NVR-B5210.37.61.230915 Release Notes

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NVR-B5210.37.61.230915 Release Notes

Keywords: Version information, usage notes, precautions.

Abstract: This document provides information about the **NVR-B5210.37.61.230915** board software, including version information, usage notes, precautions, and features.

Acronym

Acronym	Full Name
NVR	Network Video Recorder

Contents

1 Version Information

1.1 Version Number

NVR-B5210.37.61.230915

1.2 Applied Product Models

Table 1 Applied Product Models

Product Models	Description
NVR824-128-R-IM-16G	24 slot, 128-ch, H.264/H.265 and 4K ultra HD.
NVR824-256-R-IM-16G	24 slot, 256-ch, H.264/H.265 and 4K ultra HD.
NVR816-64-R-IM-8G	16 slot, 64-ch, H.264/H.265 and 4K ultra HD.
NVR816-128-R-IM-8G	16 slot,128-ch, H.264/H.265 and 4K ultra HD.

1.3 Release History

Table 2 Released Versions

Version No.	Basic Version No.	Released On
NVR-B5210.37.61.230915	Initial release	2023-09-26

2 Usage Notes

None.

3 Software Features

Table 3 Software Features

Service	Feature
Audio and video decoding	H.264 and H.265, 4K resolution display, up to 16Mbps bit rate.
Data storage	Local storage of recordings in hard disk(s).
Web-based management	Web-based user interface for device configuration and management.

4 Version Change Description

4.1 Feature Change Description

Table 4 NVR-B5210.37.61.230915 Feature Changes

| Item	Feature	Description
Newly added features	NVR-side mixed-traffic detection	Supports NVR-side mixed traffic detection and the following functions are available when the analyzer's working mode is set to mixed traffic detection: enabling/disabling detection, parameter configuration, image storage, smart preview, image search and display; uploading images and attribute information to the upper-level platform. In addition to face recognition and perimeter protection mode, the NVR can work in mixed traffic detection mode, which can detect motor vehicles/non-motor vehicles/pedestrians in specified detection areas and collect attribute information. This function is applicable to park entrances or roads.
	Supports connecting the newly-developed network storage disk enclosure(DEU1016-B)	16-HDD or 24-HDD NVRs can connect to the network storage disk enclosure (DEU1016-B) through the miniSAS expansion interface.
Improved features		
Deleted features		

Table 5 NVR-B5210.37.44.230815 Feature Changes

Item	Feature	Description
Newly added features	Supports configuring force recognizing HDMI output	A configuration item **Force Recognizing HDMI Output** is added on the Web's hidden interface. It is disabled by default. When enabled, a prompt displays to remind the user that this change will restart the NVR. After startup, the video will be forced to output on the local interface via the HDMI port.
	Supports connecting the newly-decoding card(FB-HD04-B-NB/FB-HD07-B-NB)	16-HDD or 24-HDD NVRs can connect to the newly-decoding card(FB-HD04-B-NB/FB-HD07-B-NB)
Improved features		
Deleted features		

Table 6 NVR-B5210.37.40.230614 Feature Changes

Item	Feature	Description
Newly added features	Camera-side mixed traffic detection	When the connected camera is capable of mixed traffic detection, the following functions are available on the NVR: enabling/disabling detection, parameter configuration, receiving/storing images from IPC, smart preview, smart search by motor vehicle/non-motor vehicle/human body, or searching mixed traffic events, attributes/results display, uploading image with attribute information to the upper platform.
	Camera-side traffic	When the connected camera is capable of traffic monitoring, the

Item	Feature	Description
	monitoring	following functions are available on the NVR: enabling/disabling monitoring, parameter configuration, receiving/storing images from IPC, smart preview, smart search by motor vehicle/non-motor vehicle/human body, or searching traffic monitoring events, attributes/results display, uploading image with attribute information to the upper platform.
		The traffic monitoring can only be enabled/disabled on the NVR but cannot be configured on the NVR. Compared with mixed-traffic detection, traffic monitoring can capture vehicles passing a tripwire in real time. Besides, lane detection and motorcycle detection are added.
	Improved layout of VCA search	Face snapshot search and face comparison search tabs are moved to the **Face Search** menu (only for the local interface).
		Allows user to search images by object types on the page of motor vehicle search, non-motor vehicle search, and human body search, and search by events on the general search page.
		Deleted behavior search, and user can search behavior images on the page of motor vehicle search, non-motor vehicle search, human body search or general search.
		Deleted vehicle search, and user can search vehicle images on the page of motor vehicle search and general search.
		The improved layout enables user to search images by objects and by events.
	Supports search image by image	The NVR with FB-AI1802/1804-B supports searching images in the face library and snapshot library based on user-loaded images, images from a snapshot library, or captured images.
	Improved layout of smart display configuration	On the local interface, the smart preview page of the local interface, event types of face, vehicle, perimeter are deleted, and user now can select object types to display their real-time snapshots based on motor vehicle, non-motor vehicle, face and human body.。The smart display configuration on **Smart Preview** page now displays two tabs: **Alarm Subscription** and **ShowTime Attr Config**.
		The **Alarm Subscription** tab includes face recognition, perimeter protection, vehicle recognition, object detection, temperature detection, and behavior analysis. User can set to display images of the specified alarm types.
		The **ShowTime Attr Config** tab includes human body attributes, non-motor vehicle attributes and motor vehicle attributes, and user can set to display detailed attributes (only mixed-traffic detection and traffic monitoring support attribute configuration, and up to 3 items can be selected for each type of attribute).
	NVR supports sending an email with alarm information to the specified email address(es) when an alarm occurs.	NVR can send an email with alarm information to the specified recipient(s), avoiding frequent alarm information push to all email addresses.
		The alarm configuration page added the **Send Email** item with a list showing the configured recipients' addresses. Up to 6 recipients are allowed and the chosen recipients will receive an alarm email when an alarm occurs.
	The local interface supports overlay multi-line characters on the preview page.	The **OSD Content** tab is added at **Camera** > **OSD**, which allows to configure custom OSD for the IPC. Up to 5 OSDs are allowed and each OSD can be enabled/disabled and named separately.
	Allows to configure arming schedule and day/night mode for IPC that supports alarm sound/light for human body detection.	For cameras that support human body detection and sound/light alarm schedules: user can configure an arming schedule for sound and light alarms.
		For cameras that support human body detection and sound/light day/night mode: user can select day/night mode or custom mode to configure parameters for sound and light alarms.
		This function requires camera support.
	NVR supports configuring	Connecting the auto-tracking dome cameras that support sound and

Item	Feature	Description
	alarm sound/light for auto-tracking dome cameras.	light, user can configure alarm sound/light for auto tracking, including day/night mode, arming schedule and audio of sound, and day/night mode and blink time of light.
	Supports rapidly disarming IPC actions on NVR	On the local interface, appears on the preview window when the NVR receives an alarm from a camera (if it is a tampering detection alarm). is added on the window toolbar to disarm IPC actions. This function requires camera support.
	The Web interface adds streaming management function.	Streaming management function is added on the **Maintenance** menu of the Web interface, including **Live View** and **Playback** tabs. User can view detailed information about live and playback streams on these tabs and stop streaming manually.
	The local interface supports displaying passwords of online IPCs.	The local interface can display camera passwords on the **Camera** page. The admin user can click a button (**Show IPC Password**) to view the passwords of online IPCs after authentication.
	A small eye icon is added on the password input pages of the local interface, and the password can be displayed in cleat text by clicking the icon.	On the local interface, a small eye icon is added on all the password input pages (except on the login page). User can click this icon to view the password in clear text. The password is not displayed in clear text by default.
	Supports 16MP IPCs	NVR can connect 16MP IPCs via the Uniview protocol and realize functions including live view, playback, two-way audio, alarm and VCA. NVR cannot decode the 16MP main stream and will automatically switch to the sub stream. For playback, a message will be displayed to prompt user to switch to the sub stream if the stream exceeds the decoding capability.
	Supports 16K sampling rate in G.711 audio format	NVR can connect IPCs that support G.711U/G.711A audio compression and 8K/16K sampling rate. The local&Web interfaces support the configuration and audio decoding at 16K sampling rate in G.711 format.
	Optimized policy of hard disk access to the NVR	● For NVR with no hard disk: If there is no hard disk, the local&Web interfaces will prompt user to add a hard disk for the NVR. User can click the setting button to view hard disk information on the local interface. ● For NVR with unformatted hard disk: If there is hard disk unformatted, a message will alert user there is unformatted disk and show its slot. User can format hard disk by clicking the setting button on the local interface and configuration button on the Web interface. To close the prompt, user can click **Exit** on the local interface and **Close** on the Web interface, otherwise the prompt is always flashing. This event will not recorded in logs or alarms.
	Optimized prompt of abnormal device time	If there is abnormal device time, the local&Web interfaces will prompt user to replace the button battery and reset the time. User can click the setting button to reset the time on the local interface.
Optimized features	Analyzer's working mode optimized	The NVR with FB-AI1802/1804-B can work only in mixed mode（Face recognition+Perimeter Protection）, which can process face recognition and perimeter protection functions at the same time without mode switch.
	Supports magnifying the video of VCA search on the	On the local interface, user can magnify the video of VCA search in tile mode by double-clicking the video or clicking the full-screen button on

Item	Feature	Description
	local interface	the right window. The magnified window plays the video on the left, and displays the event details and object properties on the right. The video cannot be magnified if the search results are shown in list mode.
	Optimized default alarm policy of NVR after access IPC	For detection switch: ● For face detection, cross line detection, intrusion detection, enter area, leave area, ultra motion detection (UMD), elevator entrance detection and high-rise littering, their enabled/disabled status is based on IPC configuration if the IPC is connected for the first time, otherwise it is based on NVR. A prompt will be displayed if their enabled/disabled status is different on IPC and NVR. ● Motion detection is enabled/disabled based on IPC configuration if the IPC is connected via the private protocol, otherwise it is disabled by default if the IPC is connected via other protocols. ● Human body detection and people counting are enabled/disabled based on IPC configuration. ● Based on NVR configuration, video loss, audio detection and tempering detection are disabled by default. For detection rules: ● The detection rules of certain functions are based on IPC configuration, including face detection, cross line detection, intrusion detection, enter area, leave area, elevator entrance detection, high-rise littering, motion detection, audio detection, tempering detection and people counting. ● The detection rules of UMD are based on NVR configuration if the connected IPC supports motion detection, and based on IPC configuration if the connected IPC supports UMD. ● Video loss does not support detection rule configuration. For arming schedule: Based on NVR configuration, all detection functions adopt 24/7 arming schedule by default for the first configuration. The arming schedule of perimeter protection, UMD, motion detection, human body detection, elevator entrance detection and people counting will be synced to the IPC. For trigger actions: For cross line detection, intrusion detection, enter area, leave area, UMD, elevator entrance detection, and alarm sound/light of human body detection, the trigger actions are based on IPC configuration. The trigger actions of other functions are based on NVR configuration.
	Improved layout of setup on the Web interface	The **Disk** menu is changed to **Storage**. Deleted the **Schedule** tab, and **Recording Schedule** and **Snapshot Schedule** tabs are moved to the **Storage** menu. **Motion Detection**, **Tampering Detection**, **Human Body Detection**, **Video Loss** and **Audio Detection** tabs are moved from the **Camera** menu to **Alarm**. The order of the **Network Info** tab on the **Maintenance** menu is adjusted to the first.
	Supports copying capture mode to other camera(s)	On the **Encoding** page, the capture mode is added on the copy page and can be copied to other camera(s). The cameras that connect to the NVR via the Onvif, GB28181 and custom protocol do not support this feature.
	Optimized the usability of VCA functions	● Optimized the prompt when the face functions are enabled/disabled. ● On the Web interface, the avatar placeholder is added to replace a blank face image on the **Add Face Info** page. ● When a face image is imported, the file name of the image is used

Item	Feature	Description
		as the name of the face list by default.
		● Supports batch importing face images by folder, and the name of image file will be the person's name in the library by default.
		● The face library supports uploading JPG/JPEG images with case-insensitive filename extensions.
		● User can select one or multiple face images to copy to other face libraries.
		● The **Face List** page displays the total number of faces in the face library and the VCA search page shows the total number of search results at the bottom.
	Supports setting the validity period for license plates in the plate library	NVR supports setting a validity period for license plates in the plate library.
		On the **Plate List** page (**VCA** > **VCA Search** > **Vehicle Control** > **Plate List**), the validity period can be configured when a plate is added or modified. The plate will be permanently valid if the validity period is not configured.
		The validity period of the plate can be only set manually on the interface, and does not support import and export.
	Supports NVR local upgrade via EZCloud	After the NVR is connected to EZCloud, user can access the Web interface of NVR from EZCloud and upgrade the NVR and the connected IPCs by uploading an upgrade package.
		Make sure that at least one hard disk is available on the NVR for local upgrade.
	The camera name is added in the exported people counting report	The camera name is added in the exported report from the **People Counting Report** page of VCA search.
	Adds the alarm type in the body of the alarm email	The alarm type is added in the alarm-triggered email from the NVR.
	The Web interface can load service without plug-in installed	Supports V3.0 plug-in. The Web interface can load service even if the plug-in is not installed. User can drag the scroll bar of image parameters on the live view window to adjust the image splicing distance of binocular wide angle camera.
		Except for the multi-video live view and playback that require the plug-in, the rest functions can be used normally.
		User can normally import and export after the plug-in is installed.
	An editing button overlays on the preview window when the password of the camera is wrong	If the username or password input for an IPC is incorrect, the live view window will show the cause and a button, and user can click the button to modify the username or password.
	An editing button overlays on the preview window when no resource is provided for preview	If there is no resource for preview on the local interface, the live view will display a message to prompt user to adjust video parameters, and an editing button. User can click the button to decrease the resolution on the **Encoding** page.
	Optimized the prompt when cameras are sorted	After the cameras are sorted, a message will alert user that the recordings corresponding to the channel ID will be changed.
Deleted features	Deleted **Vehicle Search** and **Behavior Search** tabs of the **VCA Search** menu	See "Improved layout of VCA search" for details.
	Deleted **Face Recognition**, **Vehicle Recognition** and **Perimeter** tabs of **Smart Display Configuration**	**Face Recognition**, **Vehicle Recognition** and **Perimeter** tabs are moved to the **Alarm Subscription** tab. See "Improved layout of smart display configuration" for details.

Item	Feature	Description
	page	
	Deleted **Send Email** under conventional actions of the **Trigger Actions** page	See "NVR supports sending an email with alarm information to the specified email address(es) when an alarm occurs" for details.
	Deleted the motion detection alarm icon that overlays on the preview window of the local interface	On the local interface, appears on the preview window when the NVR receives an alarm from a camera
	Deleted the **Schedule** tab of the **Camera** menu	Deleted the **Schedule** tab, please see "Improved layout of setup on the Web interface" for details.

Table 7 NVR-B5201.36.38.230411 Feature Changes

Item	Feature	Description
Newly added features		
Improved features	Optimized UMD configuration	Moved UMD configuration from <VCA Config> to<Motion>, Ultra motion detection (UMD) is merged with motion detection, deleting the individual configuration page. NVR supports UMD-enabled IPC. The motion mode is added (**Alarm** > **Motion Detection**) and user can choose **Motion Detection** or **Ultra Motion Detection**. If user chooses UMD, parameters such as detection area, sensitivity and snapshot type are displayed. For the video retrieval on the **Playback** page, the sub type UMD now belongs to the type motion detection (it belonged to VCA before). Only certain NVR supports NVR-side UMD. When NVR supports UMD, the smart mode can be set as NVR side analysis. In the previous version, users have to disable motion detection manually on **Motion Detection** page before they can enable UMD. This is optimized in this version.
Deleted features	Deleted the **UMD** tab of the **VCA Config** menu	UMD and motion detection are merged, and can be selected as two motion detection modes. For details, please refer to "Optimized UMD configuration".

Table 8 NVR-B5201.36.28.230112 Feature Changes

Item	Feature	Description
Newly added features	Supports front-end UMD	Adapted to IPCs that support UMD (Ultra Motion Detection), which can recognize object types, and distinguish motor vehicles, non-motor vehicles and pedestrians. NVR supports UMD configuration, VCA search, event playback, and storage of alarm information and snapshots.
Improved features		
Deleted features		

Table 9 NVR-B5201.36.27.230105 Feature Changes

Item	Feature	Description
Newly added features	Supports dual-sensor IPCs	Supports connecting dual-sensor cameras and can display videos in proportional mode or wide mode (32:9 aspect ratio).
Improved features		
Deleted features		

Table 10 NVR-B5201.36.18.221215 Feature Changes

Item	Feature	Description
Newly added features	Supports smart PT cameras	Supports connecting smart PT cameras, and supports functions including live view, patrol, recording storage, playback, configuration, alarm reception (motion detection, human body detection, abnormal audio detection, automatic tracking), alarm storage and searching.
	Supports IPC monostable alarm output	For camera alarm output (D>), user can set alarm duration to Custom or Maximum on the NVR. When the Custom option is enabled on the NVR, the relay mode on the camera is displayed as Monostable.
	Supports continuously track	NVR now allows user to configure continuously track for front-end IPCs. This feature is configurable only if the IPC supports auto tracking. If supported, user can select continuously track or customize tracking duration for the IPC.
	Work with IPC to lift barrier	Added the "let through" action on the **Vehicle Monitoring** page and can trigger the camera to lift the barrier automatically when a plate match alarm occurs. User can also lift the barrier manually on the **Manual** page.
	Adapted to multi-channel cameras	Supports connecting dual-channel cameras, and allows user to configure and receive alarms of motion detection, face detection and perimeter protection for multi-channel cameras, configure privacy mask, and search people counting statistics of multi-channel cameras.
	Adapted to IPCs that support box-dome linkage	Adapted to IPCs that support box-dome linkage. Allows user to select a linkage mode to view live videos in multi-sensor mode. Drag to zoom: The dome camera can rotate to and zoom in on the area that user specified on the image of the box camera. Click linkage: Click an object on the image of the box camera to rotate the dome camera to the specified object. Manual tracking: The dome camera can track the object that user specified on the image of the box camera. This function requires user to enable perimeter protection on the NVR side, and configure panoramic linkage on the IPC side.
	Supports thermal imaging cameras	Supports connecting thermal imaging cameras. Supports configuring fire detection, temperature detection, and smoking detection. Allows user to view live videos in multi-sensor mode. Supports VCA search, event playback, and storage of alarm information and snapshots. NVR can now receive temperature data from thermal imaging cameras and overlay temperatures on live video on the local user interface. In thermal camera-NVR-APP networking mode, app can receive thermal imaging and perimeter protection alarms and images from

		NVR.
		In thermal camera-NVR-VMS networking mode, VMS can receive thermal imaging and perimeter protection alarms and images from NVR.
	Adapted to front-end alarm light and sound linkage of human body detection	Allows user to configure alarm sound and light for human body detection alarms, including turning on/off alarm light and sound and other configurations.
	Supports one-click disarming by switch	Allows user to disarm all linkage actions of the NVR, and alarm sound & light of the IPC by the first alarm input switch on the NVR.
	Optimized people present alarm UI	Supports counting people present for specified camera(s), reporting critical/major/minor alarms according to the number of people present, and triggering the corresponding actions if configured.
		(Configuration page:
		1、4 scenes are available. Allows user to set scene name, alarm thresholds, arming schedule, and alarm-triggered actions for each scene separately, and view the relevant rules while configuring channels.
		2、Allows user to choose to reset the number of people present automatically or manually.
		Both local and web clients support people present alarm configuration.)
		The people flow counting on **Smart Preview** page now displays real-time people flow statistics including the number of people coming in/out/more allowed/present; The normal/slightly/moderately/heavily crowded alarms are displayed with different colors. When user changes the scene on the preview page, the corresponding statistics will also be changed.
Improved features	Supports configuring alarm sound & light for IPCs that support perimeter protection	User can configure front-end alarm sound & light for IPCs that support perimeter protection.
		The configuration items are displayed only when the IPC supports alarm sound & light, including alarm sound (turn on/off, arming schedule, audio, play count), and alarm light (turn on/off, arming schedule, blink time).
	Configuring arming schedule of motion detection for IPCs	User can configure arming schedule of motion detection for IPCs on the NVR, and then IPCs report alarms according to the arming schedule.
	Optimized the display effects of smart preview and behavior search results	VCA search results: The face search results are not close-up images, but are displayed with surrounding scenes. The faces in the images are not stretched.
		Behavior search results: The search results for perimeter protection are not close-up images, but are displayed with surrounding scenes; user can double-click an image to maximize it.
		Smart preview: Face and perimeter images are not stretched; The images on the left are the same as the image details on the right.
	Improved the size limit of face library images	Allows user to upload face library images up to 4M.
	Channel name is displayed when user selects channel on the **VCA Search** page	The **VCA Search** page on the Web client now allows user to view channel ID and channel name to quickly find the desired channel.

	Supports copying storage mode to other channels	The storage mode parameter is added on the **Copy** page of encoding settings, so user can copy storage mode to other channels.
	Displaying POS information on the local interface	All overseas models support POS function. POS control center can access NVR via network, and the NVR can store data and overlay transaction data on live view and playback images.
	Added detection area for front-end tripwire people counting	Supports drawing a detection area for tripwire people counting.
	Supports downloading SD videos on the web and local interface	The web and local interface allow user to download videos in HD or SD mode.
	Added day/night mode under alarm sound & light configuration in perimeter protection	Day/night mode is added under the alarm sound & light configuration of perimeter protection. The configuration item is displayed if it is supported by the IPC.
	Relocated custom route configuration	Custom route configuration is moved to the **Network** tab on the web client.
Deleted features	Deleted the relay mode configuration item	Deleted relay mode on the **Alarm Output** page, so monostable and bistable cannot be selected. Custom alarm duration corresponds to monostable mode, and maximum alarm duration corresponds to bistable mode.

Table 11 NVR-B5201.32.31.220427 Feature Changes

Item	Feature	Description
Newly added features	AAC audio decoding	Supports decoding AAC bit streams from IPC for live view, playback, and two-way audio on the local and web interfaces to meet demands for higher audio quality.
	One-key disarm linkage	Allows user to conveniently disarm one or multiple linkage actions of the NVR or its IPCs by a set schedule or period.
	Control wiper via network keyboard	Supports using a network keyboard to control wiper.
	Low battery notification	Prompts users to replace the button battery and reset the time if the system detects incorrect time after the user logs in.
	Optimized audio configuration	Added the **Audio Configuration** tab to configure all audio parameters of IPCs. (The configurable audio input and output parameters include enable/disable audio input, access mode, input volume, audio compression, sampling rate, and audio output. The supported configuration items may vary with IPCs.)
Improved features	Optimized alarm sound and light linkage	Allows users to configure alarm sound and light of IPCs on the NVR, including arming schedule and action mechanisms. It meets the needs of users for alarm sound and light linkage in different time periods. (Users can configure alarm sound & light in the **Trigger Actions** page. The configurable parameters include start time, end time, audio, repeat, alarm light, blink time, brightness, etc.)
	Configurable audio storage	Allows users to enable/disable audio storage of each camera separately.
	Optimized network	Separated **Packet Capture** from the **Network Test** tab. Two

	test and packet capture	addresses and multiple cameras can be detected simultaneously.
		(Allows users to perform network test by entering test address or selecting camera, test duration, and test packet size. Users can view the real-time packet loss rate or network latency in a chart, and export the results when the test ends.)
		Users can view whether the network is normal intuitively so as to troubleshoot network issues quickly, improving user experience and saving maintenance costs.
	Changed Telnet to SSH	SSH is adopted to access NVR remotely. It is disabled by default, and the secondary logon is required when enabled.
	Reporting people counting results by hours	A new report type (**Hourly**) is added on the local interface to allow users to view people counting results by hours.
	Adapted to the new encryption algorithms of IPCs	Supports SHA-256 to adapt to SHA-256 based RTSP authentication on IPC.
	Optimized perimeter protection configuration on the local interface	The local interface now allows users to draw box(es) when configuring object size for perimeter protection, instead of inputting manually, improving the ease of operation.
	Optimized the layout of **People Counting Report**	The **People Counting Report** is moved to the **VCA Search** tab.
	Changed *Target Type* to *Object Type*	The *Target Type* is changed to *Object Type*.
	Added the perimeter scene	A new scene (**Perimeter**) is added to allow users to select installation scenes, reducing the tedious adjustment of image parameters. This feature is only available for certain IPCs.
	Selecting all channels quickly for vehicle monitoring on the local interface	The local interface now allows users to select all channels with one click when configuring vehicle monitoring.
	Added a progress bar when importing/exporting license plates	A progress bar is added when importing/exporting license plates. Users can view the import/export quantities and progress intuitively.
	Searching face lists by modeling status, and exporting the results in batches	Allows users to search face lists by modeling status, and export the results in batches.
	Copying monitoring task(s) of face recognition	Supports copying the created monitoring task(s) of face comparison to other cameras, saving time.
	Ranking search results by similarity for search by images	Search results are ranked by similarity when users searching face libraries or snapshot libraries by image.
Deleted features	Deleted **Audio Stream** in the **Encoding** tab	See Optimized Audio Configuration for details.
	Deleted **IPC Camera Audio** in the **Enhanced Features** tab	See Optimized Audio Configuration for details.

Table 12 NVR-B5201.31.27. 211105 Feature Changes

Item	Feature	Description
Newly added features	Persistent WebSocket connections with upper platform	NVR can initiate WebSocket connections over SSL/TLS with an upper platform (EZCloud or third-party platform) to achieve bi-directional signaling communication based on the WSS.
	WEB plugin 3.0	The new Web plugin supports a variety of new browser versions and provides better performance in supporting multi-channel and high-resolutions.
	Front-end people flow counting and crowd density monitoring	Supports the connection of IPCs capable of people flow counting and crowd density monitoring, supports the configuration of people flow counting and crowd density monitoring, the search and export of people flow counting statistics.
	Searching license plates on the web	The web interface now allows users to search plates by channel, time, plate color, vehicle color, and plate number.
	Exporting plate search results on the web	The web interface allows user to export plate search results to a CSV file.
Improved features	NVR perimeter protection based on motor vehicles, non-motor vehicles, and pedestrians	NVR perimeter protection supports motor vehicles, non-motor vehicles, and pedestrians, and relevant configuration, smart preview and smart search.
	Dahua IPC activation	NVR can activate Dahua IPC automatically.
	Searching face library by image	The local interface allows users to search a face library using a face image.
	Searching face library by modeling status	Allows user to search a face library for face images that failed modeling.
	Added alarm input channel name	The alarm input page added the configuration of alarm input channel name.
	Uniform password mechanism on IPC and NVR	IPC and NVR have uniformed the password mechanism and extended password length to 32 bits.
Deleted features	None	None

Table 13 NVR-B5201.29.63.210628 Feature Changes

Item	Feature	Description
Newly added features	Supports front-end Smart Intrusion Prevention (SIP)	Supports connection of SIP-enabled IPC, supports configuration, smart preview and search.
	Arming scheduling for SIP and human body detection	Supports synchronizing arming schedules for smart intrusion prevention and human body detection to IPC.
	On-screen watermark descriptions	Added watermark descriptions on the screen.
Improved features	Improved VIID upstream performance	The speed of image uploading via VIID reaches 60 images per second.
	256 bytes for RTSP	Supports 256-byte RTSP URL.

Item	Feature	Description
Deleted features	None	None.

Table 14 NVR-B5201.29.25.200702 Feature Changes

Item	Feature	Description
Newly added features	Remote access of IPC	Support remote access to IPC over WAN on the NVR's Web interface.
	Separate audio permission	Support separate permission control of audio output.
	Change IPC password	Support changing the password of IPC in batches. Support changing the password of IPC when changing the password of NVR.
	One-click collect diagnosis info	Support exporting NVR diagnosis information, IPC diagnosis information and operation logs with one click.
	LPR alarm	Support pushing LPR alarms so that the alarms can be received on the app side.
	ISW Management	Support ISW Management.
	Perimeter protection camera	Supports connecting deep learning perimeter protection IPCs, which feature intrusion detection, cross line detection, enter area and leave area detection.
	Stream scramble	1.Support decoding the scrambled streams of Uniview camera; 2. Support enabling/disabling Stream Scramble for cameras connected via Uniview private protocol.
	Separate camera name and it's OSD	Support syncing camera name (up to 40 characters) to its OSD name. The sync function is enabled by default.
	Improved error message in preview page	More detailed messages such as incorrect password and network error are displayed in preview page, so that user experience improved.
	Support disabling third stream audio	Support disabling third stream audio and copying audio settings to multiple channels.
	Connect video doorbell	Support video doorbell, which, when connected to the app via an NVR, doorbell calling alarm can be received both on the NVR and the app.
	H.265	Auto switch to H.265 when first connected is enabled by default.
	UNP client software upgrade	Upgrade UNP client software to SoftEther VPN.
	Live view without plug-in	Live view is available without plug-in on the Web interface.
	New local interface	New local GUI; New interaction design in wizard, channel configuration, playback and VCA.
Improved features	Playback thumbnail	Support displaying playback thumbnail when hovering the mouse cursor over the timeline for a certain time in playback page.
	Playback operation	Support quick skipping to the earliest recording in playback page.
	OSD	Add camera ID in live view page.
	FTP username	The length of FTP username changes from 15 characters to 64 characters.
	Ease of use of intelligent functions	Support saving preview mode after device is restarted.

Item	Feature	Description
	Backup file name	The file name of recording backup exported on the local interface are same with that on the Web interface.
	Multi-NVR networking	In a network environment with multiple NVRs, add the status of IPC being managed by other NVR.
	Improved playback	Support setting skip interval for forwarding and rewinding playback.
	Improved storage settings	Support encoding settings of third stream, and more Storage Mode options, so that solve the problem that camera with no third stream cannot play back in SD mode.
	Save password	Support saving password.
	Retrieve password	Retrieve password by email and mobile client.
	Preset patrol	Up to 32 presets are allowed for one preset patrol.
	Playback in main stream	Playback in standard definition automatically switches to main stream for a maximized window.
	Separate permissions	Separate channel live view and audio permissions.
	Alarm configuration	Add human body detection.
	Improve switching performance when maximizing/restoring window	For connected Topsee cameras, live video starts quickly when maximizing or restoring window.
Deleted features	None	None

4.2 Operation Change Description

None

4.3 Solved Issues

None

5 Related Documents and Delivery Method

Table 15 Related Document List

Manual Name	Manual Version	Delivery
Network Video Recorders Quick Guide	V1.00	Deliver with device.

6 Version Upgrade Guidance

6.1 Precautions

- This software system includes a software program mirror (Program.bin). Before you start upgrade, please back up configuration data through the system or Web interface in case the upgrade fails.

- Maintain proper network connection and power supply during the upgrade.

6.2 Upgrade Procedure

The version can be upgraded through the system interface and the Web interface, both support cloud upgrade.

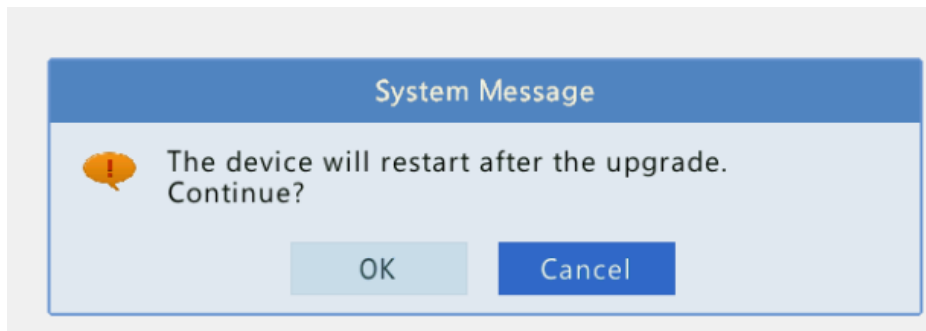## 6.3 Upgrade Through the System Interface

The system interface provides two options for upgrading the system software: local upgrade using a USB drive and cloud upgrade.

1. Local upgrade

Before you start, copy the correct upgrade file to the root directory of the USB drive.

(1)   Plug the USB drive into the USB interface on the NVR.

(2)   Log in to the system interface as "admin".

(3)   Click **Maintain** > **Upgrade**.

(4)   Click **Upgrade**, select the upgrade file from the drop-down list, and then click **Upgrade**. A prompt message appears.

(5)   Click **OK**.

Figure 1 Prompt Message

(6)   The NVR will restart automatically when the upgrade is completed.

2. Cloud upgrade

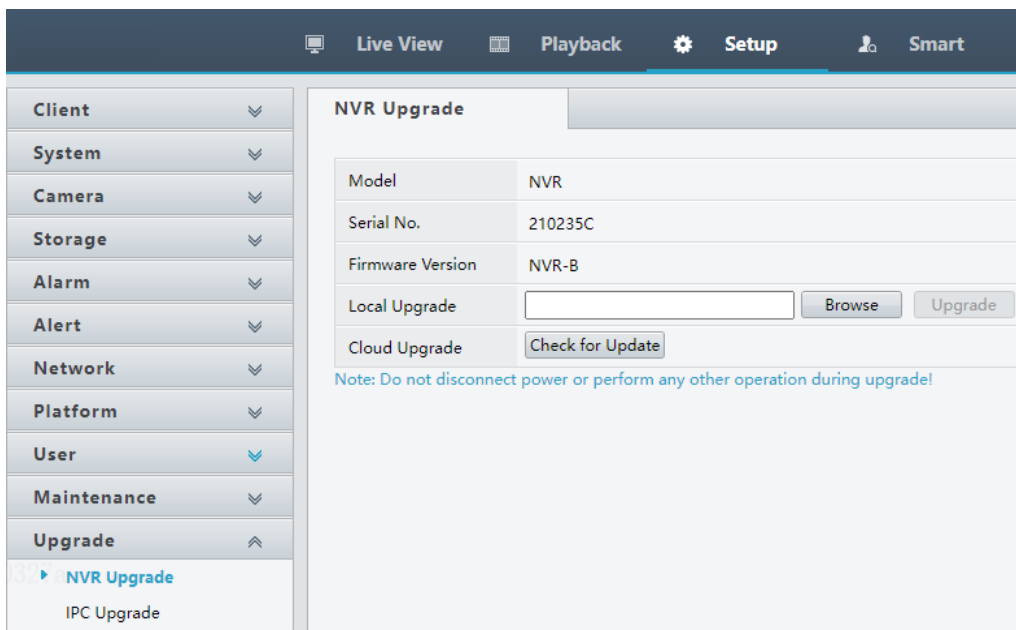Before you start, check that the NVR is correctly connected to the public network.

(1)   Click **Maintain** > **Upgrade**, and then click **Check** to check for the latest version.

(2)   Click **Upgrade** after a newer version is detected.

6.4 Upgrade Through the Web Interface

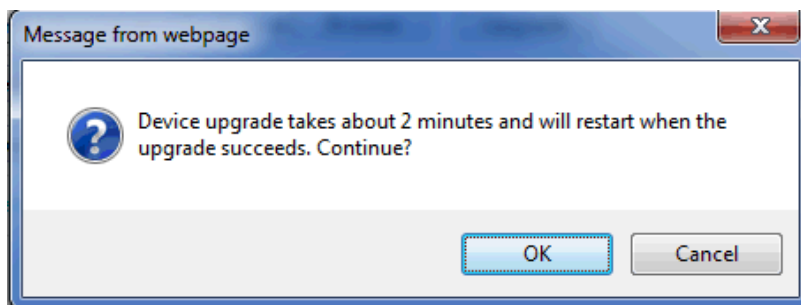Perform the following steps to upgrade through the Web interface:

(1)   Log in to the Web interface as "admin".

(2)   Click Upgrade > NVR Upgrade.

Figure 2 NVR Update

(3)   Click **Browse** right to the **Upgrade** field, select the **Program.bin** file to upgrade, and then click **Upgrade**.

(4)   If the NVR is connected to the public network, you may also click **Check** to perform a cloud upgrade. If a newer version is detected, a prompt message will appear. Click **OK** to start upgrade.

Figure 1 Prompt Message

(5)   The NVR will restart automatically when the upgrade is completed.

Version Upgrade Disclaimer

1. By setting or installing this program in any way you agree to all of the following terms and conditions. Your downloading or using the program means you acknowledge your full understanding and acceptance of the following terms and conditions. If you do not agree to any of the following terms, you shall not use the program and you must cease installing and delete the program immediately.

2. The upgrade program is only applicable to the intended regions and product models. Before upgrade or update, please read the release notes carefully to make sure the program is applicable to your region and product model. You will be fully liable and responsible for all the consequences of device abnormality and related maintenance costs caused by your improper operations.

3. Uniview owns or is legally authorized to own all rights and IPRs (Intellectual Property Rights) of the program and the supplied release notes.

4. Software upgrades are for the optimization of product functions and do not mean there is defect.

5. You must strictly follow instructions in the release notes during the upgrade process, otherwise you are responsible for the possible consequences and related maintenance costs.

6. You shall not engage in any of the following activities, otherwise you would be liable for infringement and responsible for any adverse consequences arising therefrom.

   6.1   Copy the program (exclude the reasonable and necessary copies for internal backups);

   6.2   Exclude this statement when using the program or transfer the program to any third party;

   6.3   Modify the program or its derivatives;

   6.4   Reverse engineer, decompile or disassemble this program.

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