



The table below describes the files that were selected to be included as part of this package.

Supplements, such as Figures and Illustrations, will appear as X number of Figures, X number of Illustrations, etc., rather than naming each one.

E158873-A6216-DescriptionUL
Figure-9-Total

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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:	NETWORK VIDEO RECORDER
Model:	XRN-426S
Rating:	54 Vdc, 1.26 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.

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Prepared By: Lawrence Lee / Project Handler Reviewed By: SeulKi Park / 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

NETWORK VIDEO RECORDER. This unit supplied by adapter (QQGQ/7) and consist of main board, hard disk-drives and numerous components mounted on PWB.

Model Differences

N/A

Test Item Particulars

Product group	end product
Classification of use by	Instructed 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 wall/ceiling-mounted
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)	0.604

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

4791265584

- Maximum Normal Load: Continuous operation and maximum load output terminals. (USB 2.0 2 EA: 5.0 Vdc, 0.5 A)

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	2AAL090Szzzzz z represents the different customers: z=0-9, A-Z, hyphen or blank (Type: 2AAL090S)	Input: 100-240Vac, 50/60 Hz, 1.5 A Output: 54 Vdc, 1.67 A, 90.0 W	QQJQ	UL (E161451)	
Power cord set	LONGWELL	LP-30B + SVT 18AWG 3C+ LS-13	Detachable, min 1.5 m, max. 2.4 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.	ELBZ7	UL (E55349)	
Power cord set - Alternate	WEIHAI HONG LIN ELECTRONIC CO LTD	HL-002S + SVT 18AWG X 3C + HL- 004	Detachable, min 1.5 m, max. 2.4 m long, rated 125 V, 10 A, 18/3 AWG, 105 deg.C, SVT type flexible cord. One end with NEMA 5-15P other end with appliance coupler.	ELBZ7	UL (E254927)	
Power cord set - Alternate	KOREA KDK CO LTD	KKP-30 + SVT 3/18AWG + KKS- 16A	Detachable, Min. 1.5 m, Max. 2.4 m long, rated 125 V, 7 A, 18/3 AWG, 105 deg. C, SVT type flexible cord. One end with NEMA 1-15 other end with appliance coupler.	ELBZ7	UL (E58075)	
Power cord set - Alternate	CHANGZHOU HONG CHANG ELECTRONICS CO LTD	DTII-3P-15+UL SVT 18AWG/3C +DTII- 3P-04	Detachable, Min. 1.5 m, Max. 2.4 m long, rated 125 V, 10 A, 18/3 AWG, 105 deg. C, SVT type flexible cord. One	ELBZ7	UL (E205766)	

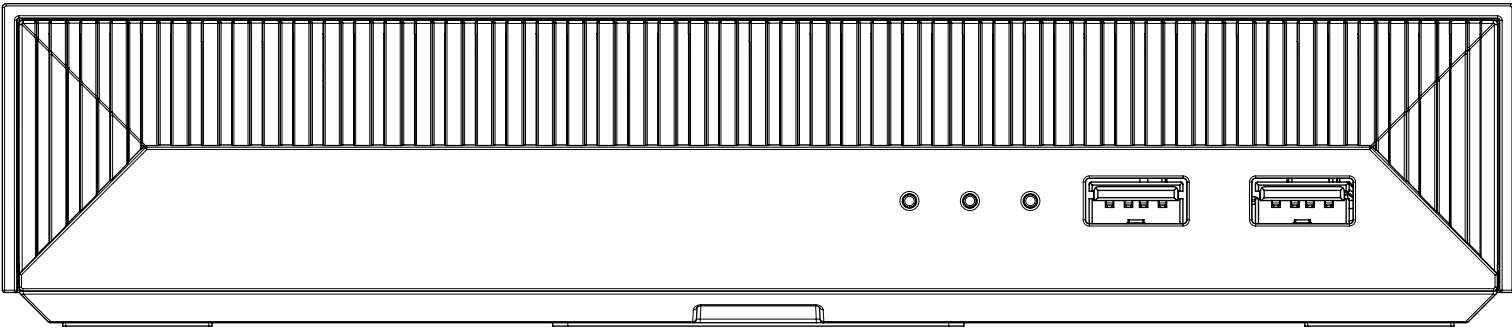
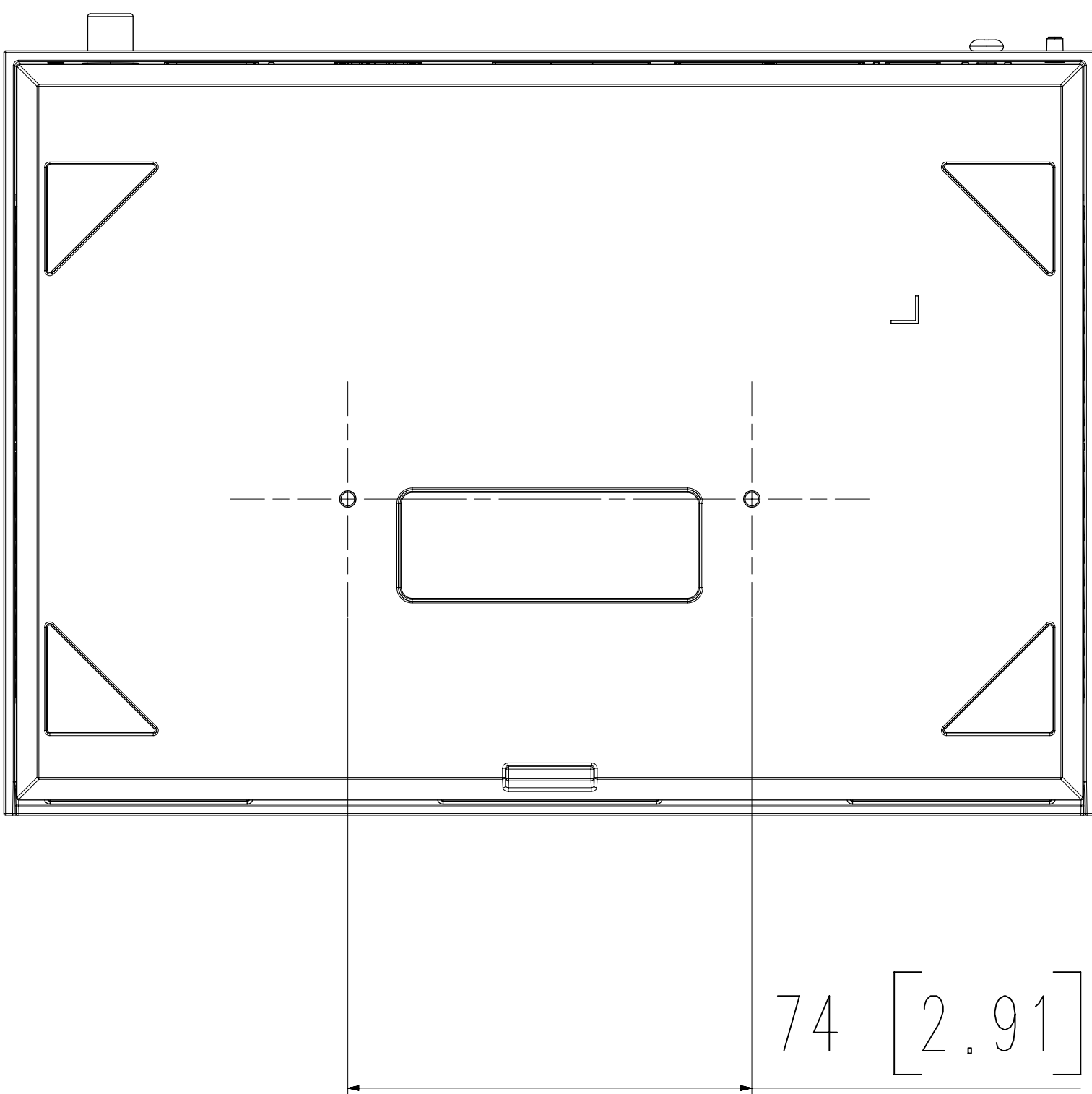
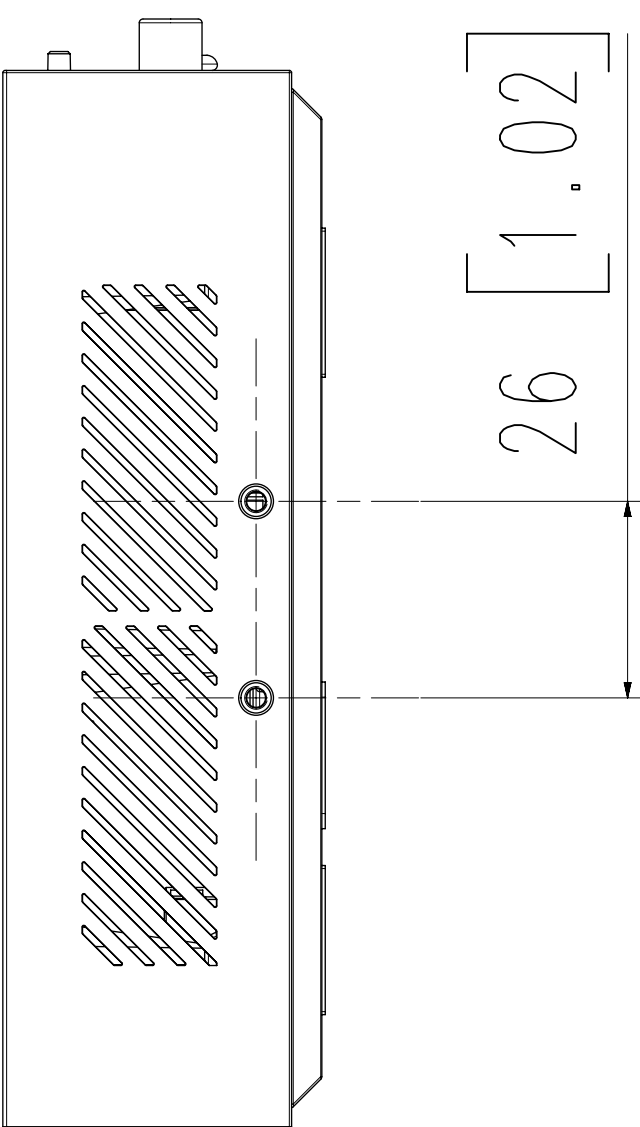
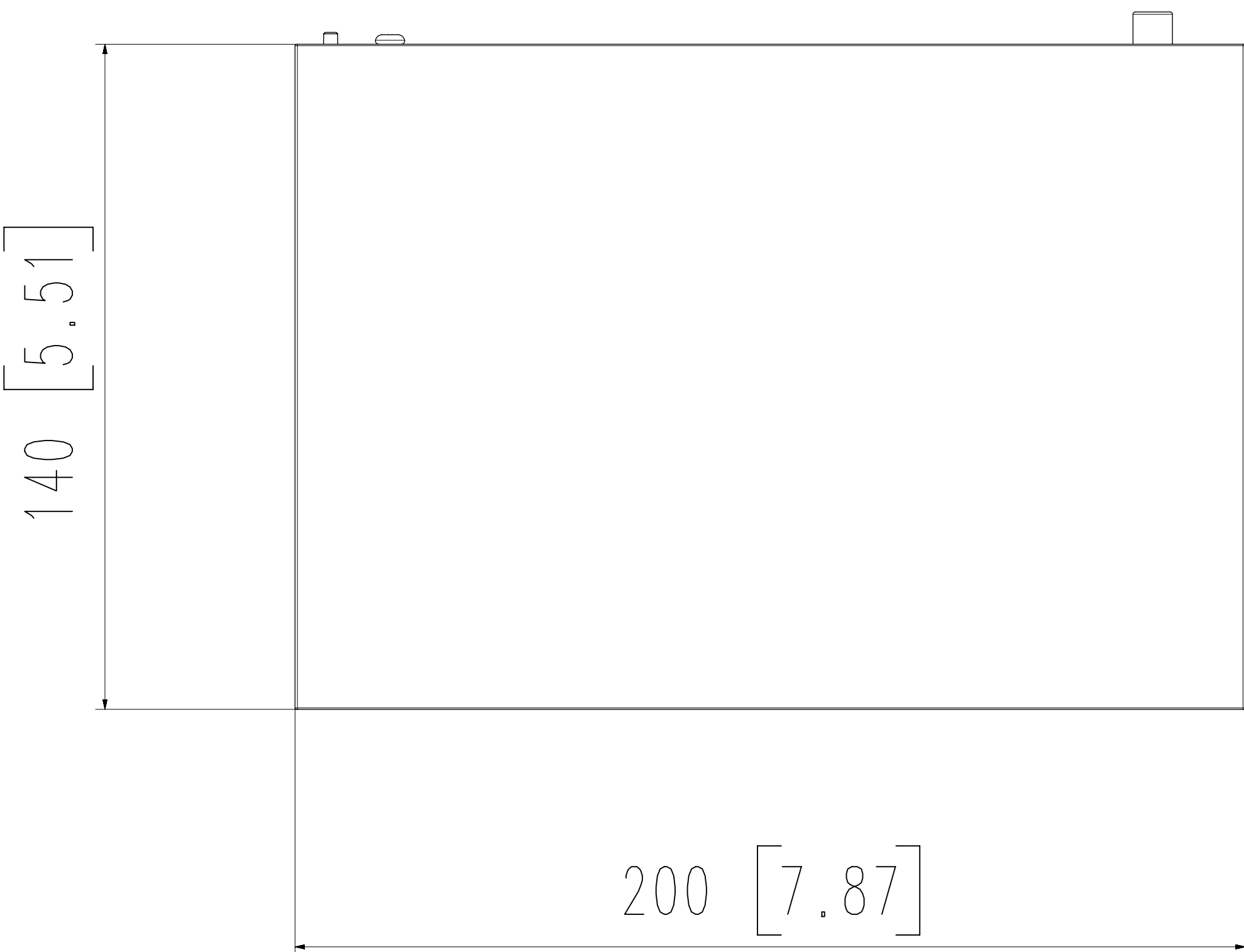
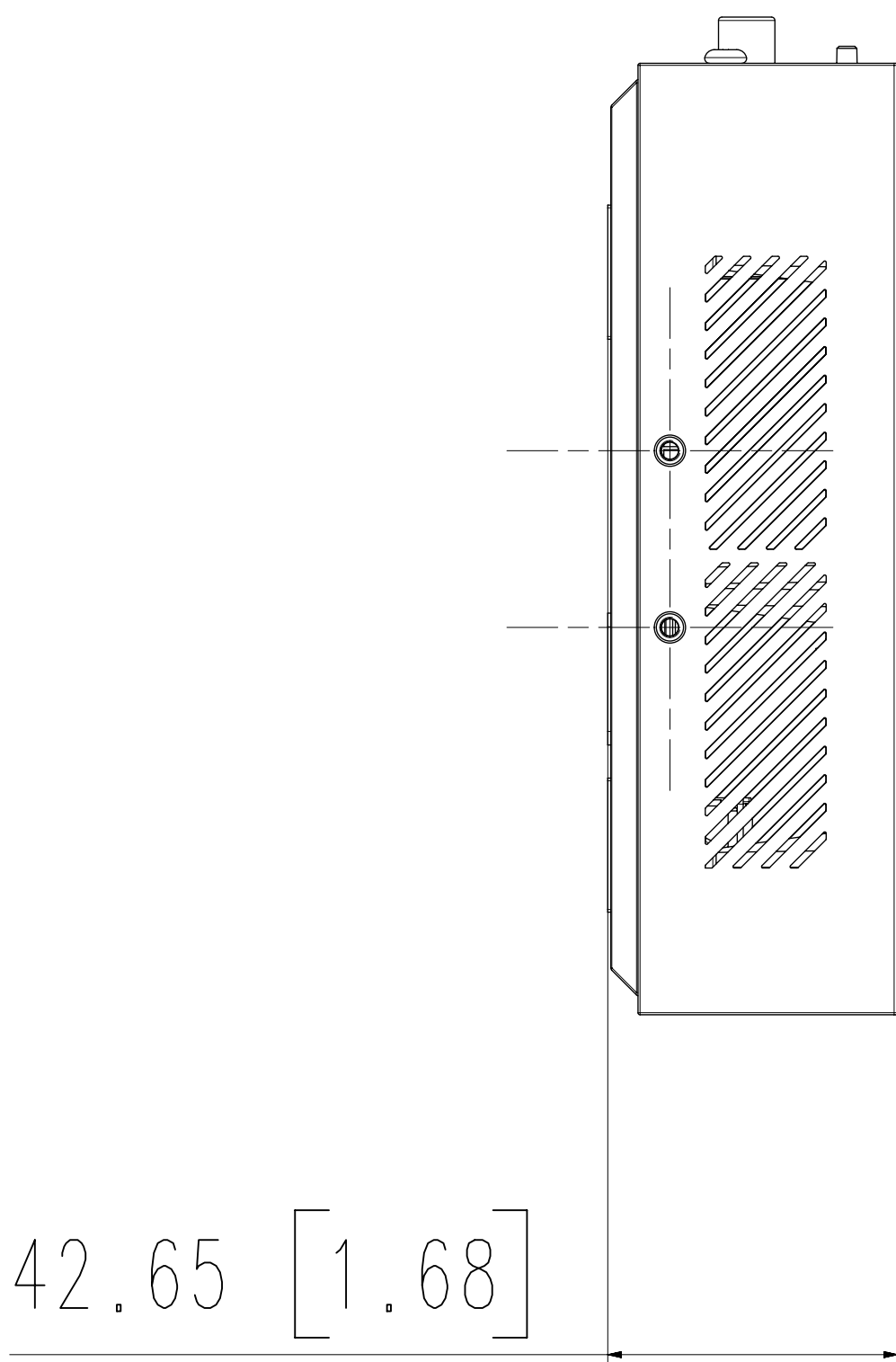
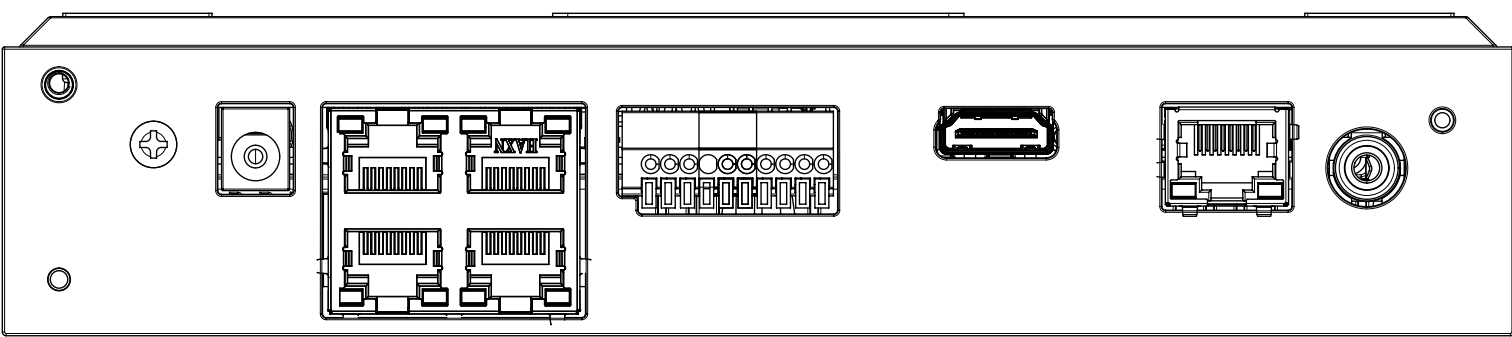
			end with NEMA 5-15P other end with appliance coupler.			
Enclosure – Case top (Plastic)	LOTTE CHEMICAL CORPORATION	UH-1068(f1)	Min. 2.0 mm thickness, rated Min. V-0, 130 deg. C	QMFZ2	UL (E115797)	
Enclosure –CASE Bottom (Metal)	Interchangeable	Interchangeable	Aluminum, Min. 3.5 mm thickness.	-	-	
Opto-coupler (LS1)	LITE-ON TECHNOLOGY CORP	LTV-816-G	Isolation Voltage: 5300. Max. Operation Temperature: 110 deg. C	FPQU2	UL (E113898)	
Transformer (T4)	SHENZHEN GROUP-TEK ELECTRONICS TECHNOLOGY CO. , LTD	PDT25117SR	130 deg. C See enclosure for more detail.	-	-	
Line filter (T9)	TNC CO.,LTD	CV320070SB	7.0 mH, 105 deg. C	-	-	
Relay (RLY1, RLY2)	Fujitsu Component Limited	FTR-B3	Temperature: -40 - + 85 deg. C	-	-	
Litium battery (BAT1)	WUHAN LIXING (TORCH) POWER SOURCE CO LTD	CR2032	Lithium / manganese dioxide (Coin), Non- rechargeable, 3.0 Vdc, Abnormal Charging Current 10 mA.	BBCV2	UL (MH26236)	
Lithium Battery Protection Circuit	Interchangeable	Interchangeable	Diode (D10, 80 V, 2 A) and Resistor (R194, 1 Kohm) in series	-	-	
USB protect IC (U20, U36)	Texas Instruments Incorporated	TPS2062	Rated 2.7 -5.5 Vdc, 1.5 A, Current limit: 2.0 A	QVGS2	UL (E169910)	
Thermal Pad	KOMOTECH CO LTD	KGP-1(a)	Min. 1.0 mm thickness, rated V-0, 150 deg. C	QMFZ2/8	UL (E245303)	
PWB	KI JOO INDUSTRIAL CO LTD	KJ4-V-0-2	Min. V-0, 130 deg. c	ZPMV2	UL (E111636)	

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.	PGDQ2 or PGJI2	UL	

Enclosures

Type	Supplement Id	Description
Photographs	03-01	External View - 1
Photographs	03-02	External View - 2
Photographs	03-03	Rear ports View
Photographs	03-04	Main Board - Top
Photographs	03-05	Main Board - Bottom
Photographs	03-06	Adaptor
Diagrams	04-01	Enclosure Diagram
Manuals	06-01	Manual
Miscellaneous	07-01	Label

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



1	XRN-426S	'23.10.04
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.
- 15) **Prohibition of battery abuse**
 - Do not install and use the wrong type of battery.
 - Do not leave the battery in a mechanically crush or cut it because it can explode.
 - Do not leave the battery in a high temperature environment.
 - Do not leave the battery in a low-pressure environment.

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.

PRODUCT USER MANUAL DESCRIPTION

- This document is a user manual for Recorder product. Before using this product, please read this document carefully in order to use it properly.
- This user manual explains how to use the product based on the defaults and default screens of this product.
 - The content of this manual is subject to change depending on the product software updates and the company policies. It is subject to partial changes without prior notification to users.

TARGET AUDIENCE

This user manual contains contents for Recorder users.

HOW TO USE THE PRODUCT

- Users of this product can perform the following:
- Monitor cameras registered to Recorder in real time
 - Search for or play videos saved in Recorder
 - Monitor text data being transmitted to the POS device connected to Recorder in real time
 - Search for text data from the POS device connected to Recorder
 - Monitor real time events that occur in Recorder, sensors, and cameras or search through logs

Before using this product, check if the latest version of this software is installed. Go to Hanwha Vision's website (www.HanwhaVision.com) to check the software version and download necessary files.

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 of 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.

NETWORK VIDEO RECORDER

MODEL: XRN-426S

DC 54V  1.26A

M/C: XRN-426S/KUS Fac. ID: D



DATE S/N: Serial No.

MAC ADDRESS 1: XX-XX-XX-XX-XX-01

MAC ADDRESS 2: XX-XX-XX-XX-XX-02

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

MADE IN KOREA

Hanwha Vision Co., Ltd.



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PT03-002663T

