

# Technical Newsletter

January 2025 Service Operation Team

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### Technology Information

- Info on tilt angle limitations for compact PNM 4-channel cameras
- How to set the camera's day/night mode running time
- Recommended SD card specifications for Hanwha cameras

### Latest Firmware Information

Info on tilt angle limitations for compact PNM 4-channel cameras

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

● Target model

- PNM-C32083RVQ/C16083RVQ/C16013RVQ

● Purpose

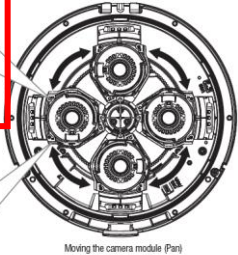
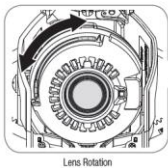
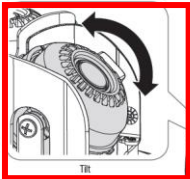
- To provide information on setting the tilt angle limit of a compact semi-module type PNM camera.

● Information on tilt angle settings

- Camera-specific limited tilt angles



MODEL	PNM-C32083RVQ	PNM-C16083RVQ	PNM-C16013RVQ
Focal Length (Zoom Ratio)	3.3~5.7mm(1.7x) motorized varifocal	3.3~5.7mm(1.7x) motorized varifocal	3.19mm fixed focal
Max. Aperture Ratio	F1.5(Wide)~F1.9(Tele)	F1.5(Wide)~F1.9(Tele)	F1.2
Angular Field of View	H: 109°(Wide)~56°(Tele) V: 55°(Wide)~31°(Tele) D: 136°(Wide)~65°(Tele)	H: 100°(Wide)~53°(Tele) V: 54°(Wide)~30°(Tele) D: 125°(Wide)~61°(Tele)	H: 97° / V: 54° / D: 116°
Min. Object Distance	1.3m(4.27ft)	1.3m(4.27ft)	2m(6.56ft)
Focus Control	Simple focus	Simple focus	Manual
Lens Type	Fixed iris	Fixed iris	Fixed Iris
Mount Type	-	-	M12
Pan / Tilt / Rotate Range	0°~360° / 0°~65° / 0°~90°	0°~360° / 0°~65° / 0°~90°	0~360°(100° per CH)/ 0~75° / 0~90°



The camera lens cover has a donut-shaped structure; thus, setting it beyond the limited tilt angle may affect some of the image quality.

# How to set the camera's day/night mode running time (1/2)

Info. Type

☐Quality ☒Settings ☐Repair ☐S/W ☐Etc

● Target model




- XNO-C6083R and many other cameras

● Purpose

- To guide you through the options for changing the day/night mode running time to help you use it for your purposes.

● How to set the running time

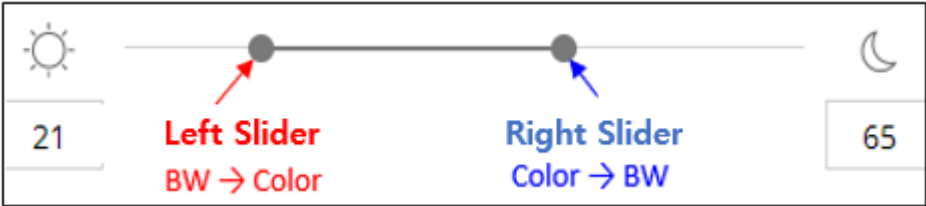
- You can set the camera sensitivity for changing day/night mode at runtime (for the BW ↔ Color switching moment)

SSDR	White balance	Backlight	Exposure	Day/Night
Special	OSD	IR		
Mode	Auto			
Dwell time	5 s			
Duration	Customize			
				
30				70

● How to set detailed items

- You can select a "Very slow-very fast" option from the drop-down menu
- 'Very fast' indicates 'high sensitivity': [BW ↔ Color] switching occurs even when the brightness slightly gets brighter or darker.
- 'Very slow' indicates 'low sensitivity': [BW ↔ Color] switching occurs only when the brightness significantly gets brighter or darker
- You can directly adjust the day/night mode switching time (sensitivity) in a custom box.

● What the icons (sun, moon), slides, and numbers represents



- The numbers are used as a reference for expressing the relative running time
- The closer the left slider is to 1, the lower the color sensitivity (It should be brighter to switch to Color)
- The closer the right slider is to 100, the lower the BW sensitivity (It should be darker to switch to BW)

How to set the camera's day/night mode running time (2/2)

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

● Conclusion

- The closer the two sliders are to each other, the higher the switching sensitivity, and the further away they are, the lower the sensitivity.
- The switching point for brightness is determined by where the two sliders are positioned.
- The two sliders cannot overlap or switch their positions; thus, the minimum gap between the two sliders is 1.
- The values of the two sliders are fixed as the "Very slow - Very fast" options are preset.  
(see below)

Duration	Left (BW → Color)	Right (Color → BW)
Very Fast	40	60
Fast	35	65
Average	30	70
Slow	25	75
Very Slow	20	80

● Note

- The slider is activated only when the day/night mode is set to 'Auto'
  - If the day/night mode cannot operate in 'Auto' mode, the slider will be disabled and changed to 'Color'.
- [Condition 1] When the AGC Max gain is set to less than 30dB
- [Condition 2] When 'AGC off' and 'AGC Manual' are set
- If the gap between the two set sliders is close, the hunting effect may occur depending on the installation environment.

Recommended SD card specifications for Hanwha cameras

Info. Type

☐Quality ☐Settings ☐Repair ☐S/W ☒Etc

Purpose

- To provide information on SD card specifications suitable for our cameras

Recommended specifications for SD cards

- Recommended Manufacturers : SanDisk, Transcend
- Products : High Endurance



[Compatible SD card products:  
Marked as High Endurance level]

Camera		SOC	Capacity	Type	Class
X Series	Bullet, Vandal Dome, Box	WN7/WN5	16GB ~ 256GB	MLC Type	
	PTZ	WN7	16 GB ~ 512 GB	MLC Type	
		WN5	16GB ~ 256GB	MLC Type	
	Fisheye	WN7	16 GB ~ 512 GB	MLC / 3D TLC	
		WN5	16GB ~ 256GB	MLC Type	
P Series	Bullet, Vandal Dome, Box	CV2	16GB ~ 256GB	MLC Type	
	Multidirectional	WN7/CV5	16 GB ~ 512 GB	MLC / 3D TLC	uhs-3 class
		WN5	16GB ~ 256GB	MLC Type	uhs-3 class
	Panoramic	CV2	16GB ~ 256GB	MLC Type	uhs-3 class
Q Series	All models (MT8137N1, MT8137N2 /WN5/CV22/S3L)		16GB ~ 256GB	MLC Type	

Precautions for use

- To remove the Micro SD card, follow the sequence: set the device to the <Not Use> mode in the <Storage> menu, press the [OK] button, turn off the camera, and then remove it.
- When the Micro SD card's lifespan ends, data will no longer be saved on it.
- SD card compatibility may vary depend on the card manufacturer/type. It is recommended to use the SD cards stated above.

## New updated firmware (2024, NOV ~ DEC)

Category	MODEL NAME	FIRMWARE	VER	DATE	REMARK
NVR	ARD-410 ARD-810	ARD-810_5.31.42	5.31.42	2024-12-13	- Security improved
	ARD-1610	ARD-1610_5.31.42			
	PRN-1600B2 PRN-1605B2 PRN-1610B2 PRN-3200B2(B4) PRN-3205B2(B4) PRN-3210B2(B4) PRN-6400B4(DB4) PRN-6405B4(DB4) PRN-6410B4(DB4)	PRN-6400DB4_5.34.22	5.34.22	2024-11-01	- Security improved - Corrected an issue of intermittent errors in camera search or network settings after booting the device after a reset - Changed the default PnP mode from "Enabled (On)" to "Disabled (Off)"
	XRN-820S XRN-1620B2(SB1) XRN-3210B2(B4,RB2) XRN-6410B2(B4,DB4,RB2)				
	QRN-830S QRN-1630S XRN-815S	QRN-1630S_5.06.62	5.06.62	2024-11-01	- Security improved
DVR	HRX-434 HRX-435	HRX-435_4.52.72	4.52.72	2024-12-13	- Security improved
	HRX-835 HRX-1632	HRX-1632_4.52.72			
	HRX-835A HRX-1634 HRX-1635	HRX-1635_5.31.82	5.31.82	2024-12-13	- Security improved
	HRX-435L	HRX-435FN_5.31.82			
Mobility	MGC-D8080 MGC-D8080LI	MGC-D8080LI_2.22.01	2.22.01	2024-12-18	- Added web viewer settings items and options (see release notes for details) - Added a feature to detect a blue license plate for electric vehicles - Changed the corporate name to Hanwha Vision in the web viewer
Mobility	MGC-F9010LI	MGC-F9010LI_2.22.01			
NW CAM	PNM-C32084RQZ	PNM-C32084RQZ_24.01.01	24.01.01	2024-12-14	- Integrated the WiseAI application supporting AI functionality - Improved the Jetson flashing upgrade functionality. - Corrected an issue that caused the camera to reboot intermittently due to failure in capturing video frames
	QND/O-6012RG QND/O-6082RG	QND-6012RG_1.42.01	1.42.01	2024-12-17	- Corrected an issue where the [Help] icon to navigate to the Online Help page was not visible in the top right corner of the web viewer
	QND/O-8010RG QND/O-8080RG	QNO-8080RG_1.42.01			

New updated firmware (2024, NOV ~ DEC)

Category	MODEL NAME	FIRMWARE	VER	DATE	REMARK
NW CAM	PNO-A9311RLP	PNO-A9311RLP_2.21.01	2.21.01	2024-12-18	<ul style="list-style-type: none"><li>- SD CARD related CGI not supported (prev ents using SD card for purposes other than Wisenet Road AI function)</li><li>- Downgraded from version 5.00_240111 to version 5.00_230629 to stabilize the Open p latform version</li><li>- Corrected an issue where the camera did not return to the home position after reboo ting the camera, even after clicking the [Set home] button under the [Preset] tab in [PT Z]&gt;[Preset setup] in the web viewer</li><li>- Corrected an issue where the VMS recogn ized the event occurrence timestamp as bei ng in the future due to incorrect timestamp information (indicated by the imageRef met adata element) sent from the camera</li><li>- Corrected an issue where graphs that app eared under the [STATISTICS] tab was inter mittently invisible on the page that appeare d after clicking [Open platform] &gt; [Go App] in the web viewer</li></ul>
	TNO-C3010TRA TNO-C3020TRA TNO-C3030TRA	TNO-C3010TRA_2.21.02	2.21.02	2024-12-06	<ul style="list-style-type: none"><li>- Added support for Cloud Connector</li><li>- Improved the temperature detection even t not to trigger consecutively when the con ditions for the event to occur are maintaine d</li><li>- Corrected an issue that didn't generate B estShot of the detected object that is small</li></ul>
	TNO-C3012TRA TNO-C3022TRA TNO-C3032TRA	TNO-C3012TRA_2.21.02			
	TNV-C7013RCG	TNV-C7013RCG_2.21.02	2.21.02	2024-11-29	<ul style="list-style-type: none"><li>- Improved system stability</li></ul>
	XNB-8000 XNO-8080R	XNB-8000_2.10.06	2.10.06	2024-12-14	<ul style="list-style-type: none"><li>- Improved SUNAPI API of Events status</li><li>- Improved compatibility with 1TB SD card ( 512GB x 2)</li><li>- Corrected an issue that disabled streamin g and stopped Common Gateway Interface (CGI) working in certain circumstances whe n you access the web viewer after adding a camera to Genetec using the ONVIF protoc ol</li><li>- Corrected an issue where the RTP timesta mp appearing on the NVR's recorded video didn't match the actual time when you use an external company's VMS (video manage ment system) to stream multicast video</li></ul>
	XNF-9013RVG	XNF-9013RVG_2.23.01	2.23.01	2024-11-29	Improved system stability
	XNP-C6403G(RG) XNP-C8253RG XNP-C9253RG	XNP-C9253RG_2.23.01			
	XNP-C6403RWG XNP-C8303RWG XNP-C9303RWG	XNP-C9303RWG_2.23.01			
	XNP-C7310RG XNP-C9310RG	XNP-C9310RG_2.23.01			