

CERTIFICATE of EMC Compliance

Report No: EMC-FCC-1620
Type of equipment: Network Camera
Model Name: SNB-7002N
Applicant: Samsung Techwin Co., Ltd.
#42 Seongju-Dong, Changwon-Shi,
Kyungsangnam-Do, Korea
Manufacturer#1: Samsung Techwin Co., Ltd.
#42 Seongju-Dong, Changwon-Shi,
Kyungsangnam-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 : FCC part 15 subpart B, Class A
Classification : Verification

The above equipment was tested by EMC compliance Testing Laboratory for with the requirements of FCC Rules and Regulations. The results of testing in this report apply to the product / system which was tested only.

These results are deemed satisfactory evidence of compliance with ICES-003 of the Canadian Interference-Causing Equipment Regulations.



Yeom, Han-Seok/ Manager

Laboratory

EMC compliance Ltd.
480-5 Sin-dong, Yeongtong-gu,
Suwon-city, Gyeonggi-do, 443-390, Korea

Tel: 82 31 336 9919
Fax: 82 505 299 8311

EMI TEST REPORT

Test report No.: EMC-FCC-1620
Type of Equipment: Network Camera
Model Name: SNB-7002N
Applicant: Samsung Techwin Co., Ltd.
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OPTO-ELECTRONIC CO., LTD
No.11 Weiliu Road. Micro-Electronic Industrial
Park Jingang Road Tianjin 300385, China
Test standards: FCC part 15 subpart B, Class A
Test Procedure and Items
- Radiated Emissions Measurement : ANSI C63.4-2009
Testing Laboratory: EMC Compliance Ltd.
Test result: Complied

The above equipment was tested by EMC compliance Testing Laboratory for compliance with the requirements of FCC 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.

These results are deemed satisfactory evidence of compliance with ICES-003 of the Canadian Interference-Causing Equipment Regulations.

Date of receipt: 2012. 07. 04

Date of testing: 2012. 07. 10

Issued date: 2012. 07. 31

Tested by:


SUNG, KI-MUN

Approved by:


YEOM, HAN-SEOK

Contents

1. Applicant information	3
2. Laboratory information	4
3. Test system configuration	5
3.1 Operation environment	5
3.2 Measurement Uncertainty	6
4. Description of E.U.T.	7
4.1 General information.....	7
4.2 Product description.....	10
4.3 Auxiliary equipments.....	10
4.4 Test configuration	11
4.5 Operating conditions	13
5. Summary of test results	14
5.1 Summary of EMI emission test results.....	14
6. Test results	15
6.1 Radiated Emission.....	15
7. E.U.T. photographs	27

1. Applicant information

Applicant: SAMSUNG TECHWIN CO., LTD.
Address: #42 Seongju-Dong, Changwon-Shi,
Kyungsangnam-Do, Korea
Telephone: +82-70-7147-8361
Fax: +82-31-277-2784
E-mail: js2002.kang@samsung.com
Contact name: **Kang Jei Soon**

Manufacturer#1: SAMSUNG TECHWIN CO., LTD.
Address: #42 Seongju-Dong, Changwon-Shi,
Kyungsangnam-Do, Korea
Telephone: +82-70-7147-8361
Fax: +82-31-277-2784
E-mail: js2002.kang@samsung.com
Contact name: **Kang Jei Soon**

Manufacturer#2: TIANJIN SAMSUNG TECHWIN OPTO-ELECTRONIC CO., LTD
Address: No.11 Weiliu Road, Micro-Electronic Industrial Park
Jingang Road Tianjin 300385, China

2. Laboratory information

Address

EMC compliance Ltd.

480-5 Sin-dong, Yeongtong-gu, Suwon-city, Gyeonggi-do, 443-390, Korea

Telephone Number: 82 31 336 9919

Facsimile Number: 82 505 299 8311

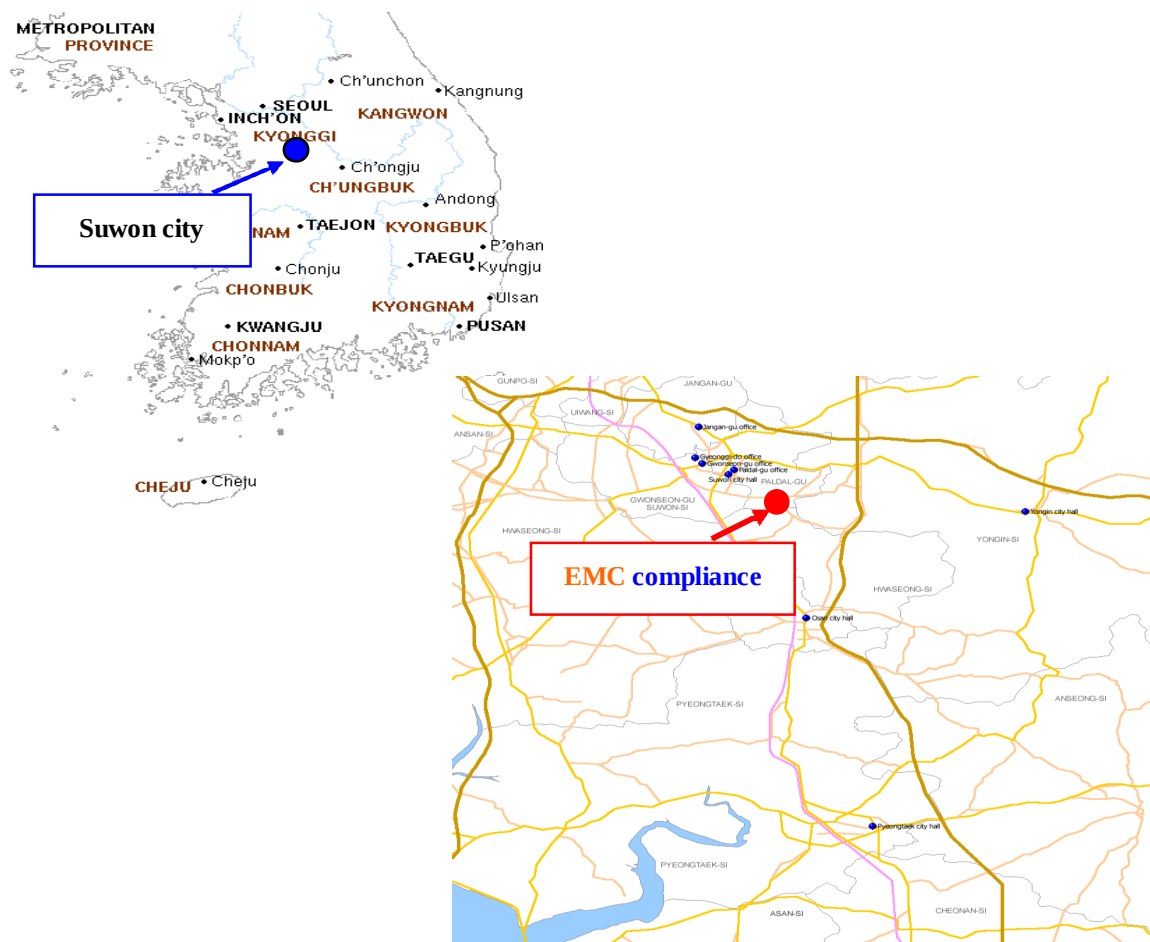
FCC CAB.: KR0040

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)	: 25 °C	56 % 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: ± 3.82 dB 150 kHz ~ 30 MHz: ± 3.43 dB	
Shielded Room (CE#2)	9 kHz ~ 150 kHz: ± 3.82 dB 150 kHz ~ 30 MHz: ± 3.43 dB	
Shielded Room (CE#3)	9 kHz ~ 150 kHz: ± 4.00 dB 150 kHz ~ 30 MHz: ± 3.63 dB	
Radiated Emission measurement (C.L: Approx 95 %, k = 2)		
10 m Chamber (#F4)	30 MHz ~ 300 MHz	3 m: + 4.56 dB, - 4.58 dB 10 m: + 4.56 dB, - 4.56 dB
	300 MHz ~ 1 000 MHz	3 m: + 4.84 dB, - 4.85 dB 10 m: + 4.71 dB, - 4.72 dB
	1 GHz ~ 6 GHz	3 m: + 6.19 dB, - 6.20 dB
	6 GHz ~ 18 GHz	3 m: + 6.41 dB, - 6.53 dB
10 m Chamber (#F2)	30 MHz ~ 300 MHz	3 m: + 4.86 dB, - 4.88 dB 10 m: + 4.86 dB, - 4.86 dB
	300 MHz ~ 1 000 MHz	3 m: + 4.98 dB, - 4.99 dB 10 m: + 4.85 dB, - 4.87 dB
	1 GHz ~ 6 GHz	3 m: + 6.19 dB, - 6.20 dB
	6 GHz ~ 18 GHz	3 m: + 6.41 dB, - 6.53 dB

4. Description of E.U.T.

4.1 General information

Video	
Imaging Device	1/3.2" 3.1M PS CMOS
Total Pixels	2,064(H) X 1,578(V)
Effective Pixels	2,052(H) X 1,536(V)
Scanning System	Progressive
Min. Illumination	Color : 0.7 Lux (F1.2, 50IRE), 0.011 Lux (Sens up 60X) B/W : 0.07 Lux (F1.2, 50IRE), 0.001 Lux (Sens up 60X)
S / N Ratio	39dB
Video Out	CVBS : 1.0 Vp-p / 75Ω composite, 704x480(N), 704x576(P), for installation
Lens	
Focal Length (Zoom Ratio)	-
Max. Aperture Ratio	-
Angular Field of View	-
Min. Object Distance	-
Focus Control	Manual, Simple focus, Day&Night
Zoom Movement Speed	-
Lens Type	Manual / DC Auto Iris
Mount Type	C/CS
Pan / Tilt / Rotate	
Pan Range	-
Pan Speed	-
Tilt Range	-
Tilt Speed	-
Rotate Range	-
Preset	-
Preset Accuracy	-
Auto Tracking	-
Operational	
IR LED	-
Viewable Length	-
Camera Title (OSD)	Off / On (Displayed up to 15 characters)
Day & Night	Auto (ICR) / Color / B/W / External
Backlight Compensation	Off / BLC / HLC
Wide Dynamic Range	Off / On
Contrast Enhancement	SSDR (Samsung Super Dynamic Range) (Off / On)
Digital Noise Reduction	SSNR/III (2D+3D Noise Filter) (Off / On)
Digital Image Stabilization	-
Motion Detection	Off / On (4 Rectangular zones)
Privacy Masking	Off / On (1ea 4 Point Polygonal + 16ea Rectangular zones)
Sens-up (Frame Integration)	Off / Auto (2X ~ 60X)

Auto Gain Control	Off / Low / Middle / High
White Balance	ATW / AWC / Manual / Indoor / Outdoor
Electronic Shutter Speed	Auto / A.FLK / Manual (1/30 ~ 1/12,000sec)
Digital Zoom	-
Flip / Mirror	Off / On
Video Analytics	Audio Detection, Face Detection, Tampering, Virtual Line, Enter / Exit, Appear / Disappear
Alarm I/O	Input 1ea / Output 1ea (Relay)
Remote Control Interface	RS-485
RS-485 Protocol	SAMSUNG-T/E, PELCO-P/D, Sungjin
Alarm Triggers	Motion detection, Tampering detection, Audio Detection, Face Detecton, Video Analytics
Alarm events	• File upload via FTP, E-Mail • Notification via E-Mail, TCP • local storage(SD/SDHC) recording at Network disconnected
Network	
Ethernet	RJ-45 (100BASE-T)
Video Compression Format	H.264(MPEG-4 Part 10/AVC), Motion JPEG
Resolution	<3M Mode> 2048x1536, 1920x1080P(Full HD), 1600x1200, 1280x1024, 1280x960, 1280x720P(HD), 1024x768, 800x600, 800x450, 640x480, 640x368, 320x240, 320x192 <2M Mode> 1920x1080P(Full HD), 1280x1024, 1280x960, 1280x720P(HD), 1024x768, 800x600, 800x450, 640x480, 640x368, 320x240, 320x192
Max. Framerate	<3M Mode> * H.264 : Max 20fps at all resolutions * MJPEG : 800x600 ~ 320x180 - 20 fps 1024x768 ~ 1920x1080 - 15 fps 2048x1536 - 10 fps <2M Mode> * H.264 : Max 30fps at all resolutions * MJPEG : 800x600 ~ 320x180 - 30 fps 1024x768 ~ 1920x1080 : 15 fps
Smart Codec	Yes (Area Based Method)
Video Quality Adjustment	H.264 : Compression Level, Target Bitrate Level Control MJPEG : Quality Level Control
Bitrate Control Method	H.264 : CBR or VBR MJPEG : VBR
Streaming Capability	Multiple Streaming (Up to 6 Profiles)

Audio I/O	Mic/Line in , Line out, Built-in Mic.
Audio Compression Format	G.711, G.726
Audio Communication	Bi-directional
IP	IPv4, IPv6
Protocol	TCP/IP, UDP/IP, RTP(UDP), RTP(TCP), RTSP, NTP HTTP, HTTPS, SSL, DHCP, PPPoE, FTP, SMTP, ICMP IGMP, SNMPv1/v2c/v3(MIB-2), ARP, DNS, DDNS, QoS, UPnP
Security	HTTPS(SSL) Login Authentication Digest Login Authentication IP Address Filtering User access Log 802.1X Authentication
Streaming Method	Unicast / Multicast
Max. User Access	10 users at Unicast Mode
Memory Slot	SD/SDHC Memory Slot
ONVIF Conformance	Yes
Webpage Language	English, French, German, Spanish, Italian, Chinese, Korean, Russian, Japanese, Swedish, Danish, Portuguese, Turkish, Polish, Czech, Rumanian, Serbian, Dutch, Croatia, Hungary, Greek
Web Viewer	Supported OS : Windows XP / VISTA / 7, MAC OS X 10.7 or Higher Supported Browser : Internet Explorer 7.0 or Higher, Firefox 9.0 or Higher, Chrome 15.0 or Higher, Safari 5.1 or Higher
Central Management Software	NET-i viewer
Environmental	
Operating Temperature / Humidity	-10°C ~ +55°C (+14°F ~ +131°F) / 20% ~80 RH
Ingress Protection	-
Vandal Resistance	-
Electrical	
Input Voltage / Current	Max. 7W (DC 12V), Max. 8W (AC 24V, PoE (DC 48V)), class3
Power Consumption	Max. 7W (DC 12V), Max. 8W (AC 24V, PoE (DC 48V))
Mechanical	
Color / Material	Body : Dark Gray / Aluminum
Dimension (WxHxD)	72.0 (2.83") x 60.0(2.36") x 150.5(5.93") excluding projections
Weight	TBD

4.2 Product description

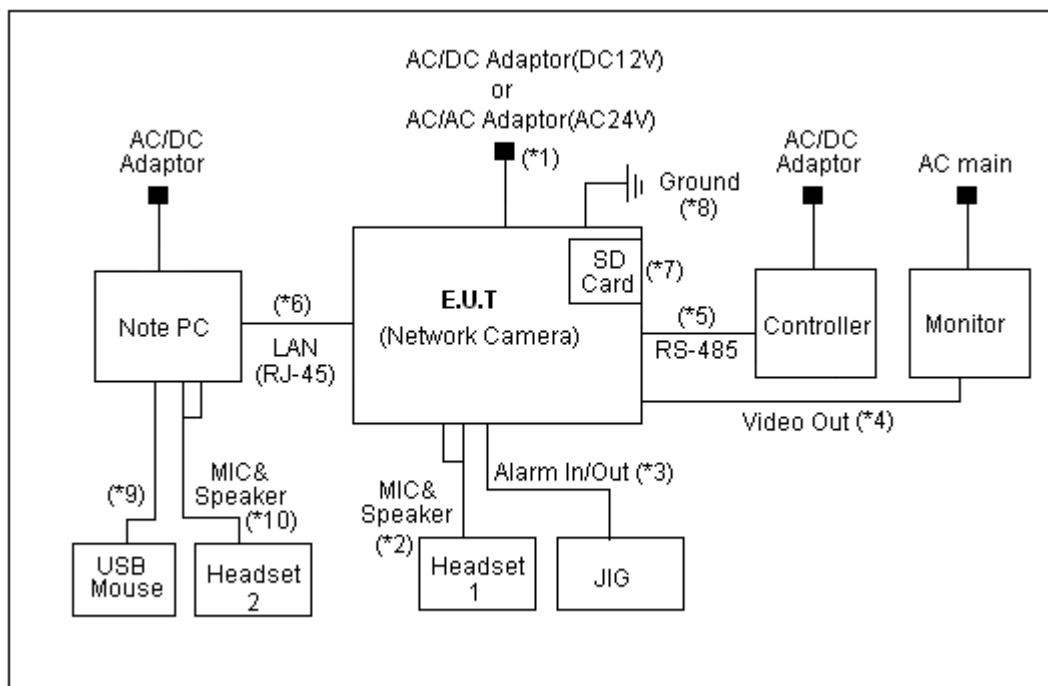
Type of product	Network Camera
Model name (Basic)	SNB-7002N
Model name (Variant)	-
Difference	-
Trade name	-
Serial no	Engineering Sample
Testing voltage	DC 12 V, AC 24 V, PoE
Product rating	DC 12 V, AC 24 V, PoE
Internal clock frequency	-
Note	* AC/DC adaptor was not provided by the manufacturer. * AC/AC adaptor was not provided by the manufacturer. * PoE Switch was not provided by the manufacturer.

4.3 Auxiliary equipments

Type	Model / Part #	Serial number	Manufacturer
Note PC	C1410	463680121002	FUJITSU
Headset 1	SHS-250V	-	SAMSUNG
Headset 2	MP-422	-	MANIAPC
JIG	-	-	-
USB Mouse	1088	8165900241827	Microsoft
Monitor	PM24KO	ZQ9XH1HBAA01632N	SAMSUNG
Controller	SCC-2000	-	SAMSUNG
SD Card(1GB)	-	-	SAMSUNG
AC/DC Adaptor	ADS-30SI-12-2	-	-
AC/AC Adaptor	DRL-241500AC	-	Dream Electronics
PoE Switch	FS108P	1DL2093R00C1C	NETGEAR

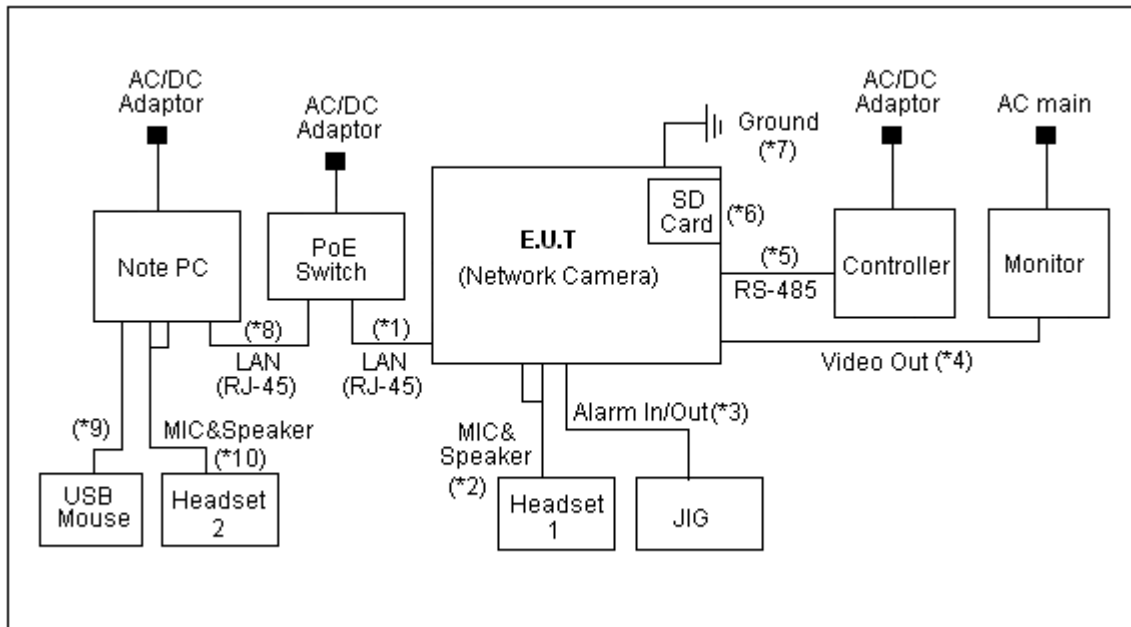
4.4 Test configuration

#1- DC 12V, #2- AC 24V



Note	Start		End		Cable	
*	Name	I/O port	Name	I/O port	Length (m)	Spec.
1	EUT (Network Camera)	Power	AC/DC Adaptor or AC/AC Adaptor	Power	1.8	Non-Shield
2		MIC&Speaker	Headset 1	MIC&Speaker	2.0	Non-Shield
3		Alarm In/Out	JIG	Alarm In/Out	3.0	Non-Shield
4		Video Out	Monitor	Video In	3.0	Shield
5		RS-485	Controller	RS-485	3.0	Non-Shield
6		LAN(RJ-45)	Note PC	LAN(RJ-45)	3.0	Non-Shield
7		SD Card	SD Card	SD Card	Direct	-
8		Ground	Ground	Ground	1.8	Non-Shield
9	Note PC	USB	USB Mouse	USB	2.0	Shield
10		MIC&Speaker	Headset 2	MIC&Speaker	2.0	Non-Shield

#3- PoE



* Power supplied from PoE Switch

Note *	Start		End		Cable	
	Name	I/O port	Name	I/O port	Length (m)	Spec.
1	EUT (Network Camera)	LAN(RJ-45)	PoE Switch	LAN(RJ-45)	3.0	Non-Shield
2		MIC&Speaker	Headset 1	MIC&Speaker	2.0	Non-Shield
3		Alarm In/Out	JIG	Alarm In/Out	3.0	Non-Shield
4		Video Out	Monitor	Video In	3.0	Shield
5		RS-485	Controller	RS-485	3.0	Non-Shield
6		SD Card	SD Card	SD Card	Direct	-
7		Ground	Ground	Ground	1.8	Non-Shield
8	Note PC	LAN(RJ-45)	PoE Switch	LAN(RJ-45)	2.0	Non-Shield
9		USB	USB Mouse	USB	1.8	Shield
10		MIC&Speaker	Headset 2	MIC&Speaker	2.0	Non-Shield

4.5 Operating conditions

The EUT was configured as normal intended use.

This test was done at worst case.

Test mode	Normal operating
1	Camera Monitoring Test Mode

* Note: 3 types of powers are available for the product, that are DC 12 V, AC 24 V, PoE.

Therefore, tests were performed for 3 different types of powers.

5. Summary of test results

In the above configuration tested, The EUT complied with the requirement of the specification

5.1 Summary of EMI emission test results

FCC Part 15 Subpart B (Class A)

ANSI C63.4 – 2009

Applied	Test items	Test method	Result
☐	Conducted Emission	ANSI C63.4 – 2009	N/A
☒	Radiated Emission	ANSI C63.4 – 2009	Complied

6. Test results

6.1 Radiated Emission

Test specification	FCC Part 15, Section 15.109(g), Class A		
Testing voltage	DC 12 V, AC 24 V, PoE		
Test facility	10 m Chamber (#F2)		
Test distance	10 m, 3 m		
Date	2012. 07. 10		
Temperature (°C)	25 °C	Humidity (% R.H.)	56 % R.H.
Remarks	Complied		

6.1.1 Limits of radiated emission measurement

Frequency [MHz]	Class A (dB(μ V/m)) @ 10 m	Class B (dB(μ V/m)) @ 3 m
30-88	39	40
88-216	43.5	43.5
216-960	46.4	46
Above 960	49.5	54

* Note- Alternative standard: CISPR, Pub. 22 *

6.1.2 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.

6.1.3 Used equipments

Equipment	Model no.	Serial no.	Makers	Next Cal. Date	Used
Test Receiver	ESCI	100710	R&S	2012.11.28	☒
Bi-Log Antenna	VULB 9168	9168-440	SCHWARZBECK	2013.10.04	☒
Amplifier	310N	293004	SONOMA INSTRUMENT	2012.11.28	☒
3 dB Attenuator	8491A	27444	HP	2012.11.28	☒
Antenna Mast	MA4000-EP	303	Innco Systems	-	☒
Turn Table	DT2000S-1t	079	Innco Systems	-	☒
Horn ANT	3115	00086706	ETS	2013.11.21	☒
Amplifier	8449B	3008A01802	AGILENT	2013.05.04	☐
Amplifier	8449B	3008A02343	AGILENT	2012.11.28	☒
Spectrum Analyzer	FSP7	100289	R&S	2012.12.19	☒

6.1.4 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

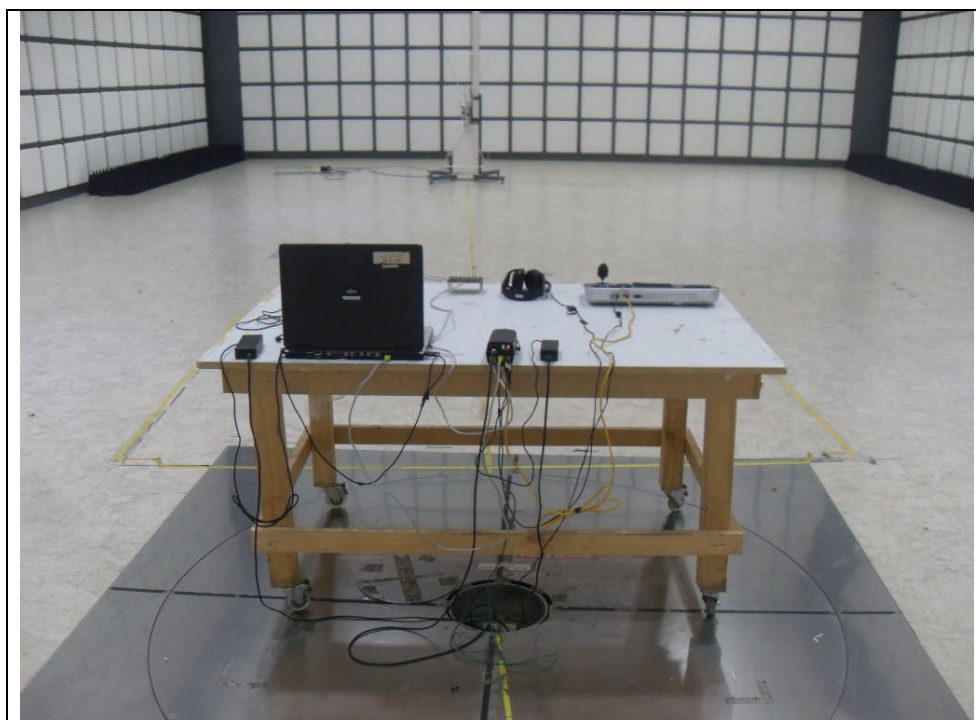
The result is

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

6.1.5 Photographs of test setup

* 30 MHz ~ 1 GHz

* #1- DC 12V, #2- AC 24V

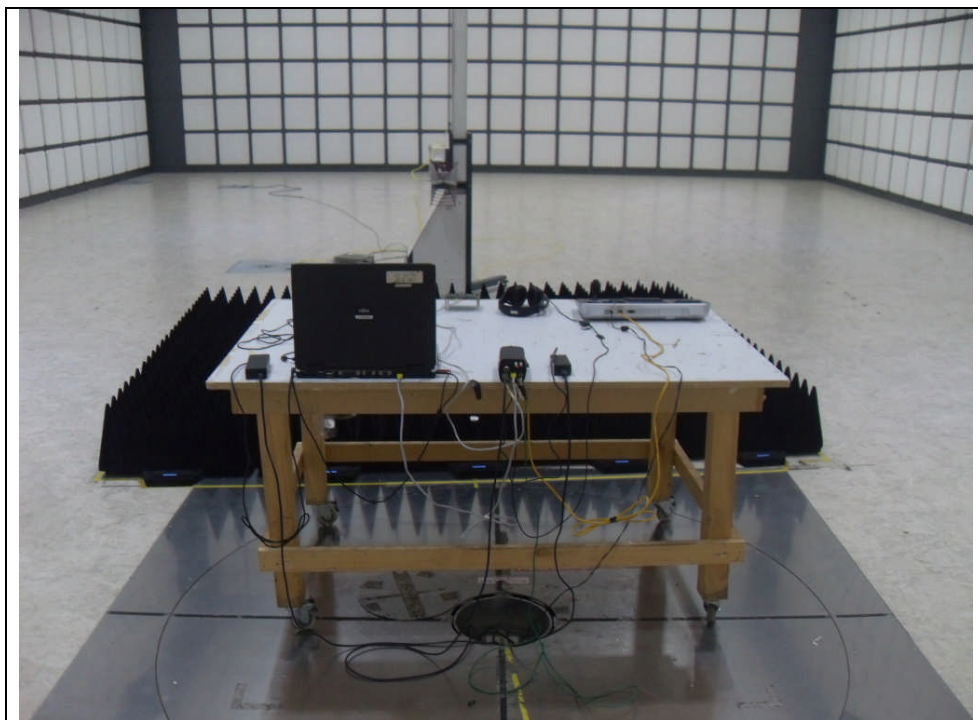


* #3-PoE

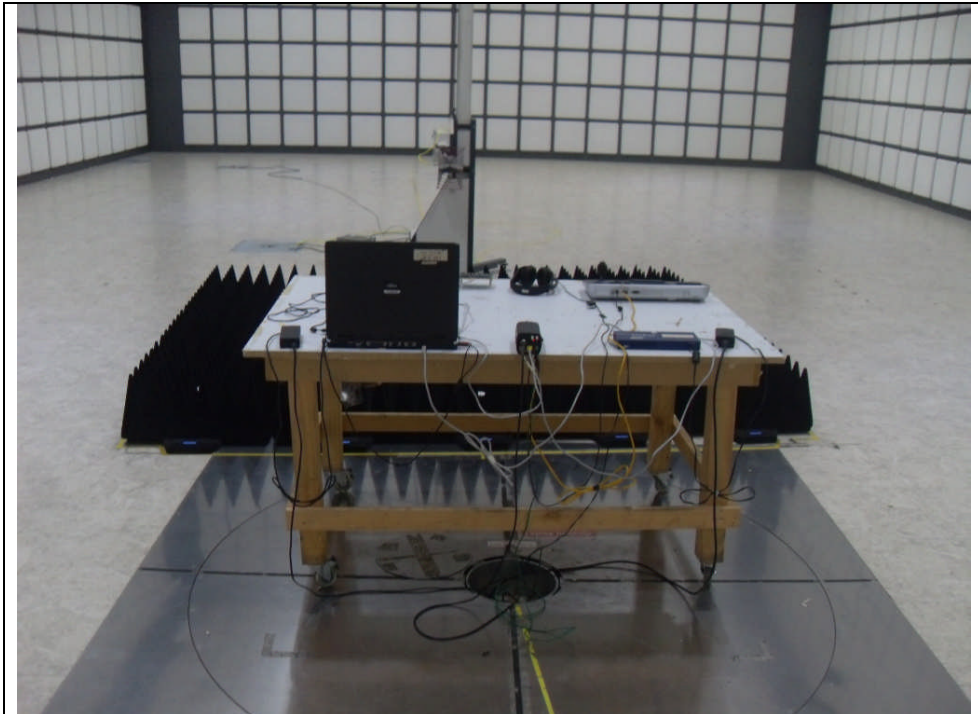


* 1 GHz ~ 5 GHz

* #1- DC 12V, #2- AC 24V



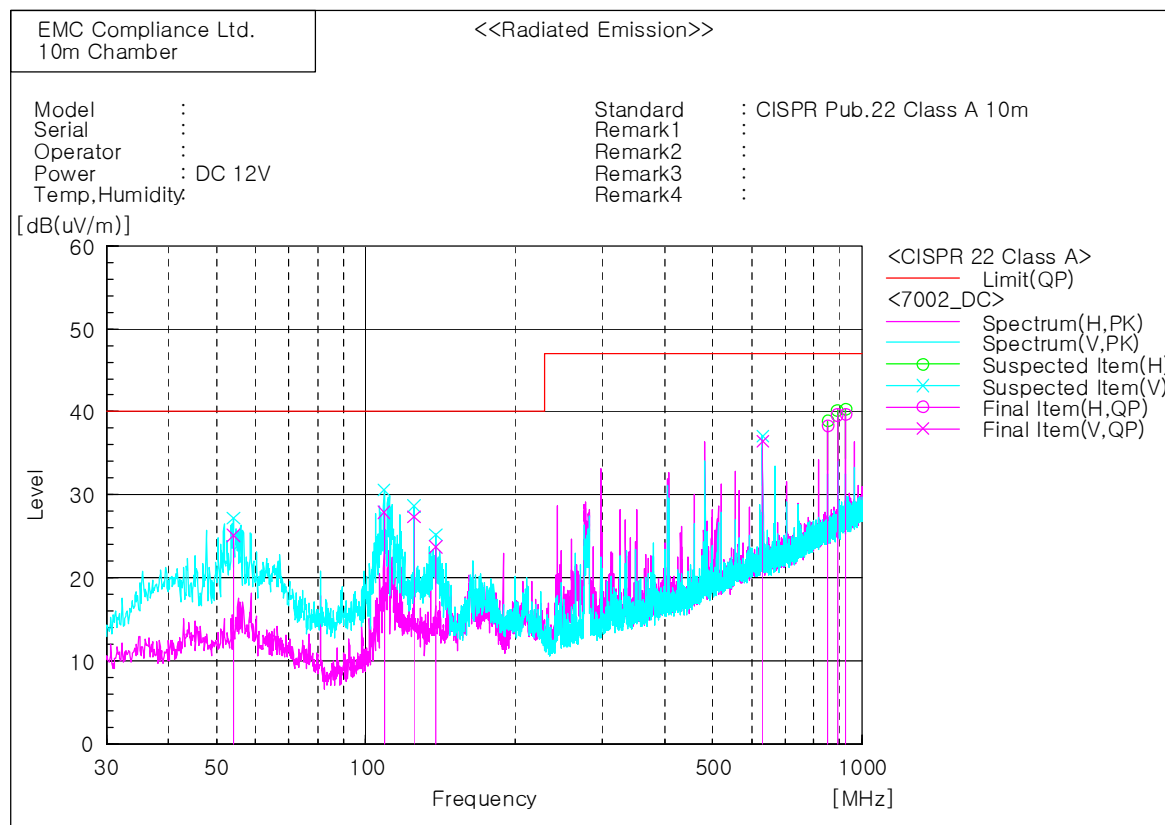
* #3-PoE



6.1.6 Radiated emission measurement result

* Graph and Data

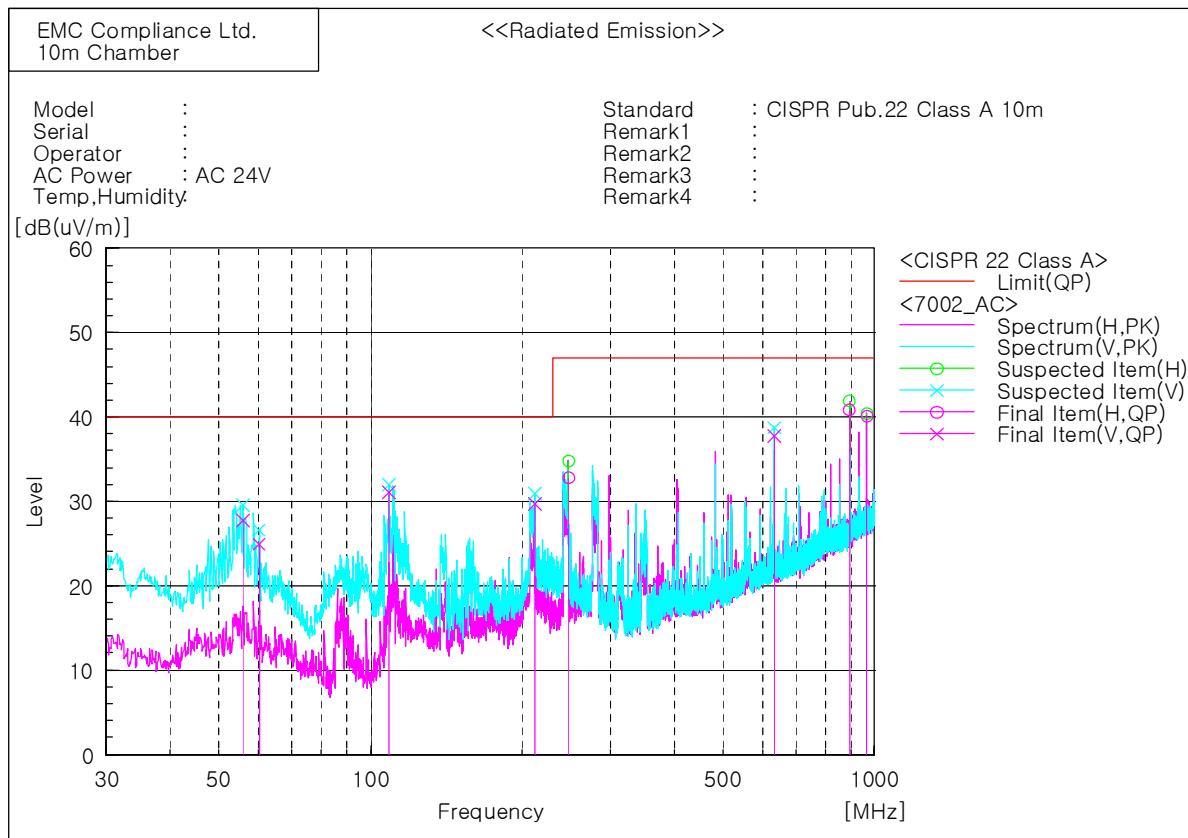
* 30 MHz ~ 1 GHz (#1- DC 12V)_SNB-7002N



Final Result

No.	Frequency [MHz]	(P)	Reading QP [dB(uV)]	c.f [dB(1/m)]	Result QP [dB(uV/m)]	Limit QP [dB(uV/m)]	Margin QP [dB]	Height [cm]	Angle [deg]
1	54.129	V	38.9	-13.8	25.1	40.0	14.9	100.0	323.0
2	108.813	V	44.9	-17.0	27.9	40.0	12.1	400.0	295.3
3	124.939	V	42.4	-15.1	27.3	40.0	12.7	100.0	24.8
4	138.398	V	37.7	-14.0	23.7	40.0	16.3	100.0	229.5
5	631.158	V	39.9	-3.4	36.5	47.0	10.5	100.0	6.7
6	853.894	H	37.6	0.7	38.3	47.0	8.7	100.0	219.5
7	891.117	H	38.3	1.3	39.6	47.0	7.4	100.0	305.4
8	928.220	H	37.6	2.1	39.7	47.0	7.3	100.0	179.1

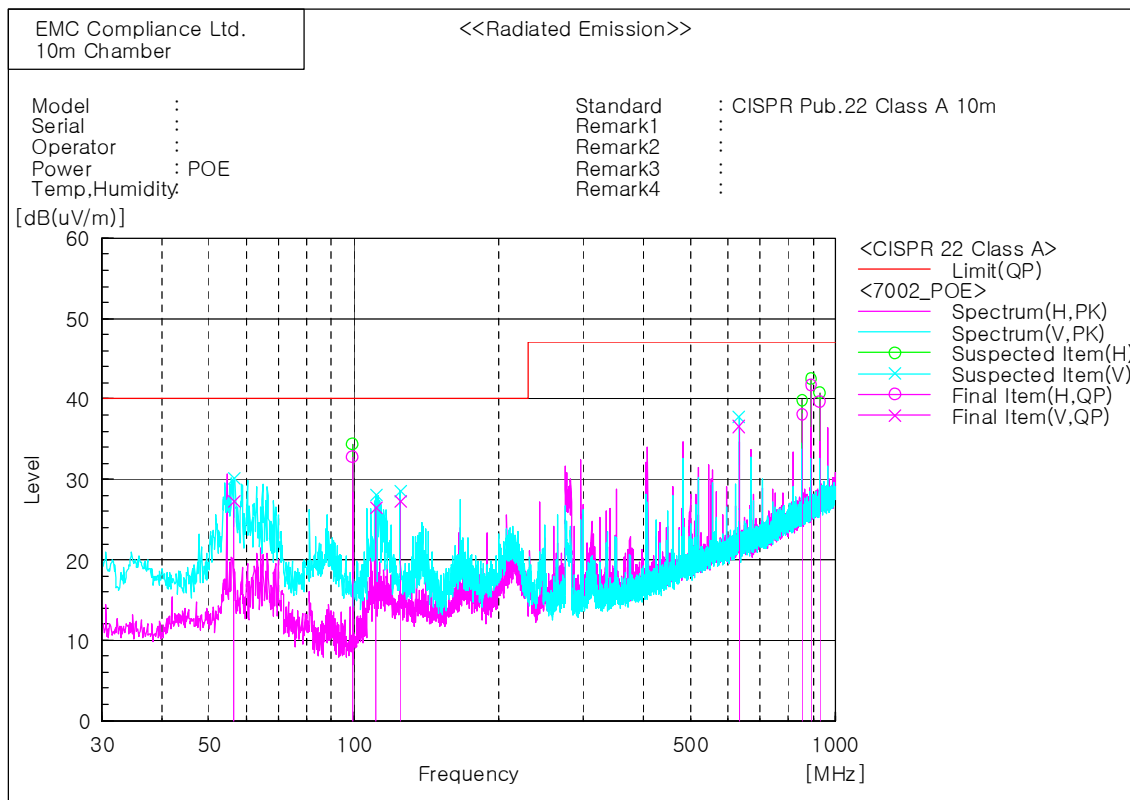
* 30 MHz ~ 1 GHz (#2- AC 24V)_SNB-7002N



Final Result

No.	Frequency [MHz]	(P)	Reading QP [dB(uV)]	c.f [dB(1/m)]	Result QP [dB(uV/m)]	Limit QP [dB(uV/m)]	Margin QP [dB]	Height [cm]	Angle [deg]
1	55.948	V	41.6	-13.9	27.7	40.0	12.3	100.0	275.9
2	60.191	V	39.1	-14.2	24.9	40.0	15.1	400.0	32.9
3	108.813	V	48.1	-17.0	31.1	40.0	8.9	100.0	129.4
4	211.875	V	45.3	-15.6	29.7	40.0	10.3	100.0	129.4
5	247.280	H	46.7	-13.9	32.8	47.0	14.2	301.0	211.4
6	631.158	V	41.2	-3.4	37.8	47.0	9.2	400.0	346.9
7	891.117	H	39.5	1.3	40.8	47.0	6.2	100.0	206.7
8	965.322	H	37.5	2.6	40.1	47.0	6.9	100.0	189.1

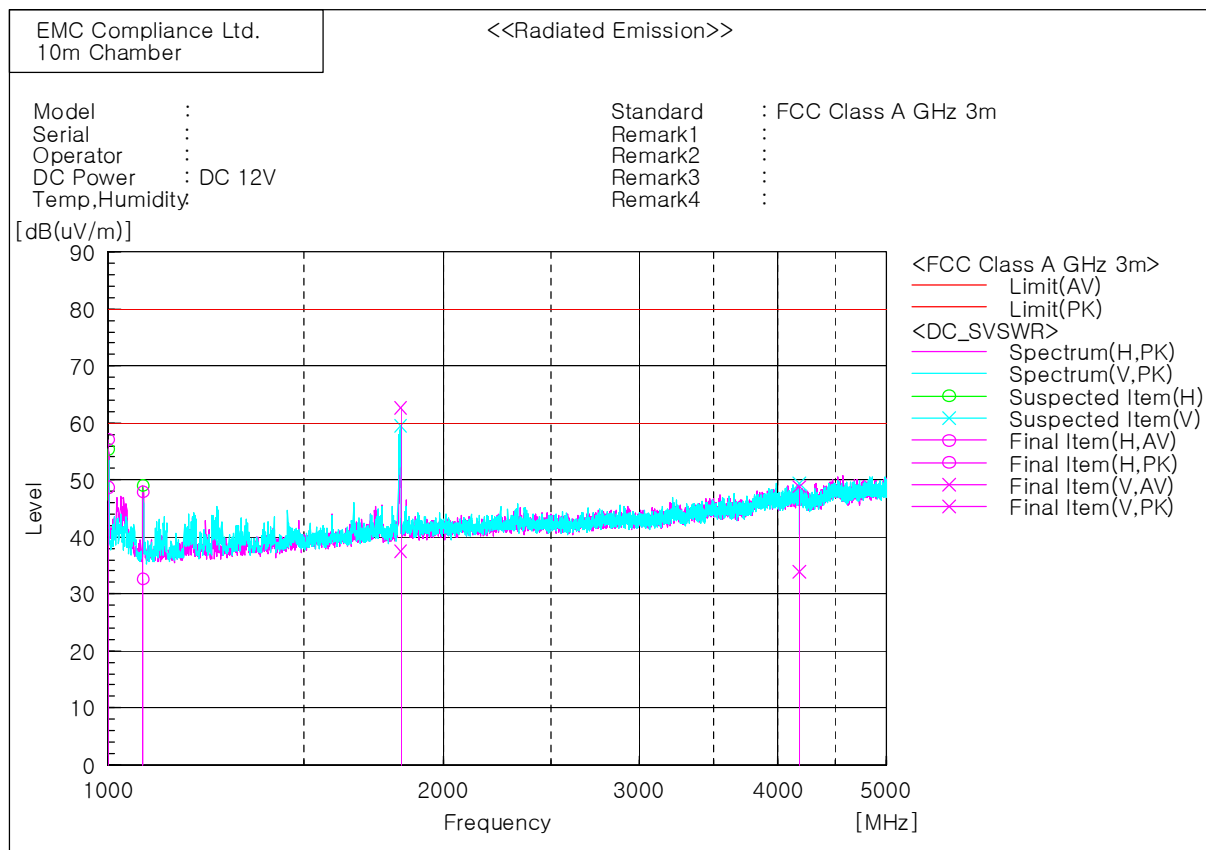
* 30 MHz ~ 1 GHz (#3- PoE)_SNB-7002N



Final Result

No.	Frequency [MHz]	(P)	Reading QP [dB(uV)]	c.f [dB(1/m)]	Result QP [dB(uV/m)]	Limit QP [dB(uV/m)]	Margin QP [dB]	Height [cm]	Angle [deg]
1	56.554	V	41.1	-13.9	27.2	40.0	12.8	100.0	148.9
2	99.598	H	51.0	-18.2	32.8	40.0	7.2	301.0	354.8
3	111.480	V	43.1	-16.6	26.5	40.0	13.5	400.0	207.3
4	124.939	V	42.3	-15.1	27.2	40.0	12.8	199.0	236.7
5	631.158	V	40.0	-3.4	36.6	47.0	10.4	100.0	357.9
6	853.894	H	37.4	0.7	38.1	47.0	8.9	100.0	317.7
7	891.117	H	40.5	1.3	41.8	47.0	5.2	100.0	312.7
8	928.220	H	37.6	2.1	39.7	47.0	7.3	100.0	322.2

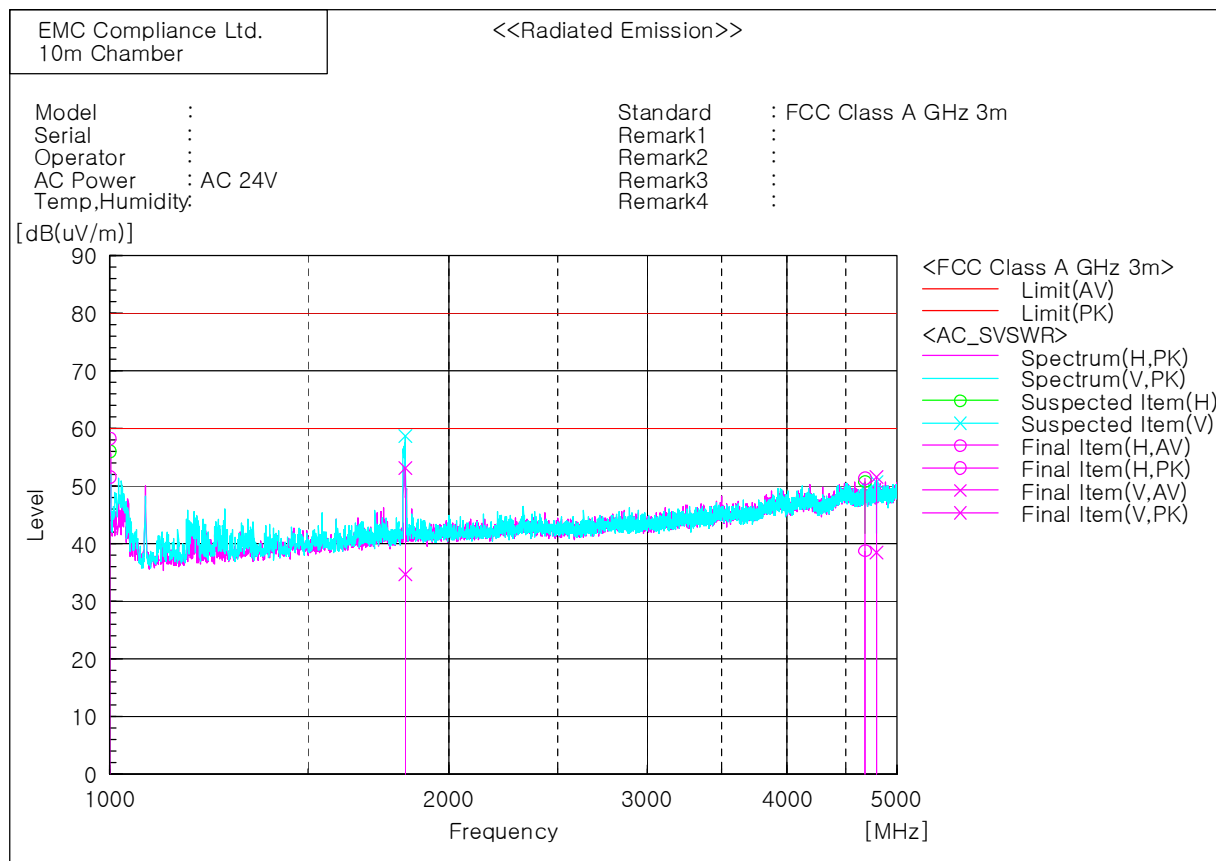
* 1 GHz ~ 5 GHz (#1- DC 12V)_SNB-7002N



Final Result

No.	Frequency [MHz]	(P)	Reading AV [dB(uV)]	Reading PK [dB(uV)]	c.f [dB(1/m)]	Result AV [dB(uV/m)]	Result PK [dB(uV/m)]	Limit AV [dB(uV/m)]	Limit PK [dB(uV/m)]	Margin AV [dB]	Margin PK [dB]	Height [cm]	Angle [deg]
1	1001.875	H	56.7	65.1	-8.0	48.7	57.1	60.0	80.0	11.3	22.9	100.0	342.9
2	1076.250	H	39.8	55.1	-7.2	32.6	47.9	60.0	80.0	27.4	32.1	100.0	342.9
3	1832.500	V	38.4	63.6	-0.9	37.5	62.7	60.0	80.0	22.5	17.3	100.0	147.2
4	4174.375	V	27.0	41.9	6.9	33.9	48.8	60.0	80.0	26.1	31.2	100.0	6.9

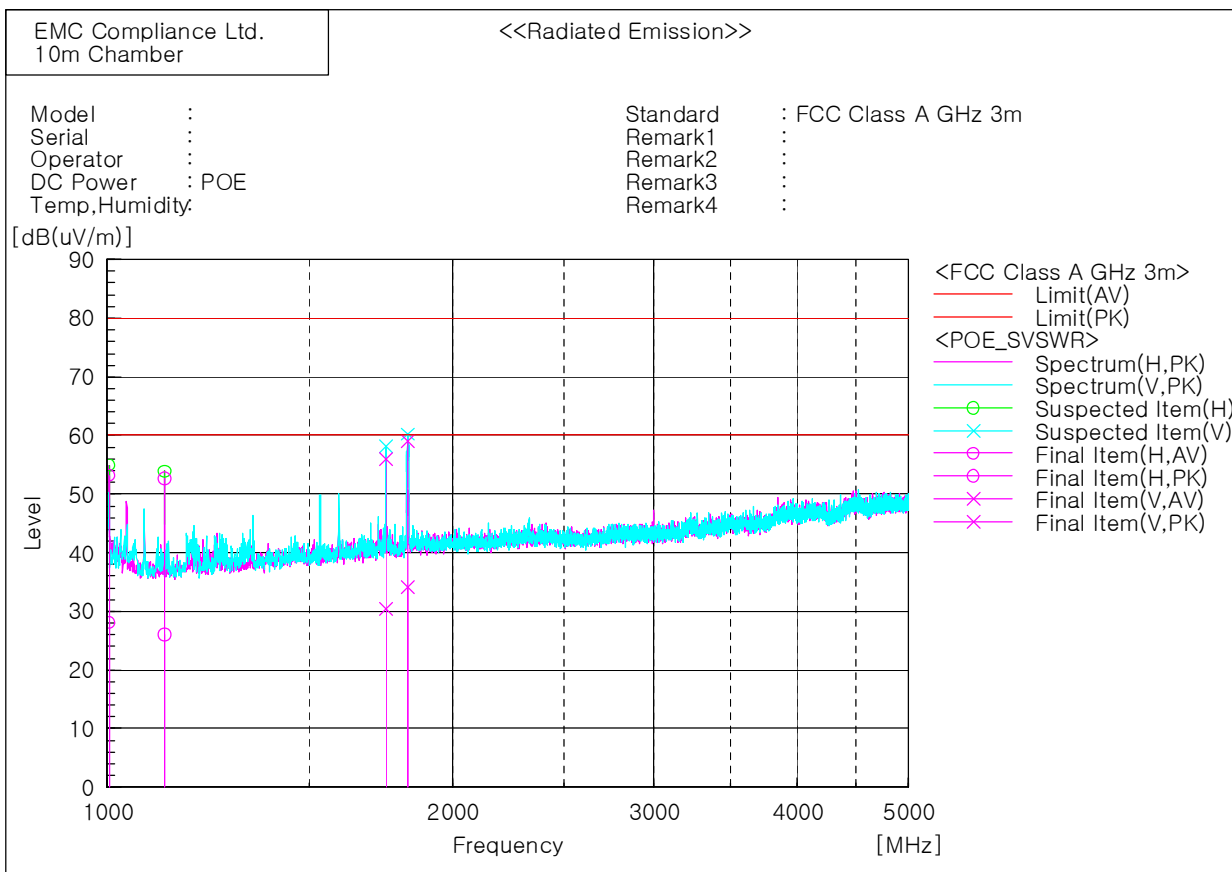
* 1 GHz ~ 5 GHz (#2- AC 24V)_SNB-7002N



Final Result

No.	Frequency [MHz]	(P)	Reading AV [dB(uV)]	Reading PK [dB(uV)]	c.f [dB(1/m)]	Result AV [dB(uV/m)]	Result PK [dB(uV/m)]	Limit AV [dB(uV/m)]	Limit PK [dB(uV/m)]	Margin AV [dB]	Margin PK [dB]	Height [cm]	Angle [deg]
1	1001.875	H	59.5	66.2	-8.0	51.5	58.2	60.0	80.0	8.5	21.8	100.0	156.0
2	1832.500	V	35.6	54.0	-0.9	34.7	53.1	60.0	80.0	25.3	26.9	100.0	149.4
3	4688.750	H	30.6	43.2	8.1	38.7	51.3	60.0	80.0	21.3	28.7	100.0	246.6
4	4795.000	V	30.0	43.2	8.4	38.4	51.6	60.0	80.0	21.6	28.4	100.0	7.9

* 1 GHz ~ 5 GHz (#3- PoE)_SNB-7002N



Final Result

No.	Frequency [MHz]	(P)	Reading AV [dB(uV)]	Reading PK [dB(uV)]	c.f [dB(1/m)]	Result AV [dB(uV/m)]	Result PK [dB(uV/m)]	Limit AV [dB(uV/m)]	Limit PK [dB(uV/m)]	Margin AV [dB]	Margin PK [dB]	Height [cm]	Angle [deg]
1	1002.500	H	36.1	61.2	-8.0	28.1	53.2	60.0	80.0	31.9	26.8	100.0	173.3
2	1121.250	H	32.7	59.3	-6.7	26.0	52.6	60.0	80.0	34.0	27.4	100.0	211.0
3	1750.625	V	32.0	57.5	-1.6	30.4	55.9	60.0	80.0	29.6	24.1	100.0	133.3
4	1826.875	V	35.2	60.0	-1.0	34.2	59.0	60.0	80.0	25.8	21.0	100.0	168.4

7. E.U.T. photographs

Front View



Rear View



Left View



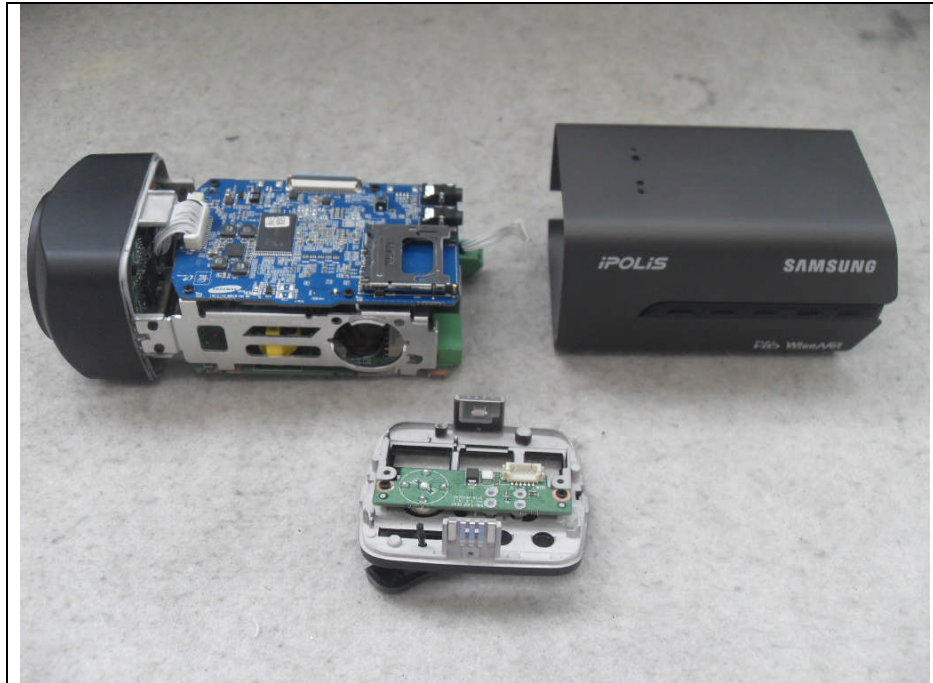
Right View



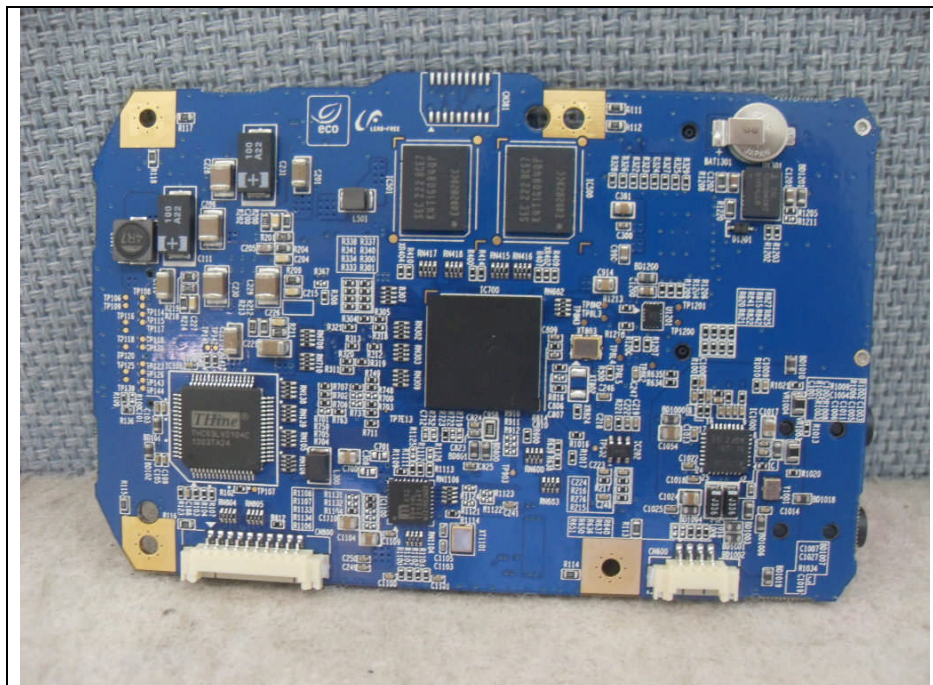
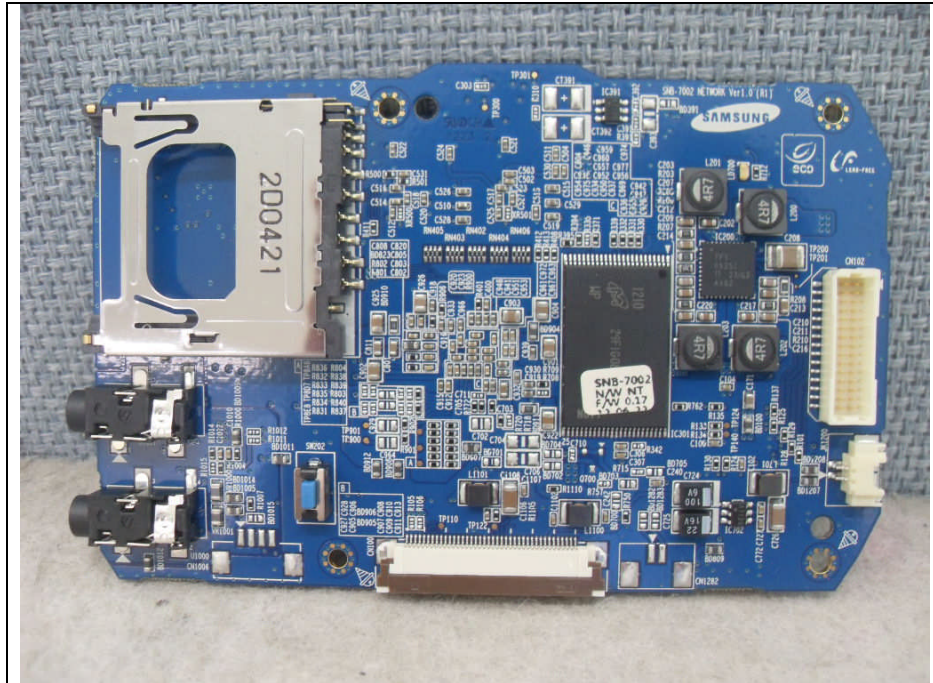
A black Samsung IPOLIS portable device, possibly a power bank or external battery, lying horizontally on a light-colored surface. The device has 'SAMSUNG' and 'IPOLIS' printed on its top surface. Four small circular indicators are visible on the front face.

[illegible]

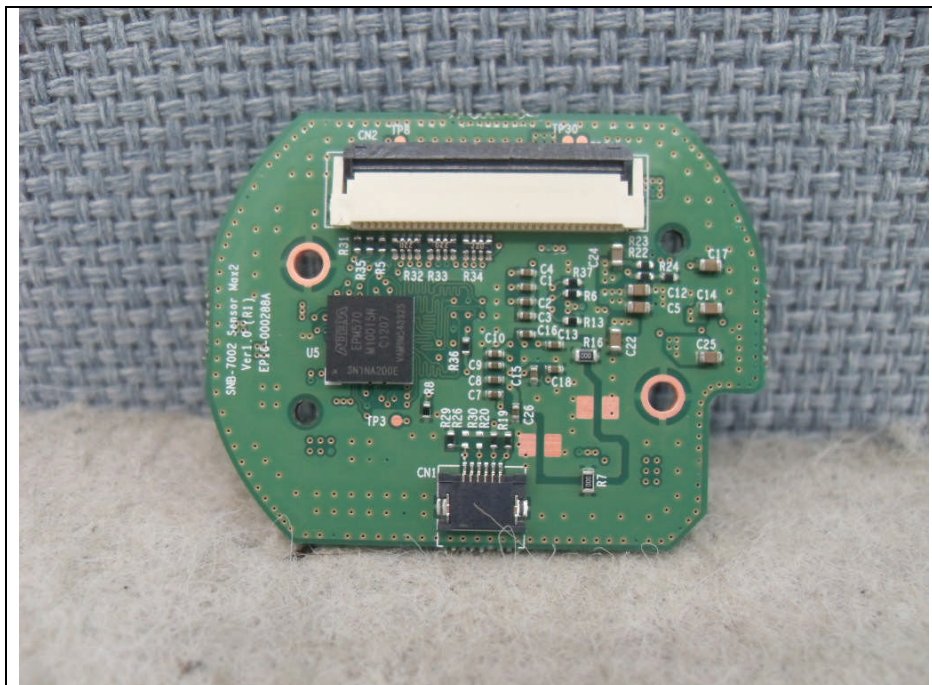
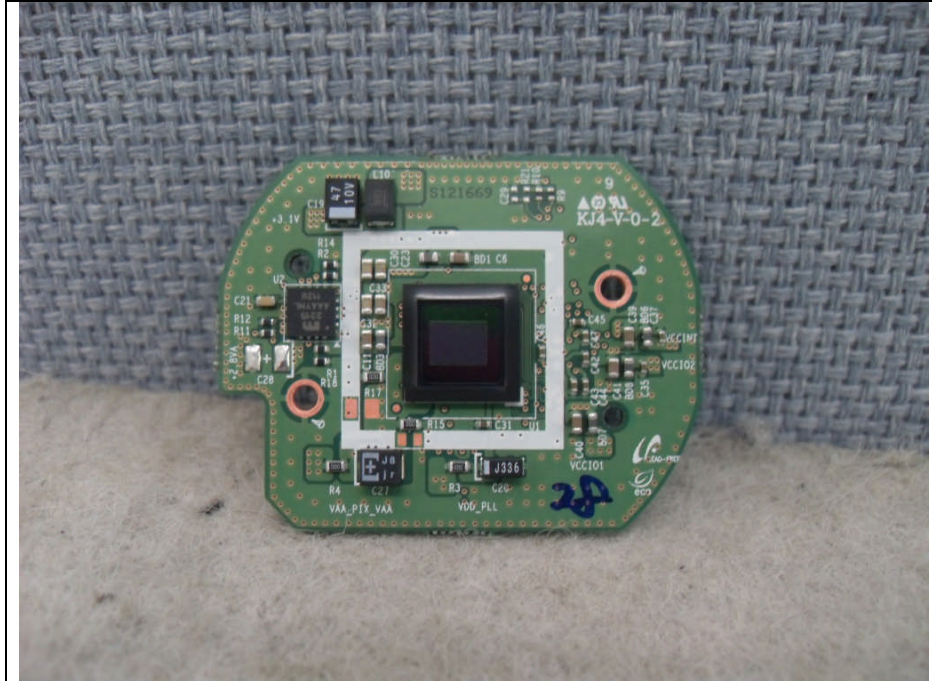
Inside



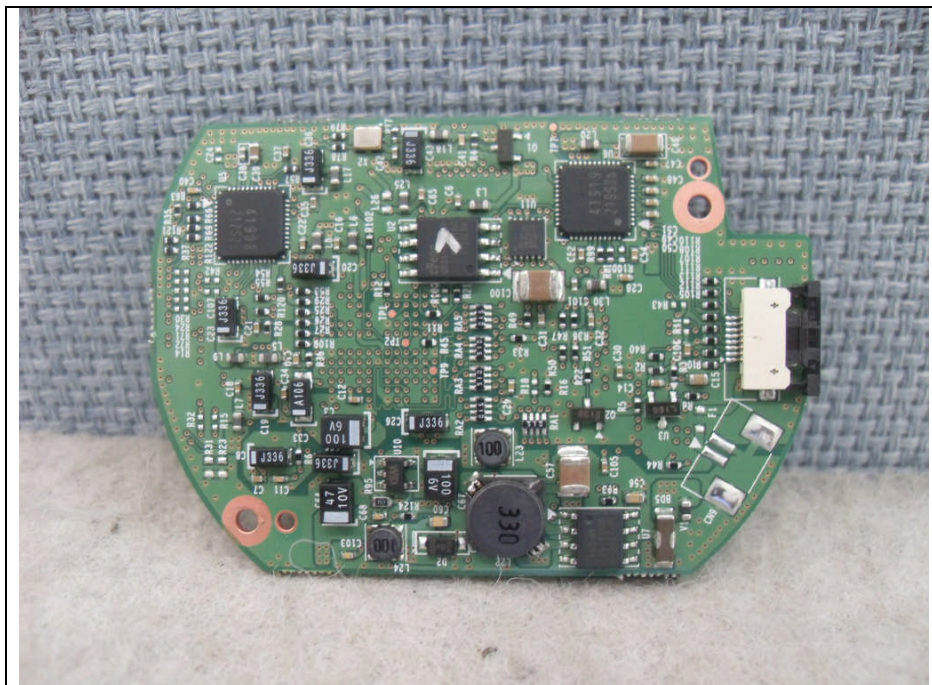
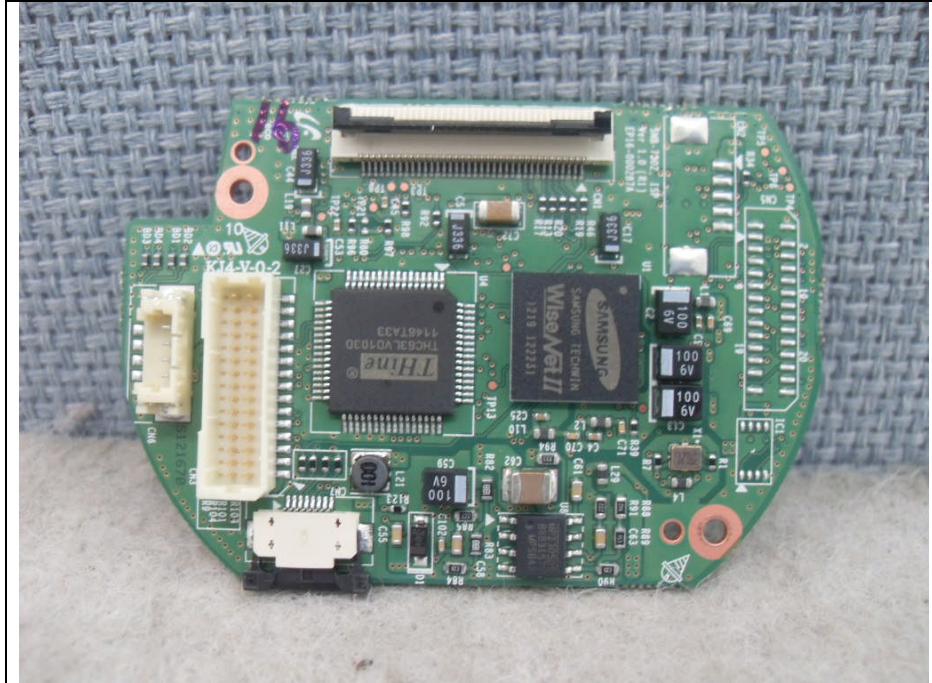
Main Board



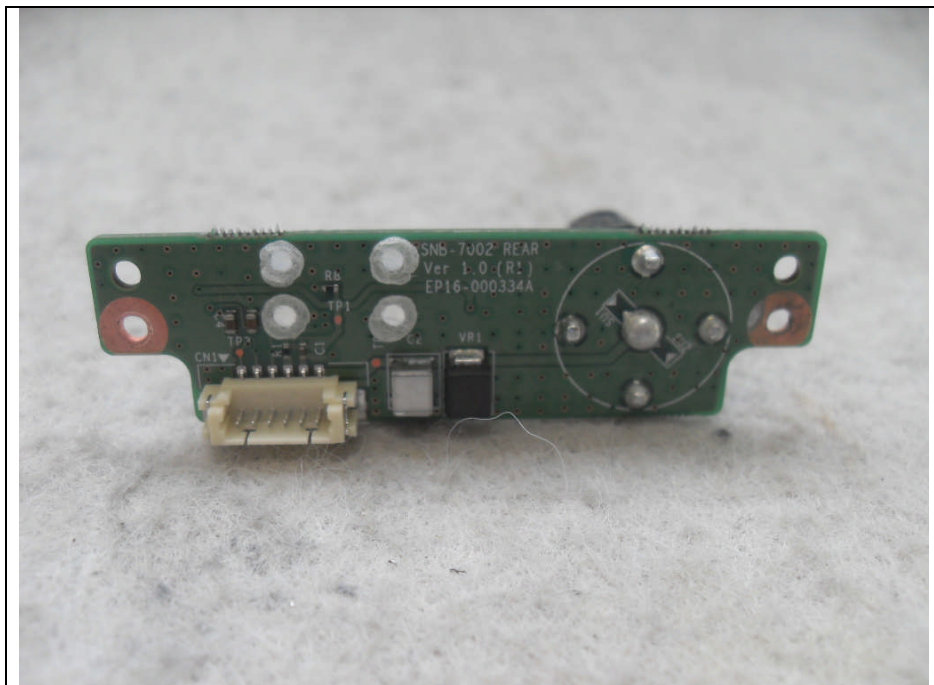
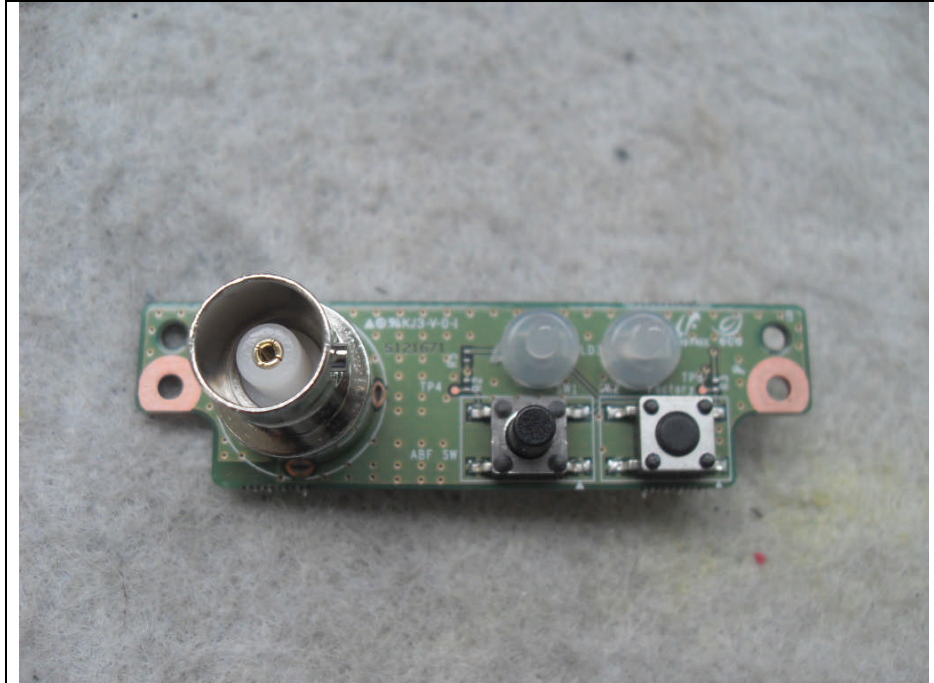
CCD Board



ISP Board



Rear Board



Power Board

