Hanwha Techwin

Network Camera Version 1.40 Release Note

v1.40
2019-09-09

Hanwha Techwin

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HTW Network Camera Version 1.40

This document describes the new and changed features of Hanwha Techwin network camera version 1.40.

ⓘ **Released on SEP 09, 2019**

Common Features

[New Features]

- Added a function to control Pan and Tilt individually in [Setup] > [Video & Audio] > [PTRZ Setup].

- Added a function to configure the administrator account ID (admin).

- Added a function to configure the MTU (Maximum Transmission Unit) size between 1,280 and 1,500 in [Setup] > [Basic] > [IP & Port] > [IP address].

- Added a [Set pan ground position] function to set the current pan angle to zero degrees in [Setup] > [PTZ] > [PT limit]. (PTZ cameras)

- Added an overlay option to display azimuth over the camera images in [Setup] > [Video & Audio] > [Camera Settings] > [OSD]. (PTZ cameras)

- Added a function to set up a trace using a preset already specified in [Setup] > [PTZ] > [PTZ setup] > [Trace]. (PTZ cameras)

- Added the [Change host name] option to use the Common Name of a unique certificate instead of the host name of the camera, when the secure connection system is to HTTPS (Secure connection mode using a unique certificate).

- Added the [Event activation time] function so that the people counting events are only received on a specific schedule in [Setup] > [Statistics] > [People counting] > [Setup]. (People counting supported cameras)

[Improvements]

- Improved motion detection algorithm to increase the detection rate of recognized objects.

- Changed the Moscow time zone from UTC+4 to UTC+3.

- Allowed to use special characters (spaces # * + - / ( ) _ ,) for the camera OSD title in [Setup] > [Video & Audio] > [Camera Settings] > [OSD].

- Supported for using TL-WN823N (v2, v3) as a Wi-Fi dongle.

- Increased the maximum number of multicast connections from 20 to 128. (PTZ cameras)

- Increased the maximum number of privacy areas from 24 to 32. (PTZ cameras)

Affected Products

Table 1. Product Family Based On Version 1.40

Major model	Model name
XNB-6000	XNB-6000
	KNB-2000
XNB-6001	XNB-6001
XNB-6005	XNB-6005
XNB-8000	XNB-8000
	KNB-5000N
XND-6010	XND-6010
XND-6011F	XND-6011F
XND-6020	KND-2020RN
XND-6020R	XND-6020R
XND-6080	XND-6080
	XND-K6080N
XND-6080R	XND-6080R
	KND-2080RN
XND-6080RV	XND-6080RV
XND-6080V	XND-6080V
XND-6081RV	XND-6081V
	XND-6081RV
	XNV-6081
	XNV-6081R
	XND-6081RF
	XND-6081F
XND-6085	XND-6085
XND-6085V	XND-6085V
XND-8020F	XND-8020F
XND-8020R	KND-5020RN
	XND-8020R
	XND-8020RW
XND-8030R	XND-8030R
XND-8040R	XND-8040R
XND-8080R	KND-5080RN
	XND-8080R

Major model	Model name
	XND-8080RW
XND-8080RV	XND-8080RV
XND-8081RV	XND-8081RV
	XNV-8081R
	XNV-8081
XND-L6020R	XND-L6020R
XND-L6080R	XND-L6080R
XND-L6080RV	XND-L6080RV
XND-L6080V	XND-L6080V
XNF-8010R	XNF-8010R
	XNF-8010RW
XNF-8010RV	XNF-8010RV
	XNF-8010RVW
XNF-8010RVM	XNF-8010RVM
XNO-6010R	XNO-6010R
	KNO-2010RN
XNO-6120R	XNO-6020R
	KNO-2120RN
XNO-6080R	XNO-6080R
	XNO-6080RA
	KNO-2080RN
XNO-6080RS	XNO-6080RS
XNO-6085R	XNO-6085R
XNO-6120R	XNO-6120R
	KNO-2120RN
XNO-6120RS	XNO-6120RS
XNO-8020R	XNO-8020R
	KNO-5020RN
XNO-8030R	XNO-8030R
XNO-8040R	XNO-8040R
XNO-8080R	XNO-8080R
	XNO-8080RW
	KNO-5080RN
XNO-L6020R	XNO-L6020R
XNO-L6120R	XNO-L6120R
XNP-6040H	XNP-6040H
XNP-6120H	XNP-6120H

Major model	Model name
	KNP-2120HN
XNP-6320	XNP-6320
	QNP-6230
	QNP-6230H
	XNP-6321
	XNP-6321H
XNP-6320H	XNP-6320H
XNP-6320HS	XNP-6320HS
XNP-6320RH	XNP-6320RH
	XNP-6250RH
XNP-6371RH	XNP-6371RH
XNP-6550RH	XNP-6550RH
XNV-6010	XNV-6010
XNV-6011	XNV-6011
	XNV-6011W
XNV-6012	XNV-6012
XNV-6012M	XNV-6012M
XNV-6013M	XNV-6013M
XNV-6020R	XNV-6020R
XNV-6022R	XNV-6022R
XNV-6022RM	XNV-6022RM
XNV-6080	XNV-6080
XNV-6080R	XNV-6080R
XNV-6080RS	XNV-6080RS
XNV-6081Z	XNV-6081Z
	XND-6081VZ
	XND-6081FZ
XNV-6085	XNV-6085
XNV-6120	XNV-6120
XNV-6120R	XNV-6120R
XNV-6120RS	XNV-6120RS
XNV-8020R	XNV-8020R
XNV-8020RM	XNV-8020RMN
	XNV-8020RMP
XNV-8030R	XNV-8030R
XNV-8040R	XNV-8040R
XNV-8080R	XNV-8080R

Major model	Model name
	XNV-8080RW
XNV-8080RS	XNV-8080RS
XNV-8081Z	XNV-8081Z
	XND-8081VZ
	XND-8081FZ
XNV-L6080	XNV-L6080
	XNO-L6080R
XNV-L6080A	XNO-L6080RA
	XND-L6080RVA
	XNV-L6080RA
	XND-L6080VA
	XNV-L6080A
XNV-L6080R	XNV-L6080R
XNZ-6320	XNZ-6320
TNO-4050T	TNO-4050T
TNO-4040T	TNO-4040T
TNO-4030T	TNO-4030T
TNO-4051T	TNO-4051T
	TNO-4041T
TNU-4041T	TNU-4041T
	TNU-4051T
TNO-4030TR	TNO-4030TR
TNO-4040TR	TNO-4040TR
TNO-4041TR	TNO-4041TR
TNU-4041T	TNU-4041T
TNU-4051T	TNU-4051T
TNV-7010RC	TNV-7010RC
TNB-6030	TNB-6030
TNO-6010M	TNO-6010M

HTW Network Camera Version 1.30

This document describes the new and changed features of Hanwha Techwin network camera version 1.30.

> ⓘ **Released on JUL 02, 2019**

Caution

- Please note that you need to follow the steps below when you upgrade to 1.30 version from previous versions. [TNO-4050T, TNO-4051T, TNO-4040T, TNO-4041T, TNO-4030T, TNU-4041T, TNU-4051T]

  1) Upgrade to the bridge firmware. (Please do not use this version firmware other than upgrade purpose. We cannot guarantee anything with this version firmware)
  2) Upgrade to version 1.30 or later.
  - Please note that OSD configuration values will be reset when you upgrade 1.30 version from previous versions. [TNO-4050T, TNO-4051T, TNO-4040T, TNO-4041T, TNO-4030T, TNU-4041T, TNU-4051T]

  - Please note that OSD font change in all resolutions is not supported and OSD is not supported in 320x240 resolution from the version 1.30 or later. [TNO-4050T, TNO-4051T, TNO-4040T, TNO-4041T, TNO-4030T, TNU-4041T, TNU-4051T]

  - Please note that firmware downgrade from version 1.30 or later to lower version is not allowed. [TNO-4050T, TNO-4051T, TNO-4040T, TNO-4041T, TNO-4030T, TNU-4041T, TNU-4051T]

- Please note that downgrading to a version earlier than 1.30.01 may cause the following constraints [1.30.01 XNP-6320, XNP-6320H, XNP-6320HS, XNP-6371RH]:

  - More than 25 privacy zones can not be deleted or modified.

  - If the camera name contains special characters (space # * + - / ( ) ,), you can not delete or modify the camera name.

  Please fix them before downgrading the system, or reset the system to factory default with [Except network parameter & open platform] selected.

Common Features

[New Features]

- Added a handover function in accordance with temperature detection event. [TNO-4050T, TNO-4051T, TNO-4040T, TNO-4041T, TNO-4030T, TNU-4041T, TNU-4051T, TNO-4030TR, TNO-4040TR, TNO-4041TR]

[Improvements]

- Supported a production automation function (nothing changed in user perspective). [1.30.01]

- Added a [Set pan ground position] function under [Setup] > [PTZ] > [PTlimit] to set the current pan angle to zero degrees. [1.30.01 XNP-6320, XNP-6320H, XNP-6320HS, XNP-6371RH]

- Increased the maximum number of privacy areas from 24 to 32. [1.30.01 XNP-6320, XNP-6320H, XNP-6320HS, XNP-6371RH]

- Increased the maximum number of multicast connections from 20 to 128. [1.30.01 XNP-6320, XNP-6320H, XNP-6320HS, XNP-6371RH]

- Allowed a user to use special characters (space # * + - / ( ) _ ,) as camera name under [Setup] > [Camera setup] > [OSD] > [Title overlay]. [1.30.01 XNP-6320, XNP-6320H, XNP-6320HS, XNP-6371RH]

- Added a function to save the predefined preset paths when setting the trace path for auto tracking. [1.30.01 XNP-6320, XNP-6320H, XNP-6320HS, XNP-6371RH]

[Bug fixes]

- Fixed an issue where white or black pixels appear on the upper right of the image due to an error in the image calibration algorithm. [1.30.02 TNO-4030T, TNO-4040T, TNO-4050T, TNO-4041T, TNO-4051T, TNO-4030TR, TNO-4040TR, TNO-4041TR, TNU-4041T, TNU-4051T]

Security Improvements

- Supported ONVIF Profile T (with ONVIF protocol to delete the default video profile).

- Added function to email account lockout events to administrators if login fails more than 5 consecutive times (SMTP email must be enabled).

- Added encryption setting function to use SD card after password authentication when saving video to SD card.

Affected Products

Table 2. Product Family Based On Version 1.30

Major model	Model name
XNB-6000	XNB-6000
	KNB-2000
XNB-6001	XNB-6001
XNB-6005	XNB-6005
XNB-8000	XNB-8000
	KNB-5000N
XND-6010	XND-6010
XND-6011F	XND-6011F
XND-6020	KND-2020RN
XND-6020R	XND-6020R
XND-6080	XND-6080
	XND-K6080N
XND-6080R	XND-6080R
	KND-2080RN
XND-6080RV	XND-6080RV
XND-6080V	XND-6080V
XND-6081RV	XND-6081V
	XND-6081RV
	XNV-6081
	XNV-6081R
	XND-6081RF
	XND-6081F
XND-6085	XND-6085
XND-6085V	XND-6085V
XND-8020F	XND-8020F
XND-8020R	XND-8020R
	KND-5020RN
XND-8030R	XND-8030R
XND-8040R	XND-8040R
XND-8080R	XND-8080R
	KND-5080RN
XND-8080RV	XND-8080RV

Major model	Model name
XND-8081RV	XND-8081RV
	XNV-8081R
	XNV-8081
XND-L6080R	XND-L6080R
XND-L6080RV	XND-L6080RV
XND-L6080V	XND-L6080V
XNF-8010R	XNF-8010R
	XNF-8010RW
XNF-8010RV	XNF-8010RV
	XNF-8010RVW
XNF-8010RVM	XNF-8010RVM
XNO-6010R	XNO-6010R
	KNO-2010RN
XNO-6020R	XNO-6020R
XNO-6080R	XNO-6080R
	XNO-6080RA
	KNO-2080RN
XNO-6080RS	XNO-6080RS
XNO-6085R	XNO-6085R
XNO-6120R	XNO-6120R
	KNO-2120RN
XNO-6120RS	XNO-6120RS
XNO-8020R	XNO-8020R
	KNO-5020RN
XNO-8030R	XNO-8030R
XNO-8040R	XNO-8040R
XNO-8080R	XNO-8080R
	XNO-8080RW
	KNO-5080RN
XNO-L6020R	XNO-L6020R
XNO-L6120R	XNO-L6120R
XNP-6040H	XNP-6040H
XNP-6120H	XNP-6120H
	KNP-2120HN
XNP-6230	XNP-6230
XNP-6230H	XNP-6230H
XNP-6320	XNP-6320

Major model	Model name
XNP-6320	XNP-6320H
	XNP-6320HS
	QNP-6230
	QNP-6230H
	XNP-6321
	XNP-6321H
XNP-6371RH	XNP-6371RH
XNP-6550RH	XNP-6550RH
XNV-6010	XNV-6010
XNV-6011	XNV-6011
	XNV-6011W
XNV-6012	XNV-6012
XNV-6012M	XNV-6012M
XNV-6013M	XNV-6013M
XNV-6020R	XNV-6020R
XNV-6022R	XNV-6022R
XNV-6022RM	XNV-6022RM
XNV-6080	XNV-6080
XNV-6080R	XNV-6080R
XNV-6080RS	XNV-6080RS
XNV-6081Z	XNV-6081Z
	XND-6081VZ
	XND-6081FZ
XNV-6085	XNV-6085
XNV-6120	XNV-6120
XNV-6120R	XNV-6120R
XNV-6120RS	XNV-6120RS
XNV-8020R	XNV-8020R
XNV-8020RM	XNV-8020RMN
	XNV-8020RMP
XNV-8030R	XNV-8030R
XNV-8040R	XNV-8040R
XNV-8080R	XNV-8080R
XNV-8080RS	XNV-8080RS
XNV-8081Z	XNV-8081Z
	XND-8081VZ
	XND-8081FZ

Major model	Model name
XNV-L6080	XNV-L6080
	XNO-L6080R
XNV-L6080A	XNO-L6080RA
	XND-L6080RVA
	XNV-L6080RA
	XND-L6080VA
	XNV-L6080A
XNV-L6080R	XNV-L6080R
XNZ-6320	XNZ-6320
TNO-4050T	TNO-4050T
	TNO-4051T
	TNO-4040T
	TNO-4041T
	TNO-4030T
TNU-4041T	TNU-4041T
	TNU-4051T
TNO-4040TR	TNO-4041TR
	TNO-4040TR
	TNO-4030TR
TNB-6030	TNB-6030
TNV-7010RC	TNV-7010RC

HTW Network Camera Version 1.21

This document describes the new and changed features of Hanwha Techwin network camera version 1.21.

ⓘ **Released on MAR 18, 2019**

Common Features

[Improvements]

▪ Added function to push BI (People Counting / Queue Management / Heatmap) meta data to Wisenet Retail Insight. [1.21.12 XND-6010/XNV-6010, XNF-8010R/XNF-8010RV/XNF-8010RVM]

▪ Fixed an issue where the web page menu would not change after upgrading firmware due to remained browser cache. In some case, cache refresh (F5 reload key) is is required to display properly. [1.21.10]

▪ Added automatic correction function for horizontal noise that appears intermittently in image. [1.21.01 TNO-4040TR, TNO-4041TR, TNO-4030TR]

[Bug fixes]

▪ Fixed an issue where in some case, an SD card was not recognized after booting. [1.21.12 TNO-4050T, TNO-4051T,TNO-4040T,TNO-4041T,TNO-4030T,TNU-4041T,TNU-4051T]

▪ Fixed an issue where an SD card error happened with EXT4 file system. [1.21.12 TNU-4041T, TNU-4051T]

▪ Fixed an issue where the live monitoring page would be stuck on the IE11 / Windows 10 OS in case Plugin-Free profile configuration is higher than 20fps / 1920x1080 resolution. Now it will be reverted to 20fps automatically. [1.21.10]

▪ Fixed an issue where with 1.20 and 1.21 version, Genetec VMS didn't receive IVA events. [1.21.11]

- Fixed an issue where in some cases, creating a profiles didn't work through SUNAPI. [1.21.11]

- Fixed an issue of incorrect CropAreaCoordinate value in attributes.cgi through SUNAPI. [1.21.11]

- Fixed an issue where with 1.20 and 1.21 version, Genetec VMS didn't draw overlay boxes through metadata. [1.21.11]

- Fixed an issue where a camera would restart when a user changes sensitivity value in Camera [setup] > [Video & Audio] > [Audio setup] > [Audio in] > [Noise reduction] after upgrading to version 1.20 or 1.21. [1.21.11 TNO-4040T, TNO-4050T, TNO-4051T, TNO-4041T, TNO-4030T]

Affected Products

Table 3. Product Family Based On Version 1.21

Major model	Model name
XNB-6000	XNB-6000
	KNB-2000
	KNO-2080RN
	XNO-6080R
XNO-6010R	XNO-6010R
	KNO-2010RN
	XNO-6020R
XND-6010	XND-6010
	XNV-6010
XND-6020	KND-2020RN
XND-6080	XND-6080
	XND-K6080N
	KND-2080RN
	XND-6080R
	XND-6080RV
	XND-6080V
	XNV-6080
	XNV-6080R
	XNV-6080RS
XNB-8000	XNB-8000
	KNB-5000N
XNO-8020R	XNO-8020R
	XNO-8030R
	XNO-8040R

Major model	Model name
XND-8020R	XND-8020R
	KND-5020RN
	XND-8030R
	XND-8040R
	KNO-5020RN
	XNV-8020R
	XNV-8030R
	XNV-8040R
XND-8080R	XND-8080R
	KND-5080RN
	XND-8080RV
	XNV-8080R
	XNV-8080RS
XNF-8010R	XNF-8010R
	XNF-8010RW
	XNF-8010RV
	XNF-8010RVW
	XNF-8010RVM
XNO-6120R	XNO-6120R
	KNO-2120RN
	XNO-6120RS
	XNV-6120
	XNV-6120R
	XNV-6120RS
XND-L6080R	XND-L6080R
	XND-L6080RV
	XND-L6080V
	XNV-L6080
	XNV-L6080R
XNV-6012	XNV-6012
	XNV-6012M
	XNV-6013M
	XNV-6022R
	XNV-6022RM

Major model	Model name
XNB-6001	XNB-6001
	XNB-6005
	XND-6085
	XND-6085V
	XNO-6085R
XNB-6005	XNB-6005
	XND-6085
	XND-6085V
	XNO-6085R
XND-6011F	XND-6011F
XND-8020F	XND-8020F
XNP-6040H	XNP-6040H
XNP-6120H	XNP-6120H
	KNP-2120HN
XNP-6320	XNP-6320
	XNP-6320H
	XNP-6320HS
	QNP-6230
	QNP-6230H
XNP-6371RH	XNP-6371RH
XNV-6011	XNV-6011
	XNV-6011W
XNV-6085	XNV-6085
	XND-6085
	XND-6085V
TNB-6030	TNB-6030
XNZ-6320	XNZ-6320
TNO-4050T	TNO-4050T
	TNO-4051T
	TNO-4040T
	TNO-4041T
	TNO-4030T
TNU-4041T	TNU-4041T
	TNU-4051T
TNO-4040TR	TNO-4041TR
	TNO-4040TR
	TNO-4030TR

HTW Network Camera Version 1.20

This document describes the new and changed features of Hanwha Techwin network camera version 1.20.

> ⓘ **Released on OCT 12, 2018**

Common Features

[New Features]

- Added a function called Frame Lock to always maintain the number of frames/sec (fps) of one user selected profile when multi profiles are used.

- Added a function to configure the codec of profiles 1, 2 and 3.

- Added a hostname function.

- Supported LLDP as a steady-state power device.

- Added a function to configure overlay box for detected objects in motion detection, IVA, and face detection.

- Added a function to configure minimum/maximum object size in motion detection.

- Added a function to configure minimum duration in motion detection and Intrusion detection (up to 5 secs).

- Added an audio noise reduction function under Setup – Audio Setup – Audio Setup – Audio in.

- Added the USB connect/disconnect message in SNMP Trap Service.

- Added a function to enable/disable USB port under the Setup – Video & Audio - Video Setup.

- Added a function to configure home position and execute auto run (optical zoom cameras).

- Added queue management, heatmap, people counting (Mobile cameras).

- Added an option of new P-IRIS Tamron lens (P-IRIS supported cameras).

- Added a function to control pan/tilt, area zoom by mouse drag and control zoom by mouse

wheel scroll in web viewer (optical zoom cameras and PTZ cameras).

- Added a shock detection function (XNV-6085, XND-6085, XND-6085V, XNP-6120H, XNP-6320H).

[Improvements]

- Improved a function to configure pan/tilt control speed (PTZ cameras).

    - Increased proportional PT mode options to 8 stages and setting is applied at 1x zoom ratio.

- Changed the factory defaults values of UPnP, Bonjour, and Link-Local IPv4 address to disable.

- Improved a function to configure all image parameters other than sensor mode for predefined image preset mode and added 2 UserPreset options.

    - After upgrading firmware from prior to 1.2 version, the previous UserPreset configuration will be applied to UserPreset1 and all schedule configurations will be reset.

- Improved the schedule configuration.

    - Expressed day of the week instead of date.

    - Changed the image preset schedule configuration to same as other schedule configuration.

- Improved indoor representation of WDR low and middle levels.

- Changed the default value of minimum shutter speed to provide optimized value to keep framerate.

- Improved day/night switching timing (Built-in IR LED models).

[Bug fixes]

- Fixed an issue that anti flicker configuration in UserPerset mode is not be applied after reboot.

- Fixed an issue that a certain key data does not work correctly in 802.1x certificate.

- Fixed an issue that the focus does not work correctly via Pelco-D protocol. (External RS-485 control supported models.)

- Fixed an issue that AF operation does not work due to Gyro sensor (PTZ cameras having Gyro sensor).

Security Improvements

- Removed Active-X/NPAPI plug-ins from the web viewer.

- Removed the PHP module from the web viewer.

- Added an SRTP function (TCP /UDP unicast).

Protocol Improvements

- Added a feature to send time data whit UTC format when a user searches recorded data in SD/NAS via SUNAPI protocol.

- Added an attribute that specifies the DPTZ, PTZ, and Zoom capabilities via SUNAPI protocol.

- Improved ONVIF features.

  - Supported motion area configuration in VideoAnalytics service.

  - Supported VideoSourceModes in Media service.

  - Supported UTF-8 format OSD control in Media service.

  - Supported PTZ PresetTour in PTZ service.

  - Supported firmware upgrade.

  - Supported "tns1: VideoSource/MotionAlarm" event.

- Applied the unified SNMP MIB. (Keep backward compatibility, the previous MIB files can be used.)

- Added the likelihood data of sound classification via metadata streaming.

Open Platform Version 3.50 Upgrade

- Added a function to create a profile.

- Added APIs to use the SUNAPI protocol.

- Added a feature to write and save system/event log data.

  ※ Open Platform SDK should be upgraded to 3.50 version.

Affected Products

Table 3. Product Family Based On Version 1.20

※ **Please refer to the previous release notes attached.**

Major model	Model name	Release history prior to 1.20
XNB-6000	XNB-6000 KNB-2000 KNO-2080RN XNO-6080R XNO-6080RA XNO-6080RS	ReleaseNotes_XNB-6000_1.14_en.pdf
XNO-6010R	XNO-6010R KNO-2010RN XNO-6020R	ReleaseNotes_XNO-6010R_1.14_en.pdf
XND-6010	XND-6010 XNV-6010	ReleaseNotes_XND-6010_1.14_en.pdf
XND-6020	XND-6020R KND-2020RN XNV-6020R	ReleaseNotes_XND-6020R_1.14_en.pdf
XND-6080	XND-6080 XND-K6080N KND-2080RN XND-6080R XND-6080RV XND-6080V XNV-6080 XNV-6080R XNV-6080RS	ReleaseNotes_XND-6080_1.14_en.pdf
XNB-8000	XNB-8000 KNB-5000N KNO-5080RN XNO-8080R XNO-8080RW	ReleaseNotes_XNB-8000_1.14_en.pdf
XNO-8020R	XNO-8020R XNO-8030R XNO-8040R	ReleaseNotes_XNO-8020R_1.14_en.pdf

Major model	Model name	Release history prior to 1.20
XND-8020R	XND-8020R KND-5020RN XND-8030R XND-8040R KNO-5020RN XNV-8020R XNV-8020RMN XNV-8020RMP XNV-8030R XNV-8040R	ReleaseNotes_XND-8020R_1.14_en.pdf
XND-8080R	XND-8080R KND-5080RN XND-8080RV XNV-8080R XNV-8080RS	ReleaseNotes_XND-8080R_1.14_en.pdf
XNF-8010R	XNF-8010R XNF-8010RW XNF-8010RV XNF-8010RVW XNF-8010RVM	ReleaseNotes_XNF-8010R_1.14_en.pdf
XNO-6120R	XNO-6120R KNO-2120RN XNO-6120RS XNV-6120 XNV-6120R XNV-6120RS	ReleaseNotes_XNO-6120R_1.15_en.pdf
XND-L6080R	XND-L6080R XND-L6080RV XND-L6080V XNV-L6080 XNV-L6080R	ReleaseNotes_XND-L6080_1.01_en.pdf
XNV-6012	XNV-6012 XNV-6012M XNV-6013M XNV-6022R XNV-6022RM	ReleaseNotes_XNV-6022RM_1.01_en.pdf

Major model	Model name	Release history prior to 1.20
XNB-6001	XNB-6001 XNB-6005 XND-6085 XND-6085V XNO-6085R	ReleaseNotes_XNB-6001_1.14_en.pdf
XNB-6005	XNB-6005 XND-6085 XND-6085V XNO-6085R	ReleaseNotes_XNB-6005_1.14_en.pdf
XND-6011F	XND-6011F	ReleaseNotes_XND-6011F_1.14_en.pdf
XND-8020F	XND-8020F	ReleaseNotes_XND-8020F_1.14_en.pdf
XNP-6040H	XNP-6040H	ReleaseNotes_XNP-6040H_1.14_en.pdf
XNP-6120H	XNP-6120H KNP-2120HN	ReleaseNotes_XNP-6120H_1.14_en.pdf
XNP-6320	XNP-6320 XNP-6320H XNP-6320HS QNP-6230 QNP-6230H	ReleaseNotes_XNP-6320_1.01_en.pdf
XNP-6371RH	XNP-6371RH	ReleaseNotes_XNP-6371RH_1.02_en.pdf
XNV-6011	XNV-6011 XNV-6011W	ReleaseNotes_XNV-6011_1.14_en.pdf
XNV-6085	XNV-6085 XND-6085 XND-6085V	ReleaseNotes_XND-6085_1.14_en.pdf
TNO-4050	TNO-4050 TNO-4040 TNO-4051 TNO-4041 TNO-4030	ReleaseNotes_TNO-4050_1.01_en.pdf
TNB-6030	TNB-6030	ReleaseNotes_TNB-6030_1.14_en.pdf

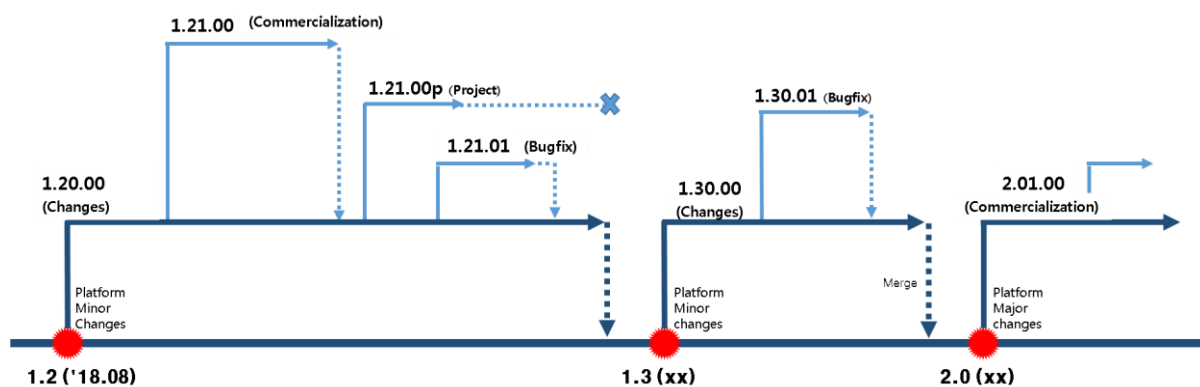# Attachment A. HTW camera version management

This describes the Hanwha Techwin network camera version rule. A camera version is updated when new features are added or bugs are fixed, and there are the following two categories:

- Platform change: Version update due to changes in the software platform structure and major feature changes

- Product change: Version update to fix reported bugs and solve potential problems

Camera Version Management Procedure

The firmware of Hanwha Techwin camera products are being developed based on the common platform, and this is developed across all camera product development.

Any features developed for a product firmware will be consolidated into the common platform and applied to new camera products accordingly.

Camera Version Rules

The camera version is structured as below and it is generated using the following rules.

> **<PlatformMajor>.<PlatformMinor><ProductMajor>.<ProductMinor>**

Platform: Specifies the release version of the common platform

- Major: Reflects any changes in platform structure and major feature changes.

- Minor: Reflects upgrade with new features and consolidated changes that apply to all models.

Product: Specifies the product release version

- Major: Reflects the addition of major product features and changes.

- Minor: Reflects firmware changes for minor fixes that solve reported bugs and potential problems

Each firmware release is displayed using a unique number given to each release type and is a combination of a platform version and a product version. The following examples explain the version rules.

1.20.00

Platform Release　　　Product Release

Version 1.20.00 indicates the combination of platform version 1.2 and product version 0.00. It represents the first product that is applied with the common platform version 1.2.

1.22.10

Platform Release　　　Product Release

Version 1.22.10 indicates the combination of platform version 1.2 and product version 2.10. It represents a product that is applied with the common platform version 1.2 and updated twice.