

**KES Co., Ltd.**

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Report No.:

KES-EM-22T0574-R1

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# EMC TEST REPORT

Test Report No. : KES-EM-22T0574-R1  
Date of Issue : Feb. 24, 2023  
Product name : NETWORK CAMERA  
Model/Type No. : XNV-C6083  
Variant Model : -  
Applicant : Hanwha Vision Co., Ltd  
Applicant Address : 6, Pangyo-ro 319Beon-gil, Bundang-gu, Seongnam-si,  
Gyeonggi-do, Republic of Korea  
Manufacturer : 1. HANWHA VISION VIETNAM COMPANY LIMITED  
2. D-TECH CO.,LTD.  
Manufacturer Address : 1. Lot O-2, Que Vo Industrial Zone extended area,  
Nam Son commune, Bac Ninh city, Bac Ninh province, Vietnam  
2. 173-25, Saneop-ro, Gwonseon-gu, Suwon-si, Gyeonggi- do,  
Korea (Suwon Industrial Complex)  
Equipment authorization : **Supplier's Declaration of Conformity**  
Date of Receipt : Jun. 21, 2022  
Test date : Jun. 27, 2022 ~ Jun. 28, 2022  
Test Results : ☒ **In Compliance** ☐ **Not in Compliance**

Tested by

Se Heon, Kim  
EMC Test Engineer

Reviewed by

Dong-Hun, Jang  
EMC Technical Manager

This test report is not related to KS Q ISO/IEC 17025 and KOLAS.

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**REPORT REVISION HISTORY**

| Date          | Test Report No.   | Revision History                                                     |
|---------------|-------------------|----------------------------------------------------------------------|
| Jul. 13, 2022 | KES-EM-22T0574    | Issued                                                               |
| Feb. 24, 2023 | KES-EM-22T0574-R1 | Change the Applicant and manufacturer at the request of the customer |
|               |                   |                                                                      |
|               |                   |                                                                      |
|               |                   |                                                                      |
|               |                   |                                                                      |
|               |                   |                                                                      |
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## 1.0 General Product Description

### Main Specifications of EUT are:

|                             | XNV-C6083                                                                                                                                                                            |
|-----------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Video</b>                |                                                                                                                                                                                      |
| Imaging Device              | 1/2.8" progressive CMOS                                                                                                                                                              |
| Resolution                  | 1920x1080, 1280x1024, 1280x960, 1280x720, 1024x768, 800x600, 800x448, 720x576, 720x480, 640x480, 640x360, 320x240                                                                    |
| Max. Framerate              | H.265/H.264: Max. 60fps/50fps(60Hz/50Hz)<br>MJPEG: Max. 30fps/25fps(60Hz/50Hz)                                                                                                       |
| NETD                        | None                                                                                                                                                                                 |
| Pixel Size                  | None                                                                                                                                                                                 |
| Min. Illumination           | Color: 0.01Lux(F1.4, 1/30sec, 30IRE)<br>B/W : 0.001Lux(F1.4, 1/30sec, 30IRE), 30/25fps<br><br>Color: 0.02Lux(F1.4, 1/60sec, 30IRE)<br>B/W : 0.002Lux(F1.4, 1/60sec, 30IRE), 60/50fps |
| Video Out                   | USB: Micro USB Type B, 1280x720 for installation                                                                                                                                     |
| Video Transmission Distance | None                                                                                                                                                                                 |
| <b>Lens</b>                 |                                                                                                                                                                                      |
| Focal Length (Zoom Ratio)   | 2.8~12mm(4.3x) motorized varifocal                                                                                                                                                   |
| Max. Aperture Ratio         | F1.4(Wide) ~ F3.6(Tele)                                                                                                                                                              |
| Angular Field of View       | H : 120°(Wide) ~ 27°(Tele)<br>V : 63°(Wide) ~ 15°(Tele)<br>D : 143°(Wide) ~ 32°(Tele)                                                                                                |
| Min. Object Distance        | 0.5m(1.64ft)                                                                                                                                                                         |
| Focus Control               | Simple focus, Manual                                                                                                                                                                 |
| Lens Type                   | DC auto iris with hall sensor                                                                                                                                                        |
| Mount Type                  | None                                                                                                                                                                                 |
| Optional Lens               | None                                                                                                                                                                                 |
| <b>Pan / Tilt / Rotate</b>  |                                                                                                                                                                                      |
| Pan / Tilt / Rotate Range   | 0°~360° / -45°~75° / 0°~355°                                                                                                                                                         |
| Pan Range                   | None                                                                                                                                                                                 |
| Pan Speed                   | None                                                                                                                                                                                 |
| Tilt Range                  | None                                                                                                                                                                                 |
| Tilt Speed                  | None                                                                                                                                                                                 |
| Rotate Range                | None                                                                                                                                                                                 |
| Sequence                    | None                                                                                                                                                                                 |
| Preset Accuracy             | None                                                                                                                                                                                 |
| <b>Operational</b>          |                                                                                                                                                                                      |
| Camera Title                | Displayed up to 85 characters                                                                                                                                                        |
| Direction Indicator         | None                                                                                                                                                                                 |
| Day & Night                 | Auto(ICR)                                                                                                                                                                            |
| Backlight Compensation      | BLC, HLC, WDR, SSDR                                                                                                                                                                  |
| Wide Dynamic Range          | extremeWDR (150dB)                                                                                                                                                                   |
| Digital Noise Reduction     | WiseNR II (Based on AI engine), SSNR V                                                                                                                                               |
| Digital Image Stabilization | Support(built-in gyro sensor)                                                                                                                                                        |
| Defog                       | Support                                                                                                                                                                              |
| Motion Detection            | 8ea, 8point Polygonal zones                                                                                                                                                          |
| Privacy Masking             | 32ea, 4point Quadrangle zones<br>- Color : Gray, Green, Red, Blue, Black, White<br>- Mosaic                                                                                          |
| Gain Control                | Off / Max Gain / Manual                                                                                                                                                              |

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|                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|---------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| White Balance             | ATW / Narrow ATW / AWC / Manual / Indoor / Outdoor                                                                                                                                                                                                                                                                                                                                                                                                                             |
| LDC                       | Support (Fill/stretch mode)                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| Electronic Shutter Speed  | Minimum / Maximum / Anti flicker (2~1/12,000sec)<br>prefer shutter control(Based on AI engine)                                                                                                                                                                                                                                                                                                                                                                                 |
| Digital PTZ               | Support                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| Video Rotation            | Flip, Mirror, Hallway view(90°/270°)                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Analytics                 | Classified object type : Person/Face/Vehicle/License plate<br>Attributes : Vehicle(Type:car/bus/truck/motorcycle/bicycle)<br>Support DetectionShot<br>Analytics events based on AI engine<br>- Object detection, Virtual line(Crossing/Direction), Virtual area(Loitering/Intrusion/Enter/Exit)<br>Analytics events<br>- Defocus detection, Motion detection, Tampering, Fog detection, Audio detection, Sound classification, Shock detection, Virtual area(Appear/Disappear) |
| Business Intelligence     | Based on AI engine : People counting, Queue management, Heatmap                                                                                                                                                                                                                                                                                                                                                                                                                |
| Serial Interface          | None                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Alarm I/O                 | 2 configurable I/O ports                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| Alarm Triggers            | Analytics, Network disconnect, Alarm input, App event, Time schedule                                                                                                                                                                                                                                                                                                                                                                                                           |
| Alarm Events              | When alarm trigger occurred<br>- File upload(image) : e-mail/FTP<br>- Notification : e-mail<br>- Recording : SD/SDHC/SDXC or NAS recording at event triggers<br>- Alarm output<br>- Handover(PTZ preset, Send message by HTTP/HTTPS/TCP)<br>- Audio clip playback                                                                                                                                                                                                              |
| Audio In                  | Selectable(mic in/line in)<br>Supply voltage: 2.5VDC(4mA), Input impedance: 2K Ohm                                                                                                                                                                                                                                                                                                                                                                                             |
| Audio Out                 | Line out, Max.output level: 1Vrms                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| IR Viewable Length        | None                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| IR Illuminator (Optional) | None                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Water Removal             | None                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Auto Tracking             | None                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Coaxial Protocol          | None                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Color Palettes            | None                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| <b>Radiometry</b>         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Temperature Detect Range  | None                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Temperature Accuracy      | None                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Temperature Detection     | None                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Additional                | None                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| <b>Network</b>            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Ethernet                  | Metal shielded RJ-45(10/100BASE-T)                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| Video Compression         | H.265/H.264: Main/High, MJPEG                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| Audio Compression         | G.711 u-law /G.726 Selectable<br>G.726(ADPCM) 8KHz, G.711 8KHz<br>G.726: 16Kbps, 24Kbps, 32Kbps, 40Kbps<br>AAC-LC: 48Kbps at 16KHz                                                                                                                                                                                                                                                                                                                                             |
| Smart Codec               | Manual(Sea area), WiseStreamII, WiseStreamIII(Based on AI engine)                                                                                                                                                                                                                                                                                                                                                                                                              |
| Video Quality Adjustment  | H.264/H.265: Target bitrate level control<br>MJPEG: Target bitrate level control                                                                                                                                                                                                                                                                                                                                                                                               |
| Bitrate Control           | H.264/H.265: CBR or VBR<br>MJPEG: VBR                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| Streaming                 | Unicast(20 users) / Multicast<br>Multiple streaming(Up to 10 profiles, 3 virtual channel support)                                                                                                                                                                                                                                                                                                                                                                              |
| Protocol                  | IPv4, IPv6, TCP/IP, UDP/IP, RTP(UDP), RTP(TCP), RTCP,RTSP, NTP, HTTP, HTTPS, SSL/TLS, DHCP, FTP, SMTP, ICMP, IGMP, SNMPv1/v2c/v3(MIB-2), ARP, DNS, DDNS, QoS, UPnP, Bonjour, LLDP, SRTP (TCP, UDP Unicast)                                                                                                                                                                                                                                                                     |

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|-----------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 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, EAP-PEAP MSCHAPv2)<br>Device Certificate(Hanwha Techwin Root CA, pre-installed)<br>Secure by default certificate<br>HTPM (Hanwha Trusted platform module)<br>Secure OS/Boot/Storage, Verify firmware forgery<br>CyberSecurity assurance program UL CAP (UL 2900-1) |
| Application Programming Interface | ONVIF Profile S/G/T<br>SUNAPI(HTTP API)<br>Wisenet open platform                                                                                                                                                                                                                                                                                                                                                         |
| General                           |                                                                                                                                                                                                                                                                                                                                                                                                                          |
| Webpage Language                  | English, Korean, Chinese, French, Italian, Spanish, German, Japanese, Russian, Portuguese, Czech, Polish, Turkish, Dutch, Greek, Hungarian                                                                                                                                                                                                                                                                               |
| Web Viewer                        | None                                                                                                                                                                                                                                                                                                                                                                                                                     |
| Edge Storage                      | Micro SD/SDHC/SDXC 1slot 512GB                                                                                                                                                                                                                                                                                                                                                                                           |
| Memory                            | 2GB RAM, 512MB Flash                                                                                                                                                                                                                                                                                                                                                                                                     |
| Environmental & Electrical        |                                                                                                                                                                                                                                                                                                                                                                                                                          |
| Operating Temperature / Humidity  | -40°C~+55°C(-40°F ~ +131°F)<br>* Start up should be done at above -20°C<br>+74°C/+165°F (Max) based on NEMA-TS 2(2.2.7)<br>0~95%RH(non-condensing)<br>Humidity control /w AIR vent                                                                                                                                                                                                                                       |
| Storage Temperature / Humidity    | -50°C ~ +60°C(-58°F ~ +140°F) / Less than 90% RH                                                                                                                                                                                                                                                                                                                                                                         |
| Certification                     | IP66/IP67/NEMA4X, IK10                                                                                                                                                                                                                                                                                                                                                                                                   |
| Input Voltage                     | PoE(IEEE802.3af, Class3), 12VDC                                                                                                                                                                                                                                                                                                                                                                                          |
| Power Consumption                 | (TBD)<br>PoE: Max 12.95W, typical 10.8W<br>12VDC: Max 12.5W, typical 10.0W                                                                                                                                                                                                                                                                                                                                               |
| Mechanical                        |                                                                                                                                                                                                                                                                                                                                                                                                                          |
| Color / Material                  | White / Aluminum<br>Hard-coated dome bubble                                                                                                                                                                                                                                                                                                                                                                              |
| RAL Code                          | RAL9003                                                                                                                                                                                                                                                                                                                                                                                                                  |
| Product Dimensions / Weight       | Ø160x118mm(Ø6.30x4.65"), 1450g(3.20 lb)                                                                                                                                                                                                                                                                                                                                                                                  |
| Compatible Conduit hole / Gangbox | 1/2" (M20)<br>single, double, 4" octagon, 4" square                                                                                                                                                                                                                                                                                                                                                                      |
| Hanging Mount (Dome)              | SBP-167HWW                                                                                                                                                                                                                                                                                                                                                                                                               |
| Skin Cover (Dome)                 | None                                                                                                                                                                                                                                                                                                                                                                                                                     |
| Weather Cap (Dome)                | SBV-161WCW                                                                                                                                                                                                                                                                                                                                                                                                               |
| Power Module                      | None                                                                                                                                                                                                                                                                                                                                                                                                                     |
| Backbox                           | None                                                                                                                                                                                                                                                                                                                                                                                                                     |
| Certifications & Standards        |                                                                                                                                                                                                                                                                                                                                                                                                                          |
| Network                           | None                                                                                                                                                                                                                                                                                                                                                                                                                     |
| EMC                               | EN 50121-4<br>FCC 47 CFR 15 Subpart B Class A<br>ICES-3(A)/NMB-3(A)<br>CE/UKCA<br>- EN 55032 Class A, EN 50130-4, EN 61000-3-2, EN 61000-3-3<br>VCCI CISPR 32 Class A<br>RCM AS/NZS CISPR 32 Class A                                                                                                                                                                                                                     |
| Safety                            | UL 62368-1, CAN/CSA C22.2 NO. 62368-1                                                                                                                                                                                                                                                                                                                                                                                    |
| Environment                       | IEC/EN 63000<br>IEC/EN 60529 IP66/IP67, IEC/EN 62262 IK10<br>NEMA 250 type 4X                                                                                                                                                                                                                                                                                                                                            |
| Video                             | None                                                                                                                                                                                                                                                                                                                                                                                                                     |

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|                           |                                               |
|---------------------------|-----------------------------------------------|
| DORI (EN62676-4 standard) |                                               |
| Detect (25PPM/ 8PPF)      | Wide: 22.2m(72.74ft) / Tele: 159.9m(524.76ft) |
| Observe (63PPM/ 19PPF)    | Wide: 8.9m(29.09ft) / Tele: 64.0m(209.90ft)   |
| Recognize (125PPM/ 38PPF) | Wide: 4.4m(14.55ft) / Tele: 32.0m(104.95ft)   |
| Identify (250PPM/ 76PPF)  | Wide: 2.2m(7.27ft) / Tele: 16.0m(52.48ft)     |

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## 1.1 Test Voltage & Frequency

Unless indicated otherwise on the individual data sheet or test results, the test voltage and frequency was as indicated below.

- ☒ AC 120 V, 60 Hz (DC Adapter Input Power)
- ☒ AC 120 V, 60 Hz (PoE Adapter Input Power)

## 1.2 Variant Model Differences

Not applicable

## 1.3 Device Modifications

Not applicable

## 1.4 Equipment Under Test

| Description    | Model Number | Serial Number | Manufacturer                                | Remarks |
|----------------|--------------|---------------|---------------------------------------------|---------|
| NETWORK CAMERA | XNV-C6083    | -             | HANWHA VISION<br>VIETNAM COMPANY<br>LIMITED | EUT     |

## 1.5 Support Equipments

| Description      | Model Number     | Serial Number         | Manufacturer                                     | Remarks |
|------------------|------------------|-----------------------|--------------------------------------------------|---------|
| AC/DC Adapter    | FJ-SW1205000     | -                     | Shenzhen Fujia<br>Appliance Co, LTD.             | -       |
| PoE Injector     | PT-PSE109GBRO-AH | PT1850221049          | Dongguan PROCET<br>Network Technology<br>Co.,Ltd | -       |
| Notebook         | LG15N54          | 506NZGK000615         | LG Electronics                                   | -       |
| Notebook Adapter | PA-1650-43(65W)  | OF58U63849302<br>Y609 | LG Electronics                                   | -       |
| Speaker          | BR10000A CUVE    | -                     | BEIJING EDIFIER HI-<br>TECH GROUP.               | -       |
| MIC              | MP1000           | -                     | -                                                | -       |
| ALARM            | PRO-SL           | -                     | SENSOR PRO                                       | -       |
| Button ALARM     | -                | -                     | -                                                | -       |
| Smart Phone      | SHV-E210L        | R33D713KA3F           | Samsung Electronics                              | -       |
| Micro SD Card    | -                | -                     | SanDisk                                          | 16 GB   |

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## 1.6 External I/O Cabling

### ■ DC Mode

| Start                |           | END              |           | Cable Spec. |        |
|----------------------|-----------|------------------|-----------|-------------|--------|
| Description          | I/O Port  | Description      | I/O Port  | Length      | Shield |
| NETWORK CAMERA (EUT) | DC Jack   | AC/DC Adapter    | DC Jack   | 1.4         | U      |
|                      | RJ-45     | Notebook         | RJ-45     | 3.0         | U      |
|                      | ALARM OUT | ALARM            | ALARM IN  | 3.0         | U      |
|                      | ALARM IN  | Button ALARM     | ALARM OUT | 3.0         | U      |
|                      | AUDIO OUT | Speaker          | AUDIO OUT | 1.0         | U      |
|                      | AUDIO IN  | MIC              | AUDIO IN  | 1.1         | U      |
|                      | SLOT      | Micro SD Card    | SLOT      | -           | -      |
| Notebook             | 3.5 mm    | Smart Phone      | 3.5 mm    | 1.0         | U      |
|                      | DC Jack   | Notebook Adapter | DC Jack   | 1.3         | U      |

\* Unshielded=U, Shielded=S

### ■ PoE Mode

| Start                |             | END              |             | Cable Spec. |        |
|----------------------|-------------|------------------|-------------|-------------|--------|
| Description          | I/O Port    | Description      | I/O Port    | Length      | Shield |
| NETWORK CAMERA (EUT) | RJ-45 (PoE) | PoE Injector     | RJ-45 (PoE) | 3.0         | U      |
|                      | ALARM OUT   | ALARM            | Alarm In    | 3.0         | U      |
|                      | ALARM IN    | Button ALARM     | Alarm Out   | 3.0         | U      |
|                      | AUDIO OUT   | Speaker          | AUDIO OUT   | 1.0         | U      |
|                      | AUDIO IN    | MIC              | AUDIO IN    | 2.0         | U      |
|                      | SLOT        | Micro SD Card    | SLOT        | -           | -      |
| Notebook             | 3.5 mm      | Smart Phone      | 3.5 mm      | 1.0         | U      |
|                      | RJ-45 (LAN) | PoE Injector     | RJ-45 (LAN) | 2.0         | U      |
|                      | DC Jack     | Notebook Adapter | DC Jack     | 1.5         | U      |

\* Unshielded=U, Shielded=S



## 1.7 EUT Operating Mode(s)

| Test Mode    | operating                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|--------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| DC, PoE Mode | RJ-45 : Monitoring EUT Using Web Viewer, Ping Test<br>Audio In : After the test, check the normal operation of the MIC through the video on the Micro SD card<br>Audio Out : Verified that the 1 kHz tone played on the smartphone is output normally to the speaker<br>Alarm Out / In : Check normal operation with Alarm and Button Alarm<br>Micro SD Card : After testing, check if the recording is normally done on the Micro SD card |

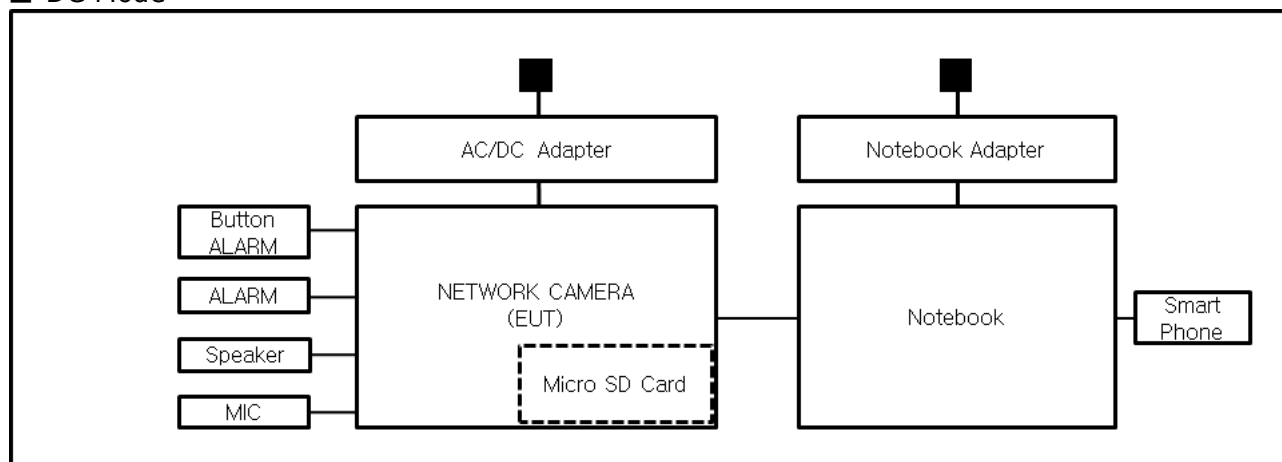
| EUT Test operating S/W |         |                     |
|------------------------|---------|---------------------|
| Name                   | Version | Manufacture Company |
| Web Viewer             | -       | -                   |

## 1.8 Configuration

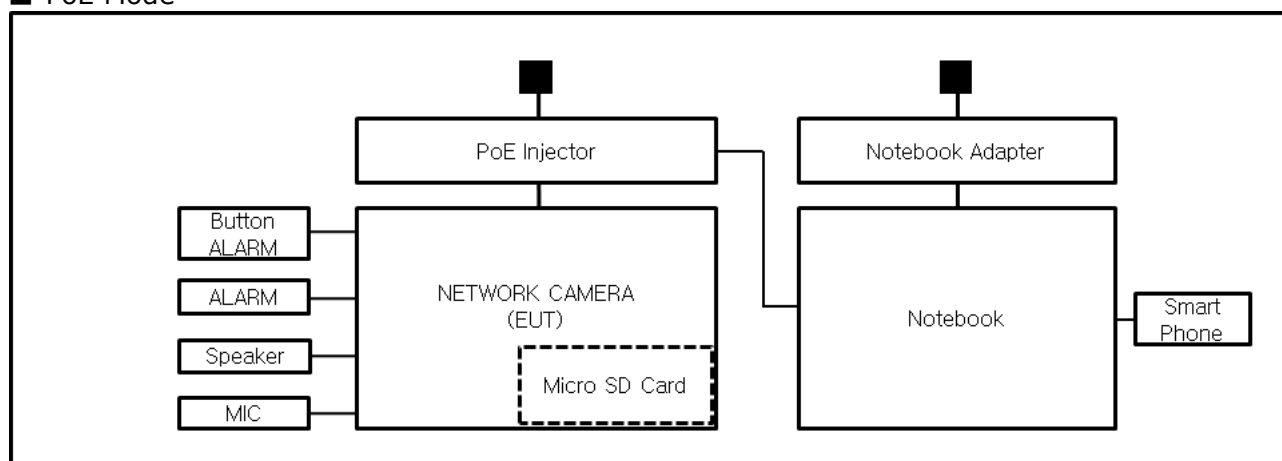
■ AC Main

□ DC Main

### ■ DC Mode



### ■ PoE Mode



## 1.9 Remarks when standards applied

USB port is not used and is excluded from testing.

## 1.10 Calibration Details of Equipment Used for Measurement

Test equipment and test accessories are calibrated on regular basis. The maximum time between calibrations is one year or what is recommended by the manufacturer, whichever is less.

## 1.11 Test Facility

The measurement facility is located at 473-21, Gayeo-ro, Yeosu-si, Gyeonggi-do, 12658, Korea, Republic of. The sites are constructed in conformance with the requirements of ANSI C63.4a-2017 and CISPR 16-1-4:2019

## 1.12 Laboratory Accreditations and Listings

| Country       | Agency  | Scope of Accreditation                                                                                                                  | Logo                                                                                                                           |
|---------------|---------|-----------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------|
| KOREA         | RRA     | EMI (3 m & 10 m Semi-Anechoic Chamber and conducted test site)<br>EMS (ESD, RS, EFT/Burst, Surge, CS, Magnetic, Dips and interruptions) | <br>KR0100                                  |
| International | KOLAS   | EMI (3 m & 10 m Semi-Anechoic Chamber and conducted test site)<br>EMS (ESD, RS, EFT/Burst, Surge, CS, Magnetic, Dips and interruptions) | <br>KT489                                 |
| USA           | FCC     | 3 m & 10 m Semi-Anechoic Chamber<br>Conducted test site to perform FCC Part 15/18 measurements.                                         | <br>KR0100                                |
| Canada        | ISED    | 3 m & 10 m Semi-Anechoic Chamber and Conducted test site                                                                                | <br>23298                                 |
| JAPAN         | VCCI    | EMI (3 m & 10 m Semi-Anechoic Chamber and conducted test site)                                                                          | <br>C-20136, T-20137,<br>R-20181, G-20176 |
| Europe        | TÜV SÜD | EMI (3 m & 10 m Semi-Anechoic Chamber and conducted test site)<br>EMS (ESD, RS, EFT/Burst, Surge, CS, Magnetic, Dips and interruptions) | <br>CARAT 001633 0004                     |



## 2.0 Test Regulations

The emissions tests were performed according to following regulations:

☒ **47 CFR Part 15, Subpart B**

☐ CISPR 22:2009 +A1:2010

☐ Class A

☐ Class B

☒ ANSI C63.4a-2017

☒ Class A

☐ Class B

☒ **IC Regulation ICES-003 Issue 7**

☐ CAN/CSA-CISPR 32:17

☐ Class A

☐ Class B

☒ ANSI C63.4a-2017

☒ Class A

☐ Class B

## 2.1 Conducted Emissions at Mains Power Ports

### Test Date

Jun. 27, 2022

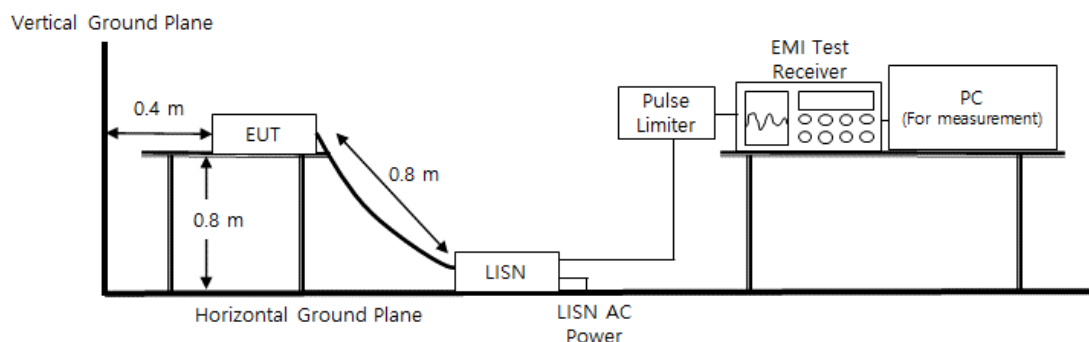
### Test Location

Electro wave Shieldroom #6

### Test Equipment

| Used                                | Description       | Model Number | Manufacturer | Serial Number | Cal. Due     |
|-------------------------------------|-------------------|--------------|--------------|---------------|--------------|
| <input checked="" type="checkbox"/> | EMI Test S/W      | EMC32        | R & S        | 9.12.00       | -            |
| <input checked="" type="checkbox"/> | EMI TEST RECEIVER | ESR3         | R & S        | 101783        | 12, 28, 2022 |
| <input checked="" type="checkbox"/> | LISN              | ENV216       | R & S        | 101787        | 12, 27, 2022 |
| <input checked="" type="checkbox"/> | LISN              | ESH2-Z5      | R & S        | 100450        | 12, 27, 2022 |
| <input checked="" type="checkbox"/> | PULSE LIMITER     | ESH3-Z2      | R & S        | 101915        | 12, 27, 2022 |

### Diagram of test setup





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www.kes.co.kr

Report No.:

KES-EM-22T0574-R1

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### Test Conditions

Temperature: (24,4 ± 0,1) °C

Relative Humidity: (44,3 ± 0,0) % R.H.

### Frequency Range of Measurement

150 kHz to 30 MHz

### Instrument Settings

IF Band Width: 9 kHz

### Test Results

The requirements are:

- ☒ PASS
- ☐ NOT PASS
- ☐ NOT APPLICABLE

### Remarks

See Appendix A for test data.

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## 2.2 Radiated Electric Field Emissions(Below 1 GHz)

### Test Date

Jun. 27, 2022

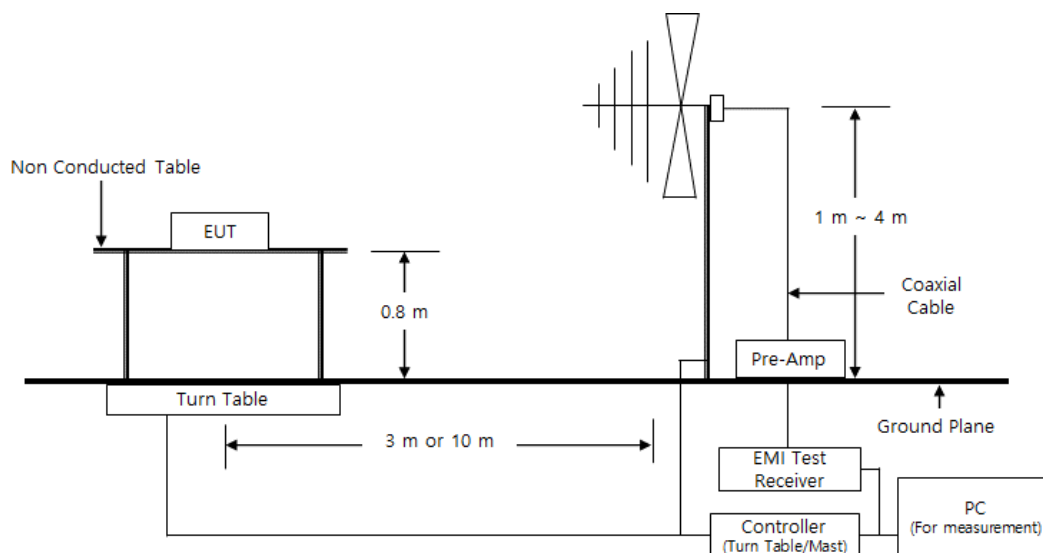
### Test Location

☐ OPEN AREA TEST SITE #2 ☒ SEMI ANECHOIC CHAMBER #4(10m)

### Test Equipment

| Used                                | Description              | Model Number | Manufacturer     | Serial Number | Cal. Due     |
|-------------------------------------|--------------------------|--------------|------------------|---------------|--------------|
| <input checked="" type="checkbox"/> | EMI Test S/W             | EP5/RE       | TOYO Corporation | 6.0.0         | -            |
| <input checked="" type="checkbox"/> | EMI TEST RECEIVER        | ESU26        | R & S            | 100551        | 03, 31, 2023 |
| <input checked="" type="checkbox"/> | AMPLIFIER                | SCU 01       | R & S            | 100603        | 11, 24, 2022 |
| <input checked="" type="checkbox"/> | TRILOG-BROADBAND ANTENNA | VULB9163     | Schwarzbeck      | 715           | 12, 08, 2022 |
| <input checked="" type="checkbox"/> | ATTENUATOR               | 8491A        | HP               | 32173         | 03, 08, 2023 |

### Diagram of test setup





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### Test Conditions

Temperature: (23,9 ± 0,1) °C

Relative Humidity: (44,5 ± 0,1) % R.H.

### Frequency Range of Measurement

30 MHz to 1 GHz

### Instrument Settings

IF Band Width: 120 kHz

### Test Results

The requirements are:

- ☒ PASS
- ☐ NOT PASS
- ☐ NOT APPLICABLE

### Remarks

See Appendix A for test data.

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## 2.3 Radiated Electric Field Emissions(Above 1 GHz)

### Test Date

Jun. 28, 2022

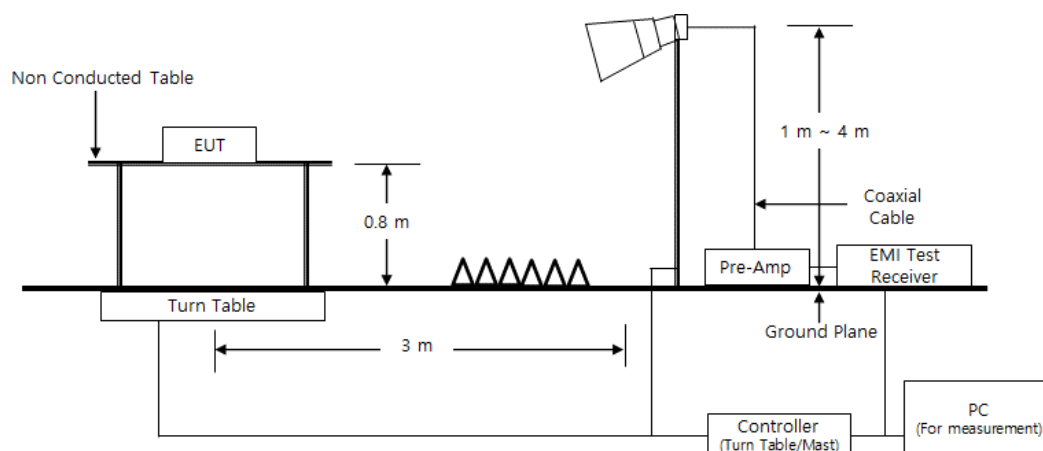
### Test Location

SEMI ANECHOIC CHAMBER #5

### Test Equipment

| Used                                | Description       | Model Number | Manufacturer     | Serial Number | Cal. Due     |
|-------------------------------------|-------------------|--------------|------------------|---------------|--------------|
| <input checked="" type="checkbox"/> | EMI Test S/W      | ES10/RE      | TOYO Corporation | 2022.01.000   | -            |
| <input checked="" type="checkbox"/> | EMI TEST RECEIVER | ESU26        | Rohde & Schwarz  | 100552        | 03, 31, 2023 |
| <input checked="" type="checkbox"/> | HORN ANTENNA      | BBHA 9120D   | SCHWARZBECK      | 9120D-1802    | 12, 16, 2022 |
| <input checked="" type="checkbox"/> | ATTENUATOR        | 8491B        | HP               | 23094         | 04, 21, 2023 |

### Diagram of test setup





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KES-EM-22T0574-R1

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### Test Conditions

Temperature: (24,1 ± 0,2) °C

Relative Humidity: (45,3 ± 0,1) % R.H.

### Frequency Range of Measurement

1 GHz to 5 GHz

### Instrument Settings

IF Band Width: 1 MHz

### Test Results

The requirements are:

☒ PASS

☐ NOT PASS

☐ NOT APPLICABLE

### Remarks

See Appendix A for test data.

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www.kes.co.kr

Report No.:

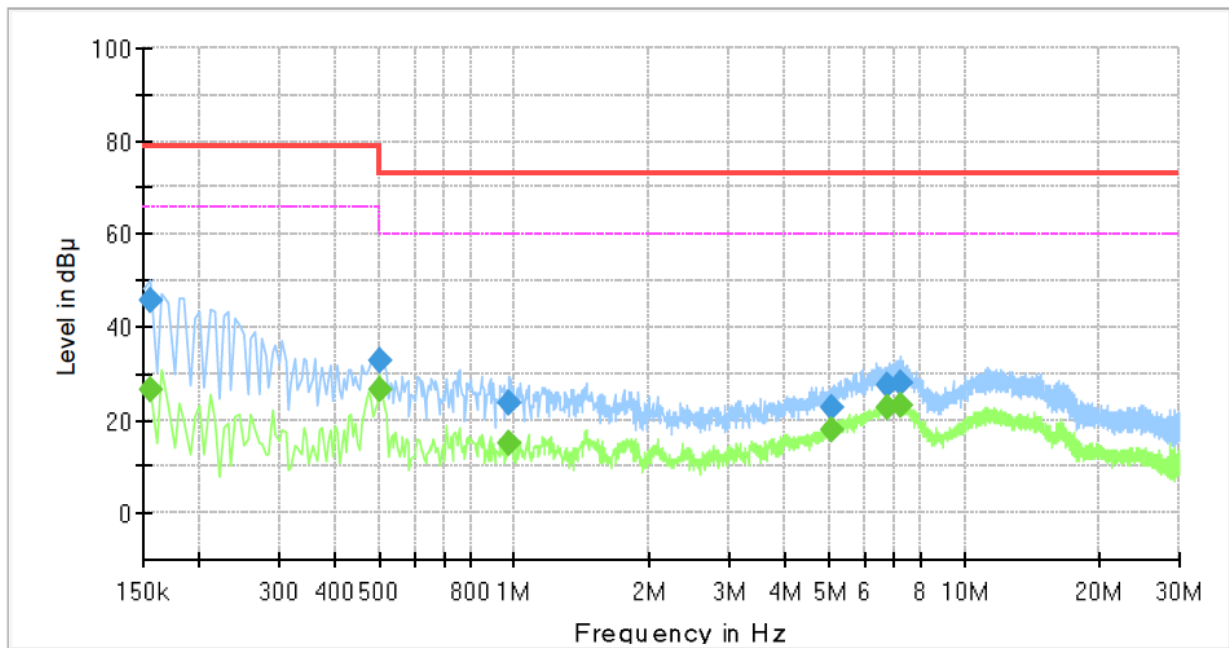
KES-EM-22T0574-R1

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### NEUTRAL LINE

## Common Information

|                   |                    |
|-------------------|--------------------|
| Test Description: | Conducted Emission |
| Model No.:        | XNV-C6083          |
| Phase:            | N                  |
| Mode:             | DC                 |
| Operator Name:    | KES                |



## Final Result

| Frequency (MHz) | QuasiPeak (dBμV) | CAverage (dBμV) | Limit (dBμV) | Margin (dB) | Meas. Time (ms) | Bandwidth (kHz) | Line | Corr. (dB) |
|-----------------|------------------|-----------------|--------------|-------------|-----------------|-----------------|------|------------|
| 0.155000        | ---              | 26.55           | 66.00        | 39.45       | 1000.0          | 9.000           | N    | 19.4       |
| 0.155000        | 45.61            | ---             | 79.00        | 33.39       | 1000.0          | 9.000           | N    | 19.4       |
| 0.500000        | ---              | 26.31           | 66.00        | 39.69       | 1000.0          | 9.000           | N    | 19.7       |
| 0.500000        | 32.83            | ---             | 73.00        | 40.17       | 1000.0          | 9.000           | N    | 19.7       |
| 0.975000        | ---              | 15.20           | 60.00        | 44.80       | 1000.0          | 9.000           | N    | 20.0       |
| 0.975000        | 23.77            | ---             | 73.00        | 49.23       | 1000.0          | 9.000           | N    | 20.0       |
| 5.055000        | ---              | 17.96           | 60.00        | 42.04       | 1000.0          | 9.000           | N    | 19.6       |
| 5.055000        | 22.69            | ---             | 73.00        | 50.31       | 1000.0          | 9.000           | N    | 19.6       |
| 6.770000        | ---              | 22.78           | 60.00        | 37.22       | 1000.0          | 9.000           | N    | 19.5       |
| 6.770000        | 27.54            | ---             | 73.00        | 45.46       | 1000.0          | 9.000           | N    | 19.5       |
| 7.250000        | ---              | 23.12           | 60.00        | 36.88       | 1000.0          | 9.000           | N    | 19.5       |
| 7.250000        | 28.04            | ---             | 73.00        | 44.96       | 1000.0          | 9.000           | N    | 19.5       |

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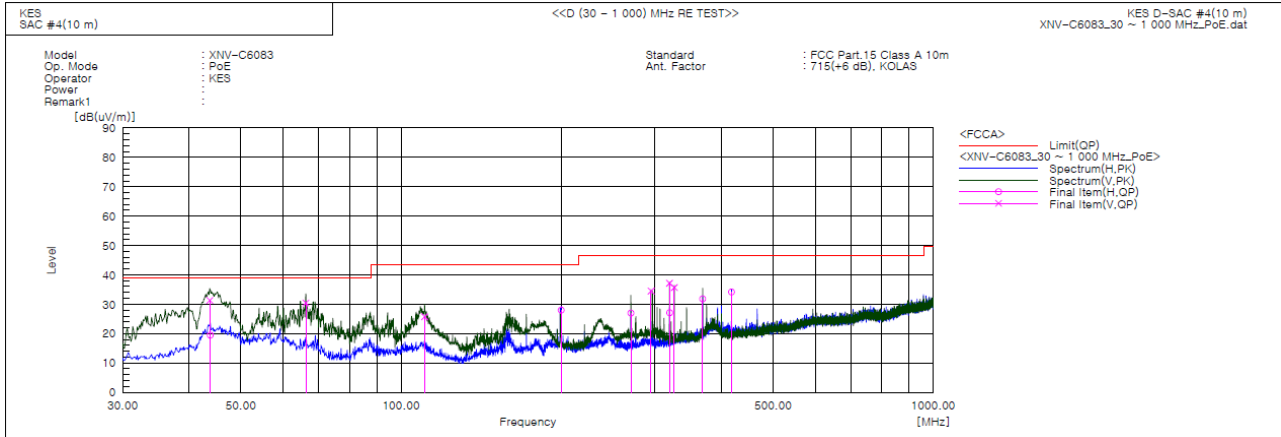








## PoE Mode



## Final Result

| No. | Frequency<br>[MHz] | (P) | Reading<br>QP<br>[dB(uV)] | c.f<br>[dB(1/m)] | Result<br>QP<br>[dB(uV/m)] | Limit<br>QP<br>[dB(uV/m)] | Margin<br>QP<br>[dB] | Height<br>[cm] | Angle<br>[deg] | Remark |
|-----|--------------------|-----|---------------------------|------------------|----------------------------|---------------------------|----------------------|----------------|----------------|--------|
| 1   | 43.701             | V   | 52.9                      | -21.6            | 31.3                       | 39.0                      | 7.7                  | 127.0          | 221.7          |        |
| 2   | 43.823             | H   | 41.1                      | -21.6            | 19.5                       | 39.0                      | 19.5                 | 377.0          | 324.4          |        |
| 3   | 66.254             | V   | 54.0                      | -23.6            | 30.4                       | 39.0                      | 8.6                  | 105.0          | 130.0          |        |
| 4   | 110.753            | V   | 48.2                      | -22.4            | 25.8                       | 43.5                      | 17.7                 | 144.0          | 203.9          |        |
| 5   | 199.871            | H   | 49.0                      | -21.0            | 28.0                       | 43.5                      | 15.5                 | 382.0          | 117.8          |        |
| 6   | 270.318            | H   | 45.8                      | -18.8            | 27.0                       | 46.5                      | 19.5                 | 395.0          | 99.9           |        |
| 7   | 294.931            | V   | 52.7                      | -18.2            | 34.5                       | 46.5                      | 12.0                 | 140.0          | 179.0          |        |
| 8   | 319.424            | V   | 54.0                      | -16.8            | 37.2                       | 46.5                      | 9.3                  | 133.0          | 8.7            |        |
| 9   | 319.545            | H   | 43.9                      | -16.8            | 27.1                       | 46.5                      | 19.4                 | 394.0          | 269.1          |        |
| 10  | 326.214            | V   | 52.1                      | -16.4            | 35.7                       | 46.5                      | 10.8                 | 116.0          | 161.2          |        |
| 11  | 368.651            | H   | 46.7                      | -14.9            | 31.8                       | 46.5                      | 14.7                 | 368.0          | 305.8          |        |
| 12  | 417.758            | H   | 48.0                      | -13.8            | 34.2                       | 46.5                      | 12.3                 | 352.0          | 159.2          |        |









## Test Setup Photos and Configuration

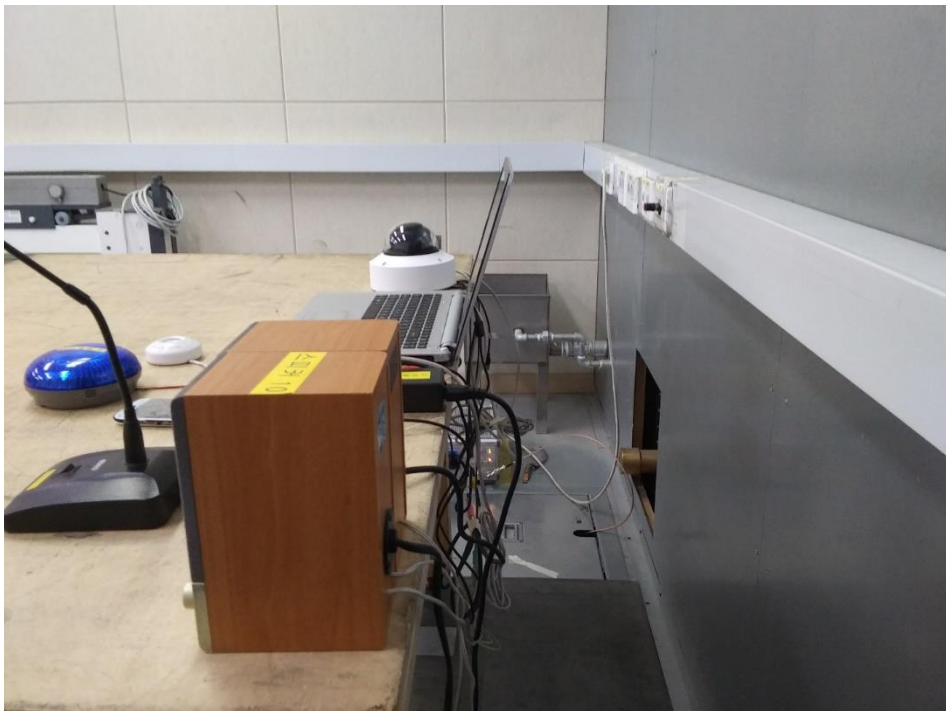
### Conducted Emissions at Mains Power Ports

#### ■ DC Mode



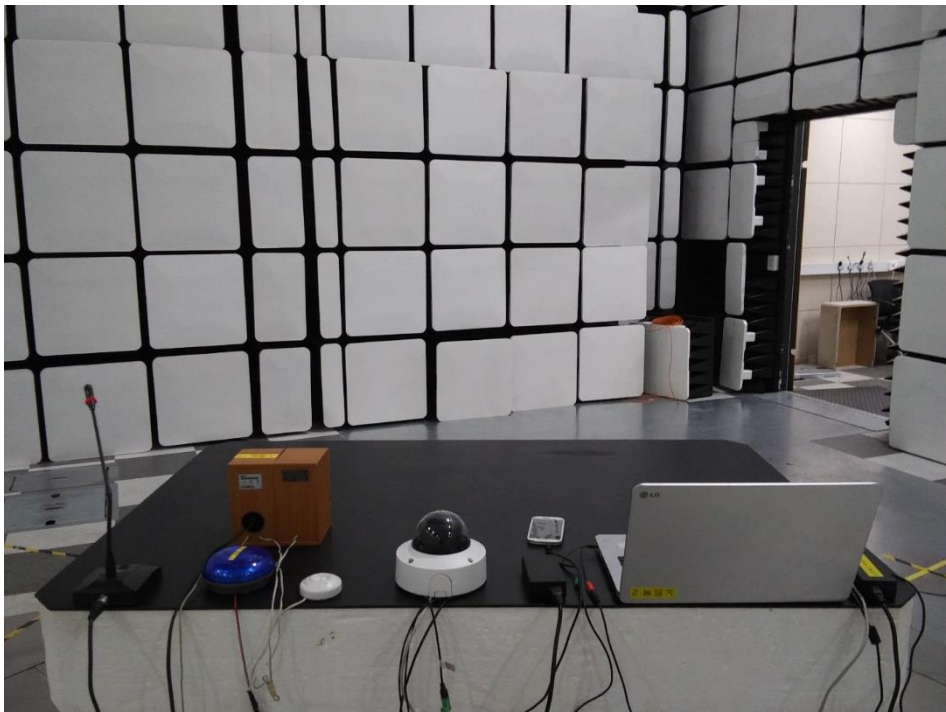
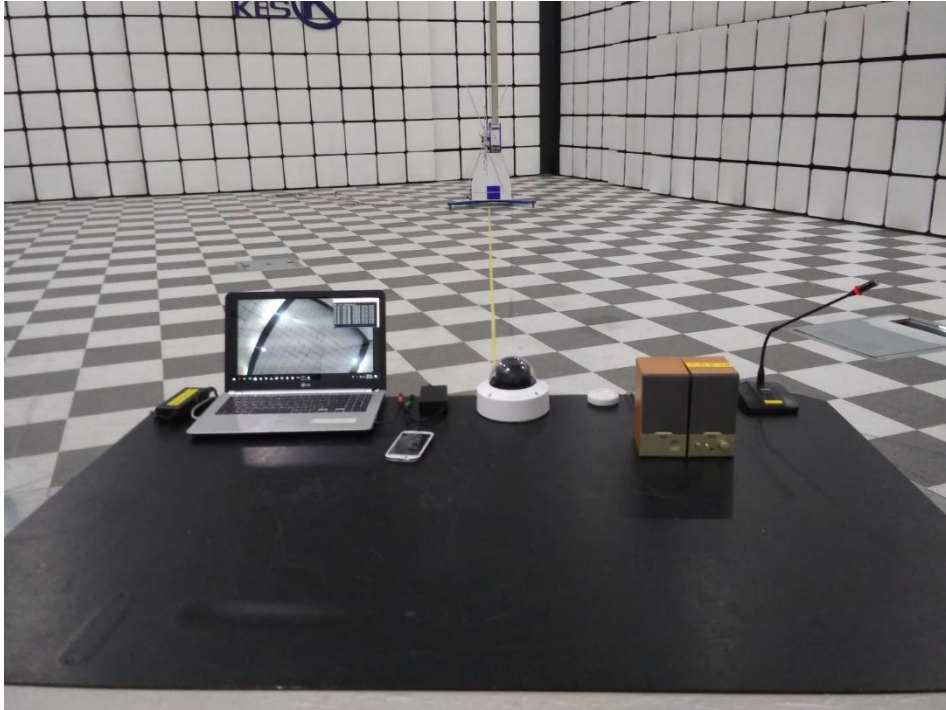
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## ■ PoE Mode



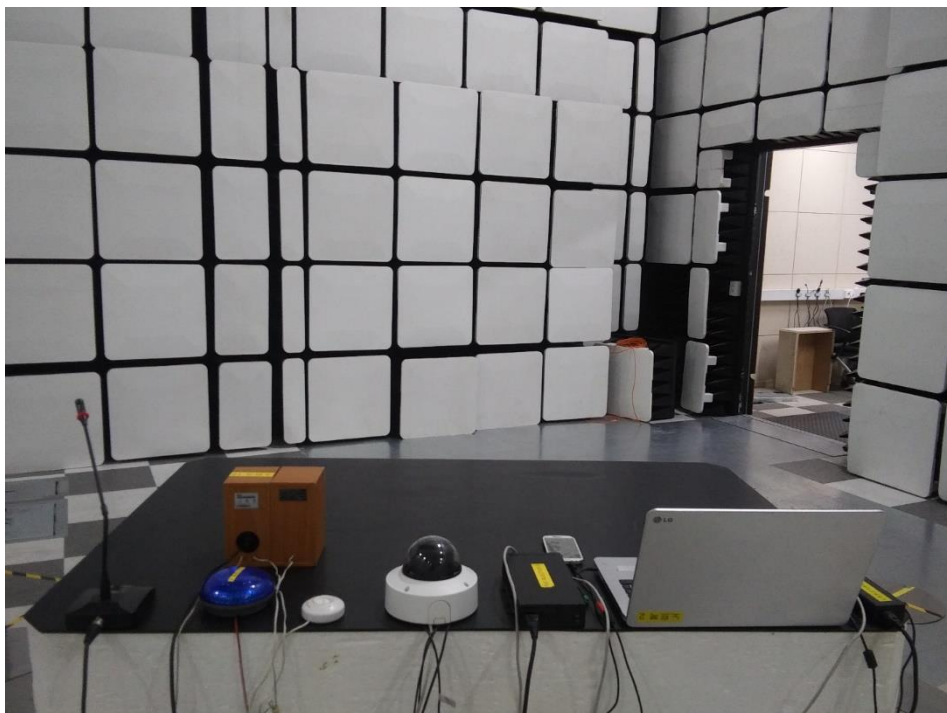
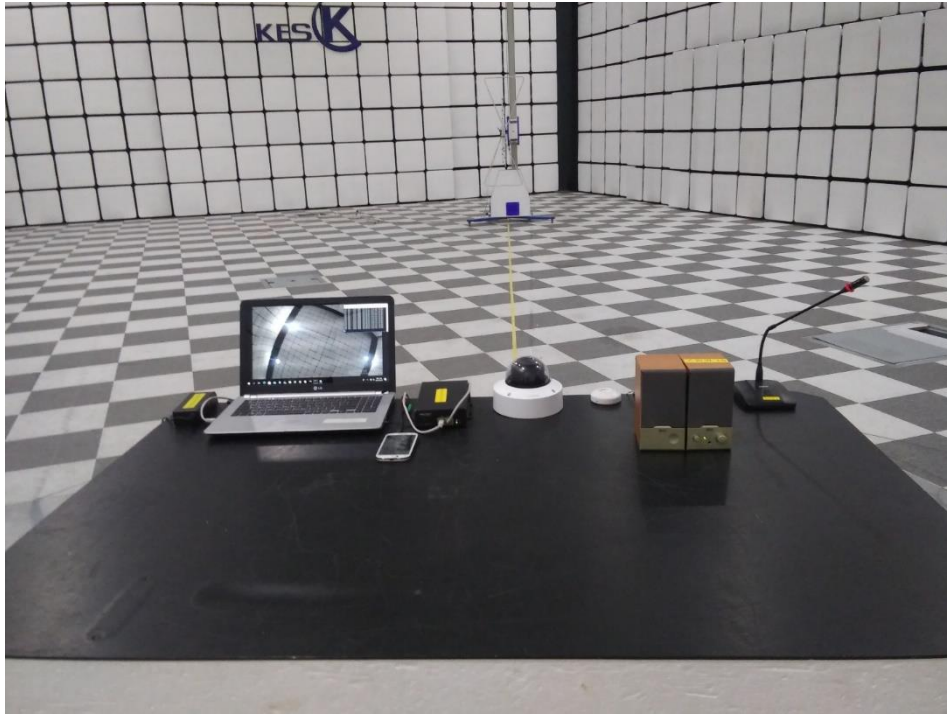
## Radiated Electric Field Emissions(Below 1 GHz)

### ■ DC Mode



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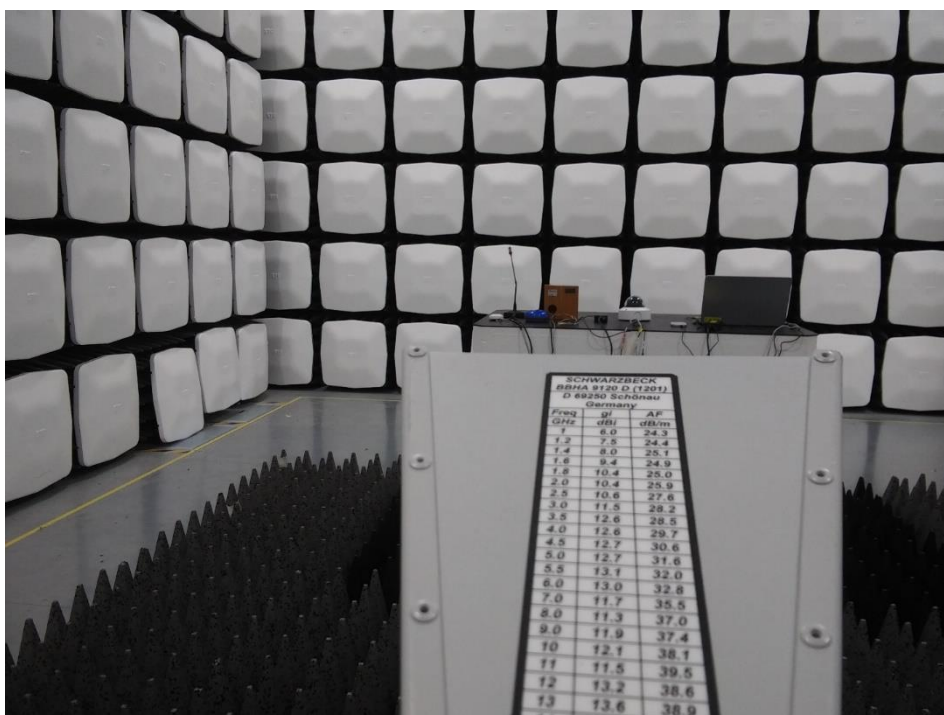
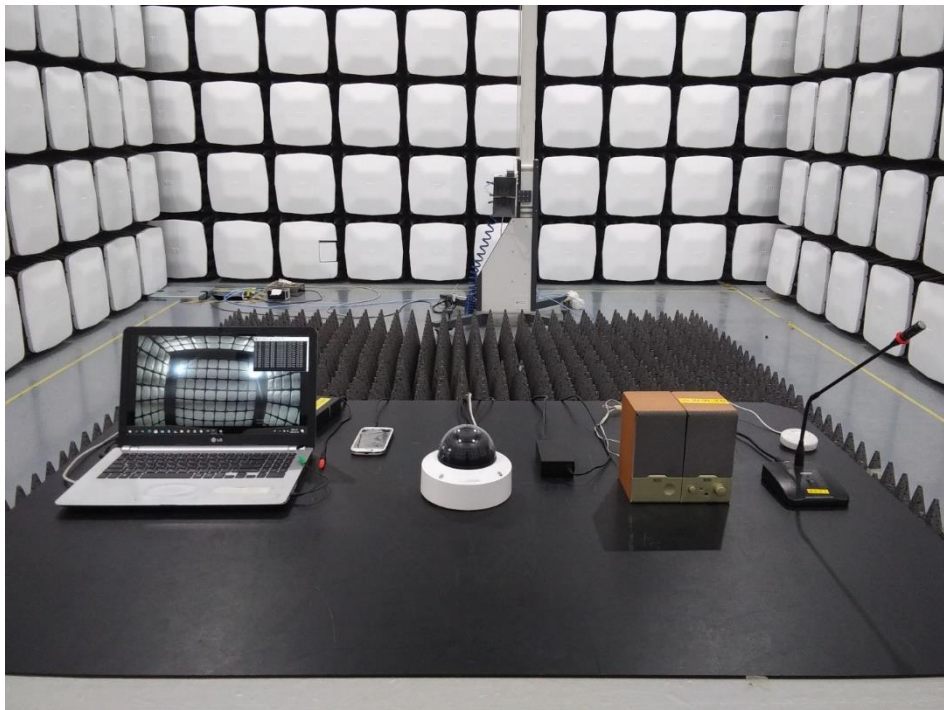
## ■ PoE Mode



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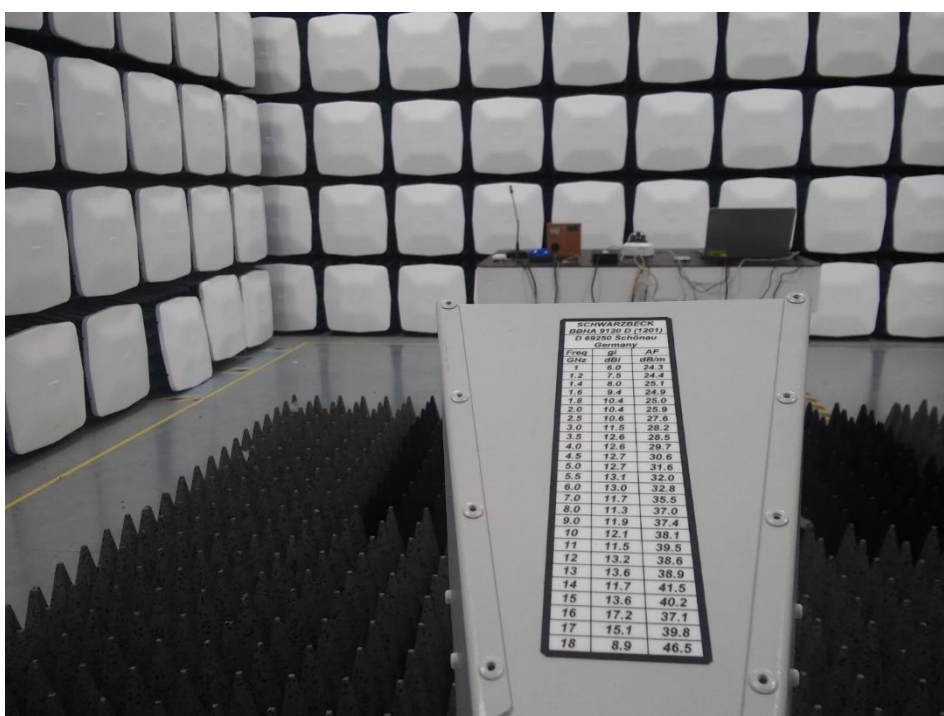
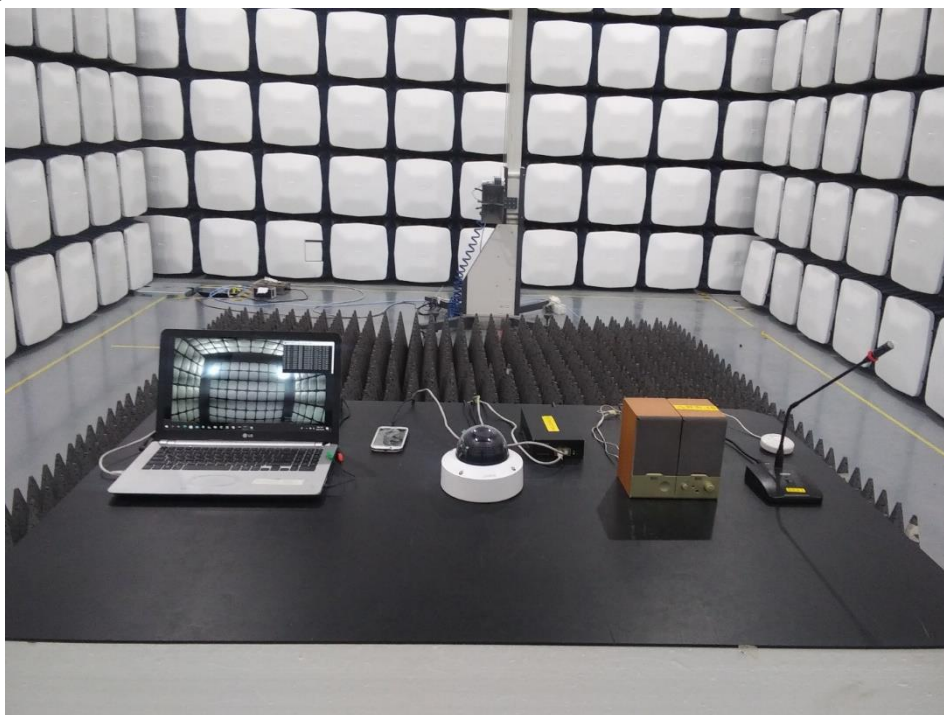
## Radiated Electric Field Emissions(Above 1 GHz)

### ■ DC Mode



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# PoE Mode



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## **EUT External Photographs**

(Top)



(Bottom)



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## **EUT Internal Photographs**

(Internal View)



## EUT Internal View – Board 1

(Top)



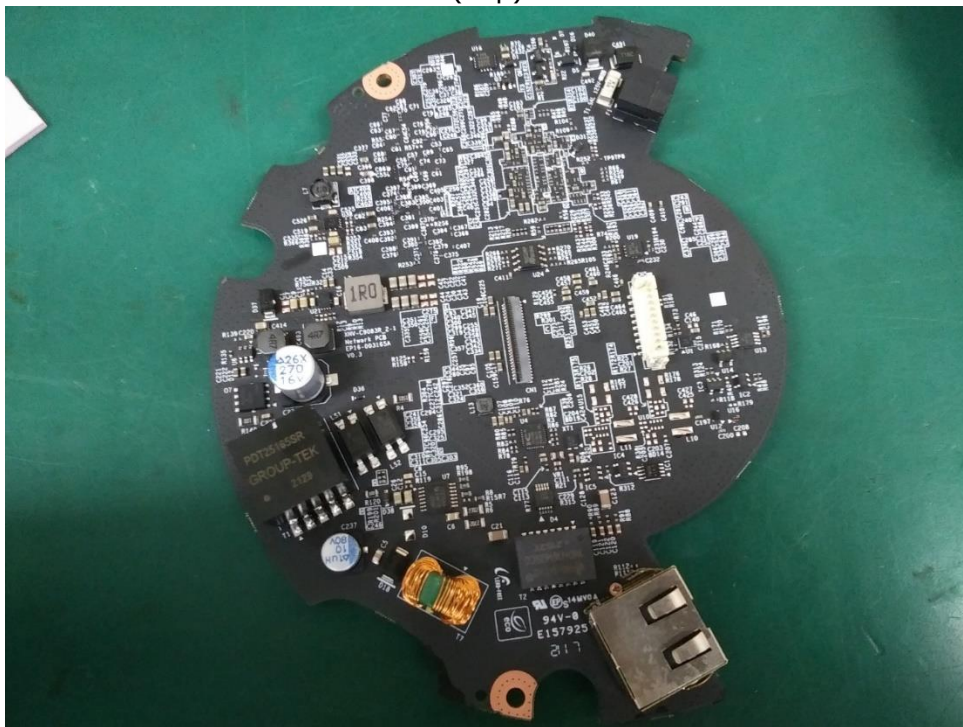
(Bottom)



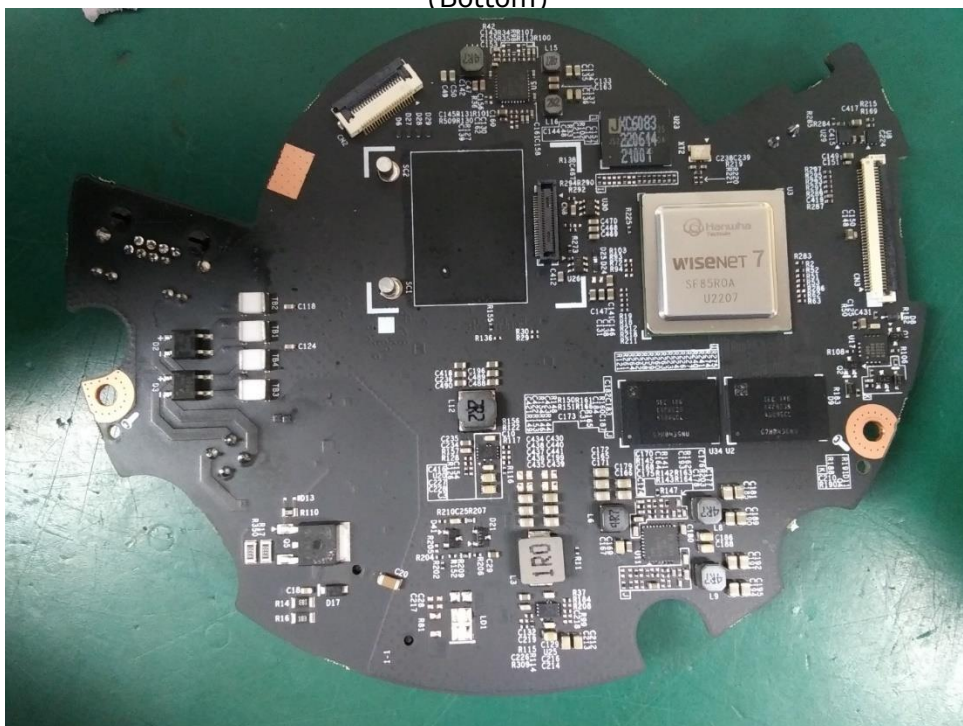
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## EUT Internal View – Board 2

(Top)



(Bottom)



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## EUT Internal View – Board 3

(Top)



(Bottom)



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## EUT Internal View – Board 4

(Top)



(Bottom)

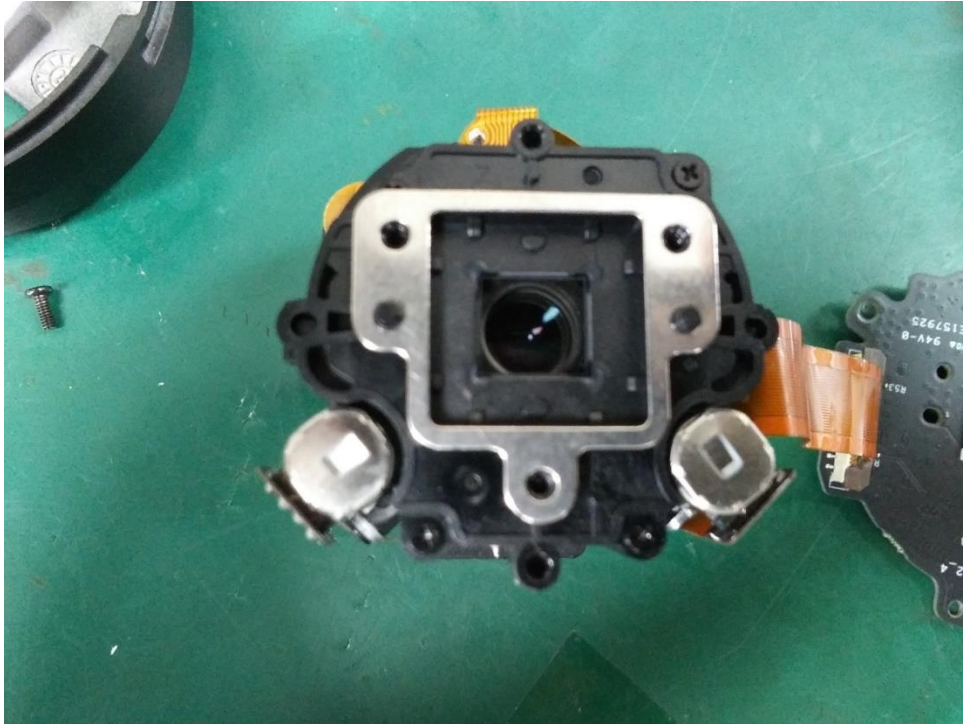


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## EUT Internal View – Lens

(Top)



(Bottom)



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---

## Label Photographs

### FCC Label



HANWHA VISION VIETNAM COMPANY LIMITED

XNV-C6083

### IC Label

## CAN ICES-003(A) / NMB-003(A)

This device complies with Industry Canada license-exempt RSS standard(s). Operation is subject to the following two conditions:  
(1) this device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation of the device.

Le présent appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes :

(1) l'appareil ne doit pas produire de brouillage, et (2) l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.