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Please find attached the related material on Project

For your convenience, the below describes the related updates:

E158873-A6226-DescriptionUL
Figure-13-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-6420RB2, XRN-3220RB2
Rating:	100-240 Vac, 50/60 Hz, 1.7 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: SungIl 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

NETWORK VIDEO RECORDER consists of R/C (QQJQ2/8) power supply, DC Fan, main board, maximum 8 hard disk-drives (optional) and numerous components mounted on PWB.

Model Differences

XRN-6420RB2 is basic model.

XRN-3220RB2 is identical to basic model except model designation and channels.

Test Item Particulars

Product group	end product
Classification of use by	Instructed person
Supply Connection	AC Mains
Supply tolerance	+10%/-10%
Supply connection – type	pluggable equipment type A - appliance coupler
Considered current rating of protective device	20 A; Location: building
Equipment mobility	movable stationary
Over voltage category (OVC)	OVC II
Class of equipment	Class I
Special installation location	N/A 0
Pollution degree (PD)	PD 2
Manufacturer's specified T _{ma} (°C)	40
IP protection class	IPX0
Power systems	TN
Altitude during operation (m)	2000 m or less
Altitude of test laboratory (m)	2000 m or less
Mass of equipment (kg)	Max. 13.15 kg (with HDD 8 EA)

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 : TN
- ☐ Considered current rating of protective device as part of the building installation (A) : 20
- ☐ Mains supply tolerance (%) or absolute mains supply : +10%/-10%
- ☐ The equipment disconnect device is considered to be : Appliance inlet
- ☐ The following circuit locations (with circuit/schematic designation) were investigated as a limited power source (LPS) : All accessible connectors
- ☐ The following are available from the Applicant upon request : Installation (Safety) Instructions / Manual

Additional Information


4791417021

- All tests were considered necessary for UL/CSA national deviation based upon previous evaluation under CB Scheme. The CB Scheme Test Certificate, Ref. Certi. No. DK-157877-UL and Report Ref. No. C24IA029-M0A0 were prepared by UL Solutions Demko A/S, Borupvang 5A, DK-2750 Ballerup, Denmark.

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 or File Number
Equipment identification marking – model identification	Model Number
Equipment rating marking – ratings	"Input Ratings (voltage, frequency, current)"
Class I equipment -Terminal for main protective earthing	Provided adjacent to the main protective earthing terminal  (IEC 60417-5019)
Hard Copy	A. IMPORTANT or ATTENTION or similar wording B. Please check 'Manuals' from our website, before connecting to the supply. C. Company website URL (https://www.~~)

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
N/A	N/A	N/A	N/A	N/A	N/A	N/A
BD1.2	Earthing Continuity Test Exemptions – This test is not required for the following models:					
	N/A					
BD1.3	Electric Strength Test Exemptions – This test is not required for the following models:					
	N/A					
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.					
	N/A					

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

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
Power Supply (SMPS)	FSP GROUP INC	FSP250-50FCC	Input: 100-240 V~, 50-60 Hz, 4-2 A; Output: +3.3Vdc, 10 A, +5Vdc, 10 A, +12Vdc, 16 A, -12Vdc, 0.3 A, +5Vsb, 2.5 A, Total power for all outputs: 250 W	QQJQ2/8	UL (E190414)	
Power cord set	LONGWELL	LP-30B + SVT 18AWG X 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 the other end with appliance coupler.	ELBZ	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 the other end with appliance coupler.	ELBZ	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 the other end with appliance coupler.	ELBZ	UL (E58075)	
Power cord set - Alternate	CHANGZHOU HONG CHANG ELECTRONICS CO LTD	DTII-3P-11+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	ELBZ	UL (E205766)	

			type flexible cord. One end with NEMA 5-15P the other end with appliance coupler.			
Enclosure -Top (Metal) (Fire / Mech / Elec)	Interchangeable	Interchangeable	SGCC, Min. 1.0 mm thickness, see enclosure for more dimension.	-	-	
Enclosure - Bottom (Metal) (Fire / Mech / Elec)	Interchangeable	Interchangeable	SECC, Min. 1.0 mm thickness, see enclosure for more dimension.	-	-	
Enclosure - Rear (Metal) (Fire / Mech / Elec)	Interchangeable	Interchangeable	SECC, Min. 1.0 mm thickness, see enclosure for more dimension.	-	-	
Side Bracket (Metal)	Interchangeable	Interchangeable	SECC, Min. 2.0 mm thickness, see enclosure for more dimension.	-	-	
Front frame (Metal)	Interchangeable	Interchangeable	Aluminum, Min. 5.0 mm thickness, see enclosure for more dimension.	-	-	
Front USB Cover (Plastic)	LOTTE CHEMICAL CORPORATION	HN-1068(f1)	Min. 3.5 mm thickness, rated Min. V-0, 130 deg. C	QMFZ2	UL (E115797)	
Front Filter Cover(Plastic)	LOTTE CHEMICAL CORPORATION	HN-1068(f1)	Min. 3.5 mm thickness, rated Min. V-0, 130 deg. C	QMFZ2	UL (E115797)	
DC Fan (Main board)	COOLER MASTER CO LTD	FA09025H12(S)(P) B (Type: FA09025H12BPB)	12 Vdc, 0.28 A	GPWV2	UL (E319075)	
DC Fan (near main board)	SUNONWEALTH ELECTRIC MACHINE	MF60251V1-1Q(Y) (Type: MF60251V1-1Q03U-S99)	12 Vdc, 0.08 A	GPWV2	UL (E77551)	

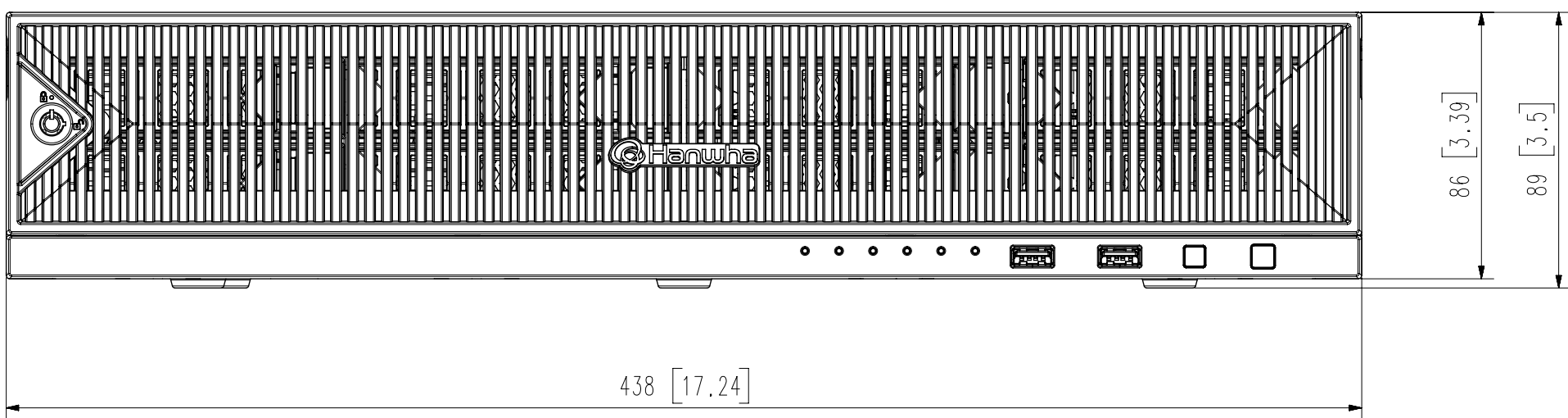
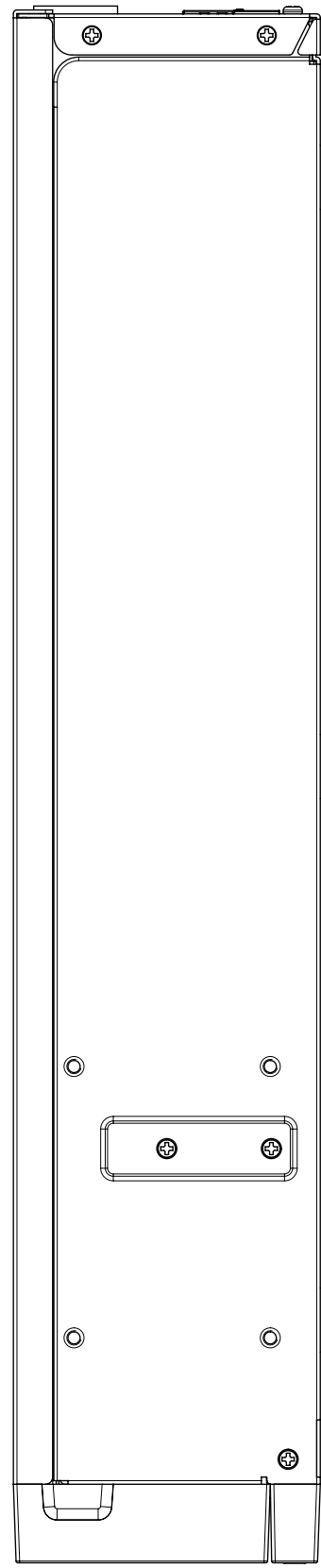
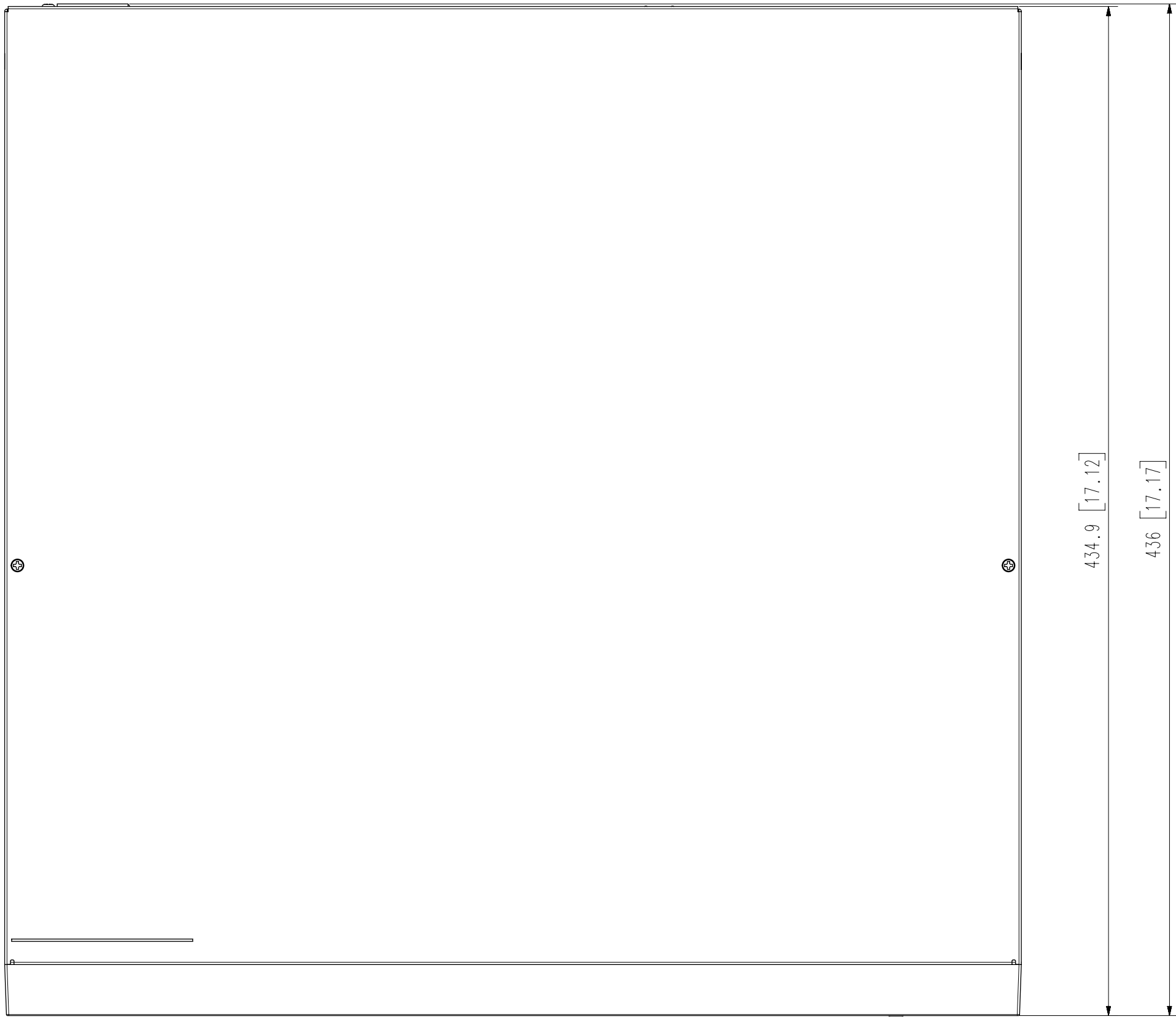
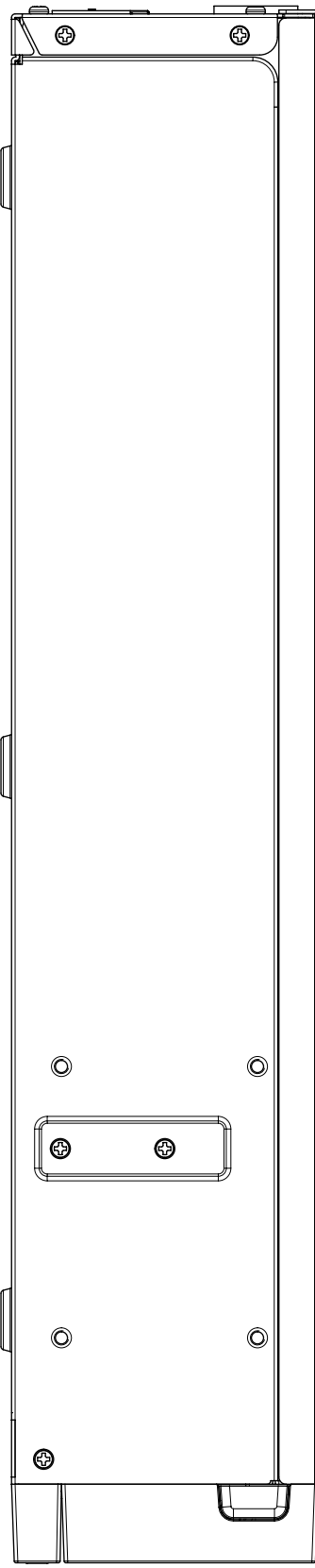
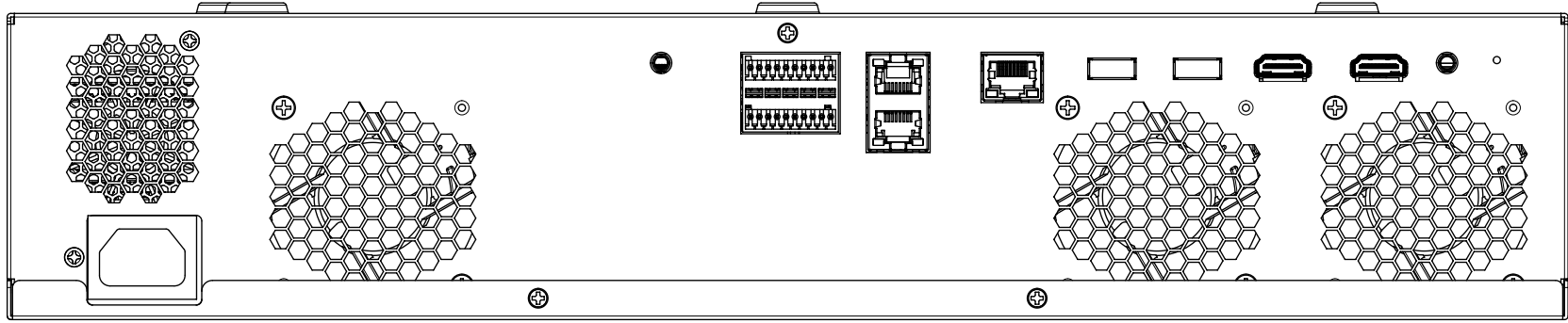
	INDUSTRY CO., LTD					
Hard Disk Drive (Max. 8 EA) (Optional)	SANDISK TECHNOLOGIES, INC.	WDXXXXXX (3) (WD42PURX)	5 Vdc, 0.38 A and 12 Vdc, 0.28 A	AZOT2	UL (E319334)	
Hard Disk Drive (Max. 8 EA) (Optional) - Alternate	Interchangeable	Interchangeable	Max. 12 Vdc	AZOT2	UL	
Lithium Battery (CN24)	Wuhan Lixing (Torch) Power Sources Co.,Ltd	CR2032	Non-rechargeable, Lithium/manganese dioxide (Coin), Max Continuous Discharge C Current: 10 mA, Nominal Voltage: 3.0 Vdc	BBCV2	UL (MH26236)	
Reverse Current Protection Circuit for Lithium Coin Battery (CN24)	Interchangeable	Interchangeable	Diode (D16, Max reverse voltage 30 V, Max reverse current 1.0 A) and resistor (R268, 1.0 kohm) in series.	-	-	
USB Protection IC (USB 3.0: U20, U21 / USB 2.0: U30, U33)	DIODES INC	AP2182A (Type: AP2182ASG-13)	2.7-5.5 Vdc, Continuous current: 1.5 A	QVGS2	UL (E322375)	
USB Protection IC (USB 3.0: U20, U21 / USB 2.0: U30, U33) - Alternate	Texas Instruments Inc	TPS2062	2.7-5.5 Vdc, Continuous current: 1A	QVGS2	UL (E169910)	
Relay (RLY1, RLY2, RLY3, RLY4)	FUJITSU COMPONENT LIMITED.	FTR-B3SA012Z-B10	Contact Rating 30 Vdc, 1 A, Carrying Current 2.0 A	NRNT2	UL (E63615)	
Heatsink	Interchangeable	Aluminium (Black or Silver)	Approx. overall size of 40.0 by 40.0 by 12.6 mm, Min. 0.8 mm thickness, secured on PWB by soldering, see	-	-	

			enclosure for more dimension.			
Terminal Blocks	DONGGUANSHI WELINK ELECTRONIC TECHNOLOGY CO LTD	F83(@11)	V-0, 300 V, 12 A	XCFR2	UL (E307275)	
PWB	HANNSTAR BOARD CORP	MV-4	Min. V-0, 130 deg. C	ZPMV2	UL (E89382)	
PWB - Alternate	EXPRESS ELECTRONICS LTD	14MV0	Min. V-0, 130 deg. C	ZPMV2	UL (E157925)	
PWB - Alternate	KI JOO INDUSTRIAL CO LTD	KJ3-V-0-1	Min. V-0, 130 deg. C	ZPMV2	UL (E111636)	
PWB - Alternate	Interchangeable	Interchangeable	Min. V-0, 130 deg. C	ZPMV2/8	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	Front View
Photographs	03-04	Rear View
Photographs	03-05	Internal View
Photographs	03-06	SMPS
Photographs	03-07	Main Board - Front
Photographs	03-08	Main Board - Rear
Photographs	03-09	DC Fan (Near Main Board)
Diagrams	04-01	Enclosure Drawing
Diagrams	04-02	Heatsink Diagram
Manuals	06-01	Manual
Miscellaneous	07-01	Label

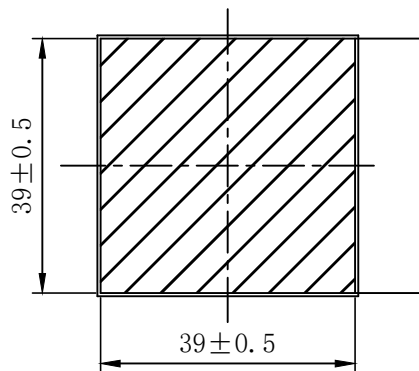
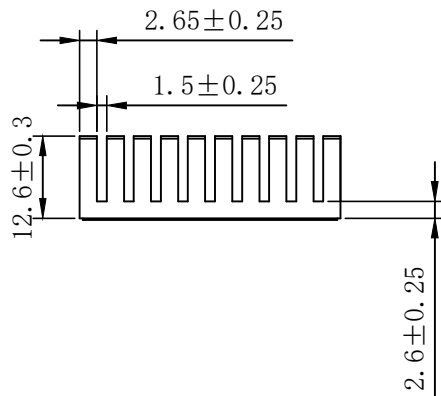
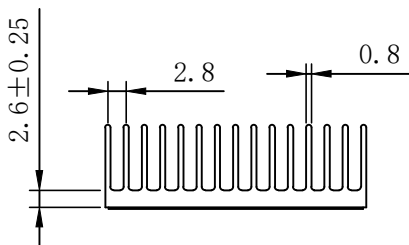
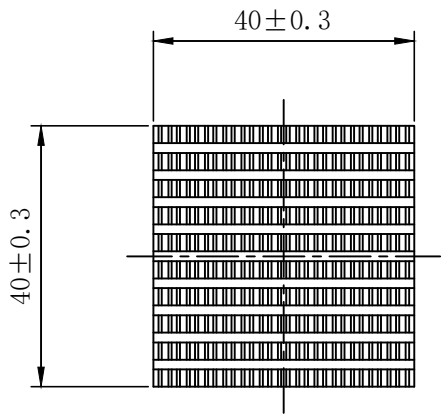
The following Page(s) are related to Diagrams-01. The next supplement, if applicable, will be identified with a new Supplement Page Heading.



3		
2		
1	XRN-6420RB2	'24.08.05
No.	MODEL NAME	DATE
Unit:mm[inch] SCALE:1/2		Hanwha Vision

The following Page(s) are related to Diagrams-02. The next supplement, if applicable, will be identified with a new Supplement Page Heading.

版本	描述	位置	变更者	审核	日期
A0	新版发行				



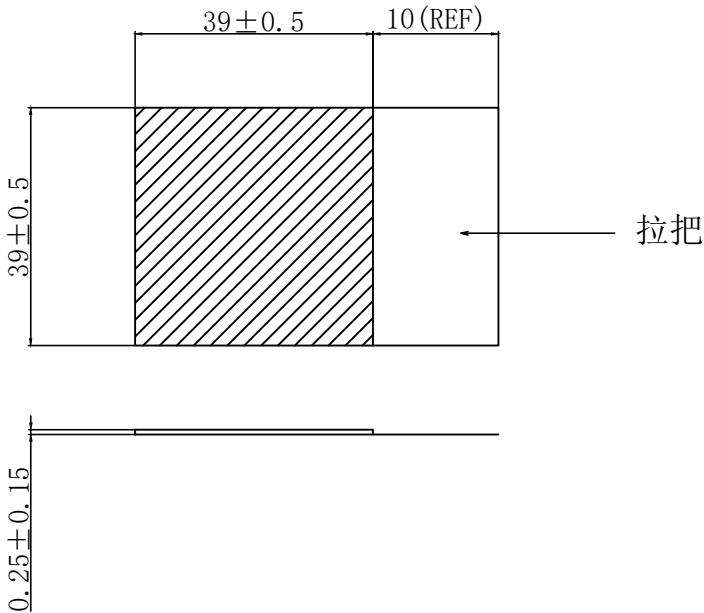
技术要求:

- 1.材质:AL6063-T5
- 2.表面处理: 阳极黑色
- 3.产品表面不能有压痕、碰伤等
- 4.标示 ① ~ ⑧ 为重点检验尺寸
- 5.产品须符合RoHs2.0要求
- 6.外观标准B级, 未注公差M2

成品图面

材 质 AL6063-T5		SCALE 1/2	同裕电子有限公司 TUNG YU ELECTRONIC CO.,LTD.		
表面处理 阳极黑色		SHEET 1/1			
选 择			UNIT	名称	
DIM. TOL.±	F	M1	M2	C	mm
0-6	0.05	0.10	0.20	0.25	
>6-30	0.10	0.20	0.30	0.50	
>30-120	0.15	0.30	0.50	0.80	
>120-400	0.20	0.50	0.80	1.20	
>400-1000	0.30	0.80	1.20	2.00	
>1000~	0.50	1.20	2.00	3.00	
角度	0.50°	1.00°	1.20°	1.50°	
			SIZE A4	料号	
				101023130沿用	客户代码
					客户料号
			制图	审核	核准
			JUN 20201218		

版本	描述	位置	变更者	审核	日期
A0	新版发行				



技术要求:

1. 材质: 3M9473
3. 表面不可有刮碰伤, 破损, 脏污, 气泡及未切断等不良
4. 标示 ① ~ ⑧ 为重点检验尺寸
5. 产品须符合RoHs2.0 要求
6. 外观标准B级, 未注公差M2

配件图面

材 质					SCALE	同裕电子有限公司 TUNG YU ELECTRONIC CO.,LTD.		
3M9473					1/2			
表面处理					SHEET	名称		
/					1/1			
选 择			√		UNIT	3M9473		
DIM. TOL. ±	F	M1	M2	C	mm			
0-6	0.05	0.10	0.20	0.25	SIZE A4	料号	客户代码	客户料号
>6-30	0.10	0.20	0.30	0.50		101023130沿用		
>30-120	0.15	0.30	0.50	0.80				
>120-400	0.20	0.50	0.80	1.20				
>400-1000	0.30	0.80	1.20	2.00				
>1000~	0.50	1.20	2.00	3.00	制图 JUN 20201218	审核	核准	
角度	0.50°	1.00°	1.20°	1.50°				

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.

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 or the body, seek immediate medical attention.
- Batteries (battery pack or batteries installed) shall not be exposed to excessive heat such as sunshine, fire or the like.
- 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.

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.
- Les batteries (bloc-batterie ou batteries installées) ne doivent pas être exposées à une chaleur excessive telle que le soleil, le feu ou autre.
- N'installez pas et n'utilisez pas le mauvais type de batterie.
- Ne laissez pas la batterie dans un endroit où elle pourrait être écrasée ou découpée mécaniquement, car elle pourrait exploser.
- Ne laissez pas la batterie dans un environnement à haute température.
- Ne laissez pas la batterie dans un environnement à basse pression.

FUNCTIONS SUPPORTED BY MODEL

Model name		XRN-6420RB2 XRN-3220RB2	XRN-6420R2 XRN-3220R2
Function			
Fan		Y	Y
P2P		Y	Y
Joystick		Y	Y
Extended monitor		Y	Y
Failover		Y	Y
Alarm		Y	Y
RAID		Y	N
Minimum number of RAID hard disks		4	-
Distributed recording		Y	Y
iSCSI		Y	Y
AI compatible function	AI search	Y	Y
	Object detection	N	N
AI recognition function	LPR search	N	N
Power supply redundancy		N	N
PoE		N	N
Dewarping		Y	Y

Y : Yes, N : No

NETWORK VIDEO RECORDER

MODEL: XRN-6420RB2

AC 100-240V~ 50/60Hz 1.7A

M/C: XRN-6420RB2/KSA 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

MAC ADDRESS 3: XX-XX-XX-XX-XX-03

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

MADE IN KOREA

Hanwha Vision Co., Ltd.



I.T.E.

US LISTED

9T96 E158873

UK
CA



PT03-002663T



