-Gu, Seoul, KOREA		
Manufacturer	NETPOWER CO., LTD.		
Address	Baekam Bldg., 6F 123, Karak-Dong, Songpa-Gu, Seoul, KOREA		
 Test specification : FCC Part15 Subpart B Class B (Standard)			
 Test Result : In compliance			
<i>Tested by</i> (Test engineer)		<i>Reviewed by</i> (EMC Manager)	
<u>2000-09-25</u>	<u>Young Joon, Park</u>	<u>2000-09-25</u>	<u>James, Hong</u>
Date	Name	Date	Name
			
	Signature		Signature
Definition ☒ : Applicable, ☐ : Not Applicable, N/A : Not Applicable, - : Not Applicable			

The test result only responds to the tested sample.

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CERTITEK STANDARDS LABORATORY CO., LTD.



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1. EUT description

Introduction

NPU-10 is a USB PC CAMERA.

Identification

Receipt date : 2000-09-21

Model : NPU-10

Manufacturer : NETPOWER CO., LTD.

Address : Baekam Bldg., 6F 123, Karak-Dong, Songpa-Gu, Seoul, **KOREA**

Contact person : Y.J. KIM (Manager)

Telephone : +82 - 2 - 403 - 7678~9

Peripheral Device Ports

Port name	Description
Earphone	Connect to Earphone
USB	Connect to PC' s USB Port
DC IN	Connect to Adaptor

Electrical rating

Input : From PC's USB Port.

Output : -

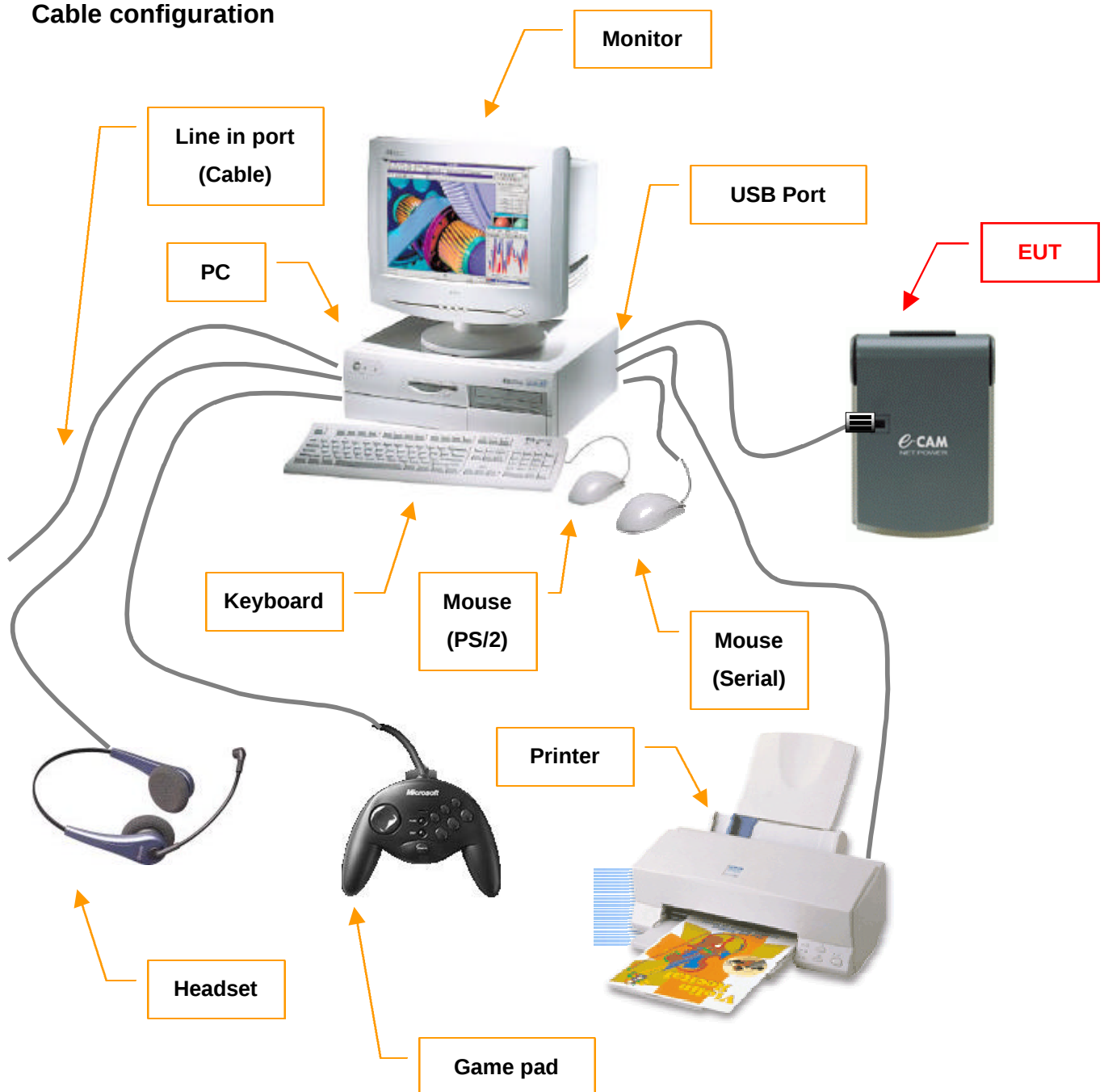


2. Test Set-up

Test Mode

Normal operation mode. Display image to monitor screen.

Cable configuration



**Cable description**

	Port name (start / end)	Type	Length (m)	Remark
A	EUT' s USB / PC' s USB	Shielded	1.2	Connected to PC' s USB port
B	PC' s Serial / Mouse	Shielded	1.6	Connected Serial Mouse
C	PC' s Parallel / Printer	Shielded	1.6	Connected Printer
D	PC' s Keyboard / Keyboard	Shielded	1.5	Connected PS/2 Keyboard
E	PC' s Mouse / Mouse	Shielded	1.6	Connected PS/2 Mouse
F	PC' s Sound (Speaker / Mic / Line in) / Headset & Cable	Unshielded	2.0	Connected Headset & Cable
G	PC' s Game Port / Game pad	Unshielded	2.0	Connected Game pad
H	PC' s Video / Monitor	Shielded (With Ferrite Core)	1.8	Connected Monitor

Auxiliary equipment

	Description	Model name	Serial No.	Manufacturer
1	PC	DTPC-17	G1703009	HEWLETT PACKARD
2	Monitor	PG17HS	301661	SAMSUNG
3	Printer	Stylus COLOR 460	BWCE143331	EPSON
4	Keyboard	SK-2502C	M000351491	HEWLETT PACKARD
5	Mouse (PS/2)	M-S48	LZA84601000	LOGITECH
6	Mouse (USB)	M-BB48	LZE93853176	LOGITECH
7	Mouse (Serial)	M-S48	LZA91153127	SOTEC
8	Game pad	Side Winder	03421317	Microsoft Corporation
9	Headset	Hi-sonic	-	-

Test software

Software name	Manufacturer	Version	Description
e-CAM	NETPOWER CO., LTD.	1.2	-



Measurement Procedures

Preliminary AC power line conducted emissions tests were performed shielded room. To find worst mode, several typical mode and typical cable position were tested.

Final AC power line conducted emissions test was performed shielded room.(location is same as Preliminary test)

Based on the preliminary tests of the EUT, final test was proceeded worst case test mode and cable configuration.

Preliminary radiated emissions test were performed anechoic chamber (Distance of antenna and EUT was 3m). To find worst mode, several typical mode and typical cable position were tested and peak level and frequency were recorded.

Final radiated emissions test was performed Open Area Test Site. Based on the preliminary tests of the EUT, final test was proceeded worst case test mode and cable configuration.

* Measurement procedures was In accordance with ANSI C63.4-1992 7.2.3, 7.2.4 and 8.3.1.1, 8.3.1.2



3. Test Result

Test summary

Test	Result	Remark
Emission test (EMI)		
Radiated emission	Met	
Conducted emission	Met	

Measurement uncertainty (k=2)

150kHz~30MHz: ± 2.68 , 30MHz~300MHz: +4.58, -4.66, 300MHz ~ 1GHz: +3.78, -3.74

Uncertainty parameter was calculated according to 'NAMES Publication NIS 80'

The tested NPU-10 fully meets the Requirements of ANSI C63.4-1992, when operated as described in this report.

President of Certitek standards laboratory.

2000-09-25

Date

Kedin, Lyoun

Name

Signature

**Radiated emission**Test result: **Met**

Date of testing : 2000-09-23

Ambient temperature: 25°C, Relative humidity: 60%, Atmospheric pressure: 999hPa(mbar)

Test site type: Open area test site

Reference Standard: FCC Part15 Subpart B , Class B

Test and measurement equipment (Main equipment)

Model name	Manufacturer	Description	Serial No.
BBA9106	Schwarzbeck	Biconical antenna	41-00210
UHALP9107	Schwarzbeck	Log-periodic antenna	1452
ESVS30	Rohde Schwarz	Field strength meter	826638/008
-	-	-	-

Frequency Band 30MHz - 1000MHz

Antenna distance 3m (From the EUT)

Test data sheet

Frequency [MHz]	Reading [dBuV/m]	Pol.	Height [m]	Correction Factor		Limits [dBuV/m]	Result [dBuV/m]	Margin [dB]
				Antenna	Cable			
47.96	20.1	V	1.5	10.28	0.60	40.0	30.98	9.02
72.01	26.3	H	4.0	8.80	0.90	40.0	36.00	4.00
108.12	21.2	H	3.0	10.65	1.10	43.5	32.95	10.55
143.96	14.7	V	3.1	12.30	1.40	43.5	28.40	15.10
144.02	17.6	H	2.5	12.30	1.40	43.5	31.30	12.20
205.68	17.1	V	1.0	15.45	1.70	43.5	34.25	9.25
480.85	18.6	V	1.2	17.42	3.30	46.0	39.32	6.68
552.01	18.6	H	2.5	18.30	3.50	46.0	40.40	5.60
696.25	14.2	H	2.2	21.60	3.90	46.0	39.70	6.30
744.12	14.1	V	1.3	21.28	4.50	46.0	39.88	6.12
848.23	14.7	V	1.2	21.80	4.50	46.0	41.00	5.00
960.84	13.2	V	2.0	23.30	4.80	54.0	41.30	12.70

Comment : -

**Conducted emission**Test result: **Met**

Date of testing : 2000-09-23

Ambient temperature: 23°C, Relative humidity: 40%, Atmospheric pressure: 998hPa(mbar)

Test site type: Shielded room

Reference Standard: FCC Part15 Subpart B , Class B

Test and measurement equipment (Main equipment)

Model name	Manufacturer	Description	Serial No.
3825/2	EMCO	LISN	9206-1971
ESHS30	Rohde Schwarz	Field strength meter	828144/002
-	-	-	-

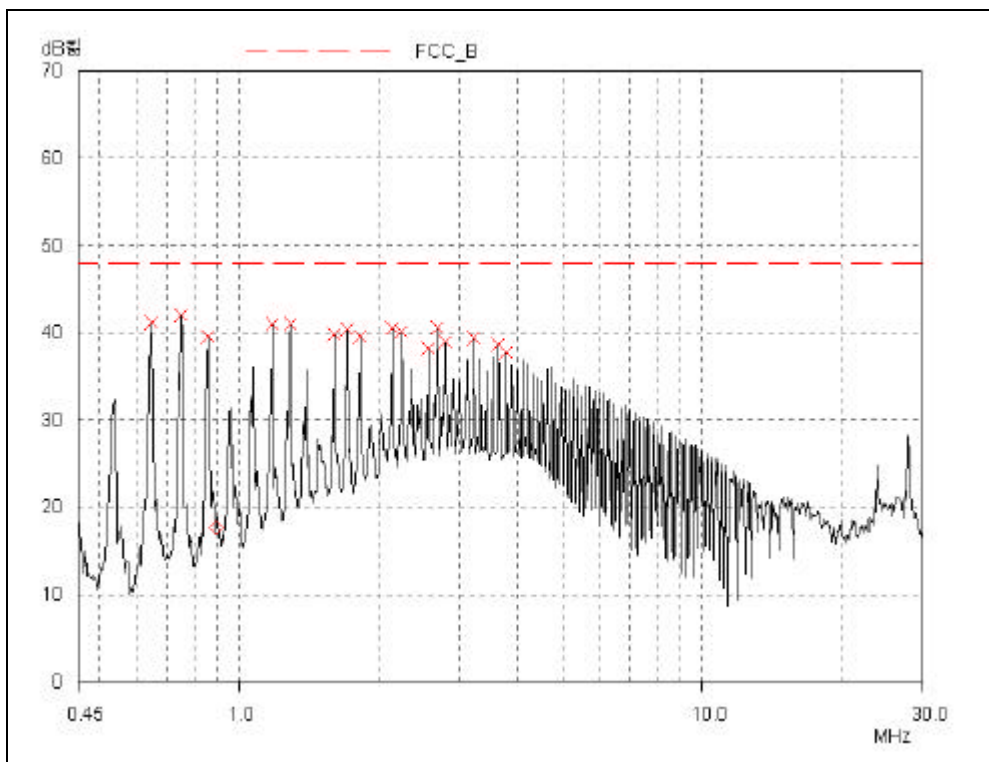
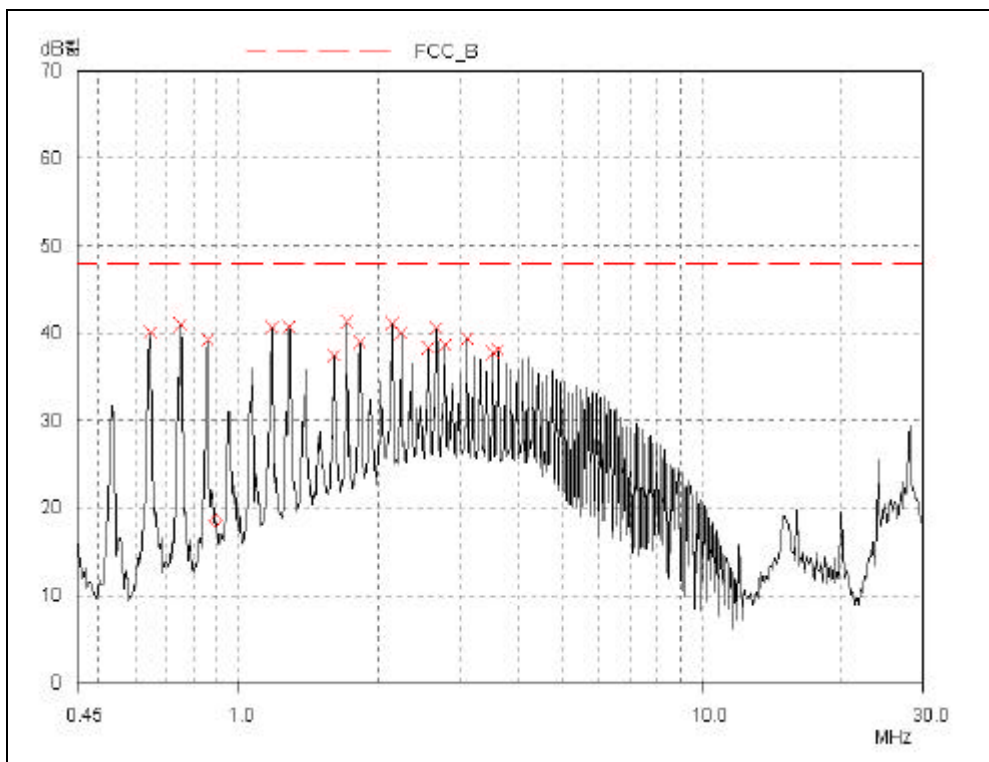
Test data sheet

Frequency [MHz]	Correction Factor		Line	Quasi-peak				Average			
	LISN	Cable		Limit [dBuV]	Reading [dBuV]	Result [dBuV]	Margin [dB]	Limit [dBuV]	Reading [dBuV]	Result [dBuV]	Margin [dB]
0.65	0.2	0.1	N	48.0	42.0	42.3	5.7				
0.78	0.2	0.1	H	48.0	42.0	42.3	5.7				
0.86	0.2	0.1	H	48.0	39.9	40.2	7.8				
1.18	0.2	0.1	H	48.0	41.0	41.3	6.7				
1.31	0.2	0.1	N	48.0	42.0	42.3	5.7				
1.61	0.3	0.1	N	48.0	37.8	38.2	9.8				
1.80	0.3	0.1	H	48.0	41.0	41.4	6.6				
1.83	0.3	0.1	N	48.0	39.5	39.9	8.1				
2.15	0.3	0.1	N	48.0	40.5	40.9	7.1				
2.32	0.3	0.1	H	48.0	40.1	40.5	7.5				
2.58	0.2	0.1	N	48.0	40.7	41.0	7.0				
2.69	0.2	0.1	H	48.0	40.6	40.9	7.1				

Comment : -



Test data graphic





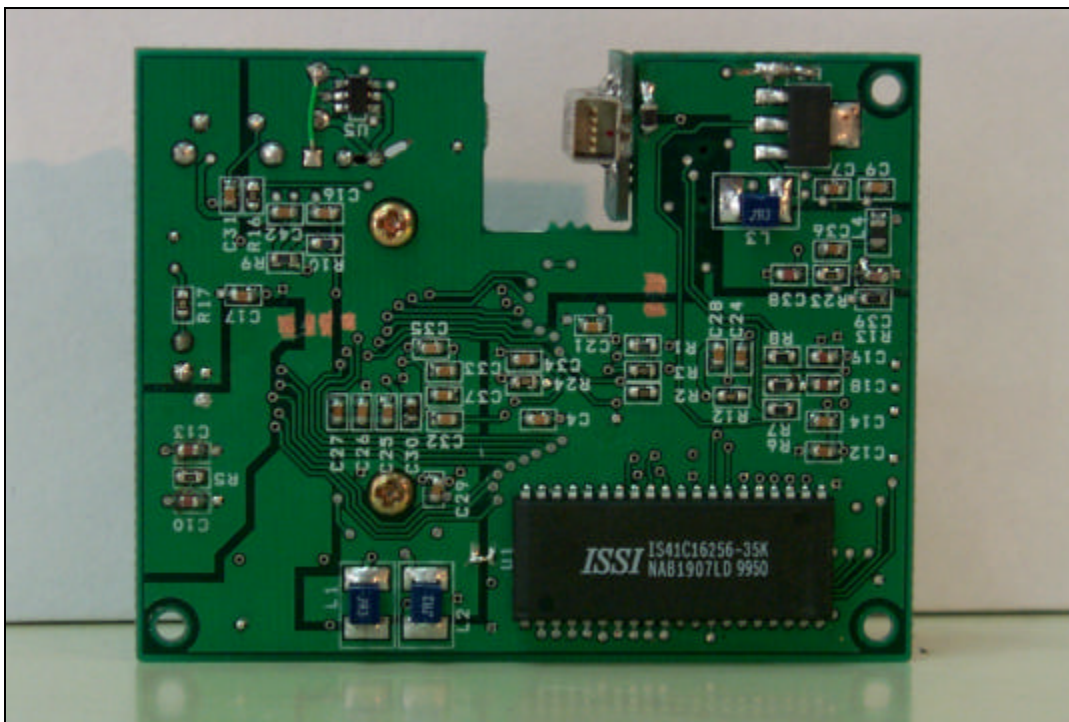
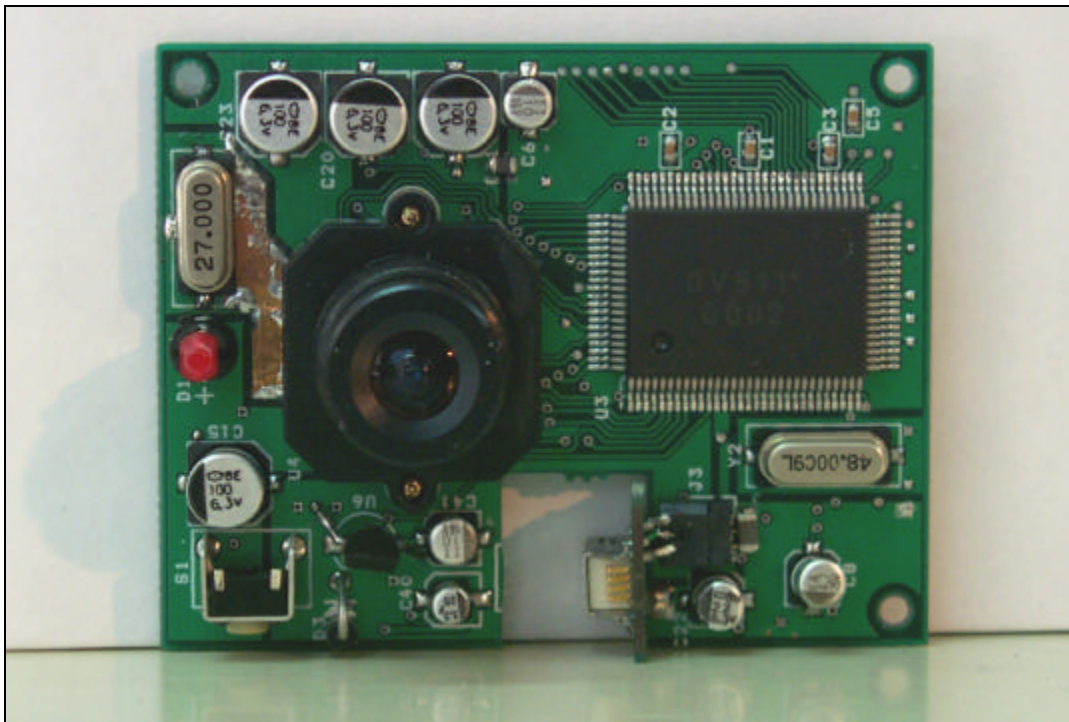
4. Photographs

EUT (Front/Rear)



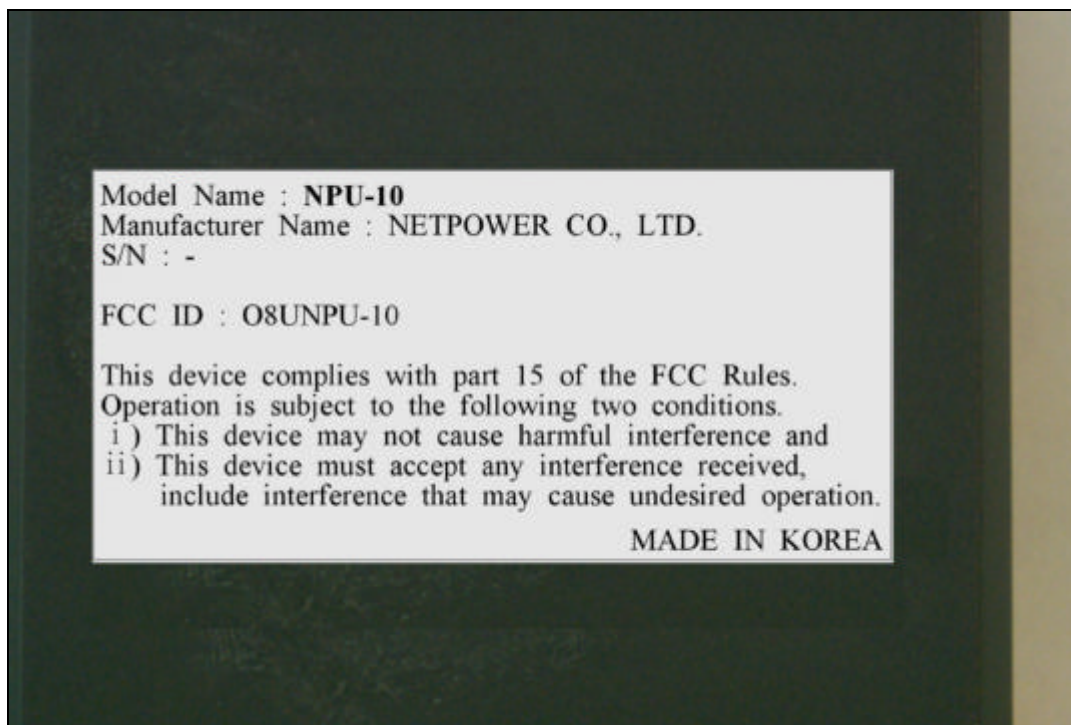


Main Board (Front/Rear)





EUT (Label)





Radiated emission





Conducted emission

