

Technical Newsletter

August 2024 Service Operation Team

Contents

Technology Information

- Guide for attaching a heat sink when replacing NVR mainboard
- Introducing the new IoT communication protocol MQTT
- How to find service technical information

Latest Firmware Information

Guide for attaching a heat sink when replacing NVR mainboard

Info. Type

☐Quality

☐Settings

☒Repair

☐S/W

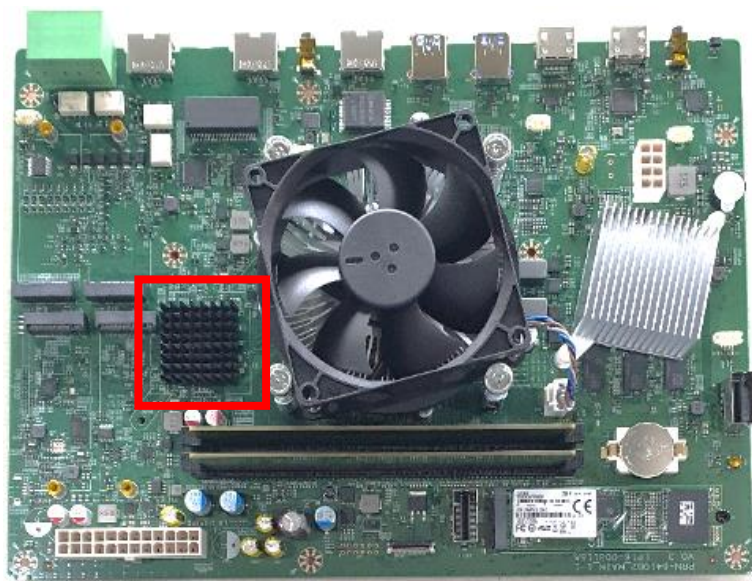
☐Etc

● **Model** : 64CH/32CH/16CH NVR

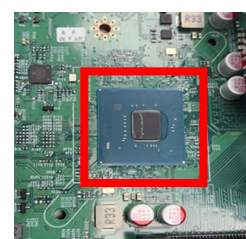
● **Purpose**

- Guide on how to attach heat sink while replacing NVR mainboard for repair

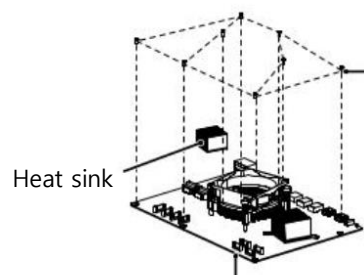
● **NVR mainboard + Heat sink attachment guide**



[Location of heat sink]



[Without heat sink]



Heat sink

Mainboard

- Role of heat sink

. Effectively distributes heat inside the device to reduce the temperature of the system

. Composed of thermal conductors and thermal conducting sheet, internal cooling improves system stability and performance

※ Heat sink is assembled together at manufacturing stage, but not provided on the mainboard when purchased as repair material

- Heat sink material information

. Refer to service manual for heat sink of each model

. Eg. : XRN-6410B2 (EP07-001610A SINK,HEAT 28*28*9)

. Eg. : PRN-3210B2 (EP07-001610A SINK,HEAT 28*28*9 / EP07-001529A SINK,HEAT 25*25*20)

● **Notice**

. When replacing mainboard, remove and re-attach the existing heat sink or order a new heat sink for use

. Adhesive tape is applied to the new heat sink, but if the existing heat sink is re-used, the adhesion may be weakened, thus the use of heat sink adhesive is recommended(Heatsink plater)



Introducing the new IoT communication protocol MQTT

Info. Type

☐Quality ☐Settings ☐Repair ☐S/W ☒Etc

- **Model** : Basic feature for newly released models, expending from P AI, X to Q series

- **Purpose**

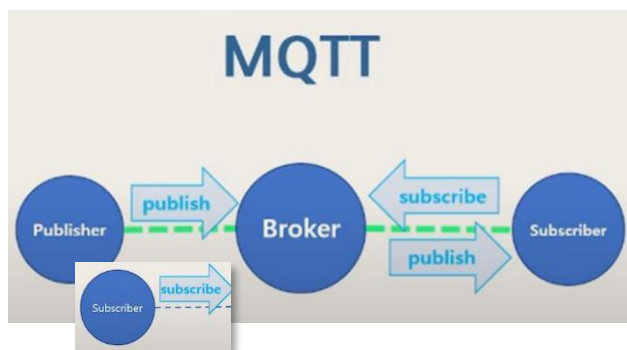
- Introducing the new IoT communication protocol MQTT so that users can optimize and configure the desired system

- **What is MQTT?**

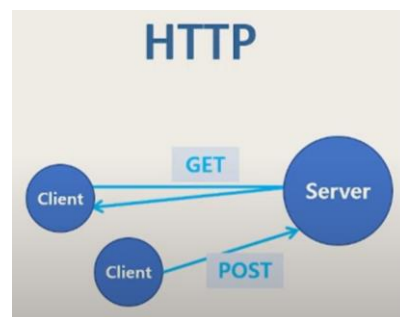
- Definition of MQTT?

MQTT is a Message Queuing Telemetry Transport which is a message protocol that can publishes and subscribes based on TCP/IP

- Structure and terms



VS



- . MQTT client establishes a connection with the MQTT broker.
- . Once connected, the client can either publish messages, subscribe to specific messages, or do both.
- . When the MQTT broker receives a message, it forwards it to subscribers who are interested for specific 'topic'
- . MQTT provides **continuous, stateful session**, and it is bi-directional that the clients can both publish and subscribe

- . Clients request for data, and server responds to the clients
- . Authorized clients can request to post data on server
- . The direction of data communication is clearly set (request-send), and clients takes lead for a data exchange

- Advantages

- 1) Super lightweight

The smallest MQTT control message is 2 bytes, which is optimized for IoT by communicating with minimal use of packet and power within limited resource

- 2) Expandability

Because it is light and simple protocols that requires minimal source of code and power, it can expand its connectivity with many devices as long as the device has internet connection

- 3) Reliability

It reduces time for reconnection between IoT device and cloud, and provides three type of Quality of Service (QoS) agreement in order secure reliability

- **How to setup**

- For MQTT Client and publish/subscribe setting, refer to Online help for each model

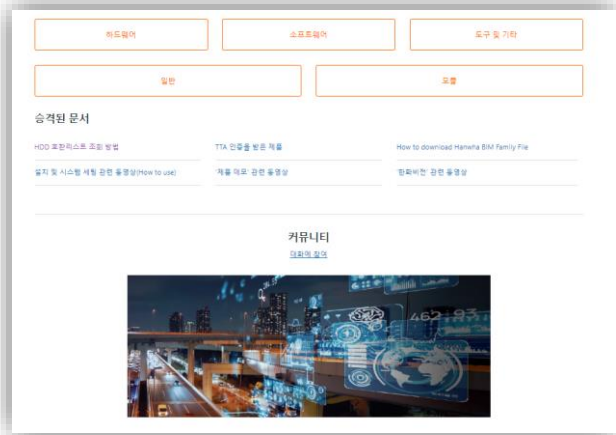
How to find service technical information

Info. Type ☐Quality ☐Settings ☐Repair ☐S/W ☒Etc

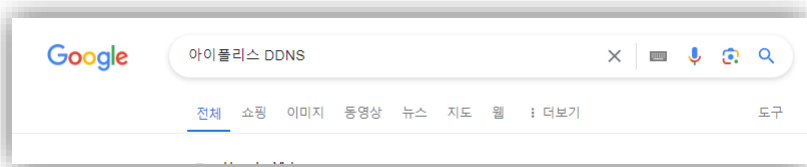
- **Purpose** : Increase customer satisfaction by guiding how to search for service technical information on the website
- **Model** : all Hanwha Vision models
- **Information categories**
 - 1) Hardware : eg. Firmware Update using Wisenet Device Manager
 - 2) Software : eg. How to Download Core and CSLOG's.
 - 3) Tools & Others : eg. How to download Hanwha BIM Family File
 - 4) General : eg. How to add a RTSP stream to a NVR
- **Target user** :

Previously, the service technical information was not open to public but only distributed through e-mail to limited people. But now, the information is posted on the website which is open to anyone who are seeking for more information.
(AS-IS : open to distributor , TO-BE : open to anyone)
- **Where to find** : Hanwhavision.com → Where to buy → Contact sales

※ URL : <https://support.hanwhavision.com/hc/en-us>



※ Available on google by keyword searching



DVR

Model	File	Date	Ver.	Remark
ARD-410 ARD-810	ARD-810_5.31.32_230525160458	2023/05/25	5.31.32	- Addressed an issue where DDNS ID was occasionally not issued
ARD-1610	ARD-1610_5.31.32_230525165929	2023/05/25	5.31.32	
HRX-434/435	HRX-435_4.52.62_240214195734	2024/02/22	4.52.62	- Security improved
HRX-835/1632	HRX-1632_4.52.62_240221174349	2024-04-30	4.52.62	- Corrected an issue that caused the NVR to stop functioning when you used the two-way talk function on the Wisenet mobile viewer for iOS - Corrected a connectivity issue that blocked you from using the two-way talk function for about 1 minute when you tried using the function on the Wisenet mobile viewer for iOS and Android, as well as the Wisenet web viewer
HRX-1634/1635	HRX-1635_5.31.62_240221205721	2024-04-30	5.31.62	

NVR

Model	File	Date	Ver.	Remark
ARN-410S ARN-810S ARN-1610S	ARN-1610S_5.08.22_230206121706	2023/02/06	5.08.22	- HDD performance improved
PRN-1600B2 PRN-3200B2/B4 PRN-6400B4/DB4	PRN-6400DB4_5.30.72_231107202437	2023/11/14	5.30.72	- Corrected an issue that caused the [Dynamic layout] feature to malfunction - Fixed mouse-click errors in some pop-up windows - Corrected an issue that prevented you from inserting spaces in the [NVR name] entry box in the Web viewer
XRN-820S XRN-1620B2/SB1 XRN-3210 (B2,B4,RB2) XRN-6410 (B2,B4,DB4,RB2)				- Corrected the howling issue that intermittently happened when you played videos using an AAC codec on Wisenet mobile - Changed the domain name from hanwha-security to hanwhavision to reflect the new company name - Improved the backup speed of remote clients (SSM, NVR, Web viewer, SMV, etc.)
QRN-830S QRN-1630S XRN-815S	QRN-1630S_5.06.52_230626173233	2023/08/10	5.06.52	- Removed support for fan-related events and logs
QRN-430S XRN-420S	XRN-420S_5.01.62_231128194047	2023/12/11	5.01.62	- Security improved
XRN-3220B4 XRN-6420B4 XRN-6420DB4	XRN-6420DB4_5.32.12_231116112359	2024/01/09	5.32.12	- Security improved

Network Camera

Model	File	Date	Ver.	Remark
ANV-L6012R ANO-L6012R	ANO-L6012R_1.41.03 _20230322_R30	2023-03-22	1.41.03	<ul style="list-style-type: none">- Fixed language error in Japanese version- Fixed an error where [Tampering detection] function did not operate after a certain time- Added the ability to set the minimum bitrate of a profile to 10 kbps- Added the ability to use HTTP and HTTPS at the same time
ANV-L6082R	ANO-L6082R_1.41.03 _20230322_R82	2023-03-22	1.41.03	
ANV-L7012R ANO-L7012R	ANO-L7012R_1.41.03 _20230322_R116	2023-03-22	1.41.03	
ANV-L7082R ANO-L7082R	ANO-L7082R_1.41.03 _20230322_R88	2023-03-22	1.41.03	
LND/V-6012R LND-6022R LNV-6072R	LNO-6072R_1.41.13 _20231109_R165	2023-11-28	1.41.13	<ul style="list-style-type: none">- Fixed a problem that the NTP server time was not reset to match the changed NTP server when the NTP server ad dress setting was changed
PNM-12082RVD	PNM-12082RVD_2.22.03 _20240624_R173	2024-07-08	2.22.03	<ul style="list-style-type: none">- Corrected an issue where Chinese text didn't appear in the UI even after you chose the language as Chinese
PNM-7082RVD	PNM-7082RVD_2.22.03 _20240624_R143	2024-07-08	2.22.03	
PNM-9022V	PNM-9022V_2.22.00 _20231103_R155	2023-11-14	2.22.00	<ul style="list-style-type: none">- Corrected an issue where the [Time schedule] feature did not intermittently work after the camera rebooted
PNM-9031RV	PNM-9031RV_2.22.01 _20231101_R542	2023-11-28	2.22.01	<ul style="list-style-type: none">- Fixed language error s in Japanese version
PNM-9084RQZ1 PNM-9085RQZ1	PNM-9084QZ_2.22.02 _20231109_R380	2023-11-28	2.22.02	<ul style="list-style-type: none">- Fixed an issue where video streaming was interrupted for the live and recording in the camera registered to NVR or Genetec
PNM-C12083RVD	PNM-C12083RVD_2.21.03 _20231025_R352	2023-11-23	2.21.03	<ul style="list-style-type: none">- Added support for the Cisco Discovery Protocol (CDP) used in CISCO switches
PNM-C16083RVQ PNM-C32083RVQ	PNM-C32083RVQ _23.01.04_20240417_R929	2024-04-17	23.01.04	<ul style="list-style-type: none">- Unable to downgrade firmware due to changes in the CV5 Chip hardware- Corrected an issue that caused WiFi Dongle to malfunction
PNM-C34404RQPZ	PNM-C34404RQPZ _23.01.04_20240417_R650	2024-04-17	23.01.04	
PNV-A9081R	PNO-A9081R_2.21.14 _20231011_R788	2024-05-31	2.21.14	<ul style="list-style-type: none">- The existing AI functions are now sup ported in the WiseAI application
QNF-8010	QNF-8010_2.10.02 _20220401_R411	2022-04-01	2.10.02	<ul style="list-style-type: none">- Added certificate management function
QNF-9010	QNF-9010_2.11.03 _20230509_R444	2024-04-23	2.11.03	<ul style="list-style-type: none">- Addressed the vulnerability of Authenticated Command Injection where a Linux command may be executed after a command is randomly injected into the folder mount point of the NAS function (Issued CVE 2023 31996)
QND-6011 QND/O/V-6012R QND/O/V-6022R QND/O/V-6072R QND/O/V-6082R	QNO-6082R_1.41.17 _20240614_R404	2024-07-05	1.41.17	<ul style="list-style-type: none">- Upgraded to the latest firmware. Y ou cannot downgrade to a firmware lower than the following firmware, respectively. (1.41.12_20211026_R286)

Network Camera

Model	File	Date	Ver.	Remark
QND/O/V-6082R1 QND/O/V-6012R1 QND/O/V-6022R1	QNO-6082R1_1.41.17_20240614_R55	2024-07-05	1.41.17	- Upgraded to the latest firmware. You cannot downgrade to a firmware lower than the following firmware, respectively. QNO-6082R1 : 1.41.01_20211012_R19 QNO-7082R : 1.41.02_210907_R102
QND/O/V-7012R QND-7022R QND/O/V-7082R	QNO-7082R_1.41.17_20240614_R174	2024-07-05	1.41.17	
QND/O/V-8010R QND/E-8011R QND/O/V-8020R QND/O/V-8080R	QNO-8080R_1.42.01_20240329_R388	2024-03-29	1.42.01	- Added options to configure GOV, dynamic GOV, and dynamic FPS settings of the recording profile. In case of configuration, however, the video may not be recorded properly.
QNP-6320H QNP-6250(H)	QNP-6320H_2.21.04_20230623_R205	2023-06-28	2.21.04	- Added auto tracking function
QNV-C8011R	QNV-C8011R_2.21.10_20230908_R167	2023-09-20	2.21.10	- Added video analytics features ([People counting], [Heatmap], [Queue management], and [Vehicle counting]) - Added WiseStream 3 features - Added a [Customize] option to the [Duration] list under the [Day/Night] tab
QNO-C8083R QNV-C8083R	QNV-C8083R_2.21.10_20230908_R311	2023-09-20	2.21.10	
QNV-C9083R	QNV-C9083R_2.21.10_20230908_R390	2023-09-20	2.21.10	
XNB-6000	XNB-6000_2.10.06_20240108_R698	2024-02-02	2.10.06	- Improved SUNAPI API of Events status
XNB-6001	XNB-6001_2.10.05_20231226_R578	2024-06-17	2.10.05	- When setting the H.264/H.265 codec, you can set the minimum bitrate to 10 kbps - Fixed language error in Japanese version
XNF-8010R(RV)	XNF-8010R_2.10.04_20230328_R640	2023-05-11	2.10.04	
XNV-6011	XNV-6011_2.10.02_20220117_R573	2022-02-07	2.10.02	- Added certificate management function
XND/V-6080R XND/V-6080(V)	XND-6080_2.22.01_20240108_R595	2024-01-08	2.22.00	- Corrected an issue that disabled streaming and stopped Common Gateway Interface (CGI) working in certain circumstances when you access the web viewer after adding a camera to Genetec using the ONVIF protocol
XND-6083RV	XND-6083RV_2.23.00_20240416_R420	2024-05-20	2.23.00	- Added a function of Secure FTP - Added a function where you can send video footage related to an event occurrence via FTP/SFTP when you set the profile of H.264 or H.265 codec as the event profile - Added a AI based vehicle counting feature - Added a [Simple focus schedule] feature in [Video & Audio]>[PTRZ setup] or in [Video & Audio]>[Focus setup] so that the simple focus function can run on the scheduled date and time
XND/V-C6083RV XND/V-C7083RV	XND-C7083RV_2.23.00_20240416_R509	2024-05-20	2.23.00	
XNF-9010RV	XNF-9010RV_2.23.00_20240508_R521	2024-05-20	2.23.00	
XNF-9013RV	XNF-9013RV_2.23.00_20240508_R436	2024-05-20	2.23.00	
XND-8020R	XND-8020R_2.10.03_20240523_R601	2024-07-16	2.10.03	- Fixed the issue where the video was intermittently broken in some decoders
XNV-8080R XND-8080R(RV)	XND-8080R_2.10.04_20240513_R624	2024-05-13	2.10.04	- Resolved an issue of a response error in the SUNAPI API for event status

Encoder / Decoder

Model	Filename	Date	Version	Release Note
SPD-152	SPD-152_5.10.32_230508130731	2023/05/10	5.10.32	- Deleted the function of synchronizing a decoder SPD-152 with a camera audio - Enable the sequence to operate in the latest layout configuration when the decode restarts after it reboots in operation of layout sequence functions - Increased the maximum number of layouts from 10 to 20 for layout configuration and operation of layout sequence
SPE-420	SPE-420_2.21.02_20230803_R152	2023/08/11	2.21.02	- Fix the problem that when you change the external PTZ connection port to COAX for all channels, the external PTZ settings item disappears in the webviewer
SPE-1630	SPE-1630_2.21.01_20230309_R149	2023/03/24	2.21.01	- Added a function to display the time in "Month-Day-Year Hour:Minute" format if H.264 or H.265 codec is applied - Fixed an error where ONVIF discovery communication was not available between a camera and Wisenet Device Manager in a certain circumstance

Software

Model	Filename	Date	Version
Wisenet SSM	2.16.01	2024-07-05	- Bug fixes and functional improvements
Wisenet Viewer	1.05.00	2023-10-31	- Bug fixes and functional improvements
Smart Viewer	4.9.13	2022-05-18	- Bug fixes and functional improvements
Wisenet mobile	2.07.04	2024-04-28	- Bug fixes and functional improvements

HDD Compatibility List

Revision 11.24

Release date : 2023.12.14

[Hanwhavision.com](#) > Support > Data Center > HDD Compatibility

☐ Major change

- 1. New model : XRN-6420DB4
 - ST6000VX008-2ZP1, ST4000VX015-3CU1, ST8000VX009-2ZP1,WD8001PURA-64B6VY0
- 2. WD PURU Series Restrictions Added: XRN-6420DB4
 - WD42PURU-64C4CY0, WD63PURU-64C4FY0
 - Only products produced after July 15, 2023