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Please note, Follow-Up Procedure Revisions or Report Revisions do not include Authorization Pages, Indices, Section General, and/or Appendices unless revisions were required or requested.

Should you have any questions, after reviewing the material, or need to report any inaccuracies, please reach out to your UL representative or find UL contact details for your local Customer Service Department at <https://www.ul.com/about/locations>.

Please find attached the related material on Project

For your convenience, the below describes the related updates:

E158873-A6202-DescriptionUL
Figure-16-Total

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Times change, Trust Remains™

UL TEST REPORT AND PROCEDURE

Standard:	UL 62368-1, 3rd Ed, 2021-10-22 (Audio/video, information and communication technology equipment Part 1: Safety requirements) CAN/CSA C22.2 No. 62368-1:19, 3rd Ed, 2021-10-22 (Audio/video, information and communication technology equipment Part 1: Safety requirements)
Certification Type:	Listing
CCN:	AZOT, AZOT7 (Audio/video, Information and Communication Technology Equipment)
Complementary CCN:	N/A
Product:	AI BOX
Model:	AIB-800, AIB-800A
Rating:	12 Vdc, 2.4 A
Applicant Name and Address:	HANWHA VISION CO LTD 6, PANGYO-RO 319BEON-GIL, BUNDANG-GU SEONGNAM-SI GYEONGGI-DO 13488 KOREA

This is to certify that representative samples of the products covered by this Test Report have been investigated in accordance with the above referenced Standards. The products have been found to comply with the requirements covering the category and the products are judged to be eligible for Follow-Up Service under the indicated Test Procedure. The manufacturer is authorized to use the UL Mark on such products which comply with this Test Report and any other applicable requirements of UL LLC ('UL') in accordance with the Follow-Up Service Agreement. Only those products which properly bear the UL Mark are considered as being covered by UL's Follow-Up Service under the indicated Test Procedure.

The applicant is authorized to reproduce the referenced Test Report provided it is reproduced in its entirety.

UL authorizes the applicant to reproduce the latest pages of the referenced Test Report consisting of the first page of the Specific Technical Criteria through to the end of the Conditions of Acceptability.

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Prepared By: Lawrence Lee / Project Handler Reviewed By: SeungTae Kim / Reviewer

Supporting Documentation

The following documents located at the beginning of this Procedure supplement the requirements of this Test Report:

A. Authorization - The Authorization page may include additional Factory Identification Code markings.

B. Generic Inspection Instructions -

- i. Part AC details important information which may be applicable to products covered by this Procedure. Products described in this Test Report must comply with any applicable items listed unless otherwise stated in the body of this Test Report.
- ii. Part AE details any requirements which may be applicable to all products covered by this Procedure. Products described in this Test Report must comply with any applicable items listed unless otherwise stated in the body of each Test Report.
- iii. Part AF details the requirements for the UL Certification Mark which is not controlled by the technical standard used to investigate these products. Products are permitted to bear only the Certification Mark(s) corresponding to the countries for which it is certified, as indicated in each Test Report.

Product Description

AI BOX was supplied by adaptor (Complied with LPS) and consist of main board and numerous components mounted on PCB.

Model Differences

N/A

Test Item Particulars

Product group	end product
Classification of use by	Ordinary person
Supply Connection	not mains connected: ES1
Supply tolerance	None
Supply connection – type	N/A
Considered current rating of protective device	N/A
Equipment mobility	movable
Over voltage category (OVC)	OVC I
Class of equipment	Class III
Special installation location	N/A
Pollution degree (PD)	PD 2
Manufacturer's specified Tma (°C)	40
IP protection class	IPX0
Power systems	not AC mains
Altitude during operation (m)	2000 m or less
Altitude of test laboratory (m)	2000 m or less
Mass of equipment (kg)	1.38

Technical Considerations

- The product was submitted and evaluated for use at the maximum ambient temperature (Tma) permitted by the manufacturer's specification of : 40 °C
- The product is intended for use on the following power systems : No direct connection
- Considered current rating of protective device as part of the building installation (A) : N/A

- Mains supply tolerance (%) or absolute mains supply : No direct connection
- The equipment disconnect device is considered to be : N/A
- The following circuit locations (with circuit/schematic designation) were investigated as a limited power source (LPS) : All output ports
- The following are available from the Applicant upon request : Installation (Safety) Instructions / Manual

Additional Information

4791055542

- Maximum Normal Load: Continuous operation. (Connected with the network camera)

4791901284

- Add model name; AIB-800A.

- Update manual.

Additional Standards

The product fulfills the requirements of: N/A

Markings and Instructions

Clause Title	Marking or Instruction Details
Equipment identification marking – Manufacturer identification	Listee's or Recognized Company's name, Trade Name, Trademark or File Number
Equipment identification marking – model identification	Model Number
Equipment rating marking – ratings	Input Ratings (voltage, dc, current)

Special Instructions to UL Representative

N/A

BD1.0	TABLE: Production-Line Testing Requirements					
BD1.1	Electric Strength Test Special Constructions – Refer to Generic Inspection Instructions, Part AC for further information.					
Model	Component	Removable parts	Test probe location	Test V rms	Test V dc	Test Time, s
-	-	-	-	-	-	-
BD1.2	Earthing Continuity Test Exemptions – This test is not required for the following models:					
	All model					
BD1.3	Electric Strength Test Exemptions – This test is not required for the following models:					
	All model					
BD1.4	Electric Strength Test Component Exemptions – The following solid-state components may be disconnected from the remainder of the circuitry during the performance of this test.					
	All model					

BE1.0	Sample and Test Specifics for Follow-Up Tests at UL				
Model	Component	Material	Test	Sample (s)	Test Specifics
-	-	-	-	-	-

4.1.2	TABLE: List of critical components					Pass
Object / part No.	Manufacturer/ trademark	Type / model	Technical data	Product Category CCN(s)	Mark(s) of conformity	Supplement ID
AC Adapter	CHANNEL WELL TECHNOLOGY CO LTD	KPL-048F-VI	Input: 100-240 Vac, 1.7 A, 50/60 Hz, Output: 12 Vdc, 4 A, Complied with LPS.	QQGQ	UL (E161451)	
Code set	LONGWELL CO	LP-30B + SVT 18AWG X 3C + LS-13	Detachable, min 1.5 m, max. 4.5 m long, rated 125 V, 10 A, 18/3 AWG, 60 deg. C, SVT type flexible cord. One end with NEMA 5-15P other end with appliance coupler.	ELBZ2	UL (E55349)	
Code set - Alternate	CHANGZHOU HONG CHANG ELECTRONICS CO LTD	DTII-3P-15 + UL SVT 18AWG/3C +DTII-3P-04	Detachable, min 1.5 m, max. 4.5 m long, rated 125 V, 10 A, 18/3 AWG, 105 deg. C, SVT type flexible cord. One end with NEMA 5-15P the other end with appliance coupler.	ELBZ2	UL (E205766)	
Code set - Alternate	WEIHAI HONG LIN ELECTRONIC CO LTD	HL-002S + SVT 18AWG X 3C + HL-004	Detachable, min 1.5 m, max. 4.5 m long, rated 125 V, 10 A, 18/3 AWG, 105 deg. C, SVT type flexible cord. One end with NEMA 5-15P the other end with appliance coupler.	ELBZ2	UL (E254927)	
Code set - Alternate	KOREA KDK CO LTD	KKP-30 + SVT 3/18AWG + KKS-16A	Detachable, min 1.5 m, max. 4.5 m long, rated 125 V, 7 A, 18/3 AWG, 105 deg. C, SVT type flexible cord. One end with NEMA 1-15 the	ELBZ2	UL (E58075)	

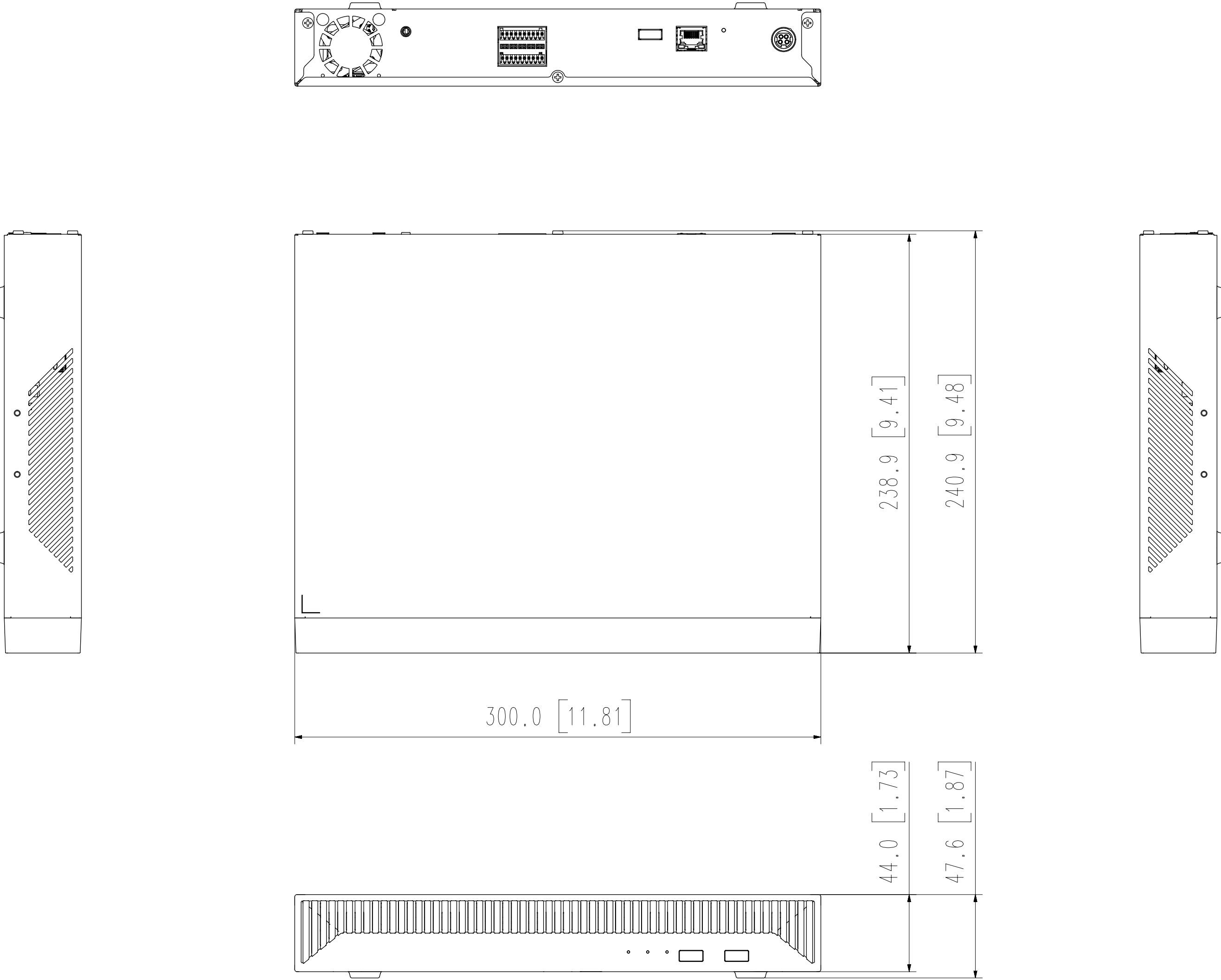
			other end with appliance coupler.			
Enclosure Top (Metal)	Interchangeable	Interchangeable	Steel, Min. 0.6 mm thickness.	-	-	
Enclosure Bottom (Metal)	Interchangeable	Interchangeable	Steel, Min. 0.8 mm thickness.	-	-	
Enclosure Front (Plastic)	LOTTE CHEMICAL CORPORATION	HN-1068(+)(f1)	Min. 2.5 mm thickness, rated Min. V-0, 130 deg. C	QMFZ2	UL (E115797)	
Enclosure Rear (Metal)	Interchangeable	Interchangeable	Steel, Min. 0.8 mm thickness.	-	-	
DC Fan for Main board	MinebeaMitsumi Inc.	04520GA-12L-XY	12 Vdc, 0.12 A, 6000 RPM (N/15000+K/2400 = 0.413068 < 1, N=6000, K=31.3632)	GPWV2	UL (E89936)	
DC Fan for Rear	SUNONWEALTH ELECTRIC MACHINE INDUSTRY CO LTD	HA40101V4-1(Y)	12 Vdc, 0.28 A, 5000 RPM (N/15000+K/2400 = 0.339383 < 1, N=5000, K=14.52)	GPWV2	UL (E77551)	
SSD	TRANSCEND INFORMATION INC	TS256GMTE670T	Rated 3.3 Vdc	AZOT2	UL (E356634)	
Battery (CN4)	WUHAN LIXING (TORCH) POWER SOURCE CO LTD	CR2032	Lithium/manganese dioxide (Coin), Max Abnormal Charging Current: 10 mA, Max Abnormal Charging Voltage: 5 Vdc	BBCV2	UL (MH26236)	
Reverse Current Protection Circuit for Lithium Coin Battery (CN4)	Interchangeable	Interchangeable	Diode (D8, 30 V, 1 A) and resistor (R4, 1 kohm) in series.	-	-	

Relay	FUJITSU COMPONENT LIMITED	FTR-B3SA012Z	Rated 12 Vdc, 85 deg. C	NRNT2	UL (E63615)	
FFC Cable	Interchangeable	Interchangeable	Marked VW-1; Min. 60 V	AVLV2	UL	
PWB	KI JOO INDUSTRIAL CO LTD	KJ4-V-0-2	Min. V-0, 130 deg. C	ZPMV2	UL (E11636)	
PWB - Alternate	Interchangeable	Interchangeable	Min. V-0, 130 deg. C	ZPMV2	UL	
Label	Interchangeable	Interchangeable	Suitable for use on each type of surface to which applied, rated for maximum and minimum surface temperature specified, or Min. 40 deg. C if not specified.	PGJI2	UL	

Enclosures

Type	Supplement Id	Description
Photographs	03-01	External View - 1
Photographs	03-02	External View - 2
Photographs	03-03	Internal View
Photographs	03-04	Rear ports View
Photographs	03-05	Main Board - Top
Photographs	03-06	Main Board - Bottom
Photographs	03-07	SSD
Photographs	03-08	DC Fan for Main board
Photographs	03-09	DC Fan for Rear
Photographs	03-10	NX Moduls - Top
Photographs	03-11	NX Moduls - Bottom
Photographs	03-12	Adaptor
Diagrams	04-01	Enclosure Diagram
Manuals	06-01	Manual
Miscellaneous	07-01	Label
Miscellaneous	07-02	Rear ports diagram

The following Page(s) are related to Diagrams-01. The next supplement, if applicable, will be identified with a new Supplement Page Heading.



3	MODEL 2	
2	MODEL 1	
1	AIB-800	'23.10.25
No.	MODEL NAME	DATE
Unit : mm [inch]		SCALE : 1 / 1
Hanwha Vision		

The following Page(s) are related to Manuals-01. The next supplement, if applicable, will be identified with a new Supplement Page Heading.

IMPORTANT SAFETY INSTRUCTIONS

- Read these operating instructions carefully before using the unit.
- Follow all the safety instructions listed below.
- Keep these operating instructions handy for future reference.
- 1) Read these instructions.
 - 2) Keep these instructions.
 - 3) Heed all warnings.
 - 4) Follow all instructions.
 - 5) Do not use this apparatus near water.
 - 6) Clean the contaminated area on the product surface with a soft, dry cloth or a damp cloth.
(Do not use a detergent or cosmetic products that contain alcohol, solvents or surfactants or oil constituents as they may deform or cause damage to the product.)
 - 7) Do not block any ventilation openings, Install in accordance with the manufacturer's instructions.
 - 8) Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.
 - 9) Do not defeat the safety purpose of the polarized or grounding- type plug. A polarized plug has two blades with one wider than the other. A grounding type plug has two blades and a third grounding prong. The wide blade or the third prong are provided for your safety. if the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.
 - 10) Protect the power cord from being walked on or pinched particularly at plugs, convenience receptacles, and the point where they exit from the apparatus.
 - 11) Only use attachments/accessories specified by the manufacturer.
 - 12) Use only with the cart, stand, tripod, bracket, or table specified by the manufacturer, or sold with the apparatus. When a cart is used, use caution when moving the cart/apparatus combination to avoid injury from tip-over.



- 13) Unplug this apparatus during lightning storms or when unused for long periods of time.
- 14) Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as power-supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.

Standards Approvals



- Any changes or modifications in construction of this device which are not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.
- This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions : (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.
- This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment.
This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.
- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

CAUTION

- RISK OF EXPLOSION IF BATTERY IS REPLACED BY AN INCORRECT TYPE. DISPOSE OF USED BATTERIES ACCORDING TO THE INSTRUCTIONS.
- Do not ingest battery, Chemical Burn Hazard.
- This product contains a coin / button cell battery. If the coin / button cell battery is swallowed, it can cause severe internal burns in just 2 hours and can lead to death.
- Keep new and used batteries away from children. If the battery compartment does not close securely, stop using the product and keep it away from children.
If you think batteries might have been swallowed or placed inside any part or the body, seek immediate medical attention.

ATTENTION

- IL Y A RISQUE D'EXPLOSION SI LA BATTERIE EST REMPLACÉE PAR UNE BATTERIE DE TYPE INCORRECT. METTRE AU REBUT LES BATTERIES USAGÉES CONFORMÉMENT AUX INSTRUCTIONS.
- Ne pas ingérer la pile, risque de brûlure chimique.
- Ce produit contient une pile de type bouton/pièce de monnaie. Si la pile de type bouton/pièce de monnaie est avalée, elle peut causer de graves brûlures internes en seulement 2 heures et peut entraîner la mort.
- Gardez les piles neuves et usagées hors de portée des enfants. Si le compartiment de la pile ne se ferme pas correctement, cessez d'utiliser le produit et gardez-le d'atteinte des enfants.
Si vous suspectez que des piles ont été avalées ou insérées dans une partie du corps, consultez un médecin sans tarder.

overview

ABOUT USER MANUAL

This document contains the instructions for AIBox. Please read this manual carefully before using the product for proper use.

- This document explains how to use the product based on its defaults and default screens.
- The information in this manual may vary, depending on the product's software update and our policies, and is subject to change without notice to the user.

ABOUT TARGET READERS

This manual contains information for users of AIBox.

ABOUT PRODUCT USAGE

Users of this product can perform the following operations :

- Real-time monitoring of camera videos registered in AIBox
- Sending video data, AI metadata, and Bestshot to devices connected to AIBox

Before using this product, please make sure that the product is the latest software version. You can visit Hanwha Vision website (www.HanwhaVision.com) to check and download the latest software version.

Features

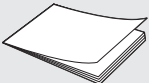
This product allows you to register cameras that do not support AI features, enabling to receive Bestshot, metadata, and such through various AI analytics. Additionally, it supports real-time monitoring of the registered videos.

- Supports AI analytics (object detection, people/vehicle counting, queue management, heatmap, IVA, and detection area)
- Supports AI Apps for each channel
- Supports BestShot view
- Configuration of event triggers and various event actions
- Convenient log search
- Supports ONVIF Profile S standard and RTP / RTSP protocols
- Alarm Input / Output
- Supports 8-Channel live monitoring of the network cameras
- Supports convenience in remote monitoring through DDNS support

Package Contents



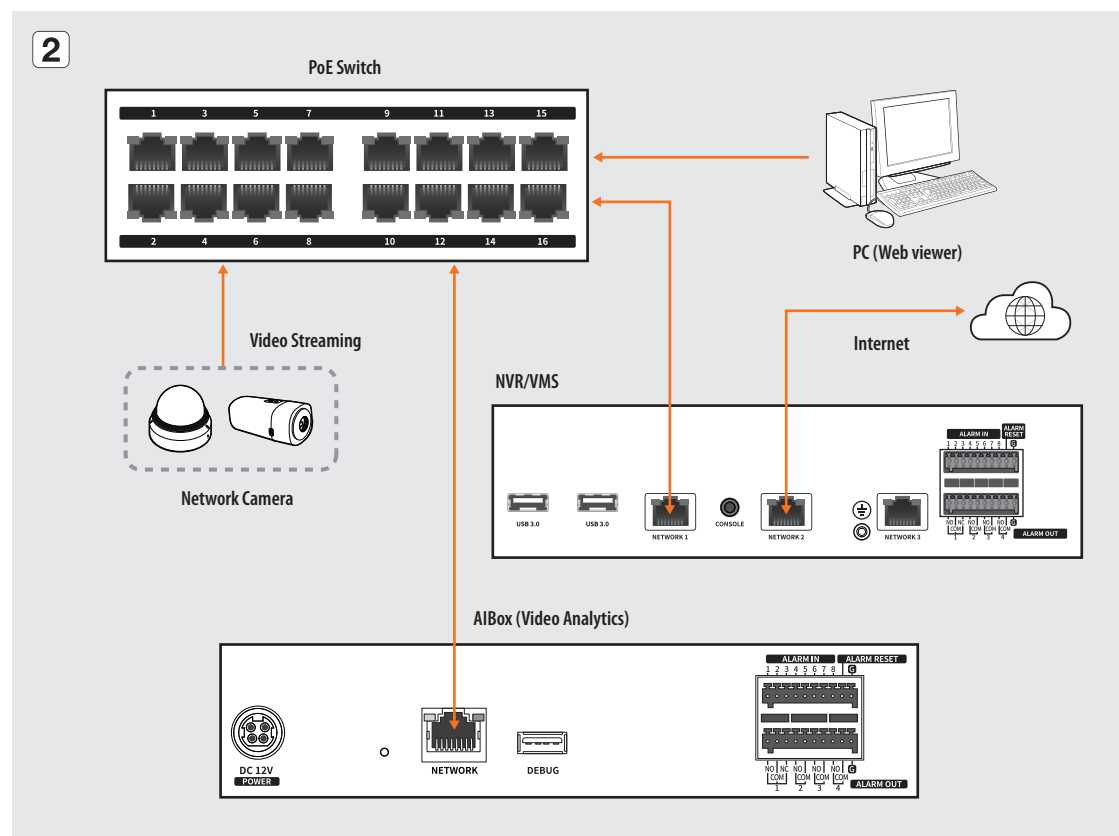
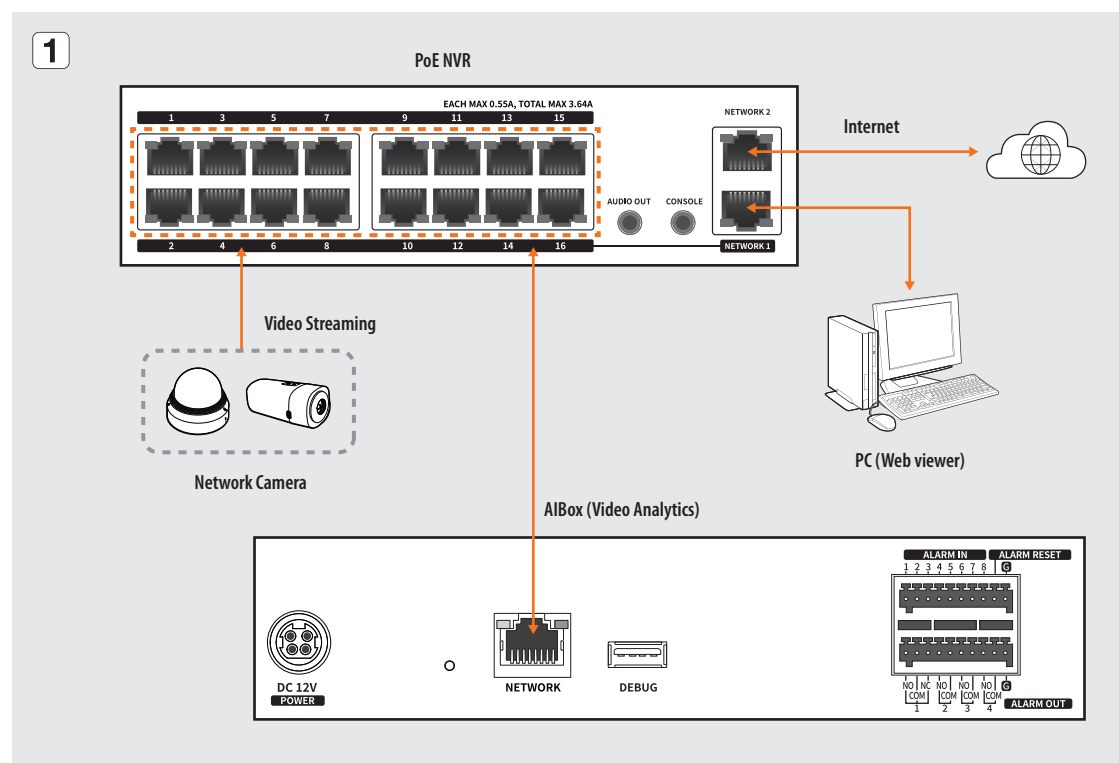
- The appearance of the components may differ from the image shown.
- Accessory category and quantity may differ depending on sales region.

		
AIBox	Quick Guide	Power Adaptor
		
Power Cable	Terminal Block (2 ea)	Anti-slip Rubber Pad
		
Bracket Rack (2 ea)	Bracket Fixing Screw (4 ea)	

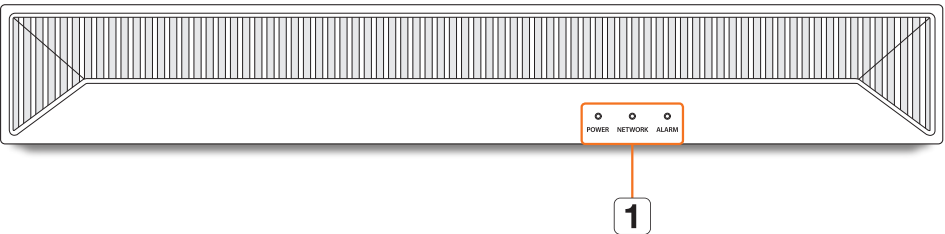


- Attach non-slip rubber pads to the bottom of the product as needed to prevent sliding or wobbling during use.

AIBox System Configuration

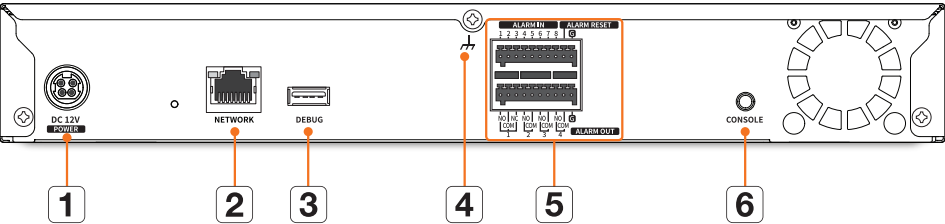


Part Names and Functions (Front)



Part Names	Functions
1 LED Indicator	POWER : Shows the power ON/OFF status.
	NETWORK : Displays both network connection and data transfer status.
	ALARM : LED lights on when an event occurs.

Part Names and Functions (Rear)



Part Names	Functions
1 DC 12V POWER	Terminal to connect power to.
2 NETWORK	Port for network connection and connection to the web viewer.
3 DEBUG	Device for maintenance. Do not connect any USB device to the port.
4 Ground Connection	Port for connecting a separate ground cable. For safe handling of the device, please add a ground wire.
5 Alarm	- ALARM IN : Alarm input ports. (1~8 CH) - ALARM RESET : Alarm reset ports. - ALARM OUT : Alarm output ports. (1~4 CH)
6 CONSOLE	Device for maintenance.

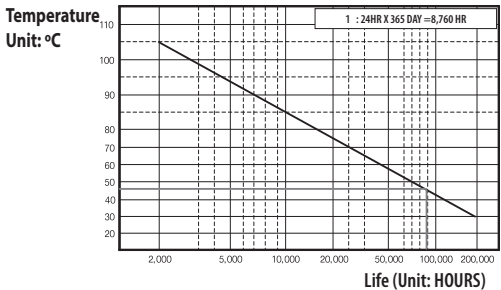
Installation Precautions

Please take note of the followings before using this product.

- Do not use the product outdoor.
- Do not spill water or liquid in the connection part of the product.
- Do not impose the system to excessive shock or force.
- Do not pull out the power plug forcefully.
- Do not disassemble the product on your own.
- Do not exceed the rated input/output range.
- Use a certified power cord only.
- For the product with an input ground, use a grounded power plug.

Checking the Installation Environment

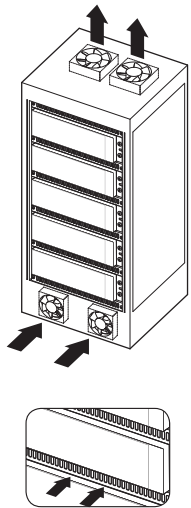
Note that an excessive internal temperature of the product may cause a system failure or a shortened product life (see the right figure). Keep in mind the following instructions before installing the product.



[Figure 1]

When mounting the product on a rack, comply with the following instructions.

- Please ensure that the rack inside is not sealed.
- Please ensure the air is circulated through the inlet/outlet as shown in the picture.
- If you pile up the products or other rack-mount devices as shown in figure 2, secure room for ventilation or install a vent.
- For natural air convection, place the inlet at the bottom of the rack and the outlet on top.
- It is strongly recommended that a fan motor is installed at the inlet and the outlet for air circulation. (Please fit a filter at the inlet to screen dust or foreign substances.)
- It is recommended to keep the temperature inside the rack or around the product at 25°C.

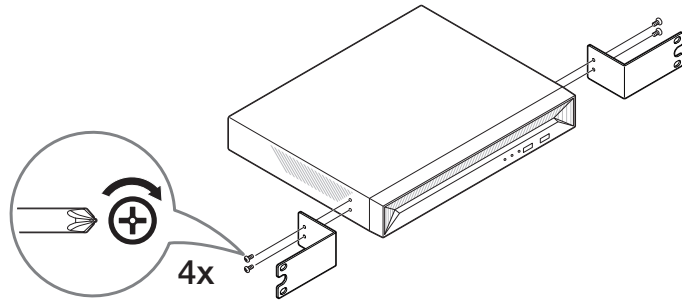


[Figure 2]

Rack Installation

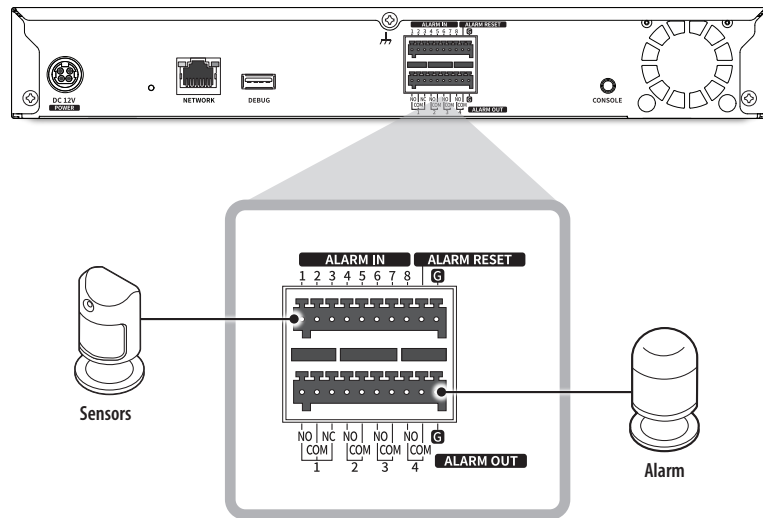
Install the Bracket-Rack as shown in the figure, and then fasten the screws on the left/right sides.

- Fix the screws not to be loosened by vibrations.

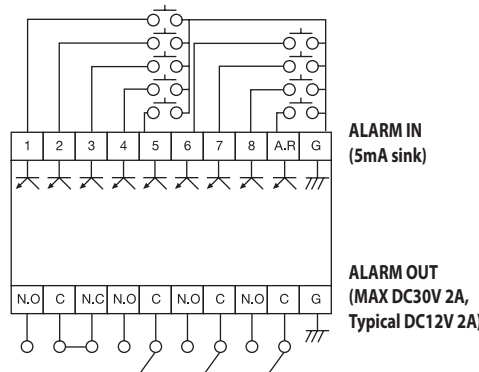


Connecting the Alarm Input/Output

The Alarm In/Out port at the back is composed of the following.



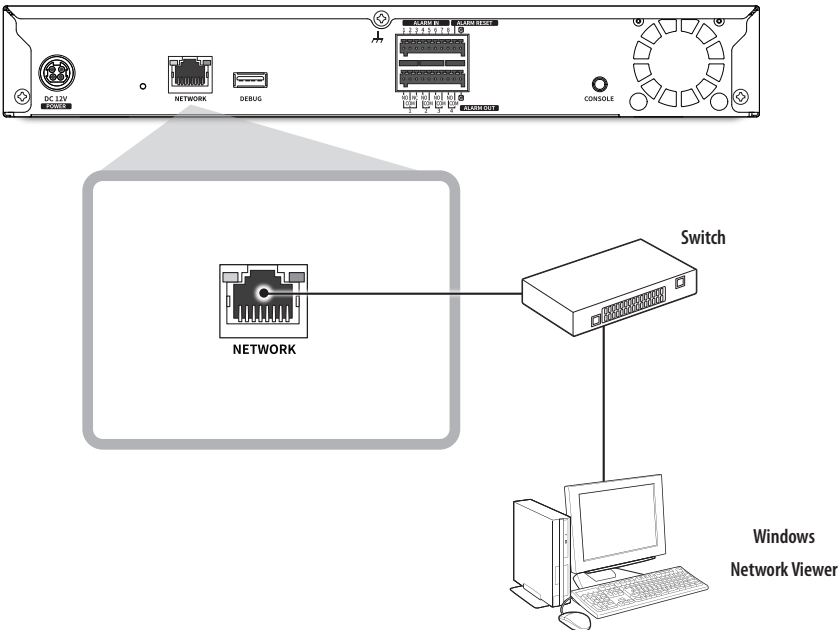
- ALARM IN 1 ~ 8 : Alarm input ports
- ALARM RESET : After receiving an alarm reset signal, it releases the current alarm input and restarts the alarm transmission.
- ALARM OUT 1 ~ 4 : Alarm output ports



Connecting the Network

- For more information about network connection, see “Setting the Network” in the User Manual.

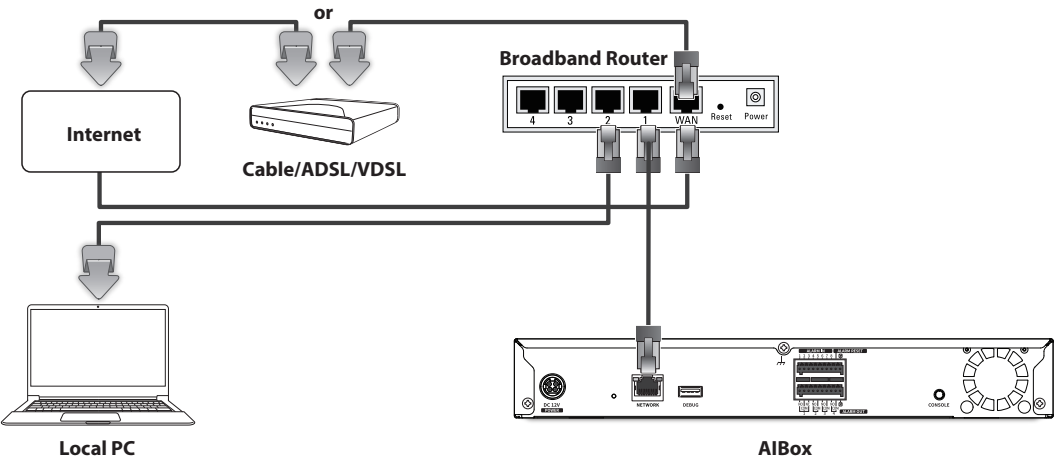
Network Connection via Ethernet (10/100/1000BaseT)



Network Connection Using a Router

If you want to use a PC and AIBox in an environment using xDSL/Cable modem, you can use the router with only one Internet line.

This guide is an installation guide for network beginners. Follow the instructions to set up your router, local PC, and AIBox.



AI BOX

MODEL: AIB-800

DC 12V $\overline{\text{~}}$ 2.4A

M/C: AIB-800/KUS

Fac. ID: D



DATE S/N: Serial No.

MAC ADDRESS: XX-XX-XX-XX-XX-XX

CAN ICES-3(A)/NMB-3(A)

MADE IN KOREA

Hanwha Vision Co., Ltd.



I.T.E.

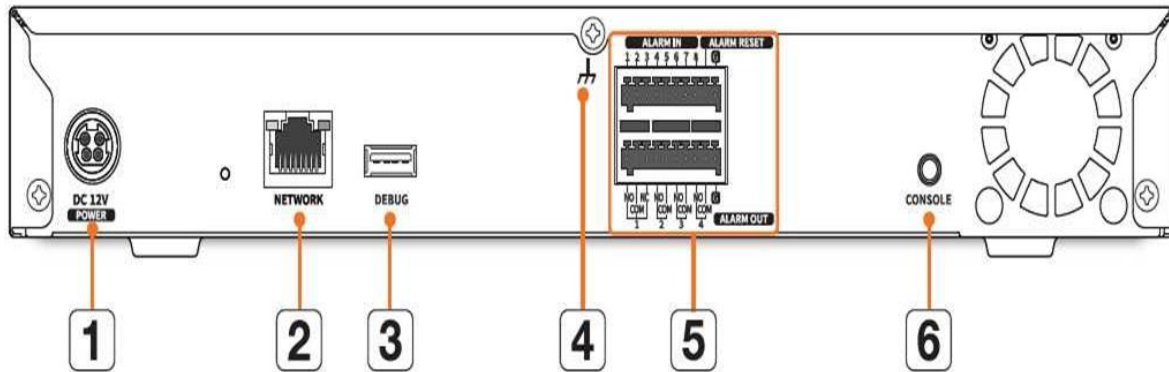
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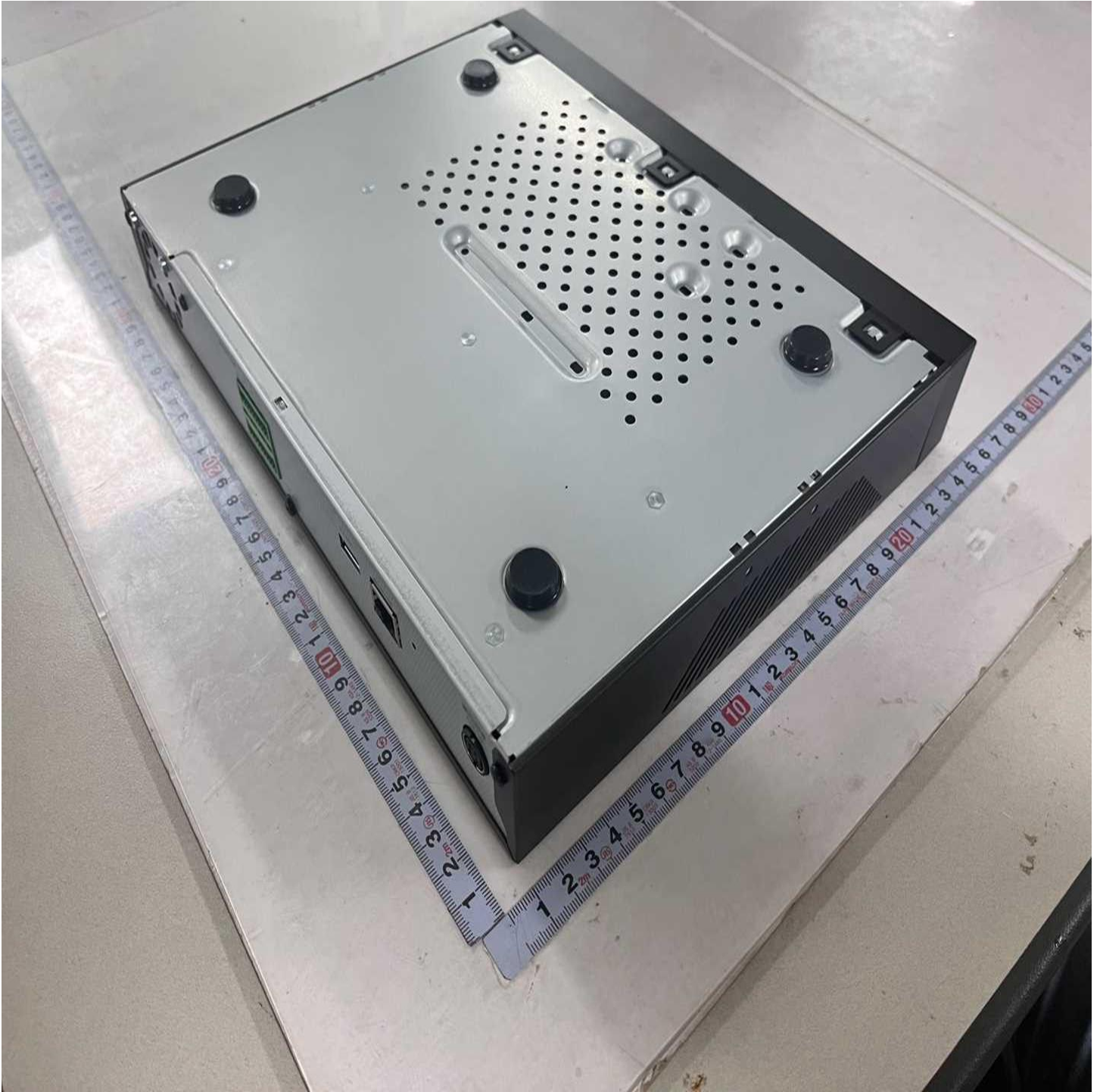
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CA



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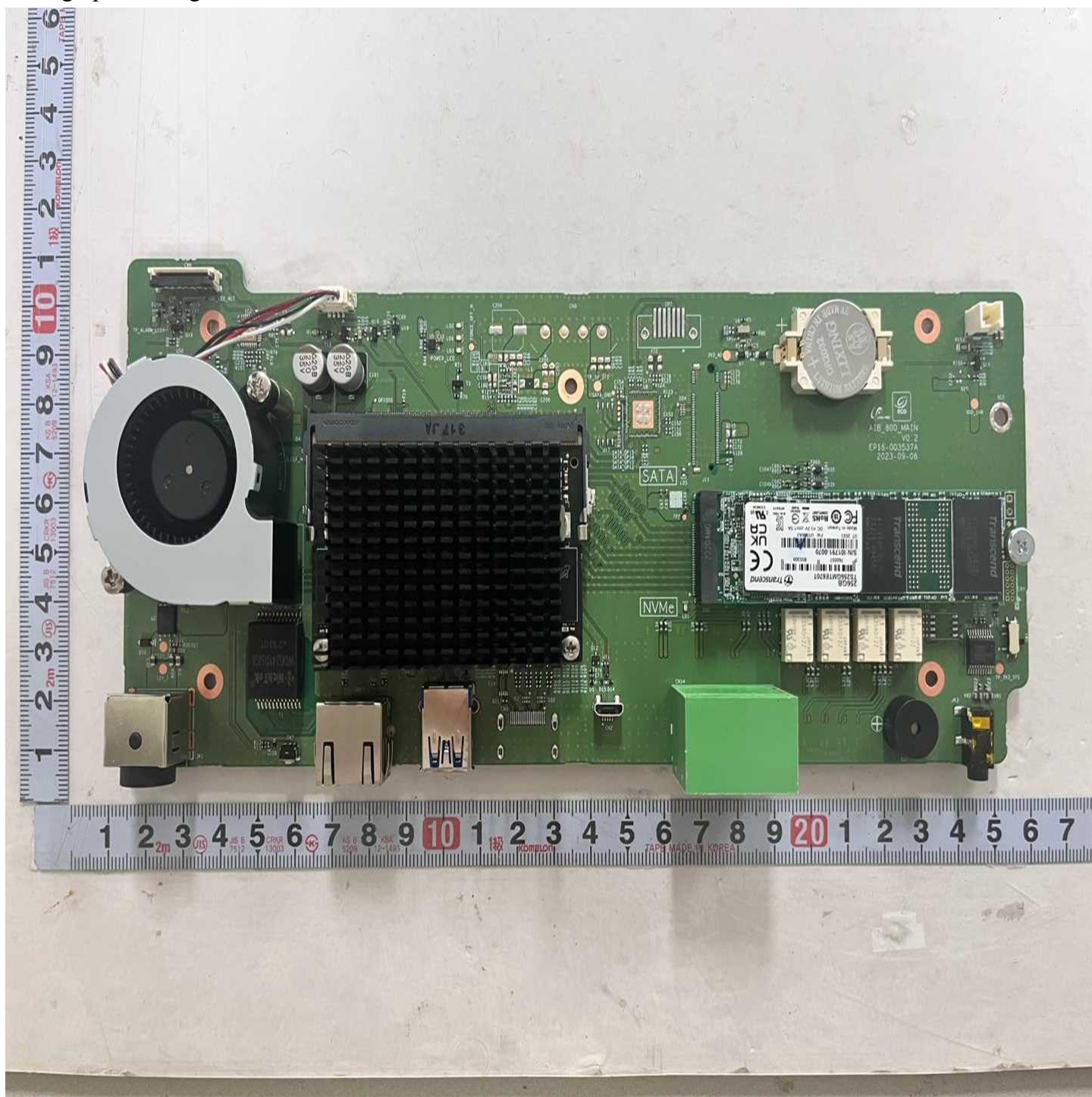


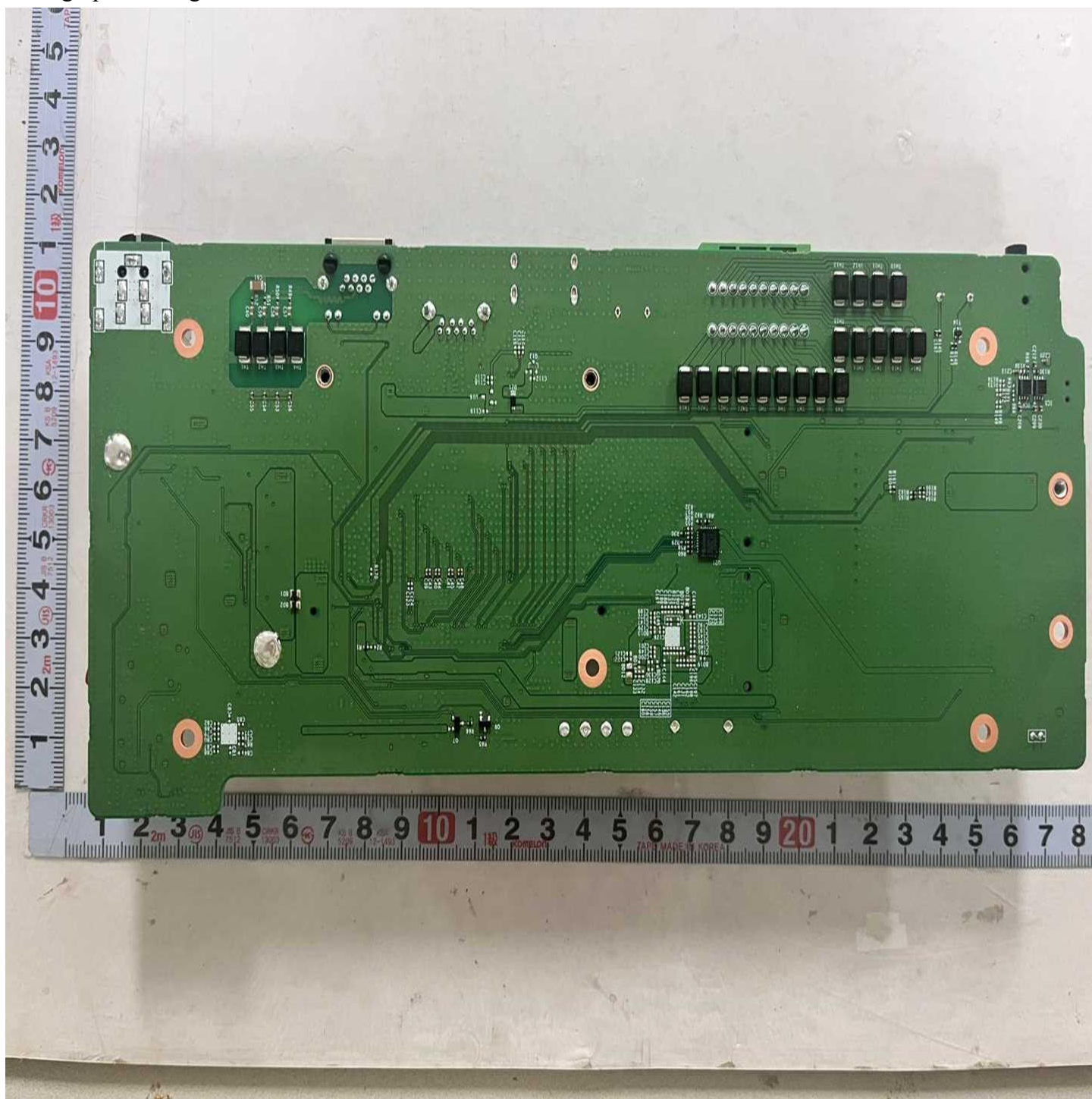
Part Names		Functions
1	DC 12V POWER	Terminal to connect power to.
2	NETWORK	Port for network connection and connection to the web viewer.
3	DEBUG	Device for maintenance. Do not connect any USB device to the port.
4	Ground Connection	Port for connecting a separate ground cable. For safe handling of the device, please add a ground wire.
5	ALARM	ALARM IN : Alarm input ports. (1~8 CH) ALARM RESET : Alarm reset ports. ALARM OUT : Alarm output ports. (1~4 CH)
6	CONSOLE	Device for maintenance.

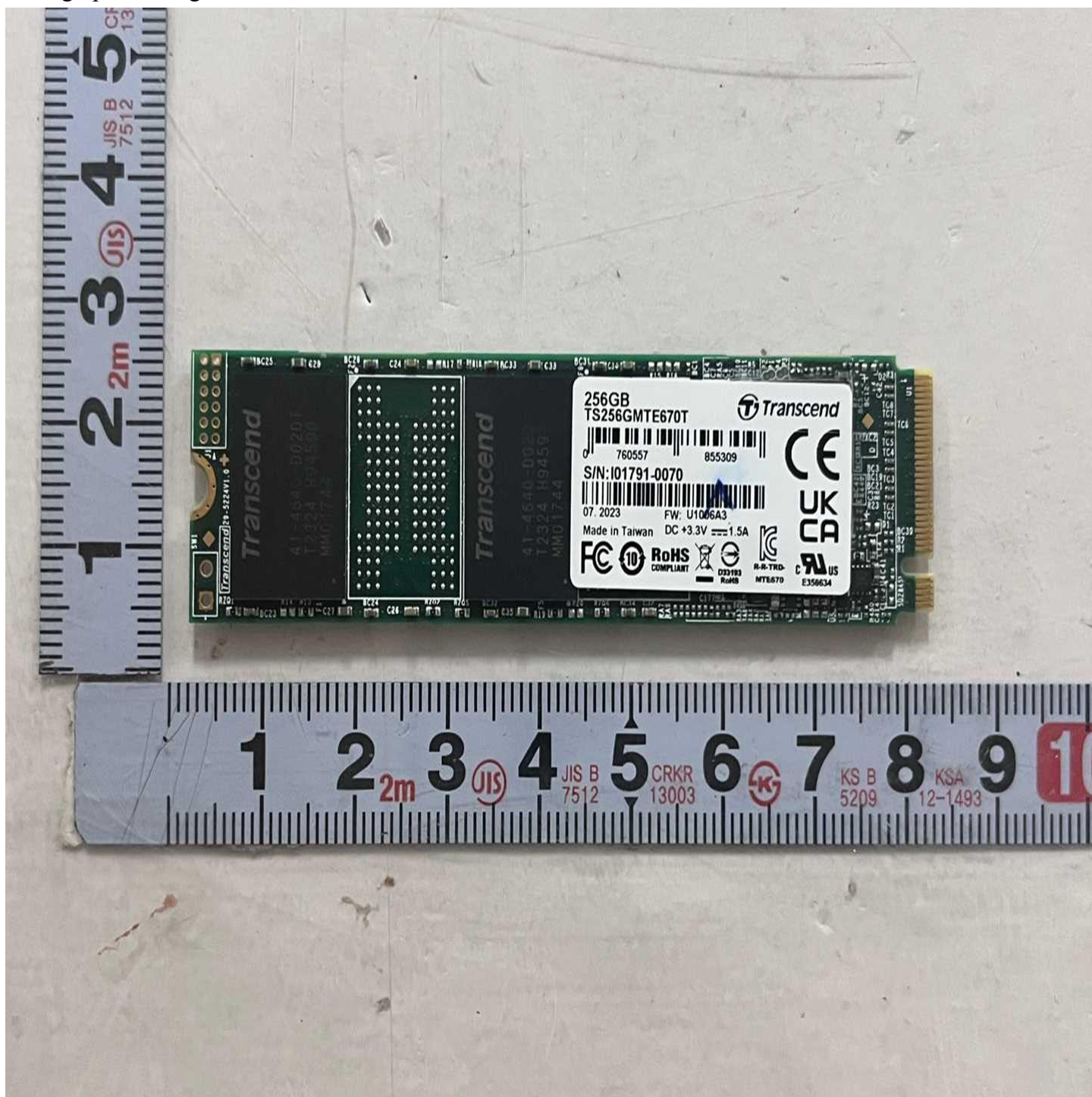






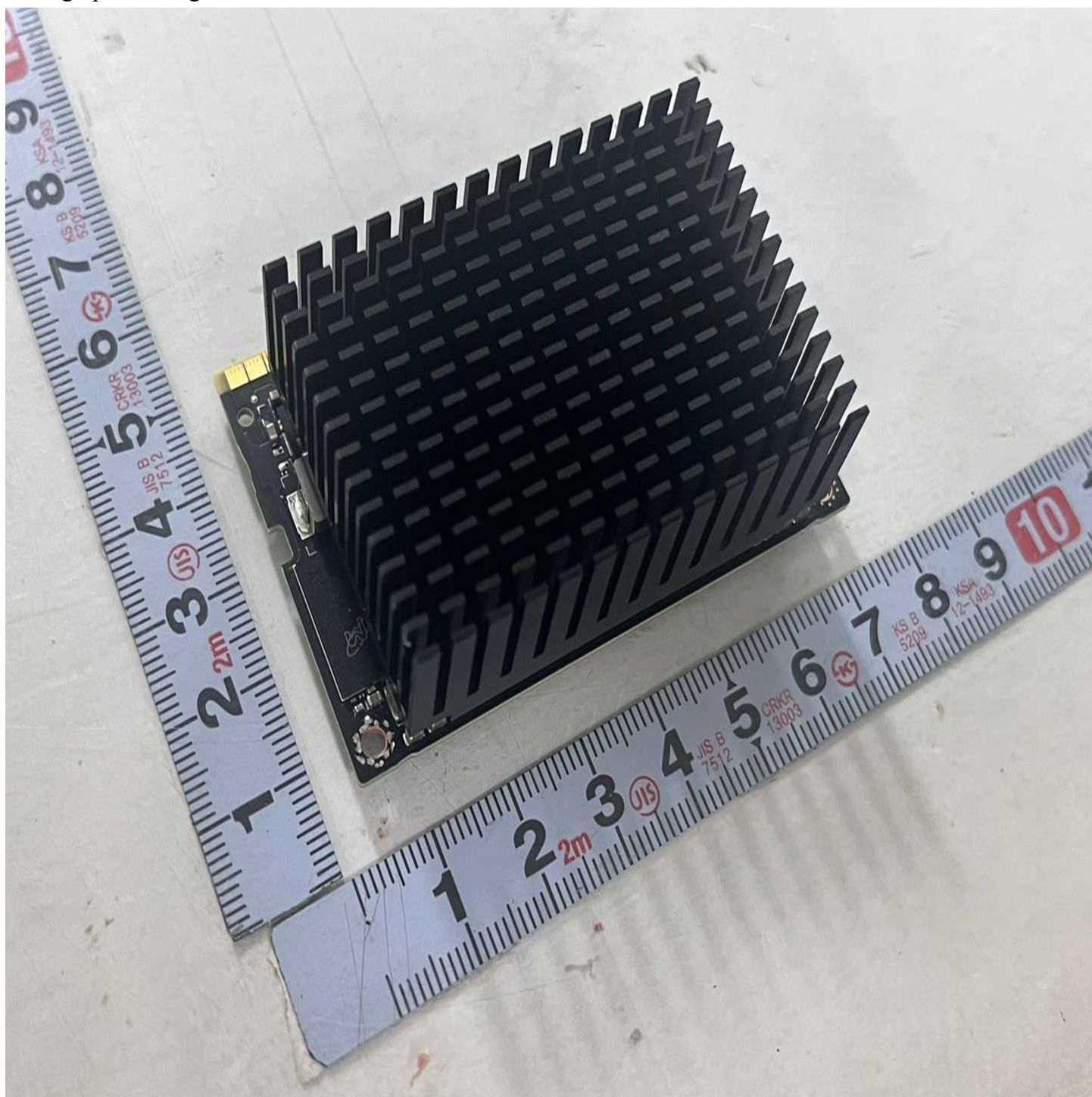


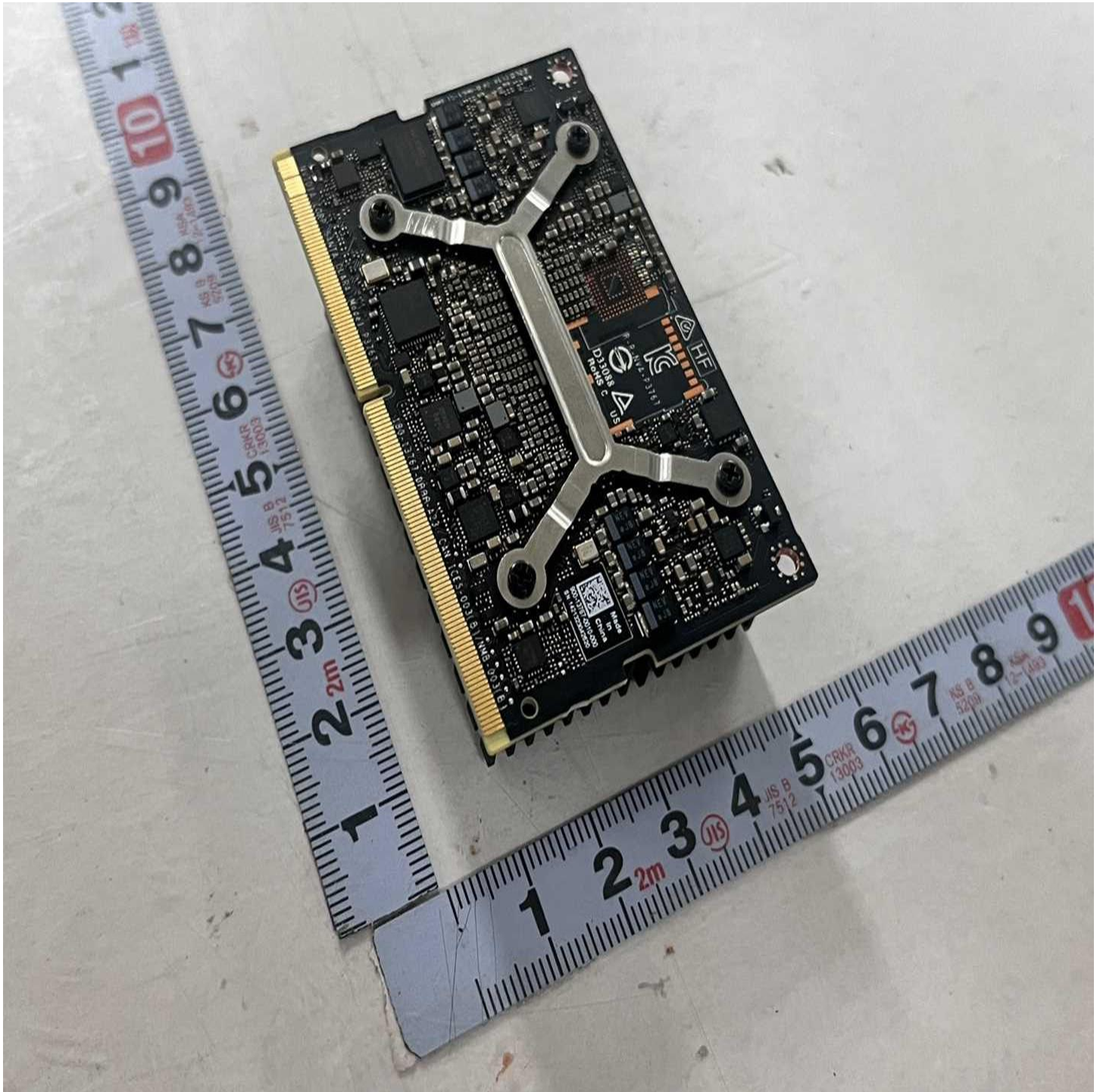














CHANNEL WELL TECHNOLOGY

侨威科技股份有限公司/僑威科技股份有限公司

HTW:EP06-003383A
ACT-4812QFIB [JPHQ]

AC ADAPTER 电源适配器/電源供應器/직류전원장치
MODEL /型号/型號/모델명: KPL-048F-VI
INPUT /輸入/輸入/정격입력: 100-240V~ 50/60Hz 1.7A
OUTPUT /輸出/輸出/정격출력: +12.0V= 4.0A 48.0W

I.T.E. POWER SUPPLY. CAN ICES-003(B)/NMB-003(B)
仅供信息技术设备使用。
僅供資訊設備使用。

A/S 센터: Sunflower Energy
제조사: Channel Well Technology (Guangzhou) Co., Ltd.
TEL: 82-070-7011-2806
제조국: 중국 (Made in China)
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