

NVR-B5101.38.43.240126 Release Notes

Zhejiang Uniview Technologies Co., Ltd.

NVR-B5101.38.43.240126 Release Notes

Keywords: Version information, usage notes, precautions.

Abstract: This document provides information about the **NVR-B5101.38.43.240126** board software, including version information, usage notes, precautions, and features.

Acronym

| Acronym | Full Name |
|---------|------------------------|
| NVR | Network Video Recorder |

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1 Version Information

1.1 Version Number

NVR-B5101.38.43.240126

1.2 Applied Product Models

Table 1 Applied Product Models

| Product Models | Description |
|----------------|--|
| NVR516-64 | 16 slots, 64-ch, H.264/H.265 decompression, 4K ultra HD, RAID |
| NVR516-128 | 16 slots, 128-ch, H.264/H.265 decompression, 4K ultra HD, RAID |

1.3 Release History

Table 2 Released Versions

| Version No. | Basic Version No. | Released On |
|------------------------|------------------------|-------------|
| NVR-B5101.38.43.240126 | NVR-B5101.37.64.231016 | 2024-02-04 |
| NVR-B5101.37.64.231016 | NVR-B5101.37.61.230915 | 2023-10-16 |
| NVR-B5101.37.61.230915 | NVR-B5101.37.45.230825 | 2023-09-26 |
| NVR-B5101.37.45.230825 | NVR-B5101.37.44.230810 | 2023-08-25 |
| NVR-B5101.37.44.230810 | NVR-B5101.37.40.230614 | 2023-08-18 |
| NVR-B5101.37.40.230614 | NVR-B5101.37.35.230509 | 2023-06-14 |
| NVR-B5101.37.35.230509 | NVR-B5101.36.38.230411 | 2023-05-12 |
| NVR-B5101.36.38.230411 | NVR-B5101.36.33.230322 | 2023-04-20 |
| NVR-B5101.36.33.230322 | NVR-B5101.36.31.230214 | 2023-03-22 |
| NVR-B5101.36.31.230214 | NVR-B5101.36.28.230112 | 2023-02-14 |
| NVR-B5101.36.28.230112 | NVR-B5101.36.27.230105 | 2023-01-12 |
| NVR-B5101.36.27.230105 | NVR-B5101.36.18.221215 | 2023-01-05 |
| NVR-B5101.36.18.221215 | NVR-B5101.35.29.221116 | 2022-12-15 |
| NVR-B5101.35.29.221116 | NVR-B5101.35.27.221010 | 2022-11-16 |
| NVR-B5101.35.27.221010 | NVR-B5101.32.50.220920 | 2022-10-10 |
| NVR-B5101.32.50.220920 | NVR-B5101.32.43.220725 | 2022-09-20 |
| NVR-B5101.32.43.220725 | NVR-B5101.32.42.220706 | 2022-07-25 |
| NVR-B5101.32.42.220706 | NVR-B5101.32.35.220518 | 2022-07-06 |
| NVR-B5101.32.35.220518 | NVR-B5101.32.31.220427 | 2022-05-18 |
| NVR-B5101.32.31.220427 | NVR-B5101.31.57.220424 | 2022-04-27 |

| | | |
|------------------------|------------------------|------------|
| NVR-B5101.31.57.220424 | NVR-B5101.31.55.220402 | 2022-04-26 |
| NVR-B5101.31.55.220402 | NVR-B5101.31.52.220127 | 2022-04-12 |
| NVR-B5101.31.52.220127 | NVR-B5101.31.46.211227 | 2022-02-12 |
| NVR-B5101.31.46.211227 | NVR-B5101.31.31.211209 | 2021-12-29 |
| NVR-B5101.31.31.211209 | NVR-B5101.31.27.211105 | 2021-12-10 |
| NVR-B5101.31.27.211105 | NVR-B5101.29.78.210805 | 2021-11-09 |
| NVR-B5101.29.78.210805 | NVR-B5101.29.63.210628 | 2021-08-05 |
| NVR-B5101.29.63.210628 | NVR-B5101.29.52.210512 | 2021-06-28 |
| NVR-B5101.29.52.210512 | NVR-B5101.29.51.210420 | 2021-05-12 |
| NVR-B5101.29.51.210420 | NVR-B5101.29.48.210319 | 2021-04-20 |
| NVR-B5101.29.48.210319 | NVR-B5101.28.50.201120 | 2021-03-19 |
| NVR-B5101.28.50.201120 | NVR-B5101.28.45.200807 | 2020-11-20 |
| NVR-B5101.28.45.200807 | NVR-B5101.28.41.200723 | 2020-08-07 |
| NVR-B5101.28.41.200723 | NVR-B5101.28.36.200513 | 2020-07-23 |
| NVR-B5101.28.36.200513 | NVR-B5101.28.26.200319 | 2020-05-13 |
| NVR-B5101.28.26.200319 | NVR-B5101.28.20.200113 | 2020-03-19 |
| NVR-B5101.28.20.200113 | NVR-B5101.28.15.191223 | 2020-01-13 |
| NVR-B5101.28.15.191223 | NVR-B5101.27.50.191108 | 2019-12-23 |
| NVR-B5101.27.50.191108 | NVR-B5101.27.45.191015 | 2019-11-08 |
| NVR-B5101.27.45.191015 | NVR-B5101.27.40.190905 | 2019-10-15 |
| NVR-B5101.27.40.190905 | NVR-B5101.27.36.190817 | 2019-09-05 |
| NVR-B5101.27.36.190817 | NVR-B5101.27.35.190801 | 2019-08-17 |
| NVR-B5101.27.35.190801 | NVR-B5101.27.30.190712 | 2019-08-01 |
| NVR-B5101.27.30.190712 | NVR-B5101.27.25.190621 | 2019-07-12 |
| NVR-B5101.27.25.190621 | B5126P35 | 2019-06-21 |
| B5126P35 | B5126P30 | 2019-04-29 |
| B5126P30 | B5126P25 | 2019-04-02 |
| B5126P25 | B5126P23 | 2019-02-25 |
| B5126P23 | B5126P22 | 2018-12-26 |
| B5126P22 | B5126P11 | 2018-12-07 |
| B5126P11 | B5125P30 | 2018-10-22 |
| B5125P30 | B5125P27 | 2018-09-03 |
| B5125P27 | B5125P26 | 2018-07-26 |
| B5125P26 | B5125P22 | 2018-07-21 |
| B5125P22 | B5125P21 | 2018-07-26 |
| B5125P21 | B5125P10 | 2018-07-07 |

| | | |
|----------|-----------------|------------|
| B5125P10 | B5123P24 | 2018-05-22 |
| B5123P30 | B5123P24 | 2018-05-30 |
| B5123P24 | B5123P20 | 2018-04-24 |
| B5123P20 | B5122P31 | 2018-03-14 |
| B5122P31 | B5122P25 | 2017-11-28 |
| B5122P25 | B5122P10 | 2017-10-24 |
| B5122P10 | B5121P20 | 2017-08-21 |
| B5121P40 | B5121P20 | 2017-10-25 |
| B5121P20 | B5121P15 | 2017-06-14 |
| B5121P15 | B5119P76 | 2017-05-24 |
| B5119P76 | B5119P75 | 2017-05-03 |
| B5119P75 | B5119P65 | 2017-04-11 |
| B5119P65 | B5119P60 | 2017-02-20 |
| B5119P60 | B5117P45 | 2017-01-16 |
| B5117P45 | B5117P35 | 2016-11-18 |
| B5117P35 | B5117P29 | 2016-08-04 |
| B5117P29 | B5117P22 | 2016-07-19 |
| B5117P22 | Initial release | 2016-05-05 |

2 Usage Notes

None.

3 Software Features

Table 3 Software Features


| Service | Feature |
|--------------------------|---|
| Audio and video decoding | H.264/H.265 video compression, with a maximum of 1080P resolution and 8Mbps 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-B5101.38.43.240126 Feature Changes

| Item | Feature | Description |
|-------------|--------------------------------------|--|
| Newly added | Supports Onvif digest authentication | Supports digest authentication for third-party IPCs. In digest authentication mode, the third-party IPCs can connect the NVR |

| Item | Feature | Description |
|----------|--|--|
| features | | <p>successfully with all functions working properly.</p> <p>In digest authentication mode, the NVR can also successfully connect to the upper platform with all functions working properly.</p> |
| | <p>Uniview NVR cannot connect IPC with invalid serial numbers via the private protocol</p> | <p>Uniview NVR allows to connect Uniview IPC or IPC with valid serial numbers via the private protocol.</p> <p>Uniview NVR does not support connecting non-Uniview IPC or IPC with invalid serial numbers via the private protocol. Please select the correct protocol for IPC connection.</p> <p>Note: The non-brand NVR and OEM NVR are not subject to the strategy above.</p> |
| | <p>Allows to connect camera that supports plate license detection via the private protocol</p> | <p>The Plate Detection function bar is added on the VCA Config page, including Plate Detection and Plate Comparison. Plate Comparison is moved from the Vehicle Monitoring menu to the VCA Config page. The plate comparison is only available to the NVR-side analysis, while the plate detection is only available to the camera-side analysis. The camera can still be connected to NVR via the GA/T 1400 protocol.</p> <p>Connect the camera that supports plate license detection to the NVR via the LAPI protocol, and enable Plate Detection after the camera is online. The NVR will receive vehicle snapshots from the camera when an alarm occurs without configuring GA/T 1400 protocol parameters on the IPC and NVR's interfaces, easier for operation.</p> |
| | <p>Supports searching playback by motor vehicle, non-motor vehicle, and human body</p> | <p>On the Playback page of the local and Web interfaces, user can search recordings by objects including motor vehicle, non-motor vehicle, and human body, so as to quickly view the desired object recordings, improving the search efficiency. The object recordings are triggered by alarms such as smart intrusion prevention, UMD, human body, etc.</p> <p>Select any object of motor vehicle, non-motor vehicle, and human body, and the corresponding recordings will be shown green on the progress bar. Select Skip normal recording, and the playback page will only play recordings of the corresponding object.</p> <p>This function is only available to the single-channel playback, normal and corridor mode.</p> |
| | <p>Supports multiple languages for overseas devices</p> | <p>Supports changing other languages on the local interface (System > General > Basic Setup) and Web interface (System > Basic).</p> <p>When changing the system language, a pop-up prompt will be displayed to ask the user to restart the NVR.</p> |
| | <p>Supports panoramic linkage and calibration with dual-lens network PTZ camera</p> | <p>When the connected camera is capable of panoramic linkage, the following functions are available on the NVR: enabling/disabling linkage, auto calibration, and manual calibration on the image of the dual-lens network PTZ camera.</p> <p>Go to Camera > Panoramic Linkage, and configure the function. Panoramic Linkage is enabled by default. Click Auto Calibration, and start calibration: (1. Adjust the panoramic image to the desired position; 2. Start auto calibration, and the calibration progress will be shown). After completing calibration of 6 points, the coordinates parameters will be shown in the list. Click any coordinate, and the close-up image shows the clicked point at the image center. To change the coordinate, you can adjust the PTZ parameters, and then click  to save the settings.</p> <p>On the VCA Config page of the bullet camera's channel, select a smart intrusion prevention function, and enter the Trigger Actions page. The Panoramic Linkage is added under Camera Linkage. After enabling it, the panoramic linkage will be triggered when a smart intrusion prevention alarm occurs.</p> |

| Item | Feature | Description |
|--------------------|---|---|
| | | NVR currently only supports automatic calibration and manually editing the calibration parameters. |
| | Allows to connect UMD-enabled IPCs that support day/night mode of alarm sound/light | NVR can connect UMD-enabled IPCs that support alarm sound/light and arming schedule. User can choose day/night mode or custom mode on the alarm sound/light configuration page, and configure the arming schedule. This function requires camera support. |
| | Allows to connect camera-side smart intrusion prevention and UMD-enabled IPC to collect object attributes | NVR can connect IPCs that support object attributes by camera-side smart intrusion prevention and UMD. The NVR will receive and store images and object attributes (motor vehicle, non-motor vehicle, and human body) from IPC, and the VCA search results will show the detail attributes. On the Human Body Search page, Upper Garment Color and Lower Garment Color are added on the Basic Attributes.,and on the Non-Motor Vehicle Search page, Upper Garment Color is added on the Basic Attributes, which allows user to search images by these new attributes. This function requires camera support. |
| | Allows to configure UMD for dual-lens cameras | NVR supports configuring UMD for dual-lens cameras. When NVR connects dual-lens cameras that support UMD, the following functions are available: parameters configuration, alarms receiving and storage, smart search, and results display. |
| | XVR cannot connect to NVR via the private protocol | NVR allows for connecting XVRs via the Onvif or RTSP protocol. The private protocol is not allowed. |
| | Supports connecting the upper platform via the LAPI protocol | NVR can connect the upper platform with the LAPI protocol, and the following functions are available: uploading images and data (from face recognition, SIP, behavior analysis, thermal imaging SIP & temperature detection, object detection, multi-target detection, and plate detection), adding/deleting/editing/searching face library image, searching face image by image, and reporting people counting data. The final results as alarms or events depend on the upper platform. The thermal imaging SIP & temperature detection, and plate detection are camera-side analysis, which requires camera support. The supported alarms and events may vary with device models. |
| | Supports adding NAS disk via the domain name | NVR allows to add NAS disks from the public network via the SMB/CIFS protocol and IP address or domain name. The NAS disks can store and back up recordings and snapshots. Supports formatting NAS disks. |
| Optimized features | Merges NVR disarming and IPC disarming into one-key disarming | NVR Disarming and IPC Disarming tabs are merged to the One-Key Disarming tab. Alarm sound and alarm light are added to IPC disarming actions. The configured disarming mode and actions will be synced to the selected IPCs. When an alarm occurs, the disarming actions will not be triggered during the disarming schedule. Alarm Output is added to the one-key disarming actions. The linked channel configuration of Disarm by Switch is deleted from the Alarm Input tab. The one-key disarming tab can configure alarm output and select corresponding NVR and IPC channels. When an alarm occurs, the alarm devices (eg, alarm light) connected to the corresponding alarm output interfaces will not be on. |
| | One-key disarming and alarm-triggered | Push Alarm is added on the alarm-triggered actions and enabled by default. The NVR will push alarm to its upper platform and app |

| Item | Feature | Description |
|------|---|---|
| | actions support Push Alarm | when an alarm occurs. Push Alarm is added on the one-key disarming actions and disabled by default. When enabled, the NVR will not push alarm to its upper platform and app during the disarming schedule if an alarm occurs. |
| | Send Email allows to send alarm information and snapshot to the email | The NVR will send an email attached with snapshot(s) to the recipient's email when an alarm occurs. In the previous version, the NVR will send two emails when an alarm occurs, including the first email without snapshot and the second email with snapshot. This is optimized in this version. |
| | Allows to send three snapshots to email address(es) of the smart intrusion prevention alarm | After selecting Send Email of smart intrusion prevention alarm-triggered actions, the NVR will send three snapshots occurring before an alarm, during an alarm, and after an alarm to the corresponding email address(es). |
| | The local interface supports drawing the detection area of VCA functions in full screen | On the VCA function configuration page of the local interface, select a detection rule and click the Draw icon, and then the live view will show the full screen, where you can draw detection area(s), easy and accurate. Right-click can exit the full screen. |
| | Merges VCA Search and Backup menus | VCA Search and Backup menus are merged into Search , a newly added menu. Recording and Image are moved to from the menu Backup to Search , and changed to Video and Picture separately. For VCA Search of the previous version, Human Body Search , Face Snapshot Search , Face Comparison Search tabs are merged into the Person menu (Menu > Search > Object > Person), the Motor Vehicle Search tab is moved at Menu > Search > Object > Motor Vehicle > Motor Vehicle Search , the Non-Motor Vehicle Search is moved at Menu > Search > Object > Non-Motor Vehicle > Non-Motor Vehicle Search , the General Search tab is changed to Event , and People Counting Report is changed to Statistics . |
| | Improved layout of VCA functions | On the VCA Config page, VCA functions are re-arranged from top to bottom: Smart Intrusion Prevention, Face Recognition, Object Detection, People Counting, Plate Detection, Temperature Detection, and Exception Detection & Statistics. Functions that are unavailable to the device are hidden. |
| | Supports linear stripe suppression and smart white light | NVR can connect IPCs that support smart white light. After the IPC is online, Smart White Light can be selected from the Illumination Mode drop-down list. When enabled, the illumination light will reach the highest intensity when an alarm occurs at night, and it will restore to original intensity after the alarm ends, reducing light pollution. NVR can connect IPCs that support linear stripe suppression. After the IPC is online, the Linear Stripe Suppression item can be configured on the Exposure tab. Adjust it to a suitable level for removing stripe when the exposure mode is set to indoor 50Hz or 60Hz. This function requires camera support. |
| | Supports WDR smart or automatic mode | NVR can connect IPCs that support WDR smart or automatic mode. After the IPC is online, Smart or Automatic can be selected from the WDR drop-down list. When enabled, Linear Stripe Suppression and WDR On/Off Sensitivity are allowed to configure. This function requires camera support. |
| | Supports face | NVR allows to connect IPCs that support face metering. When the |

| Item | Feature | Description |
|------|--|--|
| | metering | IPC is online, Face Metering can be selected from the Metering Control drop-down list, and can be synced to IPC. |
| | Improved playback page on the local interface | <ol style="list-style-type: none"> 1. On the playback page, playback and video retrieval toolbars on the left side are arranged from up-to-down to left-to-right, convenient for operation. 2. Adjusts the layout of playback toolbar at the bottom of the playback page. |
| | Improved local interface | <ol style="list-style-type: none"> 1. The camera list page is optimized. Multiple operation buttons are merged, for example, the Default operation is moved from the Advanced tab (Menu > Camera > Camera > Advanced) to the Camera tab. 2. Encoding and Audio tabs are moved to the Audio & Video menu. 3. OSD, Content, Image, and Privacy Mask tabs are moved to the Configuration menu. 4. The Snapshot Type tab is moved from the Camera menu to the Snapshot Schedule menu, as a same-level tab with Configure Snapshot Schedule. 5. Basic, Time, Time Sync, DST, and Holiday tabs are moved to the General menu (Menu > System > General). 6. Serial, Hot Spare, and Unit tabs are moved to the Advanced menu (Menu > System > Advanced). 7. Restore, Auto-Function, and System Backup tabs are moved to the Maintenance menu (Menu > Maintenance > Maintenance > Maintenance). 8. Privacy Policy and Open Source Notices tabs are moved to the Basic Info tab. |
| | Adds a Close button on the login page of the local interface. | A Close button is added on the Login page of the local interface. |
| | Optimized policy of NVR password syncing to IPC | On the Change Password page, Sync to Camera is disabled by default. If you change the NVR password and then enable Sync to Camera , a dialog box will be displayed for prompt. |
| | 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 appears to ask the user to re-start the NVR. After startup, the video will be forced to output on the local interface via the HDMI port. |
| | Optimized time sync mode | On the Time page of local and Web interfaces, the Time Sync Mode item is added, including Disable Sync , Sync with NTP Server , and Sync with Cloud Server . It is Disable Sync by default. |
| | Optimized prompt of no hard disk | <p>After the NVR starts up, the system will automatically detect available hard disks. A dialog box will appear if no disk is detected within 30s, and the detection will continue for 2 minutes. If a hard disk is detected during the 2 minutes, the dialog box will disappear; otherwise, user needs to close it manually.</p> <p>Select Don't remind me again, and then the dialog box will not appear after next startup. If the NVR restores to default settings, the dialog box will appear when no disk is detected.</p> |
| | Disabled UPnP by default | UPnP is disabled by default when the system is in factory configuration mode. |
| | Changed the alarm names of Smoke and Fire Detection | The alarm names of Smoke and Fire Detection and Temperature Detection are changed to Fume Alarm and Abnormal Temperature Alarm respectively. |

| Item | Feature | Description |
|------------------|--|---|
| | and Temperature Detection | |
| | Changes Uniview protocol name to Private | When IPCs are added to NVR via our company's protocol, the protocol name is changed from Uniview to Private . |
| | Disabled Force Sending I Frame by default. | The Force Sending I Frame item on the Web's hidden interface is disabled by default. |
| | Improved default user on the local interface | For the default user, the user type is changed from Reserved User to Local Preview User , and the user description is added, "Note: By default, the default user can only view live video on the local interface without logging in". |
| | Improved expression | Upstream Management is changed to Streaming Management . Valid Period is changed to Validity Period ; Set Valid Period is changed to Set Validity Period . Delete on the EZCloud tab of the Web's interface is changed to Logout . |
| | Supports uploading LPR information to VMS via the private protocol | NVR can connect to VMS via the LAPI protocol, and upload LPR alarms and snapshots. |
| | Optimized prompts for retrieving the password | Before modification: The path to retrieve the password on the app is difficult to find, and it may vary among different apps. After modification: Click Forgot Password on the NVR's login page of the local or Web interface, then the QR code appears. You can scan the code with app to retrieve the password. |
| | Optimized plate template | After you export the plate template to the PC and edit the csv file, the file contents are correct in format and the file can be successfully imported to the NVR. |
| Deleted features | Deleted the Backup menu, and the VCA Search menu on the VCA page | The Backup and VCA Search menus are merged to the Search menu. See "Merges VCA Search and Backup menus" for details. |
| | Deleted NVR Disarming and IPC Disarming tabs | See "Merges NVR disarming and IPC disarming into one-key disarming" for details. |
| | Deleted disarming channel configuration of Disarm by Switch | The linked channel configuration of Disarm by Switch is moved from Alarm Input to One-Key Disarming. See "Merges NVR disarming and IPC disarming into one-key disarming" for details. |
| | Deleted the Vehicle Monitoring menu and the Vehicle Alarm Monitoring tab | The Vehicle Monitoring menu is changed to Plate List , and the Vehicle Alarm Monitoring tab is changed to Plate Comparison and moved to the VCA Config page. |
| | Deleted auto update item of the Time tab. | The auto update item is changed to Sync NTP Server under the Time Sync Mode item. See "Optimized time sync mode" for details. |

Table 5 NVR-B5101.37.61.230915 Feature Changes

| Item | Feature | Description |
|-------------|---|---|
| Newly added | Supports connecting the newly-developed network | 16-HDD or 24-HDD NVRs can connect to the network storage disk |




| Item | Feature | Description |
|-------------------|-----------------------------------|--|
| features | storage disk enclosure(DEU1016-B) | enclosure (DEU1016-B) through the miniSAS expansion interface. |
| Improved features | | |
| Deleted features | | |

Table 6 NVR-B5101.37.44.230810 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. |
| Improved features | | |
| Deleted features | | |

Table 7 NVR-B5101.37.35.230509 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 monitoring | When the connected camera is capable of traffic monitoring, the 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. |
| | 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 |

| Item | Feature | Description |
|------|--|---|
| | | <p>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.</p> <p>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.</p> <p>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).</p> |
| | <p>NVR supports sending an email with alarm information to the specified email address(es) when an alarm occurs.</p> | <p>NVR can send an email with alarm information to the specified recipient(s), avoiding frequent alarm information push to all email addresses.</p> <p>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.</p> |
| | <p>The local interface supports overlay multi-line characters on the preview page.</p> | <p>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.</p> |
| | <p>Allows to configure arming schedule and day/night mode for IPC that supports alarm sound/light for human body detection.</p> | <p>For cameras that support human body detection and sound/light alarm schedules: user can configure an arming schedule for sound and light alarms.</p> <p>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.</p> <p>This function requires camera support.</p> |
| | <p>NVR supports configuring alarm sound/light for auto-tracking dome cameras.</p> | <p>Connecting the auto-tracking dome cameras that support sound and 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.</p> |
| | <p>Supports rapidly disarming IPC actions on NVR</p> | <p>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).</p> <p> is added on the window toolbar to disarm IPC actions. This function requires camera support and is currently applicable to elevator detection alarms.</p> |
| | <p>The Web interface adds streaming management function.</p> | <p>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.</p> |
| | <p>The local interface supports displaying passwords of online IPCs.</p> | <p>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.</p> |
| | <p>A small eye icon is added on the password input pages of the local interface, and the password can be displayed in clear text by clicking the icon.</p> | <p>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.</p> |
| | <p>Supports 16MP IPCs</p> | <p>NVR can connect 16MP IPCs via the Uniview protocol and realize</p> |

| Item | Feature | Description |
|--------------------|---|---|
| | | <p>functions including live view, playback, two-way audio, alarm and VCA.</p> <p>On the local interface, 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.</p> |
| | 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 | <ul style="list-style-type: none"> ● 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. |
| | Supports connecting the newly-developed network storage disk enclosure(DE-S116-B) | 16-HDD or 24-HDD NVRs can connect to the network storage disk enclosure (DE-S116-B) through the miniSAS expansion interface. |
| Optimized features | Supports magnifying the video of VCA search on the local interface | <p>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 the right window. The magnified window plays the video on the left, and displays the event details and object properties on the right.</p> <p>The video cannot be magnified if the search results are shown in list mode.</p> |
| | Optimized default alarm policy of NVR after access IPC | <p>For detection switch:</p> <ul style="list-style-type: none"> ● 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. <p>For detection rules:</p> <ul style="list-style-type: none"> ● 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. |

| Item | Feature | Description |
|------|--|--|
| | | <ul style="list-style-type: none"> ● Video loss does not support detection rule configuration. <p>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.</p> <p>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.</p> |
| | Improved layout of setup on the Web interface | <p>The Disk menu is changed to Storage.</p> <p>Deleted the Schedule tab, and Recording Schedule and Snapshot Schedule tabs are moved to the Storage menu.</p> <p>Motion Detection, Tampering Detection, Human Body Detection, Video Loss and Audio Detection tabs are moved from the Camera menu to Alarm.</p> <p>The order of the Network Info tab on the Maintenance menu is adjusted to the first.</p> |
| | Supports copying capture mode to other camera(s) | <p>On the Encoding page, the capture mode is added on the copy page and can be copied to other camera(s).</p> <p>The cameras that connect to the NVR via the Onvif, GB28181 and custom protocol do not support this feature.</p> |
| | Optimized the usability of VCA functions | <ul style="list-style-type: none"> ● 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 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 | <p>NVR supports setting a validity period for license plates in the plate library.</p> <p>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.</p> <p>The validity period of the plate can be only set manually on the interface, and does not support import and export.</p> |
| | Supports NVR local upgrade via EZCloud | <p>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.</p> <p>Make sure that at least one hard disk is available on the NVR for local upgrade.</p> |
| | The camera name is added in the exported people counting report | <p>The camera name is added in the exported report from the People Counting Report page of VCA search.</p> |



| Item | Feature | Description |
|------------------|--|---|
| | 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 page | Face Recognition , Vehicle Recognition and Perimeter tabs are moved to the Alarm Subscription tab. See “Improved layout of smart display configuration” for details. |
| | 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 8 NVR-B5101.36.38.230411 Feature Changes

| Item | Feature | Description |
|----------------------|-----------------------------|--|
| Newly added features | | |
| Improved features | Optimized UMD configuration | Moved UMD configuration from <VCA Config> to <Motion> Interface, and the Motion and UMD configuration pages are combined There are Motion and Ultra Motion modes, and only one can be turned on at the same time. After the front-end UMD camera is connected, NVR supports drawing areas, configures sound and light alarm linkage, and |

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| | | <p>configures targets (motor vehicles, non-motor vehicles, pedestrians) in NVR side</p> <p>UMD detection is divided into front-end analysis and back-end analysis, if NVR supports back-end analysis such as (NVR302-E2-IQ), NVR Side Analysis highlighting, if the camera supports UMD analysis, Camera Side Analysis highlights after access</p> <p>UMD position in playback interface is moved from the VCA to Motion</p> |
| 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 9 NVR-B5101.36.28.230112 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 10 NVR-B5101.36.27.230105 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 11 NVR-B5101.36.18.221215 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 monostable IPC 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 | Added the “let through” action on the Vehicle Monitoring page |

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|-------------------|---|---|
| | barrier | 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. |
| | Optimized people present alarm UI | <p>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.</p> <p>(Configuration page:</p> <p>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.</p> <p>2、 Allows user to choose to reset the number of people present automatically or manually.</p> <p>Both local and web clients support people present alarm configuration.)</p> <p>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.</p> |
| Improved features | Supports configuring alarm sound & light for IPCs that support perimeter protection | <p>User can configure front-end alarm sound & light for IPCs that support perimeter protection.</p> <p>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).</p> |
| | 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 | <p>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.</p> <p>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.</p> <p>Smart preview: Face and perimeter images are not stretched; The images on the left are the same as the image details on the right.</p> |
| | 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. |
| | Relocated custom | Custom route configuration is moved to the Network tab on the |

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| | route configuration | 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 12 NVR-B5101.35.27.221010 Feature Changes

| Item | Feature | Description |
|----------------------|--|---|
| Newly added features | 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. <ul style="list-style-type: none"> ● 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. |
| | | |
| Improved features | 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 | 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. |

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| | perimeter protection | |
| | | |
| Deleted features | | |

Table 13 NVR-B5101.32.31.220427 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 test and packet capture | Separated Packet Capture from the Network Test tab. Two 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 | 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. |

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| | local interface | |
| | Optimized the layout of People Counting Report | The People Counting Report is moved to the VCA Search tab. |
| | Changed <i>Target Type</i> to <i>Object Type</i> | The <i>Target Type</i> is changed to <i>Object Type</i> . |
| | 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. |
| 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 14 NVR-B5101.31.27.211105 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 | Dahua IPC activation | NVR can activate Dahua IPC automatically. |
| | Searching face library by modeling status | Allows user to search a face library for face images that failed modeling. |
| | Added alarm input | The alarm input page added the configuration of alarm input channel |

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|------------------|---|--|
| | channel name | 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 | | |

Table 15 NVR-B5101.29.48.210319 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. |
| | Change IPC password | Support changing the password of IPC in batches. Support changing the password of IPC when changing the password of NVR. |
| | USB wireless network adapter | Support connecting USB wireless network adapter. |
| | POS | Support POS OSD in playback on the Web interface. |
| | 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. |
| | 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 | 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. |
| | 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 VIID upstream performance | The speed of image uploading via VIID reaches 60 images per second. |
| | 256 bytes for RTSP | Supports 256-byte RTSP URL. |
| Deleted | Mask detection | Support alarm and configuration of mask detection cameras. |

| Item | Feature | Description |
|----------|--------------------------|--|
| features | LPR | Add license plate recognition display page. |
| | Face recognition | Support adding face snapshots to face library. |
| | LPR | Whitelist/blacklist vehicle plate recognition. |
| | GA/T1400 | Upload face & plate snapshots to VMS. |
| | Video&Image (Phase 1) DB | Vehicle license plate recognition and search. |

Table 16 NVR-B5101.28.26.200319 Feature Changes

| Item | Feature | Description |
|----------------------|----------------|--|
| Newly added features | Mask detection | Support alarm and configuration of mask detection cameras. |
| Improved features | None | None. |
| Deleted features | None | None. |

Table 17 NVR-B5101.28.15.191223 Feature Changes

| Item | Feature | Description |
|----------------------|--|---|
| Newly added features | 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. |
| Improved features | 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. |
| Deleted features | None | None. |

Table 18 NVR-B5101.27.25.190621 Feature Changes

| Item | Feature | Description |
|----------------------|-----------------------------|---|
| Newly added features | 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. |
| | LPR | Add license plate recognition display page. |
| | New local interface | New local GUI; New interaction design in wizard, channel configuration, |

| Item | Feature | Description |
|-------------------|--|---|
| | | playback and VCA. |
| Improved features | 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. |
| | Face recognition | Support adding face snapshots to face library. |
| Deleted features | None | None. |

Table 19 B5126P23 Feature Changes

| Item | Feature | Description |
|----------------------|---------|-------------------------|
| Newly added features | None | None |
| Improved features | None | None |
| Deleted features | 3G/4G | Support 3G/4G SIM card. |

Table 20 B5126P11 Feature Changes

| Item | Feature | Description |
|----------------------|----------------------------------|--|
| Newly added features | Heat map | Support heatmap statistics and export. |
| | GA/T1400 | Upload face & plate snapshots to VMS. |
| | Add device without account | Scan to add NVR on app without cloud account. |
| | Onvif | Support Profile S. |
| | Pattern unlock | Support drawing pattern to unlock. |
| | Alarm push notification | Push alarm notification traversing NAT. |
| | Web maintenance | Add net detection & network flow. |
| | Auto add IPC | Automatic search and add IPC for 1-SATA NVR with zero configuration. |
| | GDPR | Add GDPR privacy statement. |
| Improved features | Improved PTZ presets | Configurable PTZ preset name. |
| | Improved live view startup speed | IPC live view starts up quickly. |
| Deleted features | None | None. |

Table 21 B5125P10 Feature Changes

| Item | Feature | Description |
|-------------------|---------------------------|--|
| New features | Video&Image DB (Phase 1) | Vehicle license plate recognition and search. |
| | Alarm report | Alarm report in non-subscribe mode, with configuration added on local interface. |
| | Multicast | Add uplink RTSP multicast function |
| Improved features | U-Code | U-Code configuration for sub and third streams. |
| | VCA alarm | Added object left behind and removal alarms |
| | APP collaboration | Improves image display speed on APP. |
| | Playback | Supports 32x playback on VMS-B200 |
| | CDN (RTMP) | Added channel-based CDN configuration |
| | Prompt to change password | Added a message prompting user to change temporary password |
| | Device connection | Supports adding channels in batch via RTSP |
| Deleted features | None | None |

Table 22 B5123P20 Feature Changes

| Item | Feature | Description |
|-------------------|-------------------------------------|--|
| New features | Add IPC across Internet | Add IPCs to the NVR across the Internet. |
| | SNMP | System time obtainable. |
| | Decoding card | Use decoding card for image stitching on multiple screens. |
| Improved features | Improved diagnostic info collection | Support the backup of IPC logs on NVR. |
| | Alert configuration | Added two alert types: array degrade and array damaged. |
| | Alarm window | Displays alarm status with two tabs and added multiple alarm types. |
| | Web recording download | Include recording start and end times in filenames for easier differentiation. |
| | Maintenance info collection | Added network bandwidth statistics on the Web. |
| | Decoding card | Play third-party H.265 video. |
| Deleted features | None | None |

Table 23 B5122P10 Feature Changes

| Item | Feature | Description |
|--------------|--|--|
| New features | USB connected burner | Connect to an external USB burner to burn recordings to a disc. Supported by some models only. |
| | Fisheye (phase III) | Add dewarping function for 5 Series and marking function for 3 Series. |
| | Connection to new 4K fisheye camera models | Connectable with certain new models of 4K fisheye cameras and supports back-end dewarping. |
| Improved | TLS/SSL | Achieves complete SSL/TLS encryption. |

| Item | Feature | Description |
|------------------|--------------------------|---|
| features | Maintenance storage info | Save space by saving maintenance logs to hard disks. |
| | IPC upgrade by cloud | Adds a Check button (to check for update) and displays latest version info. |
| | 3G/4G | Adds custom mode for access points. |
| | Playback | Allows user to choose third stream for playback. |
| | Alarm triggered preview | Supports multi-window display for alarm-triggered preview. |
| | N+1 function | Supports IPC connected by RTSP. |
| | Parameter configuration | Increases image quality levels from 6 to 9. |
| | Password policy | Added an enable/disable setting and changed some policy. |
| Deleted features | None | None |

Table 24 B5121P15 Feature Changes

| Item | Feature | Description |
|-------------------|-------------------------------------|--|
| New features | Zoom In | Supports zooming in on certain area of certain camera. |
| | Thumbnail View | The corresponding thumbnail view appears by clicking the progress bar. |
| | Snapshot Playback | Supports playback of snapshots stored on device. |
| | Snapshot Preview | Supports preview of selected snapshots. |
| | Smart Search | Supports preview and playing of VCA recordings. |
| | High Temperature Alarm | Triggers alarm if the temperature of CPU or motherboard is too high. |
| | Defocus Detection | Determines whether the camera is defocused, and if so triggers alarm. |
| | Scene Change | Determines whether the scene is changed, and if so triggers alarm. |
| | Auto Tracking | Supports auto tracking of moving objects with IP cameras supporting this function. |
| | People Counting of Multiple Cameras | Displays people counting data of multiple cameras together. |
| | People Counting OSD | Displays people counting data by OSD in real time. |
| | Sort Camera | Supports changing sequence of selected cameras in camera list. |
| Improved features | Watermark | Supports custom encryption of video data with compatible IP cameras and EZPlayer, to avoid video info deletion and modification. |
| | Optimized H.265 compatibility | Supports third-party H.265 IP camera connecting to Uniview NVR through ONVIF. |
| | Log Export Format | The default format of exported logs is changed from TXT to CSV. |
| | Auto-Delete File(s) | Adds auto-delete file(s) configuration on Web client. |
| | Admin Management | Supports admin to force guest offline. |
| | Diagnostic Information | Adds basic information of IP camera to exported diagnostic information. |
| | Network Setting | Supports auto-completion of subnet mask when setting network address. |

| Item | Feature | Description |
|------------------|------------------------------------|--|
| | Quick Match for Camera List | Supports input selection and fuzzy matching for camera list. |
| | Professional Surveillance Keyboard | 1. Supports selecting camera and date for playback. 2. Supports patrol and route. |
| | eSATA | Supports backup and storage on NVR308-16E, NVR308-32E, NVR308-64E, NVR308-32R, NVR308-64R, NVR516-64 and NVR516-128. |
| Deleted features | None | None |

Table 25 B5119P60 Feature Changes

| Item | Feature | Description |
|-------------------|---|--|
| New features | U-Code | U-Code is a patented technology of Uniview that accomplishes higher compression efficiency than H.264/H.265. |
| | NAS | Supports NAS storage device. |
| | Auto guard | Enables the PTZ camera to operate automatically as configured if no operation is performed during a certain time period. This function can avoid situations where the camera is left to monitor an incorrect scene by user's negligence. |
| | Multicast | Makes live view possible even when the number of connecting Web clients exceeds the limit the NVR can accommodate. |
| | USB Device window | Automatically displays the window when a USB storage device is plugged in during device startup or in preview status. The window can also be opened by clicking the USB icon on the screen toolbar. |
| | VCA | Work with smart IPC to achieve VCA functions (smart detection and smart search), enhanced playback by event. |
| | RTSP-based connection to IPC | Adds IPC by RTSP for live view and playback (IPC configuration not supported). |
| | RTSP URL format on screen | Displays RTSP URL format and a description, and users can view live video from a channel of the NVR by visiting the corresponding URL using an RTSP-enabled device. |
| | IPv6 | Supports IPv6 and offers three options to set an IPv6 address: Manual, DHCP, Router Advertisement. |
| Improved features | Integrated port | Integrates multiple ports (HTTP port, ONVIF port, Media port, and SDK port) into one HTTP port. |
| | Uniview logo | Displays Uniview logo in idle preview windows. This feature is only available to Uniview version. |
| | Auto switch to | Automatically switches to H.265 and U-Code when connected by Uniview IPC and sends default bitrate settings to IPC. |
| | Copy video compression and U-Code settings | Allows user to copy video compression and U-Code settings and quickly apply them to other IPCs. |
| | Draw schedules | Allows users to make recording and snapshot schedules by drawing. |
| | Instant playback | Instant playback time is now configurable. |
| | Mouse operation | Allows user to adjust the moving speed of mouse pointer. |
| | IPC upgrade | Upgrade a batch of IPCs by cloud or USB storage device. |
| Preview | Live view window's yellow borders disappear automatically in 20 seconds if no operation is performed. | |

| Item | Feature | Description |
|------------------|--|---|
| | Snapshot | The window borders flash white when taking a snapshot during live view or playback. |
| | Resolution | Restore default resolution by pressing and holding the scroll wheel for at least 3 seconds. |
| | DHCP | DHCP is enabled by default for international versions. |
| | Playback by tag | Allows playback by tag on Web client. |
| | Quick view of serial number | View the device's serial number by double-clicking the lower left corner of the login dialog box as admin. |
| | Improved encoding configuration | Automatically refreshes encoding configurations; automatically changes bit rate as the user changes resolution and frame rate. |
| | One-click cancellation of binding to EZCloud | Allows the user to cancel binding to EZCloud account by clicking the Delete button without visiting the EZCloud website. |
| | Enhanced ease of use | Displays device operation time, camera offline cause, a system message when the USB storage device is unplugged, and added the Camera Name column under Advanced. |
| | Enhanced corridor mode | Added 4/9/10/12/16 corridor modes on the system interface. |
| | Added OSD configurations | Added font color and size options for OSD configuration. |
| | Optimized playback | Supports reverse playback; max. 256x playback speed on the system interface, and 16x playback speed on the web interface; with apparently improved fluency at low playback speed. |
| | Optimized alarm-triggered preview | Changes alarm-triggered preview from "sequence display three times" to "display from alarm is reported till alarm is cleared." |
| Deleted features | None | None |

Table 26 B5117P45 Feature Changes

| Item | Feature | Description |
|------------------|---------------|---------------------------------|
| New feature | Decoding card | The NVR supports decoding card. |
| Improved feature | None | None |
| Deleted feature | None | None |

4.2 Operation Change Description

None.

5 Related Documents and Delivery Method

Table 27 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.
- The user program file Program.bin can not be renamed to another name, otherwise, MMI process will not be upgraded successfully.

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

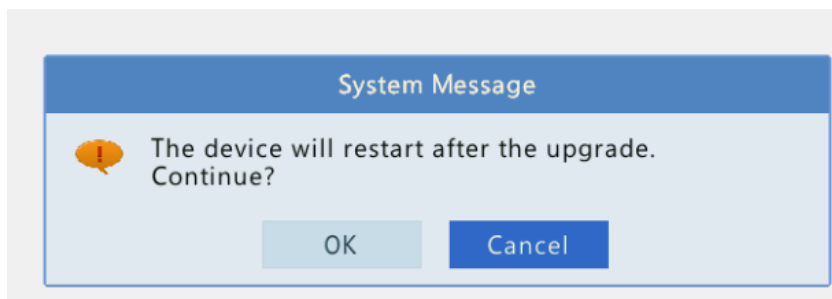
The system interface provides two options for upgrading the system software: local upgrade using a USB drive and cloud upgrade.

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 **Maintenance > System Upgrade > NVR Upgrade**.
- (4) Choose **Local 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 **Maintenance > System Upgrade > NVR Upgrade**, and then click **Check** to check for the latest version.

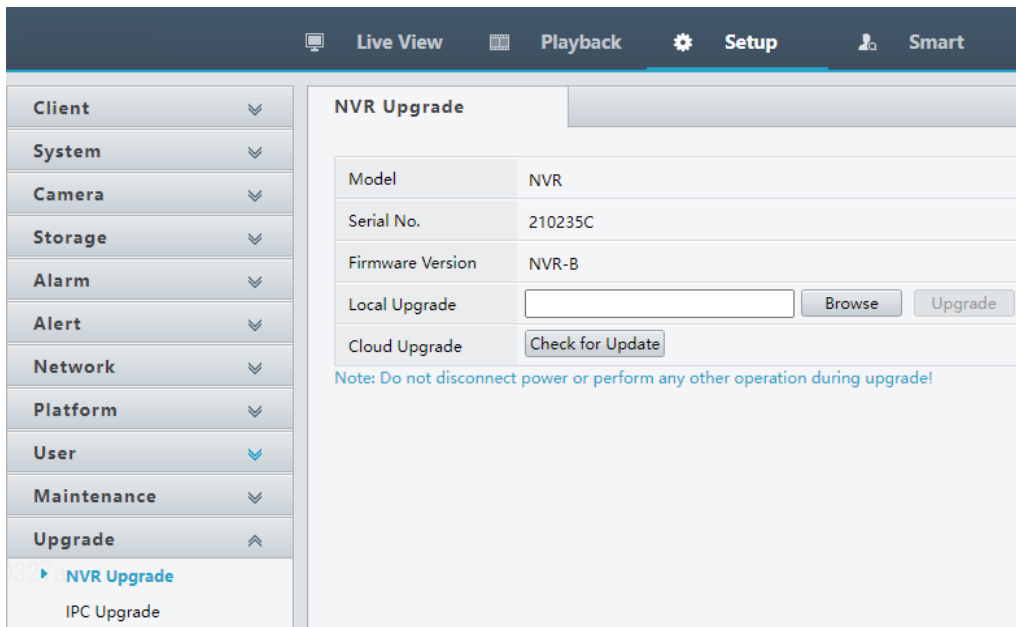
- (2) Click **Upgrade** after a newer version is detected.

6.4 Upgrade Through the Web Interface

Perform the following steps to upgrade through the Web interface:

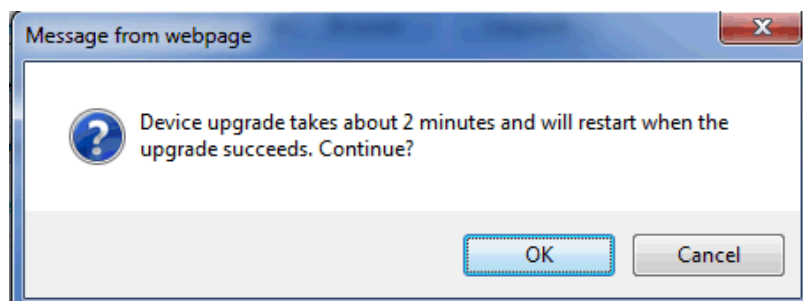
- (1) Log in to the Web interface as “admin”.
- (2) Click **Upgrade > NVR Upgrade**.

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 3 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.
7. The program is only intended for authorized users. Its architecture, organization and source code are valuable trade secrets and confidential information owned by Uniview and its authorized parties. You agree not to provide or disclose any confidential information contained in or derived from the software to any third party. No part of this document may be excerpted, reproduced, or distributed in any form by any entity or individual without written consent from our company.