

Test Report

Product Name : Network Camera

Model No. : MD8565-N

Applicant : VIVOTEK INC.

Address : 6F, No.192, Lien-Cheng Rd., Chung-Ho , New Taipei City,
235, Taiwan, R.O.C.

Date of Receipt : 2017/01/17

Issued Date : 2017/03/01

Report No. : 1710390R-ITCEP26V00

Report Version : V1.0

The test results relate only to the samples tested.

The test results shown in the test report are traceable to the national/international standard through the calibration of the equipment and evaluated measurement uncertainty herein.

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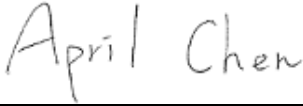
Test Report

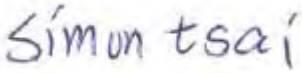
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Product Name : Network Camera
Applicant : VIVOTEK INC.
Address : 6F, No.192, Lien-Cheng Rd., Chung-Ho , New Taipei City,
235, Taiwan, R.O.C.
Manufacturer : VIVOTEK INC.
Model No. : MD8565-N
EUT Rated Voltage : DC 12V, By PoE
EUT Test Voltage : AC 230V/50Hz, By PoE
Trade Name : VIVOTEK
Applicable Standard : EN 50155: 2007, for EMC, Electric service condition and
Environmental test
EN 50121-3-2: 2015 for EMC test
EN 60068-2-1: 2007 for Environmental test
EN 60068-2-2: 2007 for Environmental test
EN 61373:1999 for Environmental test
Test Result : Complied
Performed Location : DEKRA Testing and Certification Co., Ltd.
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1 General Information

1.1 EUT Description

Product Name	Network Camera
Trade Name	VIVOTEK
Model No.	MD8565-N

1.2 Mode of Operation

DEKRA has verified the construction and function in typical operation. All the test modes were carried out with the EUT in normal operation, which was shown in this test report and defined as:

Pre-Test Mode	
Mode 1: DC 12V Mode 2: PoE	
Final Test Mode	
Conducted Emission	Mode 1: DC 12V
Impedance Stabilization Network	Mode 1: DC 12V
Radiated Emission	Mode 2: PoE
Immunity	Mode 1: DC 12V Mode 2: PoE

Note:

According to pre-test data, we choose the worst case mode 1,2 as the final and full testing.

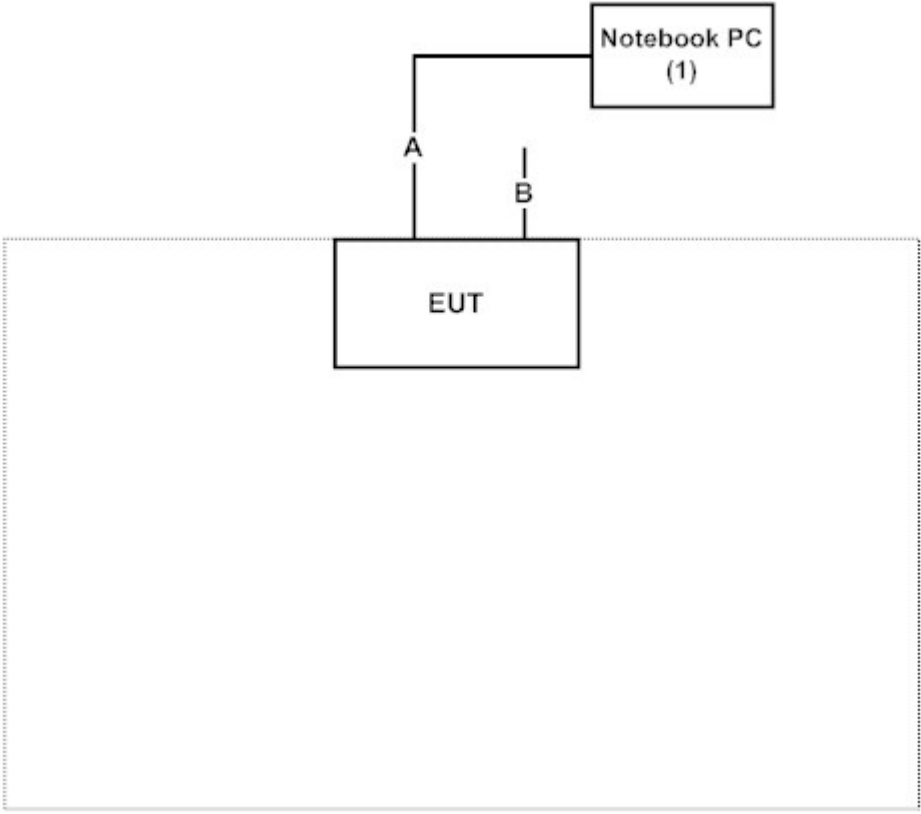
1.3 Tested System Details

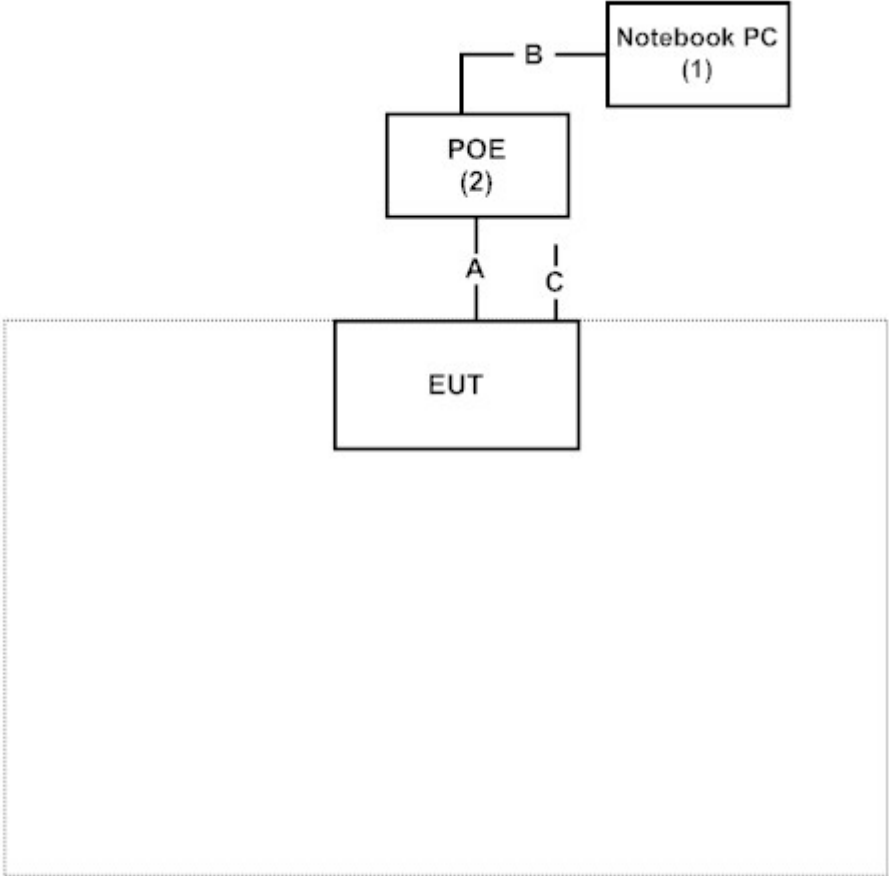
The types for all equipments, plus descriptions of all cables used in the tested system (including inserted cards) are:

Test Mode		Mode 1			
Product		Manufacturer	Model No.	Serial No.	Power Cord
1	Notebook PC	DELL	E5530	24QPXW1	Non-Shielded, 0.8m

Test Mode		Mode 2			
Product		Manufacturer	Model No.	Serial No.	Power Cord
1	Notebook PC	DELL	E5530	24QPXW1	Non-Shielded, 0.8m
2	POE	N/A	N/A	N/A	N/A

1.4 Configuration of Tested System

Test Mode		Mode 1
Connection Diagram		
		
Signal Cable Type		Signal cable Description
A	M12 to LAN Cable	Non-Shielded, 0.6m
B	Signal Cable	Non-Shielded, 0.5m, with one ferrite core bonded.

Test Mode		Mode 2
Connection Diagram		
		
Signal Cable Type		Signal cable Description
A	M12 to LAN Cable	Non-Shielded, 0.6m
B	LAN Cable	Non-Shielded, 7m
C	Signal Cable	Non-Shielded, 0.5m, with one ferrite core bonded.

1.5 EUT Exercise Software

1	Setup the EUT and simulators as shown on 1.4.
2	Turn on the power of all equipment.
3	The EUT will start to operate and display the video figure from the signal source.
4	The EUT will display “video figure” on monitor.
5	SD card works while the EUT is recording.
6	Repeat the above procedure (3) to (5).

2 Technical Test

2.1 Summary of Test Result

Report Clause	Test	EN 50155 Reference Clause	Reference Standard	Result
3.	Visual inspection	12.2.1	—	Pass
4.	Electrical services conditions			
4.1	Variations of voltage supply (Performance test)	12.2.2 a) 5.1.1.1	—	—
4.2	Interruptions of voltage supply (Performance test)	12.2.2 b) 5.1.1.2	—	—
4.3	Supply change over (Performance test)	12.2.2 5.1.3	—	—
4.4.	Supply overvoltages	12.2.6	—	—
5.	Insulation test	12.2.9	—	Pass
6.	Electromagnetic compatibility test			
6.1	Conducted Emission	12.2.8.2	EN 50121-3-2 EN 55011	Pass
6.2	Radiated Emission	12.2.8.2	EN 50121-3-2 EN 55011	Pass
6.3	Electrostatic Discharge	12.2.7.2	EN 50121-3-2 EN 61000-4-2	Pass
6.4	Radiated Susceptibility	12.2.8.1	EN 50121-3-2 EN 61000-4-3	Pass
6.5	Transient Burst Susceptibility	12.2.7.3	EN 50121-3-2 EN 61000-4-4	Pass
6.6	Surge	12.2.7.1	EN 50121-3-2 EN 61000-4-5	Pass
6.7	Conducted Susceptibility	12.2.8.1	EN 50121-3-2 EN 61000-4-6	Pass
8.Environmental Tests				
Appendix A	Product Environmental Test Report	--	--	Pass

2.2 List of Test Equipment

Conducted Emission / SR8

Instrument	Manufacturer	Type No.	Serial No	Cal. Date
EMI Test Receiver	R&S	ESCS 30	100369	2016/10/13
LISN	R&S	ESH3-Z5	836679/017	2017/01/18
LISN	R&S	ENV216	100097	2017/01/18
Coaxial Cable	QTK(Arnist)	RG 400	LC018-RG	2016/06/23

Radiated Emission / Site 7

Instrument	Manufacturer	Type No.	Serial No	Cal. Date
Bilog Antenna	Schaffner Chase	CBL6112B	2930	2016/08/17
EMI Test Receiver	R&S	ESR7	1316.3003K07-1 0145	2016/02/02
Coaxial Cable	QTK(Arnist)	RG 214	LC007-RG	2016/06/20
Pre-Amplifier	QTK	AP/0100A	CHM/1009094	2016/06/20
Site7 NSA	QTK	N/A	N/A	2016/06/20

Electrostatic Discharge / SR6

Instrument	Manufacturer	Type No.	Serial No	Cal. Date
ESD Simulator System	Noiseken	ESS-B3011	ESS1233479	2016/02/25
ESD GUN	Noiseken	GT-30R	ESS1233499	2016/02/25
Horizontal Coupling Plane(HCP)	QuieTek	HCP AL50	N/A	N/A
Vertical Coupling Plane(VCP)	QuieTek	VCP AL50	N/A	N/A

Radiated susceptibility / CB9

Instrument	Manufacturer	Type No.	Serial No	Cal. Date
Signal Generator	Keysight	N5171B	MY53051650	2015/11/15
Power Meter	Keysight	N1912A	MY55480006	2015/11/28
Stacked double Log.-Per.-Broadband Antenna	SCHWARZBECK	STLP 9129	9129 011	N/A
Power Amplifier	MILMEGA	80RF1000-300	1071481	N/A
Power Amplifier	MILMEGA	AS0860B-50/50	1071482	N/A

Electrical fast transient/burst / SR6

Instrument	Manufacturer	Type No.	Serial No	Cal. Date
EMS TEST System	TESEQ	NSG 3060	1685	2016/06/29

Surge / SR6

Instrument	Manufacturer	Type No.	Serial No	Cal. Date
EMS TEST System	TESEQ	NSG 3060	1685	2016/06/29

Conducted susceptibility / SR6

Instrument	Manufacturer	Type No.	Serial No	Cal. Date
TESEQ RF-Generator	TESEQ	NSG 4070B-30	37490	2017/01/26

2.3 Measurement Uncertainty

Conducted Emission

The measurement uncertainty is evaluated as ± 2.26 dB.

Radiated Emission

The measurement uncertainty is evaluated as ± 3.19 dB.

Electrostatic Discharge

As what is concluded in the document from Note2 of clause 5.4.6.2 of ISO/IEC 17025, the requirements for measurement uncertainty in ESD testing are deemed to have been satisfied, and the testing is reported in accordance with the relevant ESD standards. The immunity test signal from the ESD system meet the required specifications in IEC 61000-4-2 through the calibration report with the calibrated uncertainty for the waveform of current and timing as being 2.5 % and 6%.

Radiated susceptibility

As what is concluded in the document from Note2 of clause 5.4.6.2 of ISO/IEC 17025, the requirements for measurement uncertainty in RS testing are deemed to have been satisfied, and the testing is reported in accordance with the relevant RS standards. The immunity test signal from the RS system meet the required specifications in IEC 61000-4-3 through the calibration for the uniform field strength and monitoring for the test level with the uncertainty evaluation report for the electrical field strength as being 3.57 dB.

Electrical fast transient/burst

As what is concluded in the document from Note2 of clause 5.4.6.2 of ISO/IEC 17025, the requirements for measurement uncertainty in EFT/Burst testing are deemed to have been satisfied, and the testing is reported in accordance with the relevant EFT/Burst standards. The immunity test signal from the EFT/Burst system meet the required specifications in IEC 61000-4-4 through the calibration report with the calibrated uncertainty for the waveform of voltage and timing as being 8.4 % and 4.7%.

Surge

As what is concluded in the document from Note2 of clause 5.4.6.2 of ISO/IEC 17025, the requirements for measurement uncertainty in Surge testing are deemed to have been satisfied, and the testing is reported in accordance with the relevant Surge standards. The immunity test signal from the Surge system meet the required specifications in IEC 61000-4-5 through the calibration report with the calibrated uncertainty for the waveform of voltage and timing as being 4.1 % and 3.9%.

Conducted susceptibility

As what is concluded in the document from Note2 of clause 5.4.6.2 of ISO/IEC 17025, the requirements for measurement uncertainty in CS testing are deemed to have been satisfied, and the testing is reported in accordance with the relevant CS standards. The immunity test signal from the CS system meet the required specifications in IEC 61000-4-6 through the calibration for unmodulated signal and monitoring for the test level with the uncertainty evaluation report for the injected modulated signal level through CDN and EM Clamp/Direct Injection as being 2.0 dB and 2.61 dB.

2.4 Test Environment

Performed Item	Items	Required	Actual
Conducted Emission	Temperature (°C)	15-35	20
	Humidity (%RH)	25-75	51
	Barometric pressure (mbar)	860-1060	950-1000
Radiated Emission	Temperature (°C)	15-35	19.4
	Humidity (%RH)	25-75	50
	Barometric pressure (mbar)	860-1060	950-1000
Electrostatic Discharge	Temperature (°C)	15-35	22
	Humidity (%RH)	30-60	42
	Barometric pressure (mbar)	860-1060	900-1000
Radiated susceptibility	Temperature (°C)	15-35	22
	Humidity (%RH)	25-75	52
	Barometric pressure (mbar)	860-1060	950-1000
Electrical fast transient/burst	Temperature (°C)	15-35	22
	Humidity (%RH)	25-75	57
	Barometric pressure (mbar)	860-1060	950-1000
Surge	Temperature (°C)	15-35	22
	Humidity (%RH)	10-75	53
	Barometric pressure (mbar)	860-1060	950-1000
Conducted susceptibility	Temperature (°C)	15-35	22
	Humidity (%RH)	25-75	52
	Barometric pressure (mbar)	860-1060	950-1000

3 Visual Inspection

Inspection Requirement

The visual inspection shall be carried out to ensure that the equipment is of sound construction and meets its specified requirements.

Inspection Procedures

Reference to EN 50155 Clause 12.2.1

Inspection Result

Pass.

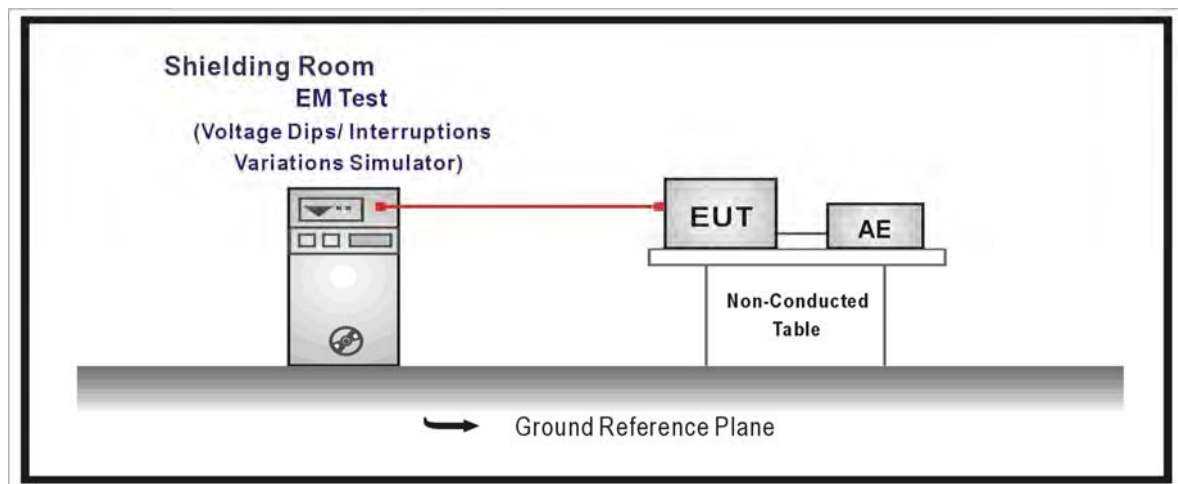
4 Electrical service conditions

4.1. Variations of Voltage Supply

Test Specification

According to EN 50155 clause 5.

Test Setup



Limit

Item	Variation of Voltage Supply	Test Specification
Minimum voltage		0.7 Un
Nominal voltage		Un
Rated voltage		1.15 Un
Maximum voltage:		1.25 Un

Test acceptance requirements:

- No failure shall occur.

Test Procedure

Reference to EN 50155 clause 12.2.2

Deviation from Test Standard

No deviation.

Test Result

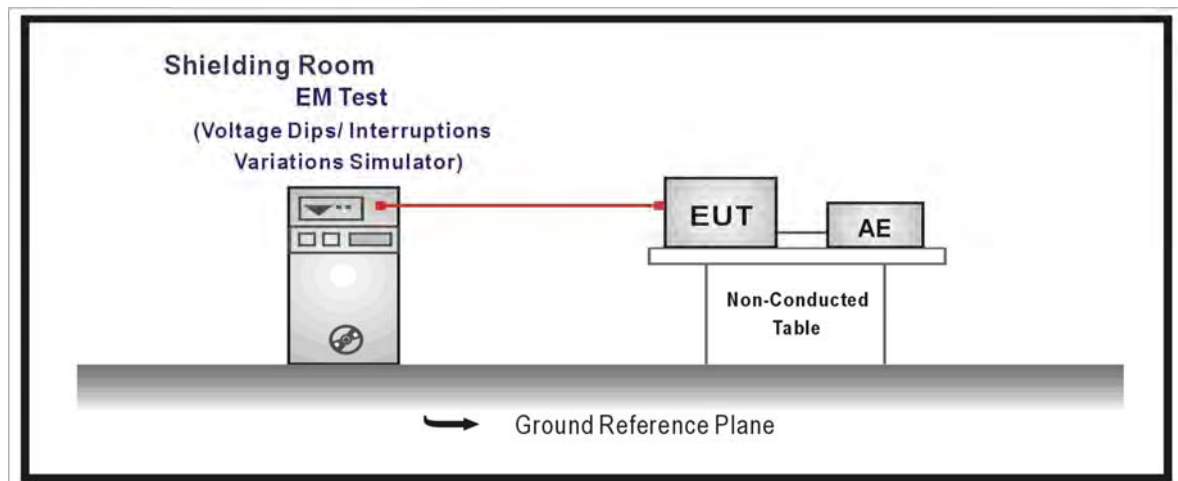
Owing to the AC operation of EUT, this test item is not performed.

4.2. Interruption of Voltage Supply

Test Specification

According to EN 50155 Clause 5.

Test Setup



Limit

Item	Interruption of Voltage Supply	Performance Criteria
	No interruptions	Class S1
	10 ms interruptions	Class S2

Test acceptance requirements:

- Class S1: no interruptions
- Class S2: 10 ms interruptions

The equipment shall continue to function and indicate correctly without intervention or need for resetting by the operator.

Test Procedure

Reference to EN 50155 clause 12.2.2

Deviation from Test Standard

No deviation.

Test Result

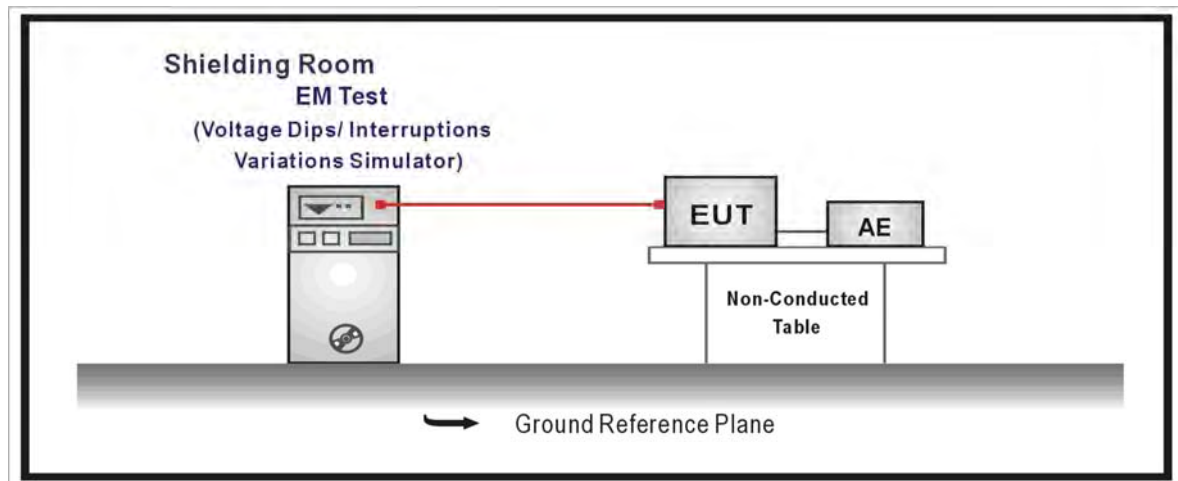
Owing to the AC operation of EUT, this test item is not performed.

4.3. Supply Change Over

Test Specification

According to EN 50155 Clause 5.

Test Setup



Limit

Item	Supply Change Over	Units	Test Specification	Performance Criteria
	Voltage Reduction	% Reduction Period	40% 100 ms	Class C1
	Voltage Interruptions	% Reduction Period	100% 30ms	Class C2

Test acceptance requirements:

- no failure shall occur

Test Procedure

Reference to EN 50155 clause 5.

Deviation from Test Standard

No deviation.

Test Result

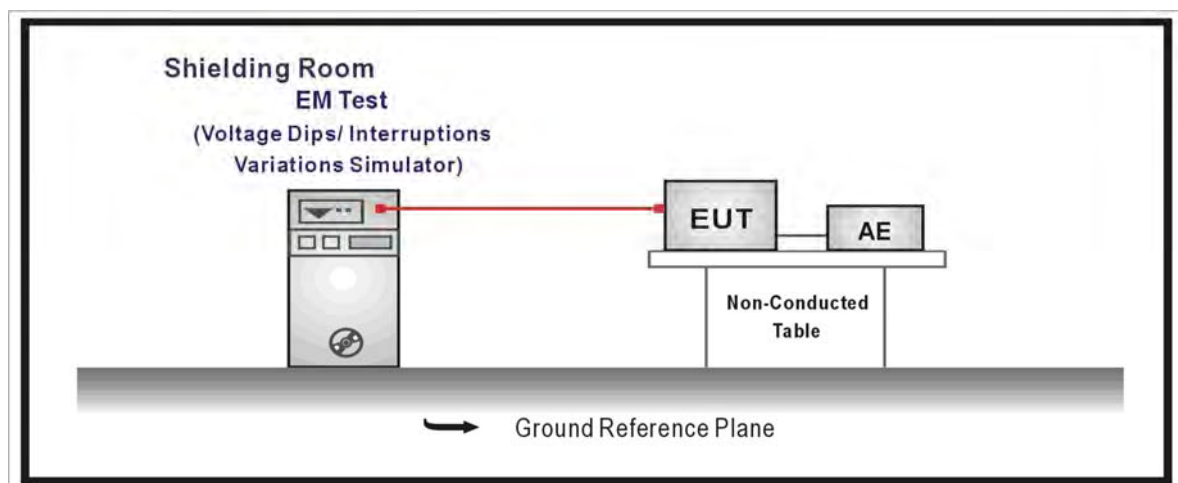
Owing to the AC operation of EUT, this test item is not performed.

4.4. Supply Overvoltages

Test Specification

According to EN 50155 Clause 5.

Test Setup



Limit

Item	Supply Overvoltages	Units	Test Specification
Voltage level minimum		V	1.4 Un
Duration d (maximum)		Second	0.1
Duration D (maximum)		Second	1.0
Series resistor RS		Ω	1

Test acceptance requirements:

- no failure shall occur

Test Procedure

Reference to EN 50155 clause 12.2.6

Deviation from Test Standard

No deviation.

Test Result

Owing to the AC operation of EUT, this test item is not performed.

5 Insulation test

Test Instrument

Conducted Emission / SR1

Instrument	Manufacturer	Type No.	Serial No	Cal. Date	Due Date
Dielectric Analyzer	EXTECH	7410	1270708	2016/6/3	2017/6/2

Test requirement

Insulation measurement test

The insulation resistance test shall be carried out at 500 V d.c. and the values recorded.

The test shall then be repeated after the voltage withstand test

Test acceptance requirements:

There shall be no fundamental deterioration from the initial measurement.

Voltage withstand test

- 500 V for nominal battery voltages below 72 V (or 50 volts a.c.)
- 1000 V for nominal battery voltages from 72 V up to 125 V, (or from 50 to 90 V a.c.), and
- 1500 V for nominal battery voltages above 125 V and up to 315 V, (or from 90 to 225 V a.c.)

Test acceptance requirements:

Neither disruptive discharge nor flashover shall occur.

Test Procedure

According to EN 50155 clause 12.2.9

Test Results

Insulation measurement test before voltage withstand test: 500VDC

Test Item	Resistance	Result
Chassis to I/O port	9999MΩ	Pass
Chassis to LAN port	9999MΩ	Pass
Supplementary information:		

Voltage withstand test: 500Vac

Test was performed after initial insulation measurement

Test Item	Current	Result
Chassis to I/O port	0.0μA	Pass
Chassis to LAN port	0.0μA	Pass
Supplementary information:		

Insulation measurement test after voltage withstand test: 500VDC

Test Item	Resistance	Result
Chassis to I/O port	9999MΩ	Pass
Chassis to LAN port	9999MΩ	Pass
Supplementary information:		

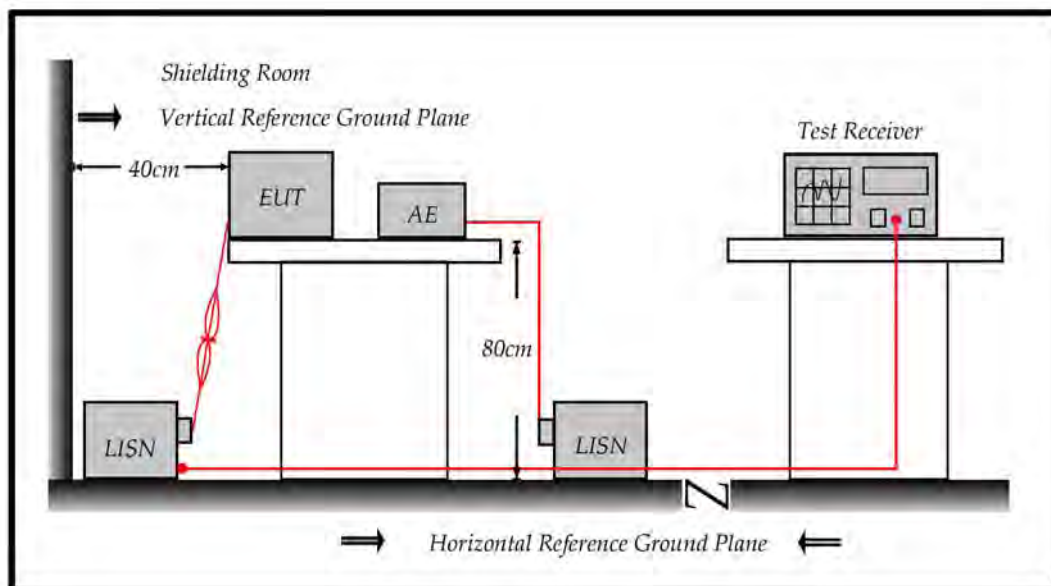
6 Electromagnetic Compatibility test

6.1. Radio frequency interference emission test(Conducted emission) Main Terminals

Test Specification

According to EN 50121-3-2 standard .

Test Setup



Limit

Limits	
Frequency (MHz)	QP (dB μ V)
0.15 - 0.50	99
0.50 - 30	93

Remarks: In the above table, the tighter limit applies at the band edges.

Test Procedure

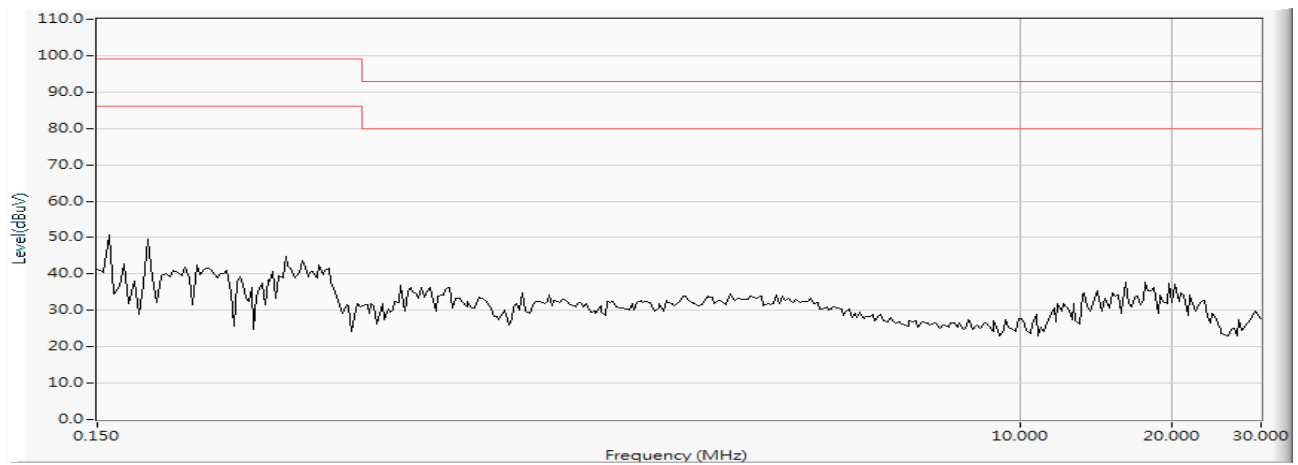
According to CISPR 16-2-1 Clause 7.4.1 and CISPR 16-1-2 Clause 4.3

Deviation from Test Standard

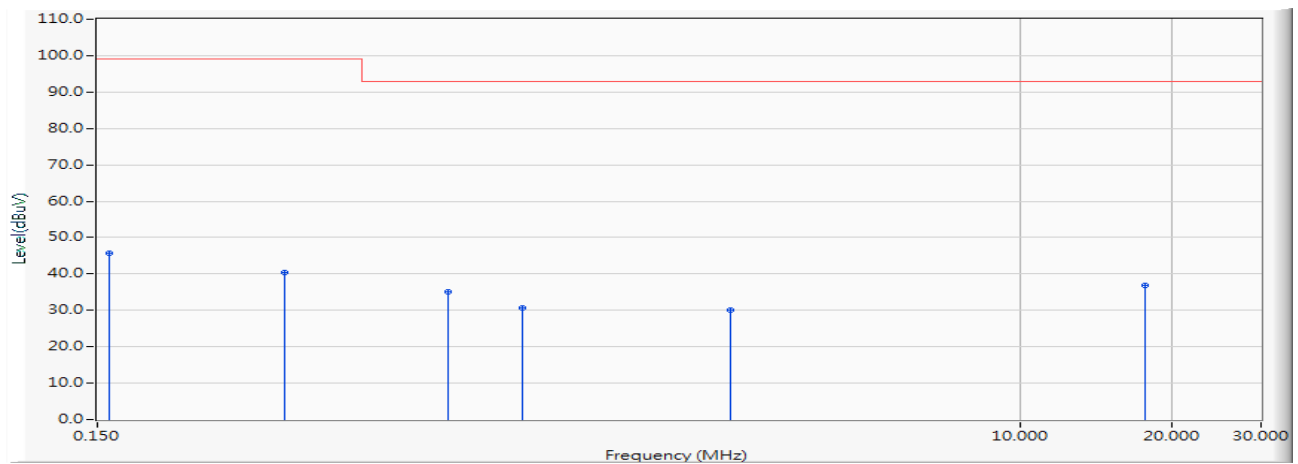
No deviation.

Test Result

Site : SR8	Time : 2017/02/03 - 14:00
Limit : EN50121_00M_QP	Margin : 13
EUT : Network Camera	Probe : ENV216_L1_1296_1602 - Line1
Power : AC 230V/50Hz	Note: Mode 1



Site : SR8	Time : 2017/02/03 - 14:01
Limit : EN50121_00M_QP	Margin : 0
EUT : Network Camera	Probe : ENV216_L1_1296_1602 - Line1
Power : AC 230V/50Hz	Note: Mode 1

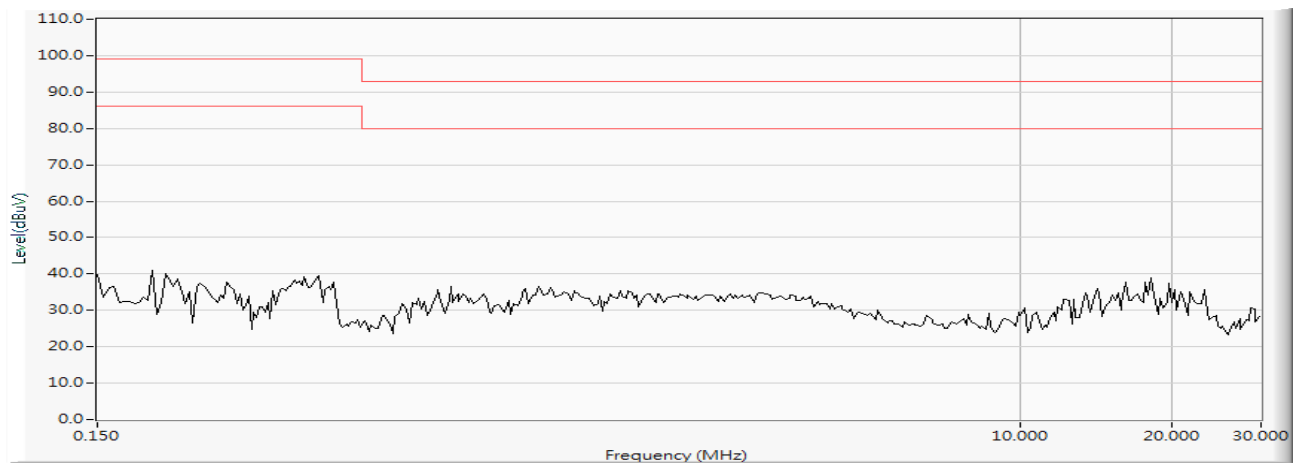


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV)	Margin (dB)	Limit (dBuV)	Detector Type
1	*	0.158	9.685	35.910	45.595	-53.405	99.000	QUASIPeAK
2	*	0.353	9.681	30.860	40.541	-58.459	99.000	QUASIPeAK
3		0.740	9.693	25.450	35.143	-57.857	93.000	QUASIPeAK
4		1.041	9.703	20.970	30.673	-62.327	93.000	QUASIPeAK
5		2.685	9.754	20.320	30.074	-62.926	93.000	QUASIPeAK
6		17.693	9.972	26.800	36.772	-56.228	93.000	QUASIPeAK

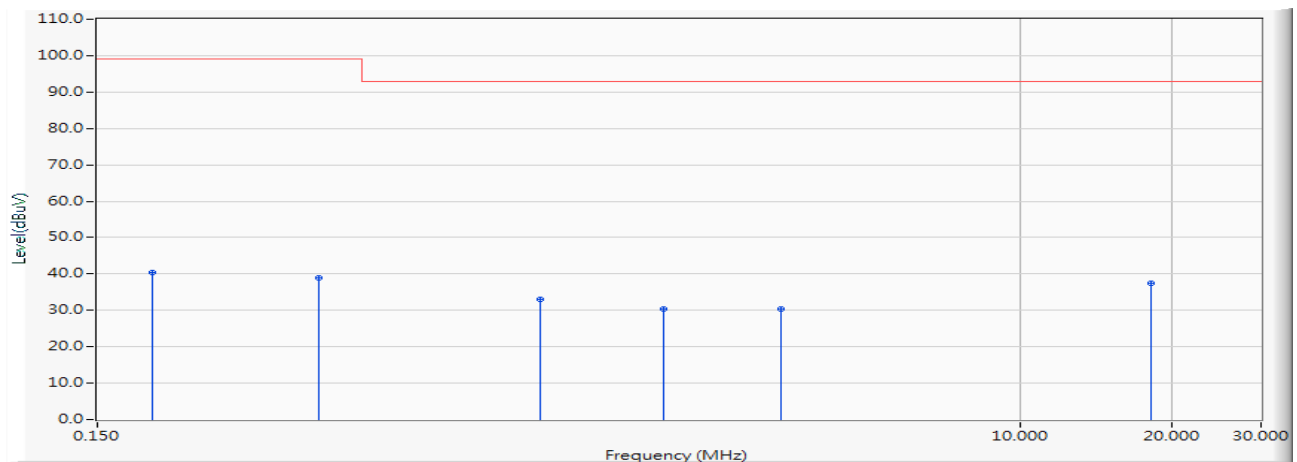
Note:

1. All Reading Levels are Quasi-Peak and average value.
2. " * ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor

Site : SR8	Time : 2017/02/03 - 14:01
Limit : EN50121_00M_QP	Margin : 13
EUT : Network Camera	Probe : ENV216_N_1296_1602 - Line2
Power : AC 230V/50Hz	Note: Mode 1



Site : SR8	Time : 2017/02/03 - 14:01
Limit : EN50121_00M_QP	Margin : 0
EUT : Network Camera	Probe : ENV216_N_1296_1602 - Line2
Power : AC 230V/50Hz	Note: Mode 1



		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV)	Margin (dB)	Limit (dBuV)	Detector Type
1		0.193	9.656	30.640	40.296	-58.704	99.000	QUASIPeAK
2	*	0.412	9.663	29.170	38.833	-60.167	99.000	QUASIPeAK
3		1.123	9.695	23.260	32.955	-60.045	93.000	QUASIPeAK
4		1.978	9.723	20.790	30.513	-62.487	93.000	QUASIPeAK
5		3.365	9.751	20.770	30.521	-62.479	93.000	QUASIPeAK
6	*	18.244	10.092	27.470	37.562	-55.438	93.000	QUASIPeAK

Note:

1. All Reading Levels are Quasi-Peak and average value.
2. " * ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor

Test Photograph

Test Mode : Mode 1: DC 12V

Description : Front View of Conducted Test



Test Mode : Mode 1: DC 12V

Description : Back View of Conducted Test

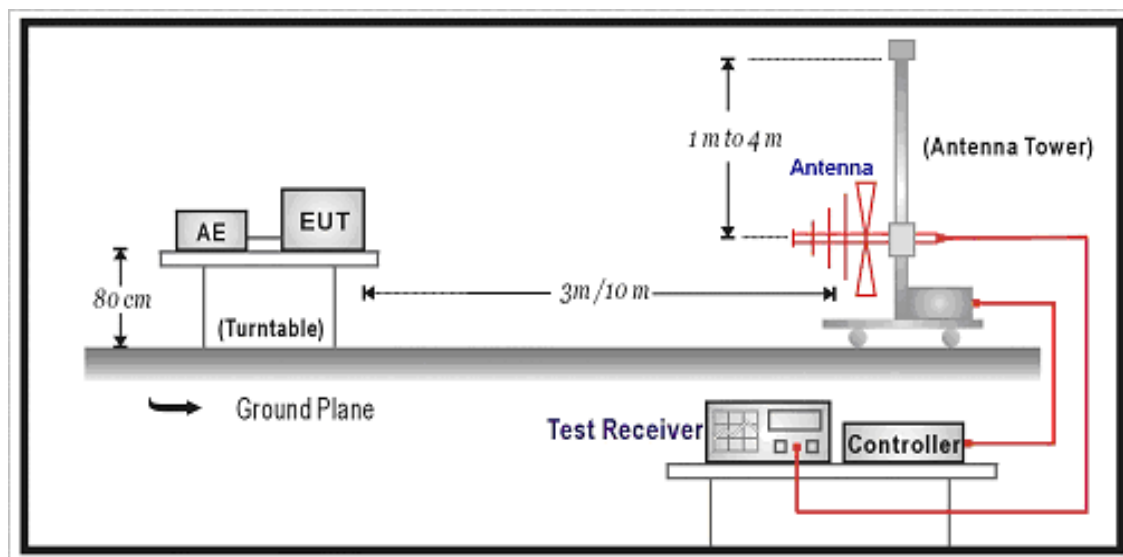


6.2 Radio frequency interference emission test (Radiated Emission)

Test Specification

According to EN 50121-3-2 standard.

Test Setup



Limit

Limits		
Frequency MHz	Distance (m)	dB μ V/m
30 – 230	10	40
230 – 1000	10	47

Remark:

1. The tighter limit shall apply at the edge between two frequency bands.
2. Distance refers to the distance in meters between the measuring instrument antenna and the closed point of any part of the device or system.

Test Procedure

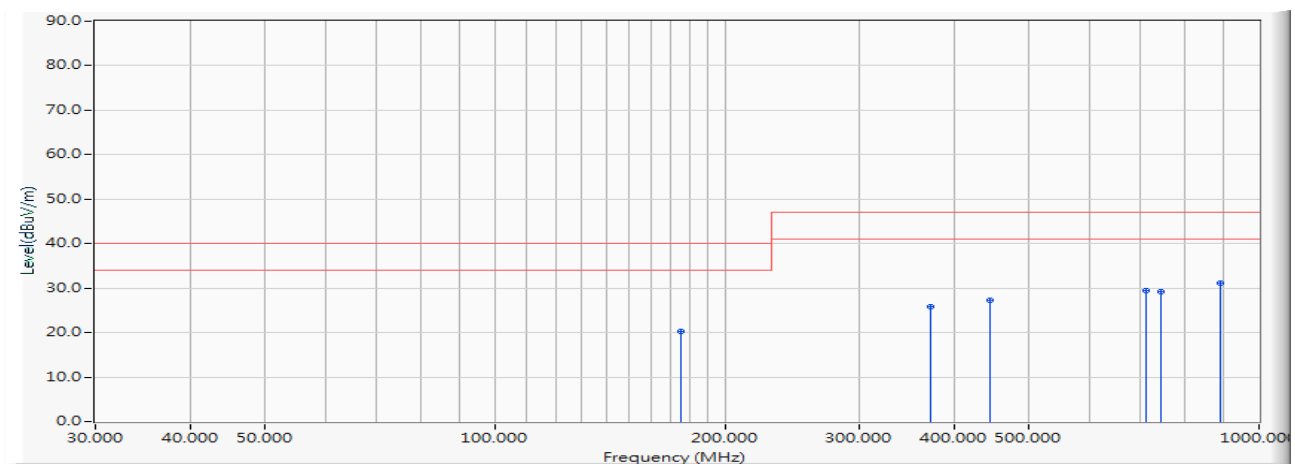
According to EN 55011 basic standard.

Deviation from Test Standard

No deviation.

Test Result

Site : SITE7	Time : 2017/01/24 - 19:17
Limit : CISPR_A_10M_QP	Margin : 6
EUT : Network Camera	Probe : Site7_CBL6112_10M_1606 - HORIZONTAL
Power : AC 230V/50Hz	Note: Mode 1

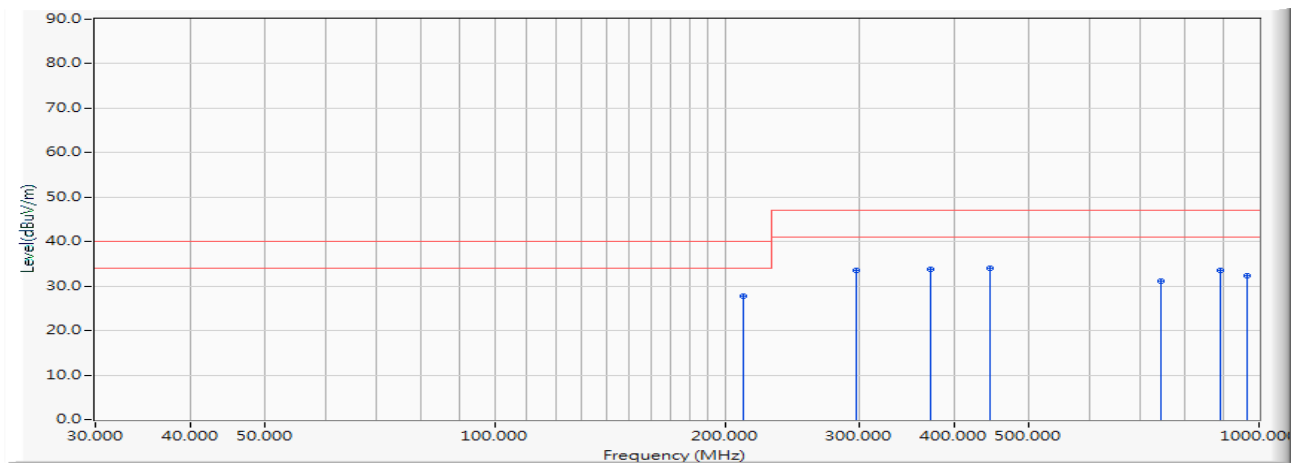


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type	Ant Pos (cm)	Table Pos (deg)
1		174.910	-13.920	34.300	20.380	-19.620	40.000	QUASIPeAK	395.000	121.000
2		371.250	-6.164	32.000	25.836	-21.164	47.000	QUASIPeAK	310.000	26.000
3		445.500	-3.609	30.800	27.191	-19.809	47.000	QUASIPeAK	200.000	119.000
4		711.070	1.144	28.400	29.544	-17.456	47.000	QUASIPeAK	118.000	130.000
5		742.500	1.996	27.300	29.296	-17.704	47.000	QUASIPeAK	121.000	-129.000
6	*	891.000	3.616	27.500	31.116	-15.884	47.000	QUASIPeAK	115.000	-108.000

Note:

1. All Readings below 1GHz are Quasi-Peak, above are performed with peak and/or average measurements as necessary.
2. " * ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor

Site : SITE7	Time : 2017/01/24 - 19:17
Limit : CISPR_A_10M_QP	Margin : 6
EUT : Network Camera	Probe : Site7_CBL6112_10M_1606 - VERTICAL
Power : AC 230V/50Hz	Note: Mode 1

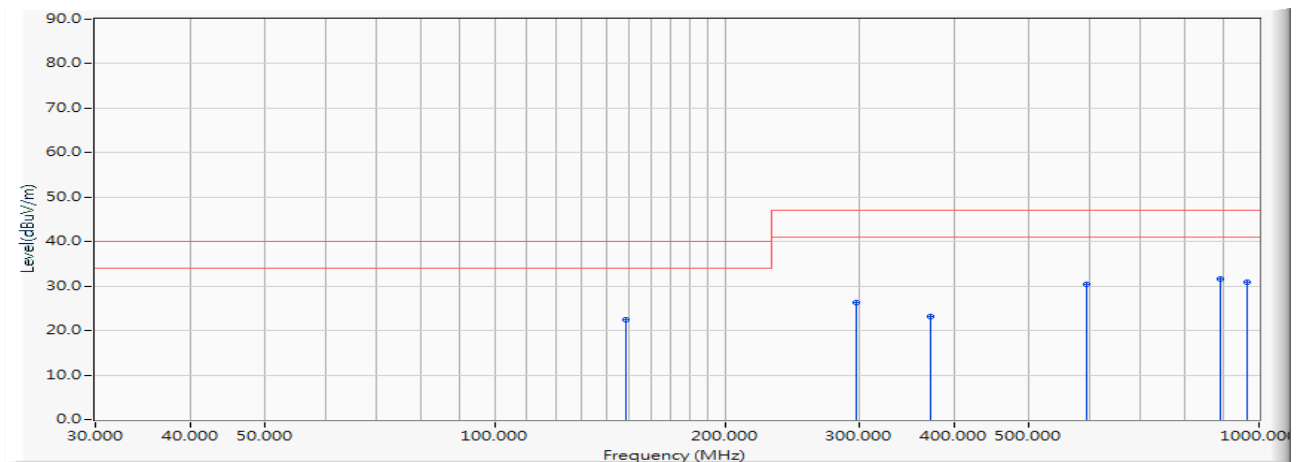


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type	Ant Pos (cm)	Table Pos (deg)
1	*	211.740	-13.759	41.500	27.741	-12.259	40.000	QUASIPeAK	100.000	-179.000
2		297.000	-8.682	42.300	33.618	-13.382	47.000	QUASIPeAK	100.000	-101.000
3		371.250	-6.164	40.000	33.836	-13.164	47.000	QUASIPeAK	100.000	-9.000
4		445.500	-3.609	37.600	33.991	-13.009	47.000	QUASIPeAK	100.000	-94.000
5		742.500	1.996	29.200	31.196	-15.804	47.000	QUASIPeAK	245.000	-151.000
6		891.000	3.616	30.000	33.616	-13.384	47.000	QUASIPeAK	205.000	-82.000
7		965.250	4.444	27.900	32.344	-14.656	47.000	QUASIPeAK	181.000	-114.000

Note:

1. All Readings below 1GHz are Quasi-Peak, above are performed with peak and/or average measurements as necessary.
2. " * ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor

Site : SITE7	Time : 2017/01/24 - 19:44
Limit : CISPR_A_10M_QP	Margin : 6
EUT : Network Camera	Probe : Site7_CBL6112_10M_1606 - HORIZONTAL
Power : POE	Note: Mode 2

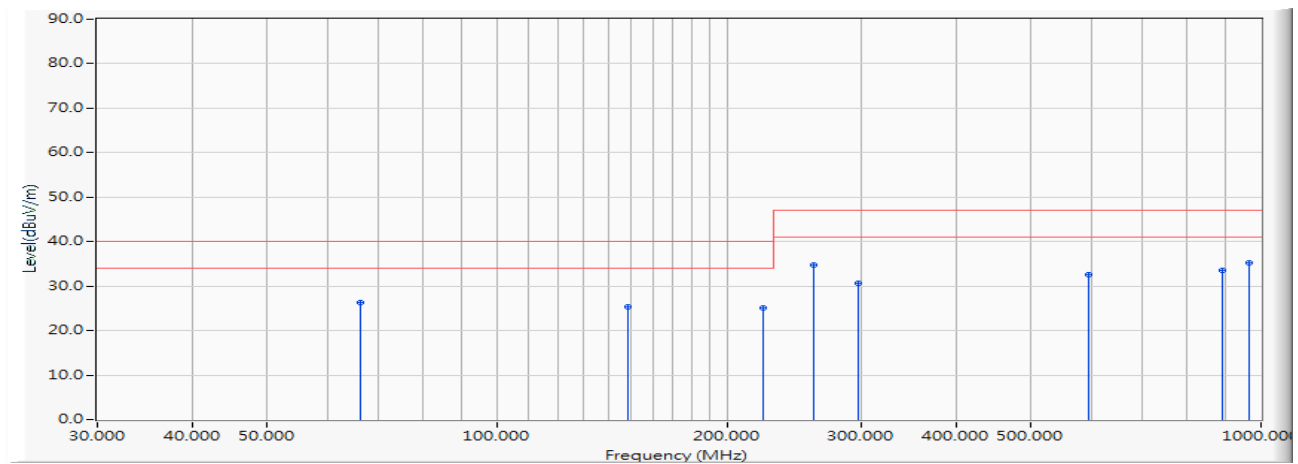


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type	Ant Pos (cm)	Table Pos (deg)
1		148.500	-13.173	35.700	22.527	-17.473	40.000	QUASIPeAK	400.000	-48.000
2		297.000	-8.682	35.000	26.318	-20.682	47.000	QUASIPeAK	390.000	-34.000
3		371.250	-6.164	29.400	23.236	-23.764	47.000	QUASIPeAK	280.000	131.000
4		594.000	-0.240	30.600	30.360	-16.640	47.000	QUASIPeAK	220.000	-29.000
5	*	891.000	3.616	28.000	31.616	-15.384	47.000	QUASIPeAK	100.000	-51.600
6		965.250	4.444	26.400	30.844	-16.156	47.000	QUASIPeAK	100.000	73.600

Note:

1. All Readings below 1GHz are Quasi-Peak, above are performed with peak and/or average measurements as necessary.
2. " * ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor

Site : SITE7	Time : 2017/01/24 - 19:44
Limit : CISPR_A_10M_QP	Margin : 6
EUT : Network Camera	Probe : Site7_CBL6112_10M_1606 - VERTICAL
Power : POE	Note: Mode 2



		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type	Ant Pos (cm)	Table Pos (deg)
1		66.200	-18.832	45.100	26.269	-13.731	40.000	QUASIPeAK	100.000	133.000
2		148.500	-13.173	38.600	25.427	-14.573	40.000	QUASIPeAK	100.000	-121.000
3		222.750	-13.226	38.300	25.074	-14.926	40.000	QUASIPeAK	100.000	106.000
4		259.870	-8.762	43.600	34.838	-12.162	47.000	QUASIPeAK	100.000	158.000
5		297.000	-8.682	39.300	30.618	-16.382	47.000	QUASIPeAK	100.000	128.000
6		594.000	-0.240	32.800	32.560	-14.440	47.000	QUASIPeAK	310.000	-17.000
7		891.000	3.616	29.900	33.516	-13.484	47.000	QUASIPeAK	210.000	120.000
8	*	965.250	4.444	30.700	35.144	-11.856	47.000	QUASIPeAK	176.000	-116.000

Note:

1. All Readings below 1GHz are Quasi-Peak, above are performed with peak and/or average measurements as necessary.
2. " * ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor

Test Photograph

Test Mode : Mode 1: DC 12V

Description : Front View of Radiated Test



Test Mode : Mode 1: DC 12V

Description : Back View of Radiated Test



Test Mode : Mode 2: PoE

Description : Front View of Radiated Test



Test Mode : Mode 2: PoE

Description : Back View of Radiated Test



Test Procedure

Direct application of discharges to the EUT:

Contact discharge was applied only to conductive surfaces of the EUT.

Air discharges were applied only to non-conductive surfaces of the EUT.

During the test, it was performed with single discharges. For the single discharge time between successive single discharges will be kept longer 1 second. It was at least ten single discharges with positive and negative at the same selected point.

The selected point, which was performed with electrostatic discharge, was marked on the red label of the EUT.

Indirect application of discharges to the EUT:

Vertical Coupling Plane (VCP):

The coupling plane, of dimensions 0.5m x 0.5m, is placed parallel to, and positioned at a distance 0.1m from, the EUT, with the Discharge Electrode touching the coupling plane.

The four faces of the EUT will be performed with electrostatic discharge. It was at least ten single discharges with positive and negative at the same selected point.

Horizontal Coupling Plane (HCP):

The coupling plane is placed under to the EUT. The generator shall be positioned vertically at a distance of 0.1m from the EUT, with the Discharge Electrode touching the coupling plane.

The four faces of the EUT will be performed with electrostatic discharge. It was at least ten single discharges with positive and negative at the same selected point.

Deviation from Test Standard

No deviation.

Test Result

Product	Network Camera		
Test Item	Electrostatic Discharge		
Test Mode	Mode 1: DC 12V		
Date of Test	2017/02/15	Test Site	No.6 Shielded Room

Item	Amount of Discharge	Voltage	Required Criteria	Complied To Criteria (A,B,C)	Results
Air Discharge	10	+8kV	B	A	Pass
	10	-8kV	B	A	Pass
Contact Discharge	25	+6kV	B	B	Pass
	25	-6kV	B	B	Pass
Indirect Discharge (HCP)	25	+6kV	B	A	Pass
	25	-6kV	B	A	Pass
Indirect Discharge (VCP)	25	+6kV	B	A	Pass
	25	-6kV	B	A	Pass

Note:

The testing performed is from lowest level up to the highest level as required by standard, but only highest level is shown on the report.

NR: No Requirement

- ☒ Meet criteria A: Operate as intended during and after the test
- ☒ Meet criteria B: Operate as intended after the test
- ☐ Meet criteria C: Loss/Error of function
- ☐ Additional Information
 - ☐ EUT stopped operation and could / could not be reset by operator at ____ kV.
 - ☒ No false alarms or other malfunctions were observed during or after the test.

Remark:

The Contact discharges were applied at least total 200 discharges at a minimum of four test points.

Product	Network Camera		
Test Item	Electrostatic Discharge		
Test Mode	Mode 2: PoE		
Date of Test	2017/02/15	Test Site	No.6 Shielded Room

Item	Amount of Discharge	Voltage	Required Criteria	Complied To Criteria (A,B,C)	Results
Air Discharge	10	+8kV	B	A	Pass
	10	-8kV	B	A	Pass
Contact Discharge	25	+6kV	B	B	Pass
	25	-6kV	B	B	Pass
Indirect Discharge (HCP)	25	+6kV	B	A	Pass
	25	-6kV	B	A	Pass
Indirect Discharge (VCP)	25	+6kV	B	A	Pass
	25	-6kV	B	A	Pass

Note:

The testing performed is from lowest level up to the highest level as required by standard, but only highest level is shown on the report.

NR: No Requirement

- ☒ Meet criteria A: Operate as intended during and after the test
- ☒ Meet criteria B: Operate as intended after the test
- ☐ Meet criteria C: Loss/Error of function
- ☐ Additional Information
 - ☐ EUT stopped operation and could / could not be reset by operator at ____ kV.
 - ☒ No false alarms or other malfunctions were observed during or after the test.

Remark:

The Contact discharges were applied at least total 200 discharges at a minimum of four test points.

Test Photograph

Test Mode : Mode 1: DC 12V

Description : ESD Test Setup



Test Mode : Mode 2: PoE

Description : ESD Test Setup



EUT to dot photo for ESD test

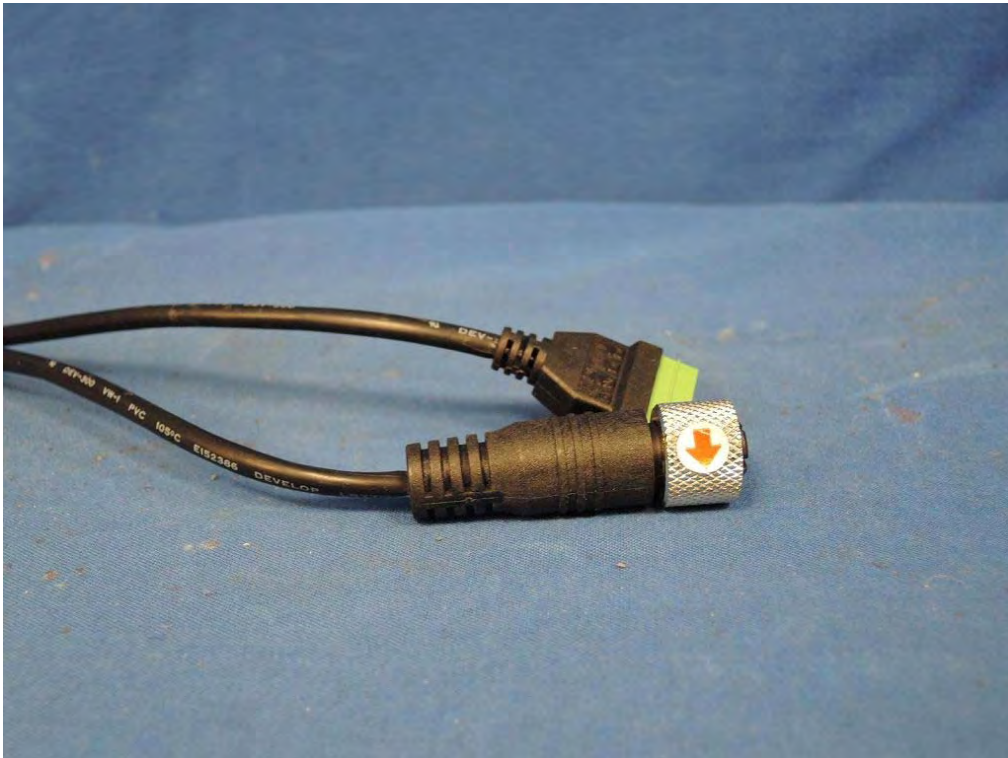
Test dot: (Contact Discharge)



Test dot: (Contact Discharge)



Test dot: (Contact Discharge)

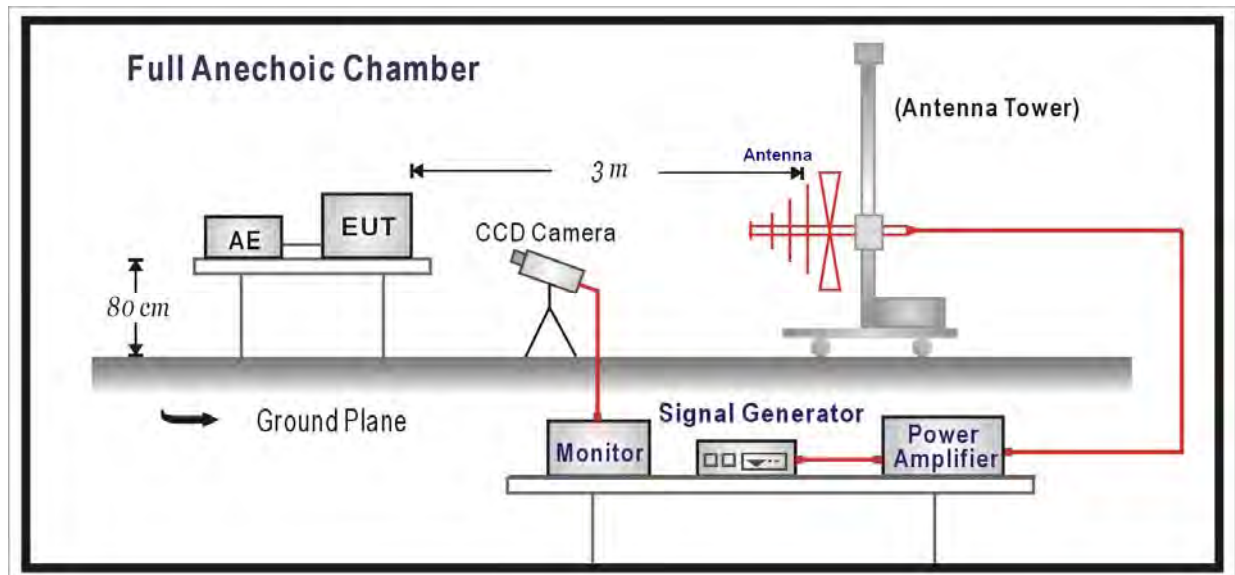


6.4 Radio frequency interference susceptibility test (Radiated Susceptibility)

Test Specification

According to EN 50121-3-2 standard

Test Setup



Limit

Item	Environmental Phenomena	Units	Test Specification	Performance Criteria
Enclosure Port				
Radio-Frequency Electromagnetic Field Amplitude Modulated		MHz	80-1000	A
		V/m(Un-modulated, rms)	20	
		% AM (1kHz)	80	
Radio-Frequency Electromagnetic Field Amplitude Modulated		MHz	1400-2000	A
		V/m(Un-modulated, rms)	10	
		% AM (1kHz)	80	
Radio-Frequency Electromagnetic Field Amplitude Modulated		MHz	2000-2700	A
		V/m(Un-modulated, rms)	5	
		% AM (1kHz)	80	
Radio-Frequency Electromagnetic Field Amplitude Modulated		MHz	5100-6000	A
		V/m(Un-modulated, rms)	3	
		% AM (1kHz)	80	

Test Procedure

The EUT and load, which are placed on a table that is 0.8 meter above ground, are placed with one coincident with the calibration plane such that the distance from antenna to the EUT was 3 meters.

Both horizontal and vertical polarization of the antenna and four sides of the EUT are set on measurement.

In order to judge the EUT performance, a CCD camera is used to monitor EUT screen.

All the scanning conditions are as follows:

Condition of Test	Remarks
1. Field Strength	5,10,20V/m
2. Radiated Signal	AM 80% Modulated with 1kHz
3. Scanning Frequency	80MHz-1000MHz for 20V/m 1400MHz-2000MHz for 10V/m 2000MHz-2700MHz for 5V/m 5100MHz-6000MHz for 3V/m
4 Dwell Time	3 Seconds

Deviation from Test Standard

No deviation.

Test Result

Product	Network Camera		
Test Item	Radiated susceptibility		
Test Mode	Mode 1: DC 12V		
Date of Test	2017/02/13	Test Site	Chamber9

Frequency (MHz)	Position (Angle)	Polarity (H or V)	Field Strength (V/m)	Required Criteria	Complied To Criteria (A,B,C)	Results
80-1000	0°	H	20	A	A	PASS
80-1000	0°	V	20	A	A	PASS
80-1000	90°	H	20	A	A	PASS
80-1000	90°	V	20	A	A	PASS
80-1000	180°	H	20	A	A	PASS
80-1000	180°	V	20	A	A	PASS
80-1000	270°	H	20	A	A	PASS
80-1000	270°	V	20	A	A	PASS
1400-2000	0°	H	10	A	A	PASS
1400-2000	0°	V	10	A	A	PASS
1400-2000	90°	H	10	A	A	PASS
1400-2000	90°	V	10	A	A	PASS
1400-2000	180°	H	10	A	A	PASS
1400-2000	180°	V	10	A	A	PASS
1400-2000	270°	H	10	A	A	PASS
1400-2000	270°	V	10	A	A	PASS
2000-2700	0°	H	5	A	A	PASS
2000-2700	0°	V	5	A	A	PASS
2000-2700	90°	H	5	A	A	PASS
2000-2700	90°	V	5	A	A	PASS
2000-2700	180°	H	5	A	A	PASS
2000-2700	180°	V	5	A	A	PASS
2000-2700	270°	H	5	A	A	PASS
2000-2700	270°	V	5	A	A	PASS
5100-6000	0°	H	3	A	A	PASS
5100-6000	0°	V	3	A	A	PASS
5100-6000	90°	H	3	A	A	PASS
5100-6000	90°	V	3	A	A	PASS
5100-6000	180°	H	3	A	A	PASS
5100-6000	180°	V	3	A	A	PASS
5100-6000	270°	H	3	A	A	PASS
5100-6000	270°	V	3	A	A	PASS

Note:

The testing performed is from lowest level up to the highest level as required by standard, but only highest level is shown on the report.

- ☒ Meet criteria A: Operate as intended during and after the test
- ☐ Meet criteria B: Operate as intended after the test
- ☐ Meet criteria C: Loss/Error of function
- ☐ Additional Information
 - ☐ There was no observable degradation in performance.
 - ☐ EUT stopped operation and could / could not be reset by operator at _____ V/m at frequency _____MHz.
- ☒ No false alarms or other malfunctions were observed during or after the test.

Product	Network Camera		
Test Item	Radiated susceptibility		
Test Mode	Mode 2: PoE		
Date of Test	2017/02/13	Test Site	Chamber9

Frequency (MHz)	Position (Angle)	Polarity (H or V)	Field Strength (V/m)	Required Criteria	Complied To Criteria (A,B,C)	Results
80-1000	0°	H	20	A	A	PASS
80-1000	0°	V	20	A	A	PASS
80-1000	90°	H	20	A	A	PASS
80-1000	90°	V	20	A	A	PASS
80-1000	180°	H	20	A	A	PASS
80-1000	180°	V	20	A	A	PASS
80-1000	270°	H	20	A	A	PASS
80-1000	270°	V	20	A	A	PASS
1400-2000	0°	H	10	A	A	PASS
1400-2000	0°	V	10	A	A	PASS
1400-2000	90°	H	10	A	A	PASS
1400-2000	90°	V	10	A	A	PASS
1400-2000	180°	H	10	A	A	PASS
1400-2000	180°	V	10	A	A	PASS
1400-2000	270°	H	10	A	A	PASS
1400-2000	270°	V	10	A	A	PASS
2000-2700	0°	H	5	A	A	PASS
2000-2700	0°	V	5	A	A	PASS
2000-2700	90°	H	5	A	A	PASS
2000-2700	90°	V	5	A	A	PASS
2000-2700	180°	H	5	A	A	PASS
2000-2700	180°	V	5	A	A	PASS
2000-2700	270°	H	5	A	A	PASS
2000-2700	270°	V	5	A	A	PASS
5100-6000	0°	H	3	A	A	PASS
5100-6000	0°	V	3	A	A	PASS
5100-6000	90°	H	3	A	A	PASS
5100-6000	90°	V	3	A	A	PASS
5100-6000	180°	H	3	A	A	PASS
5100-6000	180°	V	3	A	A	PASS
5100-6000	270°	H	3	A	A	PASS
5100-6000	270°	V	3	A	A	PASS

Note:

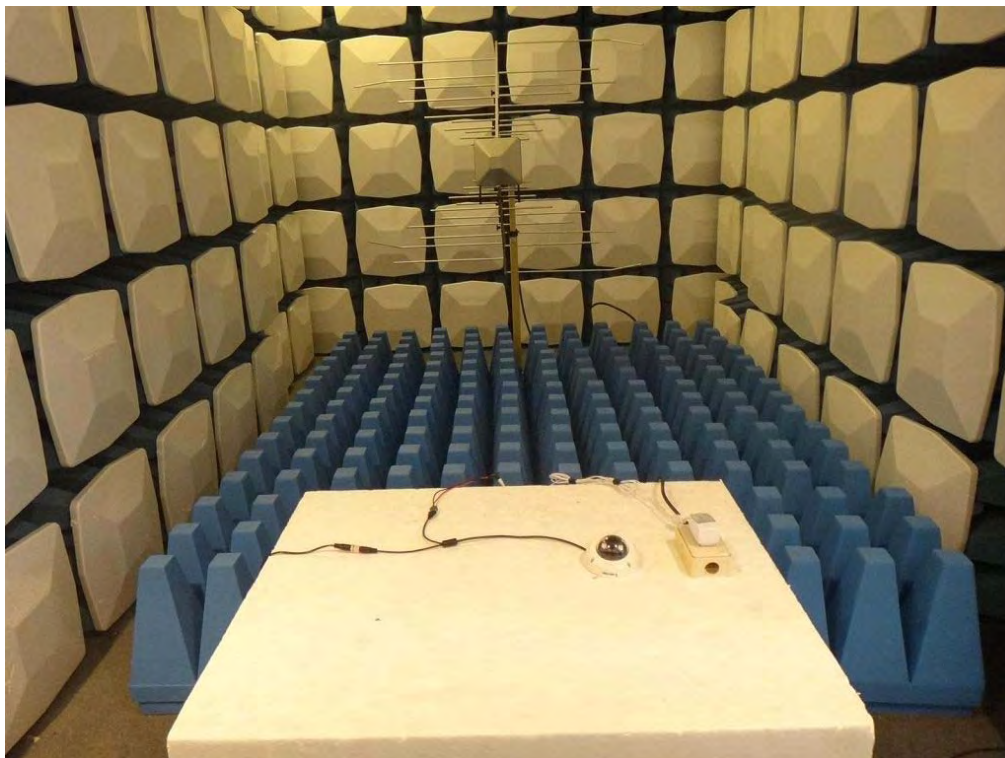
The testing performed is from lowest level up to the highest level as required by standard, but only highest level is shown on the report.

- ☒ Meet criteria A: Operate as intended during and after the test
- ☐ Meet criteria B: Operate as intended after the test
- ☐ Meet criteria C: Loss/Error of function
- ☐ Additional Information
 - ☐ There was no observable degradation in performance.
 - ☐ EUT stopped operation and could / could not be reset by operator at _____ V/m at frequency _____MHz.
- ☒ No false alarms or other malfunctions were observed during or after the test.

Test Photograph

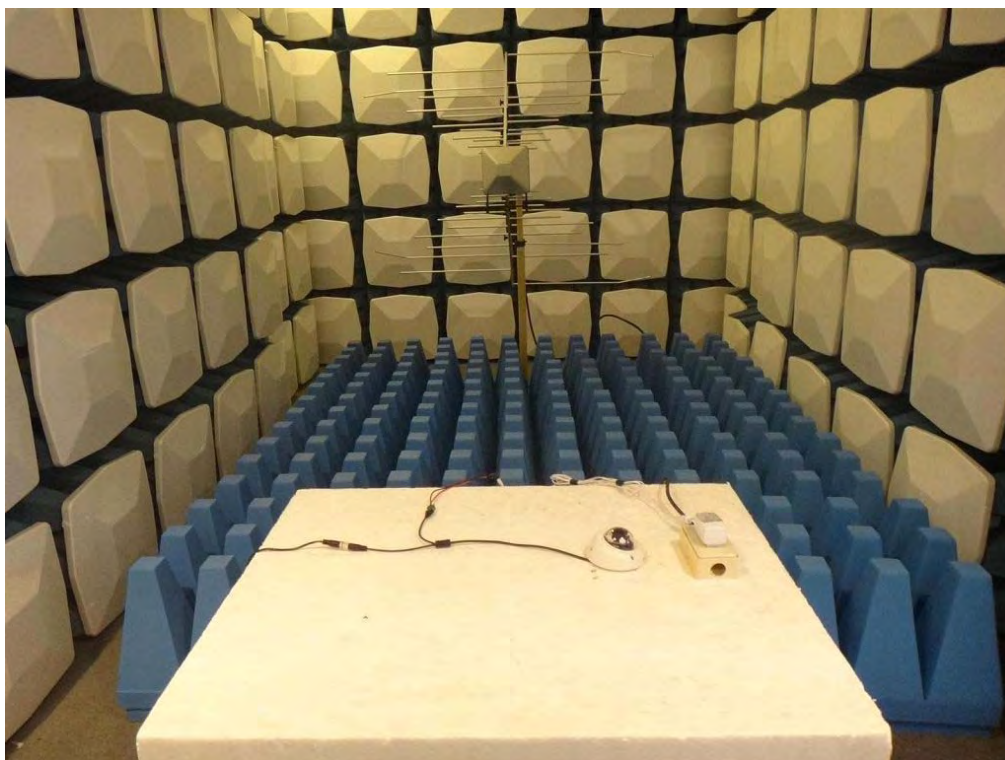
Test Mode : Mode 1: DC 12V

Description : Radiated Susceptibility Test Setup



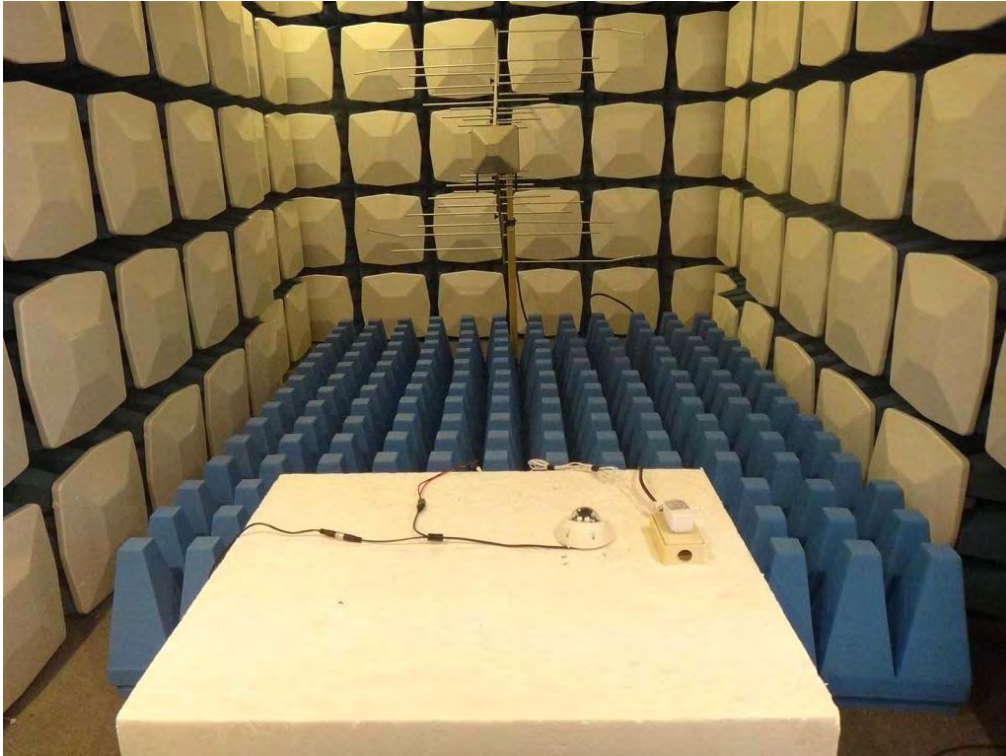
Test Mode : Mode 1: DC 12V

Description : Radiated Susceptibility Test Setup



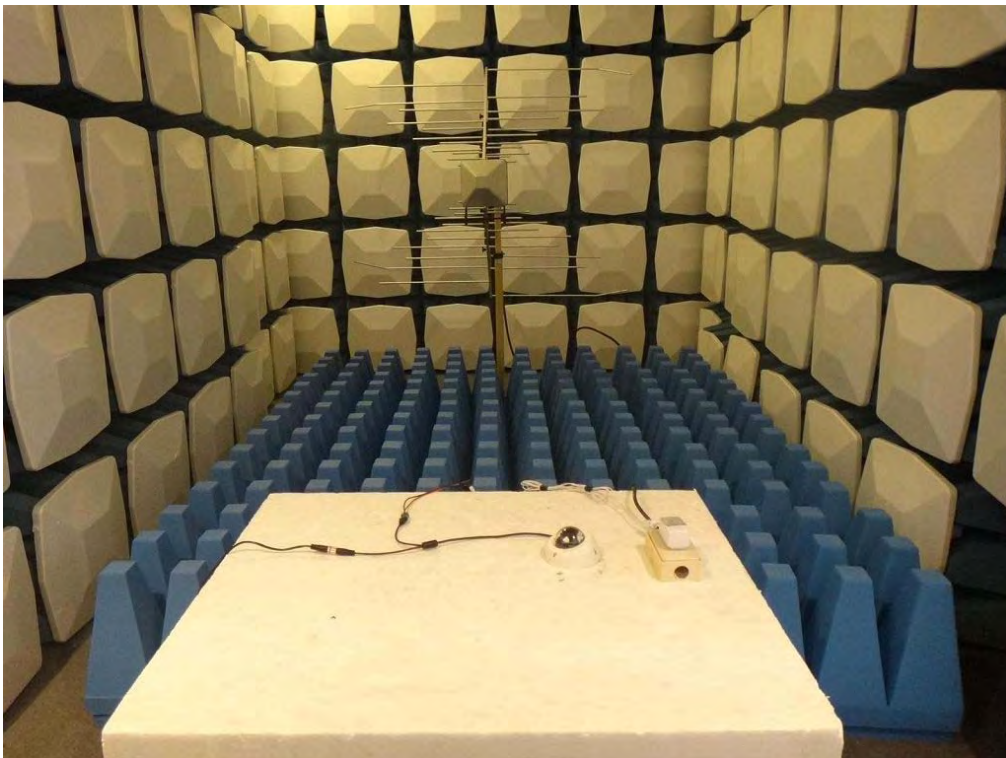
Test Mode : Mode 1: DC 12V

Description : Radiated Susceptibility Test Setup



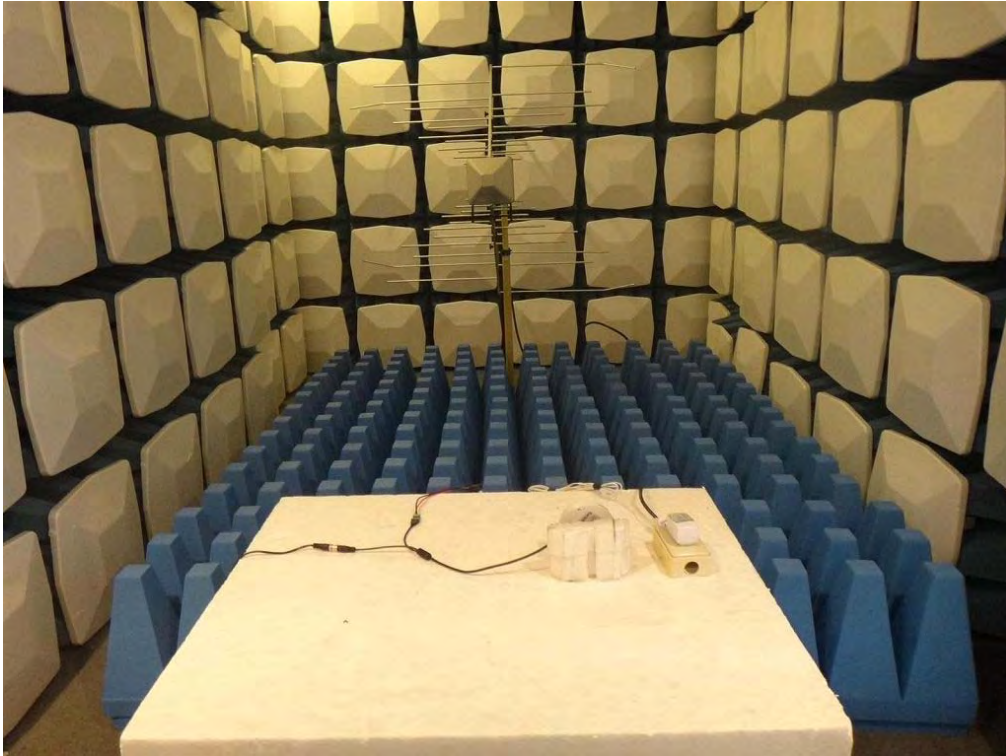
Test Mode : Mode 1: DC 12V

Description : Radiated Susceptibility Test Setup



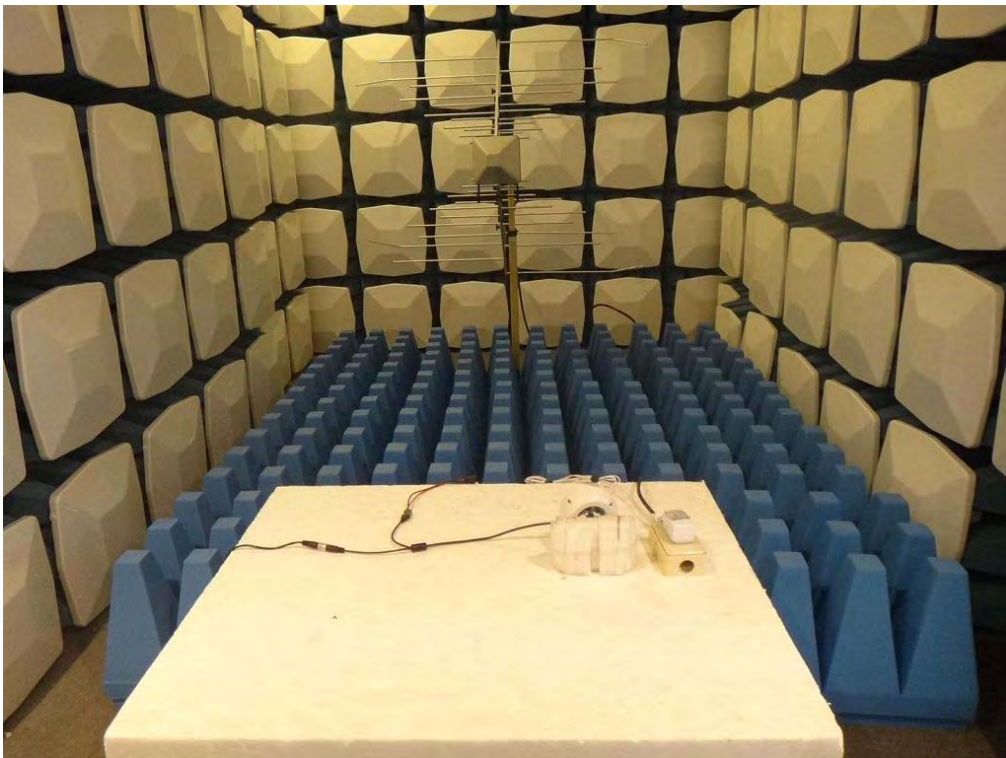
Test Mode : Mode 1: DC 12V

Description : Radiated Susceptibility Test Setup



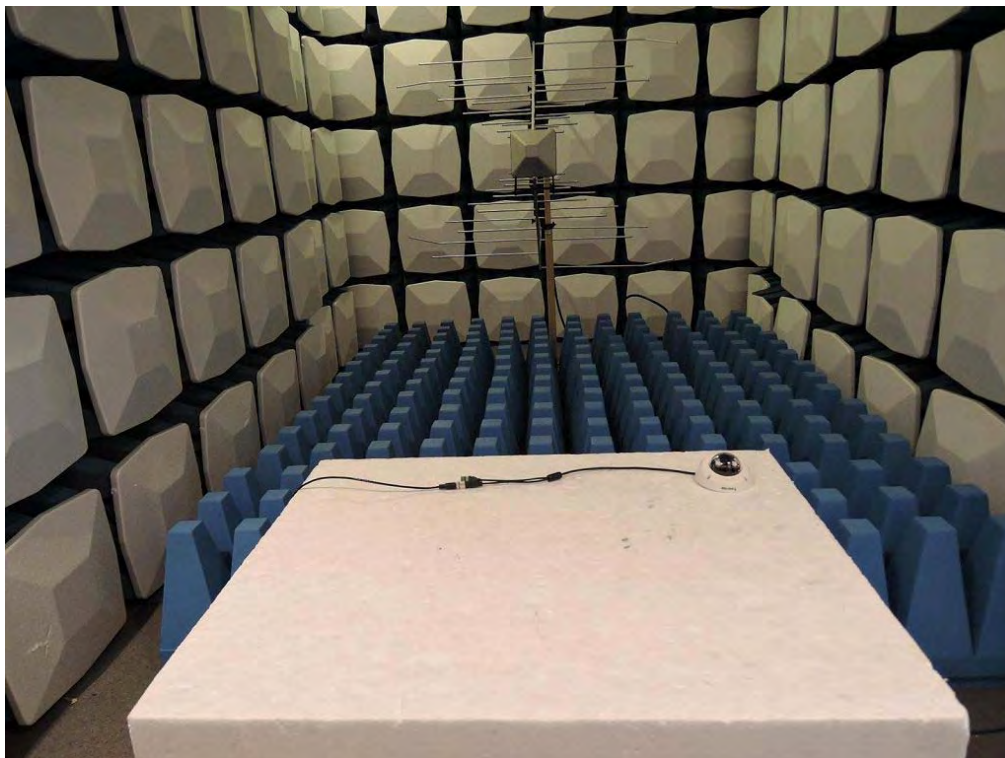
Test Mode : Mode 1: DC 12V

Description : Radiated Susceptibility Test Setup



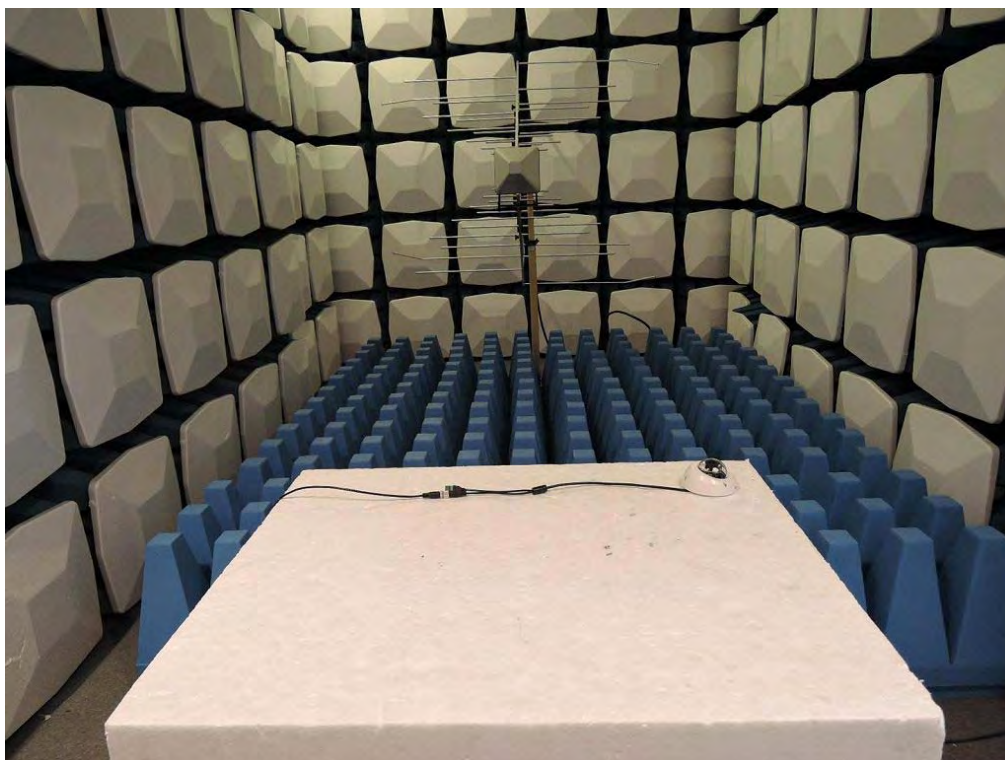
Test Mode : Mode 2: PoE

Description : Radiated Susceptibility Test Setup



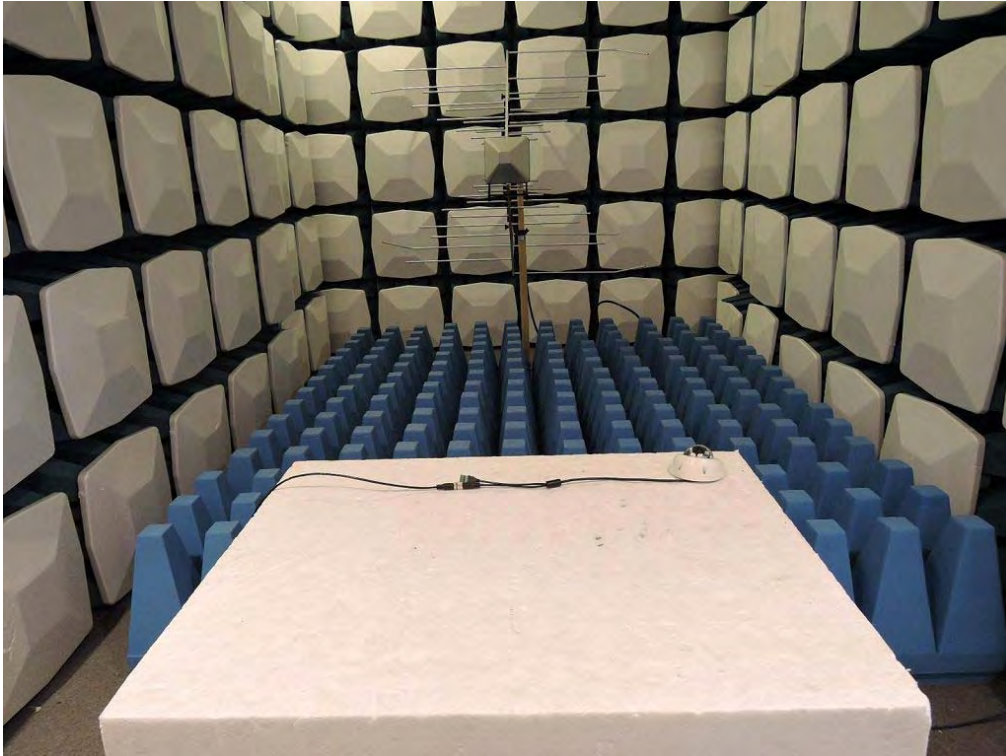
Test Mode : Mode 2: PoE

Description : Radiated Susceptibility Test Setup



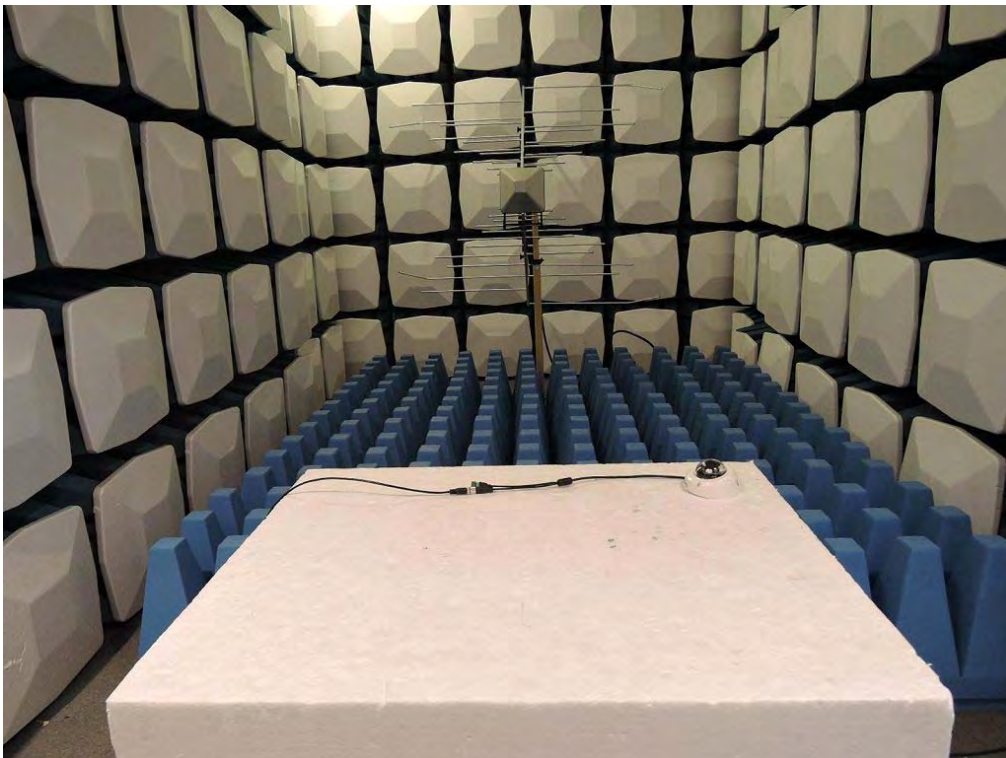
Test Mode : Mode 2: PoE

Description : Radiated Susceptibility Test Setup



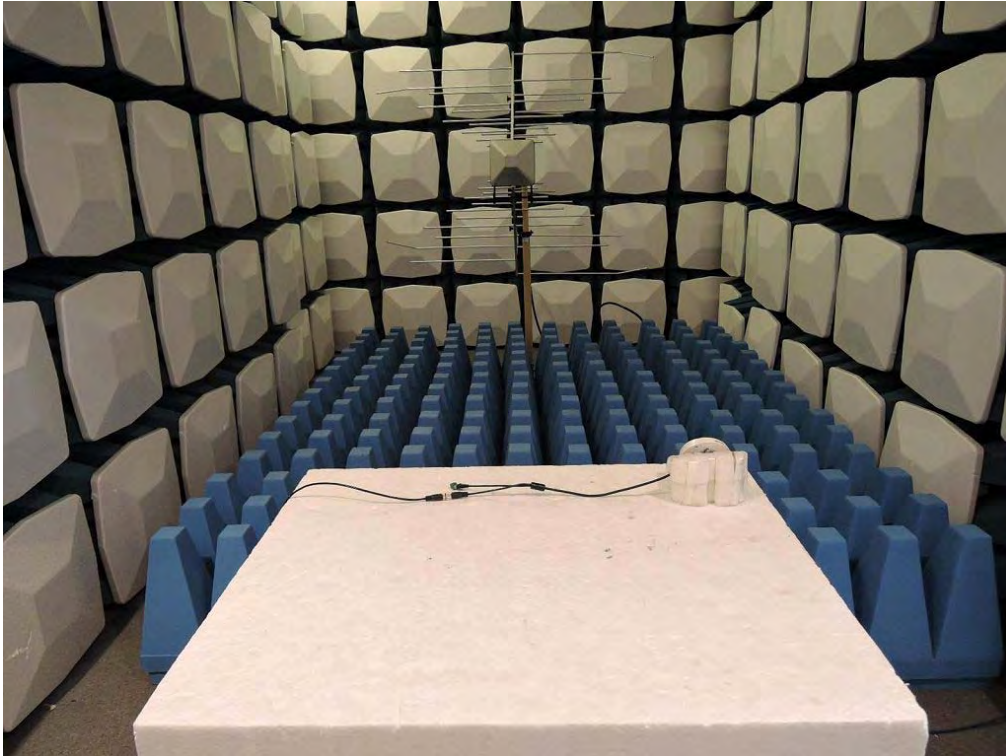
Test Mode : Mode 2: PoE

Description : Radiated Susceptibility Test Setup



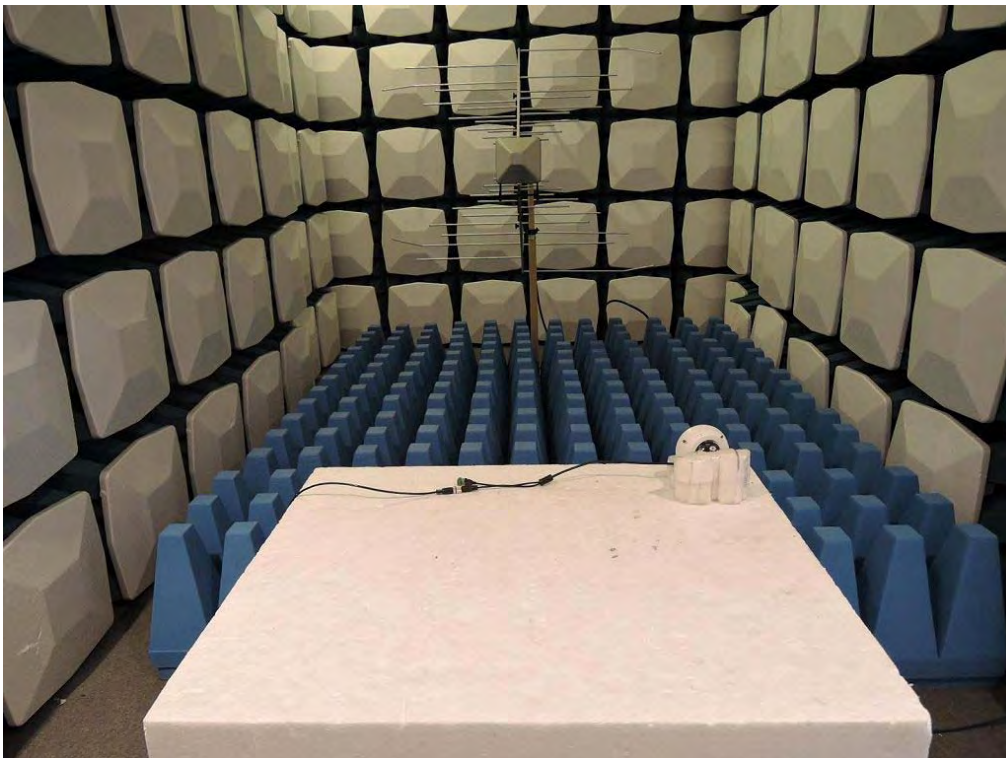
Test Mode : Mode 2: PoE

Description : Radiated Susceptibility Test Setup



Test Mode : Mode 2: PoE

Description : Radiated Susceptibility Test Setup

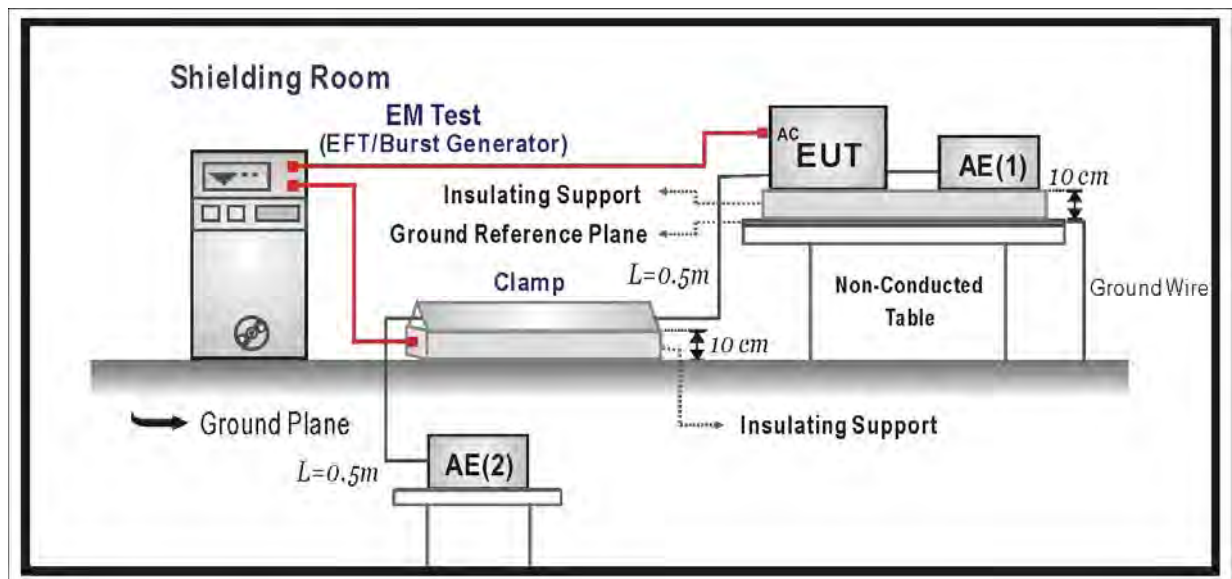


6.5 Transient Burst

Test Specification

According to EN 50121-3-2 standard.

Test Setup



Limit

Item	Environmental Phenomena	Units	Test Specification	Performance Criteria
Signal and Telecommunication Ports				
	Fast Transients Common Mode	kV (Peak) Tr/Th ns Rep. Frequency kHz	+2 5/50 5	A
Input DC Power Ports				
	Fast Transients Common Mode	kV (Peak) Tr/Th ns Rep. Frequency kHz	+2 5/50 5	A
Input AC Power Ports				
	Fast Transients Common Mode	kV (Peak) Tr/Th ns Rep. Frequency kHz	+2 5/50 5	A

Test Procedure

According to EN 61000-4-4 basic standard Clause 8.

Deviation from Test Standard

No deviation.

Test Result

Product	Network Camera		
Test Item	Transient Burst		
Test Mode	Mode 1: DC 12V		
Date of Test	2017/02/18	Test Site	No.6 Shielded Room

Inject Line	Polarity	Voltage kV	Inject Time (Second)	Inject Method	Required Criteria	Complied to Criteria	Result
L	±	2 kV	60	Direct	A	A	PASS
N	±	2 kV	60	Direct	A	A	PASS
L-N	±	2 kV	60	Direct	A	A	PASS
LAN	±	2 kV	60	Clamp	A	A	PASS
DI/DO	±	2 kV	60	Clamp	A	A	PASS

Note:

The testing performed is from lowest level up to the highest level as required by standard, but only highest level is shown on the report.

- ☒ Meet criteria A : Operate as intended during and after the test
- ☐ Meet criteria B : Operate as intended after the test
- ☐ Meet criteria C : Loss/Error of function
- ☐ Additional Information
 - ☐ EUT stopped operation and could / could not be reset by operator at _____ kV of Line _____.
- ☒ No false alarms or other malfunctions were observed during or after the test.

Product	Network Camera		
Test Item	Transient Burst		
Test Mode	Mode 2: PoE		
Date of Test	2017/02/18	Test Site	No.6 Shielded Room

Inject Line	Polarity	Voltage kV	Inject Time (Second)	Inject Method	Required Criteria	Complied to Criteria	Result
LAN	±	2 kV	60	Clamp	A	A	PASS
DI/DO	±	2 kV	60	Clamp	A	A	PASS

Note:

The testing performed is from lowest level up to the highest level as required by standard, but only highest level is shown on the report.

- ☒ Meet criteria A : Operate as intended during and after the test
- ☐ Meet criteria B : Operate as intended after the test
- ☐ Meet criteria C : Loss/Error of function
- ☐ Additional Information
 - ☐ EUT stopped operation and could / could not be reset by operator at _____ kV of Line _____.
- ☒ No false alarms or other malfunctions were observed during or after the test.

Test Photograph

Test Mode : Mode 1: DC 12V

Description : Transient Burst Test Setup



Test Mode : Mode 1: DC 12V

Description : Transient Burst Test Setup-Clamp



Test Mode : Mode 2: PoE

Description : Transient Burst Test Setup-Clamp

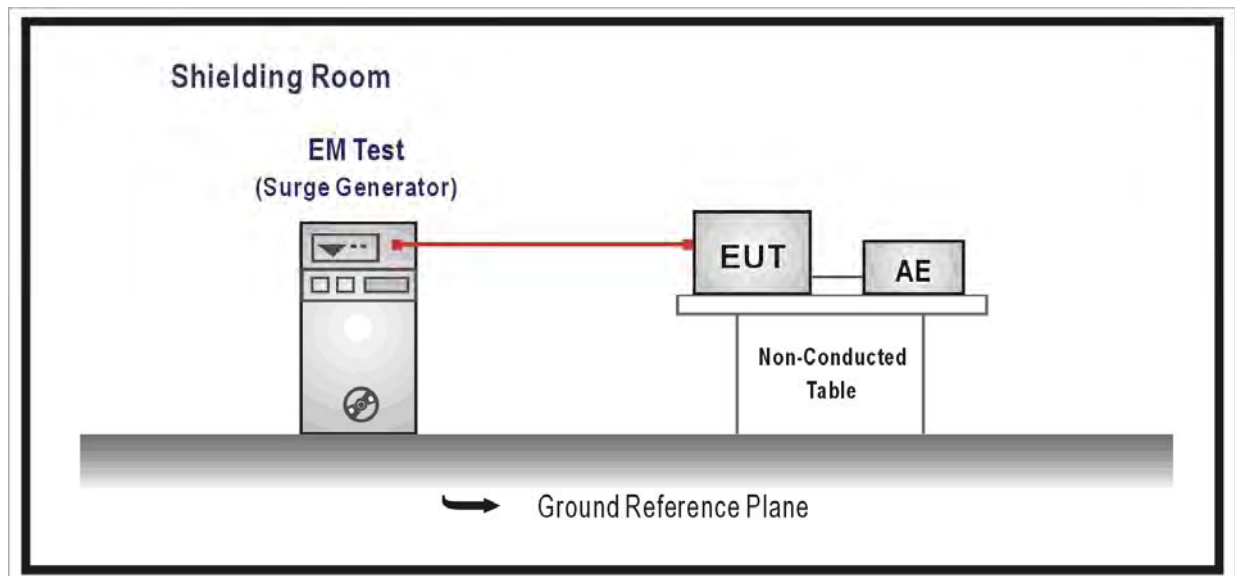


6.6 Surge

Test Specification

According to EN 50121-3-2 standard (Table 7).

Test Setup



Limit

Item	Environmental Phenomena	Units	Test Specification	Performance Criteria
Battery referenced ports (except at the output of energy sources), auxiliary a.c. power input ports (rated voltage ϕ 400 Vrms)				
Surges		Tr/Th us	1.2/50 (8/20)	B
Line to Line		KV	± 1	
Line to Ground		KV	± 2	
		Output Impedance Ω	42	
		Coupling Capacitance μF	0.5	

Notes:

- 1) Applicable only to ports which according to the manufacturer's may directly to outdoor cables.
- 2) Where normal functioning cannot be achieved because of the impact of the CDN on the EUT, no immunity test shall be required.

Test Procedure

The EUT and its load are placed on a table that is 0.8 meter above a metal ground plane measured 1m*1m min. and 0.65mm thick min. And projected beyond the EUT by at least 0.1m on all sides. The length of power cord between the coupling device and the EUT shall be 2m or less.

For Input and Output AC Power or DC Input and DC Output Power Ports:

The EUT is connected to the power mains through a coupling device that directly couples the Surge interference signal.

The surge noise shall be applied synchronized to the voltage phase at 0°, 90°, 180°, 270° and the peak value of the a.c. voltage wave. (Positive and negative)

Each of Line-Earth and Line-Line is impressed with a sequence of five surge voltages with interval of 1 min.

Deviation from Test Standard

No deviation.

Test Result

Product	Network Camera		
Test Item	Surge		
Test Mode	Mode 1: DC 12V		
Date of Test	2017/02/17	Test Site	No.6 Shielded Room

Inject Line	Polarity	Voltage kV	Angle	Time Interval (Second)	Inject Method	Required Criteria	Complied to Criteria	Result
L-N	±	1kV	0	60	Direct	B	A	PASS
L-N	±	1kV	90	60	Direct	B	A	PASS
L-N	±	1kV	180	60	Direct	B	A	PASS
L-N	±	1kV	270	60	Direct	B	A	PASS

Note:

The testing performed is from lowest level up to the highest level as required by standard, but only highest level is shown on the report.

- ☒ Meet criteria A : Operate as intended during and after the test
- ☐ Meet criteria B : Operate as intended after the test
- ☐ Meet criteria C : Loss/Error of function
- ☐ Additional Information
 - ☐ EUT stopped operation and could / could not be reset by operator at _____ kV of Line _____.
- ☒ No false alarms or other malfunctions were observed during or after the test.

Test Photograph

Test Mode : Mode 1: DC 12V

Description : SURGE Test Setup



Test Mode : Mode 1: DC 12V

Description : SURGE Test Setup-LAN



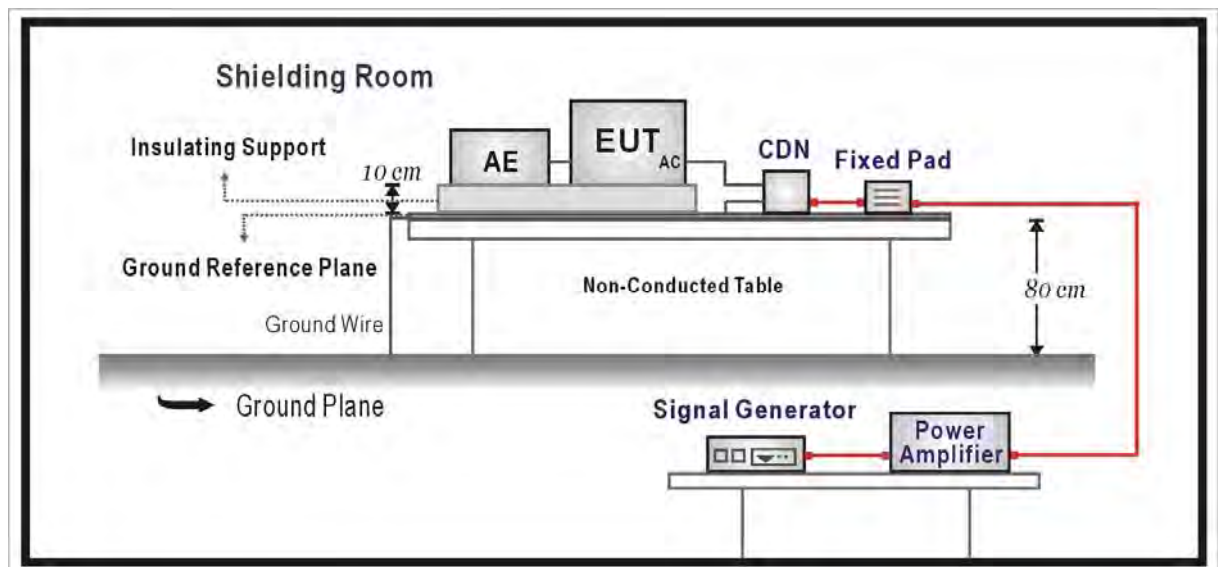
6.7 Radio frequency interference susceptibility test (Conducted susceptibility)

Test Specification

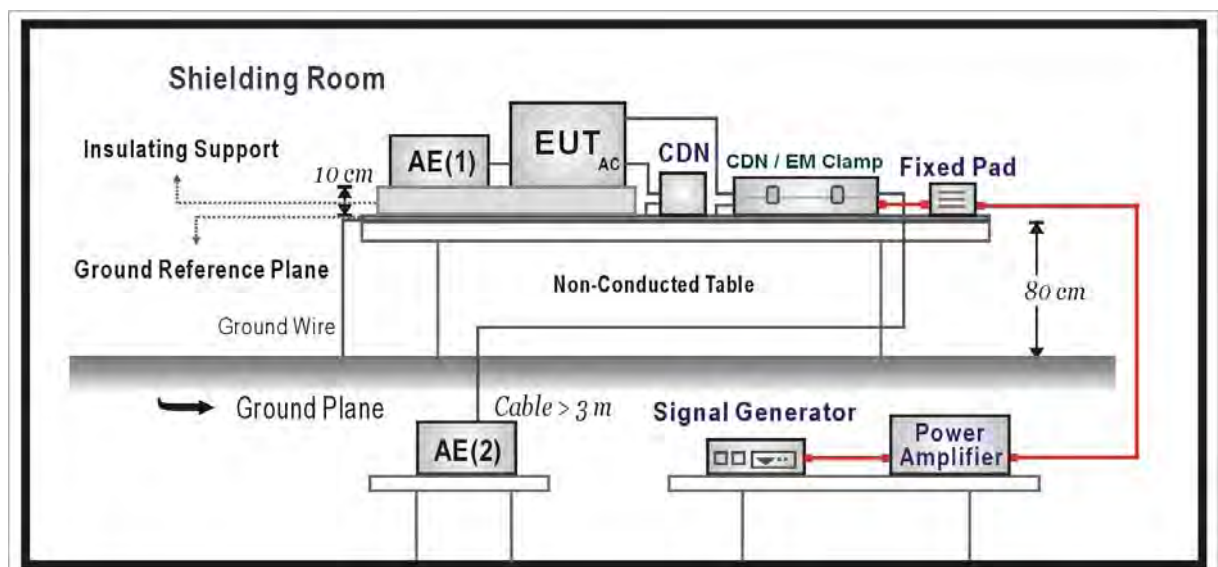
According to EN 50121-3-2 standard.

Test Setup

CDN Test Mode



EM Clamp Test Mode



Limit

Item	Environmental Phenomena	Units	Test Specification	Performance Criteria
Signal Ports and Telecommunication Ports				
	Radio-Frequency Continuous Conducted	MHz V (rms, Un-modulated) % AM (1kHz)	0.15-80 10 80	A
Input DC Power Ports				
	Radio-Frequency Continuous Conducted	MHz V (rms, Un-modulated) % AM (1kHz)	0.15-80 10 80	A
Input AC Power Ports				
	Radio-Frequency Continuous Conducted	MHz V (rms, Un-modulated) % AM (1kHz)	0.15-80 10 80	A

Test Procedure

The EUT are placed on a table that is 0.8 meter height, and a Ground reference plane on the table, EUT are placed upon table and use a 10cm insulation between the EUT and Ground reference plane.

For Signal Ports and Telecommunication Ports

The disturbance signal is through a coupling and decoupling networks (CDN) or EM-clamp device couples to the signal and Telecommunication lines of the EUT.

For Input DC and AC Power Ports

The EUT is connected to the power mains through a coupling and decoupling networks for power supply lines. And directly couples the disturbances signal into EUT.

Used CDN-M2 for two wires or CDN-M3 for three wires.

All the scanning conditions are as follows:

Condition of Test	Remarks
1. Field Strength	140dB μ V(10V) Level 3
2. Radiated Signal	AM 80% Modulated with 1kHz
3. Scanning Frequency	0.15MHz – 80MHz
4. Dwell Time	3 Seconds

Deviation from Test Standard

No deviation.

Test Result

Product	Network Camera		
Test Item	Conducted susceptibility		
Test Mode	Mode 1: DC 12V		
Date of Test	2017/02/14	Test Site	No.6 Shielded Room

Frequency Range (MHz)	Voltage Applied dBuV(V)	Inject Method	Tested Port of EUT	Required Criteria	Performance Criteria Complied To	Result
0.15~80	140 (10V)	CDN	AC IN	A	A	PASS
0.15~80	140 (10V)	CDN	LAN	A	A	PASS
0.15~80	140 (10V)	Clamp	DI/DO	A	A	PASS

Note:

The testing performed is from lowest level up to the highest level as required by standard, but only highest level is shown on the report.

- ☒ Meet criteria A : Operate as intended during and after the test
- ☐ Meet criteria B : Operate as intended after the test
- ☐ Meet criteria C : Loss/Error of function
- ☐ Additional Information
 - ☐ EUT stopped operation and could / could not be reset by operator at _____ dBuV(V) at frequency _____MHz.
 - ☒ No false alarms or other malfunctions were observed during or after the test. The acceptance criteria were met, and the EUT passed the test.

Product	Network Camera		
Test Item	Conducted susceptibility		
Test Mode	Mode 2: PoE		
Date of Test	2017/02/14	Test Site	No.6 Shielded Room

Frequency Range (MHz)	Voltage Applied dBuV(V)	Inject Method	Tested Port of EUT	Required Criteria	Performance Criteria Complied To	Result
0.15~80	140 (10V)	CDN	LAN	A	A	PASS
0.15~80	140 (10V)	Clamp	DI/DO	A	A	PASS

Note:

The testing performed is from lowest level up to the highest level as required by standard, but only highest level is shown on the report.

- ☒ Meet criteria A : Operate as intended during and after the test
- ☐ Meet criteria B : Operate as intended after the test
- ☐ Meet criteria C : Loss/Error of function
- ☐ Additional Information
 - ☐ EUT stopped operation and could / could not be reset by operator at ____ dBuV(V) at frequency ____MHz.
 - ☒ No false alarms or other malfunctions were observed during or after the test. The acceptance criteria were met, and the EUT passed the test.

Test Photograph

Test Mode : Mode 1: DC 12V

Description : Conducted Susceptibility Test Setup



Test Mode : Mode 1: DC 12V

Description : Conducted Susceptibility Test Setup-CDN



Test Mode : Mode 2: PoE

Description : Conducted Susceptibility Test Setup-CDN



7 Attachment

➤ EUT Photograph

(1) EUT Photo_MD8565-N (3.6mm)



(2) EUT Photo_MD8565-N (3.6mm)



(3) EUT Photo_MD8565-N (3.6mm)



(4) EUT Photo_MD8565-N (2.8mm)



(5) EUT Photo_MD8565-N (2.8mm)



(6) EUT Photo_MD8565-N (2.8mm)



8 Environmental Tests

➤ Appendix A

C5.01-V16025_可靠度實驗報告-MD8565-N-cover

Project: G0. 品質工程組

By QA-Test (共用帳號), 4/12/2017 5:00 PM

Model No.	MD8565-N				
Report No.	QRP-1709	Project No.	V16025	Ver.	1.0
Author	Ruru.Tsai		Approved by	Maggie.Wang	

1. Purpose:

1.1 Verify mainly the operation status of DUT under the temperature environment.

1.2 Simulating the whole structure of DUT on the transit environment.

2. Summary.

NO.	Test Item	Reference	Result	Page	Remark
1	Operational Cold Test	IEC-60068-2-1 test A	Passed	1	
2	Operational Damp Heat Steady State Test	IEC-60068-2-78	Passed	5	
3	Operational Temperature Cycles Test	IEC-60068-2-14	Passed	9	
4	Package Storage Test	IEC-60068-2-48	Passed	13	
5	Package Dropping Test	ISTA 2A	Passed	23	
6	Package Vibration Test	IEC-60068-2-64	Passed	34	
7	Non-Operational Random Vibration Test(IEC-61373)	IEC-61373 category 1Class b	Passed	45	
8	Operational Random Vibration Test(IEC-61373)	IEC-61373 category 1Class b	Passed	50	
9	Operational Shock Test(IEC-61373)	IEC-61373 category 1Class b	Passed	55	
10	Dry Heat Test(EN50155)	IEC-60068-2-2/EN50155	Passed	61	
11	Operational Damp Heat Cyclic Test (EN50155)	Can't match case name from suite to json.	Passed	65	
12	Low Temperature Storage Test(EN50155)	IEC-60068-2-1/EN50155	Passed	69	

C5.01-V16025_可靠度試驗報告-MD8565-N

Project: G0. 品質工程組

By QA-Test (共用帳號), 4/12/2017 3:45 PM

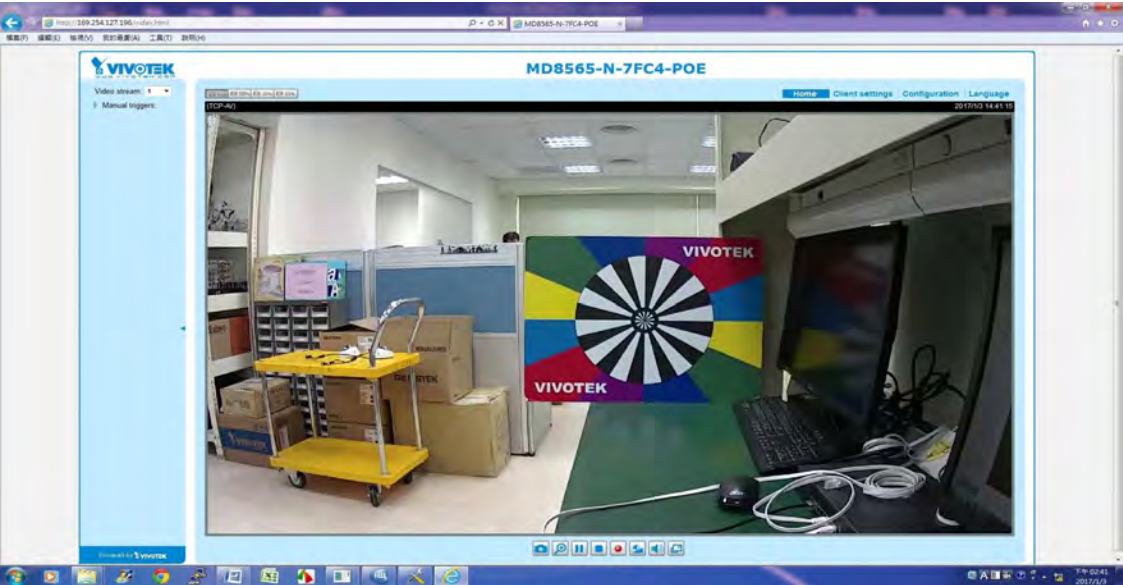
Test item	Operational Cold Test	Duration	12/26/2016 ~12/30/2016
Place	Laboratory of Quality Assurance in		
Except Report No.		N/A	
Equipment			
Temperature & Humidity Chamber	Brand	TAICHY TECHNOLOGY LTD	
	Model	MHK-408NK	
	S/N	1030308	
Personal Computer	Operation System	Microsoft Windows	7
	Browser	Microsoft Internet Explorer	9.050123
PoE Switch	Brand	YODA	
	Model	PS800GA	
Test Condition & Pcedure			
1. Humidity: Uncontrolled. 2. Cold start condition: -35 °C. Dwell for 24 hours or more than 24 hours . Depending on the the test times. 3. Decrease to Cold test condition within 4 hours power off then power on 1hour. Repeat ? times. 4. After cold star test, Power the camera on. 5. Decrease to -35 °C .Dwell for 72 hours. Run Ping test. 6. Increase to 25 °C .Dwell for 2 hours. Leave product in the chamber, Run Function test.			
Power Supply	DC 12V , PoE Switch		
Specimens	0002D1517FC4	0002D1517FC5	
Judgment Criteria	1. It doesn't have bad image, fogging, discoloration or reboot..etc. in during this test. 2. Wire Ping loss is less than 1%; wireless Ping loss is less than 10%. 3. The specimens electrical function are normal.(Please see Function test list) 4. The specimen doesn't have deformation of the housing.		
Result	Passed		

Environment

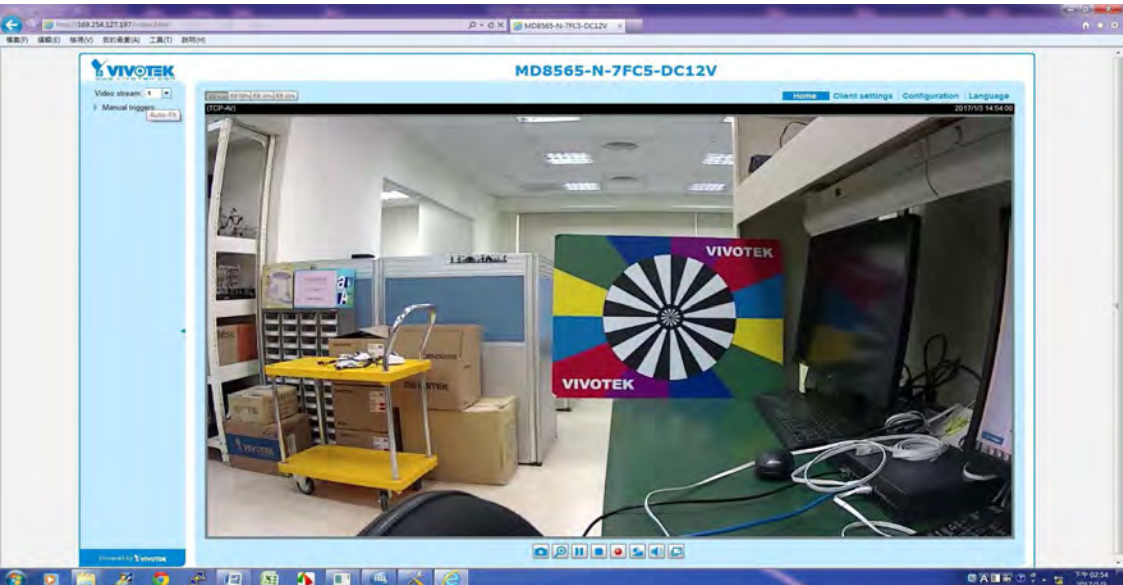


Test Image

MAC00021517FC4



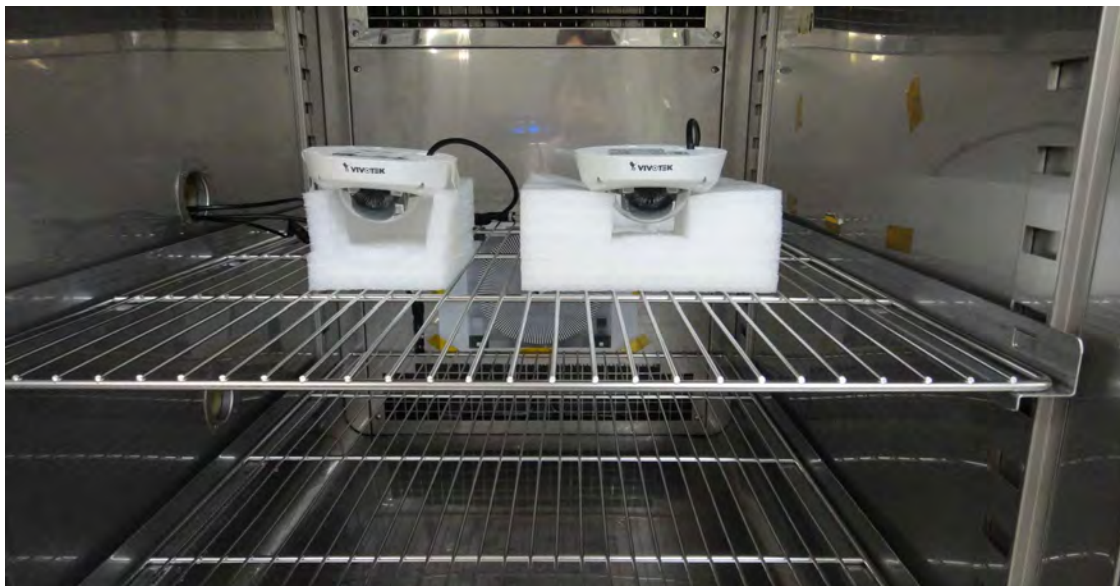
MAC00021517FC5

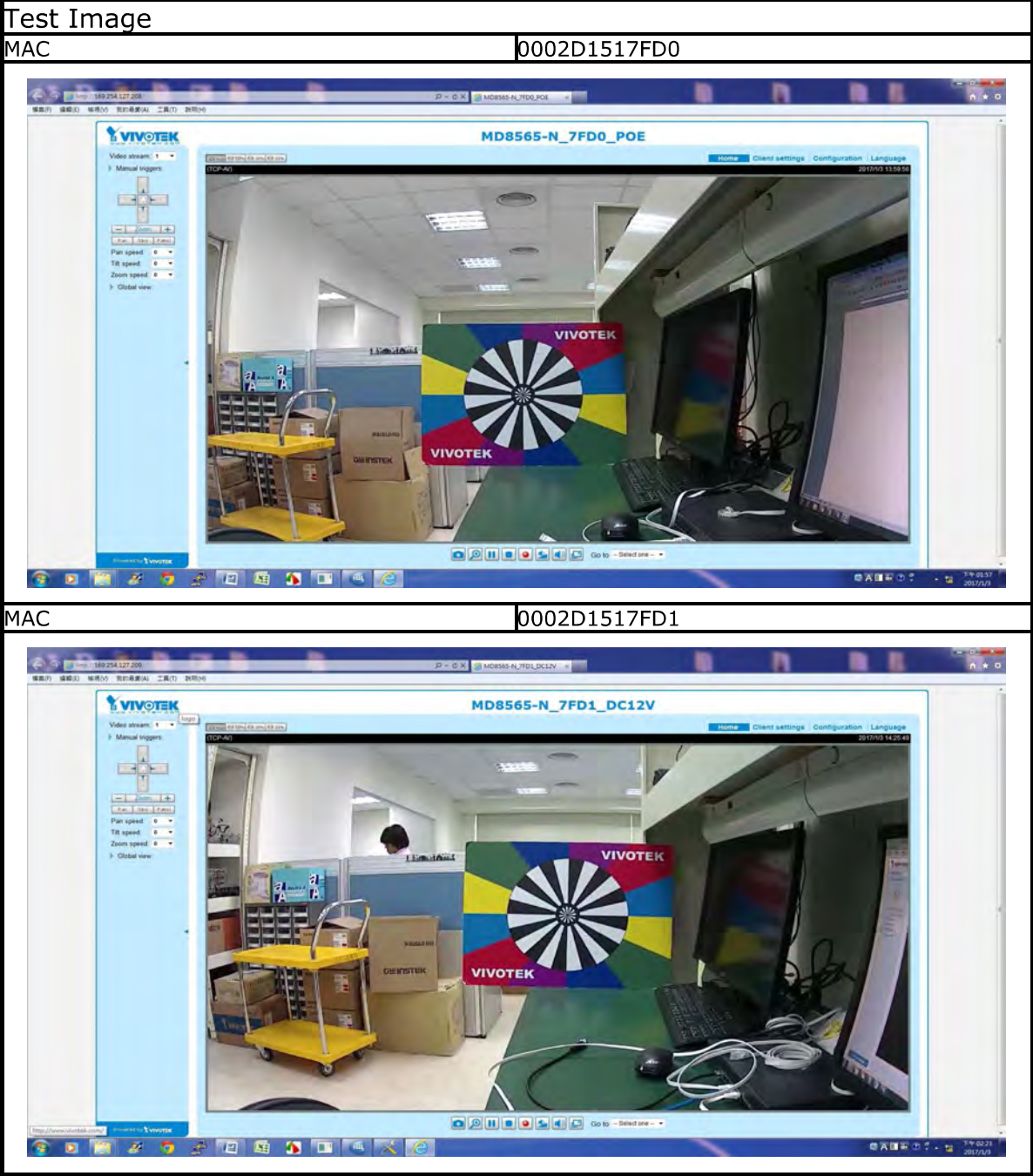


Function Test Item	Judgment	Remark
Appearance(check Peel,deformation,Dust)	NO Damage	
Network	PASS	
Update server setting	PASS	
Light Sensor Night	PASS	
Storage card	PASS	
DIDO	PASS	
Status LED	PASS	
Reset button	PASS	
Light Sensor Day	PASS	
Video	PASS	
Audio	PASS	
IR-Cut	PASS	
IR-LED	PASS	
DC 12V	PASS	
PoE Switch	PASS	

Test item	Operational Damp Heat Steady State Test	Duration	12/30/2016 ~1/2/2017
Place	Laboratory of Quality Assurance in		
Except Report No.	N/A		
Equipment			
Temperature & Humidity Chamber	Brand	TAICHY TECHNOLOGY LTD	
	Model	MHK-408NK	
	S/N	1030308	
Personal Computer	Operation System	Microsoft Windows	7
	Browser	Microsoft Internet Explorer	9.050123
PoE Switch	Brand	YODA	
	Model	PS800GA	
Test Condition & Pcedure			
1. Humidity: 95%RH. 2. Power the camera on. 3. Increase to 60 °C. Dwell for 48 hours. Run Ping test. 4. Decrease to 25 °C .Dwell for 2 hours. Leave product in the chamber, Run Function test.			
Power Supply	DC 12V , PoE Switch		
Specimens	00002D1517FD0	00002D1517FD1	
Judgment Criteria	1. It doesn't have bad image, fogging, discoloration or reboot..etc. in during this test. 2. Wire Ping loss is less than 1%; wireless Ping loss is less than 10%. 3. The specimens electrical function are normal.(Please see Function test list) 4. The specimen doesn't have deformation of the housing.		
Result	Passed		

Environment



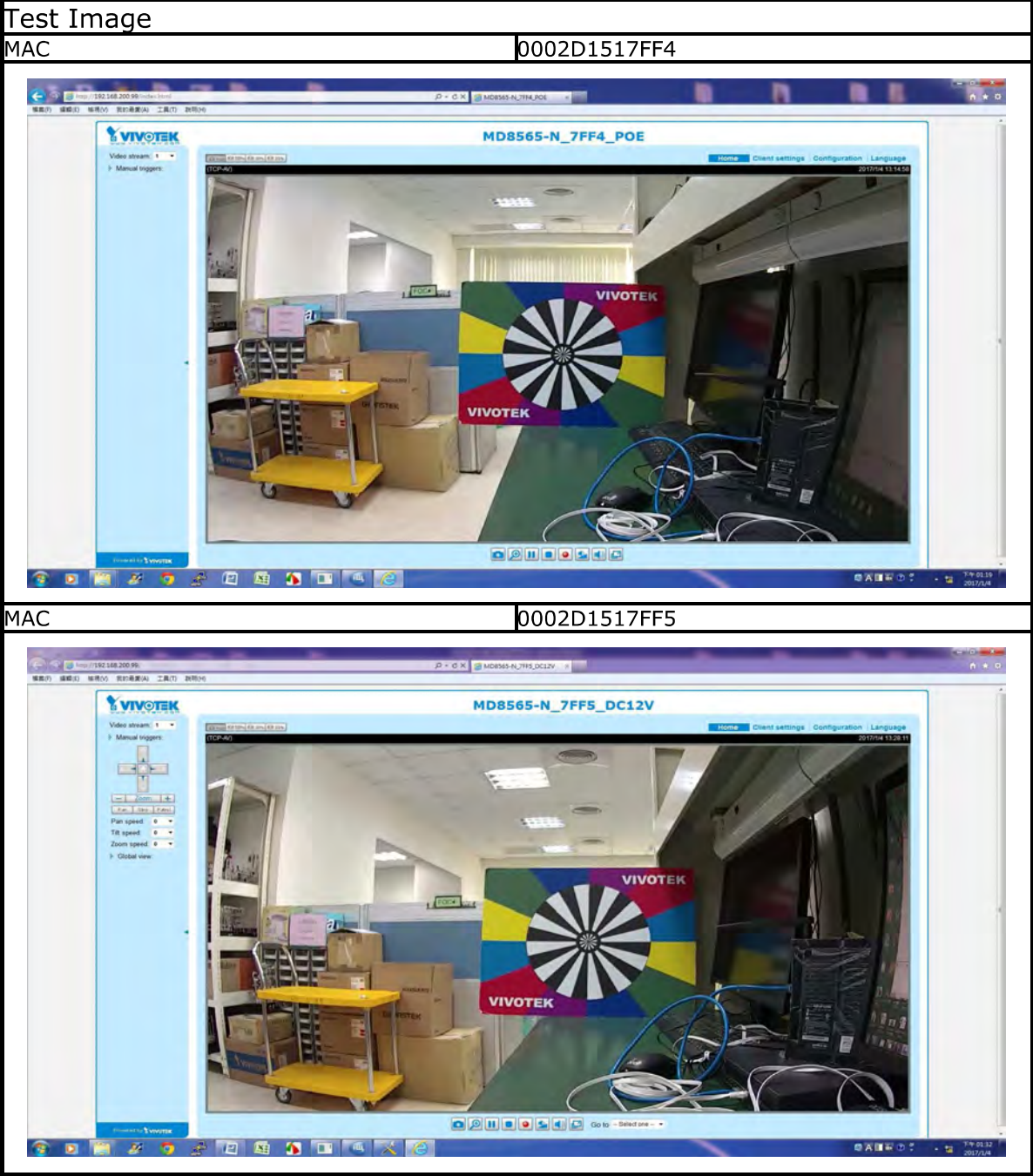


Function Test Item	Judgment	Remark
Appearance(check Peel,deformation,Dust)	NO Damage	
Network	PASS	
Update server setting	PASS	
Light Sensor Night	PASS	
Storage card	PASS	
DIDO	PASS	
Status LED	PASS	
Reset button	PASS	
Light Sensor Day	PASS	
Video	PASS	
Audio	PASS	
IR-Cut	PASS	
IR-LED	PASS	
DC 12V	PASS	
PoE Switch	PASS	

Test item	Operational Temperature Cycles Test	Duration	12/29/2016 ~1/2/2017
Place	Laboratory of Quality Assurance in		
Except Report No.	N/A		
Equipment			
Temperature & Humidity Chamber	Brand	TAICHY TECHNOLOGY LTD	
	Model	MHK-408NK	
	S/N	1020625	
Personal Computer	Operation System	Microsoft Windows	7
	Browser	Microsoft Internet Explorer	9.050123
PoE Switch	Brand	CISCO	
	Model	SG-300-10MP	
Test Condition & Pocedure			
1. Humidity: Uncontrolled. 2. Power the camera on. 3. Decrease to -30 °C. Dwell for 4 hours. 4. Increase to 60 °C. Dwell for 4 hours. 5. Repeat cycles ? times. 6. Decrease to 25 °C .Dwell for 2 hours. Leave product in the chamber, Run Function test.			
Power Supply	DC 12V , PoE Switch		
Specimens	0002D1517FF4	0002D1517FF5	
Judgment Criteria	1. It doesn't have bad image, fogging, discoloration or reboot..etc. in during this test. 2. Wire Ping loss is less than 1%; wireless Ping loss is less than 10%. 3. The specimens electrical function are normal.(Please see Function test list) 4. The specimen doesn't have deformation of the housing.		
Result	Passed		

Environment



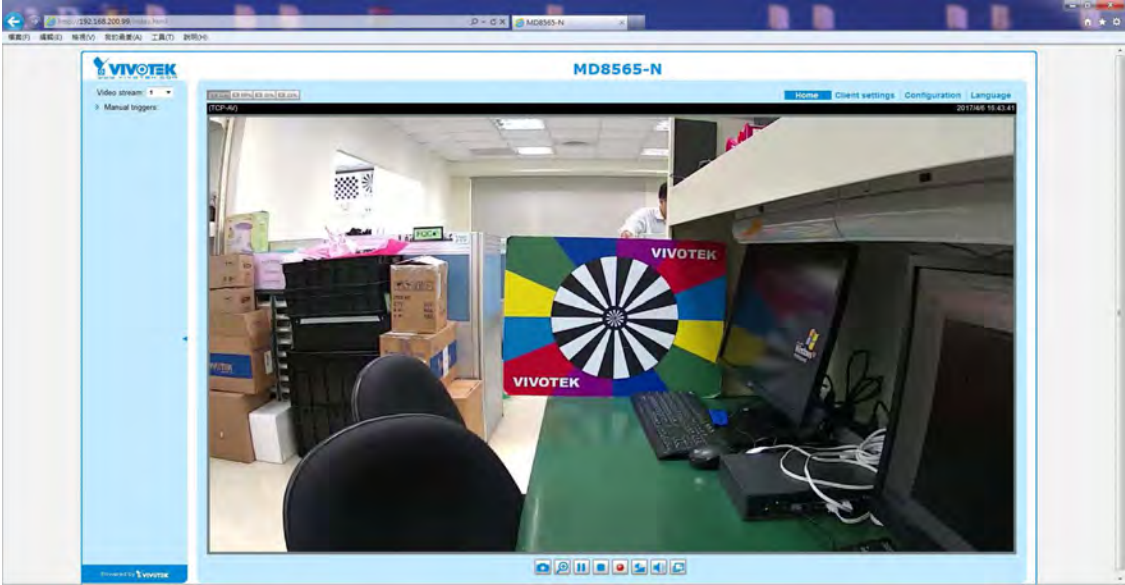
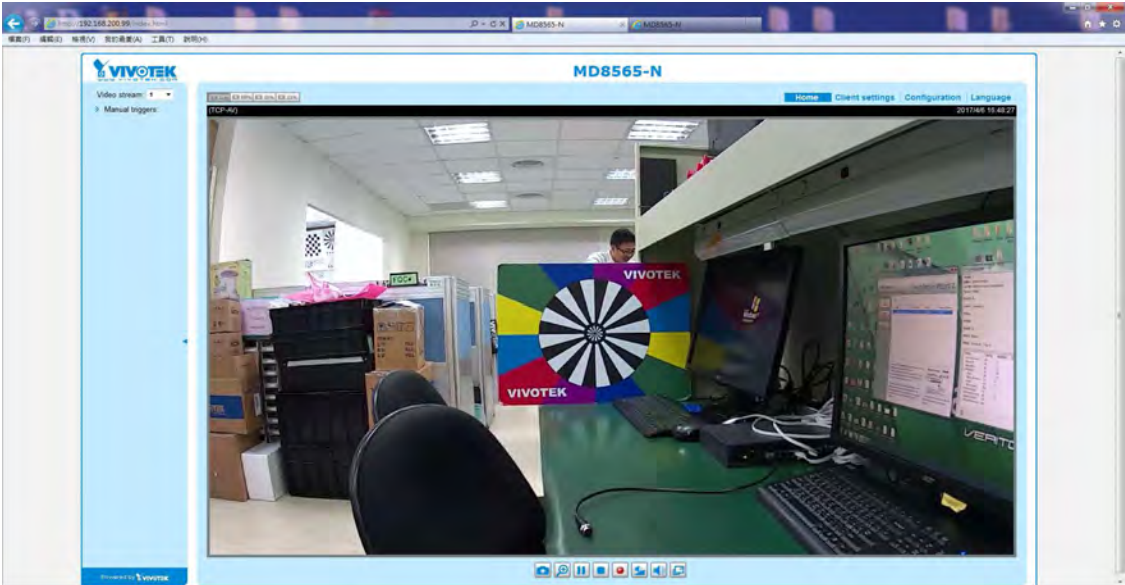
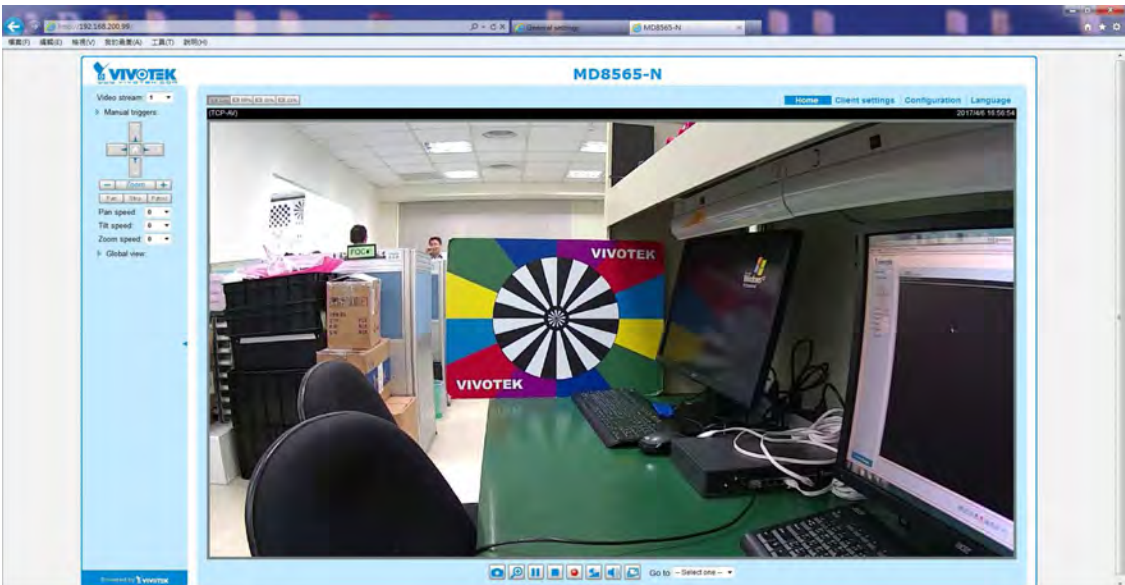


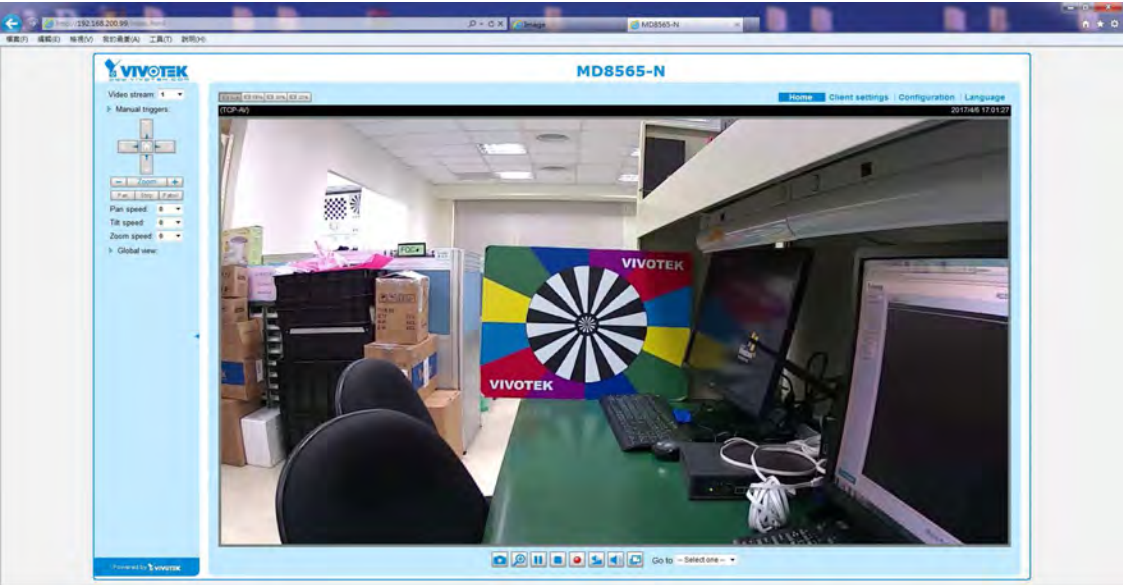
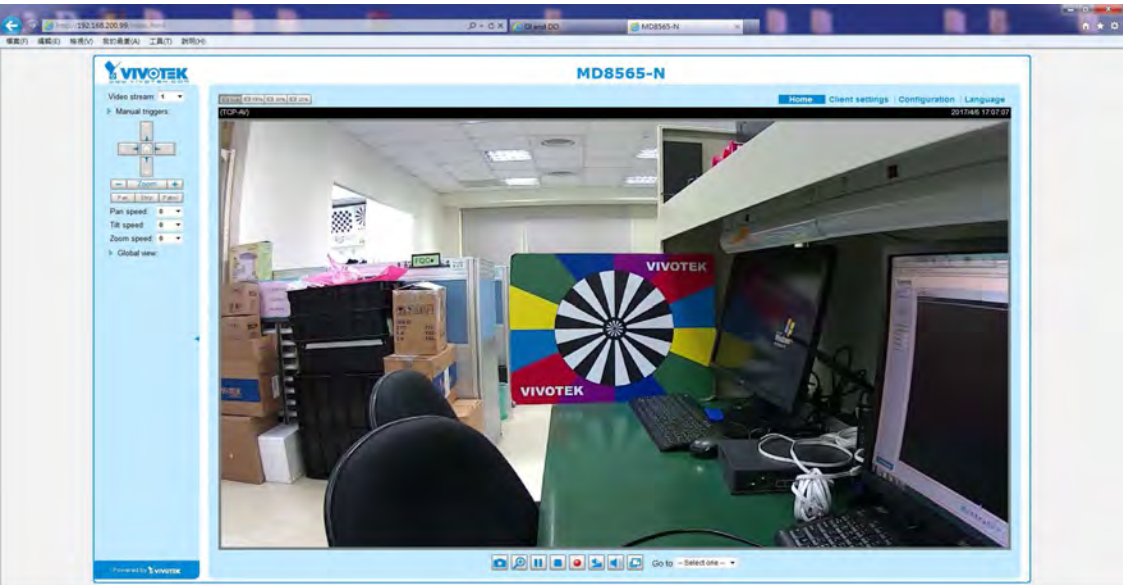
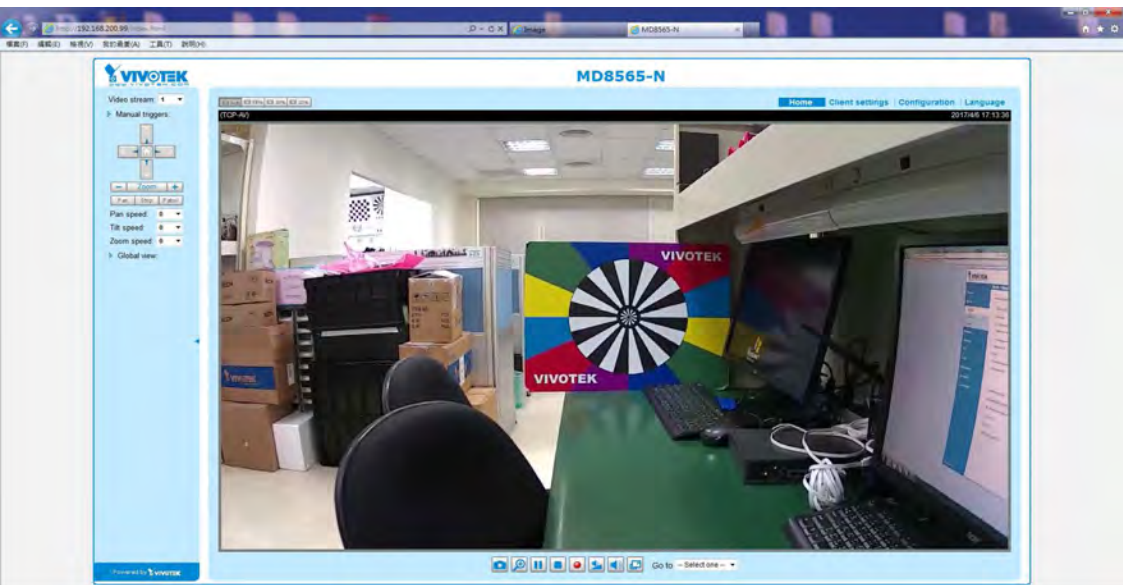
Function Test Item	Judgment	Remark
Appearance(check Peel,deformation,Dust)	NO Damage	
Network	PASS	
Update server setting	PASS	
Light Sensor Night	PASS	
Storage card	PASS	
DIDO	PASS	
Status LED	PASS	
Reset button	PASS	
Light Sensor Day	PASS	
Video	PASS	
Audio	PASS	
IR-Cut	PASS	
IR-LED	PASS	
DC 12V	PASS	
PoE Switch	PASS	

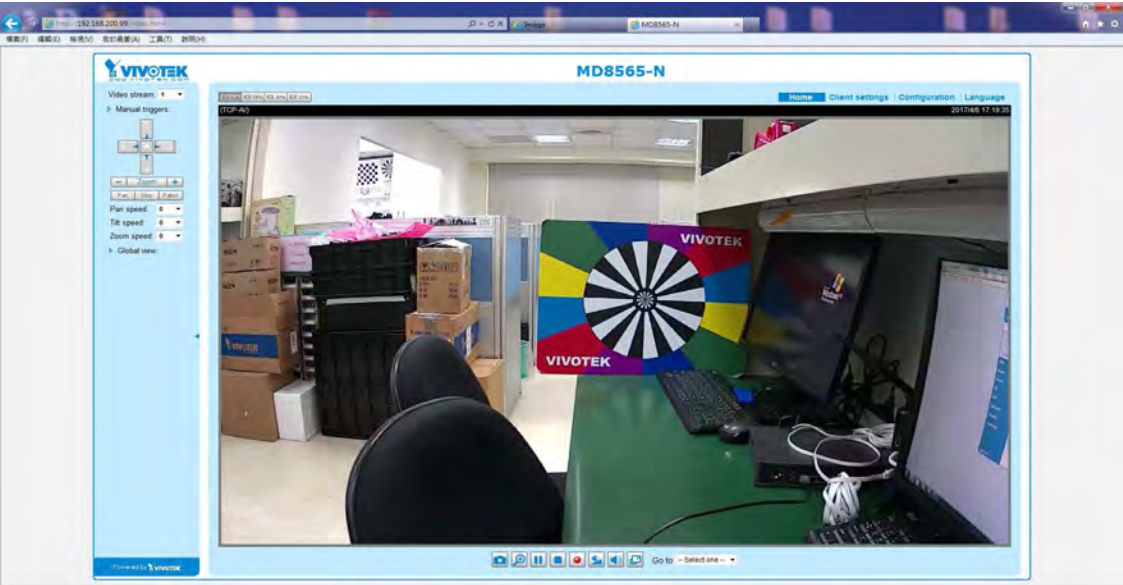
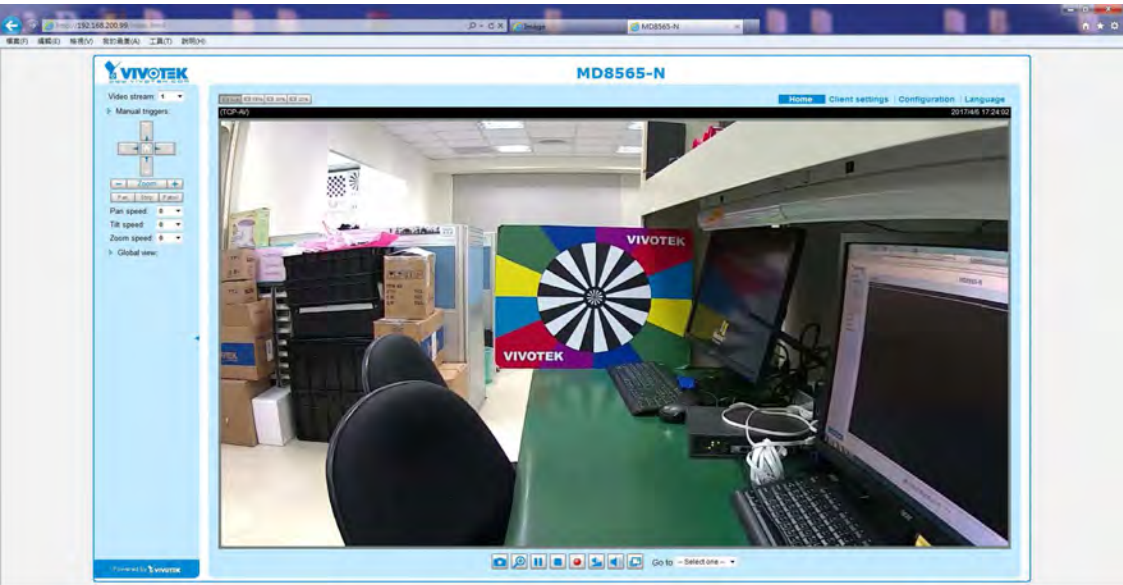
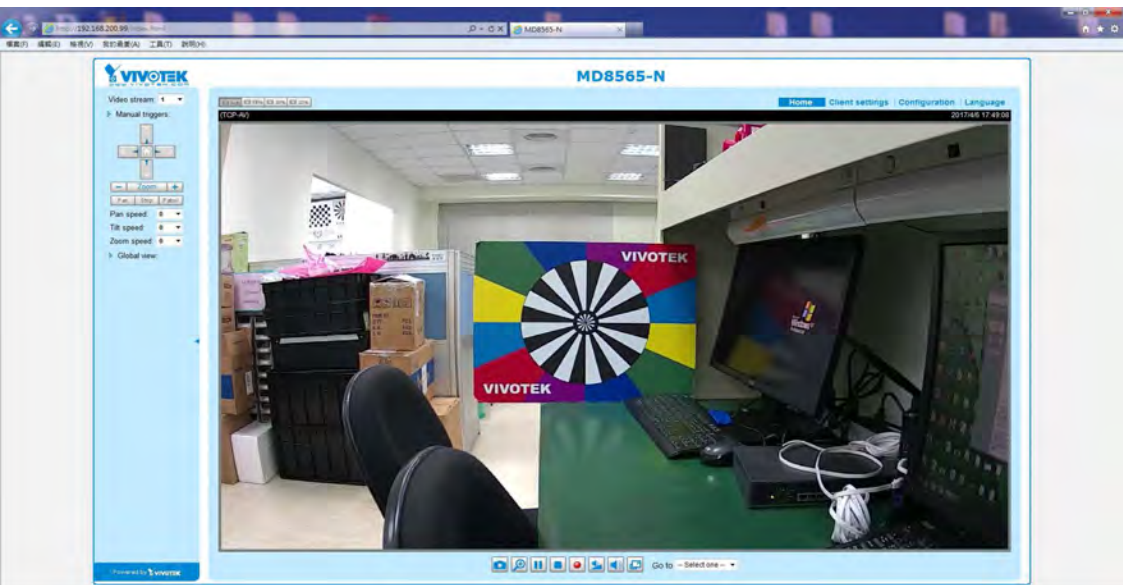
Test item	Package Storage Test	Duration	3/30/2017 ~4/5/2017	
Place	Laboratory of Quality Assurance in			
Except Report No.		N/A		
Equipment				
Personal Computer	Operation System	Microsoft Windows	7	
	Browser	Microsoft Internet Explorer	9.050123	
Test Condition & Pocerure				
Weight Plate Master Carton 1. Decrease to -25°C Dwell for 48Hrs 2. Increase to 60°C(Humidity 80%RH).Dwell for 48Hrs 3. Put the Master Carton into the chamber. Place expected loading weight on the carton. 4. To put a plate on between the carton and weight to avoid to concentrate the load on the center of carton top. Weight=(120cm/"Master Carton Height")* "Master Carton Weight"- "Pate weight (5Kg)" 5. Run the function test after test.				
Specimens	00002D156ABC9	00002D156ABCA	00002D156ABCB	00002D156ABCC
	00002D156ABCD	00002D156ABCE	00002D156ABCF	00002D156ABD0
	00002D156ABD1	00002D156ABD2	00002D156ABD3	00002D156ABD4
	00002D156ABD5	00002D156ABD6	00002D156ABD7	00002D156ABD8
	00002D156ABD9	00002D156ABDA	00002D156ABDB	00002D156ABDC
Judgment Criteria	1. It doesn't have bad image, fogging, discoloration or reboot..etc. 2. The specimens electrical function are normal.(Please see Function test list) 3. The specimen doesn't have deformation of the housing.			
Result	Passed			

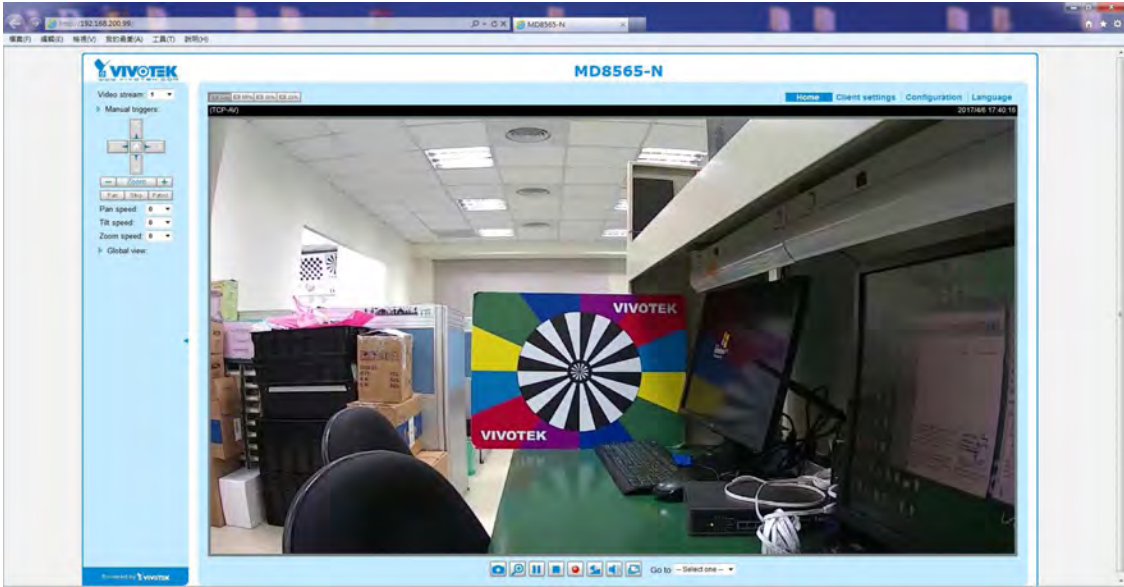
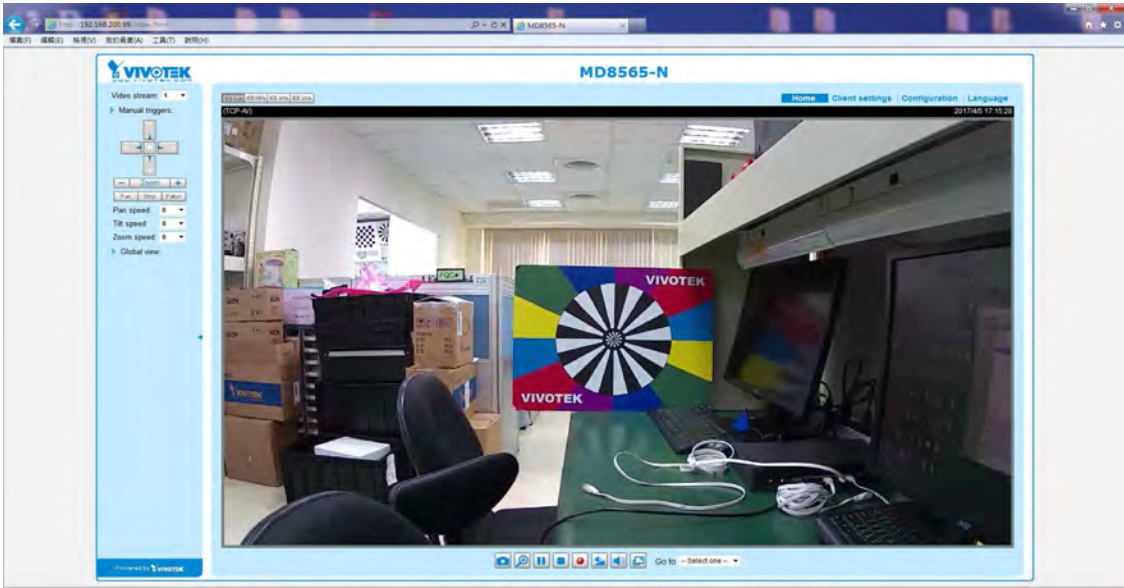
Environment

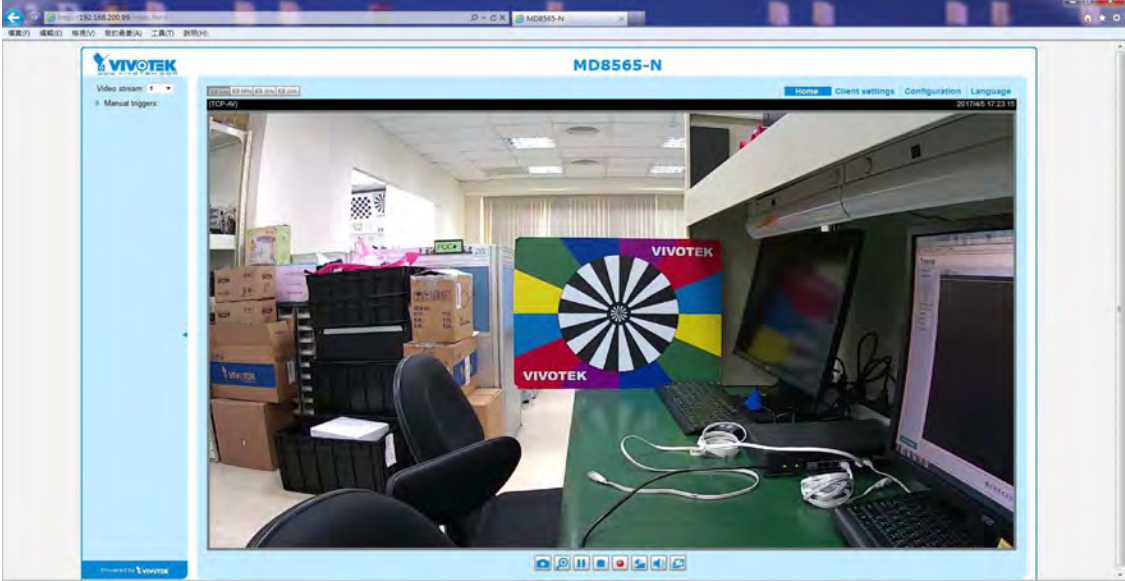
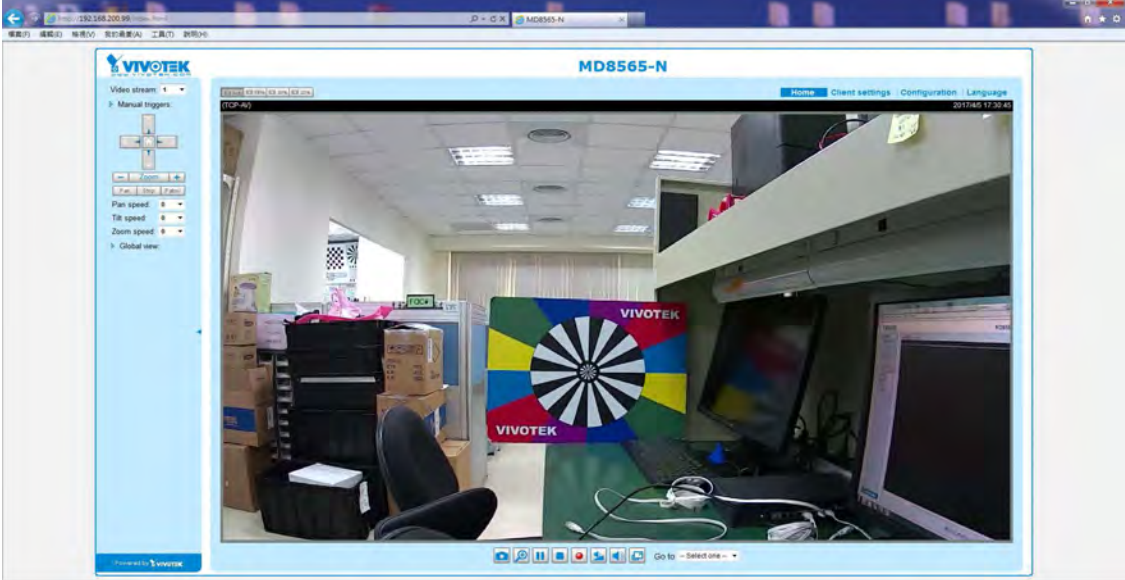
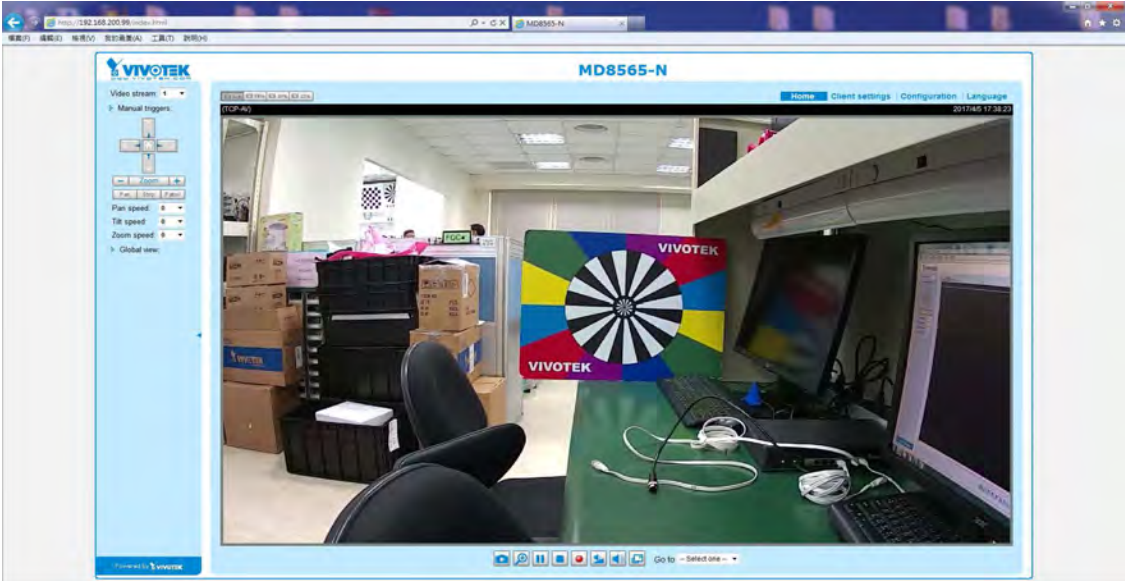


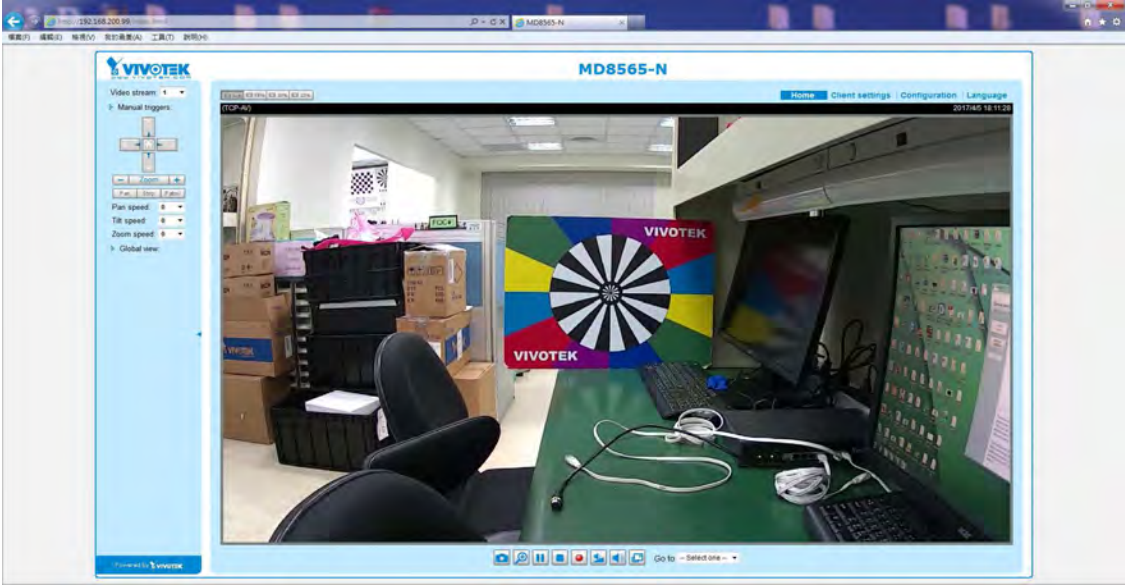
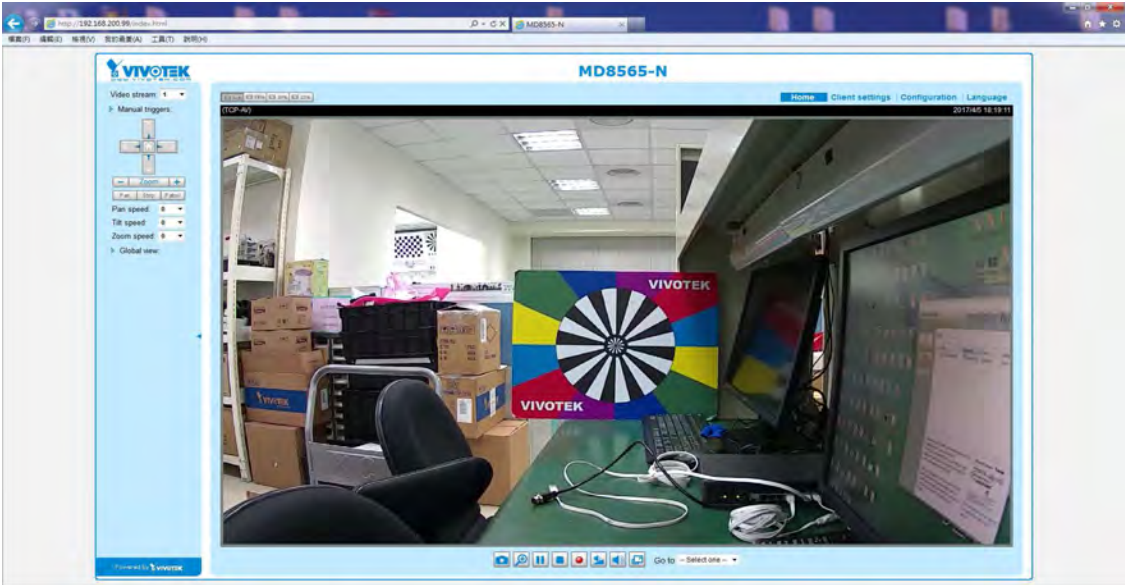
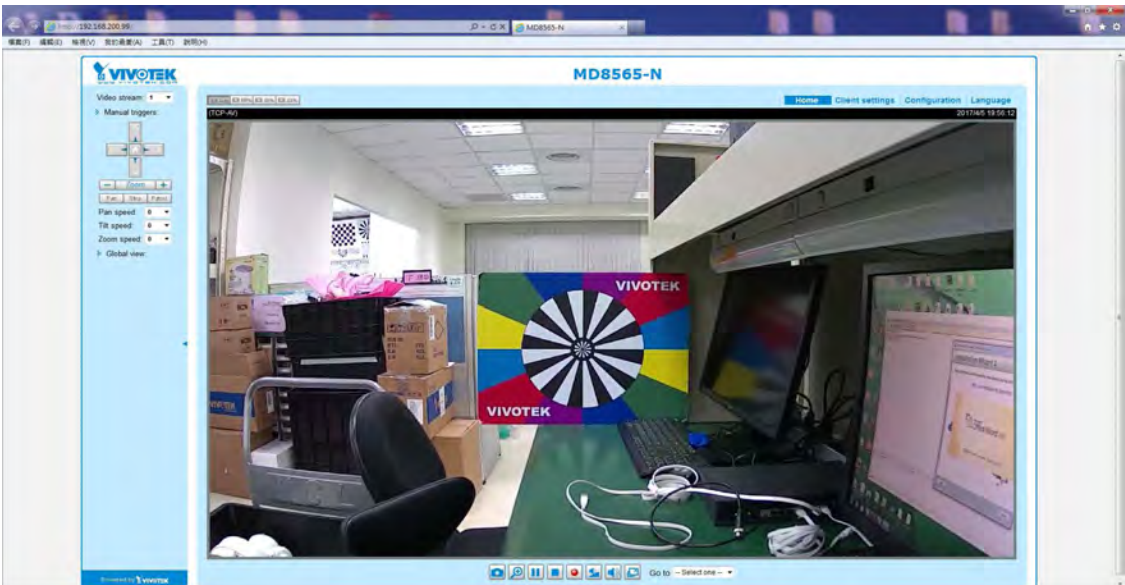
Test Image	
MAC	00002D156ABC9
	
MAC	00002D156ABCA
	
MAC	00002D156ABCB
	

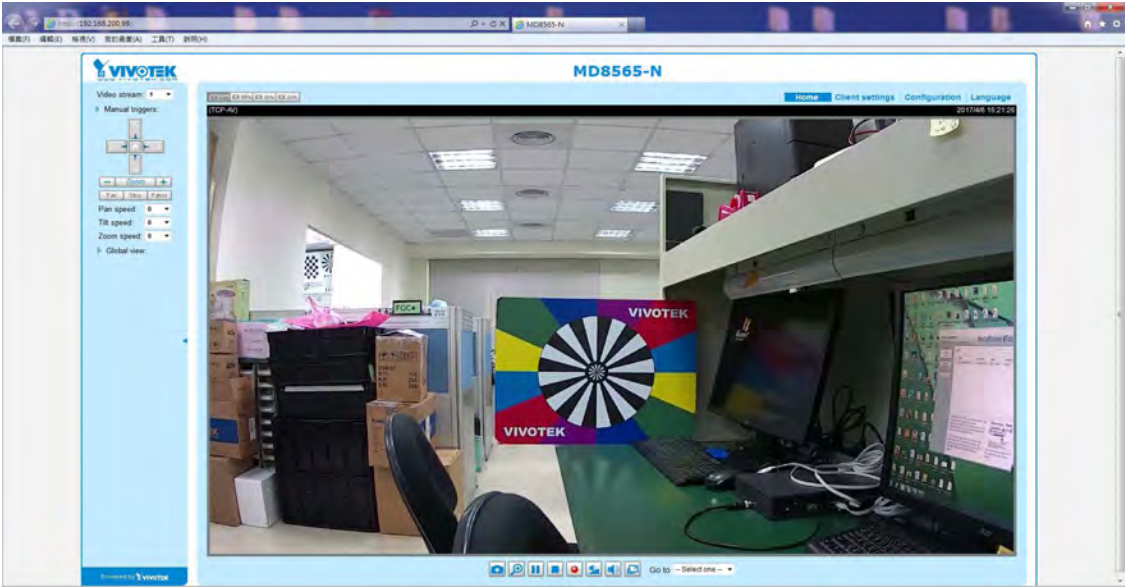
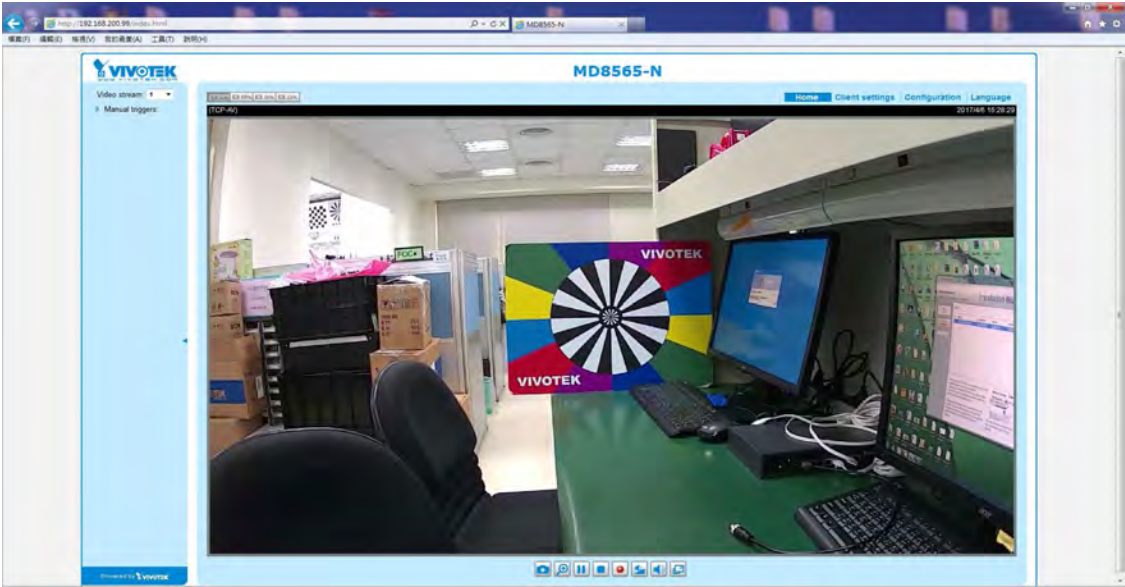
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MAC	00002D156ABCD
	
MAC	00002D156ABCE
	

Test Image	
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MAC	00002D156ABD0
	
MAC	00002D156ABD1
	

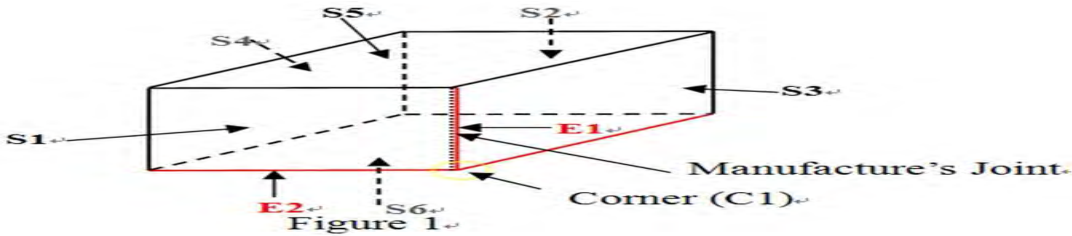
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Test Image	
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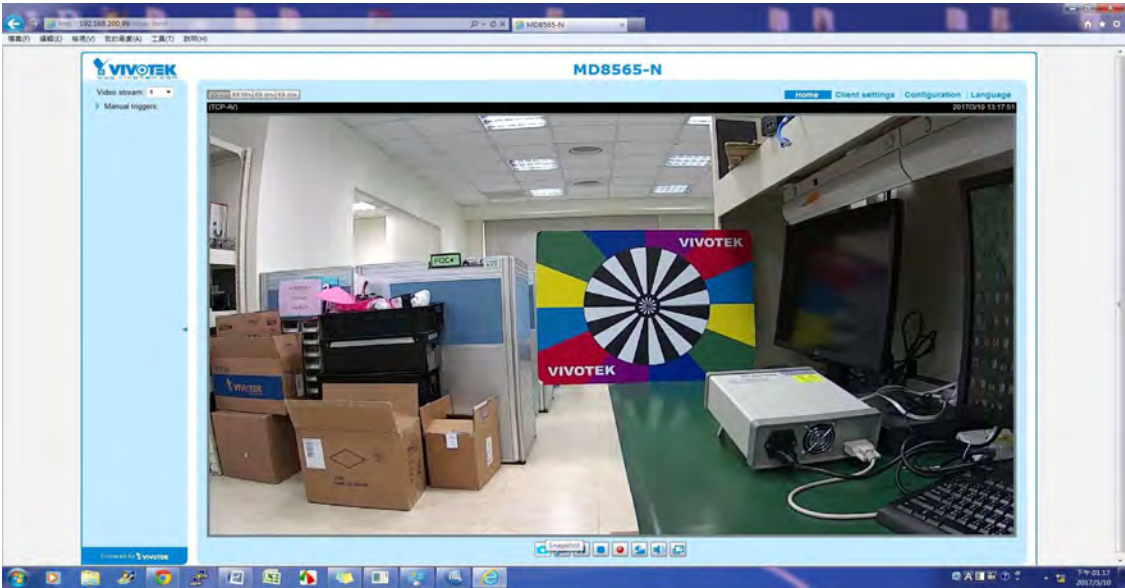
Test Image	
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MAC	00002D156ABD9
	
MAC	00002D156ABDA
	

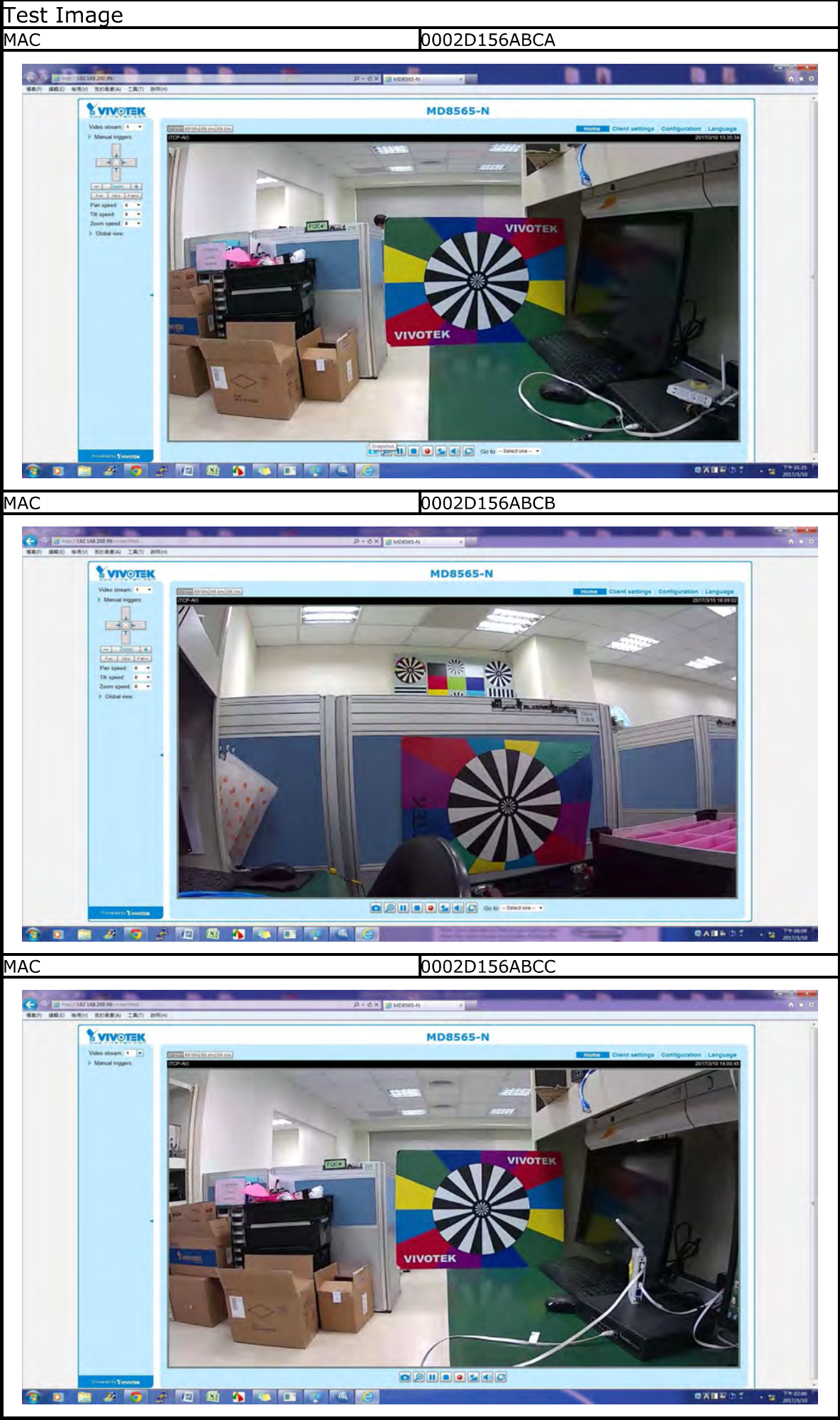
Test Image	
MAC	00002D156ABDB
	
MAC	00002D156ABDC
	

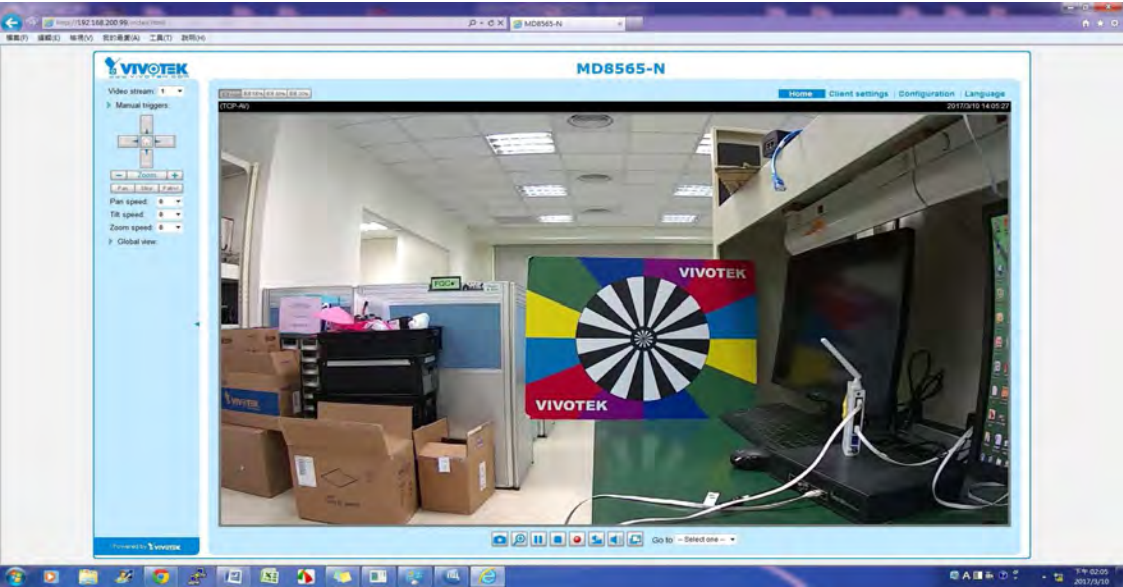
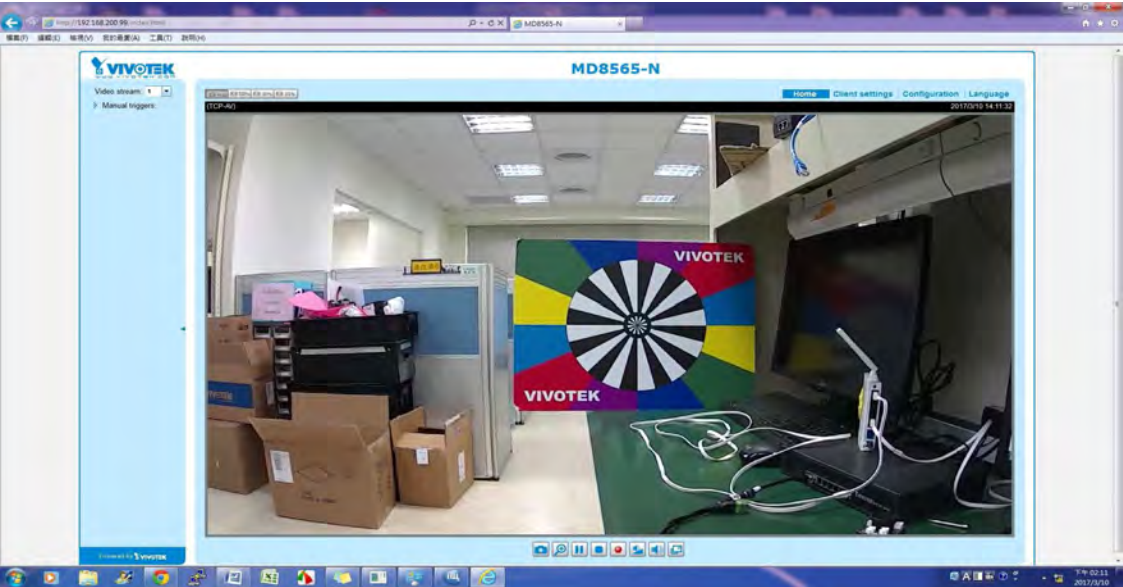
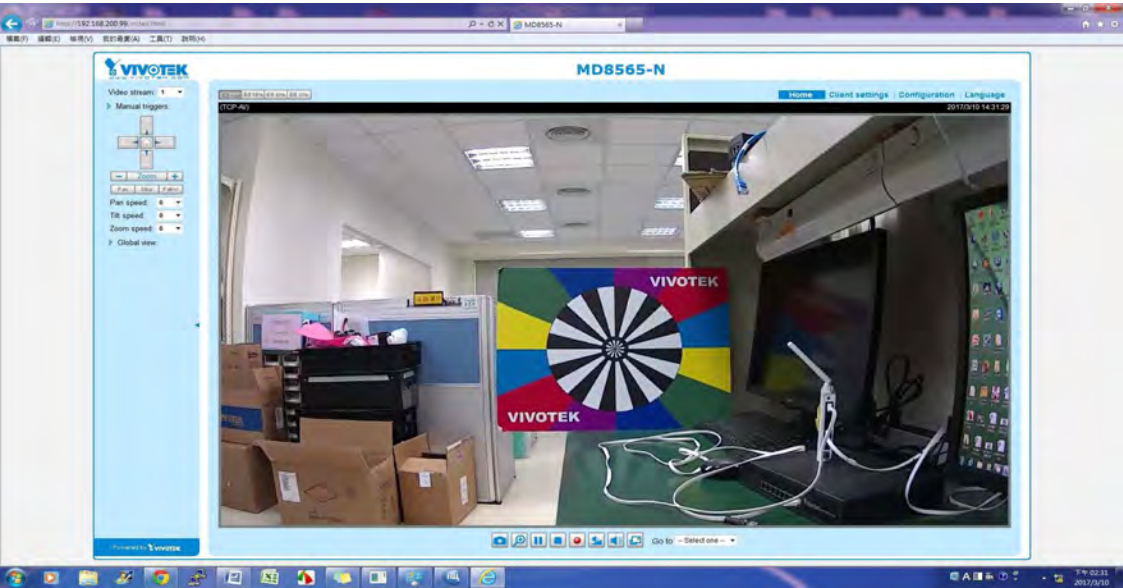
Function Test Item	Judgment	Remark
Appearance(check Peel,deformation,Dust)	NO Damage	
Network	PASS	
Update server setting	PASS	
Light Sensor Night	PASS	
Storage card	PASS	
DIDO	PASS	
Status LED	PASS	
Reset button	PASS	
Light Sensor Day	PASS	
Video	PASS	
Audio	PASS	
IR-Cut	PASS	
IR-LED	PASS	
DC 12V	PASS	
PoE Switch	PASS	

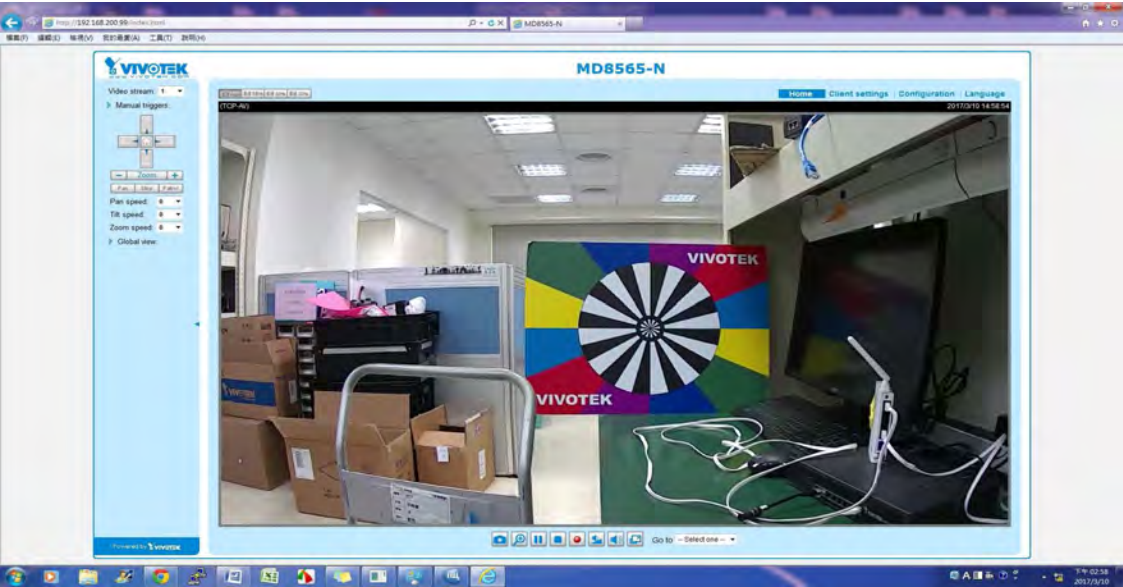
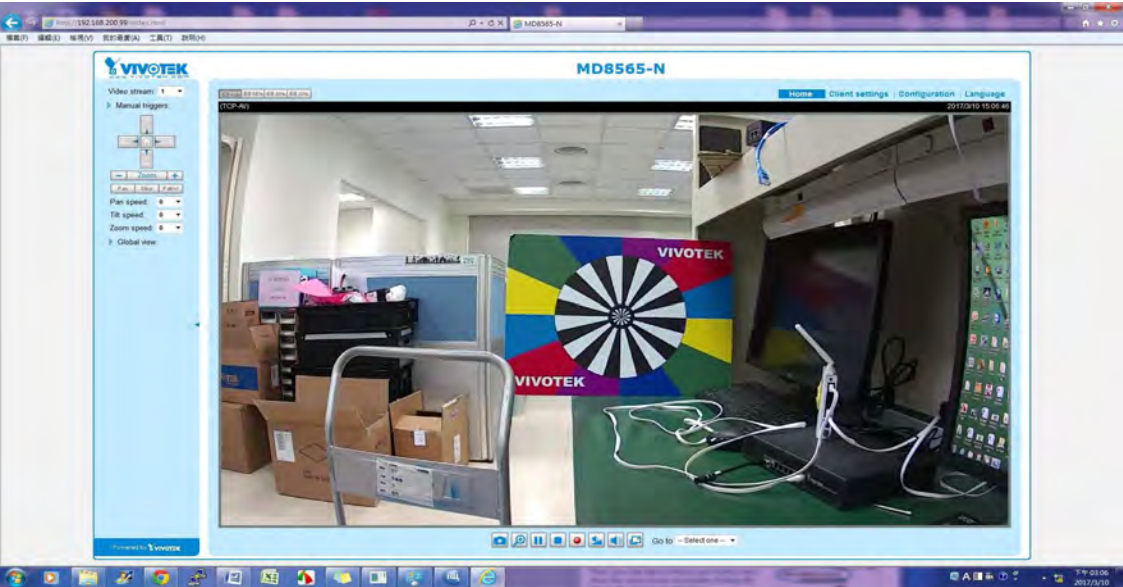
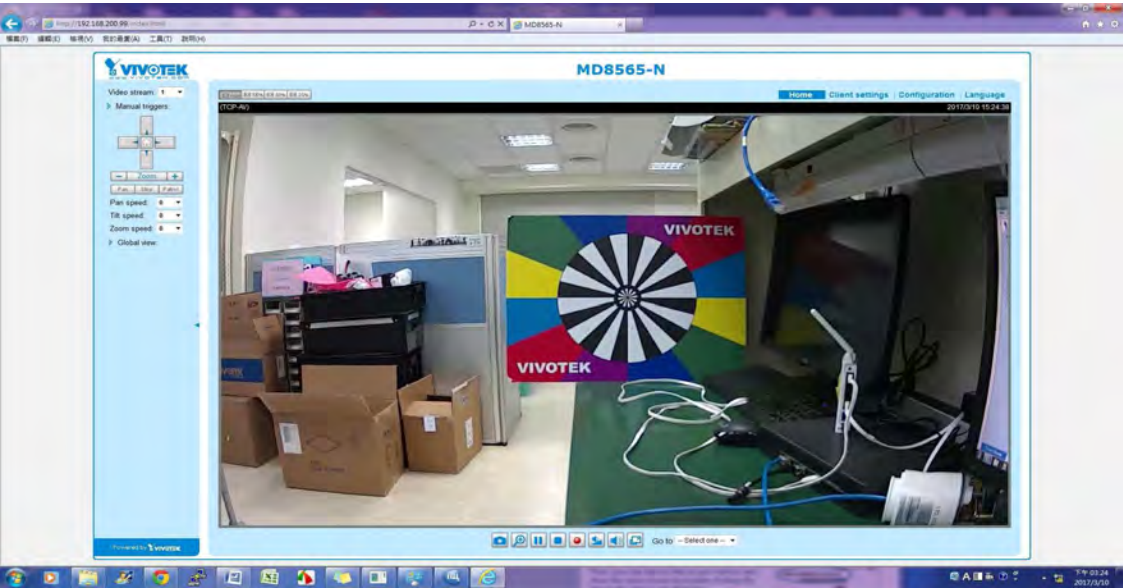
Test item	Package Dropping Test		Duration	3/9/2017 ~3/10/2017
Place	Laboratory of Quality Assurance in			MIVOTEK
Except Report No.		N/A		
Equipment				
Drop Tester	Brand	KING DESIGN		
	Model	KD-128AS		
	S/N	RB112229400		
Personal Computer	Operation System	Microsoft Windows	7	
	Browser	Microsoft Internet Explorer	9.050123	
Test Condition & Pcedure				
				
Condition:				
1. Specimen condition: Carton				
2. Specimen Weight: 13 kg				
3. Dropping Height: 81 cm				
4. Dropping target location: One corner, three edges, six faces				
Drop step:				
1. The weakest corner (C1) is manufacture's joint of DUT.				
2. The shortest edge (E1) radiating from the weakest corner of DUT.				
3. The next longest edge (E2) radiating from the weakest corner of DUT.				
4. The longest edge (E3) radiating from the weakest corner of DUT.				
5. S1 is smallest surface of DUT.				
6. S2 is opposite to S1 of DUT.				
7. S3 and S4 are sub-smaller of DUT.				
8. S5 is smallest surface of DUT.				
9. S6 is opposite to S5 of DUT.				
10. Run the function test after test.				
Specimens	0002D156ABC9	0002D156ABCA	0002D156ABCB	0002D156ABCC
	0002D156ABCD	0002D156ABCE	0002D156ABCF	0002D156ABD0
	0002D156ABD1	0002D156ABD2	0002D156ABD3	0002D156ABD4
	0002D156ABD5	0002D156ABD6	0002D156ABD7	0002D156ABD8
	0002D156ABD9	0002D156ABDA	0002D156ABDB	0002D156ABDC
Judgment Criteria	1. It doesn't have bad image, fogging, discoloration or reboot..etc. 2. The specimens electrical function are normal.(Please see Function test list) 3. The specimen doesn't have deformation of the housing.			
Result	Passed			

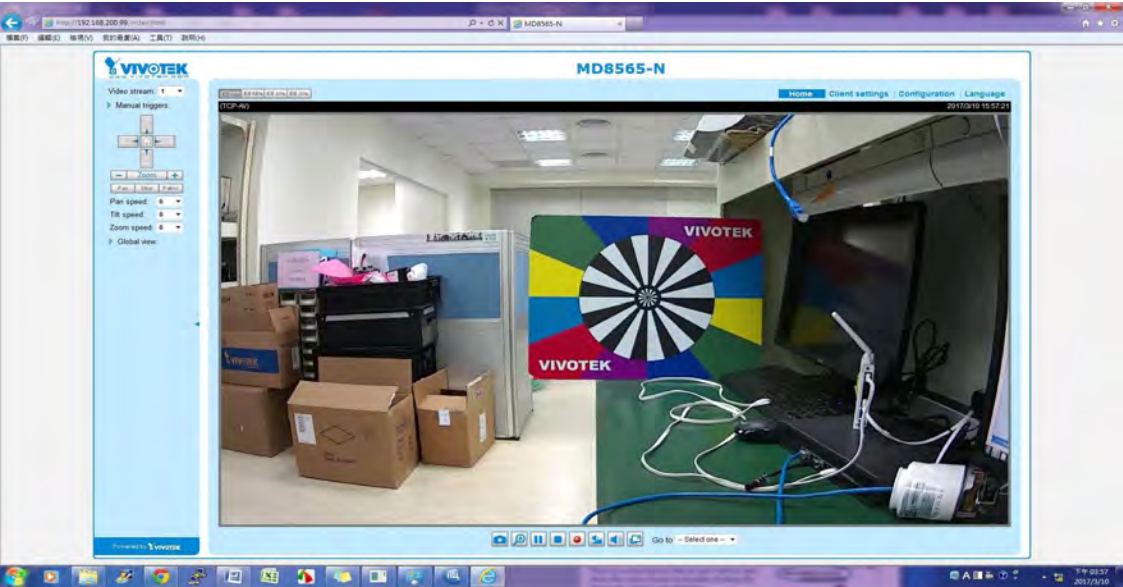
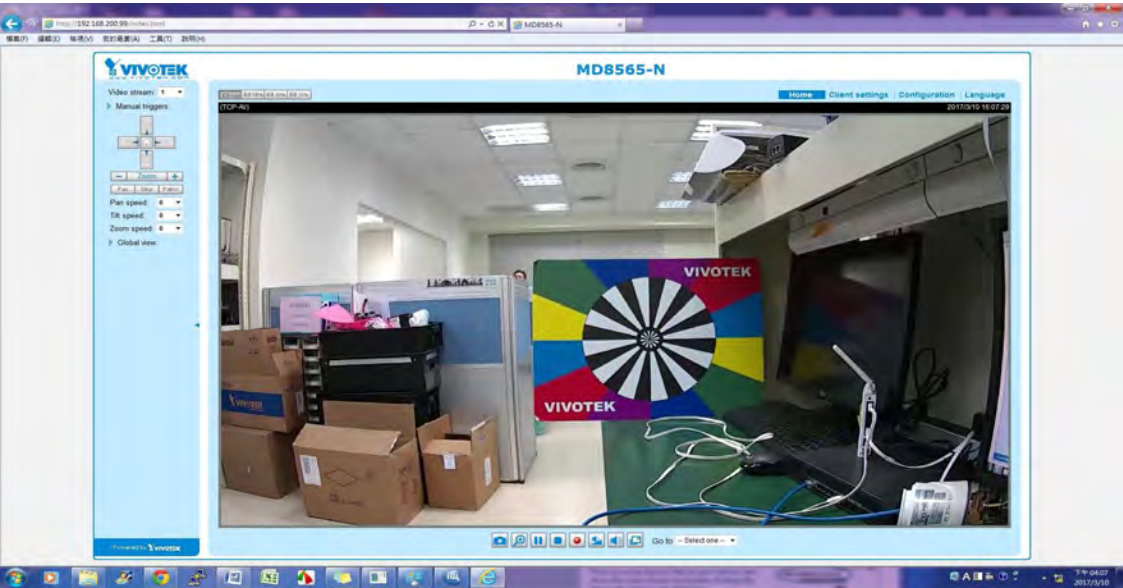
Environment	
Dropping Environment:	
	
Appearance of package	Drop test -Corner
	
Drop test -Edge	Drop test -Face

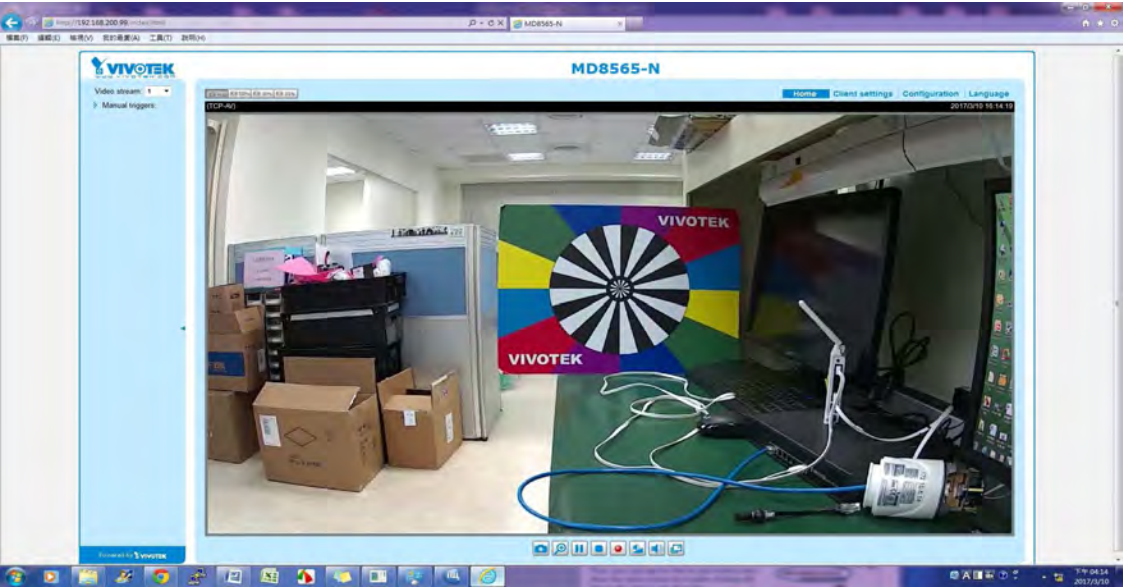
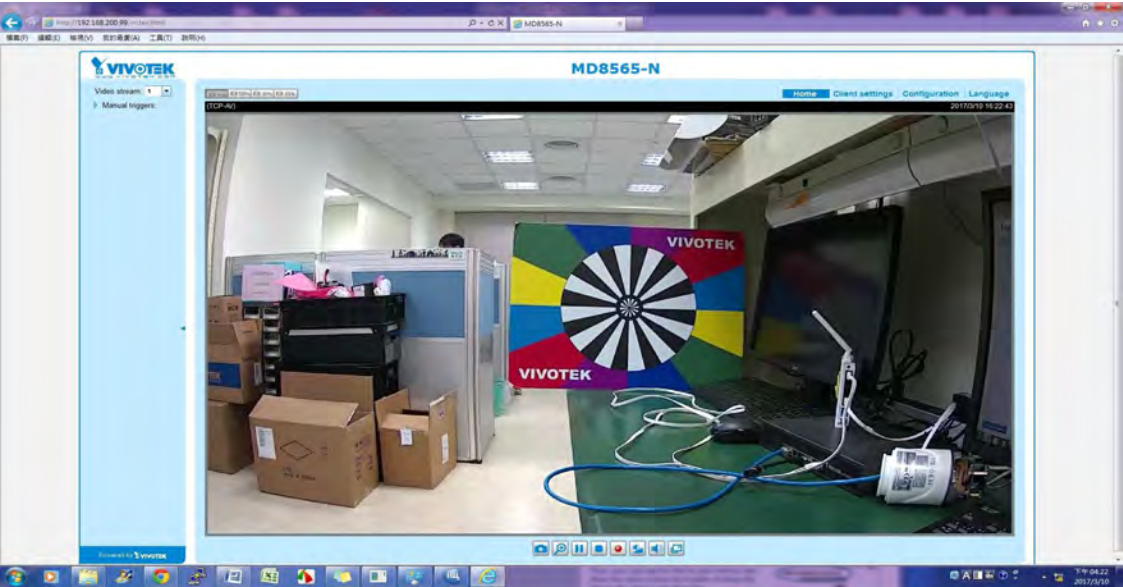
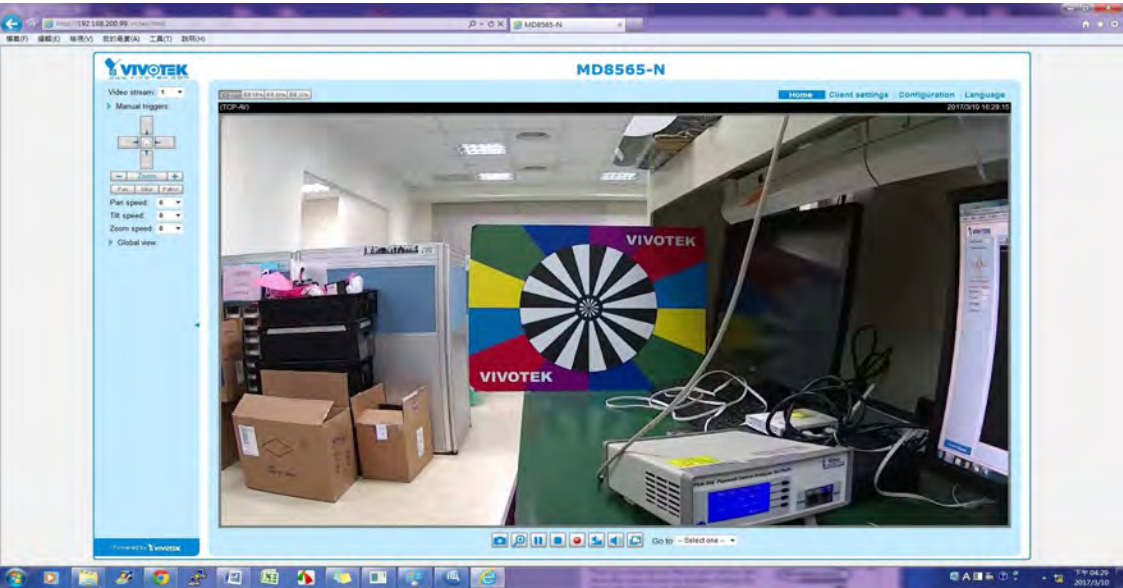
Test Image	
MAC	AFTER TEST APPEARANCE OF BOX
	
MAC	AFTER TEST APPEARANCE OF PACKAGE
	
MAC	0002D156ABC9
	



Test Image	
MAC	0002D156ABCD
	
MAC	0002D156ABCE
	
MAC	0002D156ABCF
	

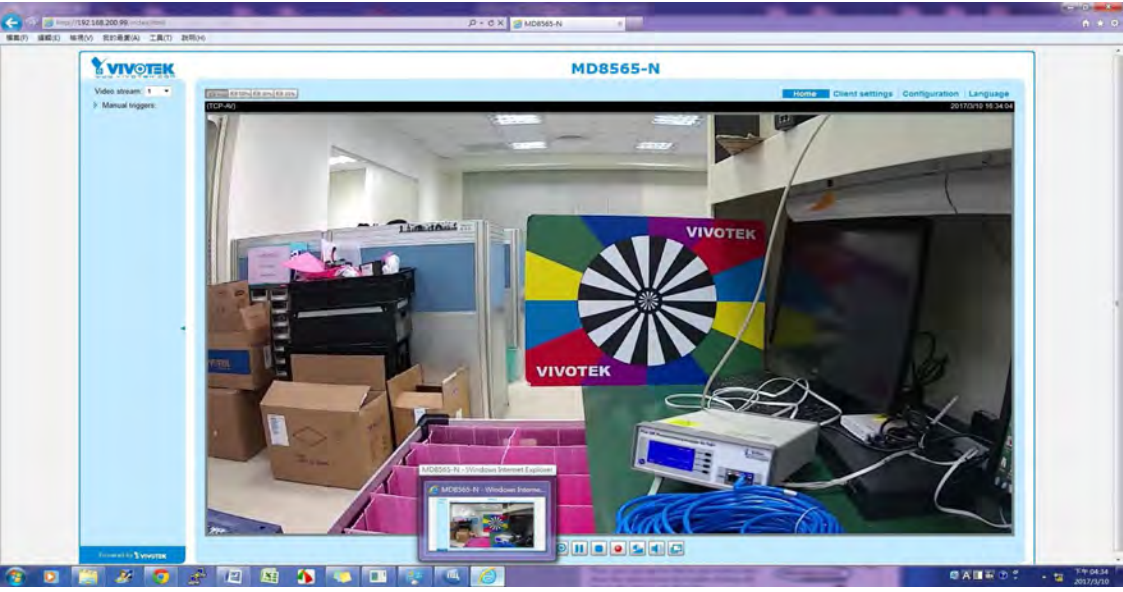
Test Image	
MAC	0002D156ABD0
	
MAC	0002D156ABD1
	
MAC	0002D156ABD2
	

Test Image	
MAC	0002D156ABD3
	
MAC	0002D156ABD4
	
MAC	0002D156ABD5
	

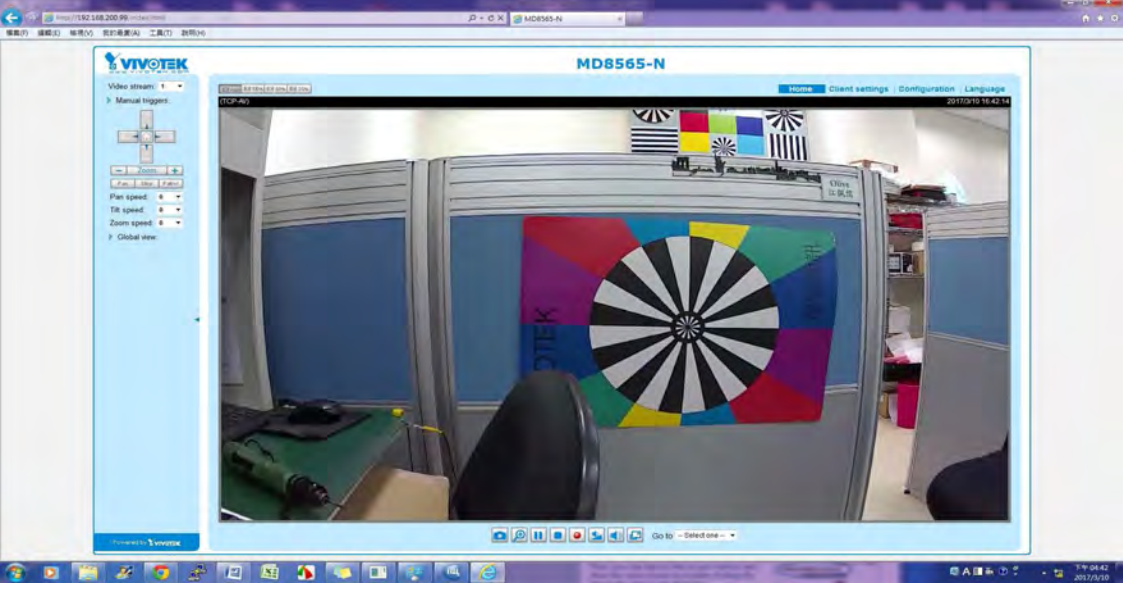
Test Image	
MAC	0002D156ABD6
	
MAC	0002D156ABD7
	
MAC	0002D156ABD8
	

Test Image

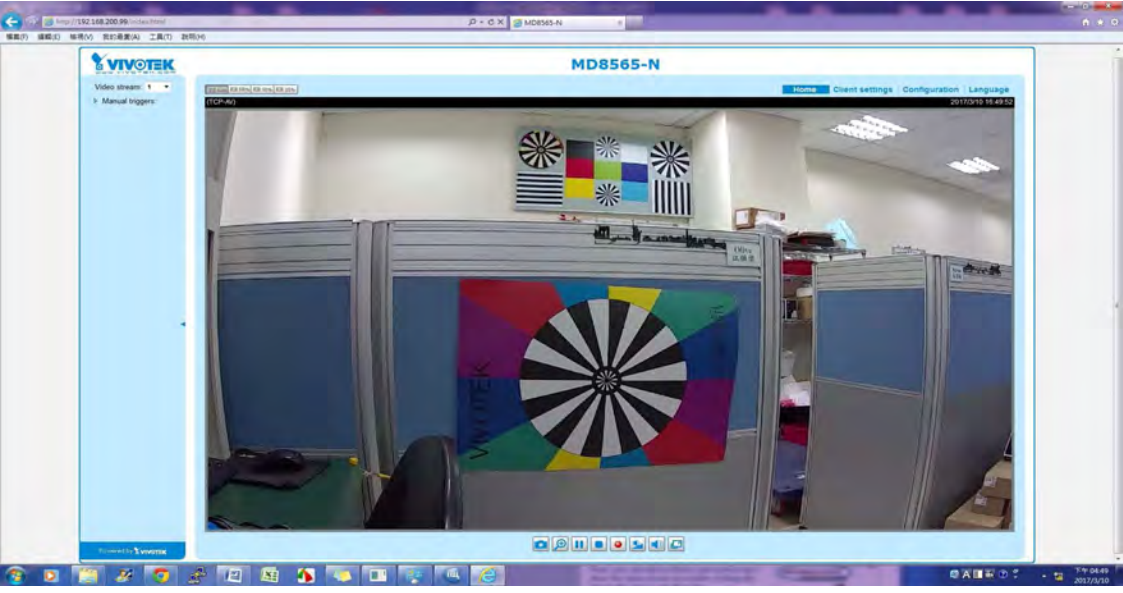
MAC0002D156ABD9

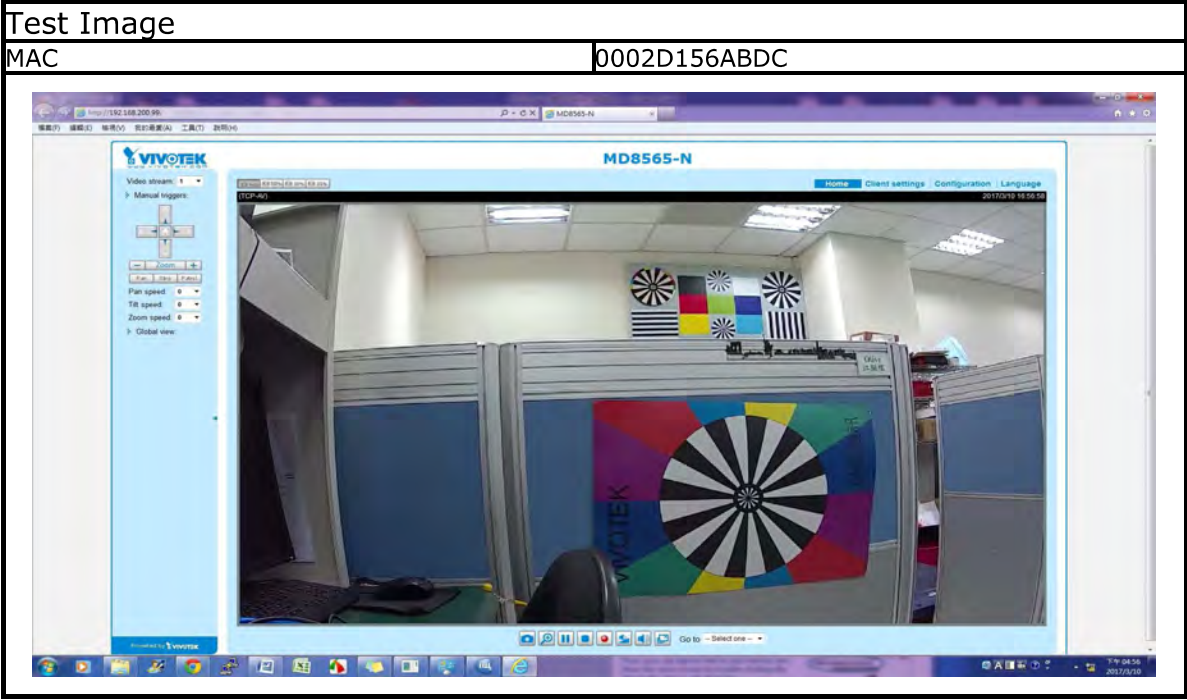


MAC0002D156ABDA



MAC0002D156ABDB





Function Test Item	Judgment	Remark
Appearance(check Peel,deformation,Dust)	NO Damage	
Network	PASS	
Update server setting	PASS	
Light Sensor Night	PASS	
Storage card	PASS	
DIDO	PASS	
Status LED	PASS	
Reset button	PASS	
Light Sensor Day	PASS	
Video	PASS	
Audio	PASS	
IR-Cut	PASS	
IR-LED	PASS	
DC 12V	PASS	
PoE Switch	PASS	

Test item	Package Vibration Test	Duration	3/14/2017 ~3/15/2017	
Place	Laboratory of Quality Assurance in		KING DESIGN	
Except Report No.		VT-170314-4		
Equipment				
Vibration Test System	Brand	KING DESIGN		
	Model	KD-9363EM-600F2K-50N120		
	S/N	KDS11054783		
Controller	Brand	VCS-913+		
	Model	VCS-913+		
	S/N	1312416		
Control Accelerometer	Brand	Wilcoxon Research		
	Model	WR-777		
	S/N	4208		
Personal Computer	Operation System	Microsoft Windows	7	
	Browser	Microsoft Internet Explorer	9.050123	
Test Condition & Pocedure				
1.Frequency: 5Hz to 200 Hz 2.Acceleration: 1.2 g rms 3.Test Axis: X, Y, Z axis 4.Test Time: 30 mins 5.Run the function test after test.				
Specimens	0002D156ABC9	0002D156ABCA	0002D156ABCB	0002D156ABCC
	0002D156ABCD	0002D156ABCE	0002D156ABCF	0002D156ABD0
	0002D156ABD1	0002D156ABD2	0002D156ABD3	0002D156ABD4
	0002D156ABD5	0002D156ABD6	0002D156ABD7	0002D156ABD8
	0002D156ABD9	0002D156ABDA	0002D156ABDB	0002D156ABDC
Judgment Criteria	1. It doesn't have bad image, fogging, discoloration or reboot..etc. 2. The specimens electrical function are normal.(Please see Function test list) 3. The specimen doesn't have deformation of the housing.			
Result	Passed			

Environment

Testing photos

Tester



Z axis

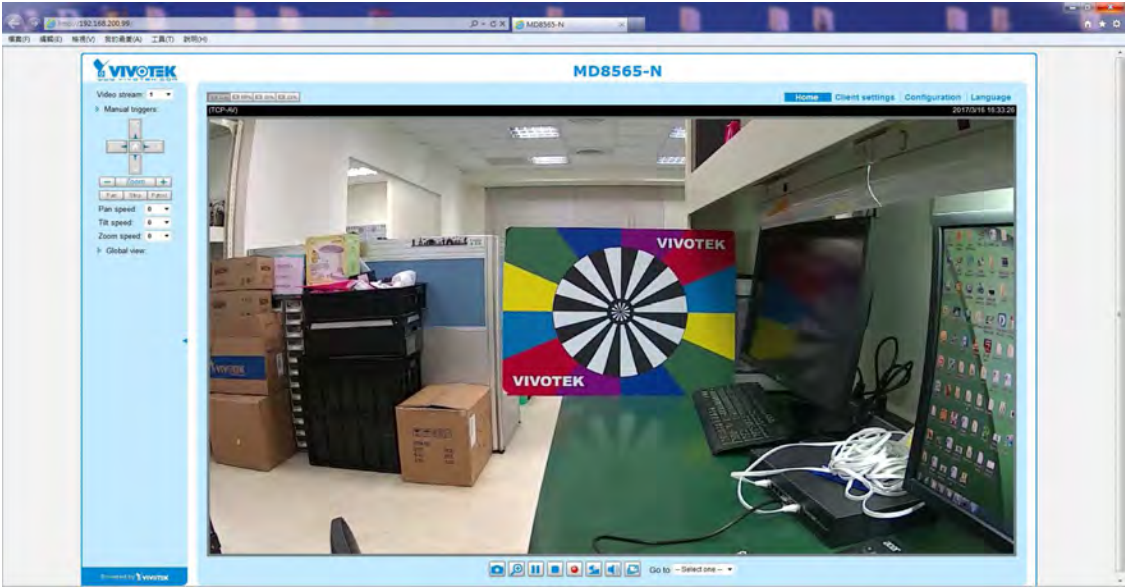
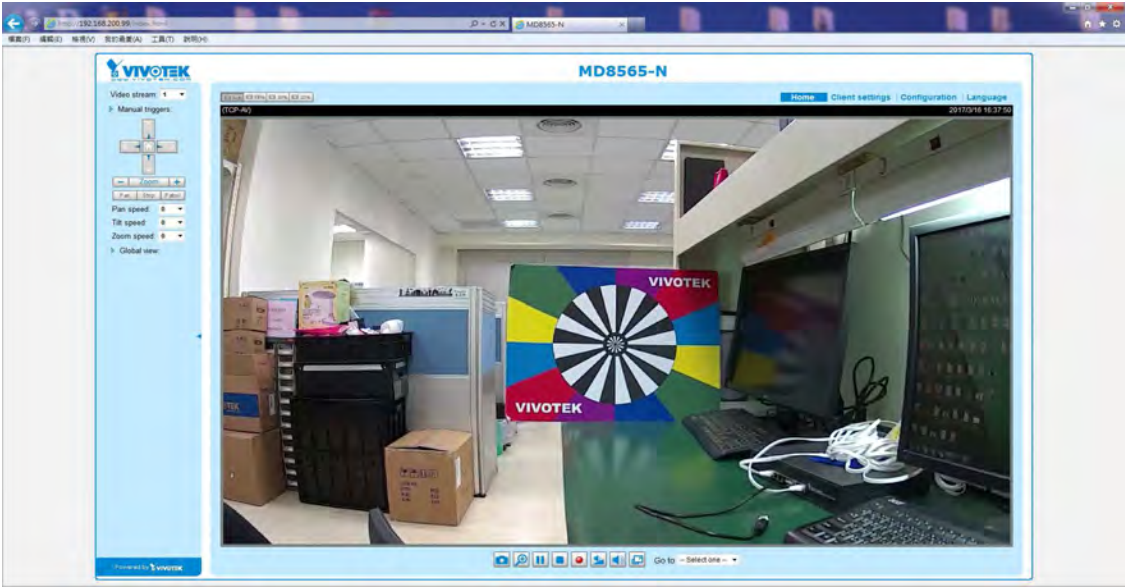
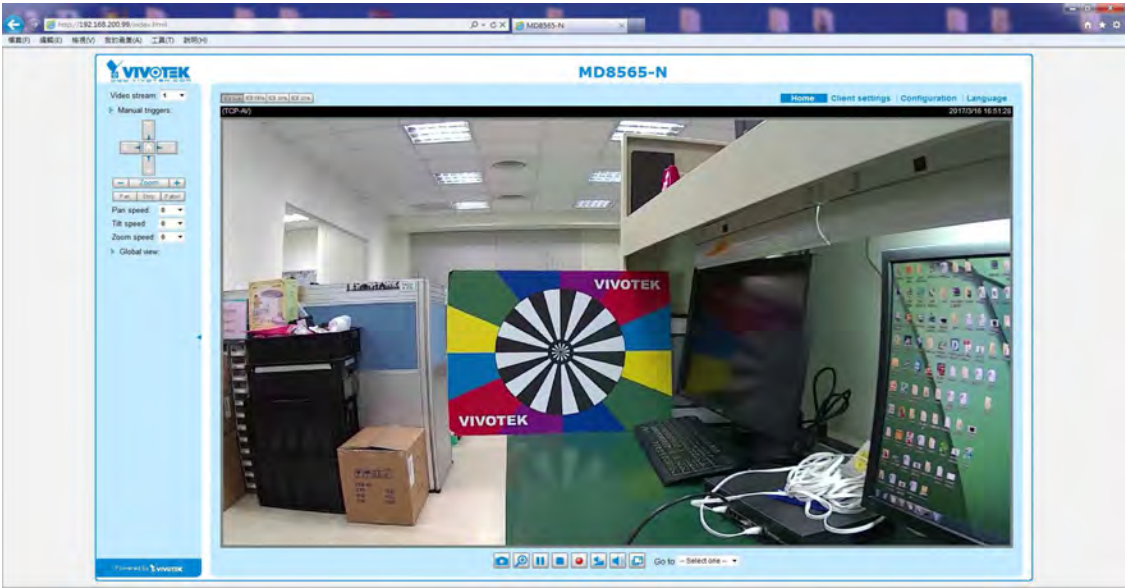


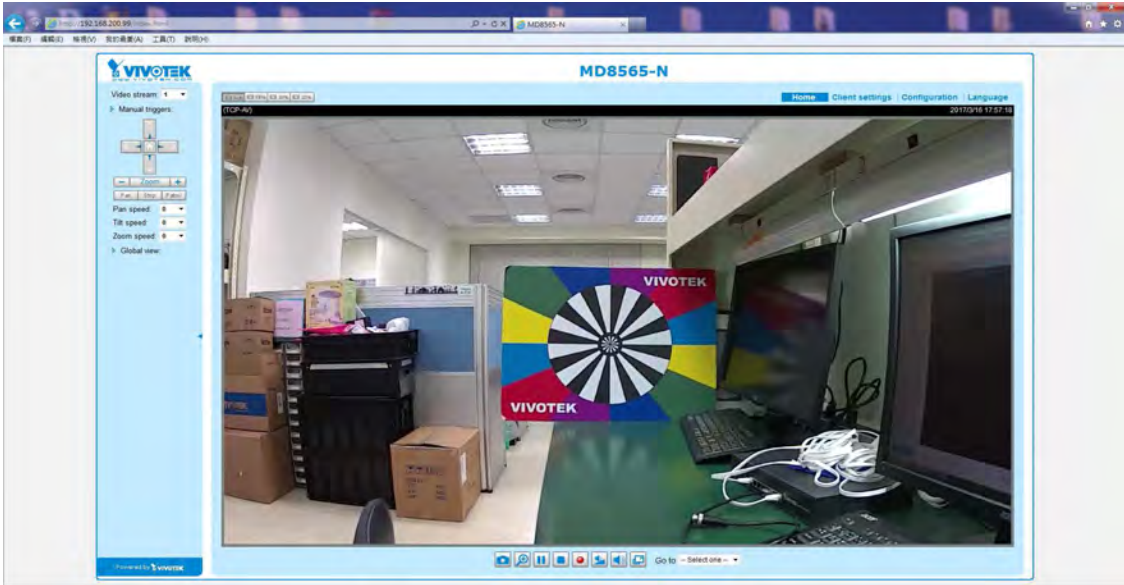
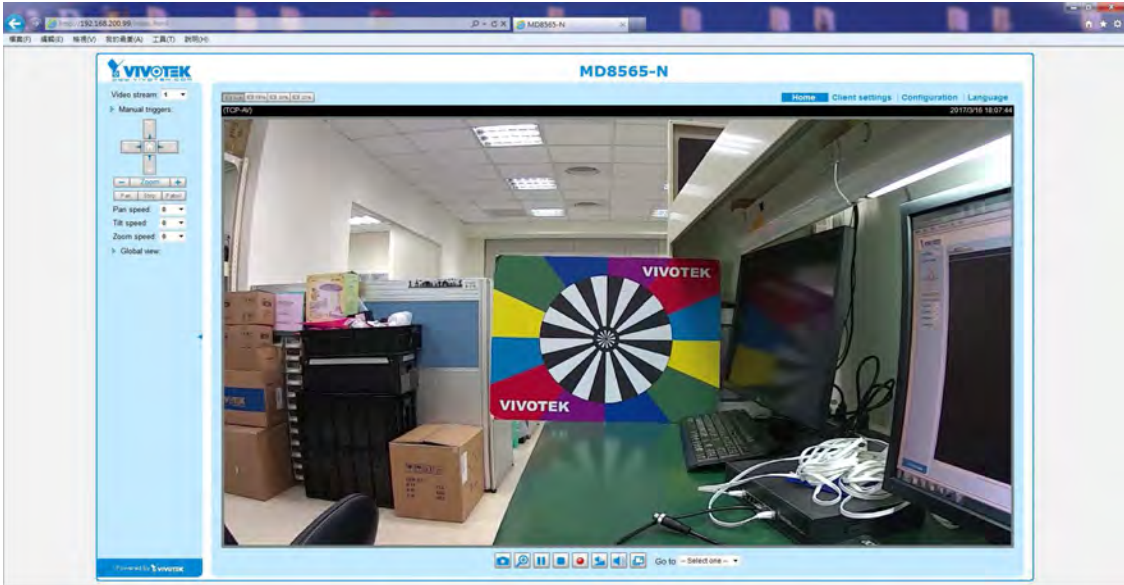
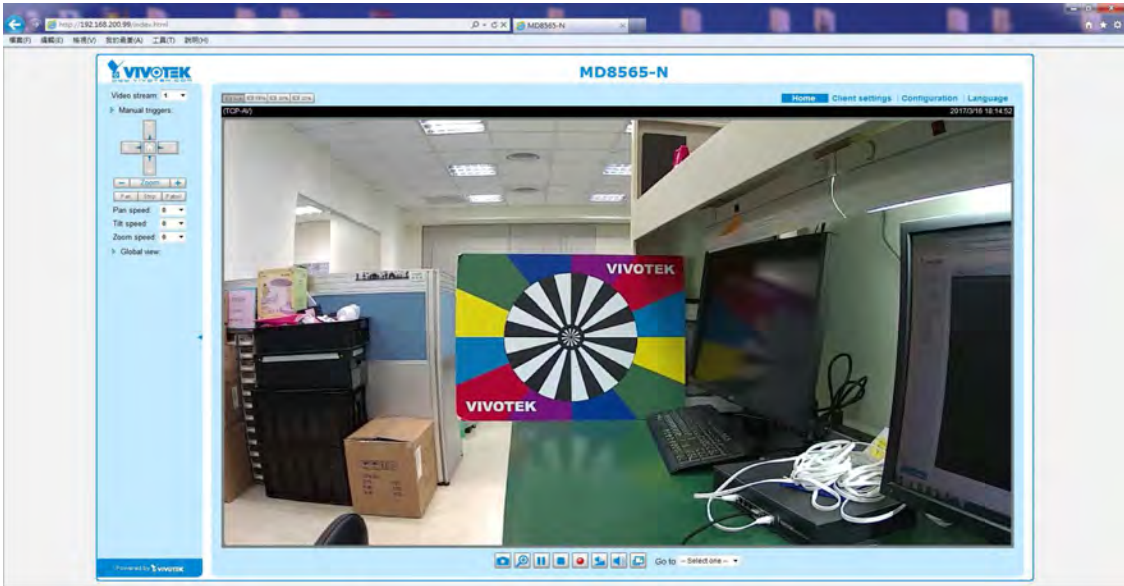
X axis

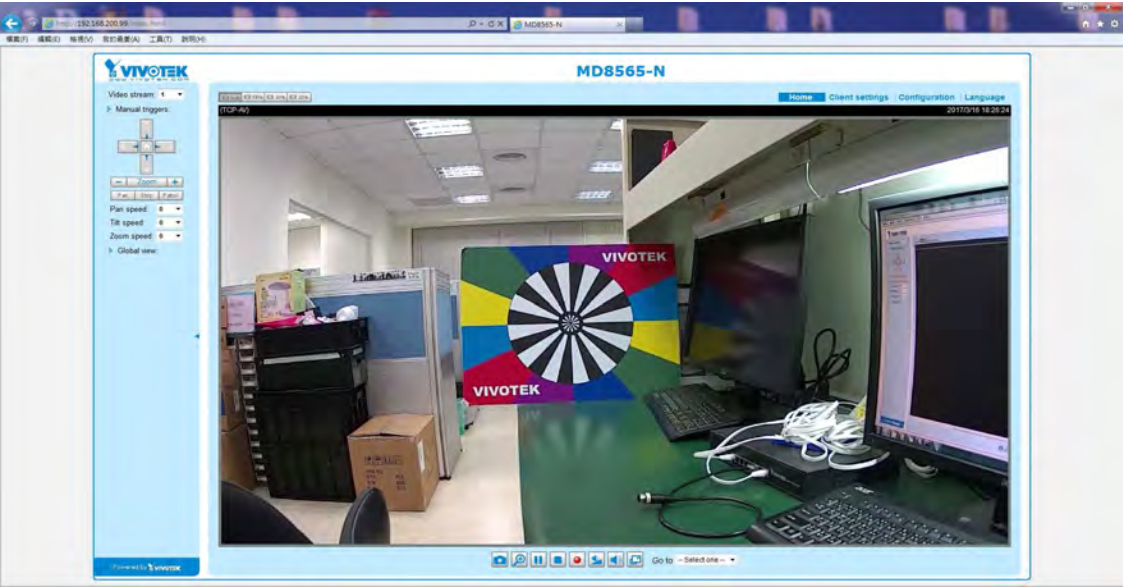
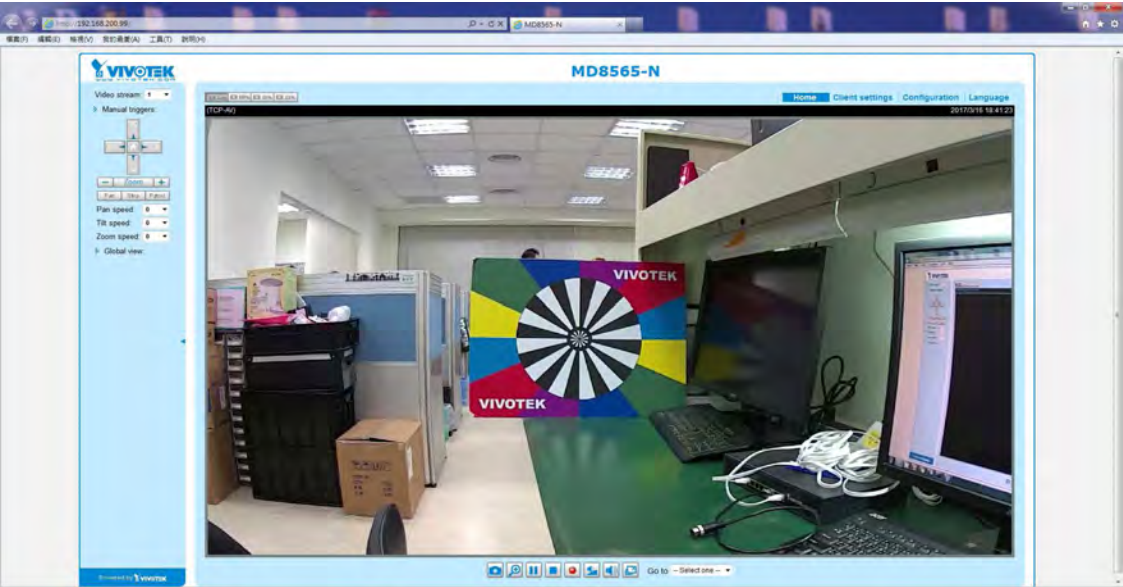
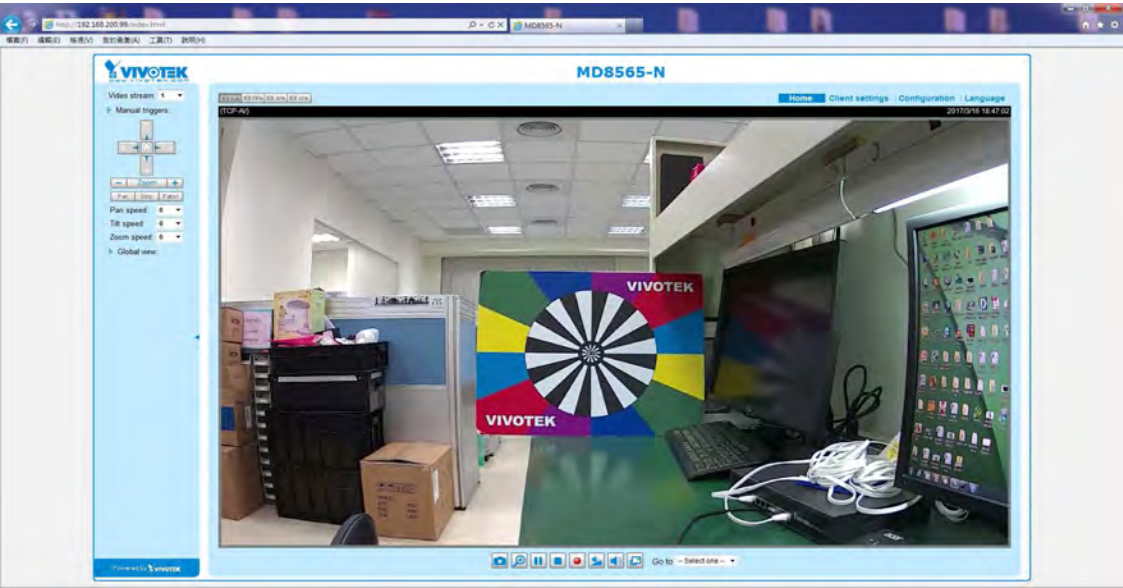


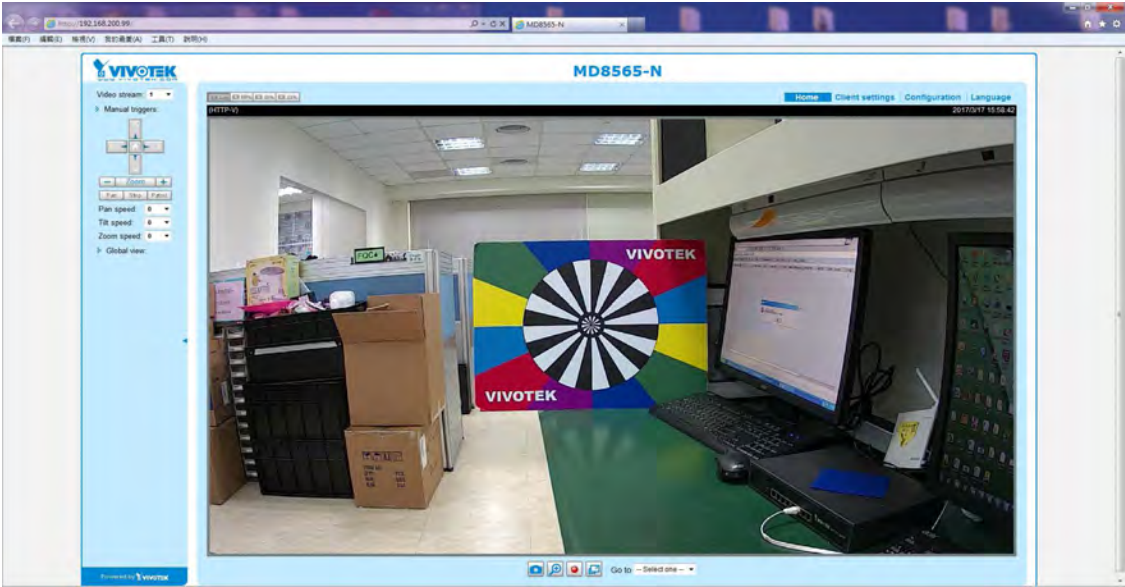
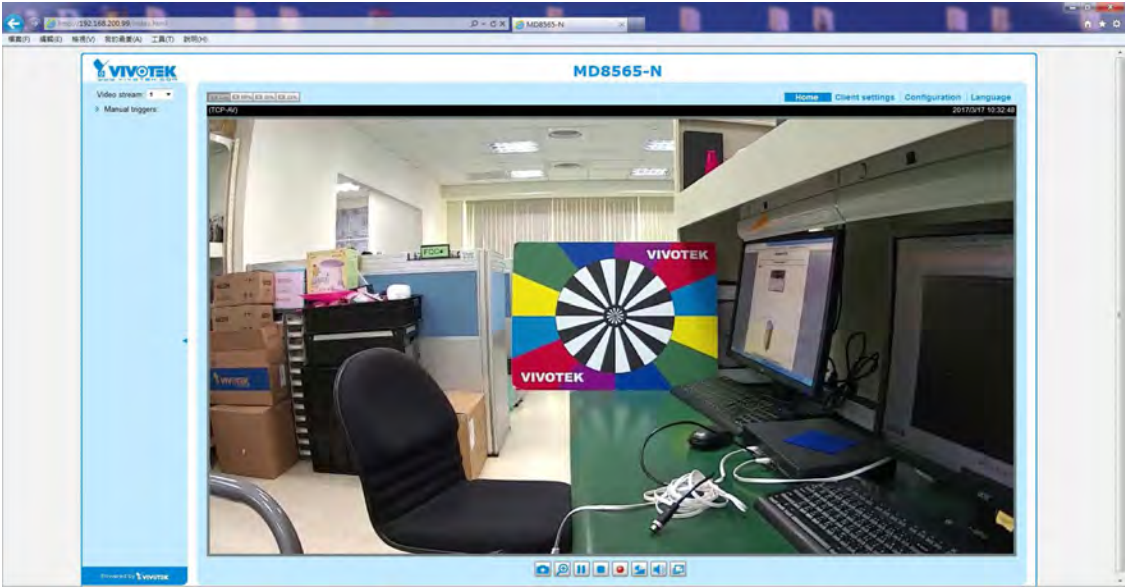
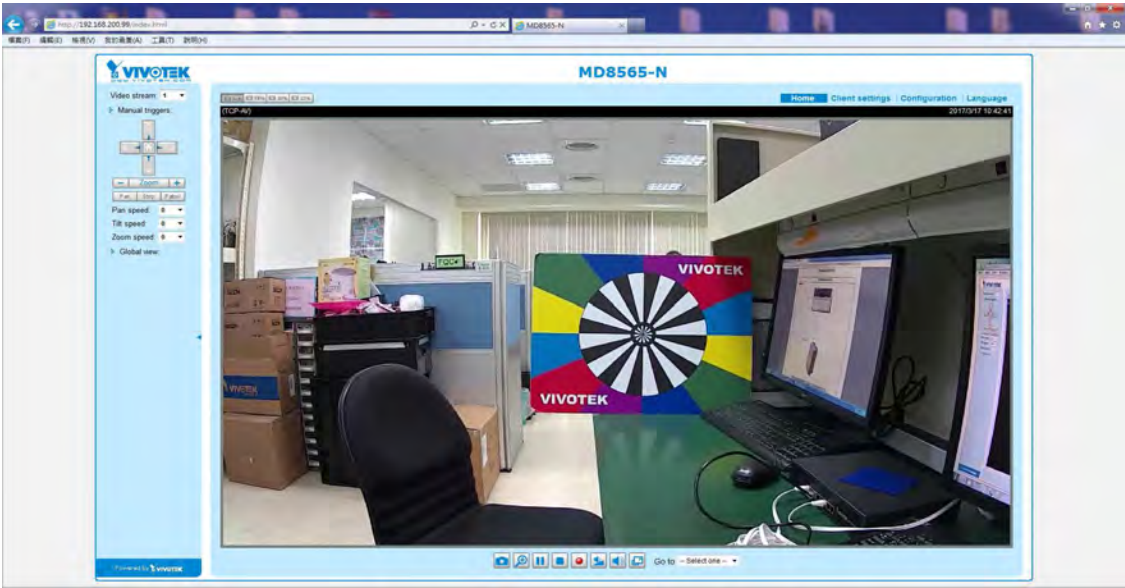
Y axis

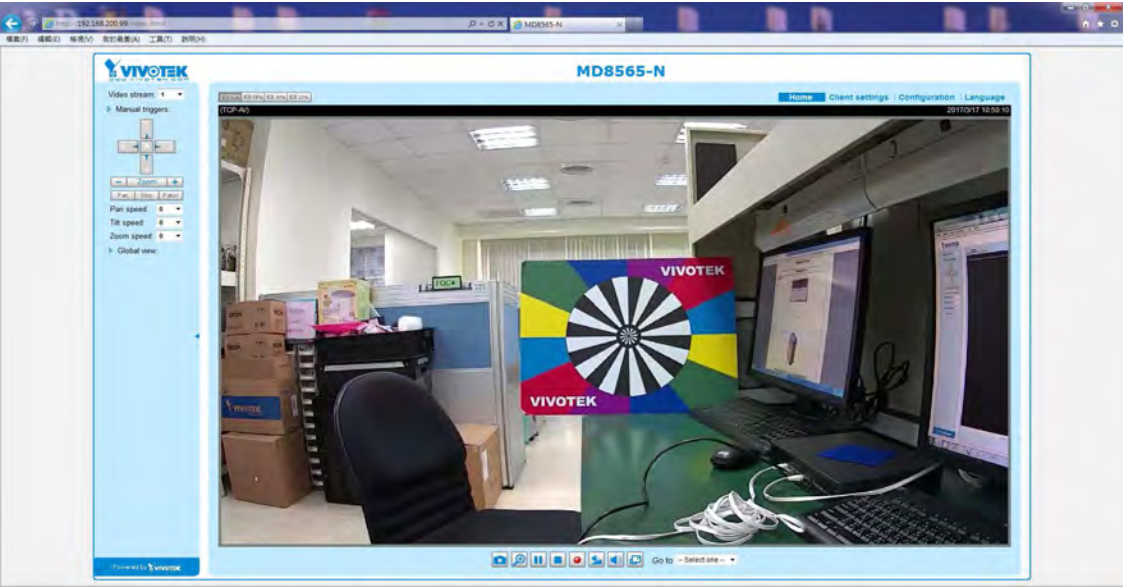
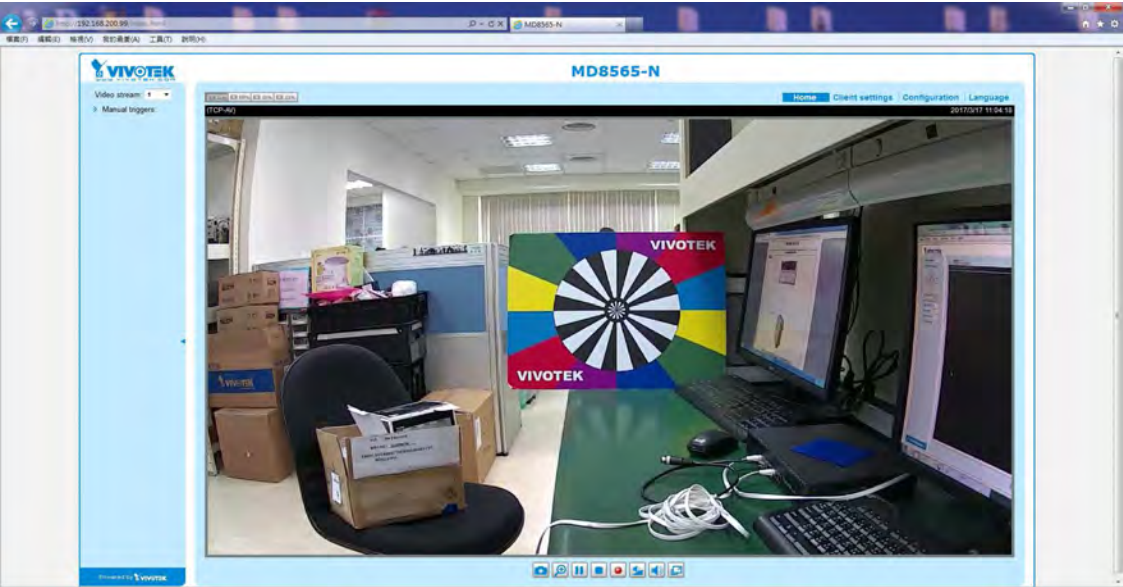
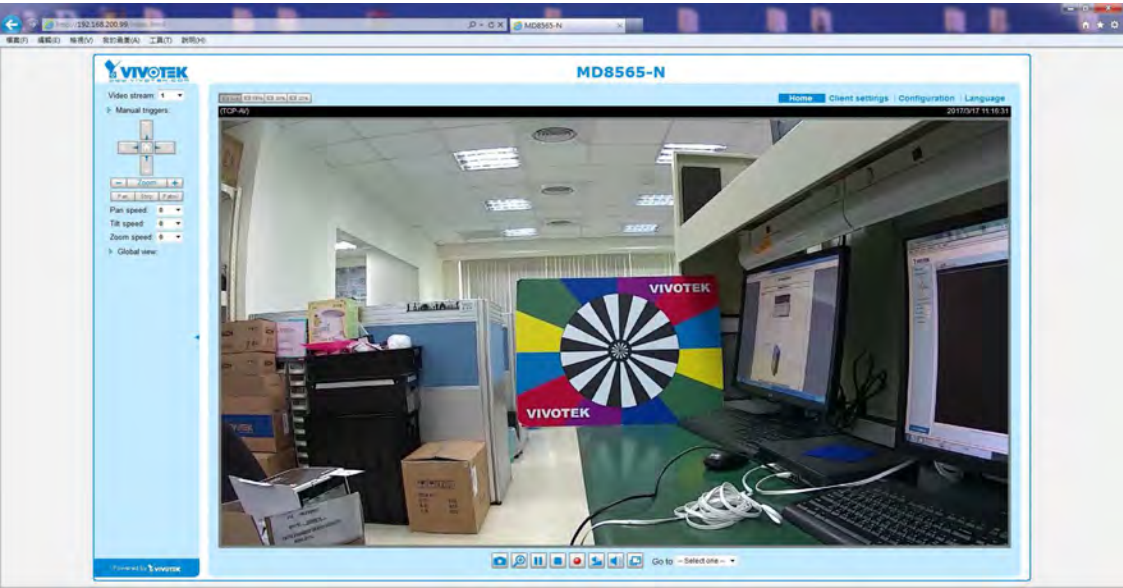


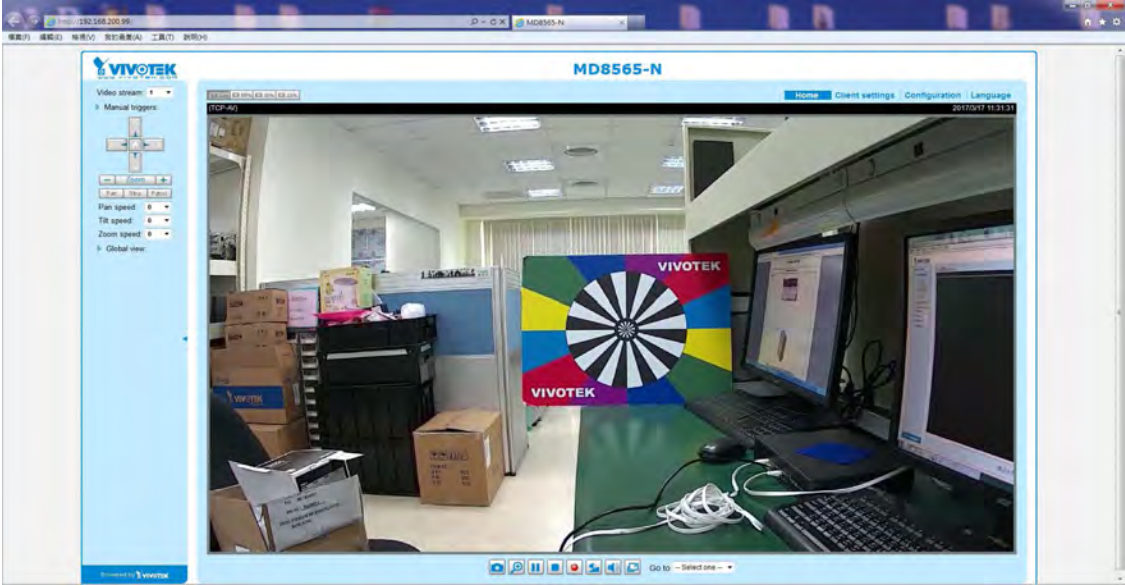
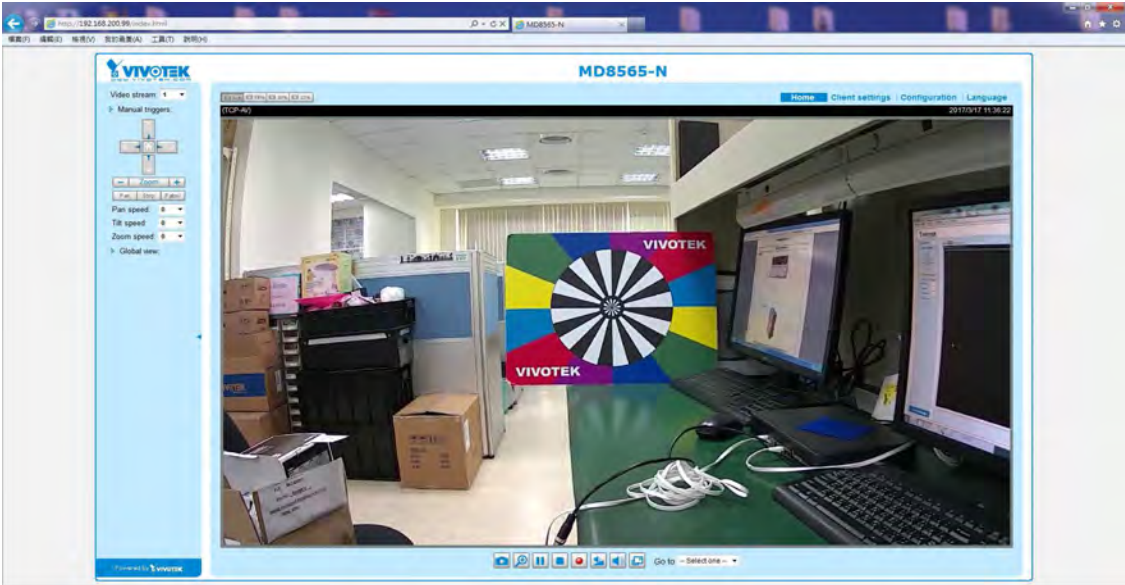
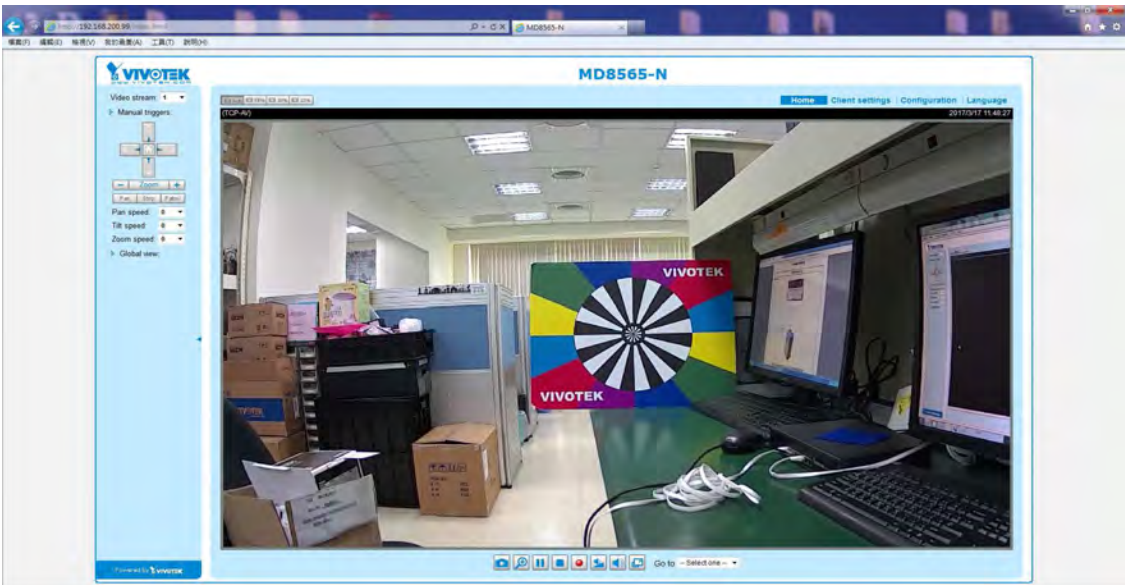
Test Image	
MAC	0002D156ABC9
	
MAC	0002D156ABCA
	
MAC	0002D156ABCB
	

Test Image	0002D156ABCC
MAC	
MAC	0002D156ABCD
	0002D156ABCE
MAC	

Test Image	
MAC	0002D156ABCF
	
MAC	0002D156ABD0
	
MAC	0002D156ABD1
	

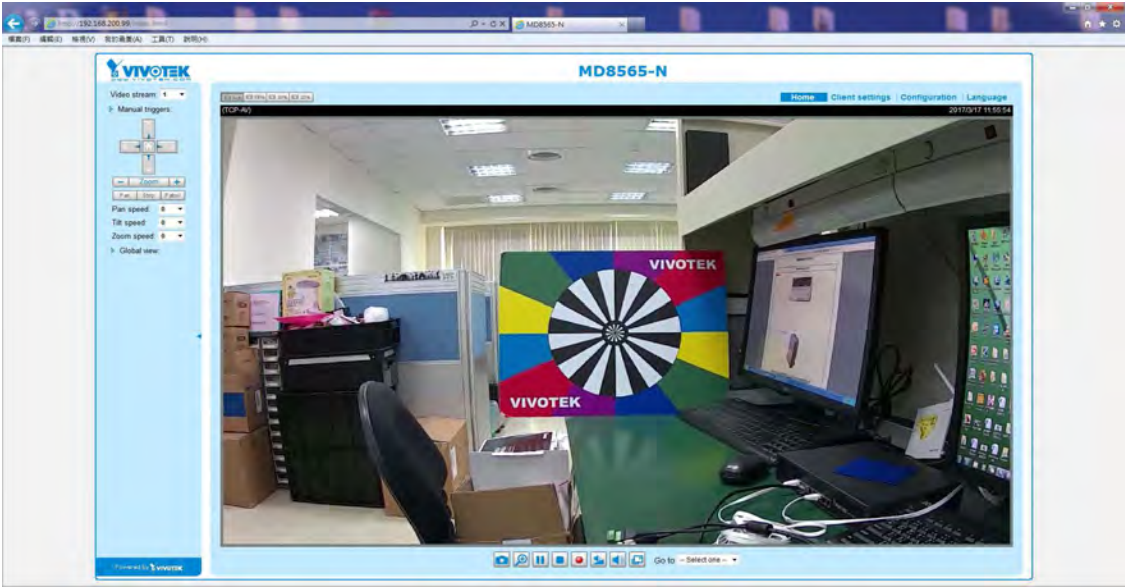
Test Image	
MAC	0002D156ABD2
	
MAC	0002D156ABD3
	
MAC	0002D156ABD4
	

Test Image	
MAC	0002D156ABD5
	
MAC	0002D156ABD6
	
MAC	0002D156ABD7
	

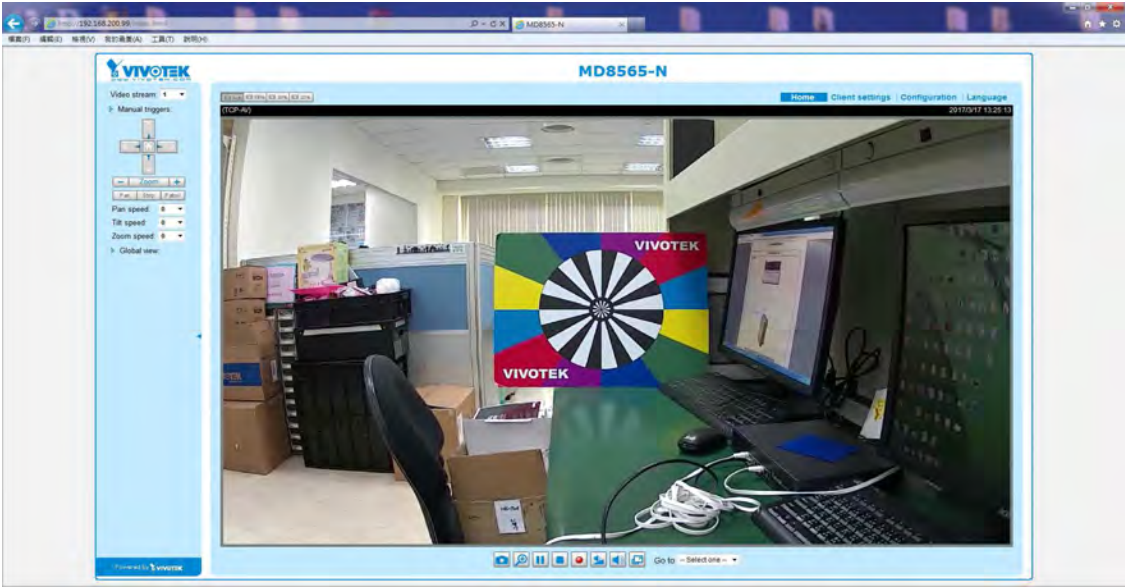
Test Image	
MAC	0002D156ABD8
	
MAC	0002D156ABD9
	
MAC	0002D156ABDA
	

Test Image

MAC0002D156ABDB



MAC0002D156ABDC



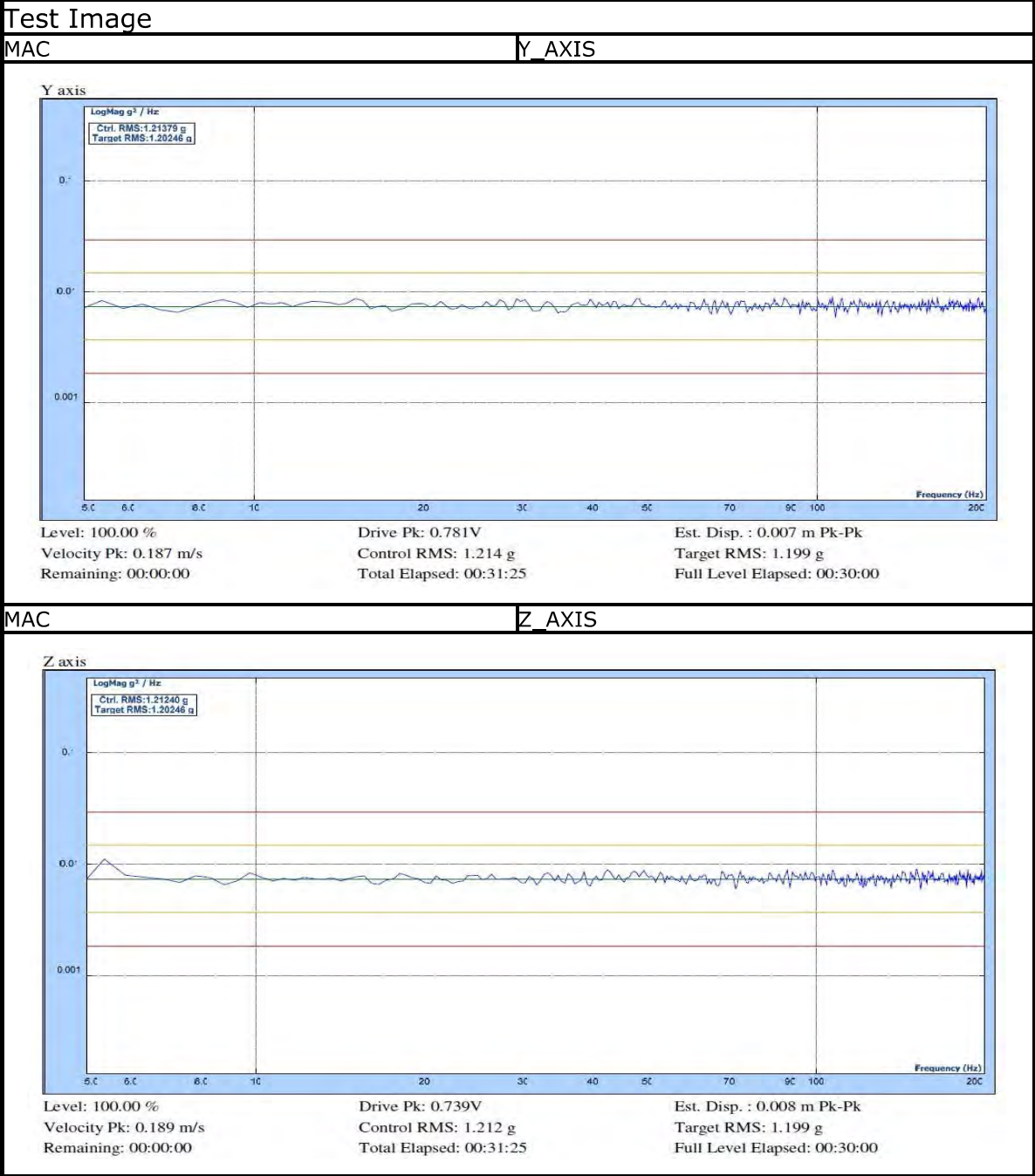
MACX_AXIS



Level: 100.00 %
Velocity Pk: 0.187 m/s
Remaining: 00:00:00

Drive Pk: 0.594V
Control RMS: 1.217 g
Total Elapsed: 00:31:25

Est. Disp. : 0.007 m Pk-Pk
Target RMS: 1.199 g
Full Level Elapsed: 00:30:00



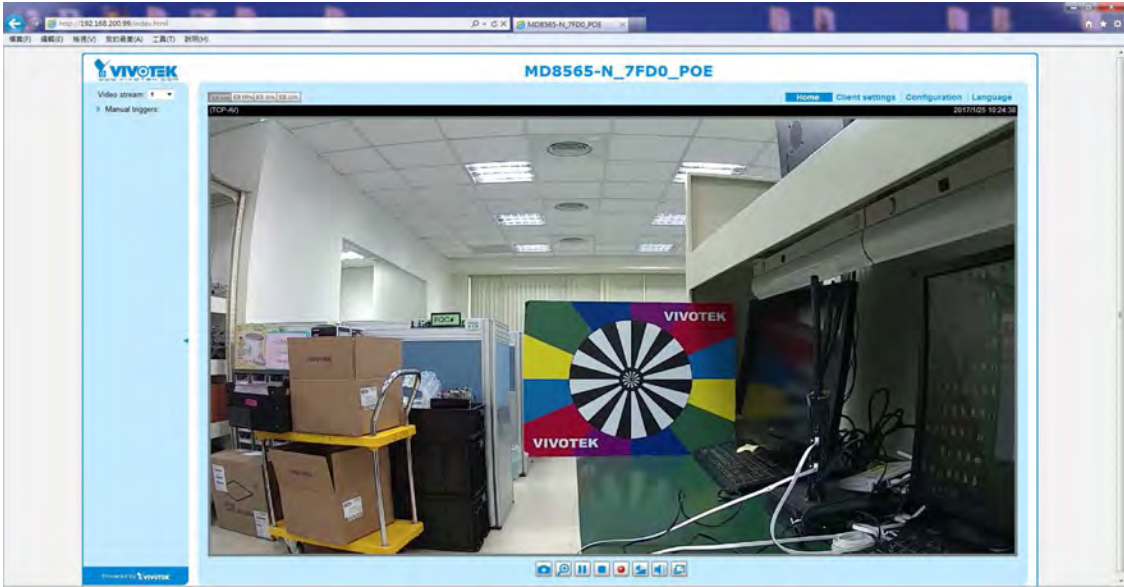
Function Test Item	Judgment	Remark
Appearance(check Peel,deformation,Dust)	NO Damage	
Network	PASS	
Update server setting	PASS	
Light Sensor Night	PASS	
Storage card	PASS	
DIDO	PASS	
Status LED	PASS	
Reset button	PASS	
Light Sensor Day	PASS	
Video	PASS	
Audio	PASS	
IR-Cut	PASS	
IR-LED	PASS	
DC 12V	PASS	
PoE Switch	PASS	

Test item	Non-Operational Random Vibration Test(IEC-61373)	Duration	1/19/2017 ~1/25/2017																																				
Place	Laboratory of Quality Assurance in	KING DESIGN																																					
Except Report No.	VT-170123-2																																						
Equipment																																							
Vibration Test System	Brand	KING DESIGN																																					
	Model	KD-9363EM-1000F2K-50N120																																					
	S/N	GUG02102091																																					
Control Accelerometer	Brand	WILCOXON RESEARCH																																					
	Model	WR-784A																																					
	S/N	23116																																					
Personal Computer	Operation System	Microsoft Windows	7																																				
	Browser	Microsoft Internet Explorer	9.050123																																				
Test Condition & Pcedure																																							
<table border="1"> <tr> <td colspan="3">Vertical</td></tr> <tr> <td>Frequency</td><td>Spectral Break Point</td><td>Slope</td></tr> <tr> <td>5-20 Hz</td><td>7.90 rms m/s²</td><td></td></tr> <tr> <td>20-150 Hz</td><td></td><td>-6 db/octave</td></tr> <tr> <td colspan="3">Transverse</td></tr> <tr> <td>Frequency</td><td>Spectral Break Point</td><td>Slope</td></tr> <tr> <td>5-20 Hz</td><td>3.50 rms m/s²</td><td></td></tr> <tr> <td>20-150 Hz</td><td></td><td>-6 db/octave</td></tr> <tr> <td colspan="3">Longitudinal</td></tr> <tr> <td>Frequency</td><td>Spectral Break Point</td><td>Slope</td></tr> <tr> <td>5-20 Hz</td><td>5.50 rms m/s²</td><td></td></tr> <tr> <td>20-150 Hz</td><td></td><td>-6 db/octave</td></tr> </table> 1. Temperature: 25±10°C. 2. Humidity: 50±25%RH. 3. Test Axis: Vertical, Transverse, Longitudinal axis. 4. Test Time: 5 hours (Each axis).				Vertical			Frequency	Spectral Break Point	Slope	5-20 Hz	7.90 rms m/s ²		20-150 Hz		-6 db/octave	Transverse			Frequency	Spectral Break Point	Slope	5-20 Hz	3.50 rms m/s ²		20-150 Hz		-6 db/octave	Longitudinal			Frequency	Spectral Break Point	Slope	5-20 Hz	5.50 rms m/s ²		20-150 Hz		-6 db/octave
Vertical																																							
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20-150 Hz		-6 db/octave																																					
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20-150 Hz		-6 db/octave																																					
Longitudinal																																							
Frequency	Spectral Break Point	Slope																																					
5-20 Hz	5.50 rms m/s ²																																						
20-150 Hz		-6 db/octave																																					
Specimens	0002D1517FD0	0002D1517FD1																																					
Judgment Criteria	1. It doesn't have bad image, fogging, discoloration or reboot..etc 2. The specimens electrical function are normal.(Please see Function test list) 3. The specimen dosen't have deformation of the housing.																																						
Result	Passed																																						

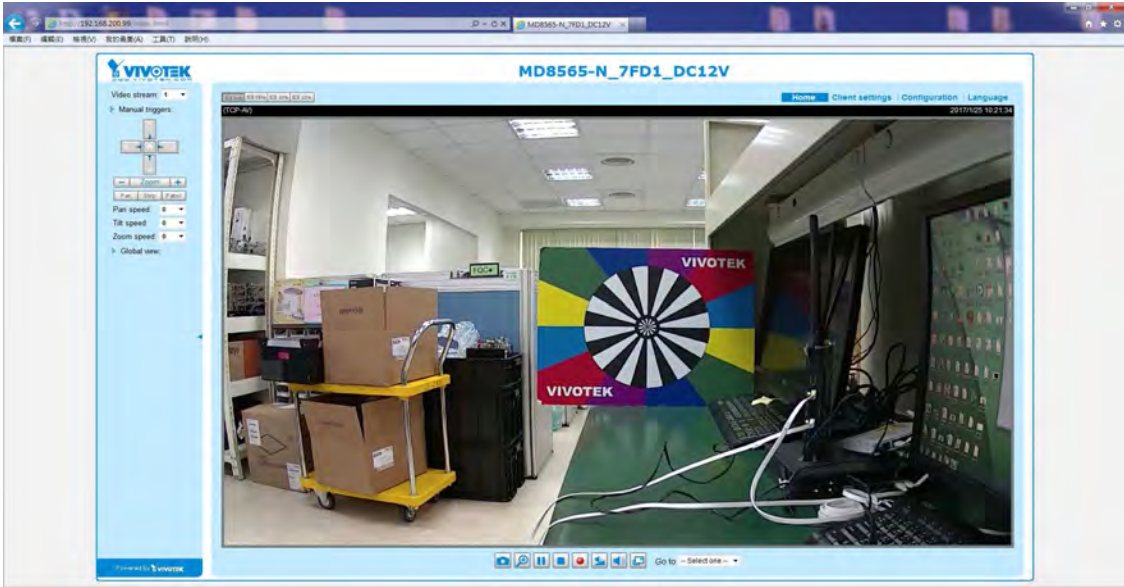
Testing photos	
Tester 	Vertical 
Longitudinal 	Transverse 

Test Image

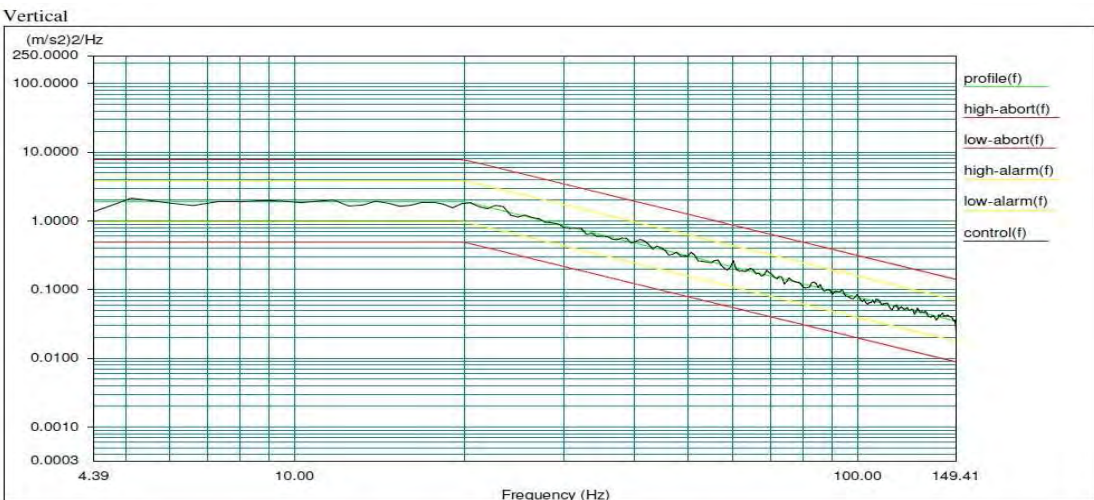
MAC0002D1517FD0



MAC0002D1517FD1



MACVERTICAL



Vertical
(m/s²)²/Hz

250.0000
100.0000
10.0000
1.0000
0.1000
0.0100
0.0010
0.0003

4.3910.00100.00149.41

Frequency (Hz)

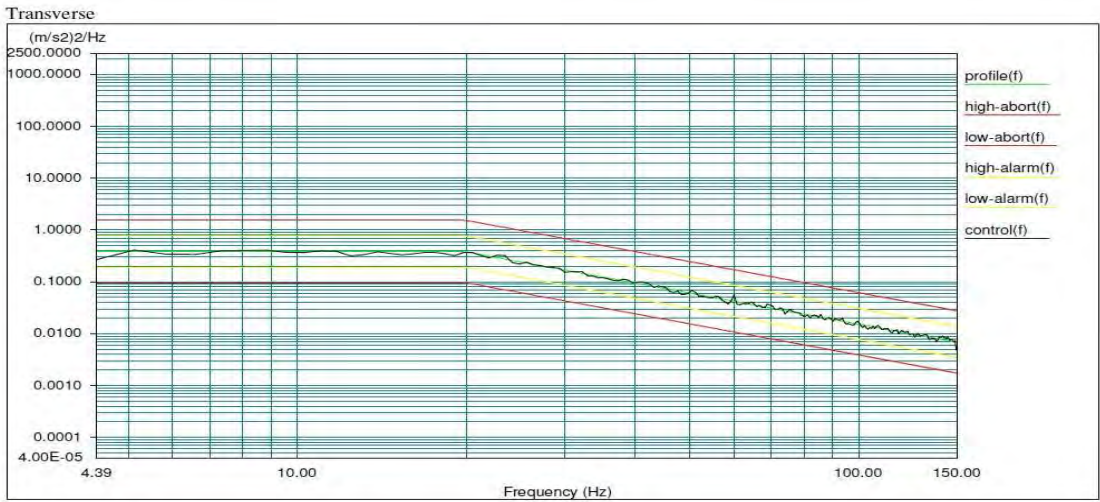
profile(f)
high-abort(f)
low-abort(f)
high-alarm(f)
low-alarm(f)
control(f)

Level: 100 %
Control RMS: 7.876769 m/s²Full Level Elapsed Time: 05:00:00
Demand RMS: 7.964374 m/s²Remaining Time: 00:00:00
Lines: 200 Frame Time: 1.365333 Seconds
DOF: 154 dF: 0.732422 Hz

Test Image

MAC

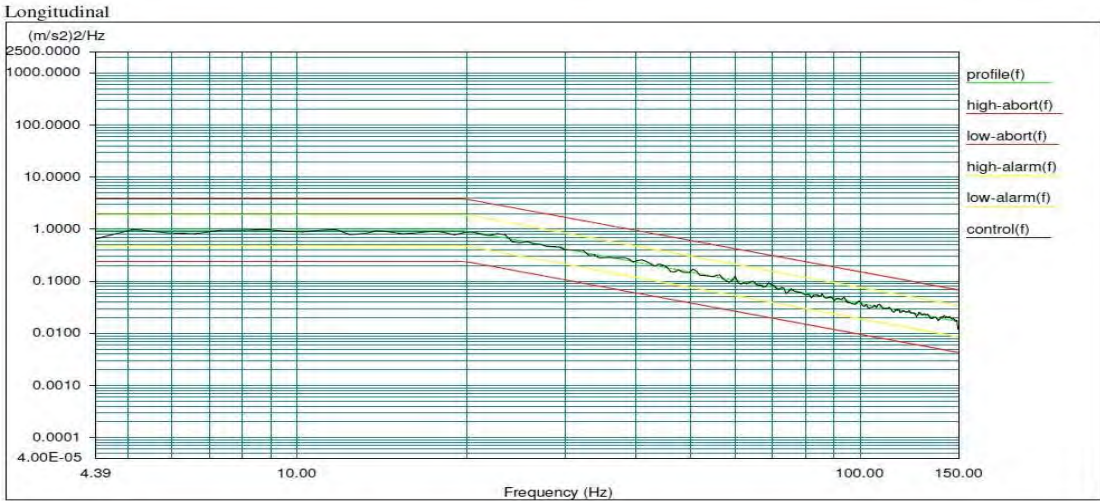
TRANSVERSE



Level: 100 %
Control RMS: 3.495446 m/s²Full Level Elapsed Time: 05:00:00 Lines: 200 Frame Time: 1.365333 Seconds
Demand RMS: 3.528520 m/s²Remaining Time: 00:00:00 DOF: 154 dF: 0.732422 Hz

MAC

LONGITUDINAL



Level: 100 %
Control RMS: 5.483742 m/s²Full Level Elapsed Time: 05:00:00 Lines: 200 Frame Time: 1.365333 Seconds
Demand RMS: 5.544821 m/s²Remaining Time: 00:00:00 DOF: 154 dF: 0.732422 Hz

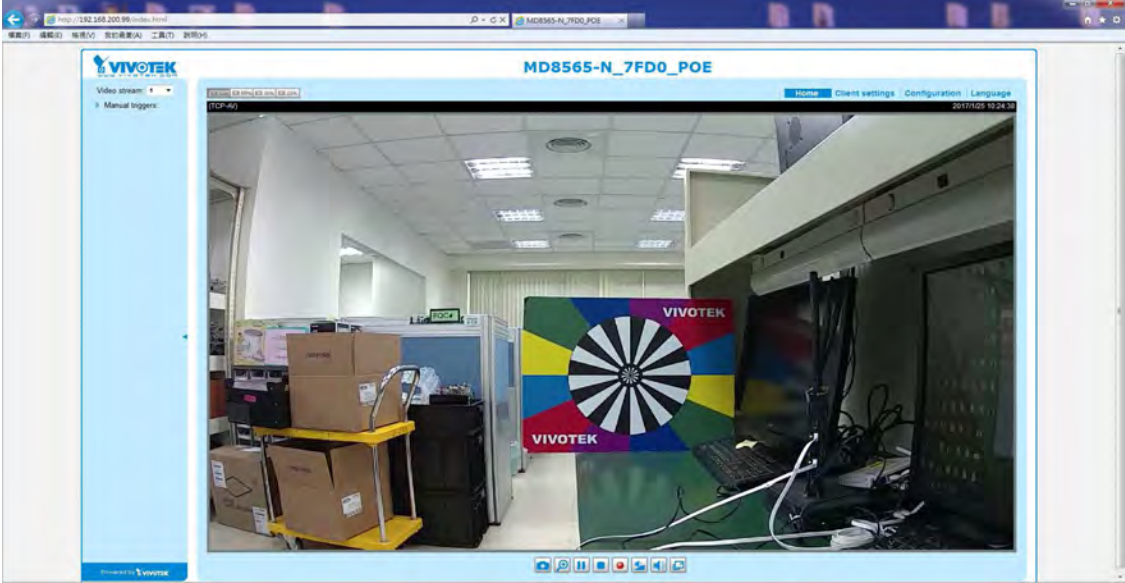
Function Test Item	Judgment	Remark
Appearance(check Peel,deformation,Dust)	NO Damage	
Network	PASS	
Update server setting	PASS	
Light Sensor Night	PASS	
Storage card	PASS	
DIDO	PASS	
Status LED	PASS	
Reset button	PASS	
Light Sensor Day	PASS	
Video	PASS	
Audio	PASS	
IR-Cut	PASS	
IR-LED	PASS	
DC 12V	PASS	
PoE Switch	PASS	

Test item	Operational Random Vibration Test(IEC-61373)	Duration	1/19/2017 ~1/25/2017																																				
Place	Laboratory of Quality Assurance in	KING DESIGN																																					
Except Report No.	VT-170123-1																																						
Equipment																																							
Vibration Test System	Brand	KING DESIGN																																					
	Model	KD-9363EM-1000F2K-50N120																																					
	S/N	GUG02102091																																					
Control Accelerometer	Brand	WILCOXON RESEARCH																																					
	Model	WR-784A																																					
	S/N	23116																																					
Personal Computer	Operation System	Microsoft Windows	7																																				
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Test Condition & Pocedure																																							
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20-150 Hz		-6 db/octave																																					
Specimens	0002D1517FD0	0002D1517FD1																																					
Judgment Criteria	1. It doesn't have bad image, fogging, discoloration or reboot..etc 2. The specimens electrical function are normal.(Please see Function test list) 3. The specimen doesn't have deformation of the housing. 4. Wire Ping loss is less than 1%; wireless Ping loss is less than 10%.																																						
Result	Passed																																						

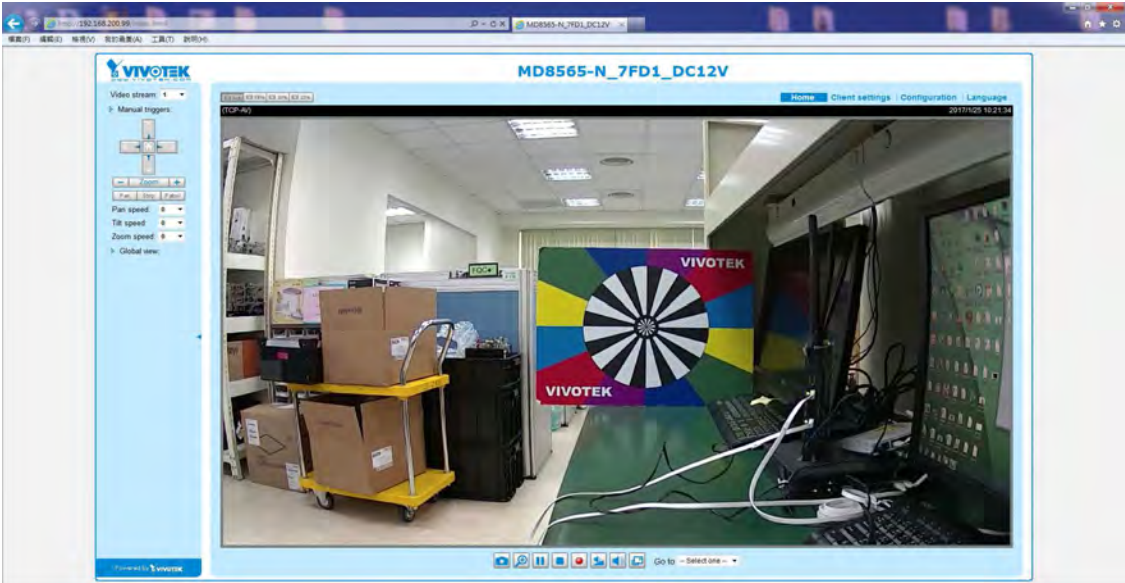
Testing photos	
Tester	Vertical
	
Longitudinal	Transverse
	

Test Image

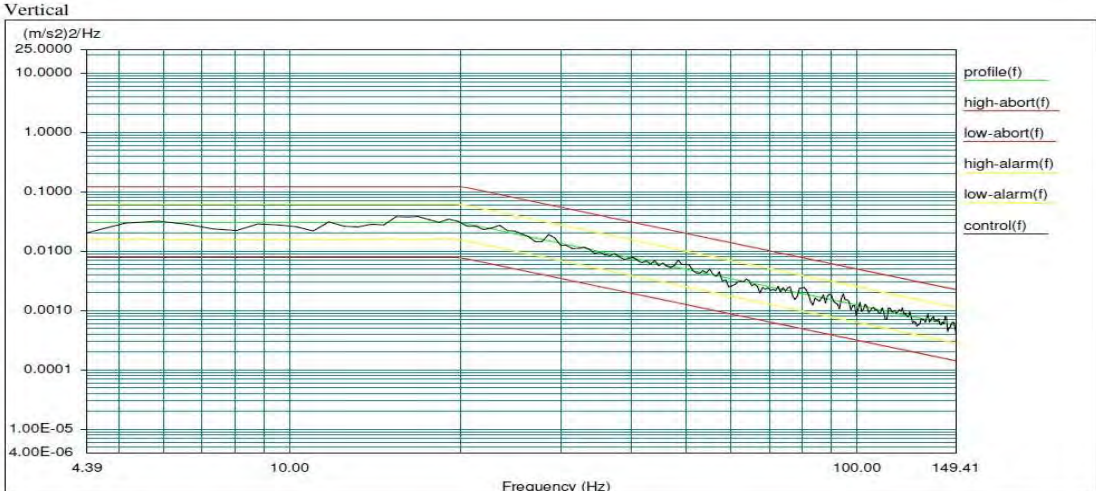
MAC0002D1517FD0



MAC0002D1517FD1



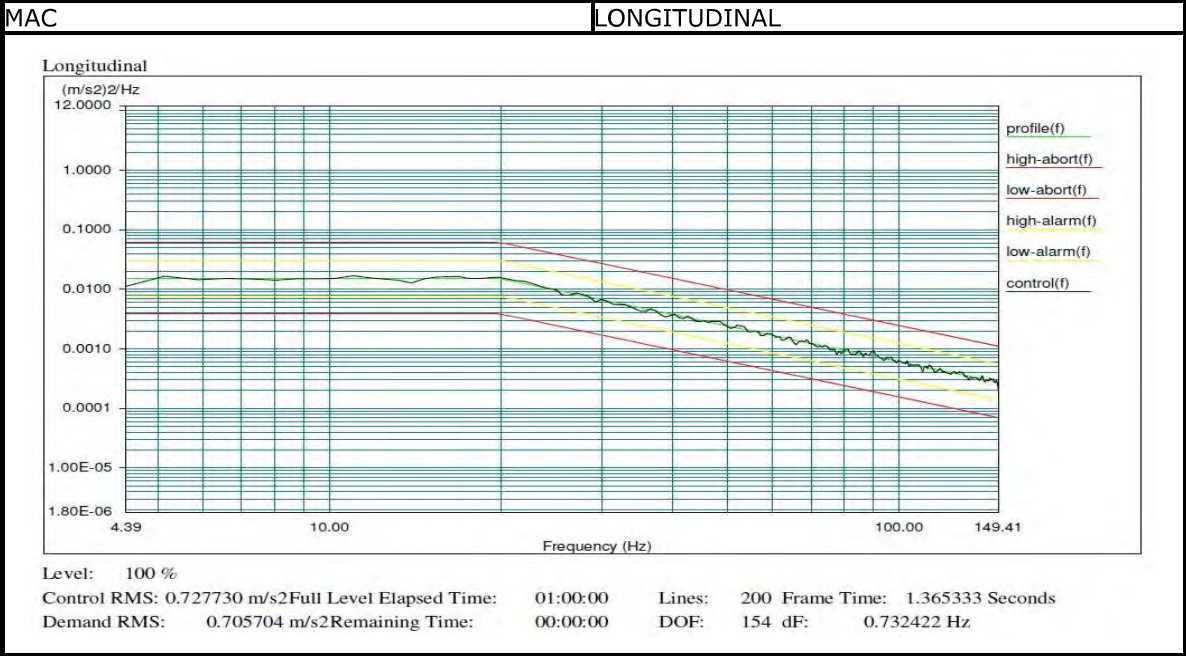
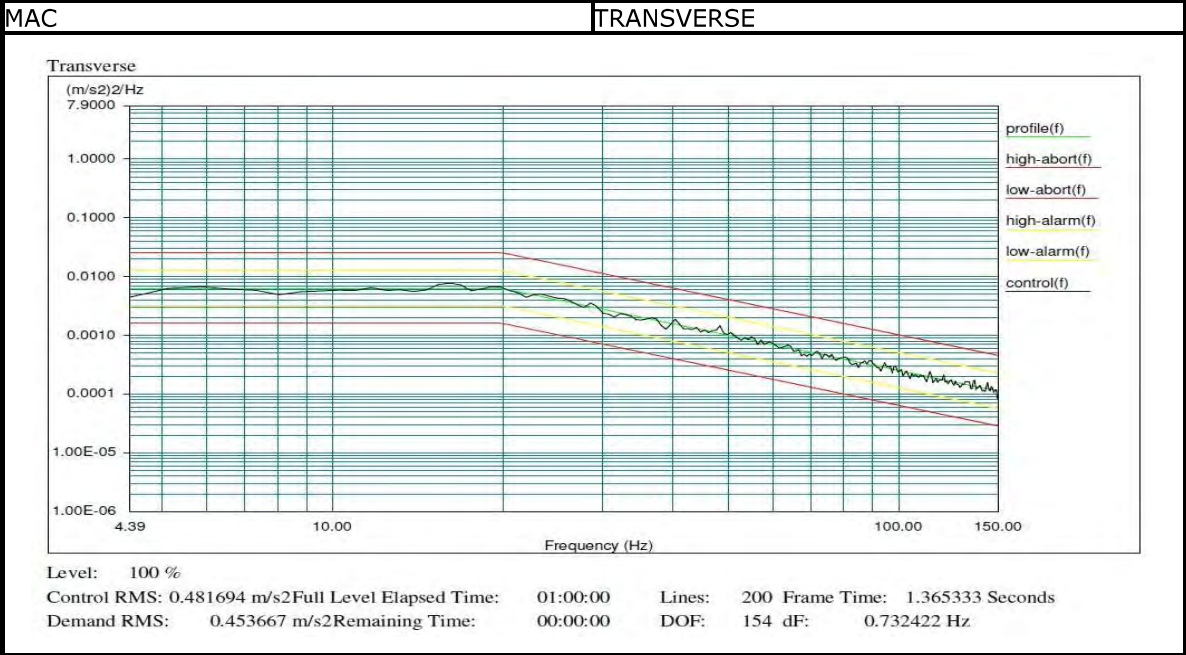
MACVERTICAL



Level: 100 %
Control RMS: 1.030702 m/s2Full Level Elapsed Time: 01:00:00
Demand RMS: 1.008150 m/s2Remaining Time: 00:00:00

Lines: 200 Frame Time: 1.365333 Seconds
DOF: 154 dF: 0.732422 Hz

Test Image



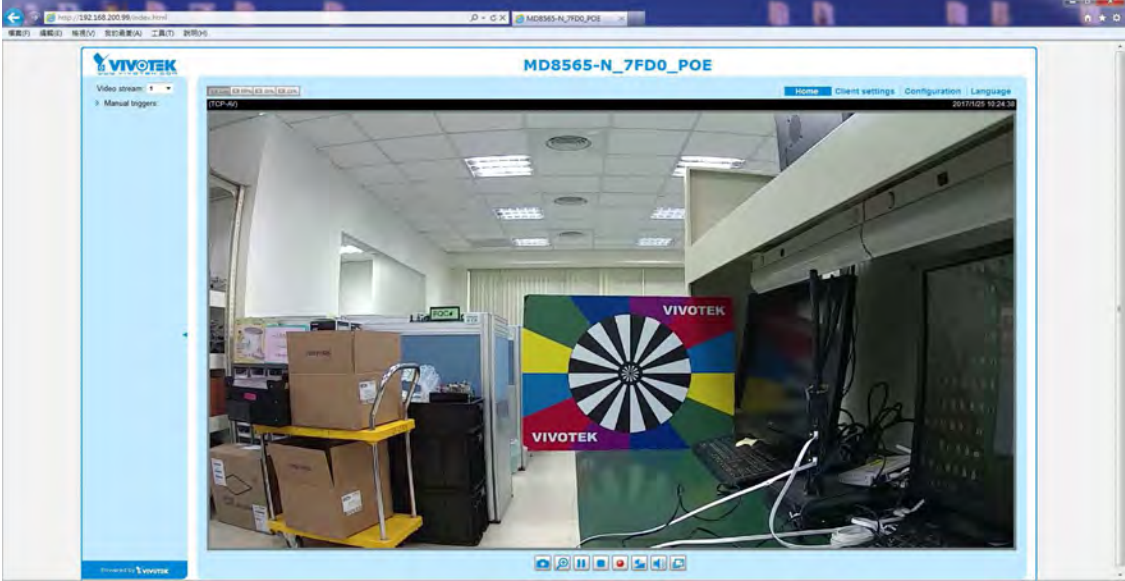
Function Test Item	Judgment	Remark
Appearance(check Peel,deformation,Dust)	NO Damage	
Network	PASS	
Update server setting	PASS	
Light Sensor Night	PASS	
Storage card	PASS	
DIDO	PASS	
Status LED	PASS	
Reset button	PASS	
Light Sensor Day	PASS	
Video	PASS	
Audio	PASS	
IR-Cut	PASS	
IR-LED	PASS	
DC 12V	PASS	
PoE Switch	PASS	

Test item	Operational Shock Test(IEC-61373)	Duration	1/19/2017 ~1/25/2017								
Place	Laboratory of Quality Assurance in										
Except Report No.	ST-170123-1										
Equipment											
Vibration Test System	Brand	KING DESIGN									
	Model	KD-9363EM-1000F2K-50N120									
	S/N	GUG02102091									
Control Accelerometer	Brand	WILCOXON RESEARCH									
	Model	WR-784A									
	S/N	23116									
Personal Computer	Operation System	Microsoft Windows	7								
	Browser	Microsoft Internet Explorer	9.050123								
Test Condition & Pcedure											
<table border="1"> <thead> <tr> <th>System/UUTWeight</th><th>Weight</th><th>Target Min G Level and Duration</th></tr> </thead> <tbody> <tr> <td rowspan="2">3.23 lb</td><td><4.5Kg(<10lb.)</td><td>3 ot50 G, 3 ms</td></tr> <tr> <td>4.5-18Kg(10-40lb.)</td><td>30G,6ms</td></tr> </tbody> </table>				System/UUTWeight	Weight	Target Min G Level and Duration	3.23 lb	<4.5Kg(<10lb.)	3 ot50 G, 3 ms	4.5-18Kg(10-40lb.)	30G,6ms
System/UUTWeight	Weight	Target Min G Level and Duration									
3.23 lb	<4.5Kg(<10lb.)	3 ot50 G, 3 ms									
	4.5-18Kg(10-40lb.)	30G,6ms									
1. Specimen Weight: weight kg 2. Power test unit on. Run Pin test. 3. The test unit shall be subjected to one each Half Sine impact for each direction (positive and negative) in each of 3 axes, at the testing specified table below. 4. Acceleration:30m/s ² (for ±vertical and ±transverse);50m/s ² (for ± longitudinal) 5. Duration D:30m/s											
Specimens	0002D1517FD0	0002D1517FD1									
Judgment Criteria	1. It doesn't have bad image, fogging, discoloration or reboot..etc 2. The specimens electrical function are normal.(Please see Function test list) 3. The specimen doesn't have deformation of the housing. 4. Wire Ping loss is less than 1%; wireless Ping loss is less than 10%.										
Result	Passed										

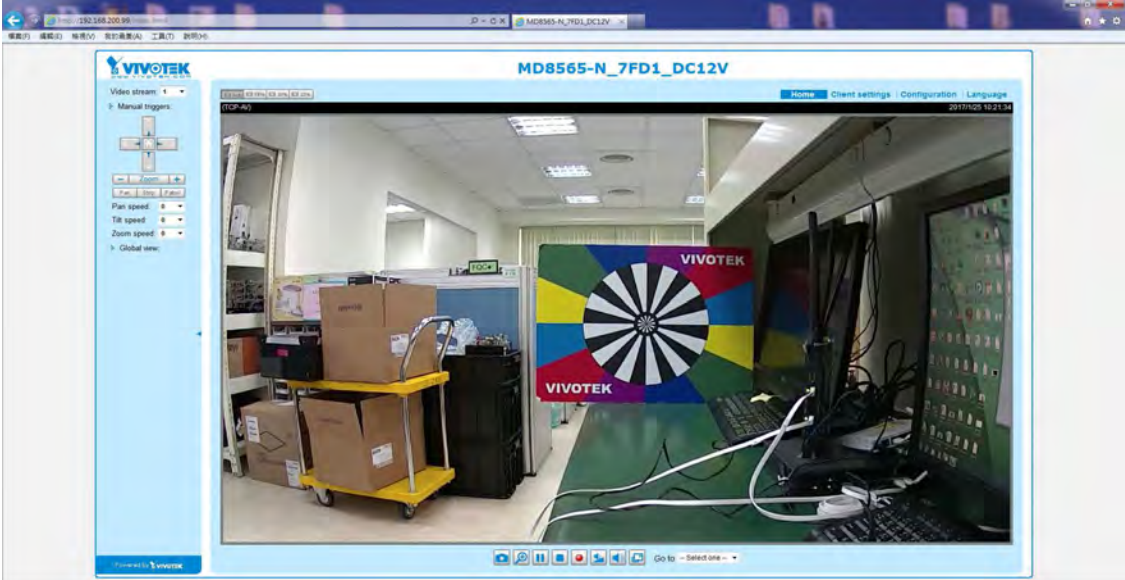
Testing photos	
Tester	±Vertical
	
±Longitudinal	±Transverse
	

Test Image

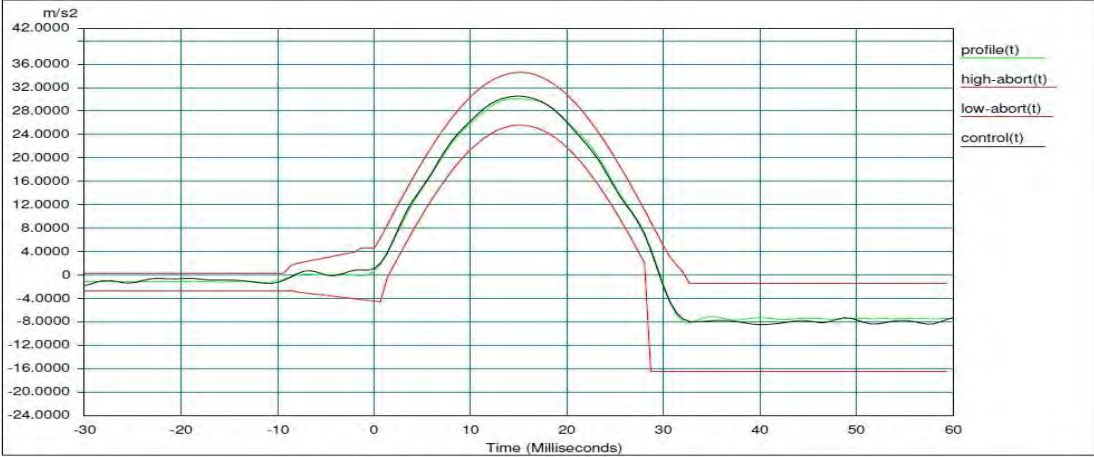
MAC0002D1517FD0



MAC0002D1517FD1



MAC_VERTICAL



Level: 100 % Block Size: 2048 Elapsed Pulses: 12

Frame Time: 1.365333 Seconds Control Peak: 30.440556 Control RMS: 3.946771 Full Level Elapsed Pulses: 3

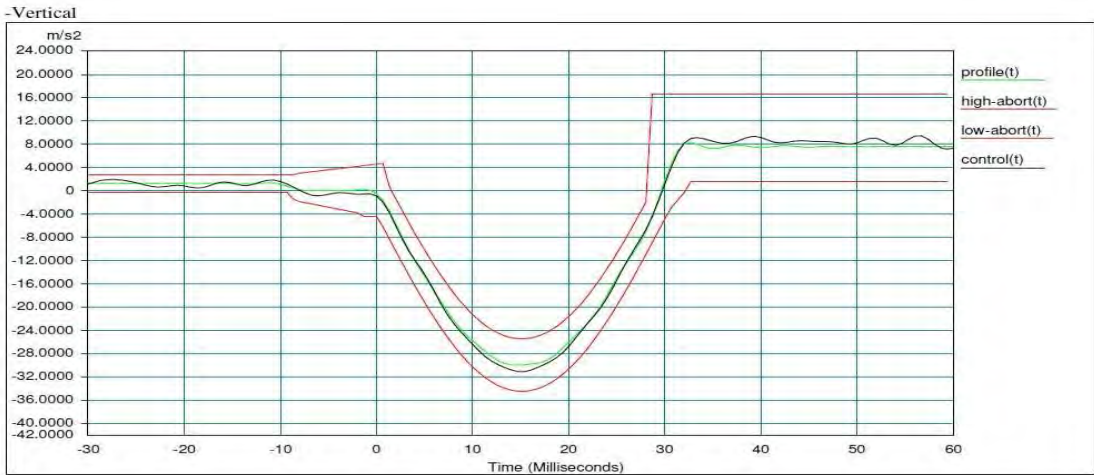
dT: 0.000667 Seconds Demand Peak: 30.000000 Demand RMS: 3.879573 Remaining Pulses: 0

Pulse Type: Half Sine Amplitude: 30.000000 Pulse Width: 29.999999 ms

Test Image

MAC

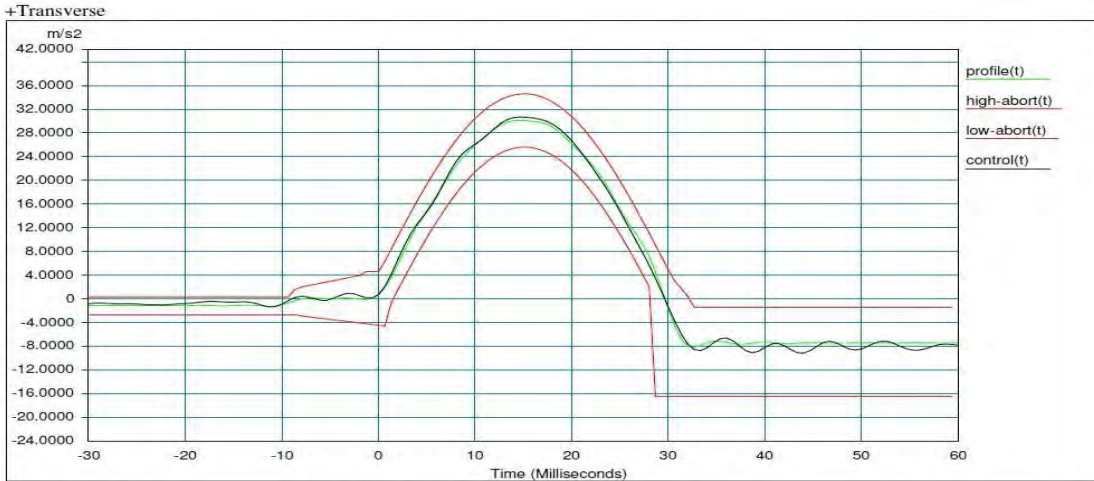
VERTICAL



Level: 100 % Block Size: 2048 Elapsed Pulses: 12
Frame Time: 1.365333 Seconds Control Peak: 31.114496 Control RMS: 4.000253 Full Level Elapsed Pulses: 3
dT: 0.000667 Seconds Demand Peak: 30.000000 Demand RMS: 3.879573 Remaining Pulses: 0
Pulse Type: Half Sine Amplitude: 30.000000 Pulse Width: 29.999999 ms

MAC

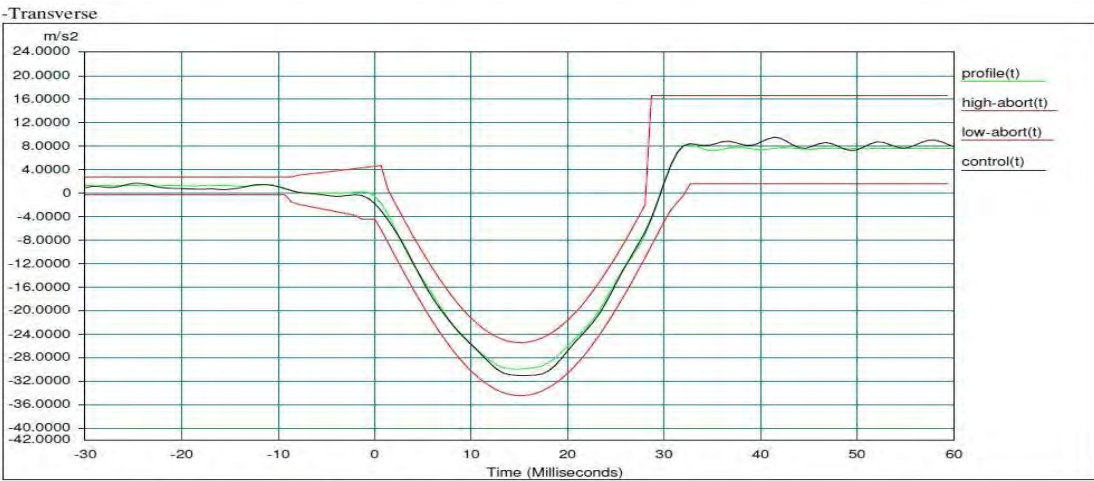
TRANSVERSE



Level: 100 % Block Size: 2048 Elapsed Pulses: 12
Frame Time: 1.365333 Seconds Control Peak: 30.585213 Control RMS: 3.959296 Full Level Elapsed Pulses: 3
dT: 0.000667 Seconds Demand Peak: 30.000000 Demand RMS: 3.879573 Remaining Pulses: 0
Pulse Type: Half Sine Amplitude: 30.000000 Pulse Width: 29.999999 ms

MAC

-TRANSVERSE

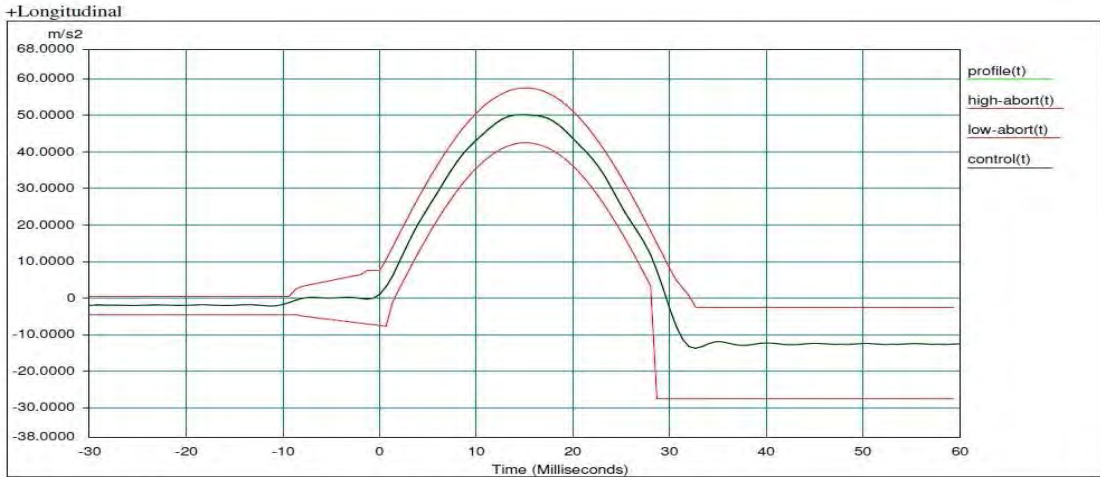


Level: 100 % Block Size: 2048 Elapsed Pulses: 12
Frame Time: 1.365333 Seconds Control Peak: 31.020166 Control RMS: 3.994230 Full Level Elapsed Pulses: 3
dT: 0.000667 Seconds Demand Peak: 30.000000 Demand RMS: 3.879573 Remaining Pulses: 0
Pulse Type: Half Sine Amplitude: 30.000000 Pulse Width: 29.999999 ms

Test Image

MAC

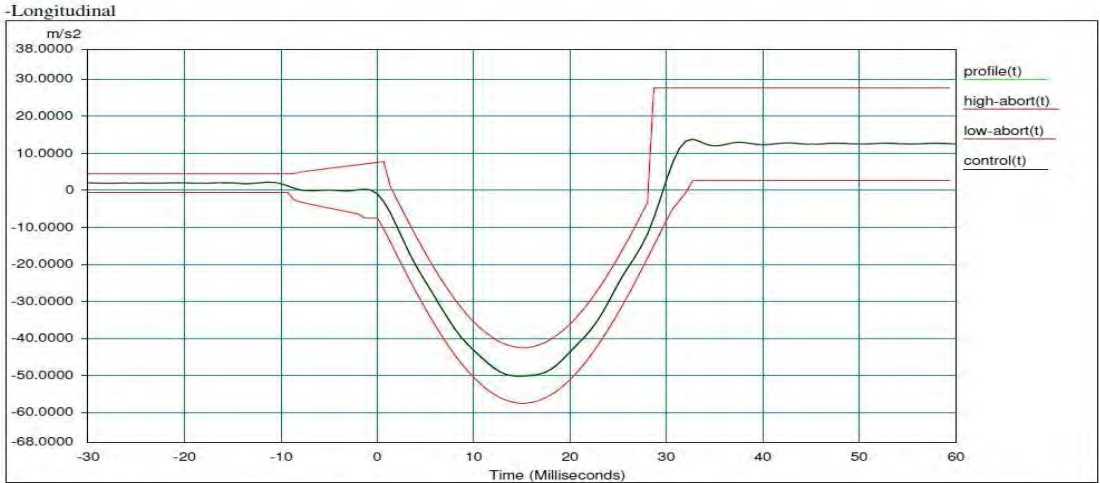
LONGITUDINAL



Level: 100 % Block Size: 2048 Elapsed Pulses: 12
Frame Time: 1.365333 Seconds Control Peak: 50.202217 Control RMS: 6.498380 Full Level Elapsed Pulses: 3
dT: 0.000667 Seconds Demand Peak: 50.000000 Demand RMS: 6.465956 Remaining Pulses: 0
Pulse Type: Half Sine Amplitude: 50.000000 Pulse Width: 29.999999 ms

MAC

LONGITUDINAL



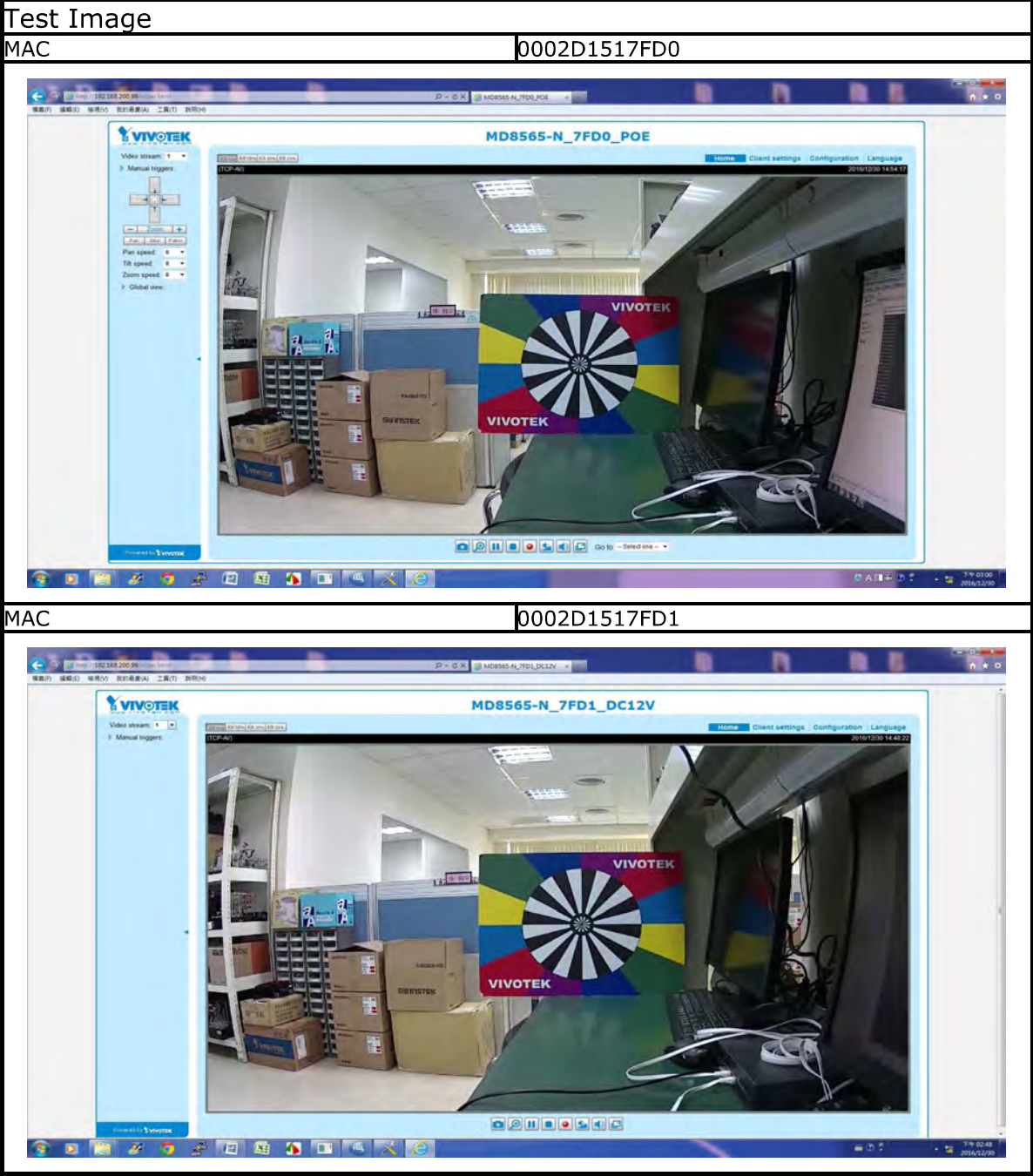
Level: 100 % Block Size: 2048 Elapsed Pulses: 12
Frame Time: 1.365333 Seconds Control Peak: 50.217415 Control RMS: 6.499094 Full Level Elapsed Pulses: 3
dT: 0.000667 Seconds Demand Peak: 50.000000 Demand RMS: 6.465956 Remaining Pulses: 0
Pulse Type: Half Sine Amplitude: 50.000000 Pulse Width: 29.999999 ms

Function Test Item	Judgment	Remark
Appearance(check Peel,deformation,Dust)	NO Damage	
Network	PASS	
Update server setting	PASS	
Light Sensor Night	PASS	
Storage card	PASS	
DIDO	PASS	
Status LED	PASS	
Reset button	PASS	
Light Sensor Day	PASS	
Video	PASS	
Audio	PASS	
IR-Cut	PASS	
IR-LED	PASS	
DC 12V	PASS	
PoE Switch	PASS	

Test item	Dry Heat Test(EN50155)		Duration	12/26/2016 ~12/29/2016
Place	Laboratory of Quality Assurance in			
Except Report No.		N/A		
Equipment				
Personal Computer	Operation System	Microsoft Windows	7	
	Browser	Microsoft Internet Explorer	9.050123	
PoE Switch	Brand	VIVOTEK		
	Model	AW-GEV-264A-370		
Test Condition & Pocedure				
1. Humidity: Uncontrolled. 2. Power the camera on. 3.To setup temperature coldtemp °C. Dwell for 72 hours. Then Power the unit off. 3. Increase to 15 °C. Dwell for1 hours. Power the unit on 10 minutes in the during this test. 4. Decrease to 25 °C .Dwell for 2 hours. Leave product in the chamber, Run Funtion test.				
Power Supply	DC 12V , PoE Switch			
Specimens	0002D1517FD0	0002D1517FD1		
Judgment Criteria	1. It doesn't have bad image, fogging, discoloration or reboot..etc. in during this test. 2. Wire Ping loss is less than 1%; wireless Ping loss is less than 10%. 3. The specimens electrical function are normal.(Please see Function test list) 4. The specimen doesn't have deformation of the housing.			
Result	Passed			

Environment

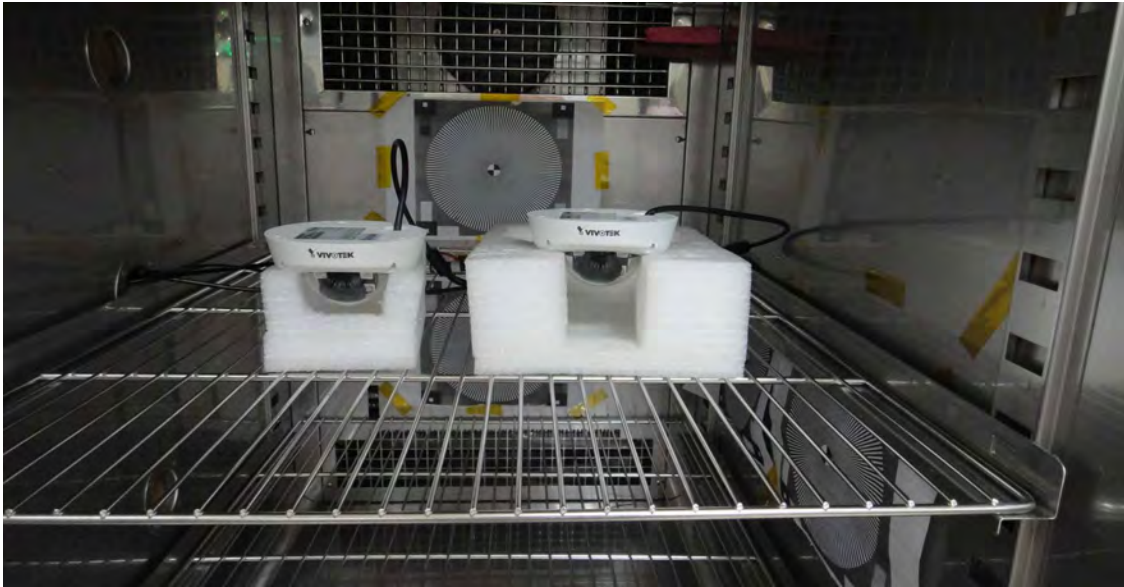


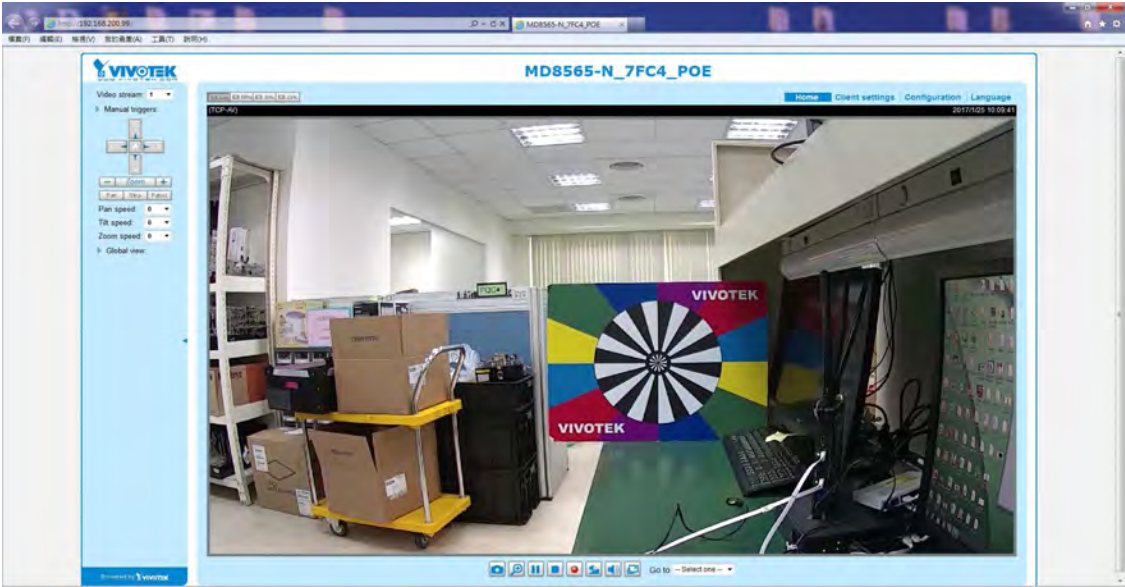
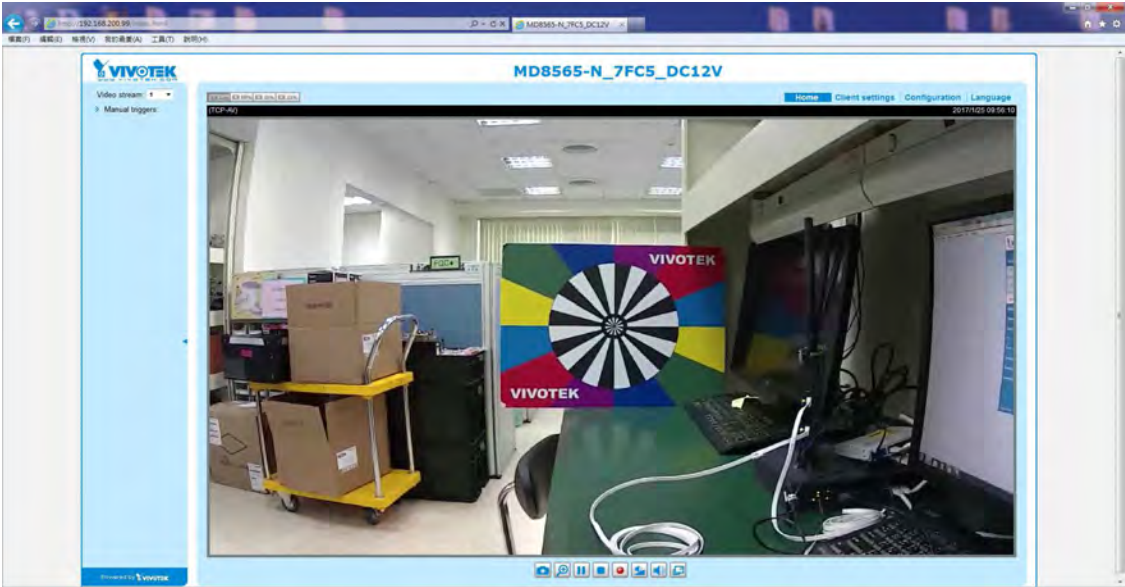


Function Test Item	Judgment	Remark
Appearance(check Peel,deformation,Dust)	NO Damage	
Network	PASS	
Update server setting	PASS	
Light Sensor Night	PASS	
Storage card	PASS	
DIDO	PASS	
Status LED	PASS	
Reset button	PASS	
Light Sensor Day	PASS	
Video	PASS	
Audio	PASS	
IR-Cut	PASS	
IR-LED	PASS	
DC 12V	PASS	
PoE Switch	PASS	

Test item	Operational Damp Heat Cyclic Test (EN50155)		Duration	1/3/2017 ~1/6/2017
Place	Laboratory of Quality Assurance in			
Except Report No.		N/A		
Equipment				
Temperature & Humidity Chamber	Brand	TAICHY TECHNOLOGY LTD		
	Model	MHK-408NK		
	S/N	1020625		
Personal Computer	Operation System	Microsoft Windows	7	
	Browser	Microsoft Internet Explorer	9.050123	
PoE Switch	Brand	CISCO		
	Model	SG-300-10MP		
Test Condition & Pocedure				
1.Humidity: 90±5% RH 2.Run temperature at 23°C 3.Dwell for 5hours. 4.Increase to 40°Cwithin 2 hours 5. Dwell for12hrs. 6. Repeat cycle 5 times 5ea 24hours cycles. 7.Sample Condition: Operating 6. Repeat cycle 5 times 5ea 24hr cycles. 7.Sample Condition: Operating. 8.Ping test (pinging each a minimum of 500 times)				
Power Supply	DC 12V , PoE Switch			
Specimens	0002D1517FC4	0002D1517FC5		
Judgment Criteria	1. It doesn't have bad image, fogging, discoloration or reboot..etc. in during this test. 2. Wire Ping loss is less than 1%; wireless Ping loss is less than 10%. 3. The specimens electrical function are normal.(Please see Function test list) 4. The specimen doesn't have deformation of the housing.			
Result	Passed			

Environment



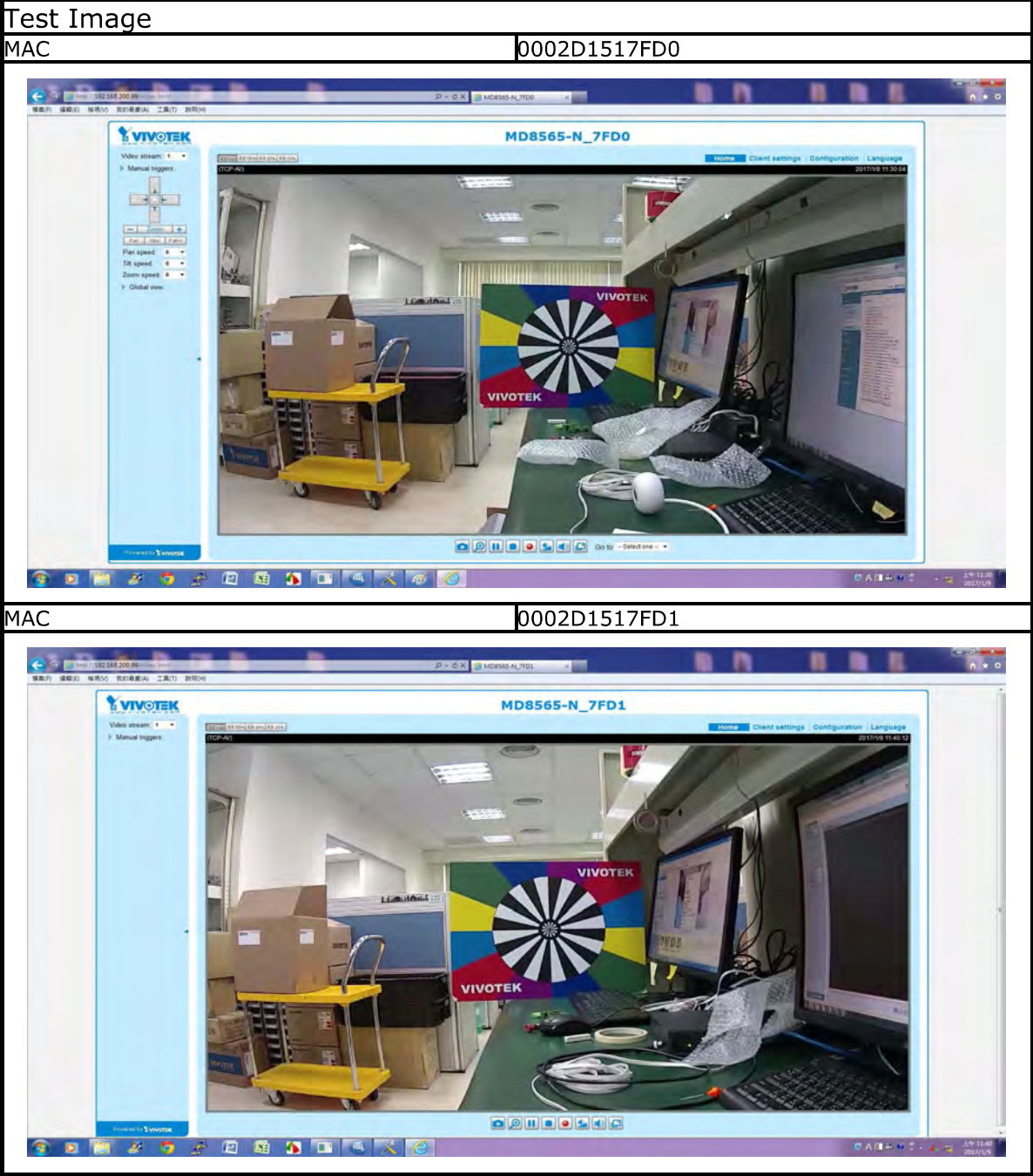
Test Image	
MAC	0002D1517FC4
	
MAC	0002D1517FC5
	

Function Test Item	Judgment	Remark
Appearance(check Peel,deformation,Dust)	NO Damage	
Network	PASS	
Update server setting	PASS	
Light Sensor Night	PASS	
Storage card	PASS	
DIDO	PASS	
Status LED	PASS	
Reset button	PASS	
Light Sensor Day	PASS	
Video	PASS	
Audio	PASS	
IR-Cut	PASS	
IR-LED	PASS	
DC 12V	PASS	
PoE Switch	PASS	

Test item	Low Temperature Storage Test(EN50155)	Duration	1/3/2017 ~1/4/2017
Place	Laboratory of Quality Assurance in		
Except Report No.	N/A		
Equipment			
Temperature & Humidity Chamber	Brand	TAICHY TECHNOLOGY LTD	
	Model	MHK-408NK	
	S/N	1030308	
Personal Computer	Operation System	Microsoft Windows	7
	Browser	Microsoft Internet Explorer	9.050123
Test Condition & Pcedure			
1. Humidity: Uncontrolled. 2. Decrease to -40°C within 2 hours. 3. Dwell for 16 hours. 4. Sample Condition: Non-Operating.			
Specimens	0002D1517FD0	0002D1517FD1	
Judgment Criteria	1. It doesn't have bad image, fogging, discoloration or reboot..etc. in during this test. 2. Wire Ping loss is less than 1%; wireless Ping loss is less than 10%. 3. The specimens electrical function are normal.(Please see Function test list) 4. The specimen doesn't have deformation of the housing.		
Result	Passed		

Environment





Function Test Item	Judgment	Remark
Appearance(check Peel,deformation,Dust)	NO Damage	
Network	PASS	
Update server setting	PASS	
Light Sensor Night	PASS	
Storage card	PASS	
DIDO	PASS	
Status LED	PASS	
Reset button	PASS	
Light Sensor Day	PASS	
Video	PASS	
Audio	PASS	
IR-Cut	PASS	
IR-LED	PASS	
DC 12V	PASS	
PoE Switch	PASS	

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Report: Reliability Test Report (QA reports), by Kenji Tsai (Version 1)