Test Report issued under the responsibility of:

TEST REPORT
IEC 62368-1
Audio/video, information and communication technology equipment
Part 1: Safety requirements

Report Number.....:	KSES220500041101-M1
Date of issue .....:	2022-06-15; Amendment 1: 2022-07-15
Total number of pages.....:	23 pages
Name of Testing Laboratory preparing the Report.....:	SGS-CSTC Standards Technical Services Co., Ltd. Kunshan Branch
Applicant's name .....:	Hangzhou Hikvision Digital Technology Co., Ltd.
Address .....:	No.555 Qianmo Road, Binjiang District, Hangzhou 310052, China
Test specification:	
Standard.....:	IEC 62368-1:2014
Test procedure.....:	CB Scheme
Non-standard test method.....:	N/A
TRF template used.....:	IECEE OD-2020-F1:2021, Ed.1.4
Test Report Form No.....:	IEC62368_1D
Test Report Form(s) Originator..:	UL(US)
Master TRF.....:	Dated 2022-04-14

This report is not valid as a CB Test Report unless signed by an approved CB Testing Laboratory and appended to a CB Test Certificate issued by an NCB in accordance with IECEE 02.

General disclaimer:

The test results presented in this report relate only to the object tested.
This report shall not be reproduced, except in full, without the written approval of the Issuing CB Testing Laboratory. The authenticity of this Test Report and its contents can be verified by contacting the NCB, responsible for this Test Report.

Test Item description .....:		Network Video Recorder
Trade Mark(s) .....:		HIKVISION
Manufacturer .....:		Same as applicant
Model/Type reference .....:		See page 8
Ratings .....:		100 - 240 V a. c., 50 / 60 Hz, 2,2 A MAX; Class I
Responsible Testing Laboratory (as applicable), testing procedure and testing location(s):		
☒	**CB Testing Laboratory:**	SGS-CSTC Standards Technical Services Co., Ltd. Kunshan Branch
Testing location/ address.....:		No. 10, Weiye Rd, Kunshan Development Zone, Jiangsu, China
Tested by (name, function, signature).....:		Cookie Zhang Project Engineer
Approved by (name, function, signature).....:		Michael Xu Reviewer
☐	**Testing procedure: CTF Stage 1:**	
Testing location/ address..... :		
Tested by (name, function, signature).....:		
Approved by (name, function, signature).....:		
☐	**Testing procedure: CTF Stage 2:**	
Testing location/ address.....:		
Tested by (name, function, signature).....:		
Witnessed by (name, function, signature).....:		
Approved by (name, function, signature).....:		
☐	**Testing procedure: CTF Stage 3 :**	
☐	**Testing procedure: CTF Stage 4:**	
Testing location/ address.....:		
Tested by (name, function, signature).....:		
Witnessed by (name, function, signature).....:		
Approved by (name, function, signature).....:		
Supervised by (name, function, signature) .....:		

List of Attachments (including a total number of pages in each attachment):

Attachment 1 – 10 pages of Photos documents.

Summary of testing:

N/A

Tests performed (name of test and test clause):

☒ 4. General requirements
☒ 5. Electrically-caused injury
☒ 6. Electrically-caused fire
☒ 7. Injury caused by hazardous substances
☒ 8. Mechanically-caused injury
☒ 9. Thermal burn injury
☒10. Radiation
☒ Annex B. Normal operating condition tests, abnormal operating condition tests and single fault condition tests
☒ Annex F.3.9. Performance of Marking test
☒ Annex M Equipment containing batteries and their protection circuits
☒ Annex Q. Limited Power Source
☒ Annex T. Mechanical strength tests
☒ Annex V. Determination of accessible parts

Testing location:

SGS-CSTC Standards Technical Services Co., Ltd. Kunshan Branch
No. 10, Weiye Rd, Kunshan Development Zone, Jiangsu, China

Summary of compliance with National Differences (List of countries addressed):

1. EU Group Differences (EN 62368-1:2014+A11:2017)
2. EU Special National Conditions, EU A-deviations: DE, DK, FI, GB, IE, NO, SE
   Explanation of used codes: DE=Germany, DK=Denmark, FI=Finland, GB= United Kingdom, IE=Ireland, NO=Norway, SE=Sweden
3. Australia and New Zealand Differences (AS/NZS 62368.1:2018)

The product fulfils the above requirements. which have been considered in original CB test report Ref. KSES220500041101, dated on 2022-06-15 and this report.

Use of uncertainty of measurement for decisions on conformity (decision rule) :

☒ **No decision rule is specified by the IEC standard, when comparing the measurement result with the applicable limit according to the specification in that standard. The decisions on conformity are made without applying the measurement uncertainty ("simple acceptance" decision rule, previously known as "accuracy method").**

☐ **Other:… (to be specified, for example when required by the standard or client, or if national accreditation requirements apply)**

Information on uncertainty of measurement:

The uncertainties of measurement are calculated by the laboratory based on application of criteria given by OD-5014 for test equipment and application of test methods, decision sheets and operational procedures of IECEE.

IEC Guide 115 provides guidance on the application of measurement uncertainty principles and applying the decision rule when reporting test results within IECEE scheme, noting that the reporting of the measurement uncertainty for measurements is not necessary unless required by the test standard or customer.

Calculations leading to the reported values are on file with the NCB and testing laboratory that conducted the testing.

Copy of marking plate:

The artwork below may be only a draft. The use of certification marks on a product must be authorized by the respective National Certification Body that own these marks.

Marking for model DS-7608NI-M2/8P

Remark:

1) The Height of CE logo shall not be less than 5 mm; Height of WEEE logo shall not be less than 7 mm.

2) The marking plates for other models are of the same pattern except for model name.

3) As declared by the applicant, the importer (and manufacturer, if it is different)'s name, registered trade name or registered trade mark and the postal address will be marked on the products before being placed on the market. The contact details shall be in a language easily understood by end-users and market surveillance authorities.

TEST ITEM PARTICULARS:	
Classification of use by ..... :	☒ Ordinary person ☒ Instructed person ☒ Skilled person ☐ Children likely to be present
Supply Connection ..... :	☒ AC Mains ☐ DC Mains ☐ External Circuit - not Mains connected - ☐ ES1 ☐ ES2 ☐ ES3
Supply % Tolerance ..... :	☒ +10%/-10% ☐ +20%/-15% ☐ +____%/ -_____% ☐ None
Supply Connection – Type ..... :	☒ pluggable equipment type A - ☐ non-detachable supply cord ☒ appliance coupler ☐ direct plug-in ☐ mating connector ☐ pluggable equipment type B - ☐ non-detachable supply cord ☐ appliance coupler ☐ permanent connection ☐ mating connector ☐ other: Not directly connected to mains
Considered current rating of protective device as part of building or equipment installation..... :	16 A for other area; 20A for north America Installation location: ☒ building; ☐ equipment
Equipment mobility ..... :	☒ movable ☐ hand-held ☐ transportable ☐ stationary ☐ for building-in ☐ direct plug-in ☐ rack-mounting ☐ wall-mounted
Over voltage category (OVC) ..... :	☐ OVC I ☒ OVC II ☐ OVC III ☐ OVC IV ☐ other: Not directly connected to mains
Class of equipment ..... :	☒ Class I ☐ Class II ☐ Class III
Access location ..... :	☐ restricted access location ☒ N/A
Pollution degree (PD) ..... :	☐ PD 1 ☒ PD 2 ☐ PD 3
Manufacturer's specified maxium operating ambient..... :	55°C
IP protection class ..... :	☒ IPX0 ☐ IP___
Power Systems ..... :	☐ TN ☐ TT ☐ IT - ____ V_{L-L}
Altitude during operation (m) ..... :	☒ 2000 m or less ☐ _____ m
Altitude of test laboratory (m) ..... :	☒ 2000 m or less ☐ 100 m
Mass of equipment (kg) ..... :	☒ 2,51kg

Possible test case verdicts:	
- test case does not apply to the test object ..... :	N/A
- test object does meet the requirement..... :	P (Pass)
- test object does not meet the requirement ..... :	F (Fail)
Testing ..... :	
Date of receipt of test item ..... :	2022-07-11
Date (s) of performance of tests..... :	2022-07-11 to 2022-07-12

General remarks:

"(See Enclosure #)" refers to additional information appended to the report.
"(See appended table)" refers to a table appended to the report.

Throughout this report a ☒ comma / ☐ point is used as the decimal separator.

Manufacturer's Declaration per sub-clause 4.2.5 of IECEE 02:	
The application for obtaining a CB Test Certificate includes more than one factory location and a declaration from the Manufacturer stating that the sample(s) submitted for evaluation is (are) representative of the products from each factory has been provided ..... :	☒ **Yes** ☐ **Not applicable**
When differences exist; they shall be identified in the General product information section.	
Name and address of factory (ies) ..... :	1. Hangzhou Hikvision Technology Co., Ltd. No. 700, Dongliu Road, Binjiang District, Hangzhou City, Zhejiang, 310052, China. 2. Hangzhou Hikvision Electronics Co., Ltd. No. 299, Qiushi Road, Tonglu Economic Development Zone, Tonglu County, Hangzhou, Zhejiang, 310052, China. 3. Hangzhou Hikvision Digital Technology Co., Ltd. No.555 Qianmo Road, Binjiang District, Hangzhou 310052, China. 4. Chongqing Hikvision Technology Co., Ltd. No. 118, Haikang Road, Area C, Jianqiao Industrial Park, Dadukou District, Chongqing, 401325, China

General product information and other remarks:

Product Description –

Functions	The equipment under test is Class I Network Video Recorder, which is powered by building-in power supply through detachable power cord set.
Material of enclosure	Front side: Plastic Other sides: Metal
Model differences	All the models are identical except for model name which have no impact for safety.
Others	Indoor use only PoE port x8, HDMI X1, VGA X1, USB 2.0 X1, USB 3.0X1, Lan port X1, Audio IN/OUT port X1, Video out port X1

Model List:

DS-7608NI-M2/8P	DS-7608NI-M2/8PUHK	DS-7608NI-M2/8PCKV
DS-7608NI-M2/8PUVS	DS-7608NI-M2/8PKVO	DS-7608NI-M2/8PHUN
DS-7608NI-M2/8P/EDU	DS-7608NI-M2/8P/RTL	DS-7608NI-M2/8P/NRG
DS-7608NI-M2/8P/LGX	DS-7608NI-M2/8P/MFG	DS-7608NI-M2/8P/RMS
DS-7616NI-Q2/16P	**DS-7616NI-Q2/16PUHK**	**DS-7616NI-Q2/16PCKV**
DS-7616NI-Q2/16PUVS	**DS-7616NI-Q2/16PKVO**	**DS-7616NI-Q2/16PHUN**
DS-7XXXNI-XXXXX	**DS-7XXXNI-XXXXXUHK**	**DS-7XXXNI-XXXXXCKV**
DS-7XXXNI-XXXXXUVS	**DS-7XXXNI-XXXXXKVO**	**DS-7XXXNI-XXXXXHUN**

Amendment 1 Report:

The original Test Report Ref. No. KSES220500041101, dated on 2022-06-15 was modified to include following changes and/or additions:

- Add above 12 models which are identical to the previous except for the model name, main board and marketing purpose which have no impact for safety details see Model List with bond words.
- Add alternative Power supply, mainboard and functional board, details see table 4.1.2;

-Update the photo attachment, derails see attachment 1 photo information.

After comparison, Cl **5.4.1.4, 6.3.2, 9.0, B.2.6, 6.2.2, B.2.5, B.3, B.4, Annex Q** were considered for DS-7608NI-M2/8P.

This test report is not valid without the original CB Test Report Ref. No. No. KSES220500041101, dated on 2022-06-15.

Additional application considerations – (Considerations used to test a component or sub-assembly) –

N/A

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Clause	Requirement + Test	Result - Remark	Verdict
5	**ELECTRICALLY-CAUSED INJURY**		P
5.2.1	Electrical energy source classifications ..... :	(See appended table 5.2)	P
5.2.2	ES1, ES2 and ES3 limits		P
5.2.2.2	Steady-state voltage and current ..... :	(See appended table 5.2)	P
5.2.2.3	Capacitance limits..... :	approved internal power supply	N/A
5.2.2.4	Single pulse limits ..... :		N/A
5.2.2.5	Limits for repetitive pulses ..... :		N/A
5.2.2.6	Ringing signals ..... :		N/A
5.2.2.7	Audio signals ..... :		N/A
5.3	Protection against electrical energy sources		P
5.3.1	General Requirements for accessible parts to ordinary, instructed and skilled persons		P
5.3.2.1	Accessibility to electrical energy sources and safeguards		P
5.3.2.2	Contact requirements		P
	a) Test with test probe from Annex V ..... :	V2	P
	b) Electric strength test potential (V)..... :		N/A
	c) Air gap (mm) ..... :		N/A
5.3.2.4	Terminals for connecting stripped wire		N/A
5.4	Insulation materials and requirements		N/A
5.4.1.2	Properties of insulating material		P
5.4.1.3	Humidity conditioning ..... :	approved internal power supply	P
5.4.1.4	Maximum operating temperature for insulating materials ..... :	approved internal power supply	P
5.4.1.5	Pollution degree..... :	2	--
5.4.1.5.2	Test for pollution degree 1 environment and for an insulating compound		N/A
5.4.1.5.3	Thermal cycling		N/A
5.4.1.6	Insulation in transformers with varying dimensions		N/A
5.4.1.7	Insulation in circuits generating starting pulses		N/A
5.4.1.8	Determination of working voltage	approved internal power supply	P
5.4.1.9	Insulating surfaces		N/A
5.4.1.10	Thermoplastic parts on which conductive metallic parts are directly mounted		N/A
5.4.1.10.2	Vicat softening temperature..... :	(See appended table 5.4.1.10.2)	N/A
5.4.1.10.3	Ball pressure ..... :	(See appended table 5.4.1.10.3)	N/A
5.4.2	Clearances	evaluated in internal power supply report	P
5.4.2.2	Determining clearance using peak working voltage	(See appended table 5.4.2.2)	N/A

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Clause	Requirement + Test	Result - Remark	Verdict
5.4.2.3	Determining clearance using required withstand voltage ..... :	(See appended table 5.4.2.3)	N/A
	a) a.c. mains transient voltage..... :	2500	--
	b) d.c. mains transient voltage ..... :		--
	c) external circuit transient voltage..... :		--
	d) transient voltage determined by measurement ..... :		--
5.4.2.4	Determining the adequacy of a clearance using an electric strength test	(See appended table 5.4.2.4)	N/A
5.4.2.5	Multiplication factors for clearances and test voltages..... :		N/A
5.4.3	Creepage distances ..... :	evaluated in internal power supply report	P
5.4.3.1	General		N/A
5.4.3.3	Material Group ..... :	IIIb	--
5.4.4	Solid insulation	approved internal power supply	N/A
5.4.4.2	Minimum distance through insulation ..... :	(See appended table 5.4.4.2)	N/A
5.4.4.3	Insulation compound forming solid insulation		N/A
5.4.4.4	Solid insulation in semiconductor devices		N/A
5.4.4.5	Cemented joints		N/A
5.4.4.6	Thin sheet material		N/A
5.4.4.6.1	General requirements		N/A
5.4.4.6.2	Separable thin sheet material		N/A
	Number of layers (pcs) ..... :		N/A
5.4.4.6.3	Non-separable thin sheet material		N/A
5.4.4.6.4	Standard test procedure for non-separable thin sheet material..... :	(See appended Table 5.4.9)	N/A
5.4.4.6.5	Mandrel test		N/A
5.4.4.7	Solid insulation in wound components		N/A
5.4.4.9	Solid insulation at frequencies >30 kHz..... :	(See appended Table 5.4.4.9)	N/A
5.4.5	Antenna terminal insulation		N/A
5.4.5.1	General		N/A
5.4.5.2	Voltage surge test		N/A
	Insulation resistance (MΩ)..... :		--
5.4.6	Insulation of internal wire as part of supplementary safeguard ..... :	(See appended table 5.4.4.2)	N/A
5.4.7	Tests for semiconductor components and for cemented joints		N/A
5.4.8	Humidity conditioning		P
	Relative humidity (%)..... :	93%	--

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Clause	Requirement + Test	Result - Remark	Verdict
	Temperature (°C) ..... :	40	--
	Duration (h) ..... :	120	--
5.4.9	Electric strength test ..... :	(See appended table 5.4.9)	P
5.4.9.1	Test procedure for a solid insulation type test		N/A
5.4.9.2	Test procedure for routine tests		N/A
5.4.10	Protection against transient voltages between external circuit		N/A
5.4.10.1	Parts and circuits separated from external circuits		N/A
5.4.10.2	Test methods		N/A
5.4.10.2.1	General		N/A
5.4.10.2.2	Impulse test..... :		N/A
5.4.10.2.3	Steady-state test ..... :		N/A
5.4.11	Insulation between external circuits and earthed circuitry..... :		N/A
5.4.11.1	Exceptions to separation between external circuits and earth		N/A
5.4.11.2	Requirements		N/A
	Rated operating voltage U_{op} (V) ..... :		--
	Nominal voltage U_{peak} (V)..... :		--
	Max increase due to variation U_{sp} ..... :		--
	Max increase due to ageing ΔU_{sa} ..... :		--
	$U_{op} = U_{peak} + \Delta U_{sp} + \Delta U_{sa}$ ..... :		--
5.5	Components as safeguards		N/A
5.5.1	General	approved internal power supply	N/A
5.5.2	Capacitors and RC units		N/A
5.5.2.1	General requirement		N/A
5.5.2.2	Safeguards against capacitor discharge after disconnection of a connector ..... :		N/A
5.5.3	Transformers		N/A
5.5.4	Optocouplers		N/A
5.5.5	Relays		N/A
5.5.6	Resistors		N/A
5.5.7	SPD's		N/A
5.5.7.1	Use of an SPD connected to reliable earthing		N/A
5.5.7.2	Use of an SPD between mains and protective earth		N/A
5.5.8	Insulation between the mains and external circuit consisting of a coaxial cable ..... :		N/A
5.6	Protective conductor		P

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Clause	Requirement + Test	Result - Remark	Verdict
5.6.2	Requirement for protective conductors		P
5.6.2.1	General requirements		P
5.6.2.2	Colour of insulation		N/A
5.6.3	Requirement for protective earthing conductors		N/A
	Protective earthing conductor size (mm^2) .....:	min. 0,75	--
5.6.4	Requirement for protective bonding conductors		N/A
5.6.4.1	Protective bonding conductors		N/A
	Protective bonding conductor size (mm^2). .....:	min. 0,75	--
	Protective current rating (A) ..... :	<25A	--
5.6.4.3	Current limiting and overcurrent protective devices		N/A
5.6.5	Terminals for protective conductors		N/A
5.6.5.1	Requirement		N/A
	Conductor size (mm^2), nominal thread diameter (mm). .....:		N/A
5.6.5.2	Corrosion		N/A
5.6.6	Resistance of the protective system		P
5.6.6.1	Requirements		P
5.6.6.2	Test Method Resistance (Ω).....:	(See appended table 5.6.6.2)	P
5.6.7	Reliable earthing		N/A
5.7	Prospective touch voltage, touch current and protective conductor current		P
5.7.2	Measuring devices and networks	evaluated in internal power supply report	P
5.7.2.1	Measurement of touch current.....:		P
5.7.2.2	Measurement of prospective touch voltage		N/A
5.7.3	Equipment set-up, supply connections and earth connections		N/A
	System of interconnected equipment (separate connections/single connection).....:		--
	Multiple connections to mains (one connection at a time/simultaneous connections).....:		--
5.7.4	Earthed conductive accessible parts.....:	See table 5.7.4	P
5.7.5	Protective conductor current		N/A
	Supply Voltage (V).....:		--
	Measured current (mA).....:		--
	Instructional Safeguard.....:		N/A
5.7.6	Prospective touch voltage and touch current due to external circuits		N/A
5.7.6.1	Touch current from coaxial cables		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
5.7.6.2	Prospective touch voltage and touch current from external circuits		N/A
5.7.7	Summation of touch currents from external circuits		N/A
	a) Equipment with earthed external circuits Measured current (mA).....:		N/A
	b) Equipment whose external circuits are not referenced to earth. Measured current (mA).....:		N/A
6	**ELECTRICALLY- CAUSED FIRE**		P
6.2	Classification of power sources (PS) and potential ignition sources (PIS)		P
6.2.2	Power source circuit classifications		P
6.2.2.1	General		P
6.2.2.2	Power measurement for worst-case load fault... :	The internal circuit is considered as PS3 without test.	P
6.2.2.3	Power measurement for worst-case power source fault..... :	Outputs are LPS and considered as PS1/PS2.	P
6.2.2.4	PS1 ..... :		P
6.2.2.5	PS2 ..... :		P
6.2.2.6	PS3 ..... :	The product is powered by PS3. And internal circuit is considered as PS3 without test.	P
6.2.3	Classification of potential ignition sources		P
6.2.3.1	Arcing PIS ..... :	No primary parts	N/A
6.2.3.2	Resistive PIS ..... :	The internal circuit is considered as resistive PIS without test.	P
6.3	Safeguards against fire under normal operating and abnormal operating conditions		P
6.3.1 (a)	No ignition and attainable temperature value less than 90 % defined by ISO 871 or less than 300 C for unknown materials ..... :	(See appended table 5.4.1.5, 6.3.2, 9.0, B.2.6)	P
6.3.1 (b)	Combustible materials outside fire enclosure	Min HB.	P
6.4	Safeguards against fire under single fault conditions		P
6.4.1	Safeguard Method	Control fire spread used.	P
6.4.2	Reduction of the likelihood of ignition under single fault conditions in PS1 circuits		N/A
6.4.3	Reduction of the likelihood of ignition under single fault conditions in PS2 and PS3 circuits		N/A
6.4.3.1	General		N/A
6.4.3.2	Supplementary Safeguards		N/A
	Special conditions if conductors on printed boards are opened or peeled		N/A
6.4.3.3	Single Fault Conditions ..... :		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	Special conditions for temperature limited by fuse		N/A
6.4.4	Control of fire spread in PS1 circuits		P
6.4.5	Control of fire spread in PS2 circuits		P
6.4.5.2	Supplementary safeguards ..... :	(See appended tables 4.1.2 and Annex G)	N/A
6.4.6	Control of fire spread in PS3 circuit		P
6.4.7	Separation of combustible materials from a PIS		N/A
6.4.7.1	General..... :		N/A
6.4.7.2	Separation by distance		N/A
6.4.7.3	Separation by a fire barrier		N/A
6.4.8	Fire enclosures and fire barriers		P
6.4.8.1	Fire enclosure and fire barrier material properties		P
6.4.8.2.1	Requirements for a fire barrier		N/A
6.4.8.2.2	Requirements for a fire enclosure		P
6.4.8.3	Constructional requirements for a fire enclosure and a fire barrier		P
6.4.8.3.1	Fire enclosure and fire barrier openings		P
6.4.8.3.2	Fire barrier dimensions		N/A
6.4.8.3.3	Top Openings in Fire Enclosure: dimensions (mm) .....:	Front side: no opening. Top side: no opening. side: power fan provide several hexagon with side max. 4mm	P
	Needle Flame test		N/A
6.4.8.3.4	Bottom Openings in Fire Enclosure, condition met a), b) and/or c) dimensions (mm) .....:	Numerous Ø 4mm openings Under components and parts meeting the requirements for V-1 class material	P
	Flammability tests for the bottom of a fire enclosure .....:		N/A
6.4.8.3.5	Integrity of the fire enclosure, condition met: a), b) or c) ..... :	No door or cover.	N/A
6.4.8.4	Separation of PIS from fire enclosure and fire barrier distance (mm) or flammability rating .....:	[ ] minimum 5mm from resistive PIS, [x] enclosure is metal or V-0	P
6.5	Internal and external wiring		P
6.5.1	Requirements		P
6.5.2	Cross-sectional area (mm^2) .....:		--
6.5.3	Requirements for interconnection to building wiring ..... :	(See Annex Q.)	N/A
6.6	Safeguards against fire due to connection to additional equipment		P

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Clause	Requirement + Test	Result - Remark	Verdict
	External port limited to PS2 or complies with Clause Q.1		P
B	**NORMAL OPERATING CONDITION TESTS, ABNORMAL OPERATING CONDITION TESTS AND SINGLE FAULT CONDITION TESTS**		P
B.2	Normal Operating Conditions		P
B.2.1	General requirements.....:	(See Test Item Particulars and appended test tables)	P
	Audio Amplifiers and equipment with audio amplifiers .....:	No such part.	N/A
B.2.3	Supply voltage and tolerances		P
B.2.5	Input test.....:	(See appended table B.2.5)	P
B.3	Simulated abnormal operating conditions		P
B.3.1	General requirements.....:	(See appended table B.3)	P
B.3.2	Covering of ventilation openings		P
B.3.3	D.C. mains polarity test		N/A
B.3.4	Setting of voltage selector .....:		N/A
B.3.5	Maximum load at output terminals .....:		P
B.3.6	Reverse battery polarity	The coin battery is soldered on PCB.	N/A
B.3.7	Abnormal operating conditions as specified in Clause E.2.		N/A
B.3.8	Safeguards functional during and after abnormal operating conditions		P
B.4	Simulated single fault conditions		P
B.4.2	Temperature controlling device open or short-circuited .....:	(See appended table B.4)	N/A
B.4.3	Motor tests		P
B.4.3.1	Motor blocked or rotor locked increasing the internal ambient temperature .....:	(See Clause G.5)	P
B.4.4	Short circuit of functional insulation		N/A
B.4.4.1	Short circuit of clearances for functional insulation		N/A
B.4.4.2	Short circuit of creepage distances for functional insulation		N/A
B.4.4.3	Short circuit of functional insulation on coated printed boards		N/A
B.4.5	Short circuit and interruption of electrodes in tubes and semiconductors		N/A
B.4.6	Short circuit or disconnect of passive components		P
B.4.7	Continuous operation of components		N/A

IEC 62368-1			
Clause	Requirement + Test	Result - Remark	Verdict
B.4.8	Class 1 and Class 2 energy sources within limits during and after single fault conditions		P
B.4.9	Battery charging under single fault conditions....:	(See Annex M)	P
Q	**CIRCUITS INTENDED FOR INTERCONNECTION WITH BUILDING WIRING**		P
Q.1	Limited power sources		P
Q.1.1 a)	Inherently limited output		N/A
Q.1.1 b)	Impedance limited output		P
	- Regulating network limited output under normal operating and simulated single fault condition		P
Q.1.1 c)	Overcurrent protective device limited output		N/A
Q.1.1 d)	IC current limiter complying with G.9		N/A
Q.1.2	Compliance and test method		P
Q.2	Test for external circuits – paired conductor cable		N/A
	Maximum output current (A) .....:		--
	Current limiting method .....:		--

IEC 62368-1			
Clause	Requirement + Test	Result - Remark	Verdict

4.1.2	TABLE: List of critical components				P
Object / part No.	Manufacturer/ trademark	Type / model	Technical data	Standard	Mark(s) of conformity[1]
Building-in power supply	Delta Electronics Inc	DPS-200PB-185A	I/P: 100-240Vac, 47-63Hz, 3,5A O/P: +12Vd.c./5A; +52Vd.c./2,5A; Total Power 190W MAX	IEC 62368-1:2014	TÜV Rheinland CB Cert No.: JPTUV-084195-M2 Ref No.: 16086086003
Alternative	CHANNEL WELL TECHNOLOGY (GUANGZHOU) CO., LTD	KSA-180S2	I/P: 100-240Vac, 47-63Hz, 3A O/P: +12Vd.c./5A; +52Vd.c./2,5A; Total Power 180W MAX	IEC 62368-1:2014	TÜV Rheinland CB Cert No.: JPTUV-109369 Ref No.: 50352971001
Alternative	**Acbel Polytech Inc.**	**FLXA2191A**	**AC Input: 100-240V~, 3,5A, 50/60Hz** **DC Output: +12,0V/ 5,0A, +54,0V/2,78A,** **TOTAL POWER 190W MAX;**	**IEC 62368-1: 2018**	**TÜV Rheinland CB Ref No.: CN223QYI001**
Metal enclosure (Fire enclosure)	Interchangeable	Interchangeable	Min. thickness: 0,6mm	IEC 62368-1:2014 EN 62368-1:2014/A11:2017	Test with appliance
Plastic enclosure (Fire enclosure)	KINGFA SCI & TECH CO LTD	FRABS-518	V-0/5VB, Min. thickness: 2,5mm, 60°C	UL94	UL E171666
PCB	VICTORY GIANT TECHNOLOGY (HUIZHOU) CO LTD	SH	V-0, 130°C	UL 796 UL 94	UL E248779
Alternative	GUANGZHOU FAST-PRINT CIRCUIT TECHNOLOGY CO LTD	M11	V-0, 130°C	UL 796 UL 94	UL E204460

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Clause	Requirement + Test	Result - Remark	Verdict

Alternative	SHENZHEN MANKUN ELECTRONICS CO LTD	MK-D	V-0, 130°C	UL796 UL94	UL E248237
Alternative	WENZHOU OULONG ELECTRIC CO LTD	OL-D	V-0, 130°C	UL796 UL94	UL E231017
Alternative	WENZHOU GALAXY ELECTRONICS CO LTD	01V0	V-0, 130°C	UL796 UL94	UL E157634
Alternative	Interchangeable	Interchangeable	V-1 or better, 130°C	UL796 UL94	UL
Lithium Battery	GUANGZHOU TIANQIU ENTERPRISE CO LTD	CR1220	3V d. c., 38mAh, Max abnormal charging current 2,5mA, Max abnormal charging voltage 3,5V	UL1642	UL MH48705
DC Fan	Asia Vital Components Co., Ltd.	DAZA0410R2H-014	12VDC, 0,06A, Max; 0,36W; 5,72CFM, 4500±15% RPM	EN 62368-1:2014/A11:2017	TÜV SUDCert. No.:B 025730 0883
Alternative	Asia Vital Components Co., Ltd.	DAZA0410B2H-021, DAZA0410B2H-022	12VDC, 0,06A, Max; 0,48W; 6,89CFM, 5000±15% RPM	EN 62368-1:2014/A11: 2017	TÜV SUDCert. No.:B 025730 0883
Alternative	Dongguan Protechnic Electric Co., Ltd.	MGA4012SB-O10	12VDC, 0,06A, Max; 0,72W; 6,07CFM, 5200±10% RPM	EN 62368-1:2014/A11: 2017	TÜV SUDCert. No.:B 031023 0138
IC for USB port (UL4, UL3)	DIODES	AP2822	Input: 2,7V-5,5VDC; Output: 1,4A- 3,2A	IEC 62368-1:2014	UL CB Cert: US-34501-UL; Report: E339337-A6001-CB-1
Plug	Phino Electric Co.,Ltd	PHP-206	AC250V ,16A	DIN VDE 0620-2-1(VDE 0620-2-1):2013-03	VDE 40013375
-Alt.	Scolmore International Ltd.	SW102	AC250V ,16A	VDE 0620-1:2010	VDE 40004330

IEC 62368-1			
Clause	Requirement + Test	Result - Remark	Verdict

-Alt.	LINOYA ELECTRONIC TECHNOLOGY CO LTD	XYP-02L	16A, 250V	DIN VDE 0620-2-1 (VDE 0620-2-1):2016-01 DIN VDE 0620-2-1/A1 (VDE 0620-2-1/A1):2017-09	VDE 40015292
Power cord	Phino Electric Co.,Ltd	H05VV-F	3*0,75mm^2	DIN EN 50525-2-11(VDE 0285-525-2-1):2012-01 EN 50525-2-11	VDE 113841
-Alt.	Hangzhou Hongshi Electrical Ltd	H05VV-F	3*0,75mm^2	EN 50525-2-11 VDE 0285-525	VDE 40010839
-Alt.	LINOYA ELECTRONIC TECHNOLOGY CO LTD	H05VV-F	3*0,75mm^2	DIN EN 50525-2-11 (VDE 0285-525-2-11):2012-01; EN 50525-2-11:2011	VDE 40035072
Power connector	Phino Electric Co.,Ltd	PHS 301	AC250V ,10A	DIN EN 60320-1(VDE 0625-1):2008-05 EN 60320-1:2001+ A1:2007 IEC 60320-1(ed.2);am1	VDE Cert. No.: 40038017
Alternative	LINOYA ELECTRONIC TECHNOLOGY CO LTD	XYC-03	10A, 250V	DIN EN 60320-1 (VDE 0625-1):2016-04; EN 60320-1:2015 + AC:2016 IEC 60320-1:2015	VDE 40016051
Plug	Phino Electric Co., Ltd	PHP-208	10A, 250VAC	AS/NZS 3112:2017	NSW28348
Power cord	Phino Electric Co., Ltd	GTSA-3	3 x 1,0mm^2	AS/NZS 4417	NSW18895
Power connector	Phino Electric Co., Ltd	PHS-301	10A, 250V AC	AS/NZS 4417	NSW23757

Supplementary information:

[1)] Provided evidence ensures the agreed level of compliance. See OD-CB2039.

[2)] Description line content is optional. Main line description needs to clearly detail the component used for testing

IEC 62368-1			
Clause	Requirement + Test	Result - Remark	Verdict

5.4.1.4, 6.3.2, 9.0, B.2.6	**TABLE: Temperature measurements**				P
	Supply voltage (V) ..... :	90VAC/60Hz	264VAC/50Hz	--	--
	Ambient T_{min} (°C) ..... :	22,6	22,6	--	--
	Ambient T_{max} (°C) ..... :	25,0	25,0	--	--
	Tma (°C) ..... :	55,0	55,0	--	--
Maximum measured temperature T of part/at:		T (°C)			Allowed T_{max} (°C)
Test with Building-in power supply FLXA2191A..					
Plastic enclosure inside		58,1	57,9	--	Ref.
Plastic enclosure *		27,3	57,2	--	110
Metal enclosure*		34,9	63,6	--	110
HDD body		71,7	71,3	--	Ref.
PCB near UL1(81109)		61,9	62,0	--	130
T1 core		99,0	98,0	--	110
T1 coil		107,2	105,6	--	110
T2 core		70,9	70,7	--	130
T2 coil		74,6	75,0	--	130
AC Inlet inside		68,5	66,2	--	Ref.
M7		72,6	71,2	--	100
Input wire(L)		70,7	69,8	--	105
Output wire		61,2	61,2	--	80
CX1		92,4	87,8	--	100
CY4		92,8	90,8	--	125
C12		81,2	80,9	--	105
L3 coil		108,1	90,8	--	110
PCB near BD1		96,5	89,1	--	130
PCB near RT1		94,4	81,5	--	130
MOV1		78,5	77,5	--	85
CY2		81,6	77,4	--	125
Output wire		65,2	64,9	--	80
PCB near CPU		81,8	81,4	--	130
BAT		75,7	75,2	--	Ref.
Supplementary information:					

Temperature T of winding:	t_1 (°C)	R_1 (Ω)	t_2 (°C)	R_2 (Ω)	T (°C)	Allowed T_{max} (°C)	Insulation class

IEC 62368-1			
Clause	Requirement + Test	Result - Remark	Verdict

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Supplementary information:
Note 1: Tma should be considered as directed by applicable requirement.
Note 2: Tma is not included in assessment of Touch Temperatures (Clause 9).
* The test results of touchable surface temperature were considered base on ambient temperature 25°C.
Other temperature point list in this table has shifted to Tma.

5.6.6.2	TABLE: Resistance of protective conductors and terminations			P
Accessible part	Test current (A)	Duration (min)	Voltage drop (V)	Resistance (Ω)
Test with Building-in power supply FLXA2191A:				
Metal enclosure	32	2	0,128	0,004
Metal enclosure	40	2	0,16	0,004
Supplementary information:				

B.2.5	TABLE: Input test							P
U (V)	Hz	I (A)	I rated (A)	P (W)	P rated (W)	Fuse No	I fuse (A)	Condition/status
90VAC	50	2,26	--	203,45	--	F1	1,88	Normal work, Each PoE 44-57 V d.c., 0,6 A max, total 120W; USB2.0*1, USB3.0*1; USB2.0 load 0,5A USB3.0 load 0,9A Power supply: FLXA2191A
90VAC	60	2,25	--	201,80	--	F1	1,85	
100VAC	50	2,02	2,2	200,70	--	F1	1,68	
100VAC	60	2,02	2,2	200,84	--	F1	1,64	
240VAC	50	0,86	2,2	194,40	--	F1	0,70	
240VAC	60	0,86	2,2	193,40	--	F1	0,69	
264VAC	50	0,79	--	193,33	--	F1	0,64	
264VAC	60	0,80	--	193,07	--	F1	0,63	
Supplementary information:								
Equipment may be have rated current or rated power or both. Both should be measured.								

B.3	TABLE: Abnormal operating condition tests							P
Ambient temperature (°C) .....:		25°C						—
Power source for EUT: Manufacturer, model/type, output rating ..:		--						—
Component No.	Abnormal Condition	Supply voltage, (V)	Test time (ms)	Fuse no.	Fuse current, (A)	T-couple	Temp. (°C)	Observation
Power supply: FLXA2191A								

IEC 62368-1			
Clause	Requirement + Test	Result - Remark	Verdict

B.3	TABLE: Abnormal operating condition tests								P
Ambient temperature (°C) .....:			25°C						—
Power source for EUT: Manufacturer, model/type, output rating ..:			--						—
Component No.	Abnormal Condition	Supply voltage, (V)	Test time (ms)	Fuse no.	Fuse current, (A)	T-couple	Temp. (°C)	Observation	
Ventilation Openings	Block	264Vd.c.	3h	--	0,79	K	T1 coil: 71,9°C; BAT body: 44,7°C; Metal enclosure : 32,4°C; Ambient: 22,9°C	The EUT normal work. No damage, no hazards.	
Fan	Block	264Vd.c.	3h	--	0,79	K	T1 coil: 72,9°C; BAT body: 47,6°C; Metal enclosure : 33,0°C; Ambient: 23,0°C	The EUT normal work. No damage, no hazards.	
USB 2.0	Overload	264Vd.c.	3h	--	0,79 to 0,82	K	T1 coil: 70,5°C; Metal enclosure : 32,6°C; Ambient: 23,1°C	Constant temperatures operated at load 1.6A . Increased to 2.0A,unit shutdown, no hazards..No damage, no hazards.	
USB 2.0	SC	264Vd.c.	10mins	--	0,78	--	--	USB shutdown. No damage, no hazards.	
Supplementary information:									
Test table is provided to record abnormal and fault conditions for all applicable energy sources including Thermal burn injury. Column “Abnormal/Fault.” Specify if test condition by indicating “Abnormal” then the condition for a Clause B.3 test or “Single Fault” then the condition for Clause B.4.									

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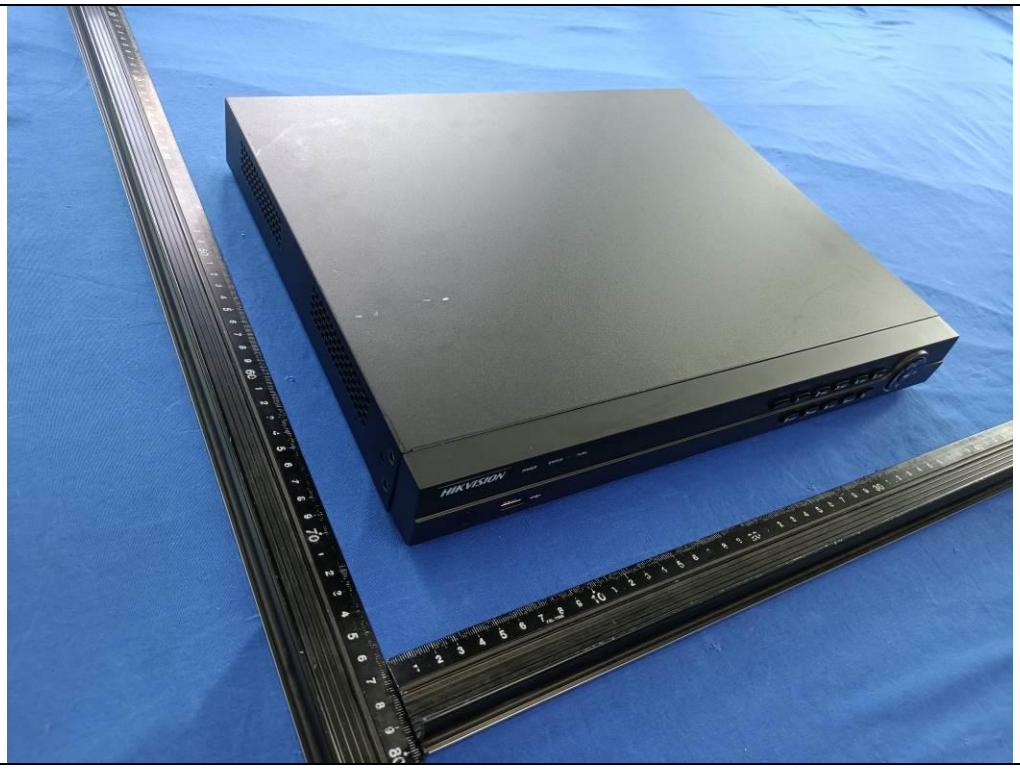
Clause	Requirement + Test	Result - Remark	Verdict

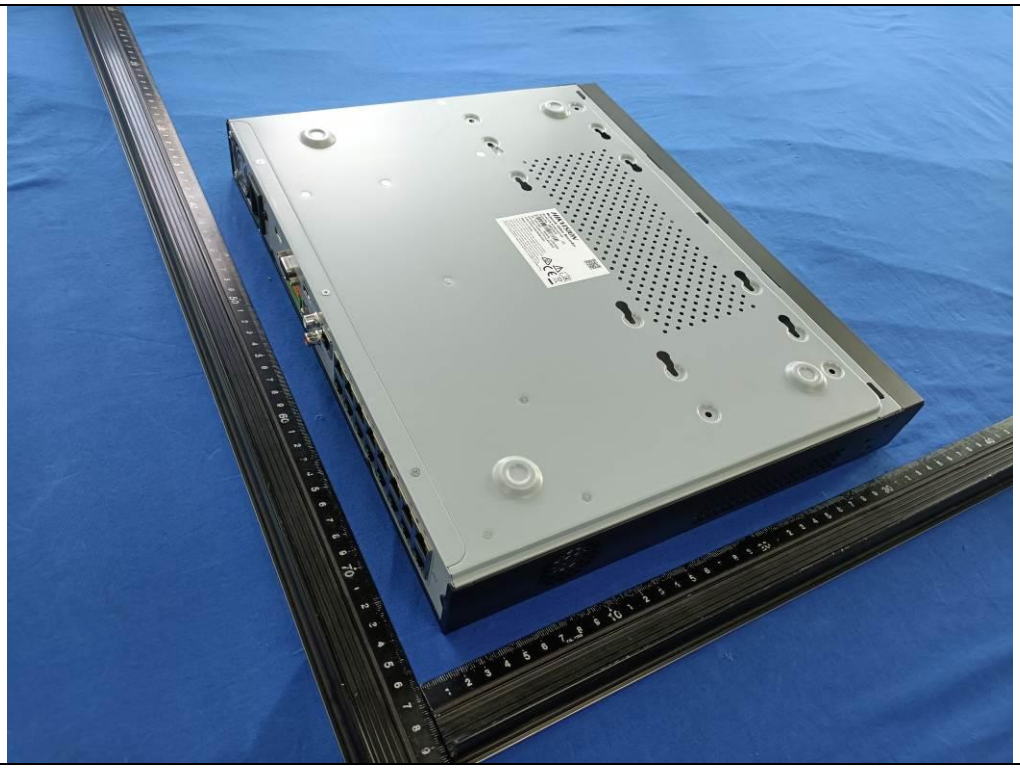
Annex Q.1	**TABLE: Circuits intended for interconnection with building wiring (LPS)**					P
Note: Measured UOC (V) with all load circuits disconnected:						
Output Circuit	Components	U_{oc} (V)	I_{sc} (A)		S (VA)	
			Meas.	Limit	Meas.	Limit
USB 2.0 Front	Normal	4,99	2,10	8	8,63	100
USB 2.0 Back	Normal	4,99	1,30	8	5,98	100
PoE port	Normal	54,04	0,58	8	30,04	100
PoE port	Single fault (QV6 pin 1-3 sc)	54,04	1,44	8	70,59	100
HDMI	Normal	0	0	8	0	100
VGA	Normal	0	0	8	0	100
Supplementary Information:						

---End of Report---

Details of: General view (Model: DS-7608NI-M2/8P)



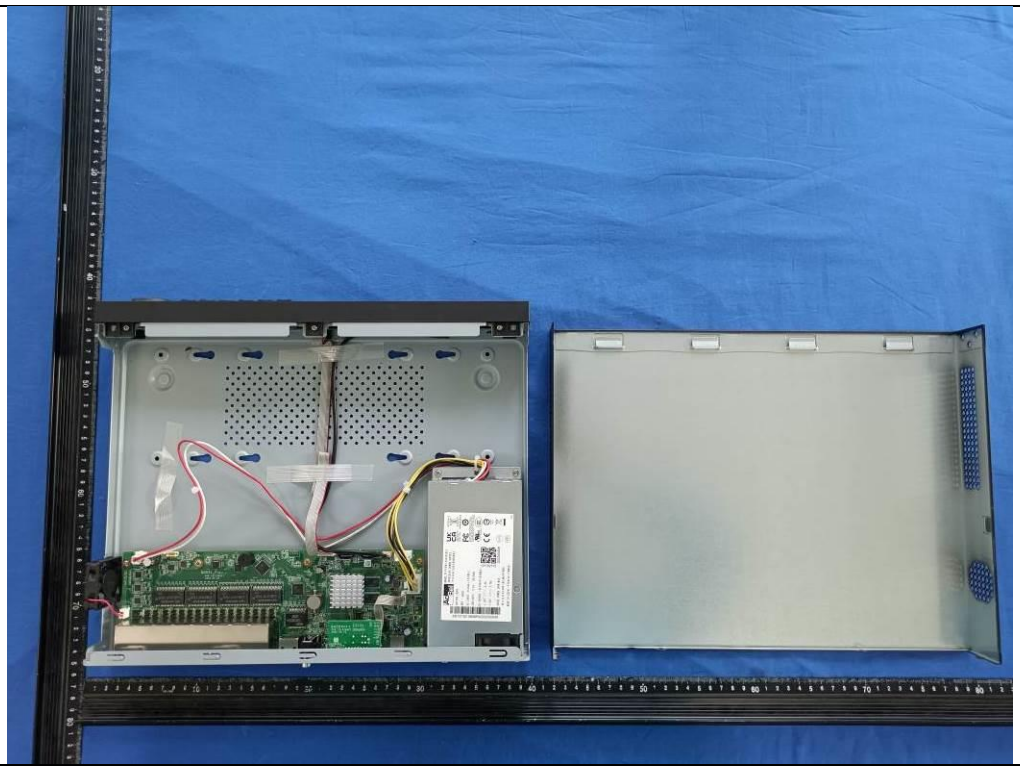
Details of: General view (Model: DS-7608NI-M2/8P)



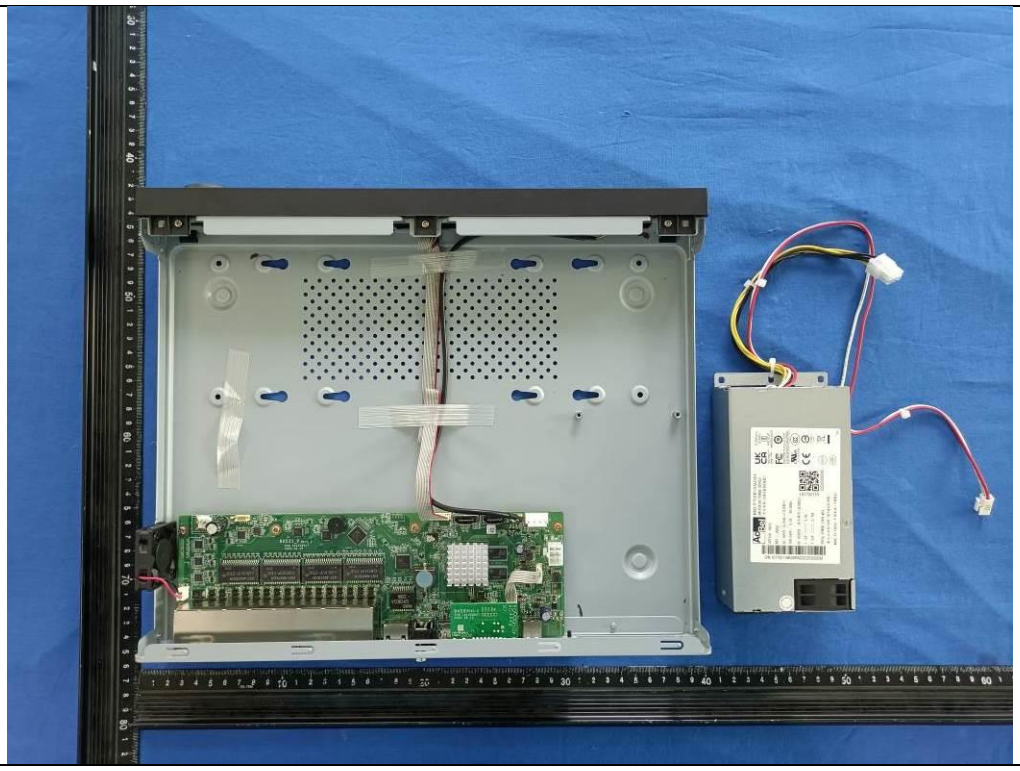
Details of: Terminal view (Model: DS-7608NI-M2/8P)

Details of: Terminal view (Model: DS-7608NI-M2/8P)

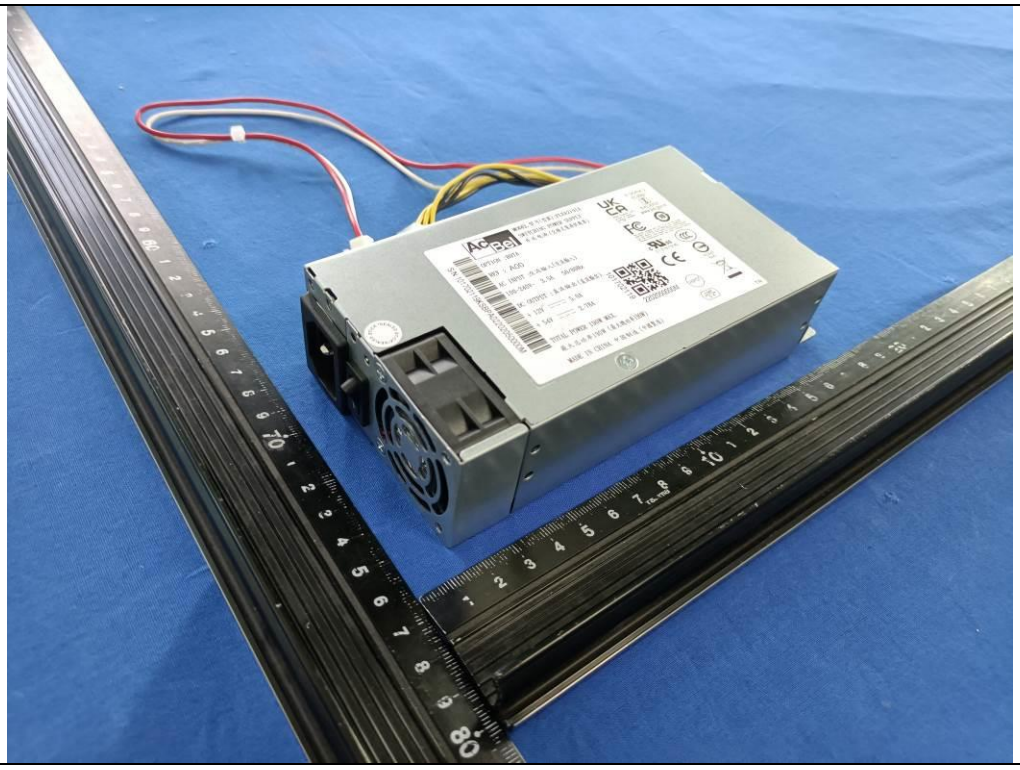
Details of: Internal view (Model: DS-7608NI-M2/8P)



Details of: Internal view (Model: DS-7608NI-M2/8P)



Details of: Power supply view (Model: FLXA2191A)



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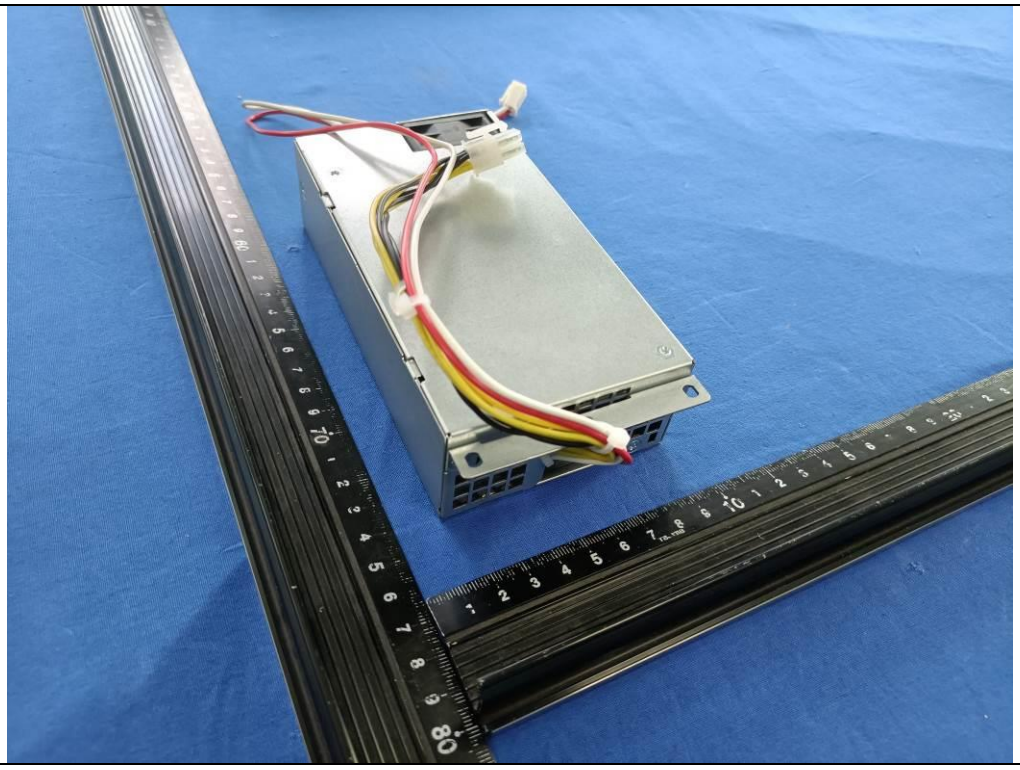
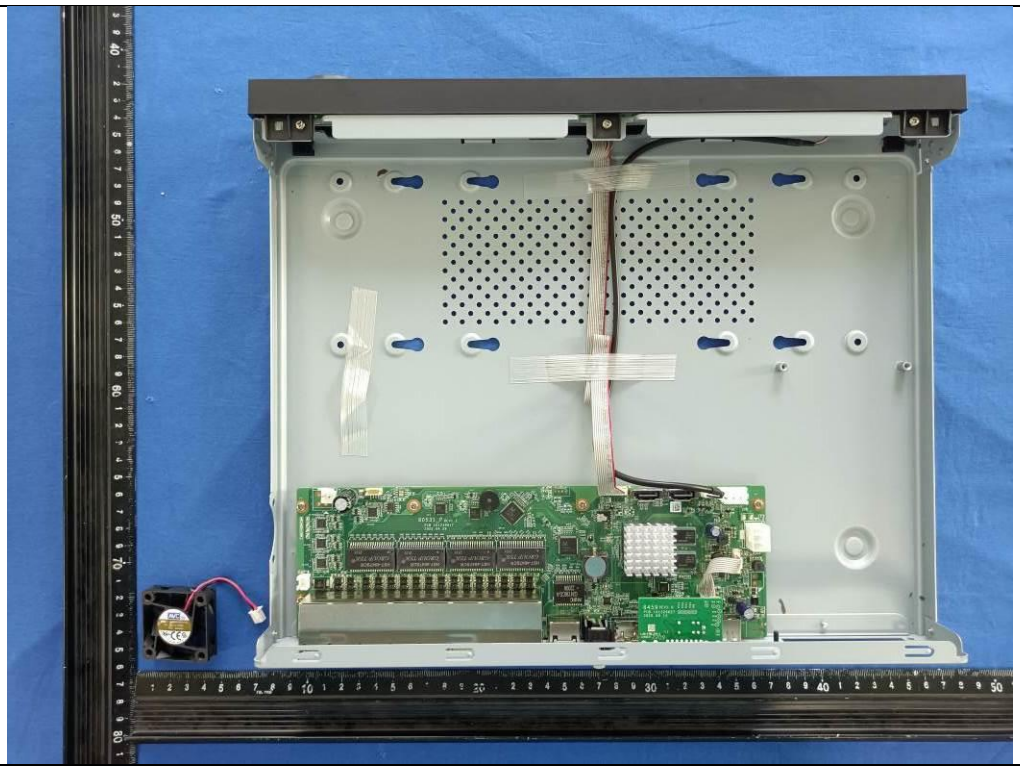
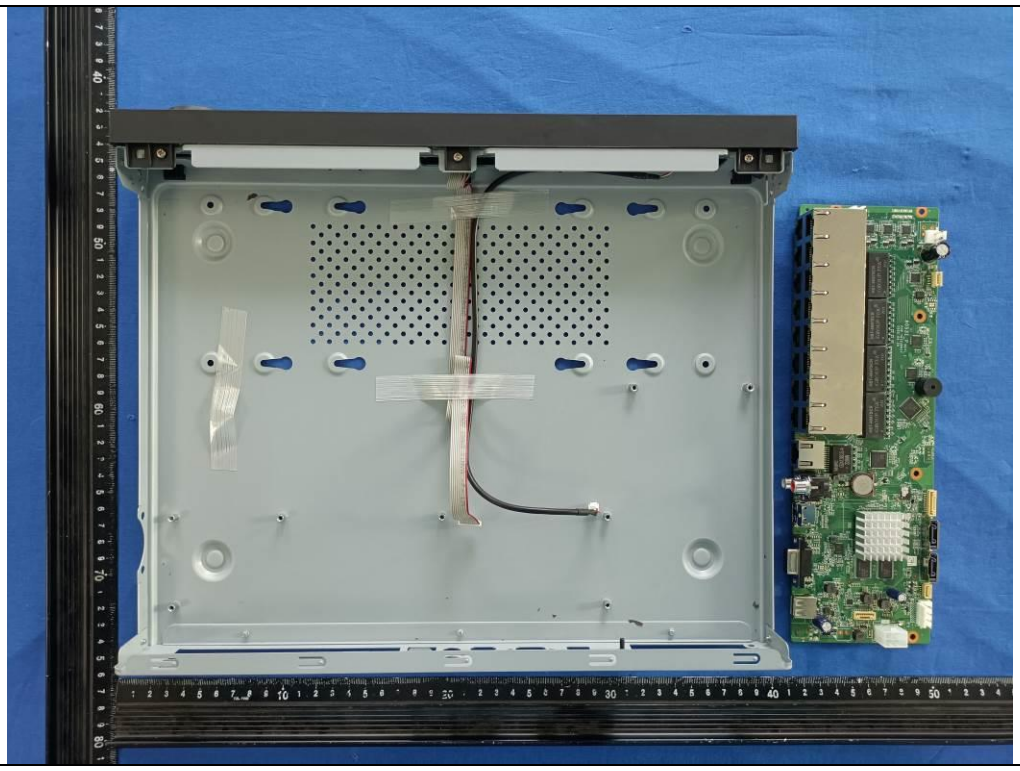


Details of: Internal view (Model: DS-7608NI-M2/8P)

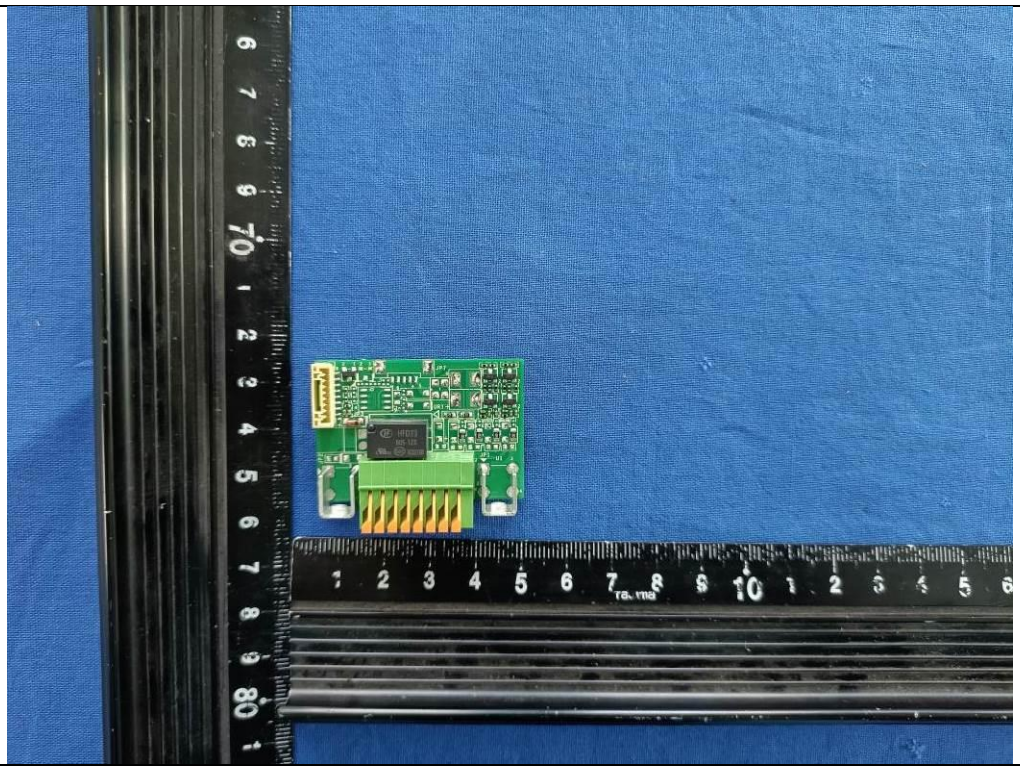


Details of: Internal view (Model: DS-7608NI-M2/8P)

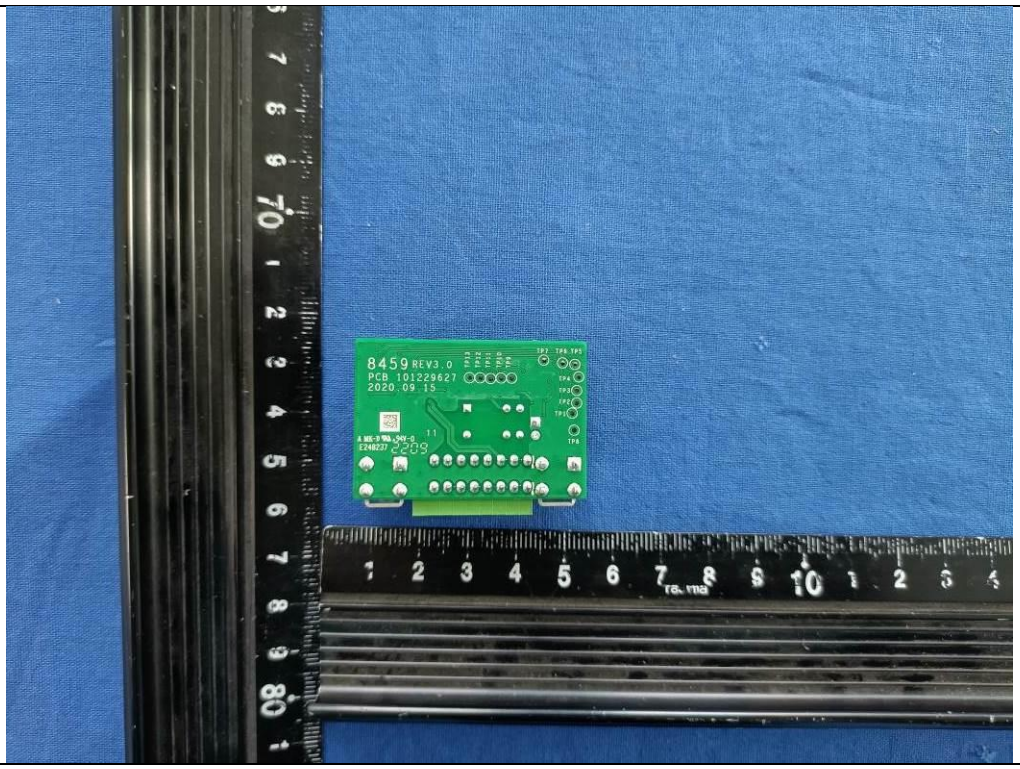
Details of: Internal view (Model: DS-7608NI-M2/8P)



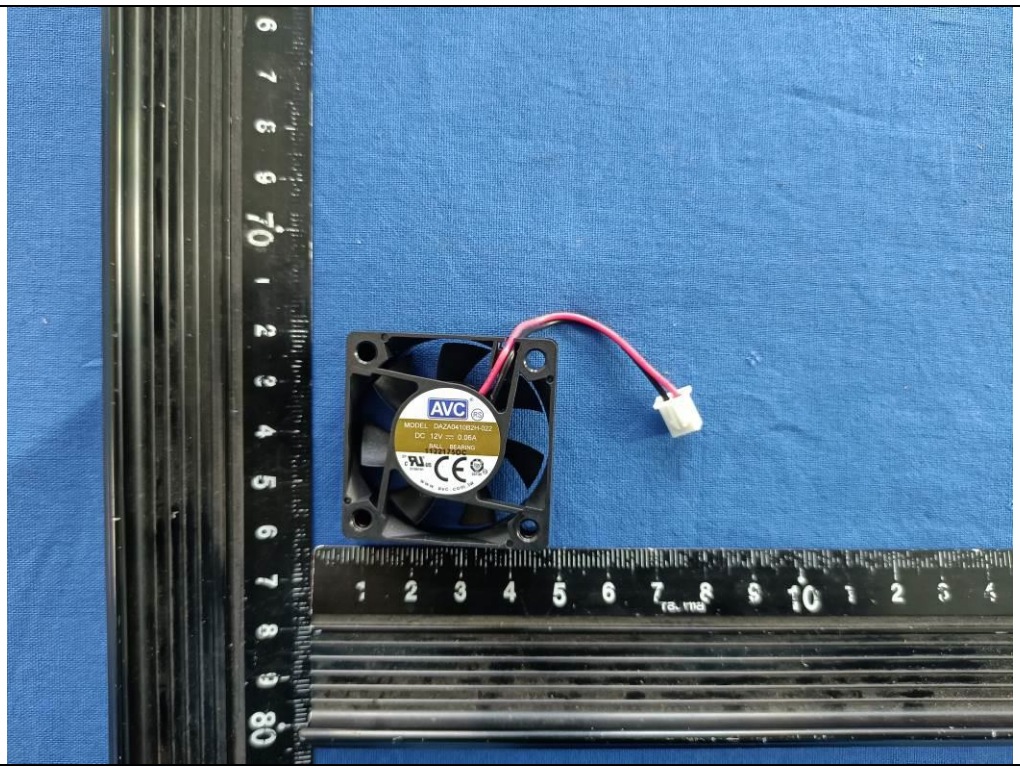
Details of: PCB-1 view



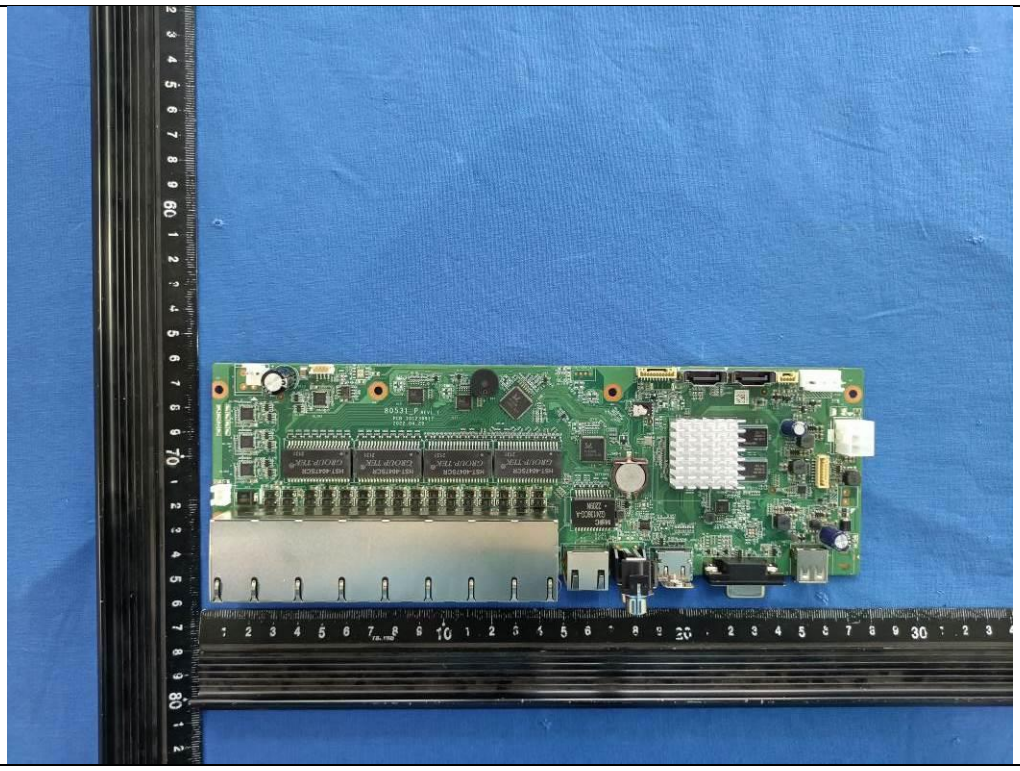
Details of: PCB-1 view



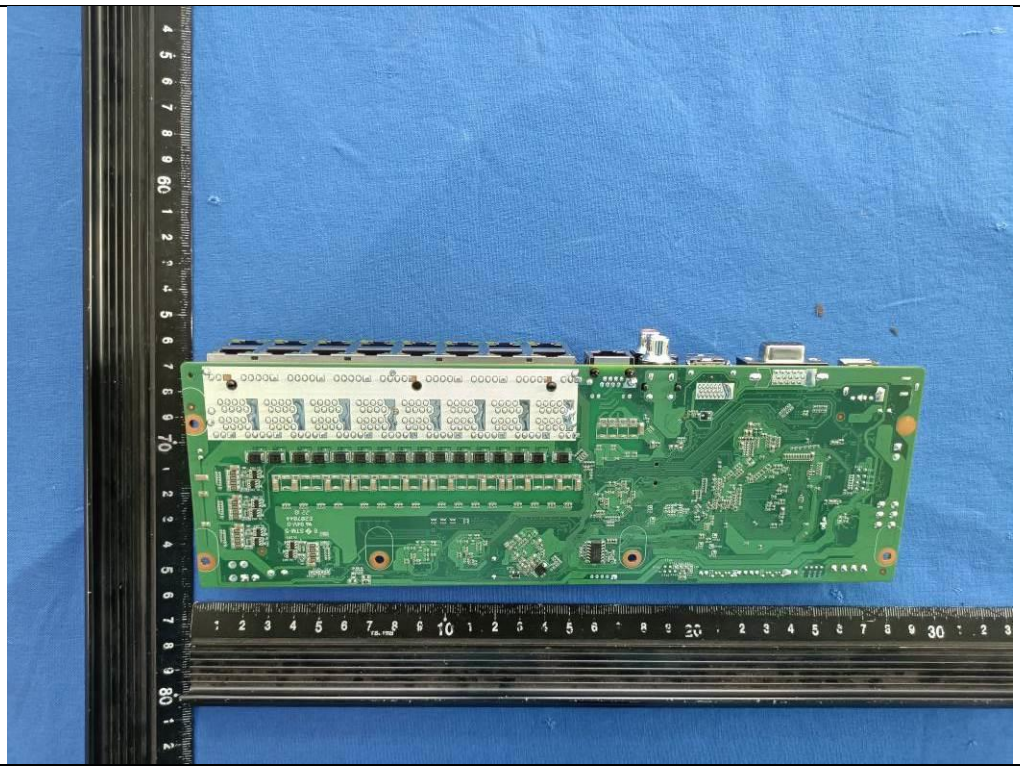
Details of: DC Fan view



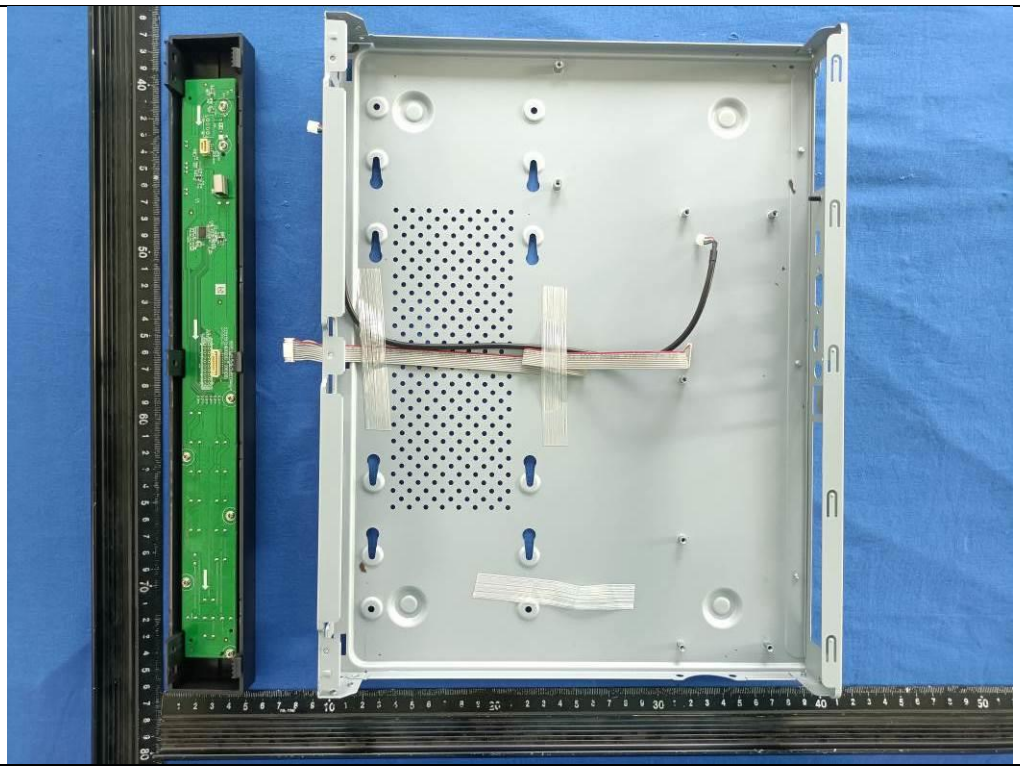
Details of: PCB-2 view



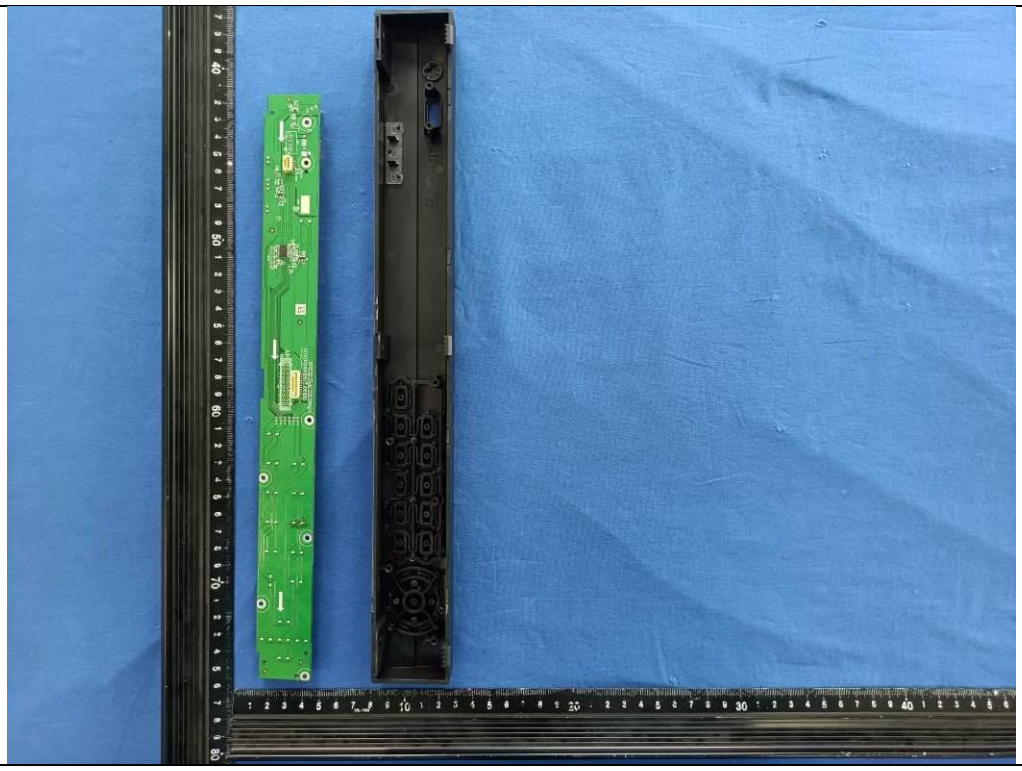
Details of: PCB-2 view



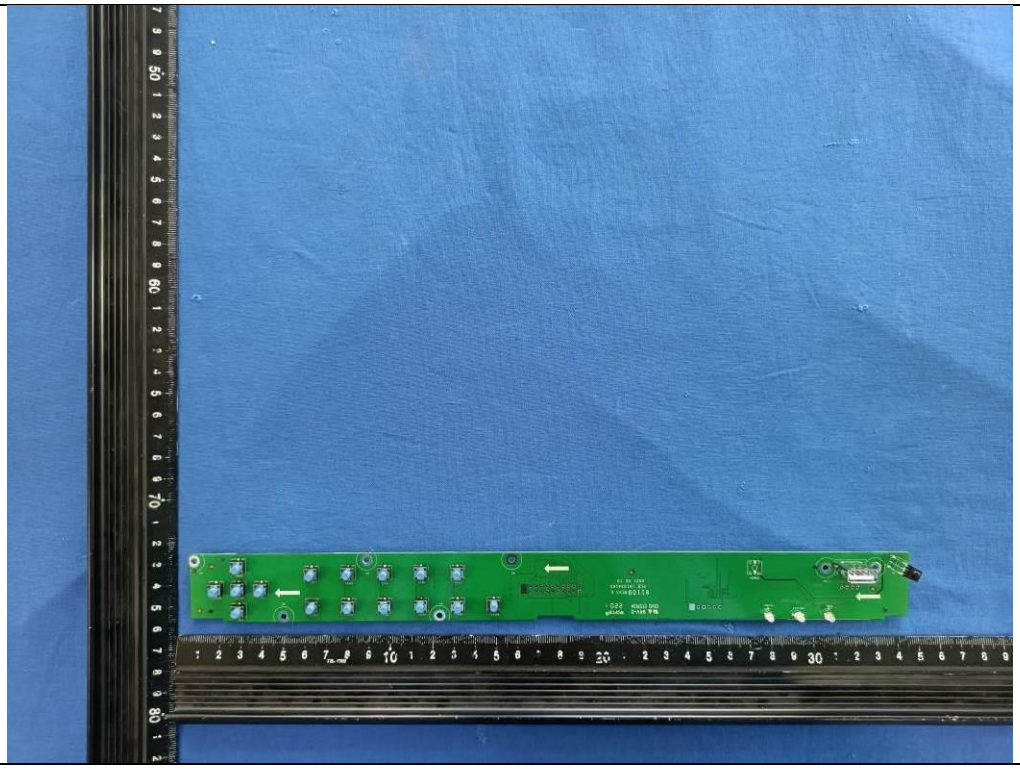
Details of: Internal view



Details of: PCB-3 view (Model: DS-7608NI-M2/8P)



Details of: PCB-3 view (Model: DS-7608NI-M2/8P)



*******End of Attachment 1*******