

# DECLARATION OF CONFORMITY

We; Samsung Techwin Co., Ltd.  
DECLARE UNDER OUR SOLE RESPONSIBILITY THAT THE PRODUCT;

**Report No:** KES-E1-15T0123

**Type of equipment:** NETWORK CAMERA

**Model Name:** SNV-8081RP

**Applicant:** Samsung Techwin Co., Ltd.

**Address:** 84, Jeongdong-ro, Seongsan-gu, Changwon-si, Gyeongsangnam-do, Korea

**Manufacturer :** TIANJIN SAMSUNG TECHWIN OPTO-ELECTRONIC CO., LTD.

**Address:** No.11 Weiliu Rd, Micro-Electronic Industrial Park, TEDA, Tianjin, 300385, People's Republic of China

**Test standards :** AS/NZS CISPR22:2009+A1:2010

**Classification:** C-Tick

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

APR. 22. 2015  
(Date of issue)

(Name and signature of authorized person)



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## AS/NZS EMI Test Report

**Test Report No.** : KES-E1-15T0123  
**Date of Issue** : 04. 22. 2015  
**Description of Product** : NETWORK CAMERA  
**Model No.** : SNV-8081RP  
**Variant Model** : -  
**Applicant** : Samsung Techwin Co., Ltd.  
**Address** : 84, Jeongdong-ro, Seongsan-gu, Changwon-si, Gyeongsangnam-do, Korea  
**Manufacturer** : TIANJIN SAMSUNG TECHWIN OPTO-ELECTRONIC CO., LTD.  
**Address** : No.11 Weiliu Rd, Micro-Electronic Industrial Park, TEDA, Tianjin, 300385, People's Republic of China  
**Applicable Regulation** : AS/NZS CISPR22:2009 + A1:2010

**Date of Receipt** : 04. 02. 2015  
**Test Date** : 04. 15. 2015

**Tested by:**

Dae Hyun, Kim  
Test Engineer

**Reviewed by:**

Dong Hun, Jang  
Technical Manager



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## Revision history

| Revision | Date of issue | Test report No. | Description |
|----------|---------------|-----------------|-------------|
| -        | 04. 22. 2015  | KES-E1-15T0123  | Initial     |

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# **1. General Information**

## **1.1 Introduction**

The EMI Test Report for CE Declaration of Conformity is prepared on behalf of named applicant in accordance with the EMC Directive(2004/108/EC) of the European Economic Community. The test results reported in this document relate only to the item that was tested.

All radiated emission, conducted emission measurements required by the EMC Directive were performed manually at KES Co., Ltd. (here in after called KES), 473-29, Gayeo-ro, Yeoju-si, Gyeonggi-do, Korea

The radiated emission measurements performed on 10 meter, Open Area Test Site, test range maintained by KES. Complete ANSI63.4;2009 description and site attenuation measurement data records are maintained at the test facility and have been placed on file with the Federal Communications Commission.

The KES EMC test facilities in and Yeoju-si are designated testing laboratory according to ISO/IEC 17025 by Radio Research Agency(RRA), Korea Communication Commission.



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### 1.2 Product Description for Equipment Under Test (EUT)

Samsung Techwin Co., Ltd., NETWORK CAMERA, Model No: SNV-8081RP or the "E.U.T". as referred to in this report is base model.

Main Specifications of EUT are:

|                                 | SNV-8081R                                                                                                                                                                                                                                                                                                                           |
|---------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Video</b>                    |                                                                                                                                                                                                                                                                                                                                     |
| Imaging Device                  | 1/1.8" 6M CMOS                                                                                                                                                                                                                                                                                                                      |
| Total Pixels                    | 3096(H) x 2094(V)                                                                                                                                                                                                                                                                                                                   |
| Effective Pixels                | 2616(H) x 1976(V)                                                                                                                                                                                                                                                                                                                   |
| Scanning System                 | Progressive Scan                                                                                                                                                                                                                                                                                                                    |
| Min. Illumination               | 5M Mode<br>Color : 0.25 Lux(1/30sec, F1.2, 50IRE), 0.004Lux(2sec, F1.2, 50IRE)<br>Color : 0.1 Lux(1/30sec, F1.2, 30IRE), 0.0017Lux(2sec, F1.2, 30IRE)<br>2M Mode<br>Color : 0.25 Lux(1/30sec, F1.2, 50IRE), 0.004Lux(2sec, F1.2, 50IRE)<br>Color : 0.1 Lux(1/30sec, F1.2, 30IRE), 0.0017Lux(2sec, F1.2, 30IRE)<br>0 Lux (IR LED On) |
| S / N Ratio                     | 50dB                                                                                                                                                                                                                                                                                                                                |
| Video Out                       | CVBS : 1.0 Vp-p / 75Ω composite, 704x480(I), 704x576(P), for installation<br>- DIB connector type                                                                                                                                                                                                                                   |
| <b>Lens</b>                     |                                                                                                                                                                                                                                                                                                                                     |
| Focal Length (Zoom Ratio)       | 3.6 ~ 9.4mm (2.6x) Motorized Varifocal                                                                                                                                                                                                                                                                                              |
| Max. Aperture Ratio             | F1.2                                                                                                                                                                                                                                                                                                                                |
| Angular Field of View           | H : 104.0°(Wide) ~ 39.2°(Tele) / V : 75.2°(Wide) ~ 29.3°(Tele)                                                                                                                                                                                                                                                                      |
| Min. Object Distance            | 0.5m(1.64ft)                                                                                                                                                                                                                                                                                                                        |
| Focus Control                   | Simple Focus (Motorized V/F) / Manual<br>- Remote control via network (Manual, Simple Focus)                                                                                                                                                                                                                                        |
| Lens Type                       | DC Auto Iris, support P-Iris mode                                                                                                                                                                                                                                                                                                   |
| Mount Type                      | Board-in type                                                                                                                                                                                                                                                                                                                       |
| LDC(Lens Distortion Correction) | Off/On (Level Adjustment : 1 ~ 5)                                                                                                                                                                                                                                                                                                   |
| <b>Pan / Tilt / Rotate</b>      |                                                                                                                                                                                                                                                                                                                                     |
| Pan Range                       | 0° ~ +354°                                                                                                                                                                                                                                                                                                                          |
| Tilt Range                      | 0° ~ +67°                                                                                                                                                                                                                                                                                                                           |
| Rotate Range                    | 0° ~ +355°                                                                                                                                                                                                                                                                                                                          |
| <b>Operational</b>              |                                                                                                                                                                                                                                                                                                                                     |
| IR LED                          | 2 ea                                                                                                                                                                                                                                                                                                                                |
| Viewable Length                 | 30m, Smart IR                                                                                                                                                                                                                                                                                                                       |
| Camera Title                    | Off / On (Displayed up to 15 characters)                                                                                                                                                                                                                                                                                            |
| Day & Night                     | Auto (ICR) / Color / B/W / External / Schedule                                                                                                                                                                                                                                                                                      |
| Backlight Compensation          | Off / BLC / WDR                                                                                                                                                                                                                                                                                                                     |
| Wide Dynamic Range              | 120dB                                                                                                                                                                                                                                                                                                                               |
| Contrast Enhancement            | SSDR (Samsung Super Dynamic Range) (Off / On)                                                                                                                                                                                                                                                                                       |
| Digital Noise Reduction         | SSNR (2D+3D Noise Filter) (Off / On)                                                                                                                                                                                                                                                                                                |
| Digital Image Stabilization     | 미지원                                                                                                                                                                                                                                                                                                                                 |
| Defog                           | 미지원                                                                                                                                                                                                                                                                                                                                 |
| Motion Detection                | Off / On(4ea, Rectangle)                                                                                                                                                                                                                                                                                                            |
| Privacy Masking                 | Off / On(6ea, Rectangle)<br>- Color : Gray, Green, Red, Blue, Black, White                                                                                                                                                                                                                                                          |
| Gain Control                    | Off / Low / Medium / High                                                                                                                                                                                                                                                                                                           |
| White Balance                   | ATW / AWC / Manual / Indoor / Outdoor (included Mercury & Sodium)                                                                                                                                                                                                                                                                   |
| Electronic Shutter Speed        | Minimum / Maximum / Anti flicker (2 ~ 1/12,000sec)                                                                                                                                                                                                                                                                                  |
| Digital Zoom                    | 미지원                                                                                                                                                                                                                                                                                                                                 |
| Rotate Image                    | Flip : On/Off<br>Mirror : On/Off<br>Halfway : 90° / 270°                                                                                                                                                                                                                                                                            |
| Intelligent Video Analytics     | Tampering, Audio Detection<br>- with Metadata                                                                                                                                                                                                                                                                                       |
| Alarm I/O                       | Input 1ea / Output 1ea                                                                                                                                                                                                                                                                                                              |
| Remote Control Interface        | 미지원                                                                                                                                                                                                                                                                                                                                 |
| RS-485 Protocol                 | 미지원                                                                                                                                                                                                                                                                                                                                 |
| Alarm Triggers                  | Alarm input, motion detection, tampering, audio detection,<br>Network Disconnect                                                                                                                                                                                                                                                    |
| Alarm events                    | • File upload via FTP, E-Mail<br>• Notification via E-Mail<br>• local storage(SD/SDHC) recording at Network disconnected<br>• External output                                                                                                                                                                                       |
| Audio In                        | Selectable (Mic IN/Line IN),<br>Supply voltage: 2.5VDC(4mA), Input impedance: approx. 2K Ohm                                                                                                                                                                                                                                        |
| Audio out                       | Line out (3.5mm stereo mini jack), Max output level: 1 Vrms                                                                                                                                                                                                                                                                         |
| <b>Network</b>                  |                                                                                                                                                                                                                                                                                                                                     |
| Ethernet                        | RJ-45 (10/100BASE-T)                                                                                                                                                                                                                                                                                                                |
| Video Compression Format        | H.265 : Main<br>H.264 (MPEG-4 Part 10/AVC) : Main/Baseline<br>Motion JPEG                                                                                                                                                                                                                                                           |
| Resolution                      | 5M Mode<br>2592x1944 / 1920x1080 / 1600x1200 / 1280x1024 / 1280x960 / 1280x720 / 1024x768 / 800x600 / 720x576 / 720x480 / 640x480 / 320x240<br>2M Mode<br>1920x1080 / 1280x1024 / 1280x960 / 1280x720 / 1024x768 / 800x600 / 720x576 / 720x480 / 640x480 / 320x240<br>※ Mode 변경 시 재부팅 사항                                            |
| Max. Framerate                  | 5M Mode<br>H.264/H.265 : 30 fps in all resolutions<br>MJPEG : more than 800x600 : 1 fps, equal or less than 800x600 : 15fps<br>2M Mode<br>H.264/H.265 : 60 fps in all resolutions<br>MJPEG : more than 800x600 : 1 fps, equal or less than 800x600 : 15fps                                                                          |
| Smart Codec                     | Manual Mode (area-based : 4EA)                                                                                                                                                                                                                                                                                                      |
| Video Quality Adjustment        | H.264/H.265 : Compression Level, Target Bitrate Level Control<br>MJPEG : Quality Level Control                                                                                                                                                                                                                                      |
| Bitrate Control Method          | H.264/H.265 : CBR or VBR,<br>Motion JPEG : VBR                                                                                                                                                                                                                                                                                      |

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|                                  |                                                                                                                                                                                                                                                                                                                                  |
|----------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Streaming Capability             | Multiple Streaming (Up to 3 Profiles)<br>- Total 3 Stream at the same time (including Recording Stream)<br>* H.264 & H.265 프로파일 동시 전송                                                                                                                                                                                            |
| Audio Compression Format         | G.711, G.726 Selectable<br>G.726 (ADPCM) 8KHz, G.711 8KHz                                                                                                                                                                                                                                                                        |
| Audio Communication              | Bi-directional (2-Way)                                                                                                                                                                                                                                                                                                           |
| IP                               | IPv4, IPv6                                                                                                                                                                                                                                                                                                                       |
| Protocol                         | TCP/IP, UDP/IP, RTP(UDP), RTP(TCP), RTCP, RTSP, NTP, HTTP, HTTPS, SSL, DHCP, PPPoE, FTP, SMTP, ICMP, IGMP, SNMPv1/v2c/v3(MIB-2), ARP, DNS, DDNS, QoS, PIM-SM, UPnP, Bonjour                                                                                                                                                      |
| Security                         | HTTPS(SSL) Login Authentication<br>Digest Login Authentication<br>IP Address Filtering<br>User access Log<br>802.1X Authentication (EAP-TLS, EAP-LEAP)                                                                                                                                                                           |
| Streaming Method                 | Unicast / Multicast                                                                                                                                                                                                                                                                                                              |
| Max. User Access                 | 10 users at Unicast Mode                                                                                                                                                                                                                                                                                                         |
| Edge Storage                     | SD/SDHC/SDXC (up to 128G)<br>- motion Images recorded in the SD/SDHC/SDXC memory card can be downloaded.<br>- camera can detect automatically when the memory is connected<br>- memory status display (normal/error/active/formatting/lock)<br>NAS(Network Attached Storage)<br>Local PC for Instant Recording                   |
| Application Programming          | ONVIF Profile S<br>SUNAPI(HTTP API)<br>SVNP<br>SAMSUNG TECHWIN Open Platform                                                                                                                                                                                                                                                     |
| Webpage Language                 | English, French, German, Spanish, Italian, Chinese, Russian, Japanese, Swedish, Danish, Portuguese, Turkish, Polish, Czech, Rumanian, Serbian, Dutch, Croatia, Hungary, Greek                                                                                                                                                    |
| Web Viewer                       | Supported OS : Windows XP / VISTA / 7 / 8 / 8.1 or Higher, MAC OS X 10.7 or Higher<br>Supported Browser : Microsoft Internet Explorer (Ver. 8~11) or Higher<br>Mozilla Firefox (Ver. 9~19) or Higher ,<br>Google Chrome (Ver. 15~25) or Higher,<br>Apple Safari (Ver. 6.0.2(Mac OS X 10.8, 10.7 only), 5.1.7)<br>* Mac OS X only |
| Central Management Software      | SmartViewer, SSM                                                                                                                                                                                                                                                                                                                 |
| Pixel Counter                    | support                                                                                                                                                                                                                                                                                                                          |
| Image Logo                       | 미지원                                                                                                                                                                                                                                                                                                                              |
| Web Viewer Help                  | support(영문 only)                                                                                                                                                                                                                                                                                                                 |
| <b>Environmental</b>             |                                                                                                                                                                                                                                                                                                                                  |
| Operating Temperature / Humidity | -40°C ~ +55°C(+14°F ~ +131°F) / Less than 90% RH<br>* Start up should be done at above -35°C                                                                                                                                                                                                                                     |
| Storage Temperature / Humidity   | -30°C ~ +60°C (-22°F ~ +140°F) / Less than 90% RH                                                                                                                                                                                                                                                                                |
| Ingress Protection               | IP66                                                                                                                                                                                                                                                                                                                             |
| Vandal Resistance                | IK10                                                                                                                                                                                                                                                                                                                             |
| <b>Electrical</b>                |                                                                                                                                                                                                                                                                                                                                  |
| Input Voltage / Current          | AC24V, DC12V, PoE(IEEE802.3af, Class3)                                                                                                                                                                                                                                                                                           |
| Power Consumption                | 최대 10W / 11.5W (12V DC, 히터 미사용 시 / 사용 시)<br>최대 11.5W / 12.95W (PoE, 히터 미사용 시 / 사용 시)<br>최대 12W / 13.5W (24V AC, 히터 미사용 시 / 사용 시)                                                                                                                                                                                                 |
| <b>Mechanical</b>                |                                                                                                                                                                                                                                                                                                                                  |
| Color / Material                 | Ivory / Aluminum                                                                                                                                                                                                                                                                                                                 |
| Dimension (WxHxD)                | Ø160 x H118.5                                                                                                                                                                                                                                                                                                                    |
| Weight                           | 995g                                                                                                                                                                                                                                                                                                                             |

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**1.3 Equipment Under Test**

| Description    | Model Number | Serial Number | Manufacturer                                         | Remarks |
|----------------|--------------|---------------|------------------------------------------------------|---------|
| NETWORK CAMERA | SNV-8081RP   | -             | TIANJIN SAMSUNG TECHWIN<br>OPTO-ELECTRONIC CO., LTD. | EUT     |

**1.4 Support****Equipments**

| Description   | Model Number    | Serial Number                 | Manufacturer                                   | Remarks |
|---------------|-----------------|-------------------------------|------------------------------------------------|---------|
| Adapter       | AP-2410A        | -                             | Atrom                                          | -       |
| Adapter       | SW60-12005000-W | -                             | POWER-TEK                                      | -       |
| PoE Adapter   | PD3001GC/AC     | RD9356082016964200            | Power Dsine                                    | -       |
| Notebook      | NT63025J        | JK9091EF400142M               | 삼성전자(주)                                        | -       |
| Adapter       | A13-040N2A      | CN60BA4400313AD0<br>N843KO2OO | Chicony Power Technology<br>(suzhou) Co., Ltd. | -       |
| Monitor       | SMT-2232        | C95V67VF900025B               | Weihai Daewoo Eletronics<br>Co.,Ltd.           | -       |
| Headset       | RHS-2000        |                               | (주)로이체                                         | -       |
| Zig           | -               |                               |                                                |         |
| Micro SD Card | -               |                               |                                                |         |

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## 1.5 External I/O Cabling

- AC, DC Mode

| Start          |            | END         |           | Cable Spec. |            |
|----------------|------------|-------------|-----------|-------------|------------|
| Description    | I/O Port   | Description | I/O Port  | Length      | Shield     |
| NETWORK CAMERA | LAN(RJ-45) | Notebook    | LAN(PoE)  | 3.0         | Unshielded |
|                | Alarm      | Zig         | Alarm     | 3.0         | Unshielded |
|                | Audio In   | Headset     | Audio Out | 1.8         | Unshielded |
|                | Audio Out  | Headset     | Audio In  | 1.8         | Unshielded |
|                | Video Out  | Monitor     | Video In  | 3.0         | Shielded   |

- PoE Mode

| Start          |            | END         |            | Cable Spec. |            |
|----------------|------------|-------------|------------|-------------|------------|
| Description    | I/O Port   | Description | I/O Port   | Length      | Shield     |
| NETWORK CAMERA | LAN(PoE)   | PoE Adapter | LAN(PoE)   | 3.0         | Unshielded |
|                | Alarm      | Zig         | Alarm      | 3.0         | Unshielded |
|                | Audio In   | Headset     | Audio Out  | 1.8         | Unshielded |
|                | Audio Out  | Headset     | Audio In   | 1.8         | Unshielded |
|                | Video Out  | Monitor     | Video In   | 3.0         | Shielded   |
| PoE Adapter    | LAN(RJ-45) | Notebook    | LAN(RJ-45) | 0.9         | Unshielded |

## 1.6 Special Accessories

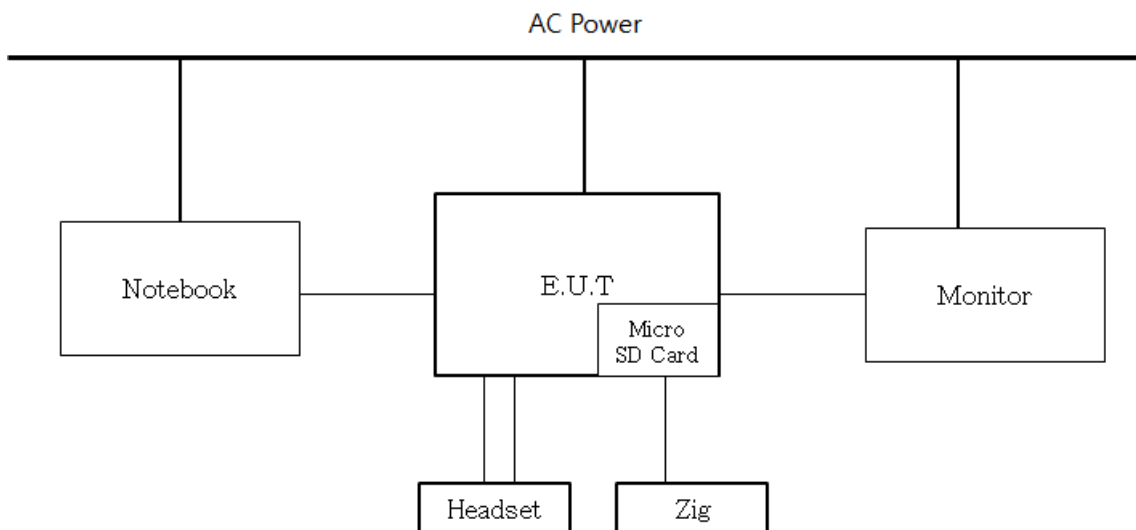
As shown in section 1.8, all interface cables used for compliance testing are shielded as normally supplied or by use respective component manufacturers.

## 1.7 EUT Modifications

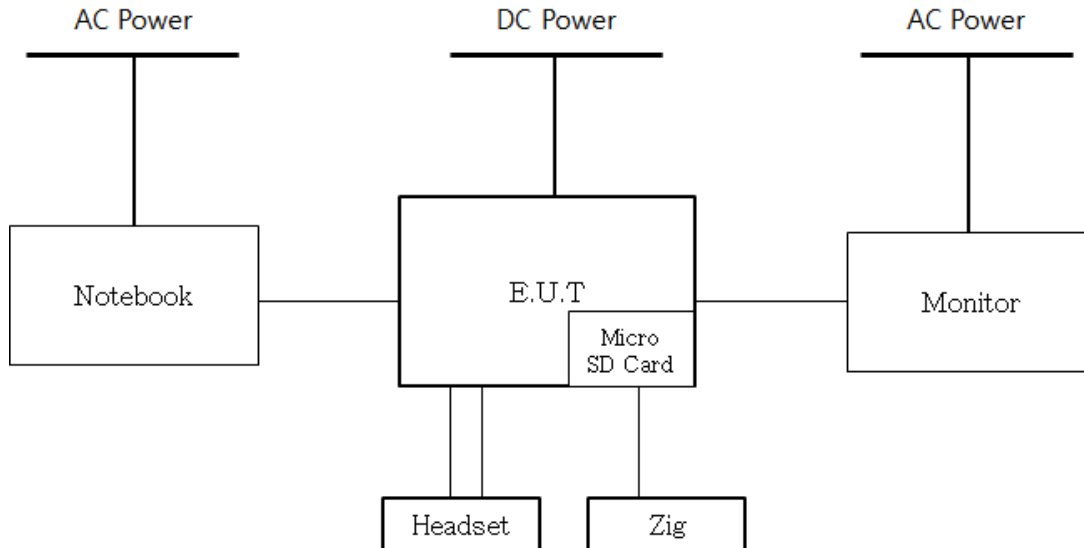
No modifications were made to the EUT in order to achieve and maintain compliance to the standards described in this report.

## 1.8 Configuration of Test System

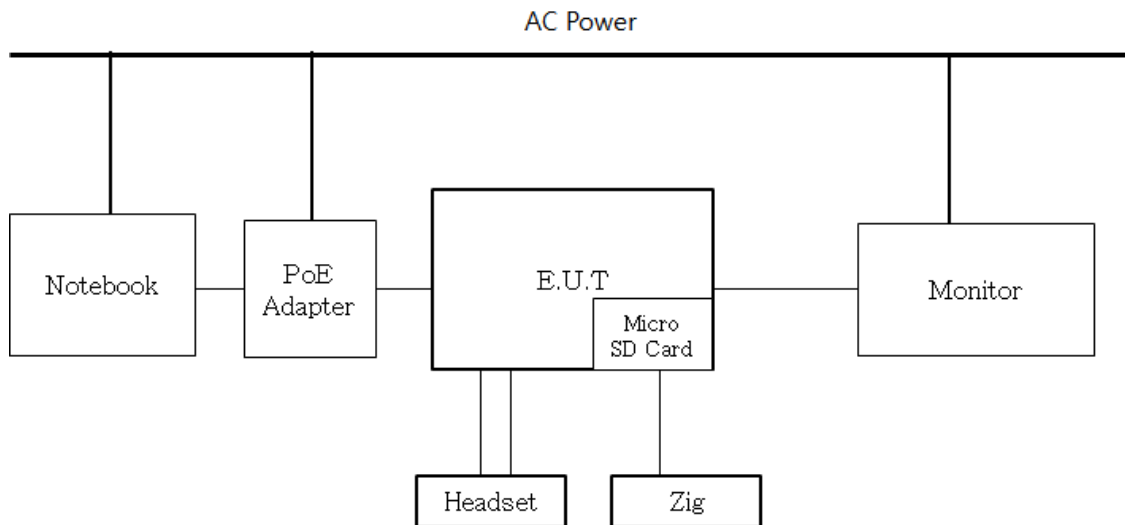
- AC Mode



- DC Mode



- PoE Mode



## 1.9 Operating condition

### ※ Test Operating Mode

- Ping test
- web view monitoring
- Alarm test
- Monitor monitoring

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**2. Test standards and results**

| Specifications   | Description        | Test Point    | Remark |
|------------------|--------------------|---------------|--------|
| CISPR22, Class A | Conducted Emission | AC Input Port | C      |
| CISPR22, Class A | Radiated Emission  | Enclosure     | C      |

Note : C=Complies N/C=Not Complies N/T=Not Tested N/A=Not Applicable

Note (1) : This device is operate by PoE power. Test is not applicable.

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### 3. Test Performed

#### 3.1 Conducted Emission Measurements

##### 3.1.1 Test Description

The power line conducted emission measurements were performed in a shielded enclosure. The EUT was placed on a wooden table, 80 centimeters height above the floor. Power was fed to the EUT through a 50 ohm/ 50 micro henry Line Impedance Stabilization Network (LISN). The ground plane that was electrically bonded to the shield room ground system and all power lines entering the shield room were filtered.

##### 3.1.2 Test Equipments

| Description                  | Manufacturer      | Model Number | Serial Number | Cal. Due     |
|------------------------------|-------------------|--------------|---------------|--------------|
| EMI Receiver/Signal Analyzer | Narda S.T.S / PMM | PMM 9010F    | 020WW31006    | 04. 01. 2016 |
| LISN                         | R&S               | ENV216       | 101137        | 02. 10. 2016 |
| LISN                         | EMCO              | 3810/2       | 2228          | -            |
| 8-Wire ISN CAT3              | Schwarzbeck Mess  | CAT3 8158    | 8158-0019     | 04. 02. 2016 |
| 8-Wire ISN CAT5              | Schwarzbeck Mess  | NTFM 8158    | 8158-0030     | 04. 02. 2016 |
| 8-Wire ISN CAT6              | Schwarzbeck Mess  | NTFM 8158    | 8158-0029     | 08. 15. 2015 |
| Electro wave Shieldroom      | SEMITEC           | -            | -             | -            |

##### 3.1.3 Test Environments

Ambient Temperatures : see the data  
Relative Humidity : see the data

##### 3.1.4 Test Limits

| Frequency<br>(MHz) | CISPR Publication 22 |          |         |    |
|--------------------|----------------------|----------|---------|----|
|                    | Class B              |          | Class A |    |
|                    | QP                   | AV       | QP      | AV |
| 0.15 to 0.50       | 66 to 56             | 56 to 46 | 79      | 66 |
| 0.50 to 5.00       | 56                   | 46       | 73      | 60 |
| 5.00 to 30.00      | 60                   | 50       | 73      | 60 |

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- Telecommunication

| Frequency<br>(MHz) | CISPR 22(Voltage)    |              |                      |              |
|--------------------|----------------------|--------------|----------------------|--------------|
|                    | Class B (dB $\mu$ V) |              | Class A (dB $\mu$ V) |              |
|                    | Quasi-peak           | Average      | Quasi-peak           | Average      |
| 0.15 to 0.50       | 84.0 to 74.0         | 74.0 to 64.0 | 97.0 to 87.0         | 84.0 to 74.0 |
| 0.50 to 30.00      | 74.0                 | 64.0         | 87.0                 | 74.0         |

| Frequency<br>(MHz) | CISPR 22(Current)    |              |                      |              |
|--------------------|----------------------|--------------|----------------------|--------------|
|                    | Class B (dB $\mu$ A) |              | Class A (dB $\mu$ A) |              |
|                    | Quasi-peak           | Average      | Quasi-peak           | Average      |
| 0.15 to 0.50       | 40.0 to 30.0         | 30.0 to 20.0 | 53.0 to 43.0         | 40.0 to 30.0 |
| 0.50 to 30.00      | 30.0                 | 20.0         | 43.0                 | 30.0         |

### 3.1.5 Test Procedure

The conducted emission levels were measured on each current-carrying line with the spectrum analyzer operating in the CISPR quasi-peak mode (or peak mode if applicable). The analyzer's 6 dB bandwidth was set to 9 kHz. The initial step in collecting conducted data is a spectrum analyzer peak scan of the measurement range. If the conducted emission exceed the average limit with the instrument set to the quasi-peak mode, the measurements are made in the average mode. The emission spectrum was scanned from 150 kHz to 30 MHz. The highest emission amplitudes relative to the appropriate limits were measured and have been recorded. Quasi-peak readings are distinguished with a "QP".

The conducted emission test was performed with the EUT exercise program loaded, and the emissions were scanned between 150 kHz to 30 MHz on the HOT side and NEUTRAL side, herein referred to as H and N, respectively.

### 3.1.6 Test Results

According to the data in section 2.1.7, the EUT complied with the CISPR22 standards.



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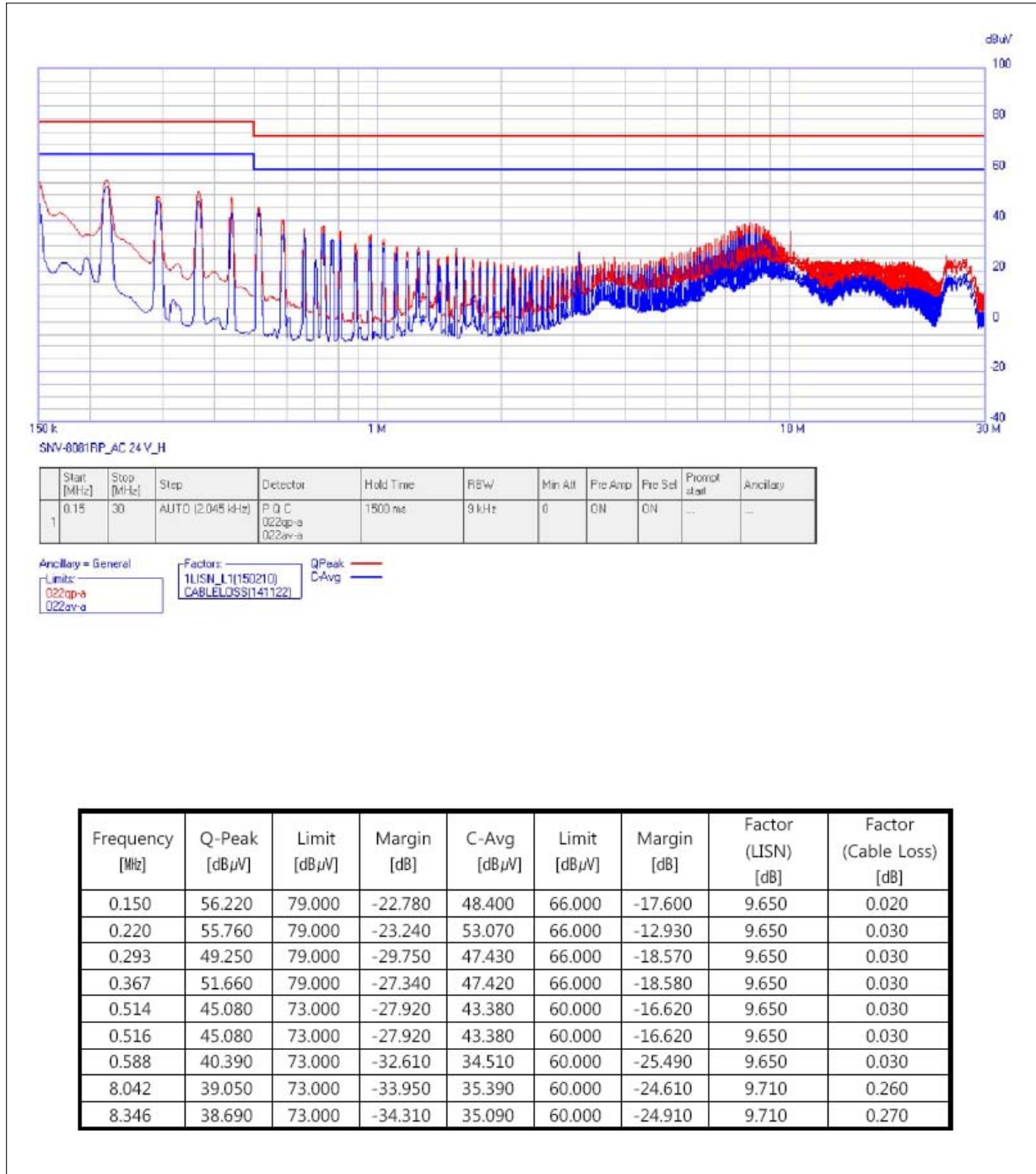
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Test report No.:  
KES-E1-15T0123  
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### 3.1.7 Test Data

- AC Mode

Temperature: 18.1 °C Humidity: 42.5 % R.H. Test Date: 04. 15. 2015 Tested by: Dae Hyun, Kim  
Polarization: HOT



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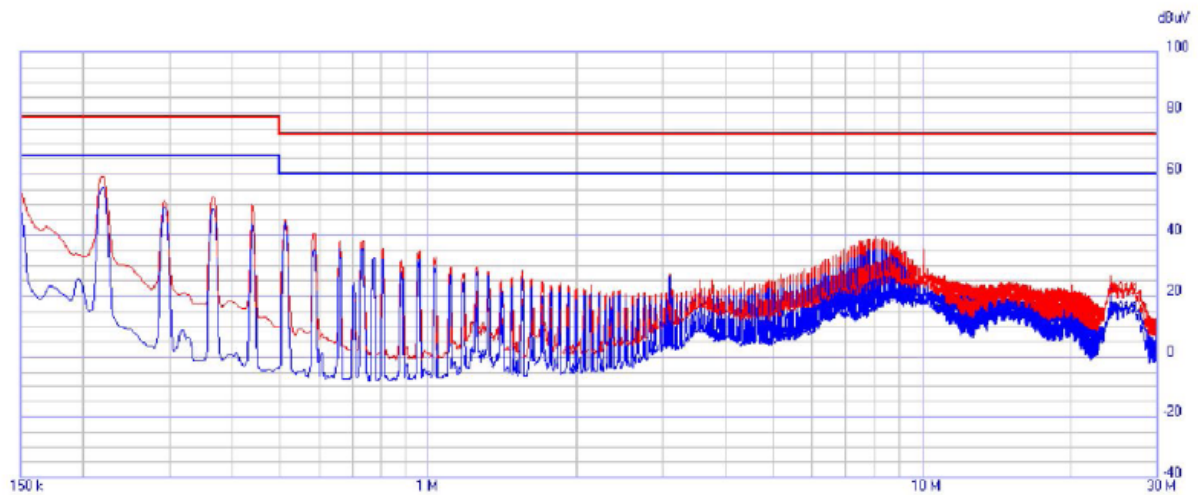


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Polarization: NEUTRAL



|   | Start [MHz] | Stop [MHz] | Step             | Detector                   | Hold Time | RBW   | Min Att | Pre Amp | Pre Sel | Prompt start | Auxiliary |
|---|-------------|------------|------------------|----------------------------|-----------|-------|---------|---------|---------|--------------|-----------|
| 1 | 0.15        | 30         | AUTO (2.045 kHz) | P B C<br>Q22ap-a<br>Q22ana | 1500 ms   | 9 kHz | 0       | ON      | ON      | ...          | ...       |

Auxiliary » General

Limits:  
Q22ap-a  
Q22ana

Factors:  
1USN\_L2(150210)  
CABLELOSS(141122)

QPeak  
C-Avg

| Frequency [MHz] | Q-Peak [dBμV] | Limit [dBμV] | Margin [dB] | C-Avg [dBμV] | Limit [dBμV] | Margin [dB] | Factor (LISN) [dB] | Factor (Cable Loss) [dB] |
|-----------------|---------------|--------------|-------------|--------------|--------------|-------------|--------------------|--------------------------|
| 0.150           | 54.790        | 79.000       | -24.210     | 49.160       | 66.000       | -16.840     | 9.650              | 0.020                    |
| 0.220           | 59.150        | 79.000       | -19.850     | 55.490       | 66.000       | -10.510     | 9.650              | 0.030                    |
| 0.293           | 51.050        | 79.000       | -27.950     | 49.130       | 66.000       | -16.870     | 9.650              | 0.030                    |
| 0.367           | 52.520        | 79.000       | -26.480     | 48.470       | 66.000       | -17.530     | 9.650              | 0.030                    |
| 0.514           | 45.260        | 73.000       | -27.740     | 43.950       | 60.000       | -16.050     | 9.650              | 0.030                    |
| 0.516           | 45.260        | 73.000       | -27.740     | 43.950       | 60.000       | -16.050     | 9.650              | 0.030                    |
| 0.588           | 40.570        | 73.000       | -32.430     | 35.060       | 60.000       | -24.940     | 9.650              | 0.030                    |
| 8.042           | 39.450        | 73.000       | -33.550     | 35.610       | 60.000       | -24.390     | 9.710              | 0.260                    |
| 8.346           | 39.070        | 73.000       | -33.930     | 35.280       | 60.000       | -24.720     | 9.710              | 0.270                    |

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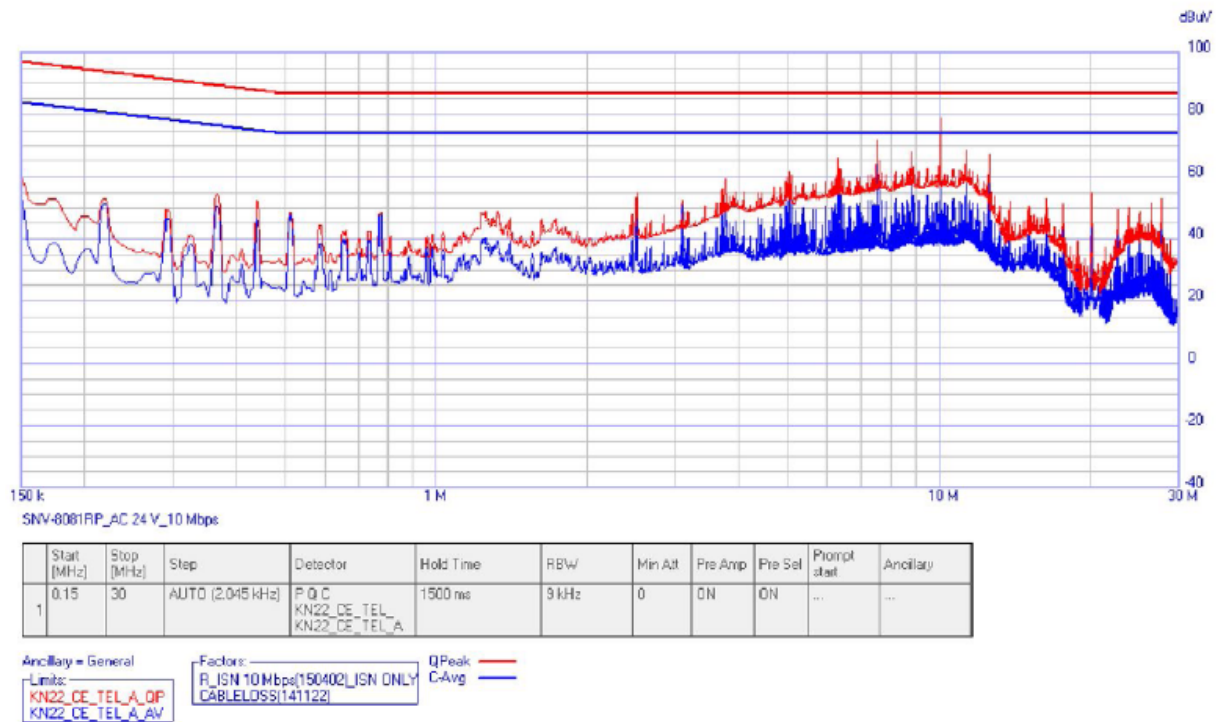
Test report No.:  
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- Telecommunication

- AC Mode

Temperature: 18.1 °C Humidity: 42.5 % R.H. Test Date: 04. 15. 2015 Tested by: Dae Hyun, Kim

[10 Mbps]



| Frequency [MHz] | Q-Peak [dBμV] | Limit [dBμV] | Margin [dB] | C-Avg [dBμV] | Limit [dBμV] | Margin [dB] | Factor (ISN) [dB] | Factor (Cable Loss) [dB] |
|-----------------|---------------|--------------|-------------|--------------|--------------|-------------|-------------------|--------------------------|
| 0.150           | 59.980        | 97.000       | -37.020     | 54.300       | 84.000       | -29.700     | 10.290            | 0.020                    |
| 0.172           | 52.980        | 95.840       | -42.860     | 38.880       | 82.840       | -43.960     | 10.260            | 0.030                    |
| 0.217           | 52.880        | 93.910       | -41.030     | 51.300       | 80.910       | -29.610     | 10.210            | 0.030                    |
| 0.367           | 54.270        | 89.570       | -35.300     | 50.430       | 76.570       | -26.140     | 10.100            | 0.030                    |
| 7.508           | 72.070        | 87.000       | -14.930     | 64.080       | 74.000       | -9.920      | 9.830             | 0.250                    |
| 8.753           | 67.870        | 87.000       | -19.130     | 58.810       | 74.000       | -15.190     | 9.830             | 0.280                    |
| 10.046          | 78.890        | 87.000       | -8.110      | 57.940       | 74.000       | -16.060     | 9.830             | 0.280                    |
| 11.289          | 68.560        | 87.000       | -18.440     | 58.080       | 74.000       | -15.920     | 9.840             | 0.320                    |

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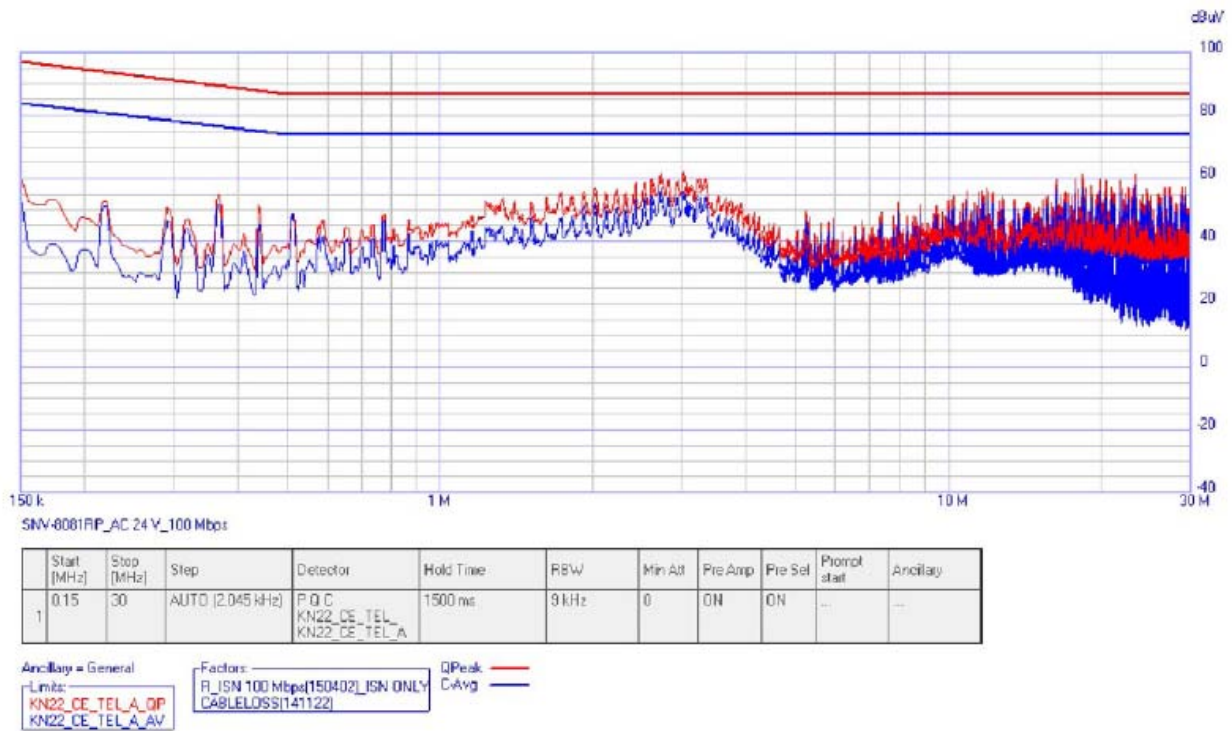


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[100 Mbps]



| Frequency [MHz] | Q-Peak [dBμV] | Limit [dBμV] | Margin [dB] | C-Avg [dBμV] | Limit [dBμV] | Margin [dB] | Factor (ISN) [dB] | Factor (Cable Loss) [dB] |
|-----------------|---------------|--------------|-------------|--------------|--------------|-------------|-------------------|--------------------------|
| 0.150           | 59.980        | 97.000       | -37.020     | 54.010       | 84.000       | -29.990     | 9.790             | 0.020                    |
| 0.170           | 53.350        | 95.940       | -42.590     | 38.720       | 82.940       | -44.220     | 9.760             | 0.030                    |
| 0.217           | 52.760        | 93.910       | -41.150     | 51.060       | 80.910       | -29.850     | 9.710             | 0.030                    |
| 0.367           | 54.620        | 89.570       | -34.950     | 51.790       | 76.570       | -24.780     | 9.610             | 0.030                    |
| 2.714           | 61.490        | 87.000       | -25.510     | 56.190       | 74.000       | -17.810     | 9.360             | 0.100                    |
| 3.019           | 61.860        | 87.000       | -25.140     | 56.060       | 74.000       | -17.940     | 9.350             | 0.110                    |
| 18.281          | 61.070        | 87.000       | -25.930     | 57.380       | 74.000       | -16.620     | 9.340             | 0.230                    |
| 23.203          | 61.360        | 87.000       | -25.640     | 57.940       | 74.000       | -16.060     | 9.350             | 0.240                    |

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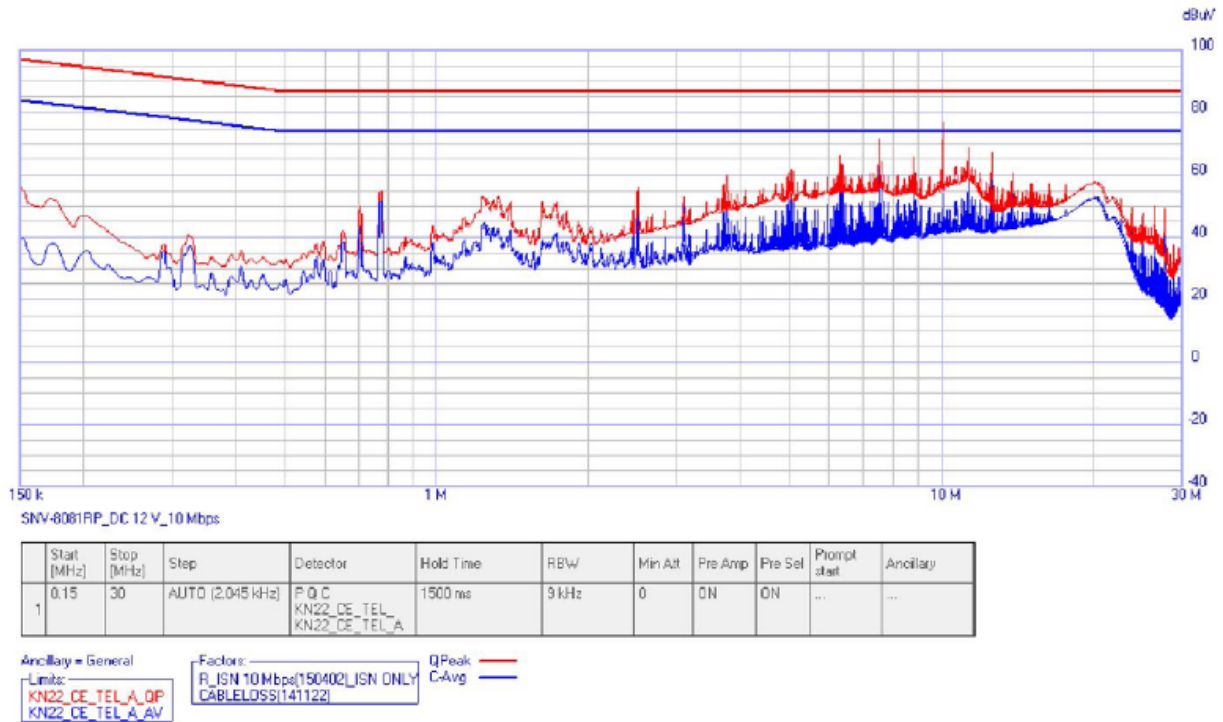
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## - DC Mode

Temperature: 18.1 °C Humidity: 42.5 % R.H. Test Date: 04. 15. 2015 Tested by: Dae Hyun, Kim

[10 Mbps]

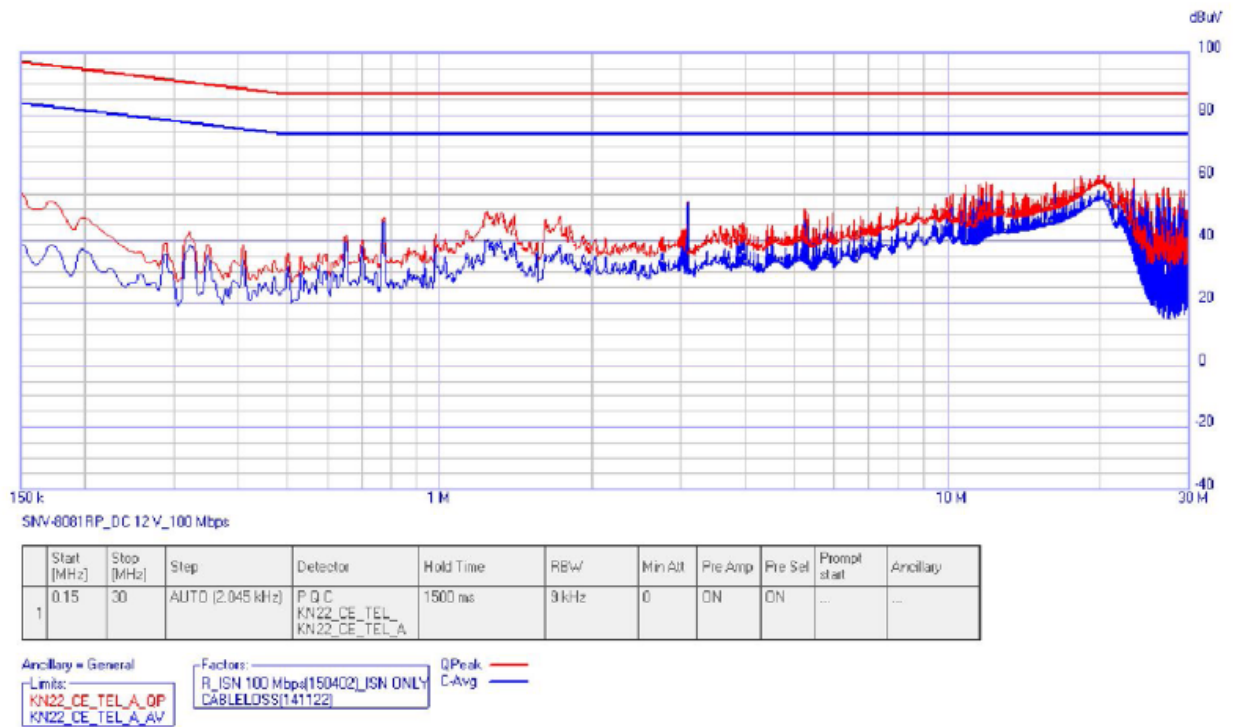


| Frequency [MHz] | Q-Peak [dBμV] | Limit [dBμV] | Margin [dB] | C-Avg [dBμV] | Limit [dBμV] | Margin [dB] | Factor (ISN) [dB] | Factor (Cable Loss) [dB] |
|-----------------|---------------|--------------|-------------|--------------|--------------|-------------|-------------------|--------------------------|
| 0.150           | 56.330        | 97.000       | -40.670     | 39.950       | 84.000       | -44.050     | 10.290            | 0.020                    |
| 0.172           | 52.300        | 95.840       | -43.540     | 38.190       | 82.840       | -44.650     | 10.260            | 0.030                    |
| 0.322           | 40.760        | 90.660       | -49.900     | 36.510       | 77.660       | -41.150     | 10.130            | 0.030                    |
| 7.508           | 71.420        | 87.000       | -15.580     | 62.460       | 74.000       | -11.540     | 9.830             | 0.250                    |
| 10.046          | 76.730        | 87.000       | -10.270     | 53.940       | 74.000       | -20.060     | 9.830             | 0.280                    |
| 11.289          | 68.860        | 87.000       | -18.140     | 58.660       | 74.000       | -15.340     | 9.840             | 0.320                    |
| 12.549          | 67.190        | 87.000       | -19.810     | 58.370       | 74.000       | -15.630     | 9.840             | 0.300                    |

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[100 Mbps]



| Frequency [MHz] | Q-Peak [dBμV] | Limit [dBμV] | Margin [dB] | C-Avg [dBμV] | Limit [dBμV] | Margin [dB] | Factor (ISN) [dB] | Factor (Cable Loss) [dB] |
|-----------------|---------------|--------------|-------------|--------------|--------------|-------------|-------------------|--------------------------|
| 0.150           | 55.960        | 97.000       | -41.040     | 39.380       | 84.000       | -44.620     | 9.790             | 0.020                    |
| 0.172           | 52.340        | 95.840       | -43.500     | 38.310       | 82.840       | -44.530     | 9.760             | 0.030                    |
| 0.322           | 42.790        | 90.660       | -47.870     | 38.330       | 77.660       | -39.330     | 9.630             | 0.030                    |
| 17.708          | 59.430        | 87.000       | -27.570     | 55.170       | 74.000       | -18.830     | 9.340             | 0.240                    |
| 18.281          | 60.460        | 87.000       | -26.540     | 56.080       | 74.000       | -17.920     | 9.340             | 0.230                    |
| 19.792          | 60.940        | 87.000       | -26.060     | 55.970       | 74.000       | -18.030     | 9.340             | 0.210                    |
| 23.203          | 59.810        | 87.000       | -27.190     | 56.690       | 74.000       | -17.310     | 9.350             | 0.240                    |



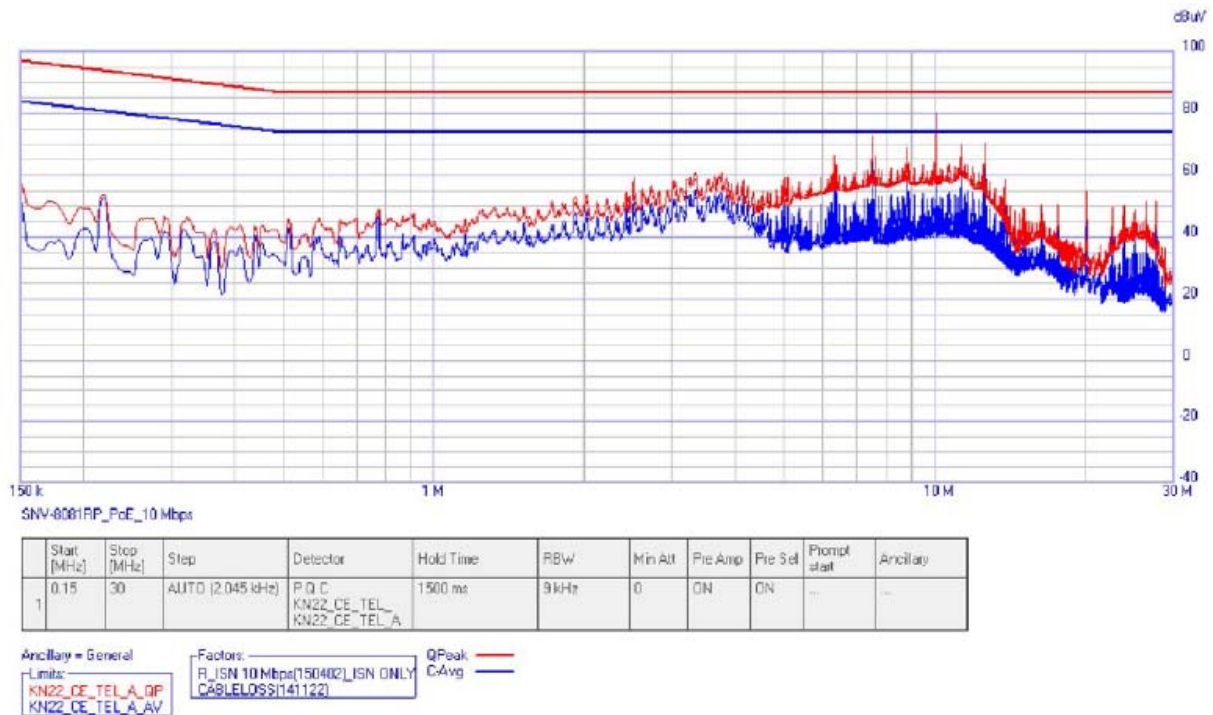
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### - PoE Mode

Temperature: 18.1 °C Humidity: 42.5 % R.H. Test Date: 04. 15. 2015 Tested by: Dae Hyun, Kim  
[10 Mbps]



| Frequency [MHz] | Q-Peak [dBμV] | Limit [dBμV] | Margin [dB] | C-Avg [dBμV] | Limit [dBμV] | Margin [dB] | Factor (ISN) [dB] | Factor (Cable Loss) [dB] |
|-----------------|---------------|--------------|-------------|--------------|--------------|-------------|-------------------|--------------------------|
| 0.150           | 58.380        | 97.000       | -38.620     | 53.000       | 84.000       | -31.000     | 10.290            | 0.020                    |
| 0.172           | 51.630        | 95.840       | -44.210     | 38.410       | 82.840       | -44.430     | 10.260            | 0.030                    |
| 0.197           | 49.530        | 94.730       | -45.200     | 42.280       | 81.730       | -39.450     | 10.220            | 0.030                    |
| 0.220           | 53.540        | 93.840       | -40.300     | 52.460       | 80.840       | -28.380     | 10.200            | 0.030                    |
| 7.508           | 72.700        | 87.000       | -14.300     | 63.860       | 74.000       | -10.140     | 9.830             | 0.250                    |
| 10.046          | 79.860        | 87.000       | -7.140      | 57.730       | 74.000       | -16.270     | 9.830             | 0.280                    |
| 11.289          | 69.980        | 87.000       | -17.020     | 60.310       | 74.000       | -13.690     | 9.840             | 0.320                    |
| 12.549          | 70.510        | 87.000       | -16.490     | 61.950       | 74.000       | -12.050     | 9.840             | 0.300                    |

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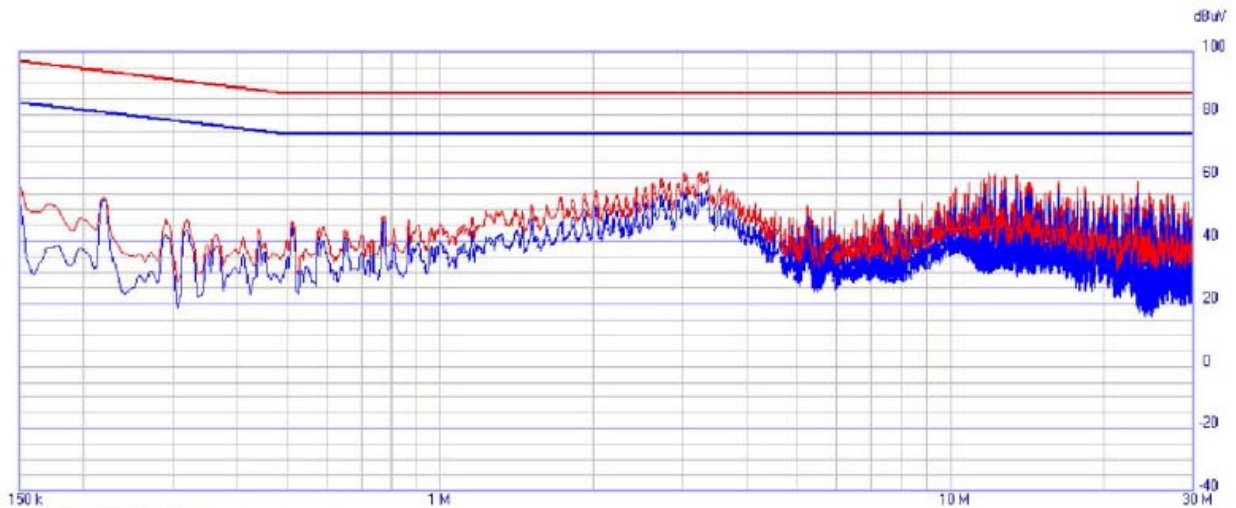


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[100 Mbps]



SNV-8081FP\_PoE\_100 Mbps

|    | Start [MHz] | Stop [MHz] | Step             | Detector                                | Hold Time | RBW   | Min Att | Pre Amp | Pre Sel | Promot start | Ancillary |
|----|-------------|------------|------------------|-----------------------------------------|-----------|-------|---------|---------|---------|--------------|-----------|
| -1 | 0.15        | 30         | AUTO (2.045 kHz) | P.Q.C.<br>KN22_CE_TEL_<br>KN22_CE_TEL_A | 1500 ns   | 9 kHz | 0       | ON      | ON      | ---          | ---       |

Ancillary = General

Limits:  
KN22\_CE\_TEL\_A\_QP  
KN22\_CE\_TEL\_A\_AV

Factors:  
R\_ISN 100 Mbps(150402)\_ISN ONLY  
CABLELOSS(141122)

Q-Peak

C-Avg

| Frequency [MHz] | Q-Peak [dBμV] | Limit [dBμV] | Margin [dB] | C-Avg [dBμV] | Limit [dBμV] | Margin [dB] | Factor (ISN) [dB] | Factor (Cable Loss) [dB] |
|-----------------|---------------|--------------|-------------|--------------|--------------|-------------|-------------------|--------------------------|
| 0.150           | 58.490        | 97.000       | -38.510     | 53.080       | 84.000       | -30.920     | 9.790             | 0.020                    |
| 0.172           | 51.580        | 95.840       | -44.260     | 37.710       | 82.840       | -45.130     | 9.760             | 0.030                    |
| 0.220           | 53.700        | 93.840       | -40.140     | 52.830       | 80.840       | -28.010     | 9.700             | 0.030                    |
| 0.291           | 46.700        | 91.490       | -44.790     | 41.800       | 78.490       | -36.690     | 9.650             | 0.030                    |
| 3.019           | 61.600        | 87.000       | -25.400     | 55.720       | 74.000       | -18.280     | 9.350             | 0.110                    |
| 3.320           | 61.800        | 87.000       | -25.200     | 55.620       | 74.000       | -18.380     | 9.350             | 0.120                    |
| 11.903          | 61.410        | 87.000       | -25.590     | 57.980       | 74.000       | -16.020     | 9.330             | 0.310                    |
| 12.222          | 61.130        | 87.000       | -25.870     | 57.690       | 74.000       | -16.310     | 9.330             | 0.310                    |

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## 3.2 Radiated Emission Measurements

### 3.2.1 Test Description

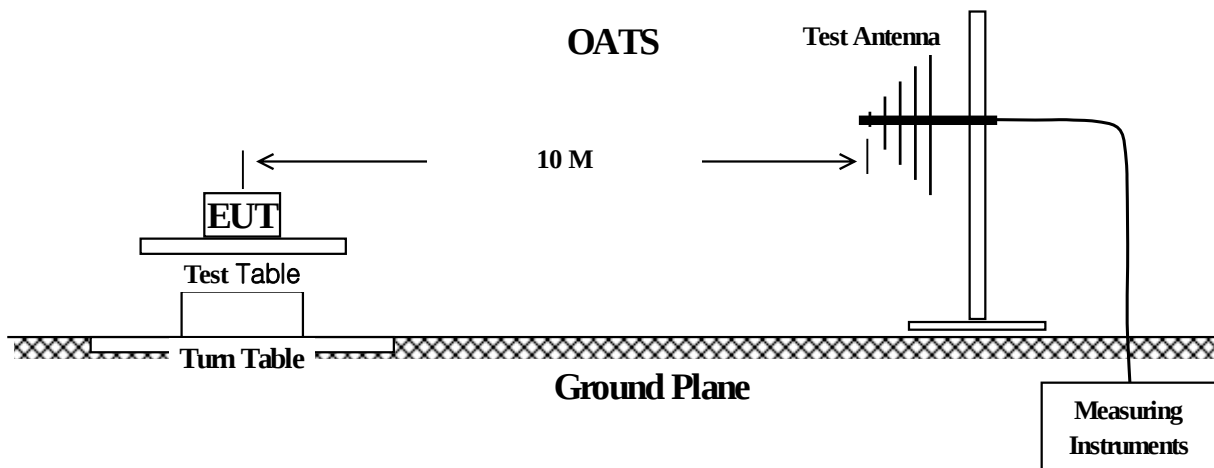
The radiated emissions measurements were performed on the ten-meter, open-field test site. The EUT was placed on a nonconductive turntable approximately 0.8 meters above the ground plane.

The frequency spectrum from 30 MHz to 1 000 MHz and 1 000 MHz to 6 000 MHz was scanned and maximum emission levels at each frequency recorded.

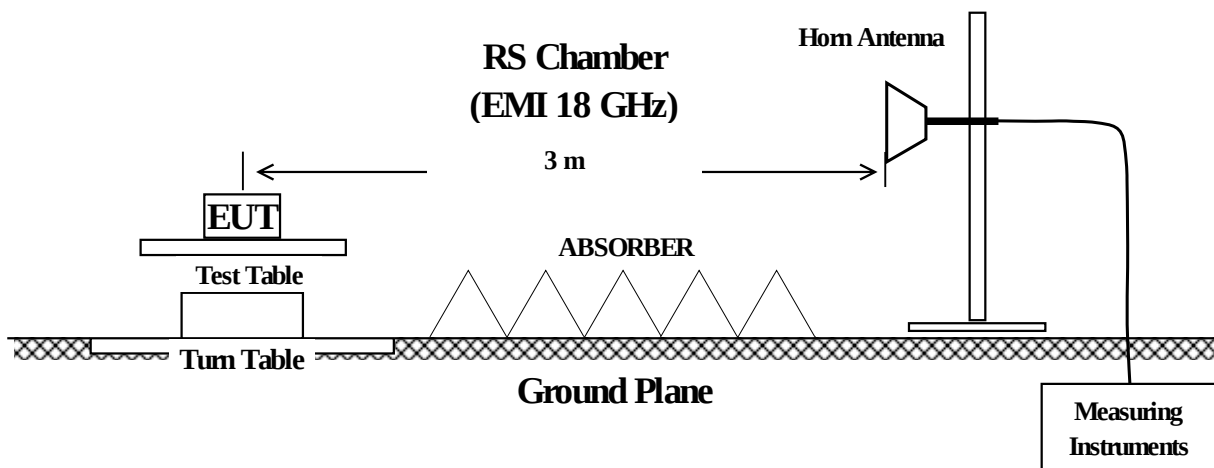
The system was rotated 360°, and the antenna was varied in the height between 1.0 and 4.0 meters in order to determine the maximum emission levels. This procedure was performed for horizontal and vertical polarization of the receiving antenna.

- above 1 GHz : Antenna height is fixed to 1.0 m

#### \* Below 1 GHz



#### \* Above 1 GHz



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**3.2.2 Test Equipments**

| Description                | Manufacturer   | Model Number | Serial Number | Cal. Due     |
|----------------------------|----------------|--------------|---------------|--------------|
| EMI TEST Receiver          | R & S          | ESVS10       | 826008/014    | 04. 01. 2016 |
| Trilog-Broadband Antenna   | SCHWARZBECK    | VULB 9168    | 9168-385      | 05. 09. 2015 |
| OATS                       | KES            | -            | -             | -            |
| Antenna Mast               | DAEIL EMC      | -            | -             | -            |
| Turn Table                 | DAEIL EMC      | -            | -             | -            |
| EMI TEST Receiver          | R & S          | ESR7         | 101190        | 08. 13. 2015 |
| PREAMPLIFIER               | 8449B          | H.P          | 3008A00538    | 07. 23. 2015 |
| Double Ridged Horn Antenna | A-H-SYSTEM,INC | SAS-571      | 414           | 02. 09. 2017 |
| RS Chamber (EMI 18GHz)     | SEMITEC        | -            | -             | -            |
| Antenna Mast               | AUDIX          | -            | -             | -            |
| Turn Table                 | AUDIX          | -            | -             | -            |

**3.2.3 Test Environments**

Temperatures : see the data  
Humidity : see the data

**3.2.4 Test Limits****\* Below 1 GHz**

| Frequency (MHz) | CISPR Publication 22 |                     |
|-----------------|----------------------|---------------------|
|                 | Class B              | Class A             |
|                 | Quasi-peak dB(uV/m)  | Quasi-peak dB(uV/m) |
| 0,15 to 30      | Under consideration  | Under consideration |
| 30 to 230       | 30                   | 40                  |
| 230 to 1 000    | 37                   | 47                  |

**\* Above 1 GHz**

| Frequency (MHz) | CISPR Publication 22         |    |                              |    |
|-----------------|------------------------------|----|------------------------------|----|
|                 | Class B @ 3 m (dB $\mu$ V/m) |    | Class A @ 3 m (dB $\mu$ V/m) |    |
|                 | PK                           | AV | PK                           | AV |
| 1 000 to 3 000  | 70                           | 50 | 76                           | 56 |
| 3 000 to 6 000  | 74                           | 54 | 80                           | 60 |

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### 3.2.5 Test Procedure

Before final measurements of radiated emission were made on the OATS, the EUT was scanned in semi-anechoic chamber in order to determine its emission spectrum signature. The physical arrangement of the test system and associated cabling was varied in order to determine the effect on the EUT's emission in amplitude, direction and frequency. This process was repeated during final radiated emission measurements on the OATS range, at each frequency, in order to ensure that maximum emissions amplitudes were attained.

The radiated emission test was performed with EUT exercise program loaded, and the emissions were scanned between 30 MHz to 1 000 MHz and 1 000 MHz to 6 000 MHz using the spectrum analyzer. The spectrum analyzer's 6 dB bandwidth was set to 120 kHz( 1 MHz), and the analyzer was operated in the CISPR quasi-peak (Peak) detection mode.

Measurements were taken using both HORIZONTAL and VERTICAL antenna polarization, herein referred to as H and V, respectively.

#### Field Strength Calculation

The Field Strength (FS) is calculated by adding the Antenna Factor (AF) and Cable Factor (CF) and Amplifier Gain(AG) from the Measured Reading (MR). The basic equation with a sample calculation is as follows:

$$* \text{ Below 1 GHz : FS(dB}\mu\text{V/m)} = \text{MR(dB}\mu\text{V)} + [\text{AF(dB/m)} + \text{CF(dB)}]$$

$$* \text{ Above 1 GHz : FS(dB}\mu\text{V/m)} = \text{MR(dB}\mu\text{V)} + [\text{AF(dB/m)} + \text{CF(dB)}] - \text{AG}$$

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**3.2.6 Test Results**

According to the data in section 3.2.7, the EUT complied with the CISPR22 standards.

**3.2.7 Test Data****\* Below 1 GHz**

- AC Mode

Temperature: 14.0 °C Humidity: 49.0 % R.H. Test Date: 04. 15. 2015 Tested by: Dae Hyun, Kim

| Frequency<br>(MHz) | Amplitude<br>(dB $\mu$ V/m) | Antenna         |               | Correction<br>Factor |               | Corrected<br>Amplitude<br>(dB $\mu$ V/m) | Applicable Limit<br>(dB $\mu$ V/m) | Margin<br>(dB) |
|--------------------|-----------------------------|-----------------|---------------|----------------------|---------------|------------------------------------------|------------------------------------|----------------|
|                    |                             | Polar.<br>(H/V) | Height<br>(m) | Ant.<br>(dB)         | Cable<br>(dB) |                                          |                                    |                |
| 32.117             | 18.700                      | V               | 1.000         | 12.740               | 1.260         | 32.700                                   | 40.000                             | 7.300          |
| 53.024             | 19.900                      | V               | 1.000         | 13.490               | 1.670         | 35.060                                   | 40.000                             | 4.940          |
| 189.245            | 17.100                      | H               | 3.860         | 10.860               | 3.330         | 31.290                                   | 40.000                             | 8.710          |
| 189.245            | 18.800                      | V               | 1.200         | 10.860               | 3.330         | 32.990                                   | 40.000                             | 7.010          |
| 405.162            | 16.300                      | V               | 1.000         | 15.690               | 5.180         | 37.170                                   | 47.000                             | 9.830          |
| 459.112            | 14.900                      | H               | 4.000         | 16.860               | 5.600         | 37.360                                   | 47.000                             | 9.640          |
| 520.386            | 18.000                      | H               | 3.000         | 18.130               | 6.040         | 42.170                                   | 47.000                             | 4.830          |

- DC Mode

Temperature: 14.0 °C Humidity: 49.0 % R.H. Test Date: 04.07. 2015 Tested by: Dae Hyun, Kim

| Frequency<br>(MHz) | Amplitude<br>(dB $\mu$ V/m) | Antenna         |               | Correction<br>Factor |               | Corrected<br>Amplitude<br>(dB $\mu$ V/m) | Applicable Limit<br>(dB $\mu$ V/m) | Margin<br>(dB) |
|--------------------|-----------------------------|-----------------|---------------|----------------------|---------------|------------------------------------------|------------------------------------|----------------|
|                    |                             | Polar.<br>(H/V) | Height<br>(m) | Ant.<br>(dB)         | Cable<br>(dB) |                                          |                                    |                |
| 180.127            | 17.700                      | V               | 1.000         | 11.700               | 3.220         | 32.620                                   | 40.000                             | 7.380          |
| 189.227            | 18.800                      | V               | 1.000         | 10.870               | 3.330         | 33.000                                   | 40.000                             | 7.000          |
| 260.541            | 16.000                      | V               | 1.300         | 12.100               | 3.980         | 32.080                                   | 47.000                             | 14.920         |
| 260.541            | 19.000                      | H               | 4.000         | 12.100               | 3.980         | 35.080                                   | 47.000                             | 11.920         |
| 459.632            | 14.900                      | H               | 3.800         | 16.870               | 5.600         | 37.370                                   | 47.000                             | 9.630          |
| 520.774            | 17.800                      | H               | 4.000         | 18.140               | 6.050         | 41.990                                   | 47.000                             | 5.010          |

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- PoE Mode

Temperature: 14.0 °C Humidity: 49.0 % R.H. Test Date: 04.15. 2015 Tested by: Dae Hyun, Kim

| Frequency<br>(MHz) | Amplitude<br>(dB $\mu$ V/m) | Antenna         |               | Correction<br>Factor |               | Corrected<br>Amplitude<br>(dB $\mu$ V/m) | Applicable Limit<br>(dB $\mu$ V/m) | Margin<br>(dB) |
|--------------------|-----------------------------|-----------------|---------------|----------------------|---------------|------------------------------------------|------------------------------------|----------------|
|                    |                             | Polar.<br>(H/V) | Height<br>(m) | Ant.<br>(dB)         | Cable<br>(dB) |                                          |                                    |                |
| 220.075            | 17.000                      | V               | 1.000         | 10.630               | 3.620         | 31.250                                   | 40.000                             | 8.750          |
| 220.075            | 18.700                      | H               | 4.000         | 10.630               | 3.620         | 32.950                                   | 40.000                             | 7.050          |
| 260.429            | 24.000                      | H               | 4.000         | 12.090               | 3.980         | 40.070                                   | 47.000                             | 6.930          |
| 280.117            | 21.700                      | H               | 4.000         | 12.740               | 4.180         | 38.620                                   | 47.000                             | 8.380          |
| 432.572            | 17.400                      | V               | 2.000         | 16.290               | 5.390         | 39.080                                   | 47.000                             | 7.920          |
| 459.620            | 17.200                      | V               | 1.500         | 16.870               | 5.600         | 39.670                                   | 47.000                             | 7.330          |

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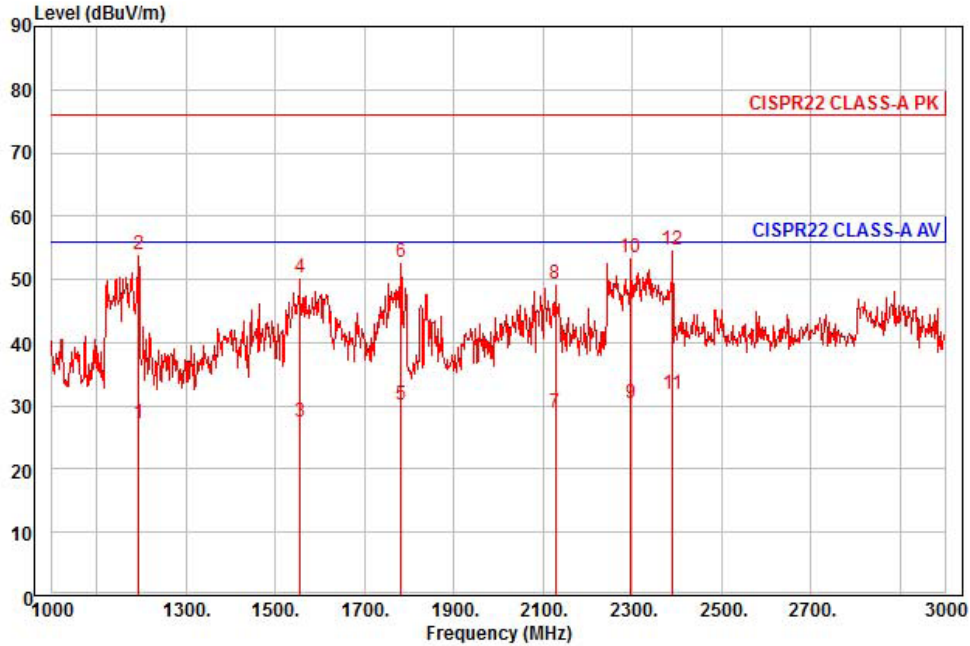
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## \* Above 1 GHz

- AC Mode

Temperature: 18.1 °C Humidity: 42.5 % R.H. Test Date: 04.15. 2015 Tested by: Dae Hyun, Kim



Site : chamber  
Condition: CISPR22 CLASS-A PK 3m HORN-414(15.02.09) horizontal  
: RBW:1000.000kHz VBW:1000.000kHz SWT:Auto  
Project : NETWORK CAMERA  
Model : SNV-8081RP  
Mode : AC 24 V  
Memo : 1 ~ 3 GHz

|       | Freq    | Read Level | Ant Factor | Cable Loss | Preamp Factor | TPos | Limit Line | Over Limit | Pol/Phase  | Remark  |
|-------|---------|------------|------------|------------|---------------|------|------------|------------|------------|---------|
|       | MHz     | dBuV       | dB/m       | dB         | dB            | deg  | dBuV/m     | dB         |            |         |
| 1     | 1194.00 | 32.87      | 24.31      | 5.91       | 35.88         | 326  | 56.00      | -28.79     | horizontal | Average |
| 2     | 1194.00 | 59.49      | 24.31      | 5.91       | 35.88         | 326  | 76.00      | -22.17     | horizontal | Peak    |
| 3     | 1556.00 | 30.65      | 25.38      | 6.79       | 35.27         | 46   | 56.00      | -28.45     | horizontal | Average |
| 4     | 1556.00 | 53.28      | 25.38      | 6.79       | 35.27         | 46   | 76.00      | -25.82     | horizontal | Peak    |
| 5     | 1782.00 | 30.90      | 26.79      | 7.33       | 34.89         | 60   | 56.00      | -25.87     | horizontal | Average |
| 6     | 1782.00 | 53.39      | 26.79      | 7.33       | 34.89         | 60   | 76.00      | -23.38     | horizontal | Peak    |
| 7     | 2128.00 | 26.83      | 28.53      | 8.13       | 34.44         | 356  | 56.00      | -26.95     | horizontal | Average |
| 8     | 2128.00 | 47.06      | 28.53      | 8.13       | 34.44         | 356  | 76.00      | -26.72     | horizontal | Peak    |
| 9     | 2296.00 | 27.14      | 29.02      | 8.48       | 34.33         | 284  | 56.00      | -25.69     | horizontal | Average |
| 10    | 2296.00 | 50.32      | 29.02      | 8.48       | 34.33         | 284  | 76.00      | -22.51     | horizontal | Peak    |
| 11 av | 2390.00 | 28.10      | 29.30      | 8.68       | 34.26         | 51   | 56.00      | -24.18     | horizontal | Average |
| 12 pp | 2390.00 | 51.06      | 29.30      | 8.68       | 34.26         | 51   | 76.00      | -21.22     | horizontal | Peak    |

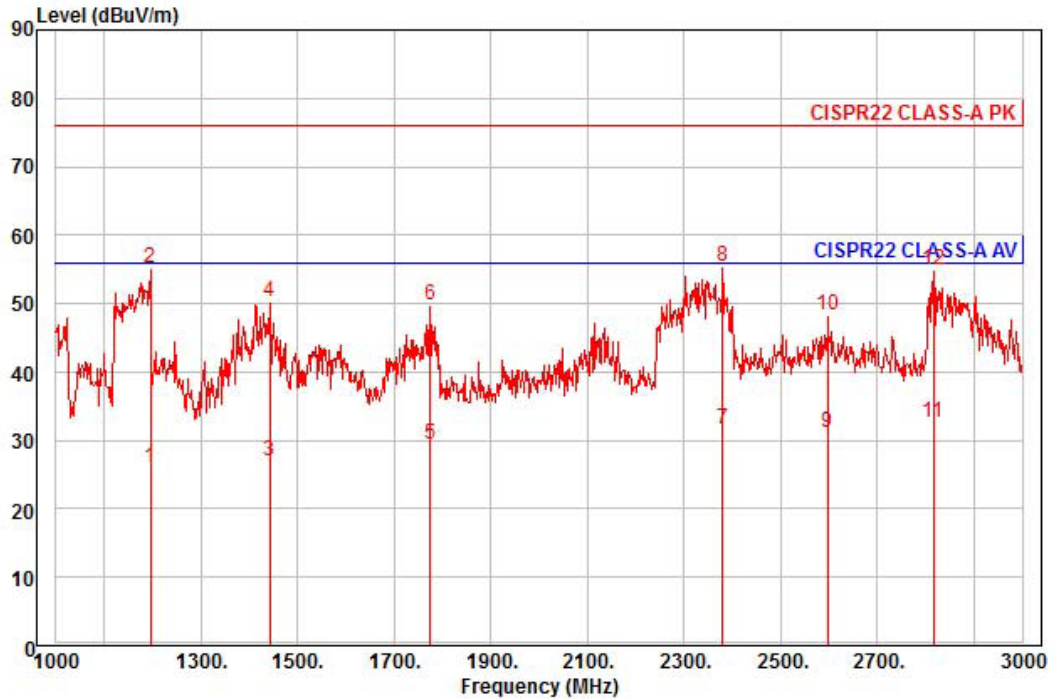
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Site : chamber  
Condition: CISPR22 CLASS-A PK 3m HORN-414(15.02.09) vertical  
Project : NETWORK CAMERA  
Model : SNV-8081RP  
Mode : AC 24 V  
Memo : 1 ~ 3 GHz

|       | Freq    | Read Level | Ant Factor | Cable Loss | Preamp Factor | TPos | Limit Line | Over Limit | Pol/Phase | Remark  |
|-------|---------|------------|------------|------------|---------------|------|------------|------------|-----------|---------|
|       | MHz     | dBuV       | dB/m       | dB         | dB            | deg  | dBuV/m     | dB         |           |         |
| 1     | 1196.00 | 31.72      | 24.32      | 5.91       | 35.87         | 328  | 56.00      | -29.92     | vertical  | Average |
| 2     | 1196.00 | 60.83      | 24.32      | 5.91       | 35.87         | 328  | 76.00      | -20.81     | vertical  | Peak    |
| 3     | 1442.00 | 31.14      | 24.89      | 6.51       | 35.46         | 323  | 56.00      | -28.92     | vertical  | Average |
| 4     | 1442.00 | 54.26      | 24.89      | 6.51       | 35.46         | 323  | 76.00      | -25.80     | vertical  | Peak    |
| 5     | 1774.00 | 30.30      | 26.74      | 7.31       | 34.91         | 309  | 56.00      | -26.56     | vertical  | Average |
| 6     | 1774.00 | 50.65      | 26.74      | 7.31       | 34.91         | 309  | 76.00      | -26.21     | vertical  | Peak    |
| 7     | 2380.00 | 27.98      | 29.27      | 8.66       | 34.27         | 304  | 56.00      | -24.36     | vertical  | Average |
| 8 pp  | 2380.00 | 51.70      | 29.27      | 8.66       | 34.27         | 304  | 76.00      | -20.64     | vertical  | Peak    |
| 9     | 2598.00 | 26.43      | 29.77      | 9.12       | 34.12         | 359  | 56.00      | -24.80     | vertical  | Average |
| 10    | 2598.00 | 43.43      | 29.77      | 9.12       | 34.12         | 359  | 76.00      | -27.80     | vertical  | Peak    |
| 11 av | 2816.00 | 26.93      | 30.11      | 9.57       | 33.97         | 331  | 56.00      | -23.36     | vertical  | Average |
| 12    | 2816.00 | 49.23      | 30.11      | 9.57       | 33.97         | 331  | 76.00      | -21.06     | vertical  | Peak    |

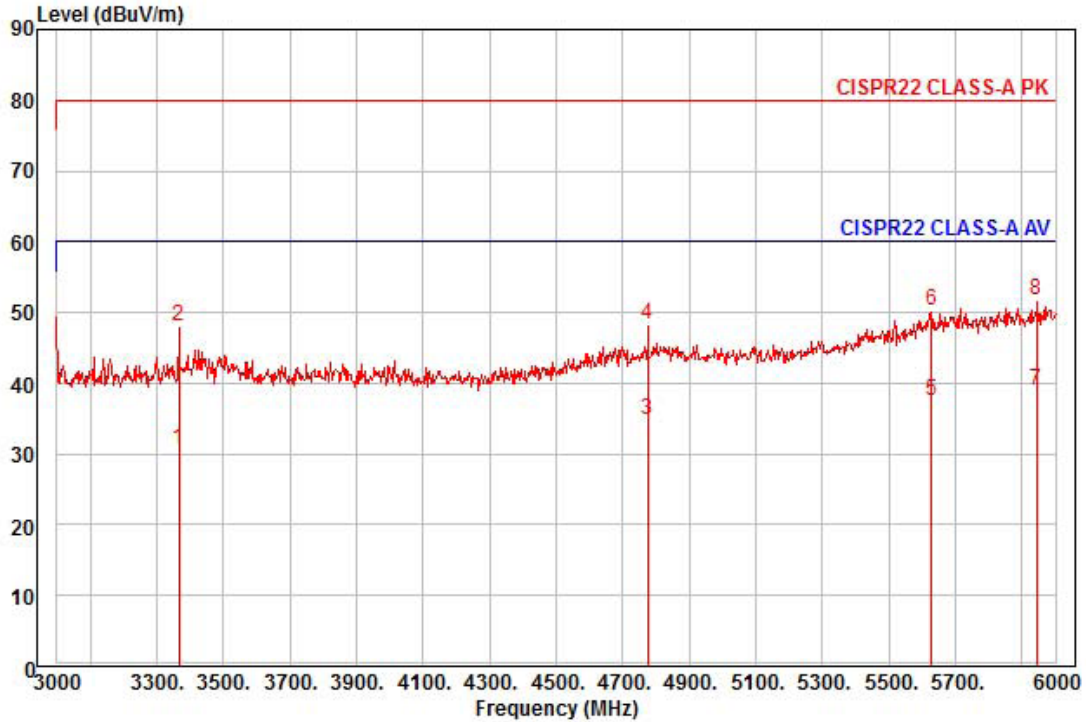
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Site : chamber  
Condition: CISPR22 CLASS-A PK 3m HORN-414(15.02.09) horizontal  
: RBW:1000.000kHz VBW:1000.000kHz SWT:Auto  
Project : NETWORK CAMERA  
Model : SNV-8081RP  
Mode : AC 24 V  
Memo : 3 ~ 6 GHz

|      | Freq    | Read Level | Ant Factor | Cable Loss | Preamp Factor | TPos | Limit Line | Over Limit | Pol/Phase  | Remark  |
|------|---------|------------|------------|------------|---------------|------|------------|------------|------------|---------|
|      | MHz     | dBuV       | dB/m       | dB         | dB            | deg  | dBuV/m     | dB         |            |         |
| 1    | 3366.00 | 23.59      | 30.83      | 10.53      | 34.25         | 310  | 60.00      | -29.30     | horizontal | Average |
| 2    | 3366.00 | 40.96      | 30.83      | 10.53      | 34.25         | 310  | 80.00      | -31.93     | horizontal | Peak    |
| 3    | 4776.00 | 22.59      | 33.09      | 12.80      | 33.60         | 10   | 60.00      | -25.12     | horizontal | Average |
| 4    | 4776.00 | 36.04      | 33.09      | 12.80      | 33.60         | 10   | 80.00      | -31.67     | horizontal | Peak    |
| 5    | 5628.00 | 20.72      | 34.03      | 15.98      | 33.30         | 106  | 60.00      | -22.57     | horizontal | Average |
| 6    | 5628.00 | 33.53      | 34.03      | 15.98      | 33.30         | 106  | 80.00      | -29.76     | horizontal | Peak    |
| 7 pp | 5943.00 | 19.89      | 34.95      | 17.39      | 33.34         | 81   | 60.00      | -21.11     | horizontal | Average |
| 8 pk | 5943.00 | 32.65      | 34.95      | 17.39      | 33.34         | 81   | 80.00      | -28.35     | horizontal | Peak    |

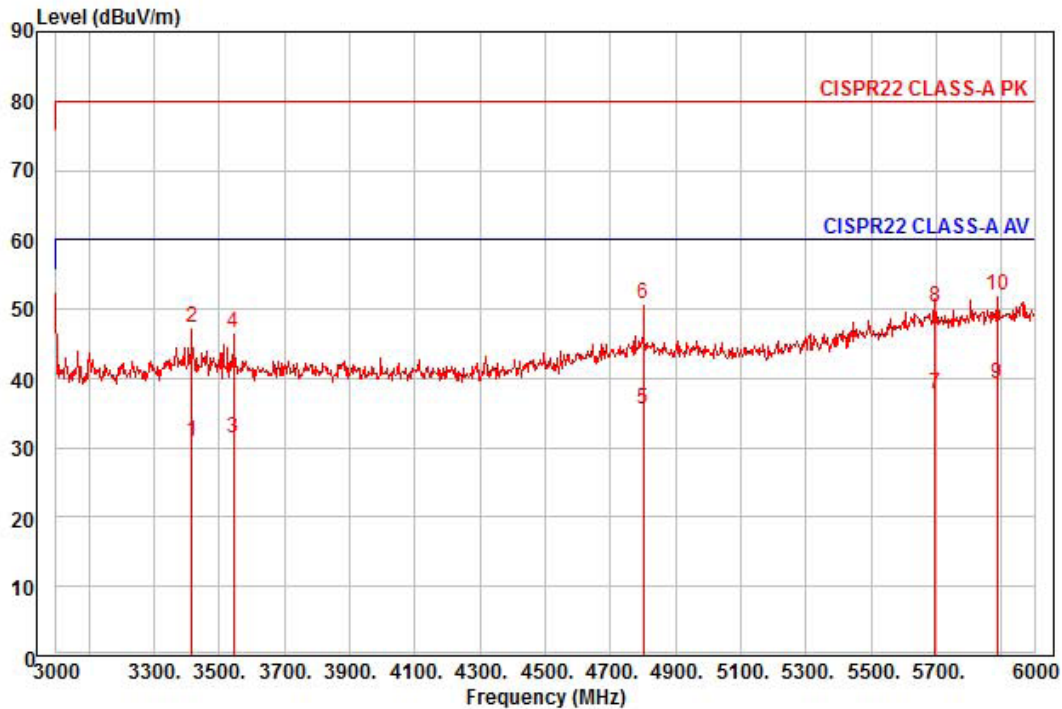
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Site : chamber  
Condition: CISPR22 CLASS-A PK 3m HORN-414(15.02.09) vertical  
: RBW:1000.000kHz VBW:1000.000kHz SWT:Auto  
Project : NETWORK CAMERA  
Model : SNV-8081RP  
Mode : AC 24 V  
Memo : 3 ~ 6 GHz

|       | Freq    | Read Level | Ant Factor | Cable Loss | Preamp Factor | TPos | Limit Line | Over Limit | Pol/Phase | Remark  |
|-------|---------|------------|------------|------------|---------------|------|------------|------------|-----------|---------|
|       | MHz     | dBuV       | dB/m       | dB         | dB            | deg  | dBuV/m     | dB         |           |         |
| 1     | 3417.00 | 23.66      | 30.89      | 10.61      | 34.31         | 324  | 60.00      | -29.15     | vertical  | Average |
| 2     | 3417.00 | 40.06      | 30.89      | 10.61      | 34.31         | 324  | 80.00      | -32.75     | vertical  | Peak    |
| 3     | 3543.00 | 23.91      | 31.07      | 10.81      | 34.45         | 311  | 60.00      | -28.66     | vertical  | Average |
| 4     | 3543.00 | 39.07      | 31.07      | 10.81      | 34.45         | 311  | 80.00      | -33.50     | vertical  | Peak    |
| 5     | 4800.00 | 23.03      | 33.17      | 12.84      | 33.56         | 178  | 60.00      | -24.52     | vertical  | Average |
| 6     | 4800.00 | 38.21      | 33.17      | 12.84      | 33.56         | 178  | 80.00      | -29.34     | vertical  | Peak    |
| 7     | 5697.00 | 20.55      | 34.23      | 16.29      | 33.31         | 93   | 60.00      | -22.24     | vertical  | Average |
| 8     | 5697.00 | 33.07      | 34.23      | 16.29      | 33.31         | 93   | 80.00      | -29.72     | vertical  | Peak    |
| 9 pp  | 5886.00 | 20.68      | 34.78      | 17.13      | 33.33         | 351  | 60.00      | -20.74     | vertical  | Average |
| 10 pk | 5886.00 | 33.39      | 34.78      | 17.13      | 33.33         | 351  | 80.00      | -28.03     | vertical  | Peak    |

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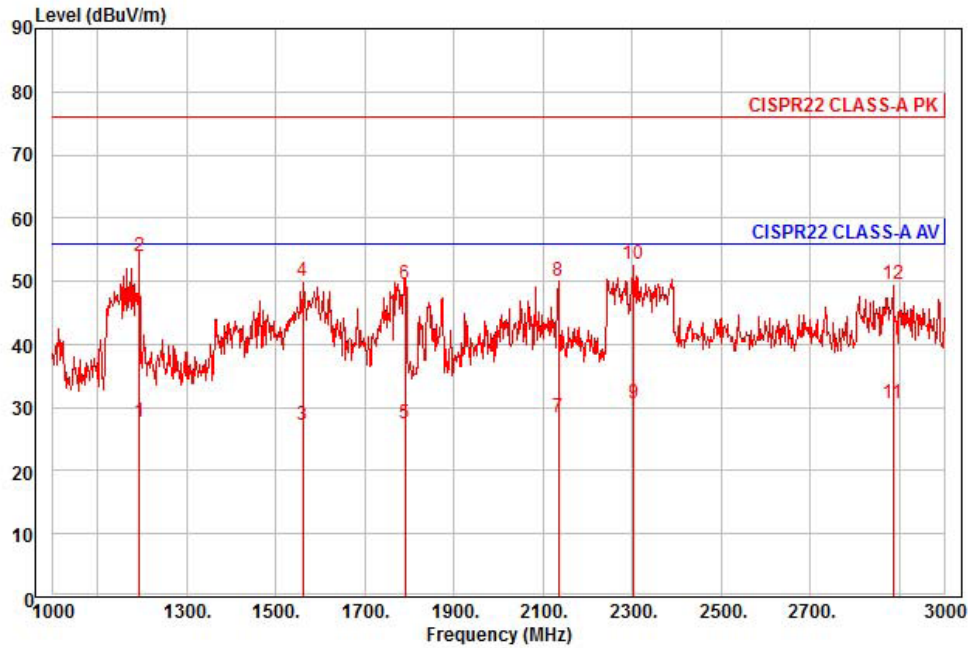
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- DC Mode

Temperature: 18.1 °C Humidity: 42.5 % R.H. Test Date: 04.15. 2015 Tested by: Dae Hyun, Kim



Site : chamber  
Condition: CISPR22 CLASS-A PK 3m HORN-414(15.02.09) horizontal  
: RBW:1000.000kHz VBW:1000.000kHz SWT:Auto  
Project : NETWORK CAMERA  
Model : SNV-8081RP  
Mode : DC 12 V  
Memo : 1 ~ 3 GHz

|      | Read    | Ant   | Cable  | Preamp | TPos   | Limit | Over   |           |                    |
|------|---------|-------|--------|--------|--------|-------|--------|-----------|--------------------|
|      | Freq    | Level | Factor | Loss   | Factor | Line  | Limit  | Pol/Phase | Remark             |
|      | MHz     | dBuV  | dB/m   | dB     | dB     | deg   | dBuV/m | dB        |                    |
| 1    | 1194.00 | 33.26 | 24.31  | 5.91   | 35.88  | 329   | 56.00  | -28.40    | horizontal Average |
| 2 pp | 1194.00 | 59.52 | 24.31  | 5.91   | 35.88  | 329   | 76.00  | -22.14    | horizontal Peak    |
| 3    | 1560.00 | 30.34 | 25.40  | 6.80   | 35.26  | 48    | 56.00  | -28.72    | horizontal Average |
| 4    | 1560.00 | 53.03 | 25.40  | 6.80   | 35.26  | 48    | 76.00  | -26.03    | horizontal Peak    |
| 5    | 1790.00 | 28.15 | 26.84  | 7.35   | 34.88  | 46    | 56.00  | -28.54    | horizontal Average |
| 6    | 1790.00 | 50.17 | 26.84  | 7.35   | 34.88  | 46    | 76.00  | -26.52    | horizontal Peak    |
| 7    | 2134.00 | 26.13 | 28.54  | 8.14   | 34.44  | 113   | 56.00  | -27.63    | horizontal Average |
| 8    | 2134.00 | 47.75 | 28.54  | 8.14   | 34.44  | 113   | 76.00  | -26.01    | horizontal Peak    |
| 9 av | 2304.00 | 27.43 | 29.04  | 8.50   | 34.32  | 284   | 56.00  | -25.35    | horizontal Average |
| 10   | 2304.00 | 49.59 | 29.04  | 8.50   | 34.32  | 284   | 76.00  | -23.19    | horizontal Peak    |
| 11   | 2886.00 | 24.62 | 30.22  | 9.72   | 33.92  | 53    | 56.00  | -25.36    | horizontal Average |
| 12   | 2886.00 | 43.43 | 30.22  | 9.72   | 33.92  | 53    | 76.00  | -26.55    | horizontal Peak    |

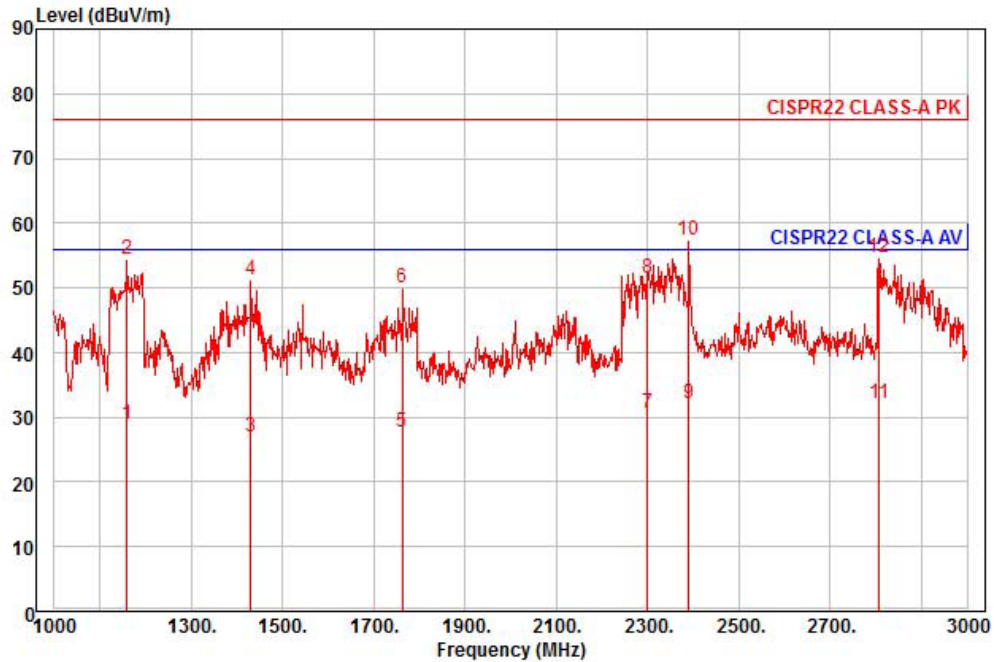
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Test report No.:  
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Site : chamber  
Condition: CISPR22 CLASS-A PK 3m HORN-414(15.02.09) vertical  
: RBW:1000.000kHz VBW:1000.000kHz SWT:Auto  
Project : NETWORK CAMERA  
Model : SNV-8081RP  
Mode : DC 12 V  
Memo : 1 ~ 3 GHz

|       | Freq    | Read Level | Ant Factor | Cable Loss | Preamp Factor | TPos | Limit Line | Over Limit | Pol/Phase | Remark  |
|-------|---------|------------|------------|------------|---------------|------|------------|------------|-----------|---------|
|       | MHz     | dBuV       | dB/m       | dB         | dB            | deg  | dBuV/m     | dB         |           |         |
| 1     | 1160.00 | 34.92      | 24.23      | 5.83       | 35.93         | 318  | 56.00      | -26.95     | vertical  | Average |
| 2     | 1160.00 | 60.40      | 24.23      | 5.83       | 35.93         | 318  | 76.00      | -21.47     | vertical  | Peak    |
| 3     | 1430.00 | 31.16      | 24.87      | 6.48       | 35.48         | 316  | 56.00      | -28.97     | vertical  | Average |
| 4     | 1430.00 | 55.46      | 24.87      | 6.48       | 35.48         | 316  | 76.00      | -24.67     | vertical  | Peak    |
| 5     | 1762.00 | 28.70      | 26.66      | 7.28       | 34.93         | 313  | 56.00      | -28.29     | vertical  | Average |
| 6     | 1762.00 | 50.94      | 26.66      | 7.28       | 34.93         | 313  | 76.00      | -26.05     | vertical  | Peak    |
| 7     | 2300.00 | 27.39      | 29.03      | 8.49       | 34.32         | 1    | 56.00      | -25.41     | vertical  | Average |
| 8     | 2300.00 | 48.32      | 29.03      | 8.49       | 34.32         | 1    | 76.00      | -24.48     | vertical  | Peak    |
| 9     | 2390.00 | 28.31      | 29.30      | 8.68       | 34.26         | 306  | 56.00      | -23.97     | vertical  | Average |
| 10 pp | 2390.00 | 53.60      | 29.30      | 8.68       | 34.26         | 306  | 76.00      | -18.68     | vertical  | Peak    |
| 11 av | 2808.00 | 26.49      | 30.10      | 9.56       | 33.97         | 320  | 56.00      | -23.82     | vertical  | Average |
| 12    | 2808.00 | 49.05      | 30.10      | 9.56       | 33.97         | 320  | 76.00      | -21.26     | vertical  | Peak    |

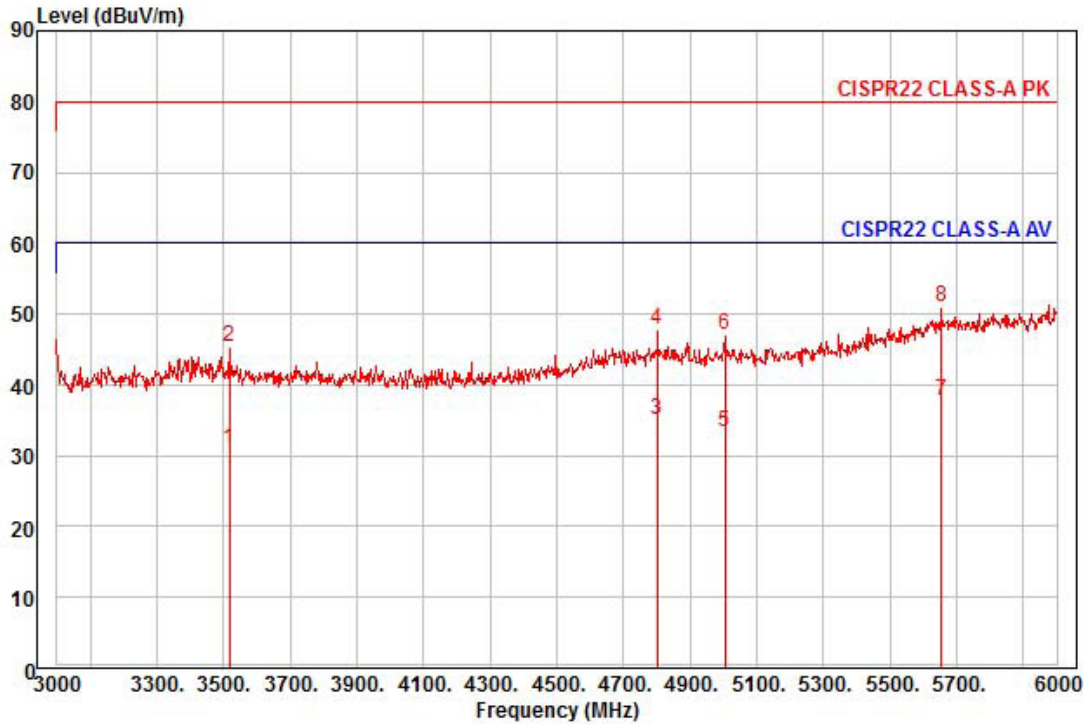
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Test report No.:  
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Site : chamber  
Condition: CISPR22 CLASS-A PK 3m HORN-414(15.02.09) horizontal  
: RBW:1000.000kHz VBW:1000.000kHz SWT:Auto  
Project : NETWORK CAMERA  
Model : SNV-8081RP  
Mode : DC 12 V  
Memo : 3 ~ 6 GHz

|      | Freq    | Read Level | Ant Factor | Cable Loss | Preamp Factor | TPos | Limit Line | Over Limit | Pol/Phase  | Remark  |
|------|---------|------------|------------|------------|---------------|------|------------|------------|------------|---------|
|      | MHz     | dBuV       | dB/m       | dB         | dB            | deg  | dBuV/m     | dB         |            |         |
| 1    | 3519.00 | 23.45      | 31.02      | 10.77      | 34.43         | 288  | 60.00      | -29.19     | horizontal | Average |
| 2    | 3519.00 | 38.11      | 31.02      | 10.77      | 34.43         | 288  | 80.00      | -34.53     | horizontal | Peak    |
| 3    | 4800.00 | 22.50      | 33.17      | 12.84      | 33.56         | 91   | 60.00      | -25.05     | horizontal | Average |
| 4    | 4800.00 | 35.37      | 33.17      | 12.84      | 33.56         | 91   | 80.00      | -32.18     | horizontal | Peak    |
| 5    | 5004.00 | 19.44      | 33.91      | 13.19      | 33.21         | 291  | 60.00      | -26.67     | horizontal | Average |
| 6    | 5004.00 | 33.26      | 33.91      | 13.19      | 33.21         | 291  | 80.00      | -32.85     | horizontal | Peak    |
| 7 pp | 5655.00 | 20.78      | 34.11      | 16.10      | 33.30         | 228  | 60.00      | -22.31     | horizontal | Average |
| 8 pk | 5655.00 | 34.04      | 34.11      | 16.10      | 33.30         | 228  | 80.00      | -29.05     | horizontal | Peak    |

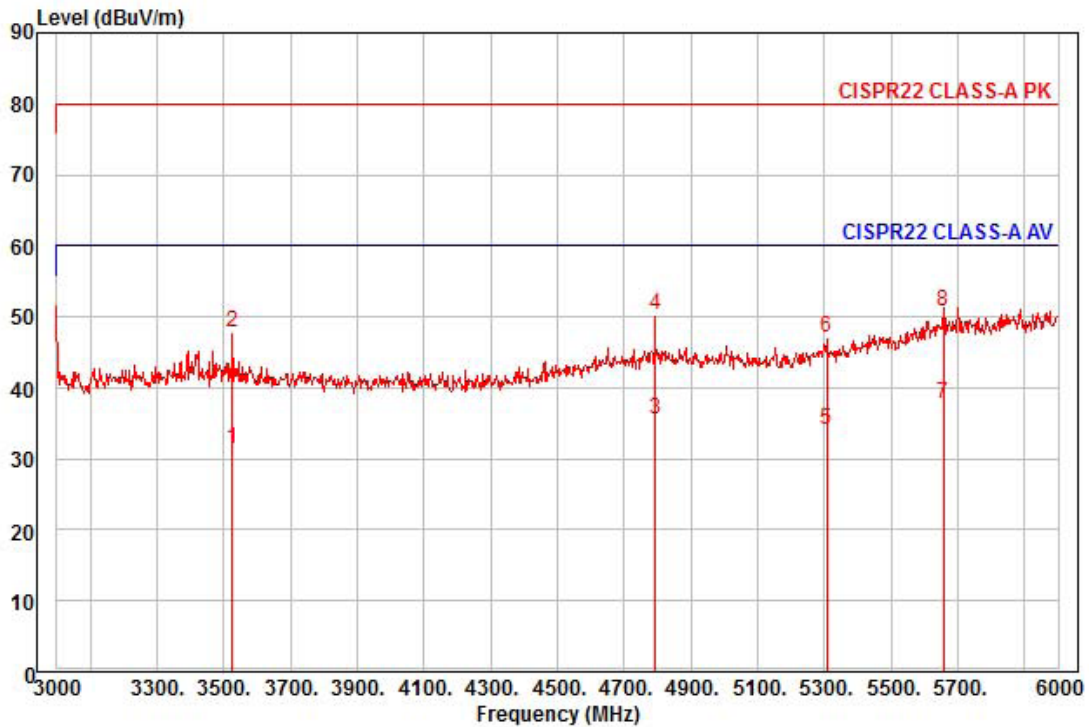
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Site : chamber  
Condition: CISPR22 CLASS-A PK 3m HORN-414(15.02.09) vertical  
: RBW:1000.000kHz VBW:1000.000kHz SWT:Auto  
Project : NETWORK CAMERA  
Model : SNV-8081RP  
Mode : DC 12 V  
Memo : 3 ~ 6 GHz

|      | Freq    | Read Level | Ant Factor | Cable Loss | Preamp Factor | TPos | Limit Line | Over Limit | Pol/Phase | Remark  |
|------|---------|------------|------------|------------|---------------|------|------------|------------|-----------|---------|
|      | MHz     | dBuV       | dB/m       | dB         | dB            | deg  | dBuV/m     | dB         |           |         |
| 1    | 3525.00 | 24.01      | 31.04      | 10.78      | 34.43         | 319  | 60.00      | -28.60     | vertical  | Average |
| 2    | 3525.00 | 40.50      | 31.04      | 10.78      | 34.43         | 319  | 80.00      | -32.11     | vertical  | Peak    |
| 3    | 4794.00 | 23.17      | 33.15      | 12.83      | 33.57         | 357  | 60.00      | -24.42     | vertical  | Average |
| 4    | 4794.00 | 37.93      | 33.15      | 12.83      | 33.57         | 357  | 80.00      | -29.66     | vertical  | Peak    |
| 5    | 5307.00 | 19.17      | 33.75      | 14.54      | 33.25         | 201  | 60.00      | -25.79     | vertical  | Average |
| 6    | 5307.00 | 32.13      | 33.75      | 14.54      | 33.25         | 201  | 80.00      | -32.83     | vertical  | Peak    |
| 7 pp | 5658.00 | 20.75      | 34.11      | 16.11      | 33.30         | 12   | 60.00      | -22.33     | vertical  | Average |
| 8 pk | 5658.00 | 33.89      | 34.11      | 16.11      | 33.30         | 12   | 80.00      | -29.19     | vertical  | Peak    |

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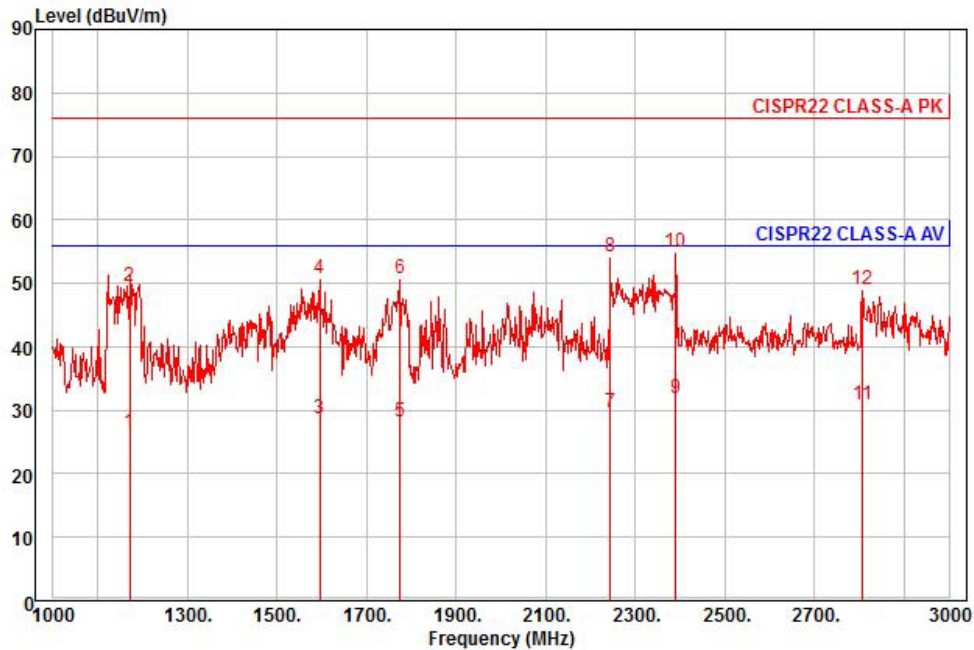
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Test report No.:  
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## - PoE Mode

Temperature: 18.1 °C Humidity: 42.5 % R.H. Test Date: 04.15. 2015 Tested by: Dae Hyun, Kim



Site : chamber  
Condition: CISPR22 CLASS-A PK 3m HORN-414(15.02.09) horizontal  
: RBW:1000.000kHz VBW:1000.000kHz SWT:Auto  
Project : NETWORK CAMERA  
Model : SNV-8081RP  
Mode : PoE  
Memo : 1 ~ 3 GHz

|       |         | Read  | Ant    | Cable | Preamp | TPos | Limit  | Over   |            |         |
|-------|---------|-------|--------|-------|--------|------|--------|--------|------------|---------|
|       | Freq    | Level | Factor | Loss  | Factor |      | Line   | Limit  | Pol/Phase  | Remark  |
|       | MHz     | dBuV  | dB/m   | dB    | dB     | deg  | dBuV/m | dB     |            |         |
| 1     | 1172.00 | 32.39 | 24.26  | 5.86  | 35.91  | 322  | 56.00  | -29.40 | horizontal | Average |
| 2     | 1172.00 | 55.32 | 24.26  | 5.86  | 35.91  | 322  | 76.00  | -26.47 | horizontal | Peak    |
| 3     | 1596.00 | 31.48 | 25.63  | 6.88  | 35.20  | 40   | 56.00  | -27.21 | horizontal | Average |
| 4     | 1596.00 | 53.45 | 25.63  | 6.88  | 35.20  | 40   | 76.00  | -25.24 | horizontal | Peak    |
| 5     | 1774.00 | 29.03 | 26.74  | 7.31  | 34.91  | 48   | 56.00  | -27.83 | horizontal | Average |
| 6     | 1774.00 | 51.74 | 26.74  | 7.31  | 34.91  | 48   | 76.00  | -25.12 | horizontal | Peak    |
| 7     | 2244.00 | 26.72 | 28.87  | 8.37  | 34.36  | 62   | 56.00  | -26.40 | horizontal | Average |
| 8     | 2244.00 | 51.33 | 28.87  | 8.37  | 34.36  | 62   | 76.00  | -21.79 | horizontal | Peak    |
| 9 av  | 2390.00 | 28.15 | 29.30  | 8.68  | 34.26  | 54   | 56.00  | -24.13 | horizontal | Average |
| 10 pp | 2390.00 | 51.33 | 29.30  | 8.68  | 34.26  | 54   | 76.00  | -20.95 | horizontal | Peak    |
| 11    | 2808.00 | 25.13 | 30.10  | 9.56  | 33.97  | 8    | 56.00  | -25.18 | horizontal | Average |
| 12    | 2808.00 | 43.40 | 30.10  | 9.56  | 33.97  | 8    | 76.00  | -26.91 | horizontal | Peak    |

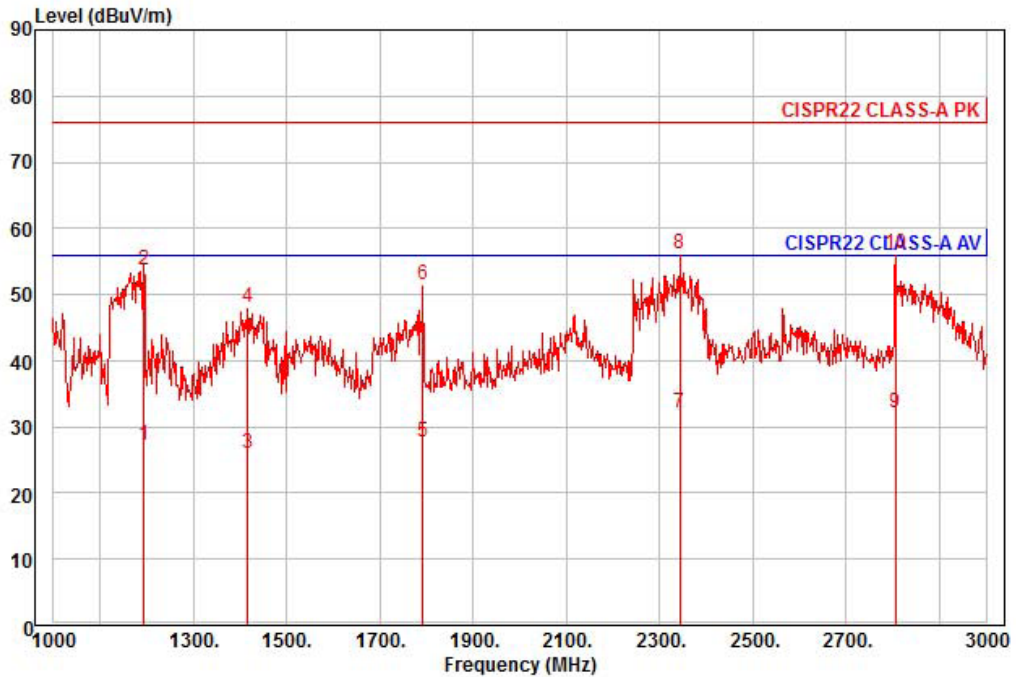
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Test report No.:  
KES-E1-15T0123  
Page (36) of (52)



Site : chamber  
Condition: CISPR22 CLASS-A PK 3m HORN-414(15.02.09) vertical  
: RBW:1000.000kHz VBW:1000.000kHz SWT:Auto  
Project : NETWORK CAMERA  
Model : SNV-8081RP  
Mode : PoE  
Memo : 1 ~ 3 GHz

|      | Freq    | Read Level | Ant Factor | Cable Loss | Preamp Factor | TPos | Limit Line | Over Limit | Pol/Phase | Remark  |
|------|---------|------------|------------|------------|---------------|------|------------|------------|-----------|---------|
|      | MHz     | dBuV       | dB/m       | dB         | dB            | deg  | dBuV/m     | dB         |           |         |
| 1    | 1194.00 | 32.84      | 24.31      | 5.91       | 35.88         | 313  | 56.00      | -28.82     | vertical  | Average |
| 2    | 1194.00 | 59.43      | 24.31      | 5.91       | 35.88         | 313  | 76.00      | -22.23     | vertical  | Peak    |
| 3    | 1416.00 | 30.11      | 24.83      | 6.45       | 35.51         | 22   | 56.00      | -30.12     | vertical  | Average |
| 4    | 1416.00 | 52.18      | 24.83      | 6.45       | 35.51         | 22   | 76.00      | -28.05     | vertical  | Peak    |
| 5    | 1792.00 | 28.39      | 26.85      | 7.36       | 34.88         | 22   | 56.00      | -28.28     | vertical  | Average |
| 6    | 1792.00 | 52.15      | 26.85      | 7.36       | 34.88         | 22   | 76.00      | -24.52     | vertical  | Peak    |
| 7 av | 2344.00 | 28.75      | 29.16      | 8.58       | 34.29         | 308  | 56.00      | -23.80     | vertical  | Average |
| 8 pp | 2344.00 | 52.80      | 29.16      | 8.58       | 34.29         | 308  | 76.00      | -19.75     | vertical  | Peak    |
| 9    | 2806.00 | 26.47      | 30.10      | 9.55       | 33.97         | 0    | 56.00      | -23.85     | vertical  | Average |
| 10   | 2806.00 | 50.56      | 30.10      | 9.55       | 33.97         | 0    | 76.00      | -19.76     | vertical  | Peak    |

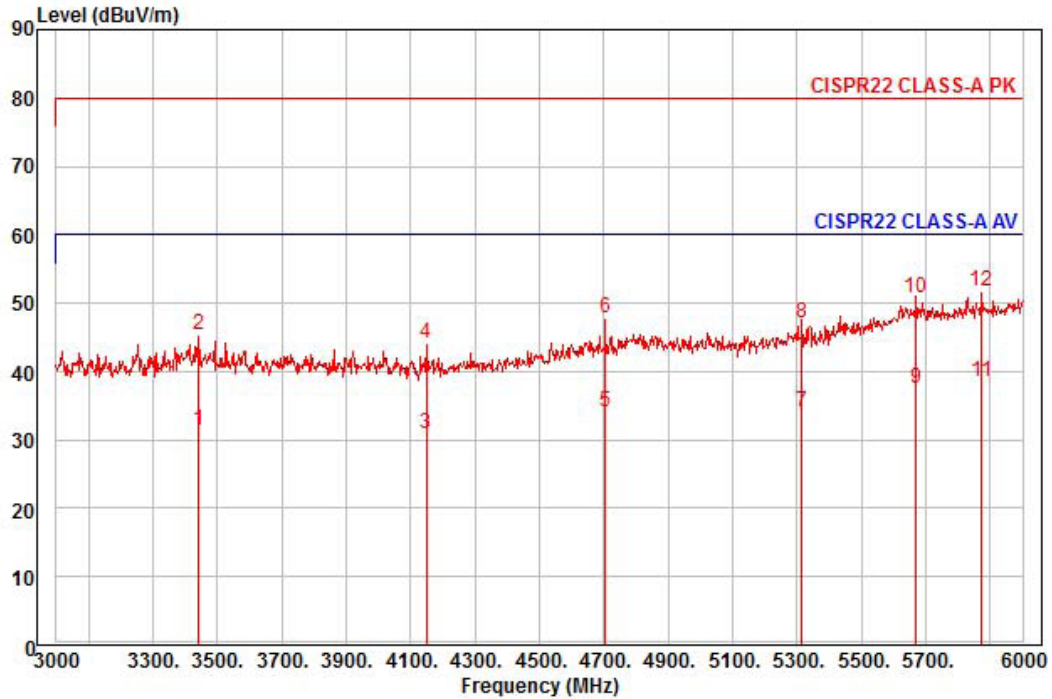
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Site : chamber  
Condition: CISPR22 CLASS-A PK 3m HORN-414(15.02.09) horizontal  
: RBW:1000.000kHz VBW:1000.000kHz SWT:Auto  
Project : NETWORK CAMERA  
Model : SNV-8081RP  
Mode : PoE  
Memo : 3 ~ 6 GHz

|       | Freq    | Read Level | Ant Factor | Cable Loss | Preamp Factor | TPos | Limit Line | Over Limit | Pol/Phase  | Remark  |
|-------|---------|------------|------------|------------|---------------|------|------------|------------|------------|---------|
|       | MHz     | dBuV       | dB/m       | dB         | dB            | deg  | dBuV/m     | dB         |            |         |
| 1     | 3441.00 | 24.06      | 30.92      | 10.65      | 34.34         | 54   | 60.00      | -28.71     | horizontal | Average |
| 2     | 3441.00 | 38.09      | 30.92      | 10.65      | 34.34         | 54   | 80.00      | -34.68     | horizontal | Peak    |
| 3     | 4149.00 | 21.98      | 31.95      | 11.77      | 34.71         | 164  | 60.00      | -29.01     | horizontal | Average |
| 4     | 4149.00 | 35.03      | 31.95      | 11.77      | 34.71         | 164  | 80.00      | -35.96     | horizontal | Peak    |
| 5     | 4704.00 | 22.40      | 32.82      | 12.68      | 33.73         | 269  | 60.00      | -25.83     | horizontal | Average |
| 6     | 4704.00 | 36.01      | 32.82      | 12.68      | 33.73         | 269  | 80.00      | -32.22     | horizontal | Peak    |
| 7     | 5316.00 | 19.10      | 33.75      | 14.58      | 33.25         | 38   | 60.00      | -25.82     | horizontal | Average |
| 8     | 5316.00 | 31.99      | 33.75      | 14.58      | 33.25         | 38   | 80.00      | -32.93     | horizontal | Peak    |
| 9     | 5670.00 | 20.59      | 34.15      | 16.16      | 33.30         | 196  | 60.00      | -22.40     | horizontal | Average |
| 10    | 5670.00 | 33.76      | 34.15      | 16.16      | 33.30         | 196  | 80.00      | -29.23     | horizontal | Peak    |
| 11 pp | 5874.00 | 19.96      | 34.75      | 17.08      | 33.33         | 340  | 60.00      | -21.54     | horizontal | Average |
| 12 pk | 5874.00 | 33.28      | 34.75      | 17.08      | 33.33         | 340  | 80.00      | -28.22     | horizontal | Peak    |

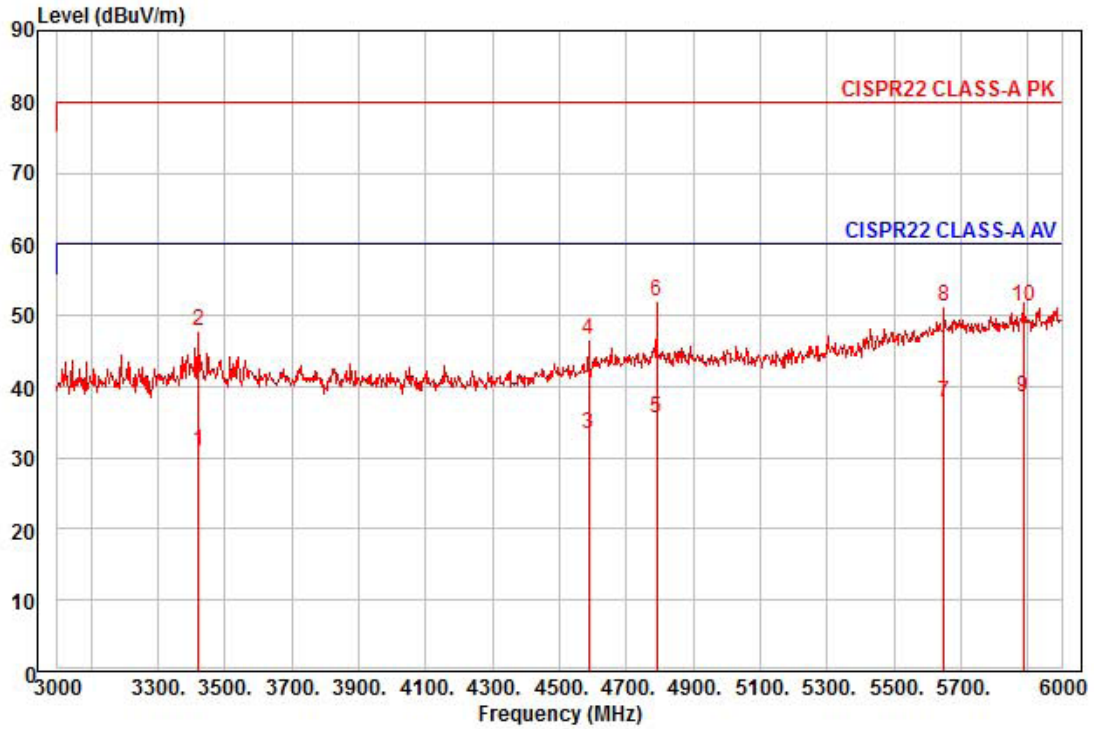
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Site : chamber  
Condition: CISPR22 CLASS-A PK 3m HORN-414(15.02.09) vertical  
: RBW:1000.000kHz VBW:1000.000kHz SWT:Auto  
Project : NETWORK CAMERA  
Model : SNV-8081RP  
Mode : PoE  
Memo : 3 ~ 6 GHz

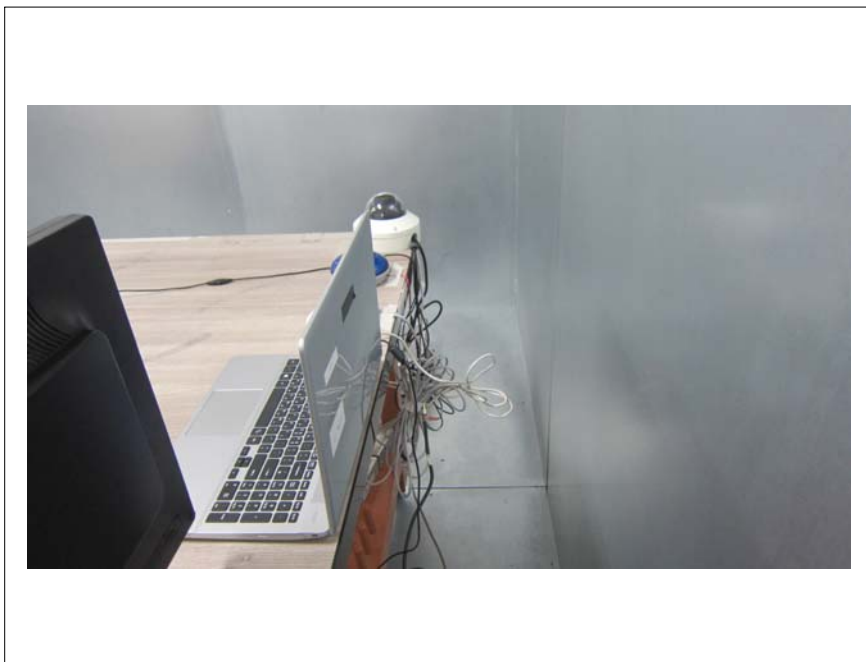
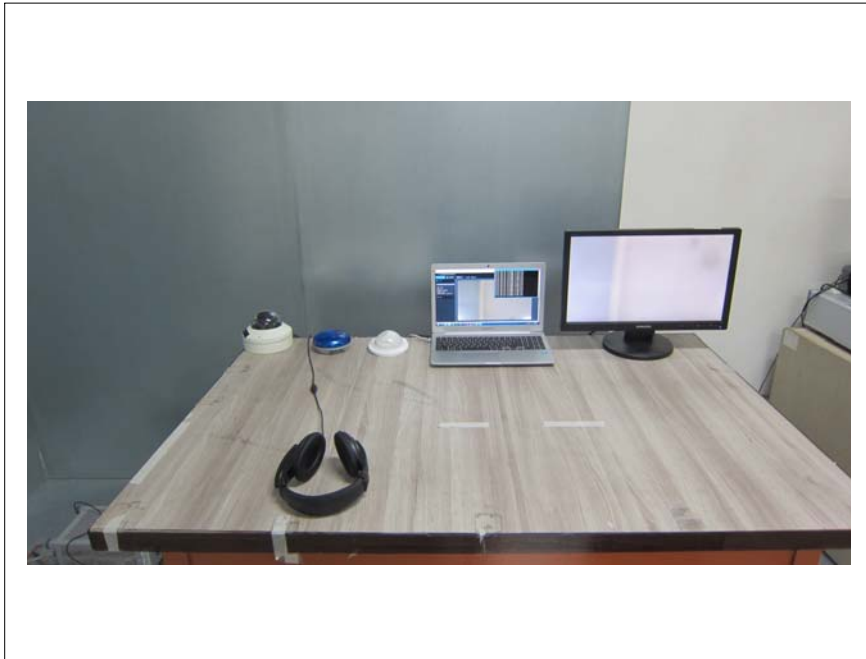
|      | Freq    | Read Level | Ant Factor | Cable Loss | Preamp Factor | TPos | Limit Line | Over Limit | Pol/Phase | Remark  |
|------|---------|------------|------------|------------|---------------|------|------------|------------|-----------|---------|
|      | MHz     | dBuV       | dB/m       | dB         | dB            | deg  | dBuV/m     | dB         |           |         |
| 1    | 3420.00 | 23.63      | 30.90      | 10.62      | 34.31         | 321  | 60.00      | -29.16     | vertical  | Average |
| 2    | 3420.00 | 40.60      | 30.90      | 10.62      | 34.31         | 321  | 80.00      | -32.19     | vertical  | Peak    |
| 3    | 4587.00 | 22.35      | 32.39      | 12.49      | 33.94         | 4    | 60.00      | -26.71     | vertical  | Average |
| 4    | 4587.00 | 35.73      | 32.39      | 12.49      | 33.94         | 4    | 80.00      | -33.33     | vertical  | Peak    |
| 5    | 4791.00 | 23.28      | 33.14      | 12.83      | 33.58         | 183  | 60.00      | -24.33     | vertical  | Average |
| 6 pk | 4791.00 | 39.53      | 33.14      | 12.83      | 33.58         | 183  | 80.00      | -28.08     | vertical  | Peak    |
| 7    | 5649.00 | 20.87      | 34.09      | 16.07      | 33.30         | 139  | 60.00      | -22.27     | vertical  | Average |
| 8    | 5649.00 | 34.34      | 34.09      | 16.07      | 33.30         | 139  | 80.00      | -28.80     | vertical  | Peak    |
| 9 pp | 5886.00 | 19.94      | 34.78      | 17.13      | 33.33         | 260  | 60.00      | -21.48     | vertical  | Average |
| 10   | 5886.00 | 32.75      | 34.78      | 17.13      | 33.33         | 260  | 80.00      | -28.67     | vertical  | Peak    |

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## 4. Test Setup Photographs

### 4.1 Conducted Emission

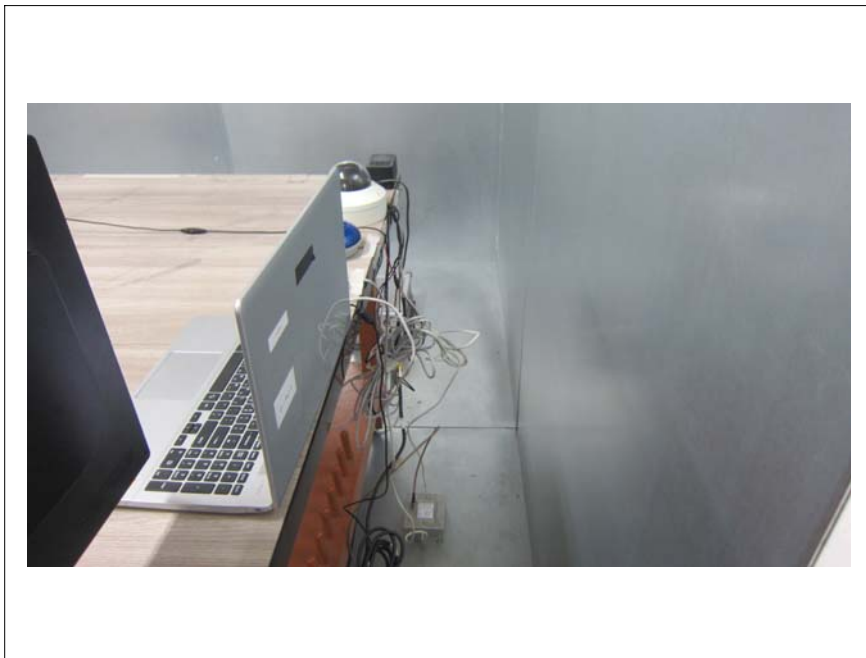
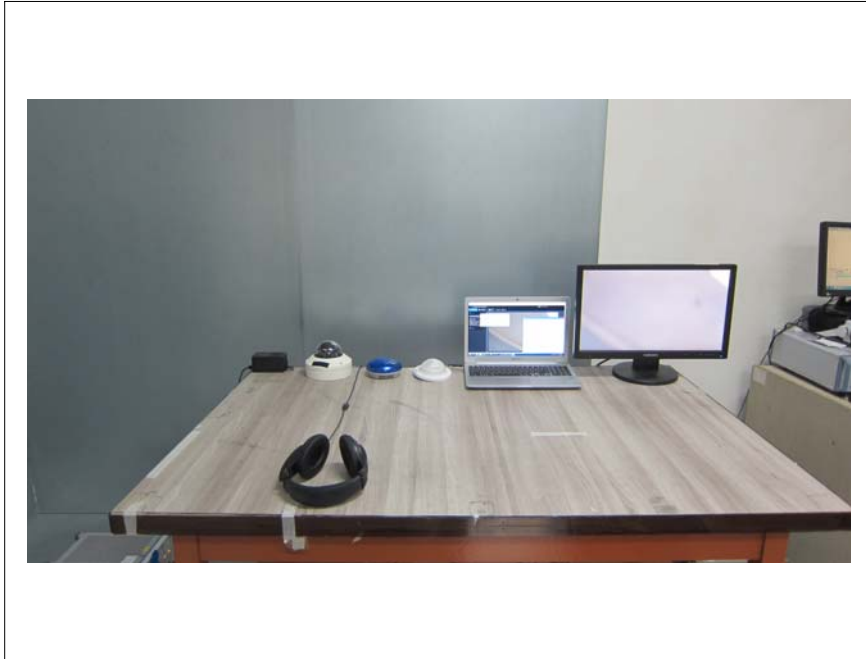
- AC Mode



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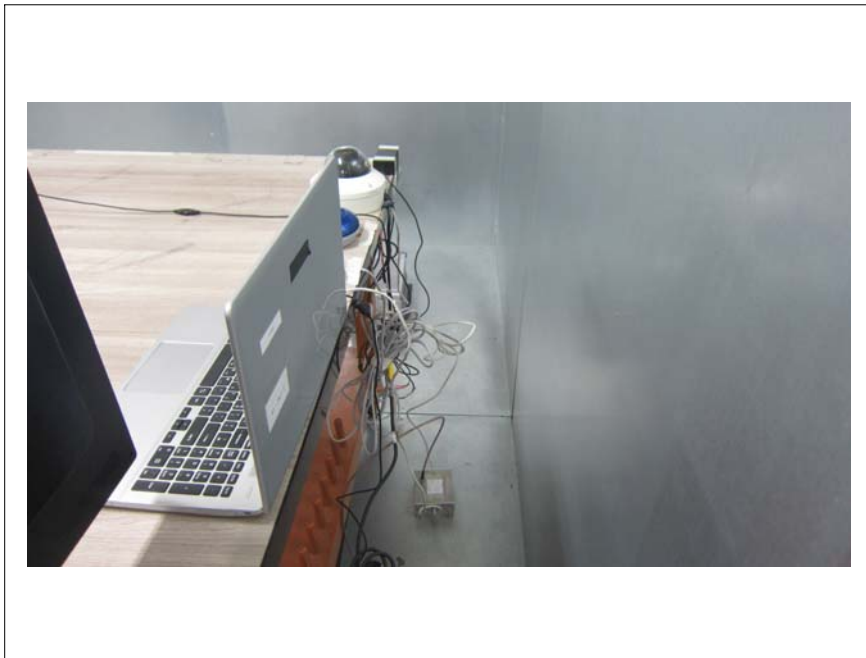
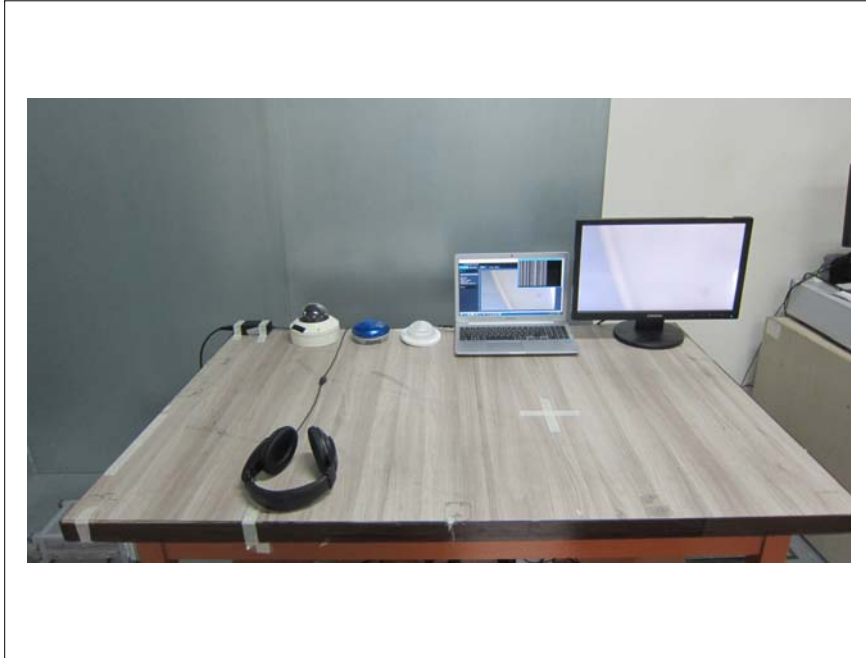
**- Telecommunication Emission**

-AC Mode



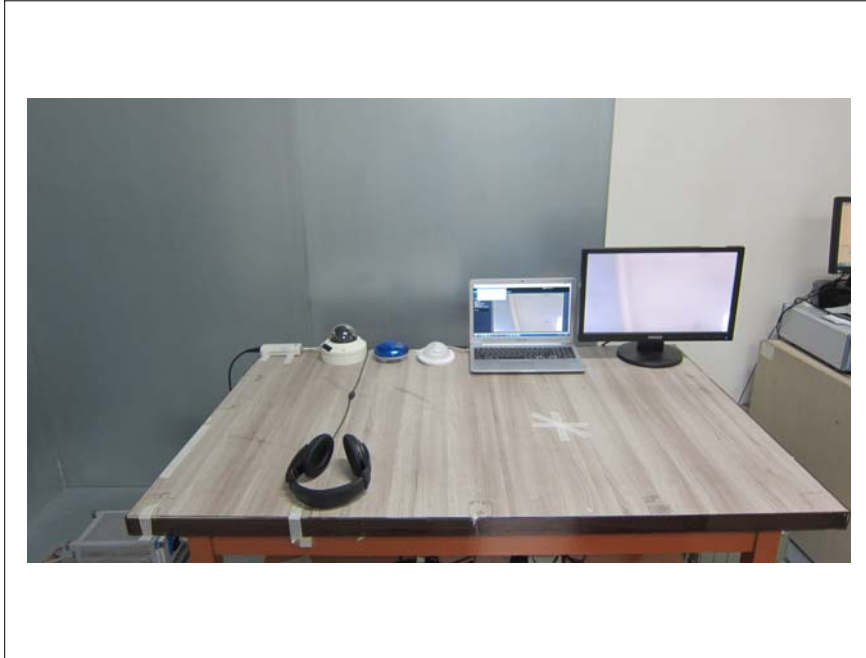
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-DC Mode



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-PoE Mode



## 4.2 Radiated Emission

### \* Blow 1 GHz

-AC Mode



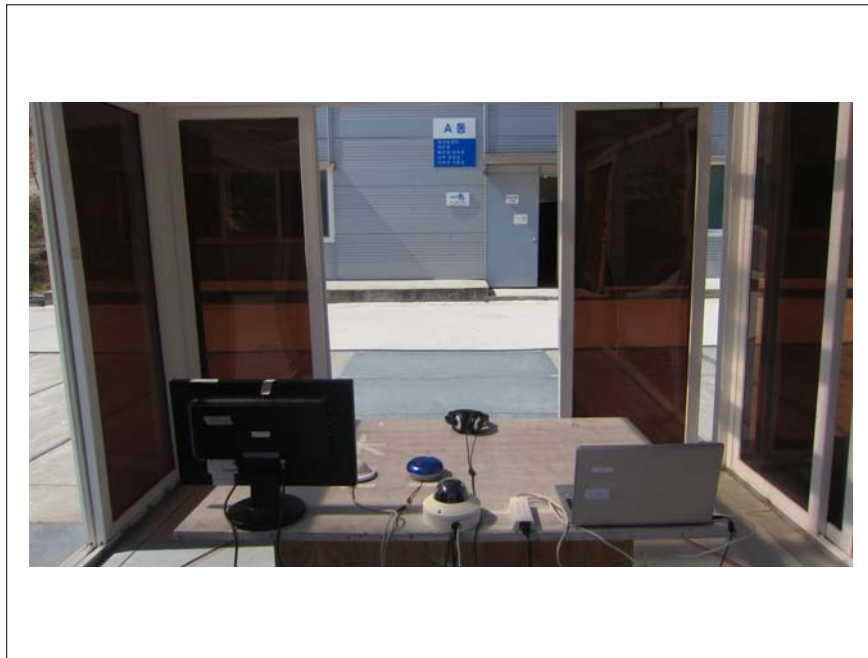
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-DC Mode



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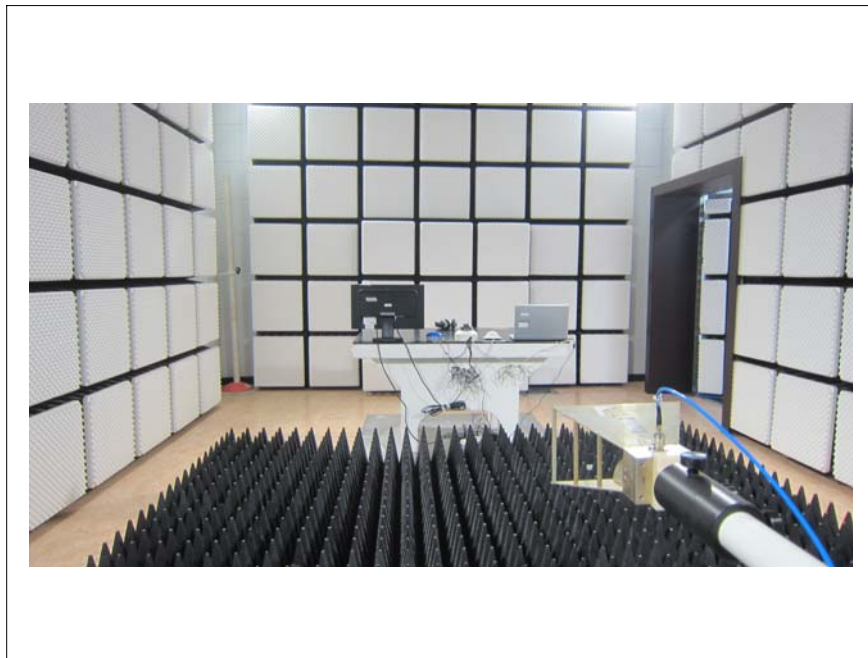
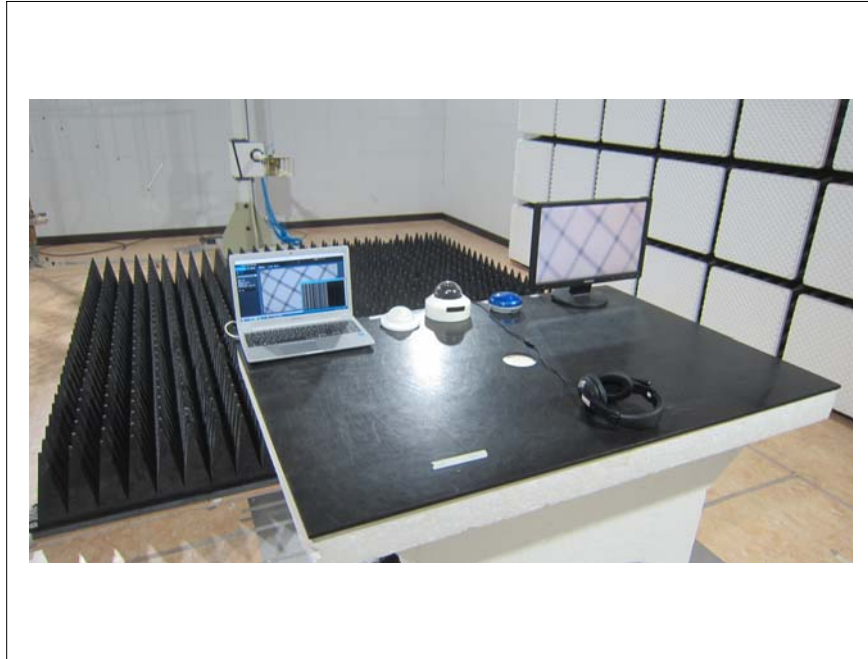
-PoE Mode



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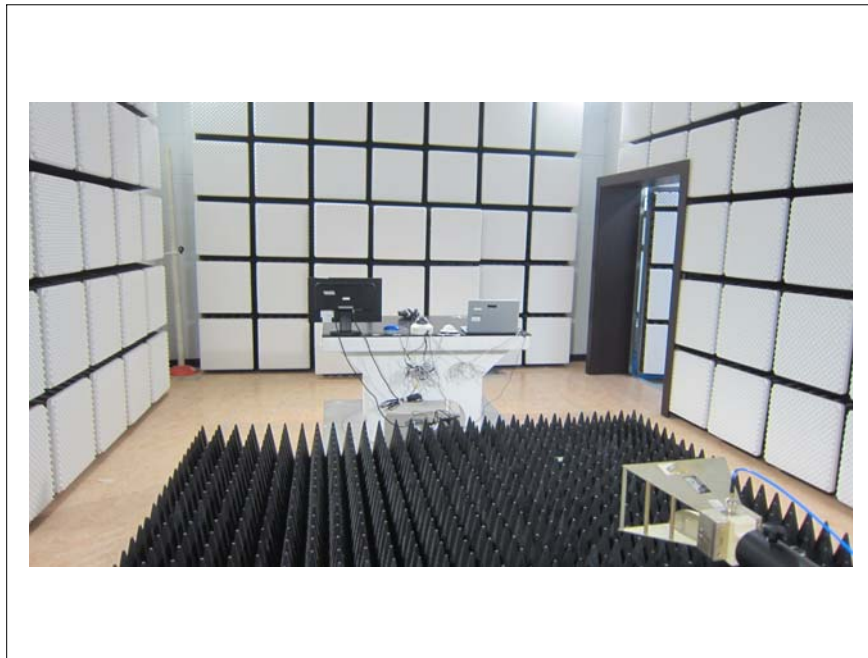
**\* Above 1 GHz**

-AC Mode



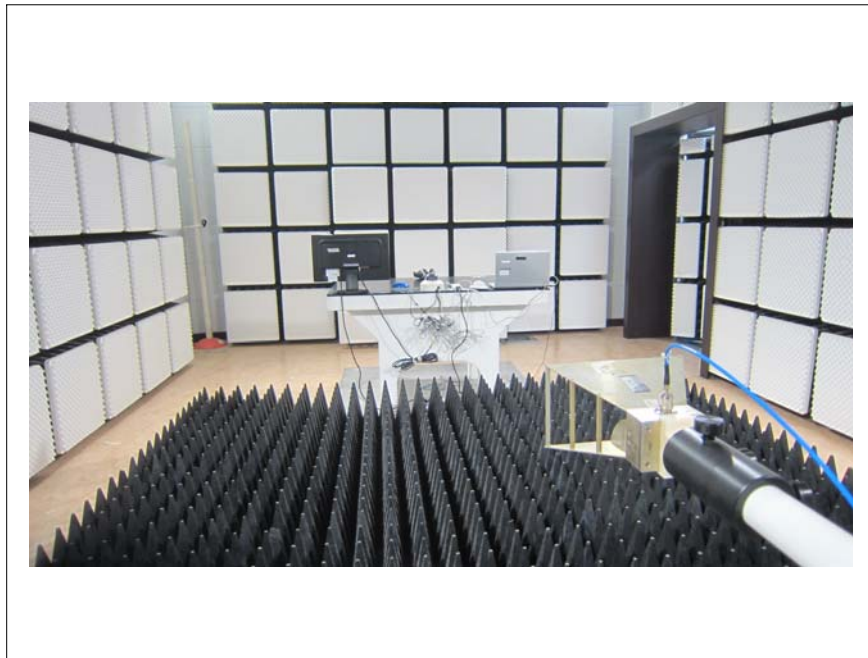
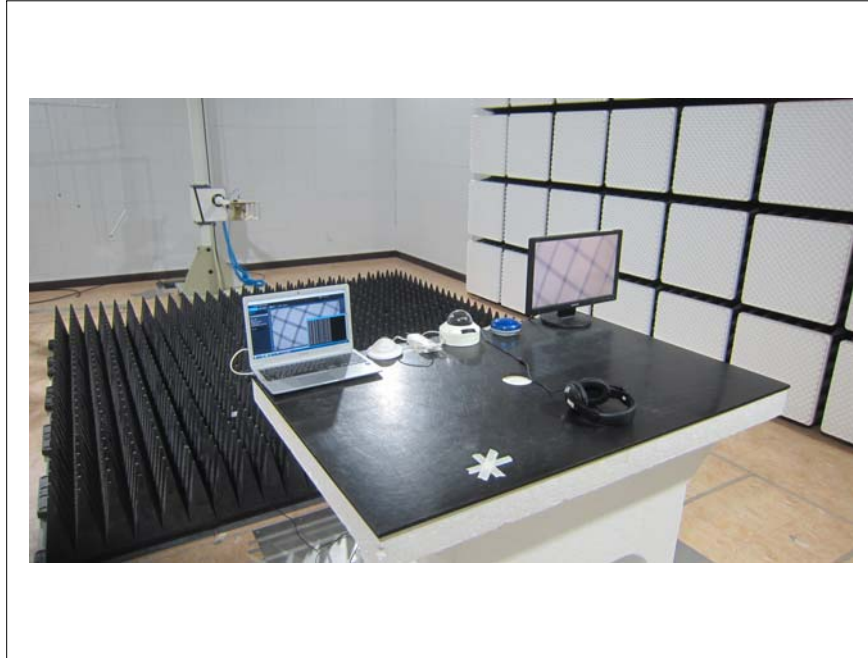
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-DC Mode



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-PoE Mode



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## 5. External Photographs



[ FRONT VIEW ]



[ REAR VIEW ]

## 6. Internal Photographs



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**E.U.T: Internal View(Top) - Main Board**



**E.U.T: Internal View(Bottom) - Main Board**



### E.U.T: Internal View(Top) - Sub Board



### E.U.T: Internal View(Bottom) - Sub Board



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