



TEST REPORT EN IEC 62368-1 Audio/video, information and communication technology equipment Part 1: Safety requirements	
Report Number..... :	KES-SA-20T0186-R3
Date of issue	2024-03-19
Total number of pages	17
Name of Testing Laboratory preparing the Report	KES Co., Ltd. #3002, #3503, #3701, 40, Simin-daero365beon-gil, Dongan-gu, Anyang-si, Gyeonggi-do, 14057, Korea, Republic of
Applicant's name	Hanwha Vision Co., Ltd
Address	6, Pangyo-ro 319 Beon-gil, Bundang-gu, Seongman-si, Gyeonggi-do, Republic of Korea
Test specification:	
Standard	EN IEC 62368-1:2020+A11:2020
Test procedure..... :	-
Non-standard test method..... :	N/A
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This test report is not related to KS Q ISO/IEC 17025 and KOLAS.



Test item description	NETWORK VIDEO RECORDER
Trade Mark(s)	 Hanwha Vision
Manufacturer	Hanwha Vision Co., Ltd 6, Pangyo-ro, 319 Beon-gil, Bundang-gu, Seongnam-si, Gyeonggi-do, 13488, Republic of Korea
Model/Type reference	PRP-5000H16, TAW-4000H16, PRO-7510B4, PRO-7511B4
Ratings	100-240 V~, 50/60 Hz, 8-4 A





Responsible Testing Laboratory (as applicable), testing procedure and testing location(s):		
☒	CB Testing Laboratory:	KES Co., Ltd.
Testing location/ address..... :		#3002, #3503, #3701, 40, Simin-daero365beon-gil, Dongan-gu, Anyang-si, Gyeonggi-do, 14057, Korea, Republic of
Tested by (name, function, signature)		Youngmin, Ji / Test Engineer
Approved by (name, function, signature) .. :		Jaekwan, Cha / 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):**

NA

Summary of testing:

N/A

Tests performed (name of test and test clause):

N/A

Testing location:

N/A

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

N/A (See main test report for detail)

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 NCBs that own these marks.



< For model, PRP-5000H16>



< For model, TAW-4000H16>



< For model, PRO-7510B4>

**Copy of marking plate (countinued):**

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



<For model, PRO-7511B4>



KES-QP16-F01(00-23-01-01)

**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 : N/A

Date (s) of performance of tests : N/A

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.☐ This Test Report Form contains requirements according to IEC/ISO Standard dated and includes Corrigendum dated

(Note: The above text maybe removed if not applicable)

Manufacturer's Declaration per sub-clause 4.2.5 of IEC60060-2:

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) : DREAM I SYSTEM CO., LTD

#510, Daerung Post Tower 6. 50-3 Gasan-dong,
Geumcheon-gu, Seoul, Korea

**General product information and other remarks:**

This amendment test report, **KES-SA-20T0186-R3** is covering new variation model **PRO-7511B4**.

The added variant model, **PRO-7511B4** is identical to previously certified model, PRP-5000H16 respectively, except for capacity of components (CPU, RAM and SSD), not affecting safety.

This amendment test report **KES-SA-20T0186-R3** must always be presented together with the main test report **KES-SA-20T0186** and amendment test report **KES-SA-20T0186-R1** and **KES-SA-20T0186-R2**.

PROJECT HISTORY:

Report Number:	Modification to the appliances:	Changes/ Modifications in clause(s):
KES-SA-20T0186	Main test report	-
KES-SA-20T0186-R1	A. Addition of new variant model, PRO-7510B4. B. Change of manufacturer information.	Copy of marking plate, General product information, Project history and Annex F.
KES-SA-20T0186-R2	A. Change of applicant name and manufacture name. B. Change of trade mark. C. Addition of alternative building power supply unit.	Applicant and manufacturer info., List of Attachments, Copy of marking plate, General product info., Project history, Cl. 4, 5, 6, 8, 9, Annex B, F, G, T, V and table for 5.2, 5.4.9, 5.5.2.2, 5.6.6, 5.7.4, 5.7.5, 6.2.2, 6.2.3.1, 6.2.3.2, 5.4.1.4, B.2.5, B.3, T.3, T.6, T.8 and Critical components info. and Photos.
KES-SA-20T0186-R3	Addition of new variant model, PRO-7511B4	Copy of marking plate, General product information, Project history and Annex F.



OVERVIEW OF ENERGY SOURCES AND SAFEGUARDS				
Clause	Possible Hazard			
5	Electrically-caused injury			
Class and Energy Source (e.g. ES3: Primary circuit)	Body Part (e.g. Ordinary)	Safeguards		
		B	S	R
ES1: All secondary output circuit of certified power supply unit.	Instructed person	N/A	N/A	N/A
ES1: All output terminals	Instructed person	N/A	N/A	N/A
6	Electrically-caused fire			
Class and Energy Source (e.g. PS2: 100 Watt circuit)	Material part (e.g. Printed board)	Safeguards		
		B	1 st S	2 nd S
PS3	Combustible material	Normal temperatures below ignition temperatures	Fire enclosure to be provided	N/A
PS3	Combustible material for internal wire	Normal temperatures below ignition temperatures	Cl. 6.5.1 Complied with 60695-11-21	N/A
PS3 (PIS)	Combustible material	Normal temperatures below ignition temperatures	1. Fire enclosure to be provided 2. Separated from fire cone of PIS	N/A
PS1	All output terminals	N/A	N/A	N/A
7	Injury caused by hazardous substances			
Class and Energy Source (e.g. Ozone)	Body Part (e.g., Skilled)	Safeguards		
		B	S	R
N/A	Instructed person	N/A	N/A	N/A
8	Mechanically-caused injury			
Class and Energy Source (e.g. MS3: Plastic fan blades)	Body Part (e.g. Ordinary)	Safeguards		
		B	S	R
MS1 (Sharp edges and corners)	Instructed person	N/A	N/A	N/A
MS3 (Plastic fan blade of Certified Power Supply Unit)	Instructed person	Complies with no touched by test probes specified in Annex V.	Safeguards are verified according to clause F.5	N/A
MS2 (Equipment mass)	Instructed person	N/A	N/A	N/A



9	Thermal burn			
Class and Energy Source (e.g. TS1: Keyboard caps)	Body Part (e.g., Ordinary)	Safeguards		
		B	S	R
TS1 (External surfaces)	Instructed person	N/A	N/A	N/A
10	Radiation			
Class and Energy Source (e.g. RS1: PMP sound output)	Body Part (e.g., Ordinary)	Safeguards		
		B	S	R
RS1 (LED is indicating lights type)	Instructed person	N/A	N/A	N/A
Supplementary Information: “B” – Basic Safeguard; “S” – Supplementary Safeguard; “R” – Reinforced Safeguard See next pages of energy source diagram for additional details				



ENERGY SOURCE DIAGRAM

Optional. Manufacturers are to provide the energy sources diagram identify declared energy sources and identifying the demarcations are between power sources. Recommend diagram be provided included in power supply and multipart systems.

Insert diagram below. Example diagram designs are; Block diagrams; image(s) with layered data; mechanical drawings

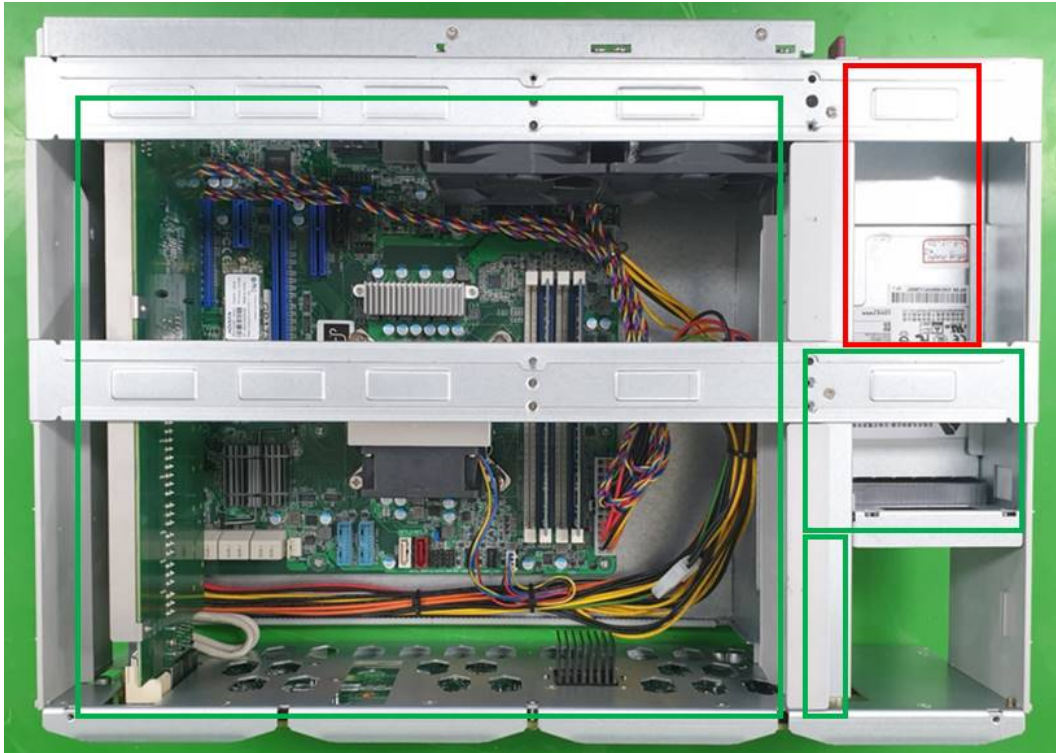
ES 1



ES 2



ES 3



<Interior part>



< Certified PSU type, U1A-D10550-DRB-H-13 >

■ ES □ PS □ MS □ TS □ RS



ENERGY SOURCE DIAGRAM

Optional. Manufacturers are to provide the energy sources diagram identify declared energy sources and identifying the demarcations are between power sources. Recommend diagram be provided included in power supply and multipart systems.

Insert diagram below. Example diagram designs are; Block diagrams; image(s) with layered data; mechanical drawings

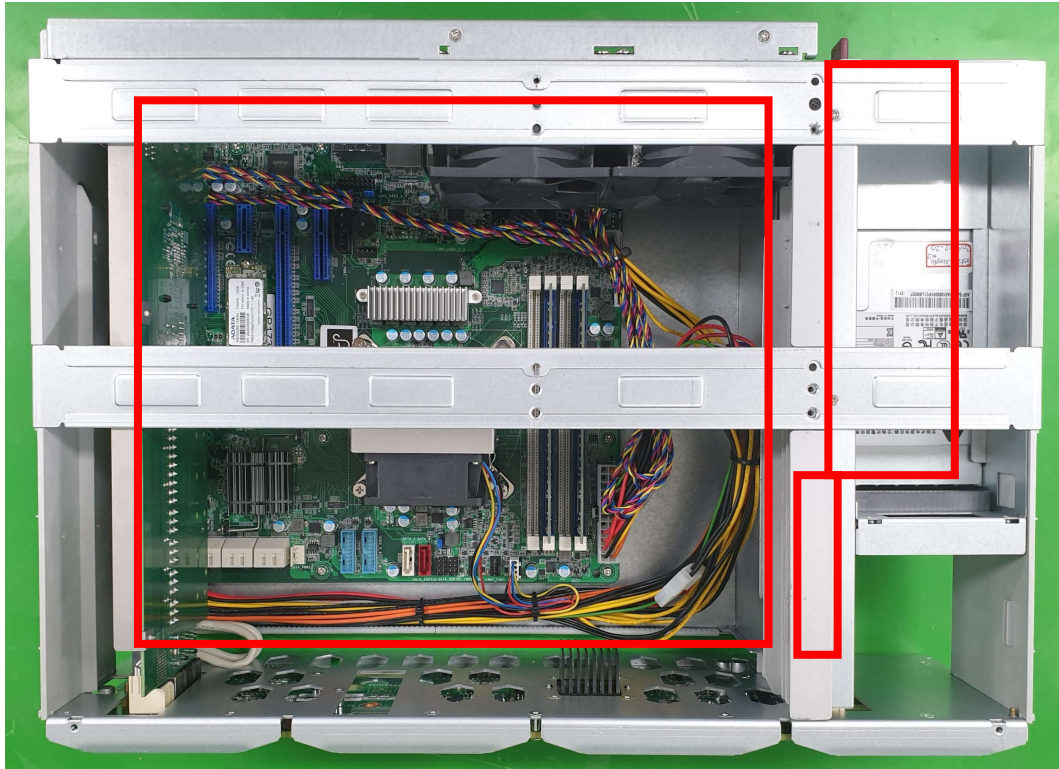
PS 1



PS 2



PS 3



<Interior part>



< Certified PSU type, U1A-D10550-DRB-H-13 >

☐ ES ☒ PS ☐ MS ☐ TS ☐ RS



ENERGY SOURCE DIAGRAM

Optional. Manufacturers are to provide the energy sources diagram identify declared energy sources and identifying the demarcations are between power sources. Recommend diagram be provided included in power supply and multipart systems.

Insert diagram below. Example diagram designs are; Block diagrams; image(s) with layered data; mechanical drawings

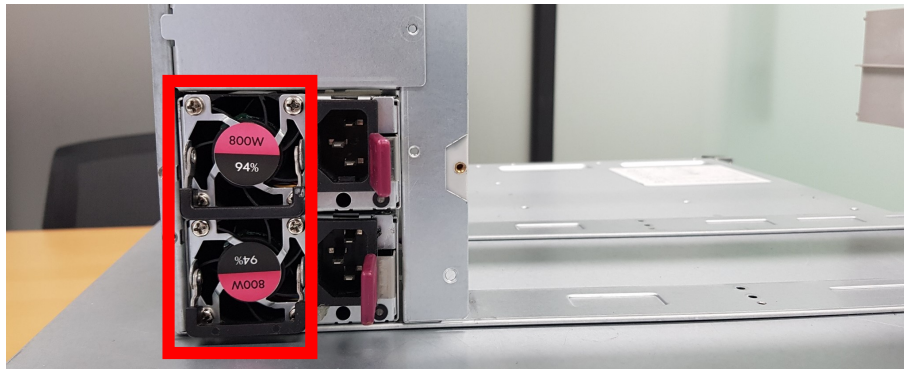
MS 1



MS 2



MS 3



< Fan blade view in the certified PSU >

Note: External enclosure is considered as MS1 for sharp edge and corner.
Plastic fan blades in the internal is considered as MS3
External enclosure is considered as MS2 for equipment mass.

☐ ES

☐ PS

☒ MS

☐ TS

☐ RS



ENERGY SOURCE DIAGRAM

Optional. Manufacturers are to provide the energy sources diagram identify declared energy sources and identifying the demarcations are between power sources. Recommend diagram be provided included in power supply and multipart systems.

Insert diagram below. Example diagram designs are; Block diagrams; image(s) with layered data; mechanical drawings

TS/RS 1



TS/RS 2



TS/RS 3



☐ ES

☐ PS

☐ MS

☒ TS

☒ RS



IEC 62368-1			
Clause	Requirement + Test		Verdict
F	EQUIPMENT MARKINGS, INSTRUCTIONS, AND INSTRUCTIONAL SAFEGUARDS		P
F.1	General		P
	Language	English	—
F.2	Letter symbols and graphical symbols		P
F.2.1	Letter symbols according to IEC60027-1	Used letter symbols according to IEC 60027-1 in label and user manual.	P
F.2.2	Graphic symbols according to IEC, ISO or manufacturer specific	Used graphic symbols according to IEC, ISO standard.	P
F.3	Equipment markings		P
F.3.1	Equipment marking locations	The equipment markings are located on the outside surface of the equipment.	P
F.3.2	Equipment identification markings	See below;	P
F.3.2.1	Manufacturer identification	Hanwha Techwin Co., Ltd.	—
F.3.2.2	Model identification	PRP-5000H16, TAW-4000H16, PRO-7510B4, PRO-7511B4	—
F.3.3	Equipment rating markings	See below;	P
F.3.3.1	Equipment with direct connection to mains	(See Annex F.3.3.3 to F.3.3.6)	P
F.3.3.2	Equipment without direct connection to mains	Equipment with direct connection to mains.	N/A
F.3.3.3	Nature of the supply voltage	The symbol (IEC 60417-1-5032) is used for ac mains.	—
F.3.3.4	Rated voltage.....	100-240 V~	P
F.3.3.5	Rated frequency	50/60 Hz	P
F.3.3.6	Rated current or rated power.....	550 W	P
F.3.3.7	Equipment with multiple supply connections	Only one supply connection.	N/A
F.3.4	Voltage setting device	No voltage setting device in the equipment.	N/A
F.3.5	Terminals and operating devices	See below;	P
F.3.5.1	Mains appliance outlet and socket-outlet markings :	No mains appliance outlet and socket-outlet in the equipment.	N/A



IEC 62368-1			
Clause	Requirement + Test	Result - Remark	Verdict
F.3.5.2	Switch position identification marking..... :	No disconnect switch in the equipment, but stand-by switch is used. The symbol (IEC 60417-1-5009) is used for stand-by switch.	P
F.3.5.3	Replacement fuse identification and rating markings..... :	Evaluated in the approved PSU (See PSU test report)	P
	Instructional safeguards for neutral fuse..... :		N/A
F.3.5.4	Replacement battery identification marking..... :	Instructional safeguard is provided in user manual.	P
F.3.5.5	Neutral conductor terminal		N/A
F.3.5.6	Terminal marking location	(See Annex F.3.6.1)	P
F.3.6	Equipment markings related to equipment classification	See below;	P
F.3.6.1	Class I equipment	Class I equipment.	P
F.3.6.1.1	Protective earthing conductor terminal..... :	Symbol $\oplus$ (IEC60417-5019(2006-08)) on AC inlet earth terminal	P
F.3.6.1.2	Protective bonding conductor terminals..... :		N/A
F.3.6.2	Equipment class marking..... :	Class I equipment	N/A
F.3.6.3	Functional earthing terminal marking..... :		N/A
F.3.7	Equipment IP rating marking..... :	This equipment is classified as IPX0	—
F.3.8	External power supply output marking..... :	USB 2.0 and 3.0 terminals only.	N/A
F.3.9	Durability, legibility and permanence of marking	See below;	P
F.3.10	Test for permanence of markings	The marking withstands required tests.	P