

EMC TEST REPORT

Test report No : EMC-VCCI-0394
Type of Equipment : Digital Video Recorder
Model Name : SRD-482N
Applicant : Samsung Techwin Co., Ltd.
84, Jeongdong-ro, Seongsan-gu,
Changwon-si, Gyeongsangnam-do, Korea
Manufacturer#1 : Samsung Techwin Co., Ltd.
84, Jeongdong-ro, Seongsan-gu,
Changwon-si, Gyeongsangnam-do, Korea
Manufacturer#2 : TIANJIN SAMSUNG TECHWIN
OPTO-ELECTRONIC CO., LTD
No.11 Weiliu Road. Micro-Electronic Industrial
Park Jingang Road Tianjin 300385, China
Test standards : VCCI V-3 / 2013.04, Class A
Testing Laboratory : EMC Compliance Ltd.
Test result : Complied

The above equipment was tested by EMC compliance Testing Laboratory for compliance with the requirements of VCCI Rules and Regulations.

The results of testing in this report apply to the product/system which was tested only.

Other similar equipment will not necessarily produce the same results due to production tolerance and measurement uncertainties.

Date of receipt: 2014. 06. 13

Date of testing: 2014. 07. 16 ~ 07. 17

Issued date: 2014. 07. 21

Tested by: 
HWANG, SUN-BIN

Approved by: 
YEOM, HAN-SEOK

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1. Applicant information

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Manufacturer#2: TIANJIN SAMSUNG TECHWIN OPTO-ELECTRONIC CO., LTD
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2. Laboratory information

Address

EMC compliance Ltd.

65, Sinwon-ro, Yeongtong-gu, Suwon-si, Gyeonggi-do, 443-390, Korea

Telephone Number: 82 31 336 9919

Facsimile Number: 82 505 299 8311

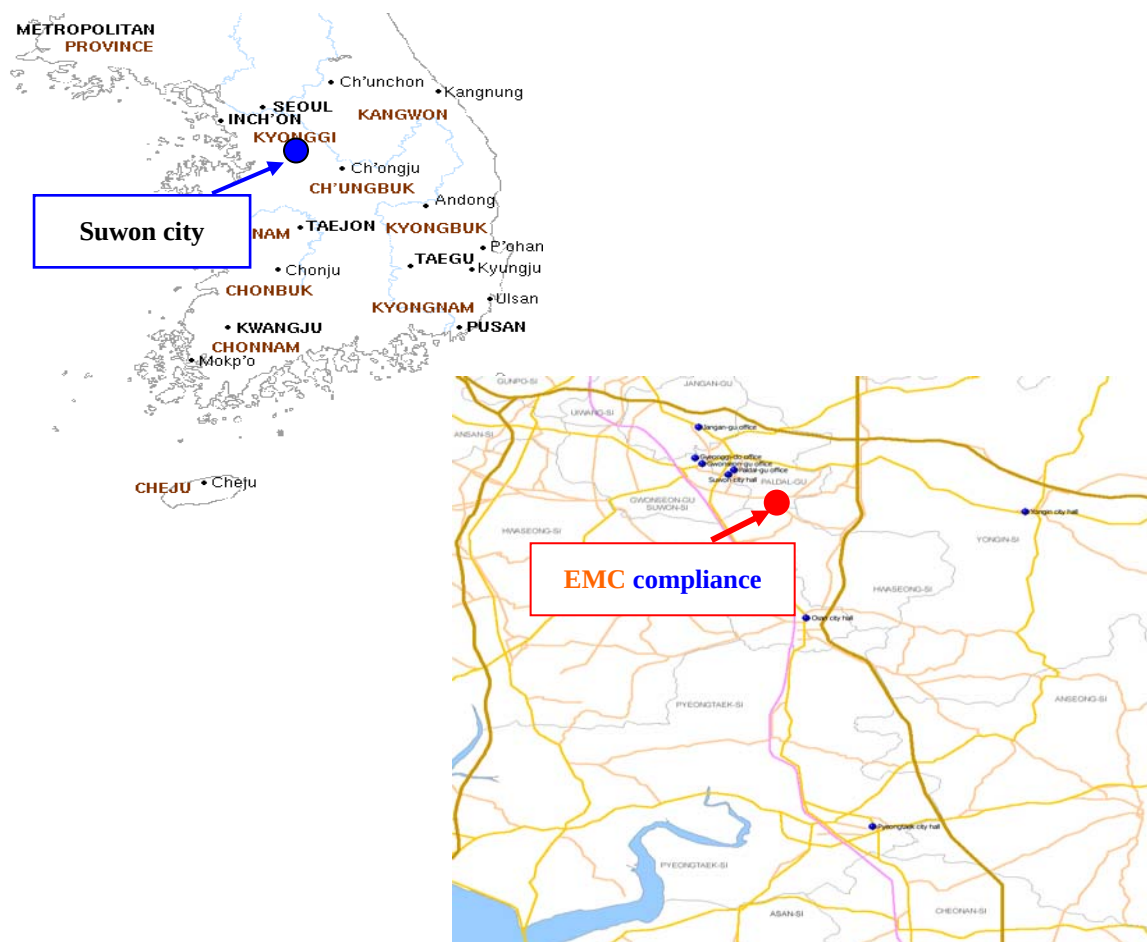
FCC CAB.: KR0040

VCCI Registration No. : R-3327, G-198, C-3706, T-1849

Industry Canada Registration No.: 8035A

KOLAS NO.: 231

SITE MAP



3. Test system configuration

3.1 Operation environment

	Temperature	Humidity	Pressure
Chamber(10 m)	: 24.8 ~ 25.4 °C	47.4 ~ 48.2 % R.H.	-
Shielded room(CE)	: 25.1 °C	46.1 % R.H.	-

Test site

These testing items were performed following locations;

Test item	Test site
Conducted Emission	Shielded Room
Radiated Emission	10 m Chamber

3.2 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 CISPR 16-4-2, the measurement uncertainty level with a 95 % confidence level was applied.

Conducted emission measurement (C.L: Approx 95 %, k = 2)		
Shielded Room (CE#1)	9 kHz ~ 150 kHz: ± 3.75 dB	
	150 kHz ~ 30 MHz: ± 3.36 dB	
Shielded Room (CE#2)	9 kHz ~ 150 kHz: ± 3.79 dB	
	150 kHz ~ 30 MHz: ± 3.42 dB	
Radiated Emission measurement (C.L: Approx 95 %, k = 2)		
10 m Chamber (#F4)	30 MHz ~ 300 MHz	3 m: + 4.87 dB, - 4.99 dB 10 m: + 4.86 dB, - 4.98 dB
	300 MHz ~ 1 000 MHz	3 m: + 5.04 dB, - 5.14 dB 10 m: + 4.91 dB, - 5.02 dB
	1 GHz ~ 6 GHz	3 m: + 6.03 dB, - 6.06 dB
10 m Chamber (#F2)	30 MHz ~ 300 MHz	3 m: + 4.94 dB, - 5.06 dB 10 m: + 4.93 dB, - 5.05 dB
	300 MHz ~ 1 000 MHz	3 m: + 4.97 dB, - 5.08 dB 10 m: + 4.84 dB, - 4.96 dB
	1 GHz ~ 6 GHz	3 m: + 6.03 dB, - 6.05 dB
Radio Frequency Electromagnetic Fields (C.L: Approx 95 %, k = 2)		
± 1.82 dB		
Disturbance power Electromagnetic Fields (C.L: Approx 95 %, k = 2)		
± 3.30 dB		

4. Description of E.U.T.

4.1 General information

SRD-482		
Video	Inputs	4 HD-SDI SMPTE292M
	Resolution	NTSC: 1920x1080, 1280x720 / PAL : 1920x1080, 1280x720
Live	Frame rate	120fps NTSC, 100fps PAL
	Resolution	NTSC: 1920x1080, 1280x720 / PAL : 1920x1080, 1280x720
	Multi Screen display	1/4/SEQUENCE/PIP
Performance		
Operating System	Embedded	Linux
	Compression	H.264
Recording	Record Rate	NTSC: Up to 120fps @ 1920x1080 / PAL: Up to 100fps @ 1920x1080 NTSC: Up to 120fps @ 1280x720 / PAL: Up to 100fps @ 1280x720
	Mode	NTSC: Manual_Schedule (Continuous/Event), Event(Pre/Post), Time lapse (1~30 fns) PAL: Manual_Schedule (Continuous/Event), Event(Pre/Post), Time lapse (1~25 fns)
	Event	Video Loss, Motion(Level 1~10), Alarm, Tampering(Level 1~3)
	Overwrite modes	Selectable(Stop/Continuous)
	Pre-alarm	Up to 30 sec (5,10,20,30 Sec)
	Post-Alarm	Up to 6 hour (5,10,20,30 sec,1,3,5,10,20 min,1,2,3,4,5,6 hour)
	Search mode	Date/time, Event, Back up, Pos. Motion (* All Search Included Preview Function)
	Playback function	Fast Forward/Backward (x2,x4,x8,x16,x32,x64) * Backward Play with I-frame Only, Slow Forward/Backward (x1/2,x1/4,x1/8) Step Forward/Backward (x2, x4,x8,x16,x32,x64) * Backward Play with I-frame Only
Network (IPv4)	Transmission speed	NTSC : 1~2M(120fps) / PAL : 1~2M(100fps)
	Bandwidth	Up to 64Mbps
	Bandwidth control	Selectable
	Stream	H.264(1080p,720p,4CIF/2CIF/CIF Selectable)
	Remote users Maximum	Search(3)/Live Unicast(10)/Live Multicast(20)
	Protocol support	TCP/IP,DHCP,PPPoE,SMTP,NTP,HTTP,DDNS,RTP,RTSP,SNMP
	Monitoring	Smart viewer,Web viewer, SSM(CMS)
Smart phone	Platform	Android , iOS
	Protocol support	RTP,RTSP,HTTP,CGI
	Remote users Maximum	Live(1), Play Back(1CH)
Storage	Internal HDD	Up to 2 SATA HDDs
	External (e-SATA Interface)	Up to 2 expansion bay (*Model: SVS-5R/5E)
	DVD Writer (Back-up)	N/A
	USB (Back-up)	2 USB Ports
	File Format (Back-up)	BU(DVR Player), EXE(Include Player),AVI
Security	Password Protection	1 Admin, 10 Group , 10 User per 1 Group
	Data Authentication	Watermark
Interface		
Monitors	VGA	1 VGA (1280x720, 1280x1024, 1920x1080)
	HDMI	1 HDMI (1280x720, 1280x1024, 1920x1080)
	Main Composite	N/A
	Spot(Composite)	Digital Spot (2CH) * Included OSD On Screen, Multi mode Support(1CH)
	Loop Outputs	N/A
Audio	Inputs/Output	4CH line in / 1CH line out
	Compression	G.711
	Sampling rate	8KHz
Alarm	Inputs/Outputs	Terminal 4 Inputs (NO/NC) / Terminal 2 relay Outputs (NO/NC), Rating : 30V DC/2A, 250V AC/0.25A
Connections	Remote notification	Notification via e-mail
	Ethernet	1 RJ45 10/100/1000 Base-T
	Serial interface	RS-232/RS-485(Half Duplex) for PTZ, Samsung System Keyboard
	USB	USB 2.0, 2 ports
	e-SATA	2 External SATA ports
	Application Support	Remote Controller
	RS-485 Protocol	N/A
	Coax Protocol	N/A
General		
Electrical	Input Voltage/Current	DC12V Adaptor,4A,100~240VAC, 50~60Hz, 48watt
	Power consumption	Max. 20 W (with 1x HDD)
Environmental	Operating Temperature/Humidity	+0°C to +40°C (+32°F to +104°F) / 20% to 85% RH
Mechanical	Dimension (W x H x D)	W332.7x H50.7 x D370
	Weight (With hard disks)	2.58kg
	Rack mountable	Yes
Language		English, French, German, Spanish, Italian, Russian, Polish, Czech, Turkish, Netherlands
		Portuguese, Swedish, Danish, Rumania, Serbia, Croatia, Hungary, Greek, Finnish, Norwegian, Korean, Japanese, Chinese(Traditional), Thai , Taiwanese(25 Language)

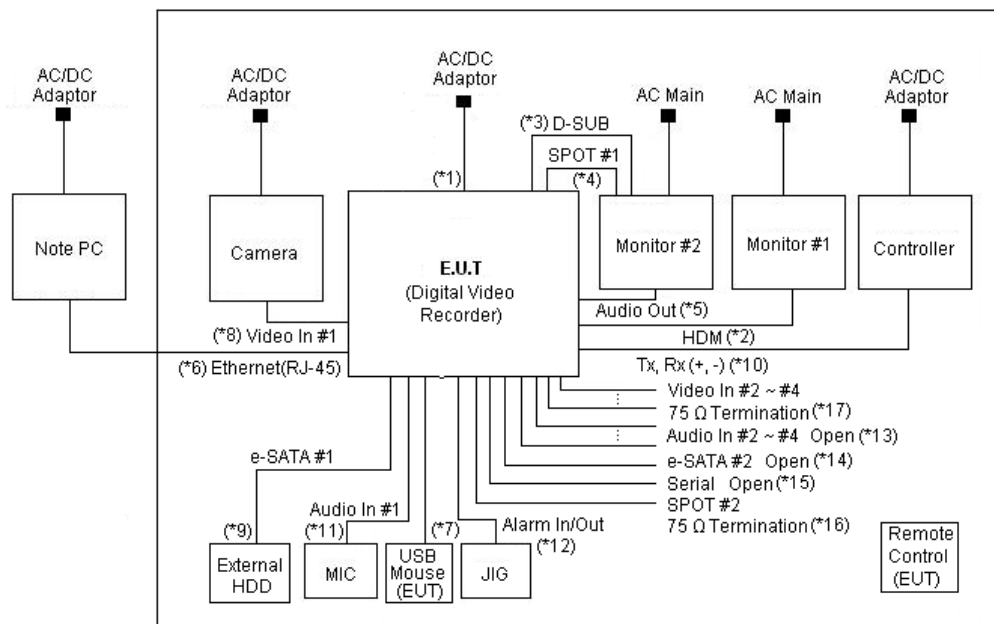
4.2 Product description

Type of product	Digital Video Recorder
Model name (Basic)	SRD-482N
Model name (Variant)	-
Difference	-
Trade name	-
Serial no	Engineering Sample
Testing voltage	100 V , 50 Hz
Product rating	*AC/DC Adaptor (ADP-4812) Input: AC 100 ~ 240 V , 50/ 60 Hz, 1.2 A Output: DC 12 V , 4 A
Internal clock frequency	Above 108 MHz
Note	-

4.3 Auxiliary equipments

Type	Model / Part #	Serial number	Manufacturer
Note PC	PSLQ0K-02N005	3A045920Q	TOSHIBA
Monitor #1	PM24KO	ZQ9XH1HBB00353H	SAMSUNG
Monitor #2	LT24B350	ZWP0HMCD101859R	SAMSUNG
Camera	SCB-6000	-	SAMSUNG
External HDD	-	-	-
Controller	SCC-1000	EW089028913	SAMSUNG
MIC	-	-	-
JIG	-	-	-

4.4 Test configuration



Note	Start		End		Cable	
*	Name	I/O port	Name	I/O port	Length (m)	Spec.
1	EUT (Digital Video Recorder)	Power	AC/DC Adaptor	Power	1.5	Non-Shield
2		HDMI	Monitor #1	HDMI	1.7	Shield
3		D-SUB	Monitor #2	D-SUB	1.5	Shield
4		SPOT #1	Monitor #2	SPOT	1.5	Shield
5		Audio Out	Monitor #2	Audio In	3.0	Shield
6		Ethernet(RJ-45)	External Note PC	Ethernet(RJ-45)	3.0	Non-Shield
7		USB	USB Mouse(EUT)	USB	1.5	Shield
8		Video In #1	Camera	Video Out	3.0	Shield
9		e-SATA #1	External HDD	e-SATA	0.5	Shield
10		Tx, Rx(+, -)	Controller	Tx, Rx(+, -)	3.0	Non-Shield
11		Audio In #1	MIC	Audio Out	3.0	Shield
12		Alarm In/Out	JIG	Alarm In/Out	3.0	Non-Shield
13		Audio In #2 ~ #4	Open	-	3.0	Shield
14		e-SATA #2	Open	-	0.5	Shield
15		Serial	Open	-	1.5	Shield
16		SPOT #2	75 Ω Termination	-	1.5	Shield
17		Video In #2 ~ #4	75 Ω Termination	-	3.0	Shield

4.5 Operating conditions

The EUT was configured as normal intended use.

Test mode	Normal operating
1	Camera web viewer monitoring test.
	Control test.
	Alarm In/Out test.
	Ping test.

5. Summary of test results

5.1 Summary of EMI emission test results

Applied	Test items	Test method	Result
☒	Conducted Emission	VCCI V-3 / 2013.04, Class A	Complied
☒	Radiated Emission	VCCI V-3 / 2013.04, Class A	Complied

6. Test results

6.1 Conducted Emission

Test specification	VCCI V-3 / 2013.04, Class A		
Testing voltage	100 V, 50 Hz		
Test facility	Shielded room (CE#2)		
Date	2014. 07. 16		
Temperature (°C)	25.1 °C	Humidity (% R.H.)	46.1 % R.H.
Remarks	Complied		

6.1.1 Limits of conducted emission measurement

☒ AC main

Frequency [MHz]	Class A (dB μ V)		Class B (dB μ V)	
	Quasi-peak	Average	Quasi-peak	Average
0.15 ~ 0.5	79	66	66 ~ 56*	56 ~ 46*
0.5 ~ 5	73	60	56	46
5 ~ 30	73	60	60	50

*The limit decreases linearly with the logarithm of frequency.

☒ Telecommunication

Frequency [MHz]	Class A Voltage Limits (dB(μ V))		Current Limits (dB(μ A))	
	Quasi-Peak	Average	Quasi-Peak	Average
0.15 ~ 0.5	97 to 87	84 to 74	53 to 43	40 to 30
0.5 ~ 30	87	74	43	30
Frequency [MHz]	Class B Limits (dB(μ V))		Current Limits (dB(μ A))	
	Quasi-Peak	Average	Quasi-Peak	Average
0.15 ~ 0.5	84 to 74	74 to 64	40 to 30	30 to 20
0.5 ~ 30	74	64	30	20

* The limits decrease linearly with the logarithm of the frequency in the range 0.15 MHz to 0.5 MHz

* The current and voltage disturbance limits are derived for use with an impedance stabilization Network (ISN) which presents a common mode (asymmetric mode) impedance of 150 Ω to the telecommunication port under test (conversion factor is $20 \log_{10} 150/I = 44$ dB).

6.1.2 Measurement procedure

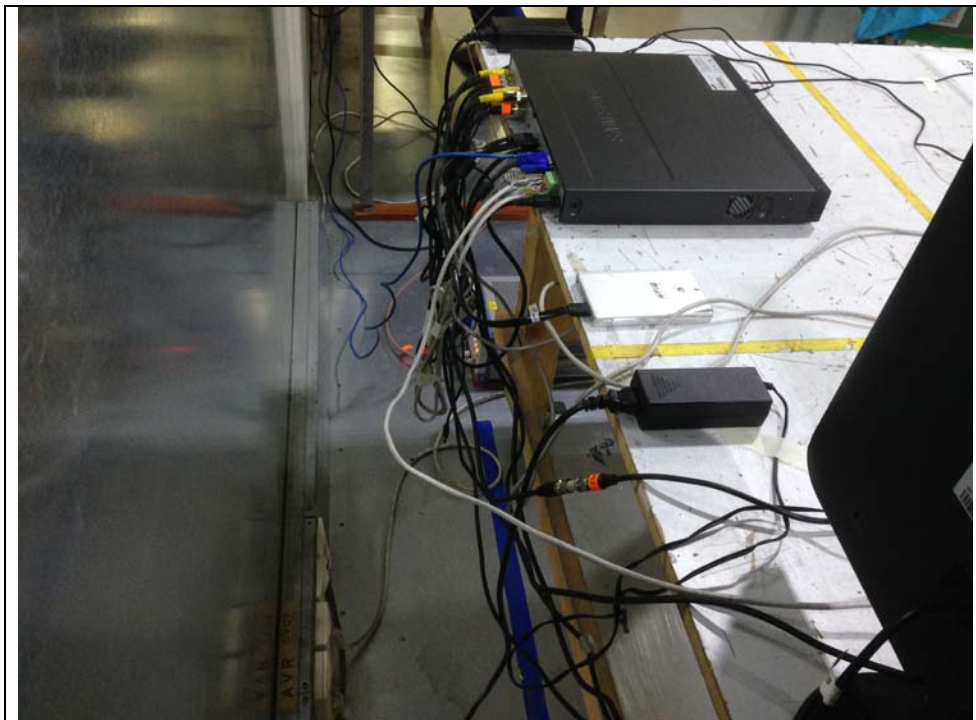
The measurements were performed in a shielded room. EUT was setup as shown in photograph and placed on a non-metallic table height of 0.8 m above the reference ground plane. The rear of table was located 0.4 m to the vertical conducted plane. EUT was power through the LISN, which was bonded to the ground plane. The LISN power was filtered. Each EUT power lead, except ground (safety) lead was individually connected through a LISN to input power source. EUT signal cables that hung closer than 0.4 m to the Horizontal metal ground 0.3 m ~ 0.4 m long. The power cord was bundles in the center. All peripheral equipment was powered from a sub LISN. The LISN and ISN were positioned 0.8 m from the EUT. Peak and Average detection were used in preliminary testing and Quasi-peak and Average detections were used at final measurement. Both lines of power cord, hot and neutral, were measured.

6.1.3 Used equipments

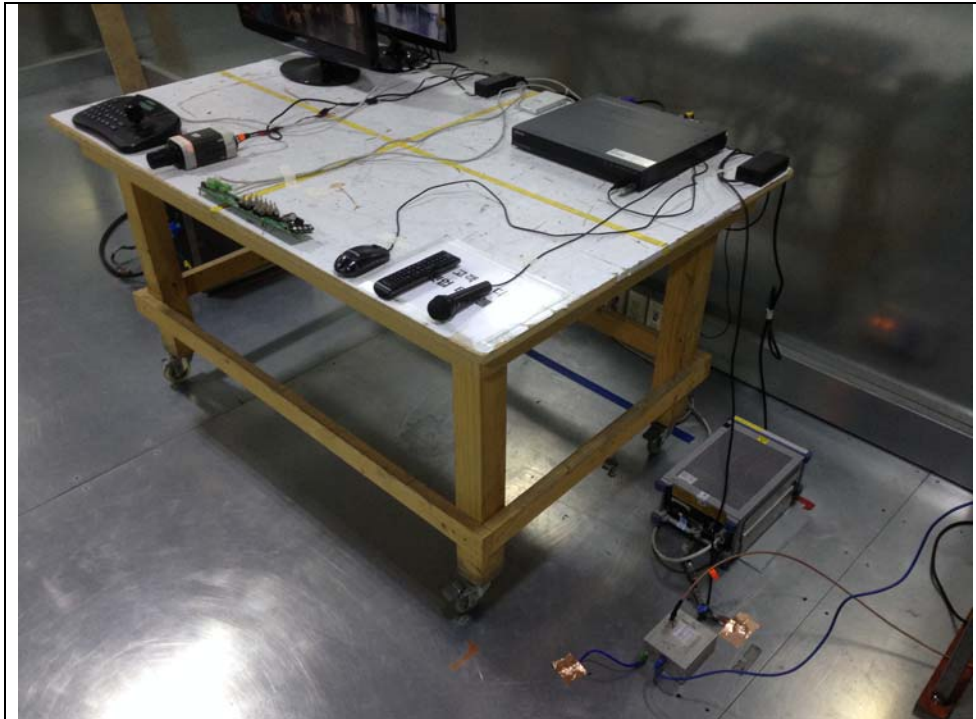
Equipment	Model	Serial No.	Makers	Next Cal. Date	Used
Test Receiver	ESCI7	100732	R&S	2015.01.27	☐
Test Receiver	ESCI	100001	R&S	2015.07.14	☐
Test Receiver	ESCI	100710	R&S	2014.10.28	☒
LISN	ENV216	101352	R&S	2015.01.02	☒
LISN	NNLK8121	8121-472	SCHWARZBECK	2015.06.24	☒
8-WIRE ISN	NTFM 8158 CAT5	CAT5-8158-0071	SCHWARZBECK	2015.02.25	☒
8-WIRE ISN	NTFM 8158 CAT3	CAT3-8158-0020	SCHWARZBECK	2015.03.07	☐
ISN	ST08	24342	TESEQ	2015.05.30	☐

6.1.4 Photographs of test setup

* AC Main

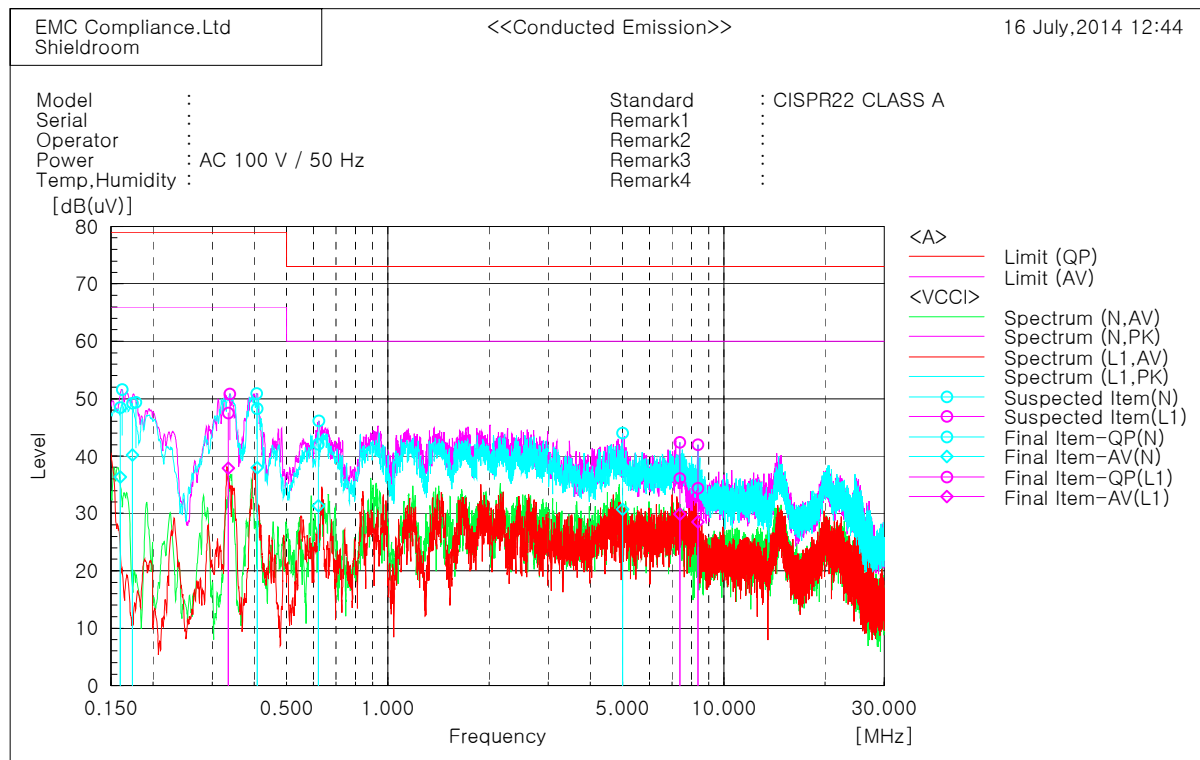


* Telecommunication



6.1.5 Conducted emission measurement result

* AC Main (SRD-482N)

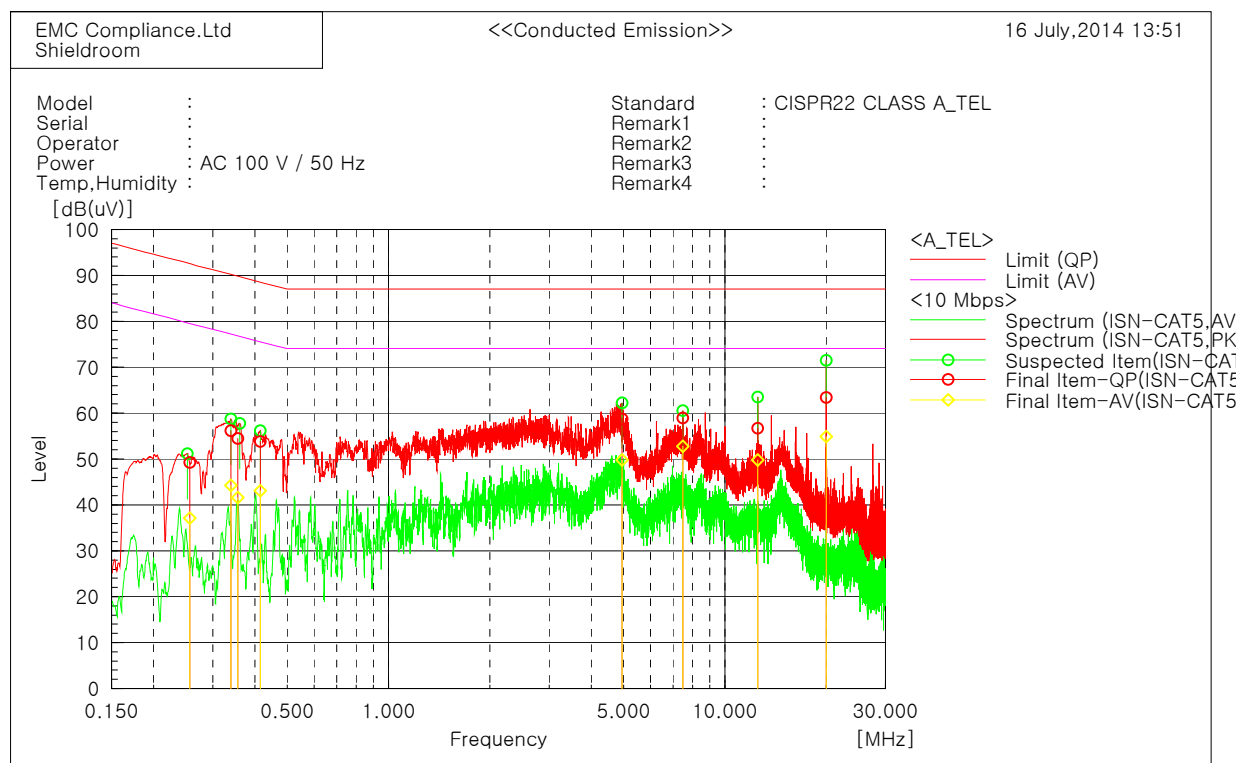


Final Result

--- N Phase ---											
No.	Frequency [MHz]	Reading QP [dB(uV)]	Reading CAV [dB(uV)]	c.f [dB]	Result QP [dB(uV)]	Result CAV [dB(uV)]	Limit QP [dB(uV)]	Limit AV [dB(uV)]	Margin QP [dB]	Margin CAV [dB]	Remark
1	0.16008	38.3	26.3	10.1	48.4	36.4	79.0	66.0	30.6	29.6	
2	0.17363	39.1	30.1	10.1	49.2	40.2	79.0	66.0	29.8	25.8	
3	0.40893	38.1	27.7	10.2	48.3	37.9	79.0	66.0	30.7	28.1	
4	0.62104	31.8	21.2	10.2	42.0	31.4	73.0	60.0	31.0	28.6	
5	4.99089	27.9	21.0	9.8	37.7	30.8	73.0	60.0	35.3	29.2	
--- L1 Phase ---											
No.	Frequency [MHz]	Reading QP [dB(uV)]	Reading CAV [dB(uV)]	c.f [dB]	Result QP [dB(uV)]	Result CAV [dB(uV)]	Limit QP [dB(uV)]	Limit AV [dB(uV)]	Margin QP [dB]	Margin CAV [dB]	Remark
1	0.33557	37.2	27.7	10.2	47.4	37.9	79.0	66.0	31.6	28.1	
2	7.37983	26.3	20.0	9.8	36.1	29.8	73.0	60.0	36.9	30.2	
3	8.3643	24.6	18.7	9.8	34.4	28.5	73.0	60.0	38.6	31.5	

* Telecommunication port

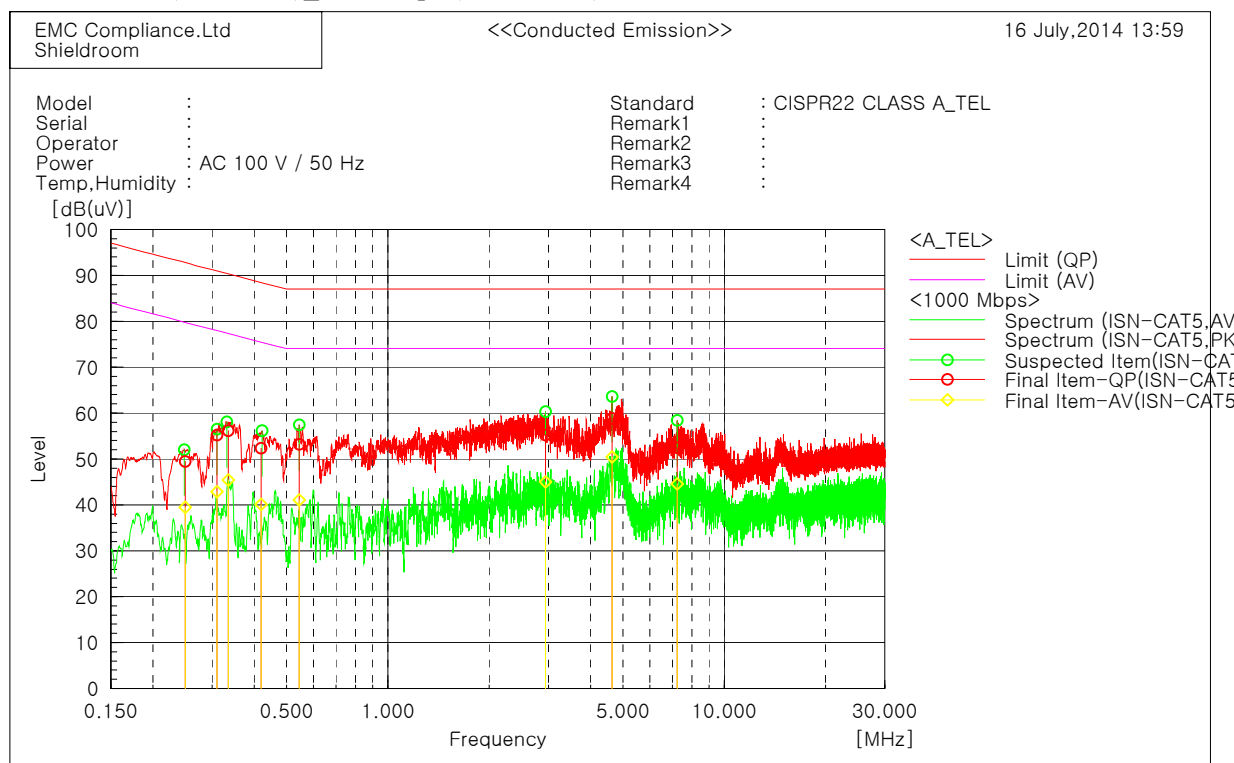
* LCL 65 dB (LAN Port)_10Mbps(SRD-482N)



Final Result

--- ISN-CAT5 Phase ---											
No.	Frequency [MHz]	Reading QP [dB(μV)]	Reading CAV [dB(μV)]	c.f [dB]	Result QP [dB(μV)]	Result CAV [dB(μV)]	Limit QP [dB(μV)]	Limit AV [dB(μV)]	Margin QP [dB]	Margin CAV [dB]	Remark
1	0.25669	39.4	27.2	9.9	49.3	37.1	92.5	79.5	43.2	42.4	
2	0.3396	46.3	34.3	9.9	56.2	44.2	90.2	77.2	34.0	33.0	
3	0.35665	44.6	31.7	9.9	54.5	41.6	89.8	76.8	35.3	35.2	
4	0.41509	44.1	33.2	9.8	53.9	43.0	88.5	75.5	34.6	32.5	
5	4.94906	49.1	40.1	9.6	58.7	49.7	87.0	74.0	28.3	24.3	
6	7.50094	49.3	43.2	9.6	58.9	52.8	87.0	74.0	28.1	21.2	
7	12.50012	47.1	40.2	9.6	56.7	49.8	87.0	74.0	30.3	24.2	
8	19.99996	53.6	45.1	9.8	63.4	54.9	87.0	74.0	23.6	19.1	

* LCL 65 dB (LAN Port)_1000Mbps (SRD-482N)



Final Result

--- ISN-CAT5 Phase ---											
No.	Frequency	Reading	Reading	c.f	Result	Result	Limit	Limit	Margin	Margin	Remark
	[MHz]	QP	CAV		QP	CAV	QP	AV	QP	CAV	
		[dB(uV)]	[dB(uV)]	[dB]	[dB(uV)]	[dB(uV)]	[dB(uV)]	[dB(uV)]	[dB]	[dB]	
1	0.24925	39.6	29.6	9.9	49.5	39.5	92.8	79.8	43.3	40.3	
2	0.31058	45.3	33.0	9.9	55.2	42.9	91.0	78.0	35.8	35.1	
3	0.33551	46.2	35.5	9.9	56.1	45.4	90.3	77.3	34.2	31.9	
4	0.41995	42.6	30.3	9.8	52.4	40.1	88.4	75.4	36.0	35.3	
5	0.5449	43.4	31.3	9.8	53.2	41.1	87.0	74.0	33.8	32.9	
6	2.93674	45.6	35.5	9.6	55.2	45.1	87.0	74.0	31.8	28.9	
7	4.64055	49.2	40.9	9.6	58.8	50.5	87.0	74.0	28.2	23.5	
8	7.24584	42.9	34.9	9.6	52.5	44.5	87.0	74.0	34.5	29.5	

6.2 Radiated Emission

Test specification	VCCI V-3 / 2013.04, Class A		
Testing voltage	100 V, 50 Hz		
Test facility	10 m Chamber (#F2)		
Test distance	10 m, 3 m		
Date	2014. 07. 16 ~ 07. 17		
Temperature (°C)	24.8 ~ 25.4 °C	Humidity (% R.H.)	47.4 ~ 48.2 % R.H.
Remarks	Complied		

6.2.1 Limits of radiated emission measurement

☒ Limits below 1 GHz

Frequency [MHz]	Class A (dB(μV/m)) @10 m	Class B (dB(μV/m)) @10 m
30 ~ 230	40	30
230 ~ 1000	47	37

☒ Limits above 1 GHz

Frequency [GHz]	Class A @ 3 m		Class B @ 3 m	
	Average limit (dB(μV/m))	Peak limit (dB(μV/m))	Average limit (dB(μV/m))	Peak limit (dB(μV/m))
1 ~ 3	56	76	50	70
3 ~ 6	60	80	54	74

Note - The lower limit applies at the transition frequency.

6.2.2 Measurement procedure

The test was done at a 10 m chamber with a quasi-peak detector. EUT was placed on a non-metallic table height of 0.8 m above the reference ground plane. Cables were folded back and forth forming a bundle 0.3 m to 0.4 m long and were hanged at a 0.4 m height to the 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.

6.2.3 Used equipments

Equipment	Model no.	Serial no.	Makers	Next Cal. Date	Used
Test Receiver	ESCI7	100732	R&S	2015.01.27	☐
Test Receiver	ESCI	100001	R&S	2015.07.14	☐
Test Receiver	ESCI	100710	R&S	2014.10.28	☐
Test Receiver	ESR	101078	R&S	2015.02.24	☒
Bi-Log Antenna	VULB 9168	440	SCHWARZBECK	2015.10.16	☒
Amplifier	310N	293004	SONOMA INSTRUMENT	2014.10.31	☒
3 dB Attenuator	8491B	22981	HP	2015.03.04	☒
Antenna Mast	MA4000-EP	303	Innco Systems	-	☒
Turn Table	DT2000S-1t	079	Innco Systems	-	☒
Amplifier	8449B	3008A02343	AGILENT	2014.10.31	☒
Horn ANT	3115	00155772	ETS	2015.02.26	☒
Spectrum Analyzer	E4407B	US39010142	AGILENT	2014.10.21	☐

6.2.4 Sample calculation

The field strength is calculated adding the antenna Factor, cable loss and, Antenna pad adding, subtracting the amplifier gain from the measured reading.

The sample calculation is as follow:

$$\text{Result} = \text{M.R} + \text{C.F}(\text{A.F} + \text{C.L} + 3 \text{ dB Att} - \text{A.G})$$

M.R = Meter Reading

C.F = Correction Factor

A.F = Antenna Factor

C.L = Cable Loss

A.G= Amplifier Gain

3 dB Att = 3 dB Attenuator

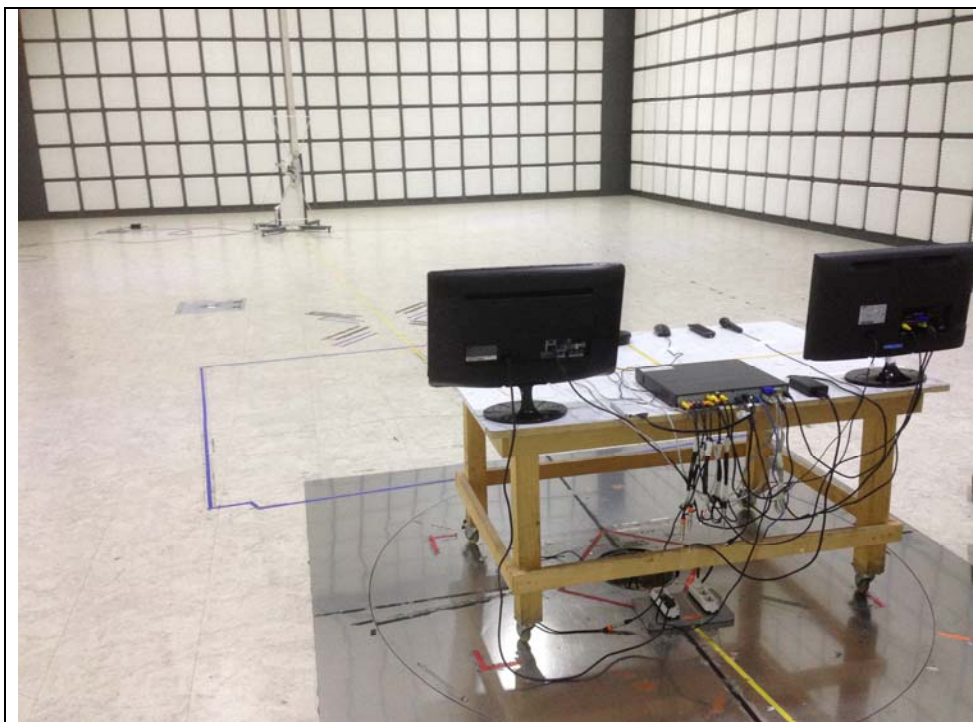
If M.R is 30 dB, A.F 12 dB, C.L 5 dB, 3 dB, A.G 35 dB

The result is

$$30 + 12 + 5 + 3 - 35 = 15 \text{ dB}(\mu\text{V/m})$$

6.2.5 Photographs of test setup

* 30 MHz ~ 1 GHz



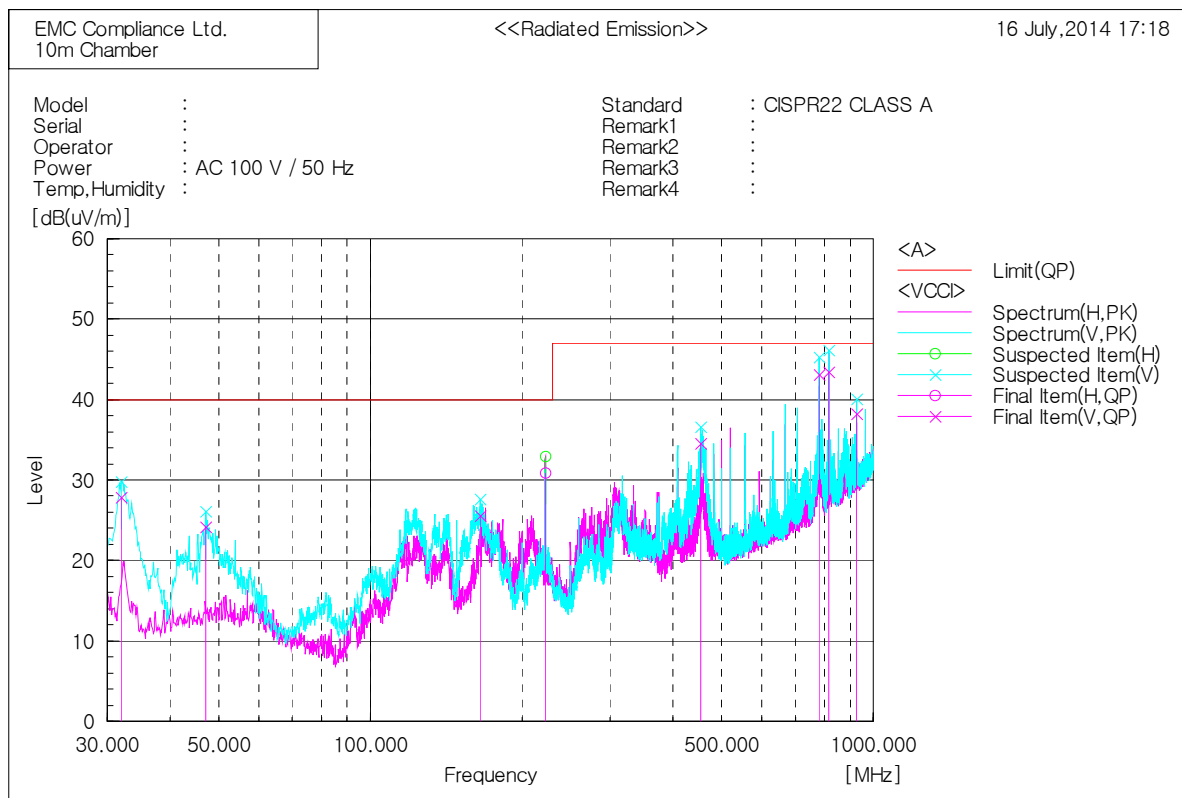
* 1 GHz ~ 6 GHz



6.2.6 Radiated emission measurement result

* Graph and Data

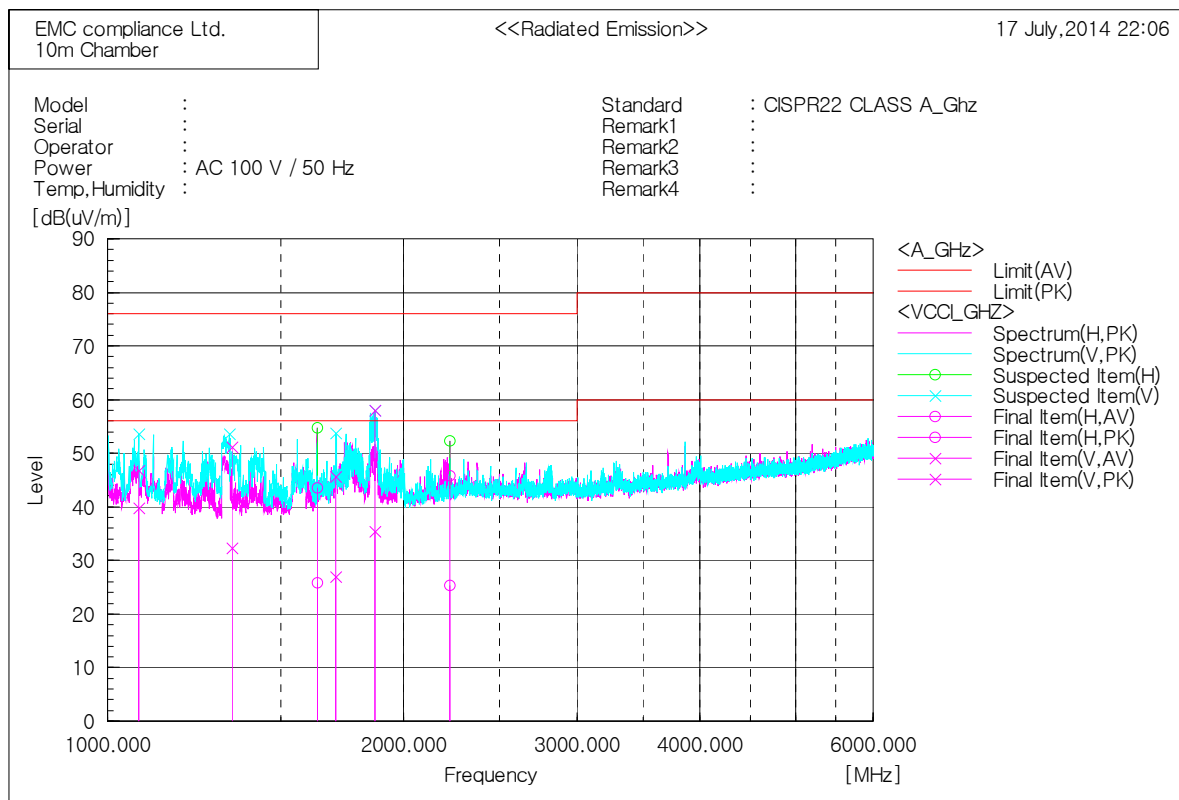
* 30 MHz ~ 1 GHz (SRD-482N)



Final Result

No.	Frequency [MHz]	(P)	Reading QP [dB(μV)]	c.f [dB(1/m)]	Result QP [dB(μV/m)]	Limit QP [dB(μV/m)]	Margin QP [dB]	Height [cm]	Angle [deg]
1	31.940	V	42.8	-15.0	27.8	40.0	12.2	100.0	348.0
2	47.096	V	37.4	-13.3	24.1	40.0	15.9	200.0	35.4
3	165.679	V	38.8	-13.2	25.6	40.0	14.4	100.0	224.4
4	222.788	H	45.0	-14.1	30.9	40.0	9.1	400.0	136.3
5	454.375	V	40.5	-5.9	34.6	47.0	12.4	400.0	182.6
6	779.689	V	41.8	1.3	43.1	47.0	3.9	299.0	353.4
7	816.791	V	41.2	2.2	43.4	47.0	3.6	200.0	141.9
8	928.220	V	33.4	4.8	38.2	47.0	8.8	200.0	30.4

* 1 GHz ~ 6 GHz (SRD-482N)



Final Result

No.	Frequency [MHz]	(P)	Reading AV [dB(μV)]	Reading PK [dB(μV)]	c.f [dB(1/m)]	Result AV [dB(μV/m)]	Result PK [dB(μV/m)]	Limit AV [dB(μV/m)]	Limit PK [dB(μV/m)]	Margin AV [dB]	Margin PK [dB]	Height [cm]	Angle [deg]
1	1076.250	V	46.3	53.3	-6.5	39.8	46.8	56.0	76.0	16.2	29.2	100.0	49.7
2	1339.325	V	37.3	56.1	-4.9	32.4	51.2	56.0	76.0	23.6	24.8	100.0	215.0
3	1633.125	H	28.8	46.6	-3.0	25.8	43.6	56.0	76.0	30.2	32.4	100.0	249.0
4	1707.500	V	29.4	48.2	-2.5	26.9	45.7	56.0	76.0	29.1	30.3	100.0	320.0
5	1871.250	V	36.9	59.5	-1.5	35.4	58.0	56.0	76.0	20.6	18.0	100.0	142.9
6	2227.500	H	24.9	45.3	0.5	25.4	45.8	56.0	76.0	30.6	30.2	100.0	221.9

7. E.U.T. photographs

Front View



Rear View



Left View



Right View



Top View



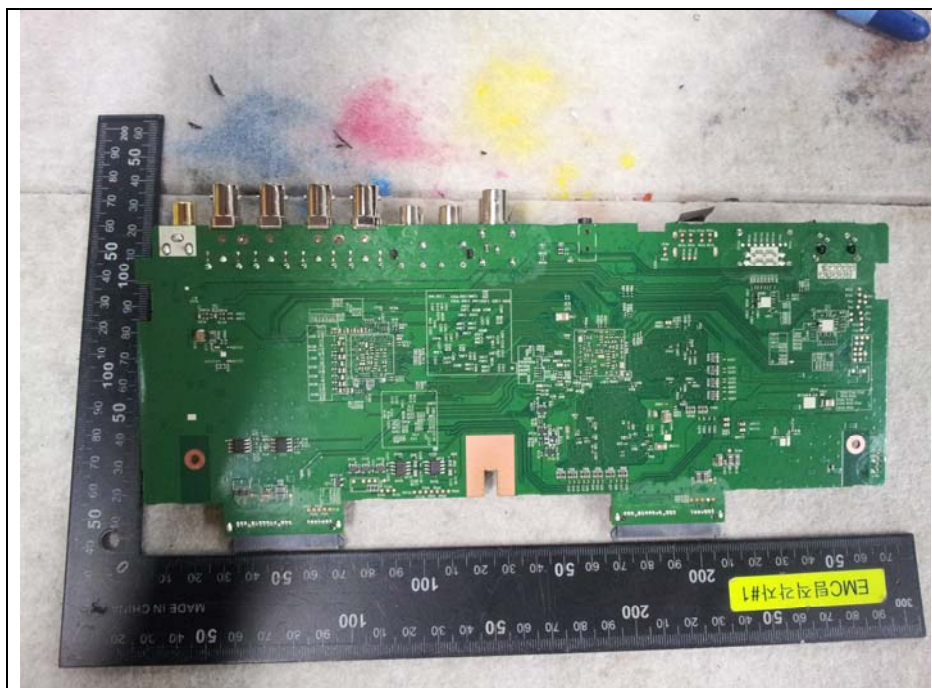
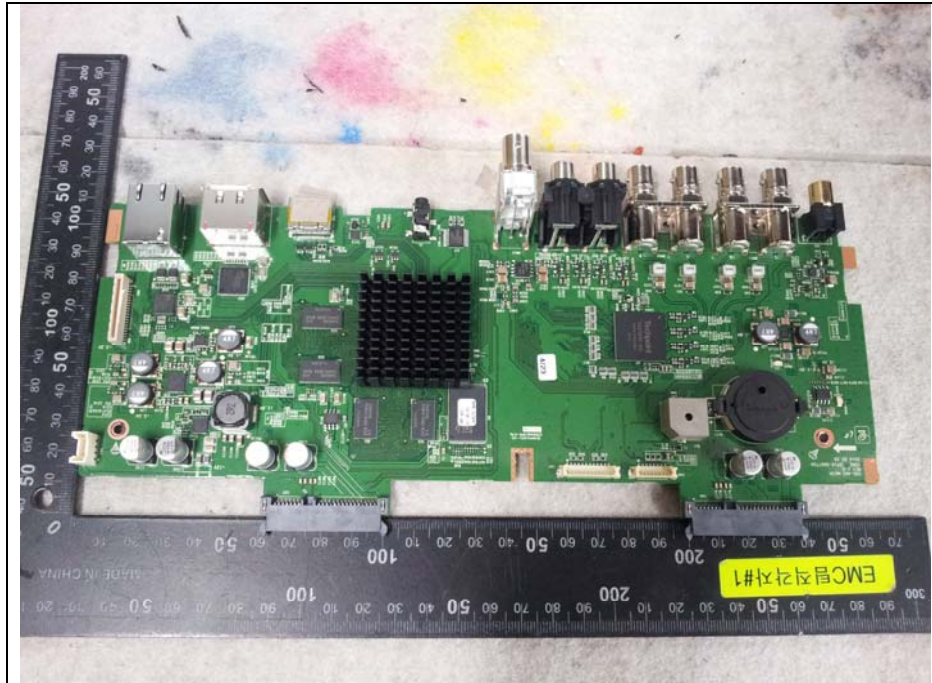
Bottom View



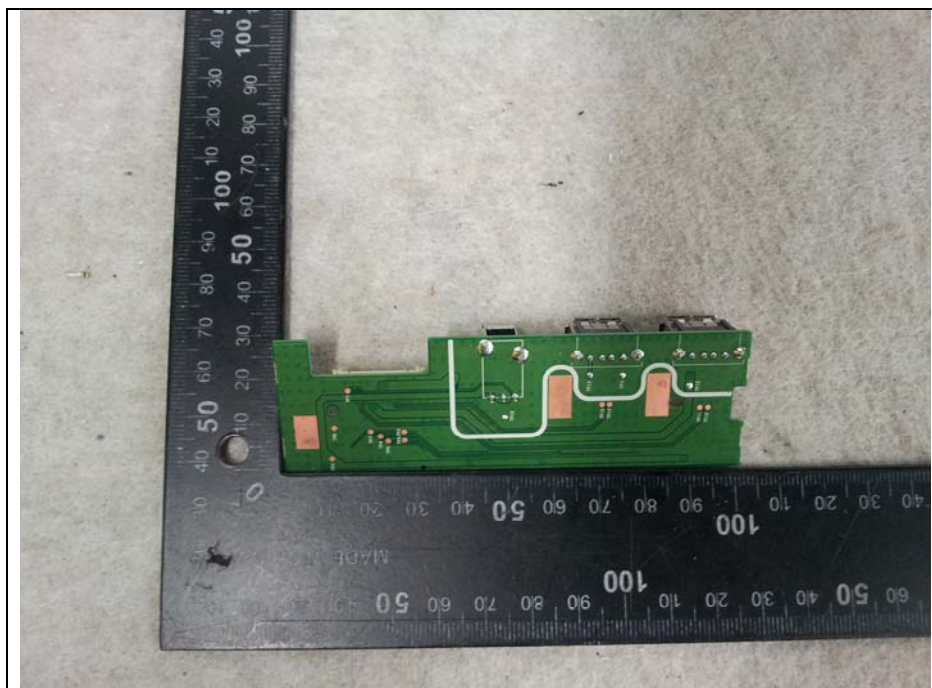
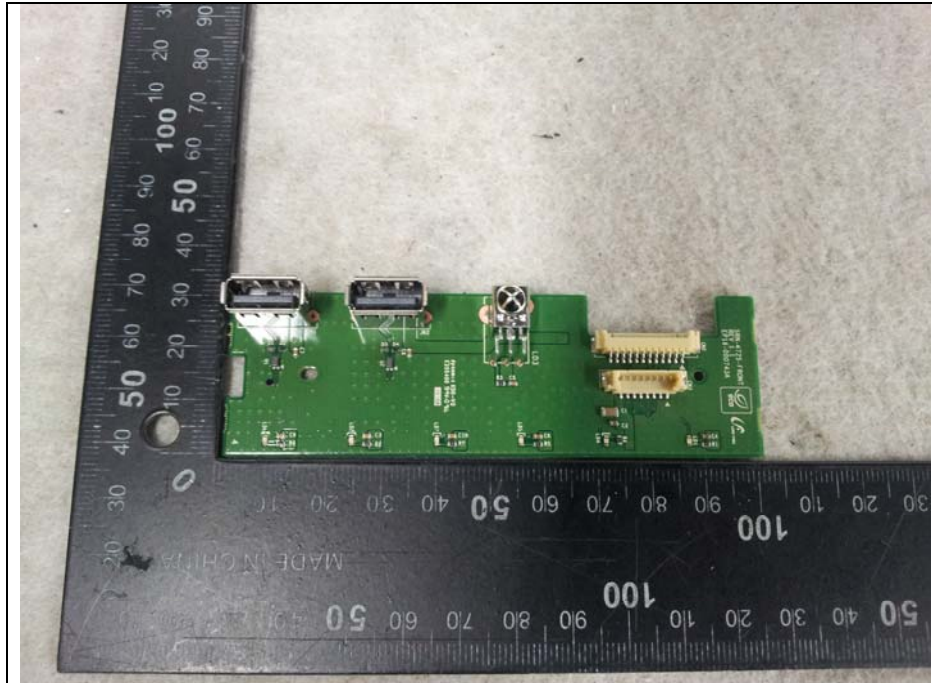
Inside



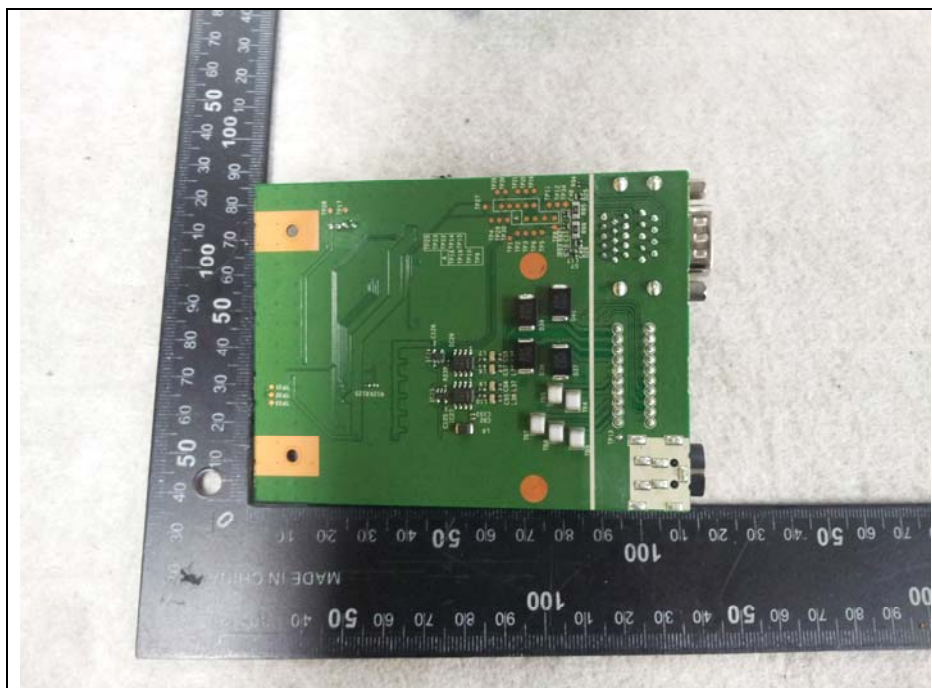
Main Board



SUB Board #1



SUB Board #2



HDD(1TB)





USB Mouse



Remote Control







AC/DC Adaptor

