EMC - Test Report

Model: NI-1201

Product type	**PC internal interface card**	**Serial No.**	**-**
Applicant	**NEON GATE INC.**		
Address	**Yooil B/D 4F, 411-14, Dogok-dong, Gangnam-gu, Seoul, Korea.**		
Manufacturer	**NEON GATE INC.**		
Address	**Yooil B/D 4F, 411-14, Dogok-dong, Gangnam-gu, Seoul, Korea.**		

Test specification (Standard) : **FCC Part15 Subpart B Class B**

Test Result : **In compliance**

Tested by
(Test engineer)

July 30, 2001 **Michael Jang** _____
Date Name Signature

Reviewed by
(EMC Technical Manager)

July 30, 2001 **James, Hong** J. H. Hong
Date Name Signature

Definition ☒ : Applicable, ☐ : Not Applicable, **N/A** : Not Applicable, **-** : Not Applicable

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Table of contents

1. EUT description

Introduction

NI-1201 is PC internal interface card that enables users to use internet access at the speed of 1.2 Mbps up to the distance of 1 Km by connecting it to Shelf type unit.

Identification

Receipt date : June 27, 2001

Model : NI-1201

Manufacturer : NEON GATE INC.

Address : Yooil B/D 4F, 411-14, Dogok-dong, Gangnam-gu, Seoul, Korea.

Contact person : Mr. Y. M. Yang

Telephone : +82-2-576-9730 (extension. : 241)

Serial No : -

EUT Size : 68 X 120 X 20mm (width X length X height)

Peripheral Device Ports

Port name	Description
Telephone connection	RJ-11
Corporate line connection	RJ-11

Electrical rating

Input : Supply by personal computer

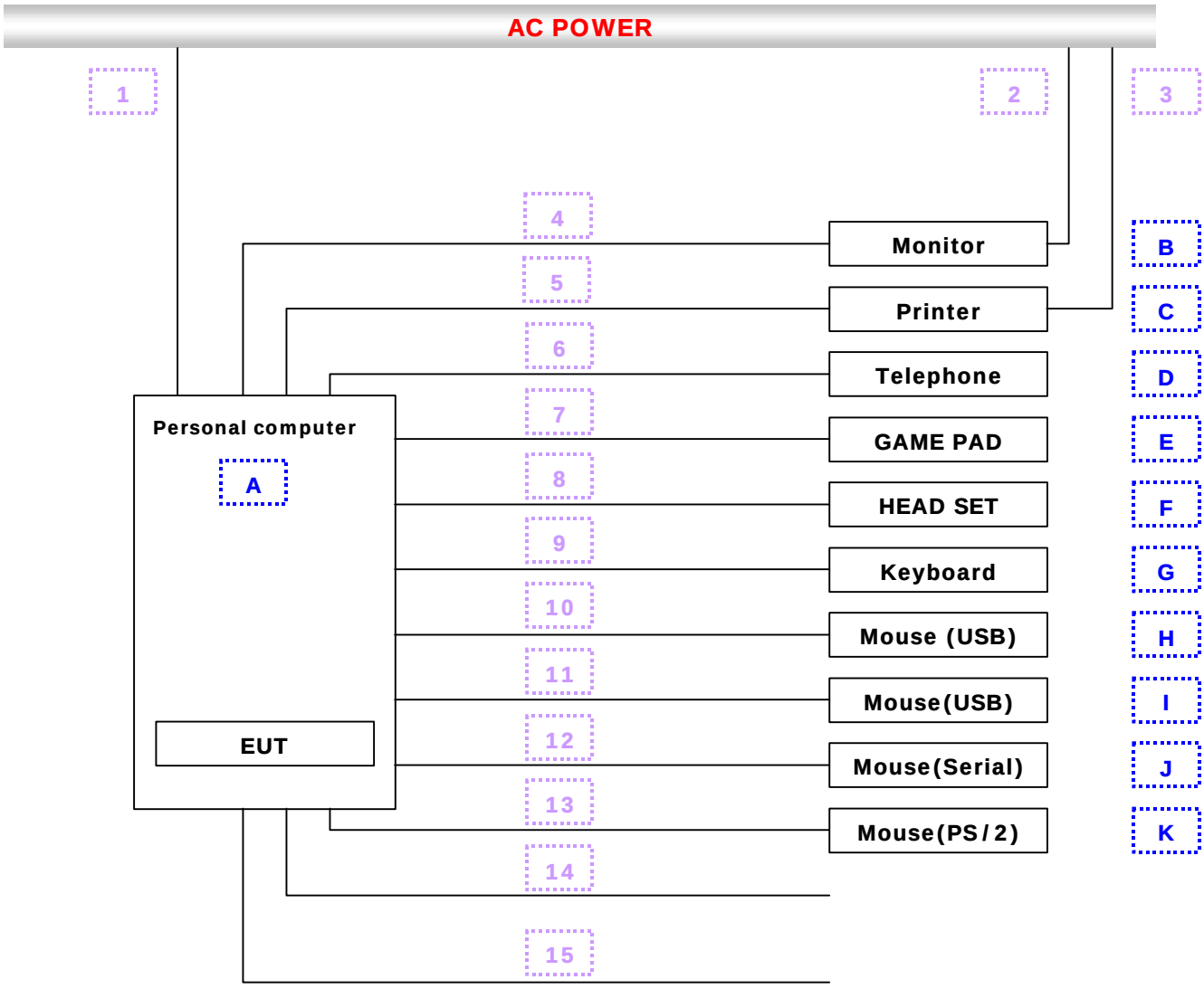
Output : -

2. Test Set-up

Test Mode

Normal load: Ping test

Cable configuration



Cable description

	Port name	Type	Length (m)	Remark
1	PC Power cable	Unshielded	2.0	-
2	Monitor Power cable	Unshielded	2.0	-
3	Printer Power cable	Unshielded	2.0	-
4	Video cable	Shielded	1.6	-
5	Parallel cable	Shielded	2.0	-
6	Telephone cable	Unshielded	2.0	-
7	Game Pad cable	Unshielded	2.0	-
8	Head Set cable	Unshielded	2.0	-
9	Keyboard cable	Unshielded	2.0	-
10	Mouse(USB) cable	Unshielded	2.0	-
11	Mouse(USB) cable	Unshielded	2.0	-
12	Mouse(Serial) cable	Unshielded	2.0	-
13	Mouse(PS/2) cable	Unshielded	2.0	-
14	Line in cable	Unshielded	2.0	-
15	Corporate line cable	Unshielded	2.0	Connected to corporate line

Auxiliary equipment

	Description	Model name	Serial No.	Manufacturer	FCC ID or DoC Info
A	PC	DTPC-17	G1703009	HEWLETT PACKARD	DoC
B	Monitor	PG17HS	301661	SAMSUNG	DOC
C	Printer	C4530A	US7A91703J	HEWLETT PACKARD	DoC
D	Telephone	-	-	-	N/A
E	Game pad	Side Winder	03421317	Microsoft	C3KMGP1
F	Head set	Hi-sonic	-	-	N/A
G	Keyboard	SK-2502C	M000351491	HEWLETT PACKARD	DoC
H	Mouse(USB)	M-BB48	LZE93853157	LOGITECH	DoC
I	Mouse(USB)	M-BB48	LZE93853176	LOGITECH	DoC
J	Mouse(Serial)	M-S48	LZA91153127	SOTEC	DZL211153
K	Mouse(PS/2)	M-S48	LZA84601000	LOGITECH	JNZ201213

Test software

Software name	Manufacturer	Version	Description
Ping	Microsoft	-	-

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 tests 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 'NAMAS Publication NIS 80'

The tested NI-1201 fully meets the Requirements of ANSI C63.4-1992, when operated as described in this report.

Radiated emission

Test result: **Met**

Date of testing : July 2, 2001

Ambient temperature: 26 °C, Relative humidity: 50 %, Atmospheric pressure: 999 hPa(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
3146	EMCO	Log-periodic antenna	9607-4567
ESVS30	Rohde Schwarz	Field strength meter	826638/008
-	-	-	-

Frequency Band 30MHz - 1000MHz

Antenna distance 3m (From the EUT)

Test data sheet

Frequency	Reading	Pol.	Height	Correction Factor		Limits	Result	Margin
[MHz]	[dBuV/m]		[m]	Antenna	Cable	[dBuV/m]	[dBuV/m]	[dB]
198.80	9.4	H	4.0	15.00	1.60	43.5	26.02	17.48
199.40	9.4	V	1.0	15.00	1.60	43.5	25.98	17.52
285.20	3.1	H	4.0	19.95	2.30	46.0	25.39	20.61
299.30	6.8	H	3.8	21.00	2.40	46.0	30.18	15.82
366.50	12.3	V	2.0	15.30	2.60	46.0	30.19	15.81
466.30	13.6	H	3.5	17.18	3.20	46.0	33.96	12.04
732.30	3.3	V	1.0	21.36	4.20	46.0	28.83	17.17
963.30	5.5	V	1.0	23.30	4.80	54.0	33.60	20.40

Comment:

Conducted emission

Test result: **Met**

Date of testing : July 02, 2001

Ambient temperature: 25 °C, Relative humidity: 52 %, Atmospheric pressure: 992 hPa(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	Correction Factor		Line	Quasi-peak				Average			
				Limit	Reading	Result	Margin	Limit	Reading	Result	Margin
[MHz]	LISN	Cable		[dBuV]	[dBuV]	[dBuV]	[dB]	[dBuV]	[dBuV]	[dBuV]	[dB]
0.54	0.3	0.1	H	48.0	36.6	37.0	11.0				
1.61	0.3	0.1	H	48.0	35.0	35.4	12.6				
1.81	0.3	0.1	H	48.0	37.9	38.3	9.7				
1.91	0.3	0.1	H	48.0	37.0	37.4	10.6				
1.93	0.3	0.1	N	48.0	37.3	37.7	10.3				
2.12	0.3	0.1	H	48.0	40.1	40.5	7.5				
2.23	0.3	0.1	H	48.0	34.7	35.1	12.9				
2.24	0.3	0.1	H	48.0	35.0	35.4	12.6				
24.42	0.5	0.4	N	48.0	34.2	35.1	12.9				
25.41	0.6	0.4	N	48.0	35.1	36.1	11.9				

Comment:

Test data graphic