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Luma x20 Resources

Pro Tip: Force a refresh on this page periodically to ensure the latest version loads.

Pro Tip: **OvrC now provides extensive surveillance functionality**—take a look at what we've done to make your life easier!

Use the index to navigate to the user guides, or click a resource below:



[Install Guides](#)



[Quick Start Using OvrC](#)



[Luma in Tech
Community](#)

Tech Support FAQs

These are the most common calls that Tech Support gets from technicians in the field.

Pro Tip: You must first claim your NVR and cameras in OvrC and update all firmware before setting up the system.

Pro Tip: Most configuration can be handled quickly and easily through OvrC. See the OvrC Quick Start for details.

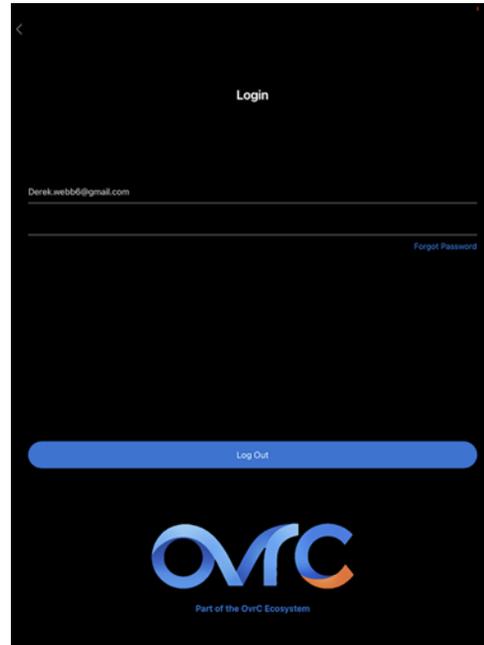
[Setting up a Luma x10 with a Luma x20 \(Tech Community\)](#).

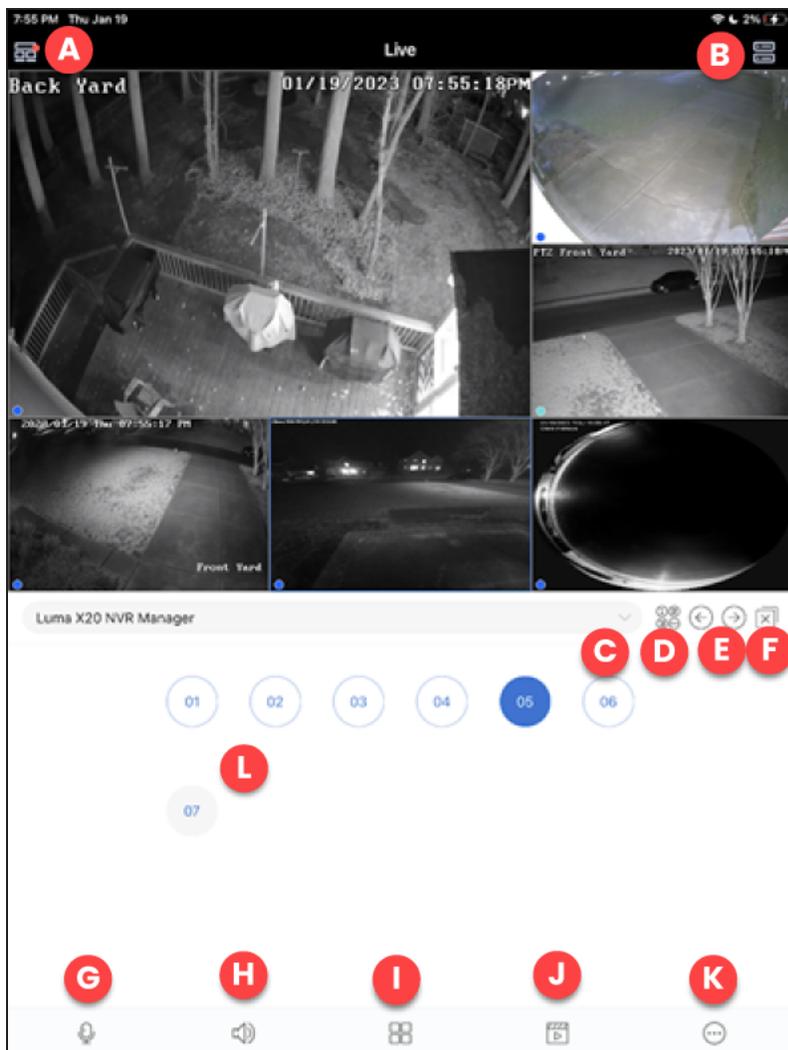
[Luma x20 Firmware Update Doesn't Show on OvrC \(Tech Community\)](#).

Luma View App

Initial Login Using OvrC Connect

When you open the Luma View app for the first time you will be prompted to log in to your OvrC Connect account. You can only log in to the Luma View app using OvrC Connect credentials.



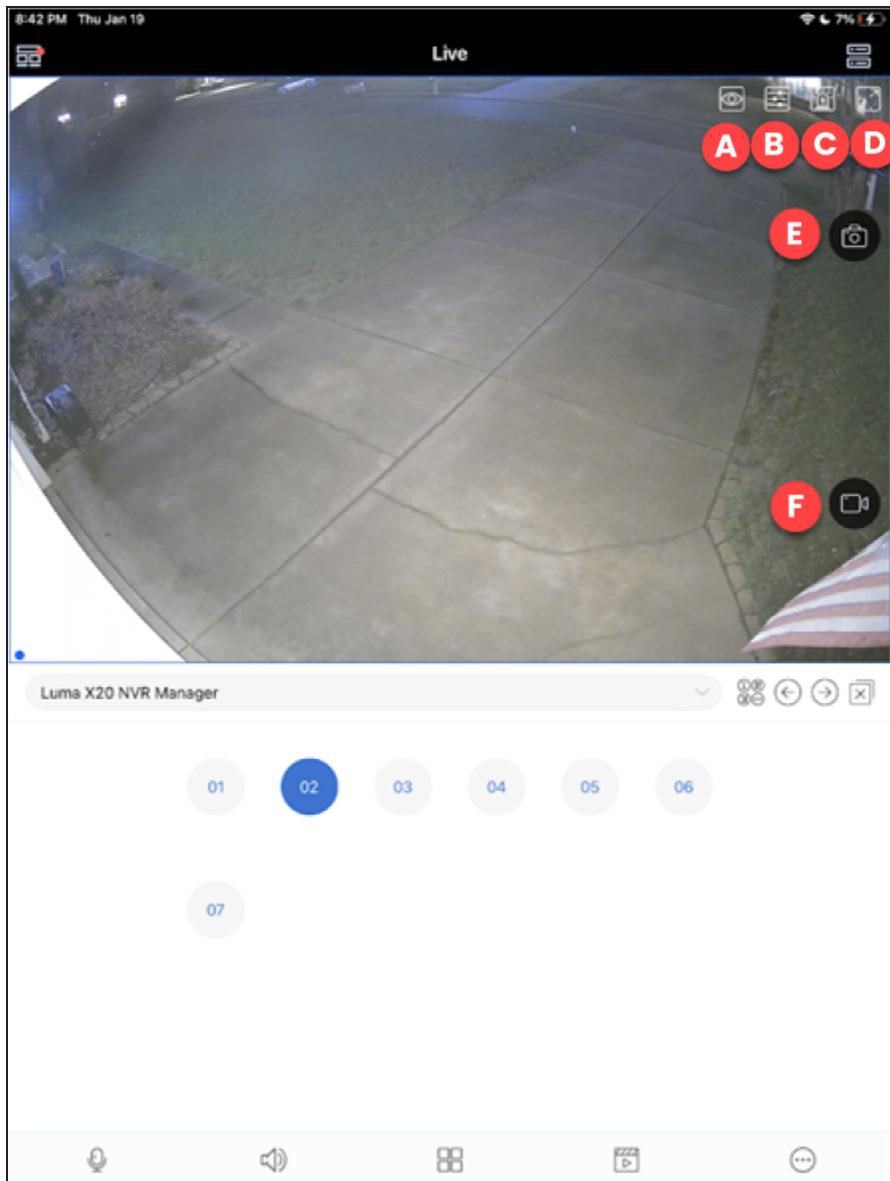


- A. Luma View app menu
- B. Server list – All devices that are assigned to your OvrC Connect account and their current status.
- C. Device list – All available devices for viewing. This includes NVRs and standalone IP cameras.
- D. Channel display – Change the display of your available channels below.
- E. Change channel group – Move entire camera screen between channel groups.
- F. Close – Close all live channels on the screen.
- G. Two-way talk – Open/Close two-way talk.

- H. Audio – Open/Close audio if the camera is equipped with a speaker.
- I. Display mode – Choose different displays that can be shown using the Luma View app.
- J. Playback – Opens the remote playback interface to view the playback for the camera currently selected.
- K. Options – Additional menu options.

Single Channel View

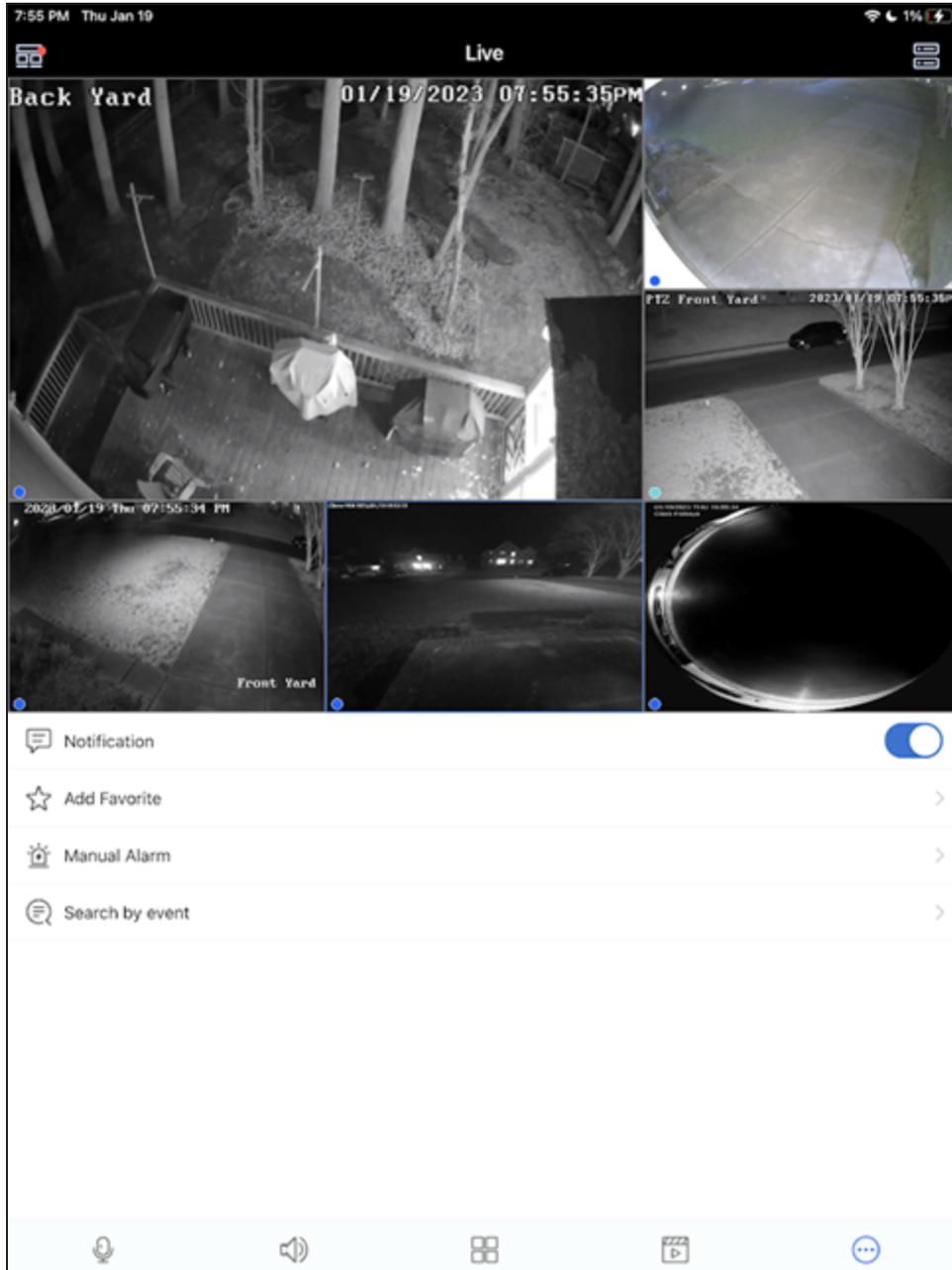
Double tap an image or select the single channel display mode.



- A. Change the definition of the current image.
- B. Image settings – Brightness, white balance, sharpness, image mirror, and zoom can be set.
- C. Alarm .
- D. Fullscreen.
- E. Take a snapshot of the current image to save to your mobile device.
- F. Start recording video to save to your mobile device.

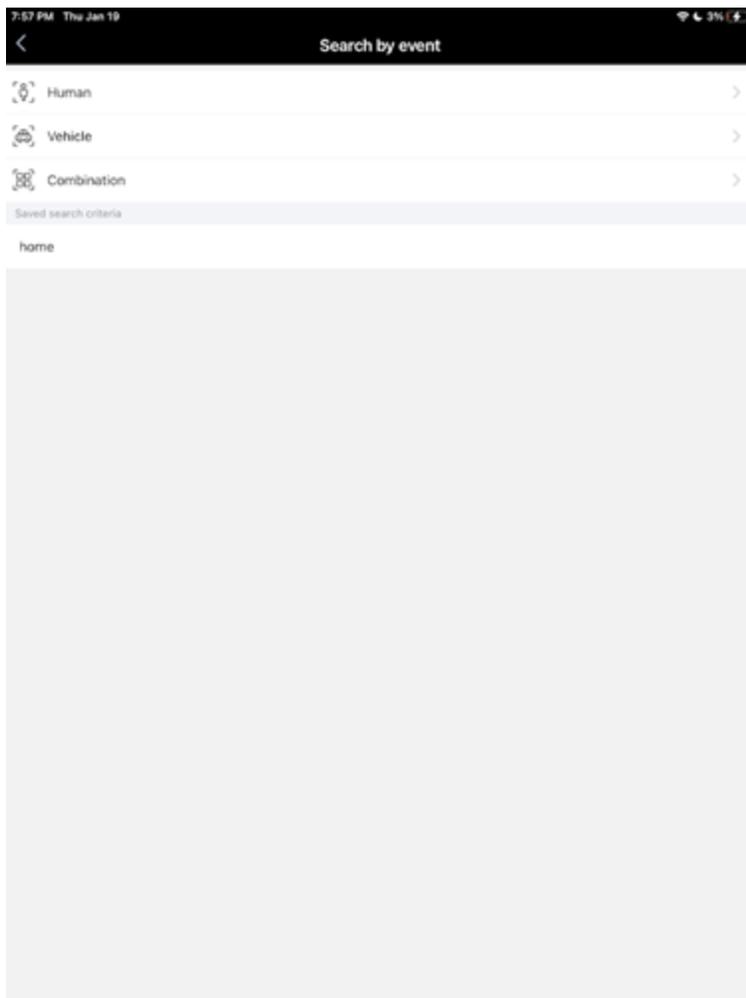
Additional Menu Options

This presents you with these options.

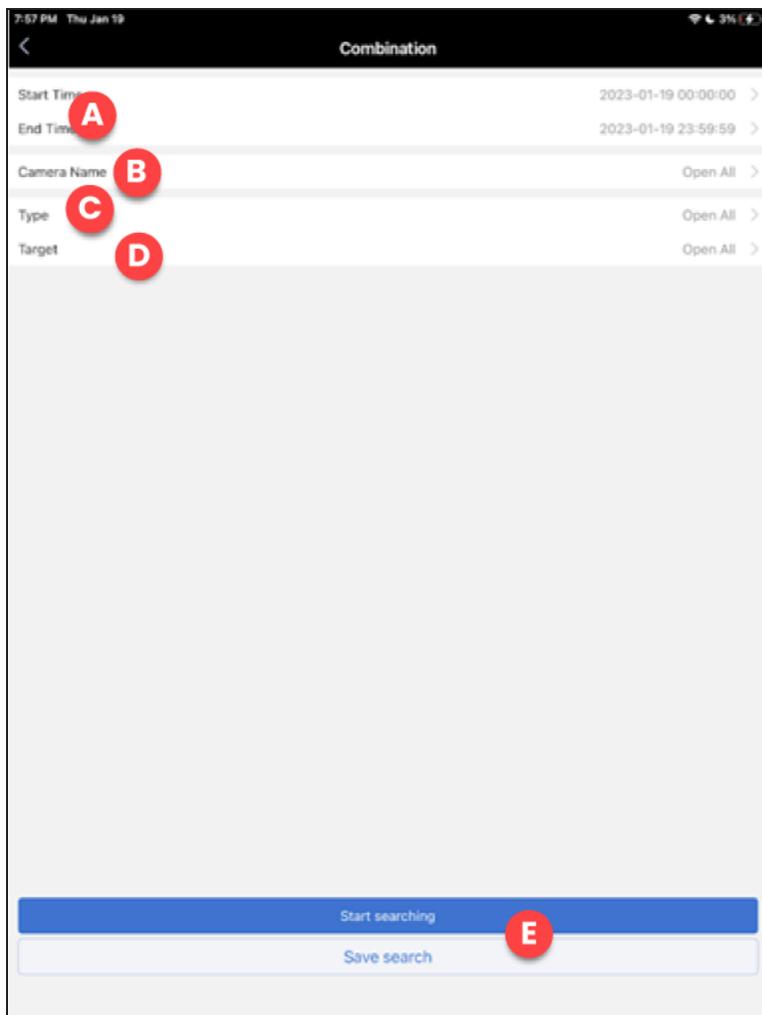


- Notification – Toggle push notifications for the selected device.
- Add favorite – Save the specified view to a favorite group. You can also recall favorite groups by clicking the play button.
- Manual alarm – If your device supports manual alarm connections and they are properly set up, this triggers those outputs.
- Search by event – Search your NVR's playback using the Advanced Analytics from your Luma X20 cameras.

Search by Event Menu



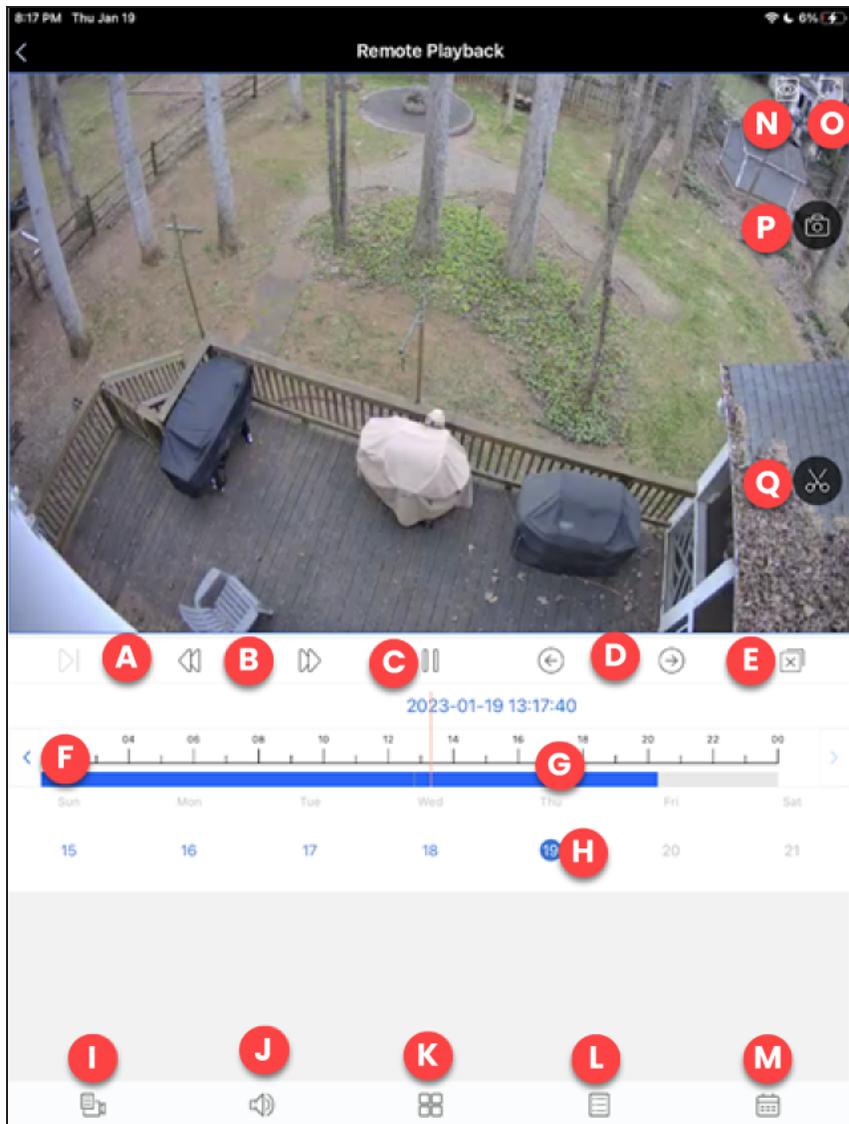
Select the Event type you would like to search by.



- A. Start/End time – Select the start time and end time for this search.
- B. Camera name – Select the cameras to be included in the search.
- C. Type – Select the Type of AI Event to be included in the search.
- D. Target – Verify the target type.
- E. Start/Save search – Begin searching archived footage based on the above parameters or save these search parameters for later.

Playback Interface

This section of the Lumina View app used for playback and archiving of video.



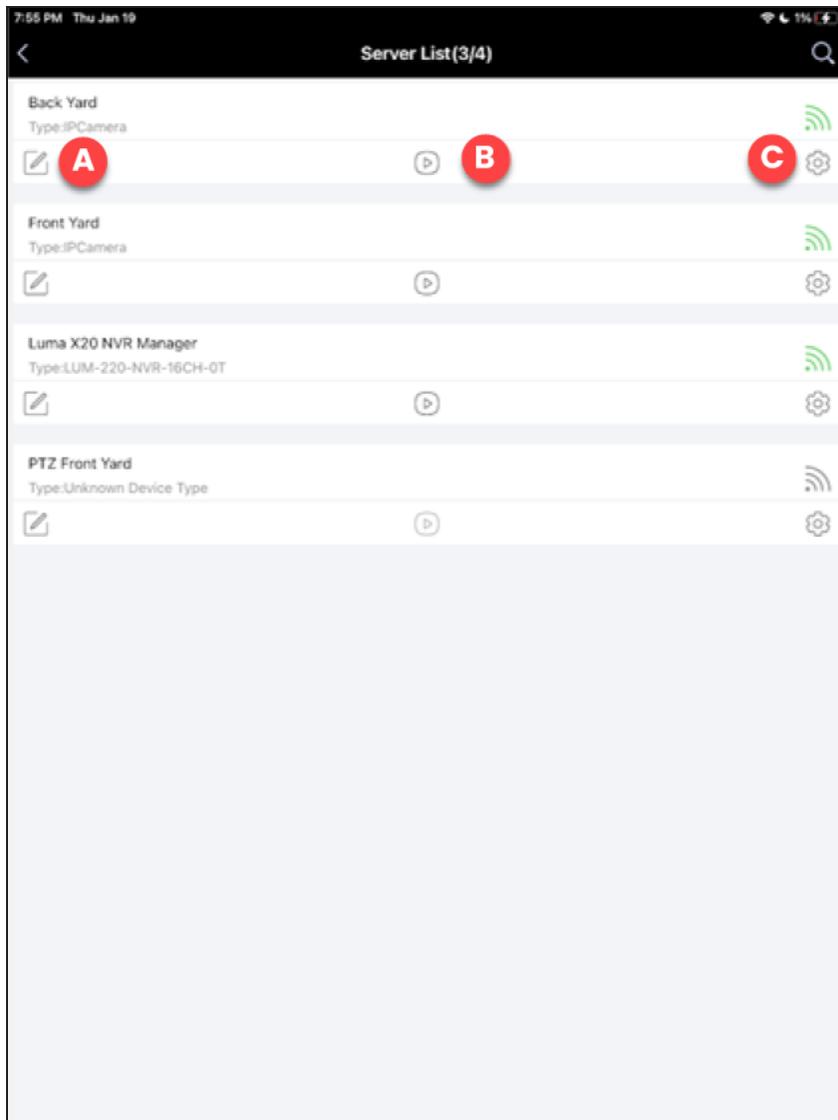
- A. Frame e- by- frame playback
- B. Rewind and Fast Forward
- C. Play/ Pause
- D. Switch between channels for playback
- E. Close all channels
- F. Select to jump back or forward to the next closest event on the timeline
- G. Timeline for event playback. Timeline is color coded for different types of playback or events. Pinch to zoom in on the timeline for more precise playback.

	AI Event – Line Crossing
	AI Event – Intrusion
	Other AI Events – Exception Detection
	Manual Recording Playback
	Sensor Events
	Motion Event Playback
	Point of Sale Playback (not currently supported on Luma x20)

- H. Day of the current month you are playing back from.
- I. Choose the current channel for playback.
- J. Enable audio playback from the recording.
- K. Enable multi-camera view for synchronous playback.
- L. Filter the timeline by event type.
- M. Change the date range for your playback timeline.
- N. Change the image quality of your playback.
- O. Enable full screen playback.
- P. Save a snapshot of the current playback frame on your mobile device.
- Q. Start a recording of playback on your mobile device. Press again to stop recording.

Server List

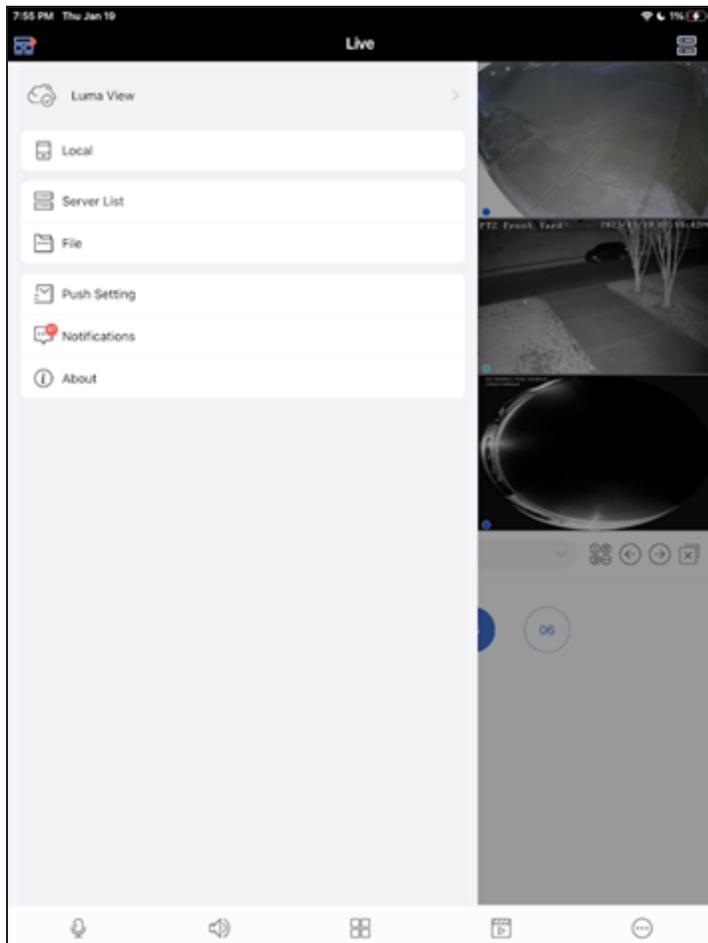
The list of all recorders that are synced to the Luma View app through OvrC.



- A. Edit – Edit properties of the selected device. The only available option on this screen is Reset Password. This resets the root adm in password of the NVR. Other passwords will remain intact.
- B. Play – Start playback of this device.
- C. Basic info – Obtain basic information of this device like firm ware version for IP Cameras and some more detailed status information for NVRs.

Main Menu for Lum a View

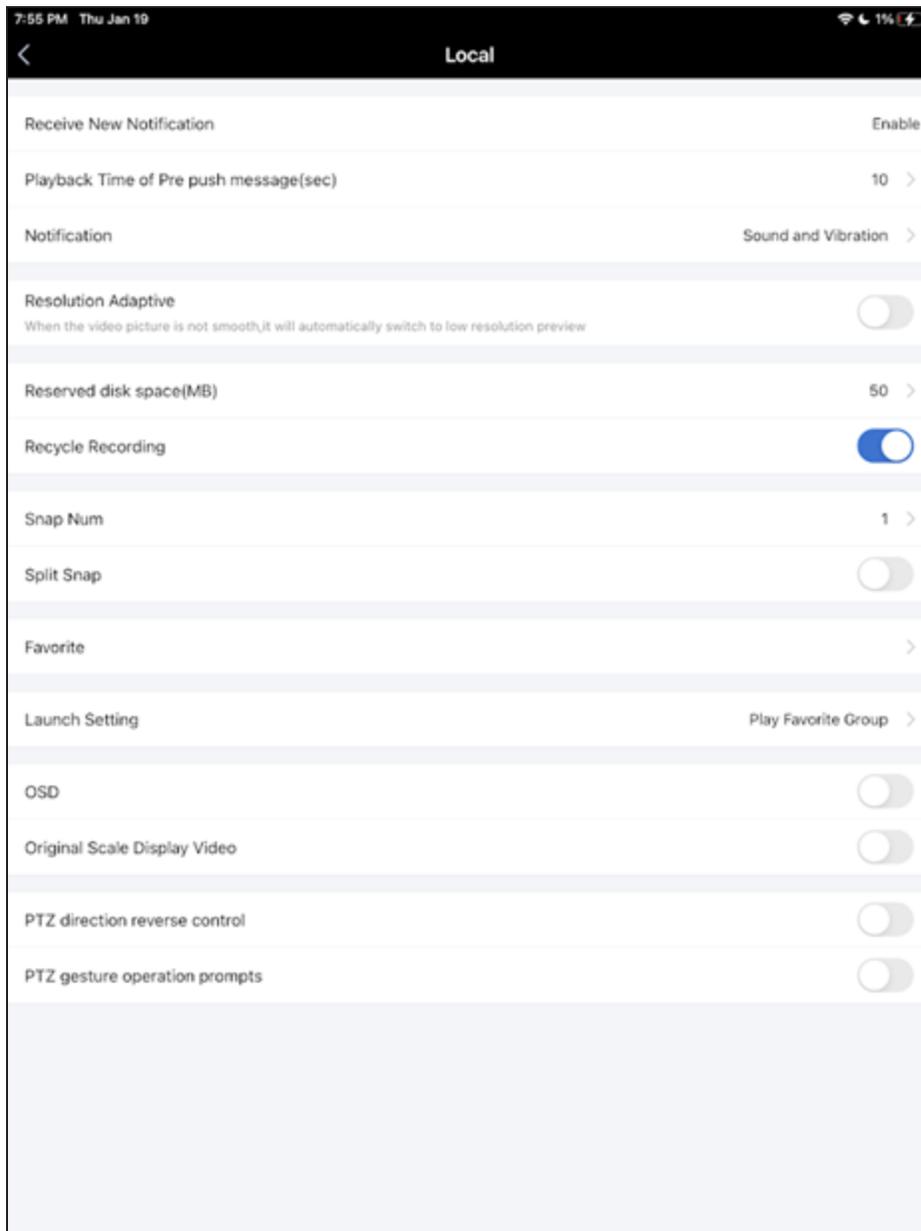
Selecting the top left icon from Live slides out the main menu.



- Lum a View – This opens your login for OvrC Connect.
- Local – This menu provides settings that are unique to your mobile device's experience with Lum a View.
- Server list – Opens the Server list of all available Lum a X20 devices.
- File – Opens the file explorer of saved snapshots and videos from the Lum a View App. You can save and share from this section.
- Push setting – View the push notification status for all of your Lum a X20 NVRs.

- Notifications – Shows the last 99 push notifications that your Luma View app has received.
- About – Shows various information about the Luma View app.

Local Settings Page

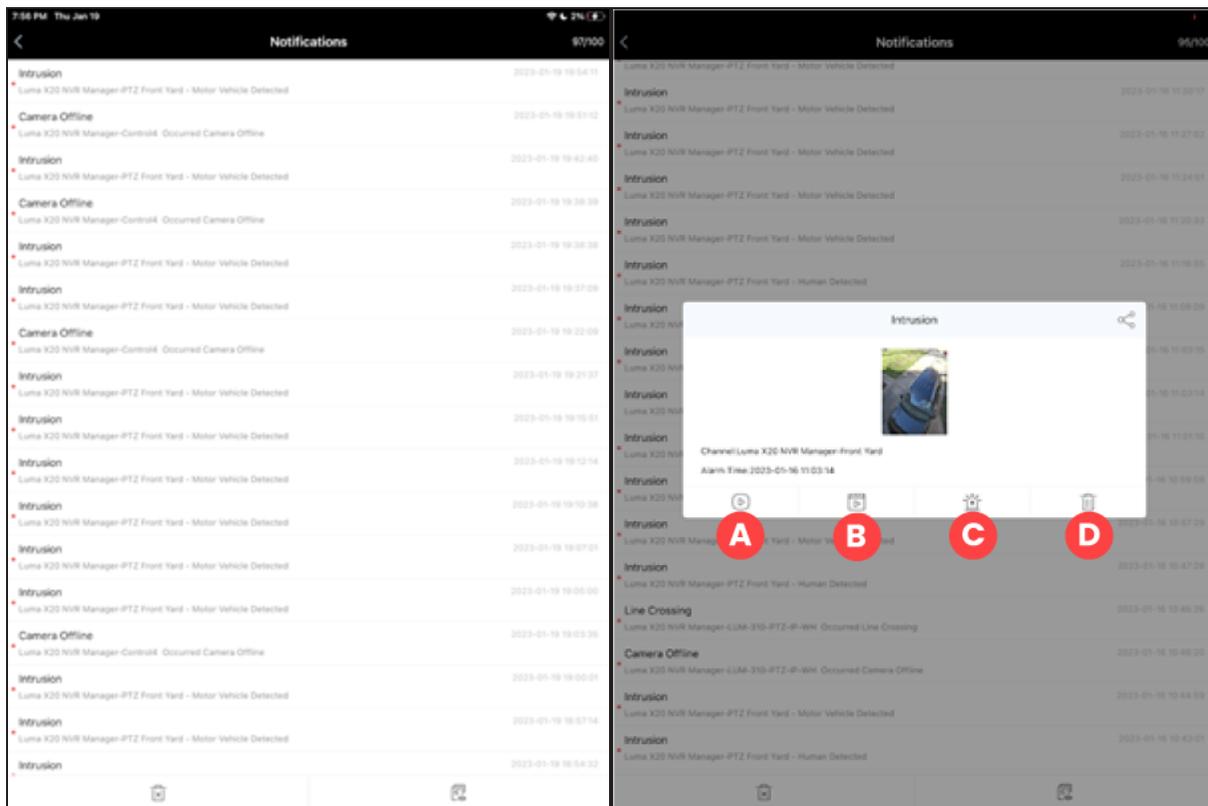


- Receive new notification – Globally turn off notifications from your Luma View app.
- Playback time of pre-push message (sec) – Set the playback start-time for a push message (event) based on the actual alarm time. For example, when you click on the alarm video playback icon, playback starts 10 seconds before the alarm occurred.
- Notification – Choose how you would like push notifications to operate on your phone.
- Resolution adaptive – When enabled, video automatically switches to a lower resolution when the image is not smooth.
- Reserved disk space (MB) – Luma View reserves space on your phone so that it always has room to backup archived footage. Set the reserved space here.
- Recycle recording – Enable/Disable record cycle. If enabled, the system automatically deletes old recordings and recycles the space if needed.
- Snap num – Select the number of snapshots to be taken when you click Snapshot in preview or playback.
- Split snap – When disabled, Luma View takes snapshots of the selected channel only. When enabled, Luma View generates snapshots of all channels in the current layout view. For example, if Split Snap is disabled and you are using 2x2 (4) channel layout view with Channel 1 selected, snapshots of Channel 1 will be generated. If Split Snap were enabled, snapshots of all the channels in the layout will be generated.
- Favorite – Edit your favorites after you have set them .
- Launch setting – Set to play favorite group, play a specific device, or play last preview channels when you open the app.
- OSD – Enable or Disable on screen display option pop-up icons.
- Original scale display video – When enabled, the native video ratio will be used, not fitted to the layout window.

- PTZ gesture operation prompts – Tapping the PTZ icon in Live view, displays eight directional touch controls. When this setting is disabled, the eight directional touch controls are displayed for only three seconds. When enabled, the eight directional touch controls remain on the screen.
- PTZ direction reverse control – When enabled, the eight directional PTZ controls are reversed.

Notifications Menu

You will receive pop-up notifications for the selected notifications. If that notification was for an AI event, you will see an image of the object that triggered the notification. The share icon allows you to share that image.



- Go directly to live view of the camera that is associated with the notification.
- Go directly to playback of the event associated with the notification.

- C. Go directly to the manual alarm page of the camera associated with the notification.
- D. Delete this notification from your list. This does not delete the recording.

Luma x20 Quick Start - Using OvrC

Using OvrC can get your Luma x20 NVR up and running in minutes—installs have never been easier!

Claim the Gear

The Luma x20 line integrates seamlessly with OvrC.

Before you claim your NVR, first attach it to the network, then connect all cameras that will be wired directly to NVR ports. Once that is done, power everything up (the NVR beeps when powered up, and beeps three times when it finishes booting).

Claim the NVR

If you have an OvrC Pro device in your network (an OvrC Hub, Araknis router, or Control4 Controller), your OvrC device automatically claims your x20 NVR as soon as it is connected to the system.

If you do not have an OvrC pro device, claim your NVR manually using its MAC address and service tag number.

What Happens When the NVR is Claimed?

OvrC automatically activates the NVR. This creates a SuperAdmin password for the NVR that Snap One Technical Support can use for emergency recovery. This password is not visible to anyone else, but can be reset using the Luma View app.

Activation also creates two unique passwords:

- **SupportAdmin:** Use this password to connect to the NVR's web UI.
- **System Connect:** Use this password for control system integration or for external systems like a third-party VMS. It does not provide access to the web interface.

These passwords match across all devices that OvrC Pro claims for your system .

Since your passwords are generated automatically and randomly, your system is already secured, and you can immediately begin customization.

Fetch the NVR's Cameras

In OvrC, go to the Devices tab, then click the NVR to go to the NVR's Details tab.

Notify	Status	Device Name	IP Address	Manufacturer	Update	Connect	Reboot
		Front Dome	10.151.151.101	Luma D4-6A-91-9C-02-57			
		Rack 310 Switch	192.168.1.190	Arakis Networks D4-6A-91-CB-75-FC			
		Rack NVR	192.168.1.188	Luma D4-6A-91-9C-05-6E			
		WB-800-IPVM-12	192.168.1.141	WebBox D4-6A-91-CF-6E-71			
		OvrC Hub	192.168.1.237	OvrC D4-6A-91-62-2F-68			

You'll see the message *Loading...* under the Linked Cameras and Unassigned Cameras sections as OvrC scans the network for all available cameras that can connect to the NVR.

Device Details

Linked Cameras (0/0)

UNASSIGN

Camera Name	IP Address	MAC Address	Model	Protocol	Port	Channel
Loading...						

Unassigned Cameras (0)

ADD TO NVR ASSIGN

Camera Name	IP Address	MAC Address	Model	Protocol	Port
Loading...					

Once OvrC has finished scanning, it populates camera data, including a dot to the left of each camera to show its status.

Linked Cameras (8/16)							
UNASSIGN							
<input type="checkbox"/>	Camera Name	IP Address	MAC Address	Model	Protocol	Port	Channel
<input checked="" type="checkbox"/>	Back Yard	192.168.1.187	D46A919C91C5	LUM-820-IP-TFW	LUMA X20	9008	1
<input type="checkbox"/>	Porch	192.168.1.147			HIKVISION	8000	2
<input checked="" type="checkbox"/>	PTZ Front Yard	192.168.1.227	00:18:AE:C6:9C:1F	LUM-420-IP-PTZ-2...	LUMA X20	9008	3

- **Linked Cameras:** The top section shows all x20 cameras connected to the NVR's PoE ports. X10 cameras also show, but with less information. Third-party cameras using ONVIF should also show. OvrC activates all cameras in this section and sets them up with the same passwords that the NVR uses.
- **Unassigned Cameras:** This section shows all cameras connected to your network that can connect to the NVR. Cameras here are either third-party cameras, older Luma cameras, or x20 cameras attached to a network switch.

Pro Tip: If a third-party camera is not showing up as expected, manually add it using the NVR's web interface. Luma x20 NVRs are ONVIF conformant.

Adding Unassigned Cameras to the NVR

When adding cameras that have a password that matches the SupportAdmin password on the NVR, click the selection box next to the cameras, ensure "Add to NVR" shows in the dropdown, and click **Assign**. The cameras move up to the Linked Cameras section.

Unassigned Cameras (4)							
Add to NVR ▾ ASSIGN							
<input type="checkbox"/>	Camera Name	IP Address	MAC Address	Model	Protocol	Port	
<input checked="" type="checkbox"/>	PTZ Front Yard	192.168.1.227	00:18:AE:C6:9C:1F	LUM-420-IP-PTZ-23W	LUMA X20	9008	
<input type="checkbox"/>	Control4	192.168.1.108	33:61:CA:A5:D:8B	C4-VDB-E	ONVIF	80	

When adding a camera that does not share the NVR's password, select the camera's checkbox, and change the dropdown to "Add to NVR with Credentials". Where prompted, type the username and password for that camera, then click **Assign**. OvrC processes the transaction, and, after about 10 seconds (time enough to communicate with the OvrC servers), the screen displays the change.

Unassigned Cameras (3)						
Add to NVR with Credentials		Username admin	Password	ASSIGN		
Camera Name	IP Address	MAC Address	Model	Protocol	Port	
<input checked="" type="checkbox"/> Control	192.168.1.108	33:61:CA:A8:ED:8B	C4-VDB-E	ONVIF	80	
<input type="checkbox"/> Luma2000H-20NVR	192.168.1.169	D2:1E:32:E4:AE:7A	LUM-510-NVR-8CH	ONVIF	80	
<input type="checkbox"/> LUM-510-PTZ-IP-WH	192.168.1.228	D4:5A:91:94:5E:DB	LUM-510-PTZ-IP-WH	ONVIF	80	

The dot next to an added camera may show red (offline) for a short while. If it still shows red after 30 seconds, refresh your screen. If it still shows red, you may need to do some troubleshooting.

Removing a Camera

You can unassign a network camera listed in the Linked Camera section. Click the camera's checkbox and click **Unassign** at the top of the list. It takes a few seconds for OvrC to update the screen with the change. You cannot unassign a camera that is plugged into the NVR itself; you can only remove network cameras.

Linked Cameras (1/8)							
UNASSIGN							
Camera Name	IP Address	MAC Address	Model	Protocol	Port	Channel	
<input checked="" type="checkbox"/> IP Camera	10.151.151.101	D4:6A:91:9C:02:57	LUM-420-IP-DMB	LUMA X20	9008	1	

Finalize the Setup

Now that the NVR has been activated and the cameras claimed, your system is fully operational. Your NVR is set to record all cameras around the clock. But that's not what most people want.

Perform Maintenance

If your NVR or cameras have a cloud icon under the Update column, click that icon to start a firmware update. Update your NVR's firmware first and ensure the device is back online before initiating any camera updates.

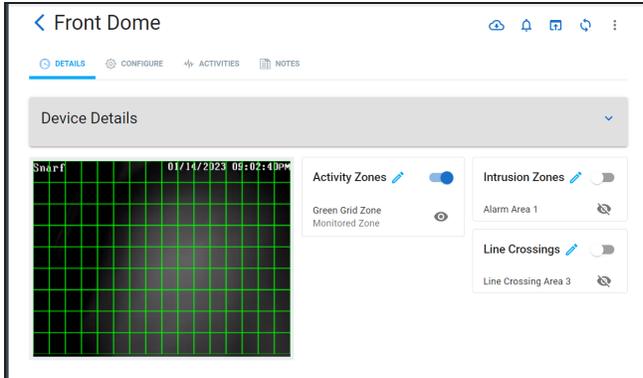
Choose a Recording Schedule

You do not need to change your recording schedule unless the install has very specific needs.

Activate Motion Events

Your NVR is already prepared to record whatever the cameras send, including motion and AI events (area intrusion, e.g.), however you must set those cameras to use events, rather than record 24/7 (which consumes a lot of disk space). For this quick- start, we'll just set up motion events.

From the NVR's Details tab, click on the camera's name in blue. Alternatively, click the camera in the OvrC Device list. Either way, you are taken to the camera's Details tab. Click on the eye icon in the area labeled Activity Zones. Check that the entire camera view is covered with a green grid.

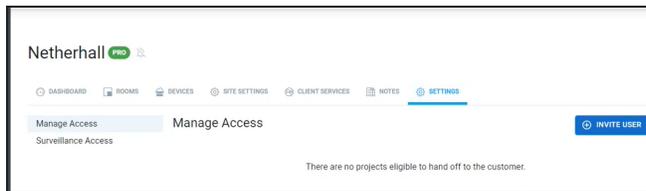


At the top right of that box, flip the toggle to enabled. Motion detection is now activated, and the camera switches from recording 24/7, to recording motion events 24/7.

Hand the System Off to the Customer

Once you have performed any additional customization, it's time to hand the system over to the customer. The hand-off process gives the customer access to the Luma View app on their mobile devices.

In the Customer page, go to the Settings tab. It opens into the Manage Access section.

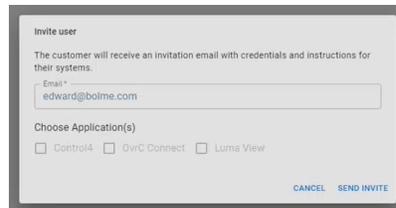


Click **+ Invite User**.

The dialog loads with the customer's email (if possible, otherwise you need to enter it).

Click all the apps they need for their install.

Click **Send Invite**.



The customer then appears on the Manage Access page with the status "Validating."

What Does the Customer See?

OvrC sends an email to the customer welcoming them to OvrC Connect and Luma View. This email gives them instructions as well as a six-digit code that serves as their temporary password. Once they log in to OvrC Connect and change their password, they'll be able to download Luma View and connect to that, as well.

Video Decoupling

Video decoupling is an upcoming OvrC feature that will provide your customers with privacy and protect you from legal exposure, while still allowing you to perform maintenance on your customers' systems.

24 hours after handoff, you (as an installer) lose access to live video from the customers' cameras. You can request access for a limited time for maintenance or upgrades, but the default state will be to protect the customer's privacy.

This section of the manual will be updated once it launches.

Luma x20 OvrC Guide

OvrC gives you significant options without having to log in to each device's interface.

This document assumes you have a solid understanding of how to use OvrC.

OvrC and Luma Dual Firm ware

Luma x20 devices run in a dual-firm ware mode to protect the hardware (and your installs) from unforeseen glitches.

Once the firm ware has been applied to the first (operational) partition, the device goes into an observation mode to ensure the new firm ware operates properly. Observation mode lasts for about ten minutes once the firm ware update is completed.

Once proper function has been verified, the device applies the firm ware to the second (backup) partition and logs the new firm ware version with OvrC. If the new firm ware fails, the device restores the backup firm ware to the first (operational) partition.

As of this writing, OvrC does not track whether a Luma x20 device is in observation mode. This means that, for about ten minutes in OvrC, it looks like the firm ware update didn't take, and that an update is available. If you try to update the firm ware again while your Luma is in observation mode, the update will fail in OvrC but this will not impact the performance of the device.

While in observation mode, you can log in to the device's web UI to see the proper firm ware version.

Jump to:

- [NVR Configure Tab](#)
- [IP Camera Details Tab](#)

- IP Camera Configure Tab

Camera Configure Tab

You can customize a given camera by clicking on the camera under the Devices page and navigating to the Configure tab.

IP Settings

Here you can change the NVR's IP address between DHCP and static. We recommend keeping your gear set to DHCP and handling all IP addresses through the router.

Click **Save** if you made changes here.

Time Settings

In this section you choose the time zone for your camera. This affects the time as it appears on your channel feeds. Changes to this setting are saved automatically.

We do not recommend changing time from the camera; if you change it from the NVR, the change propagates across all x20 cameras connected to the NVR.

Image Settings

Here you adjust the appearance of the video image.

(Left Column)

At the top left is a view of the camera's current image.

Below the image, if your camera is motorized, are buttons to adjust the zoom and focus.

At the bottom of the left column are three buttons (four if you have a varifocal camera).

- **Rotate Image** rotates the view 90° clockwise.
- **Mirror Image** flips the camera image horizontally (not accounting for any image rotation).
- **One- Key Focus** appears only if you have a motorized camera model. It lets the camera use its AI to determine the best focus value. It can be adjusted from there.

Restore Default cancels all image adjustments ever made.

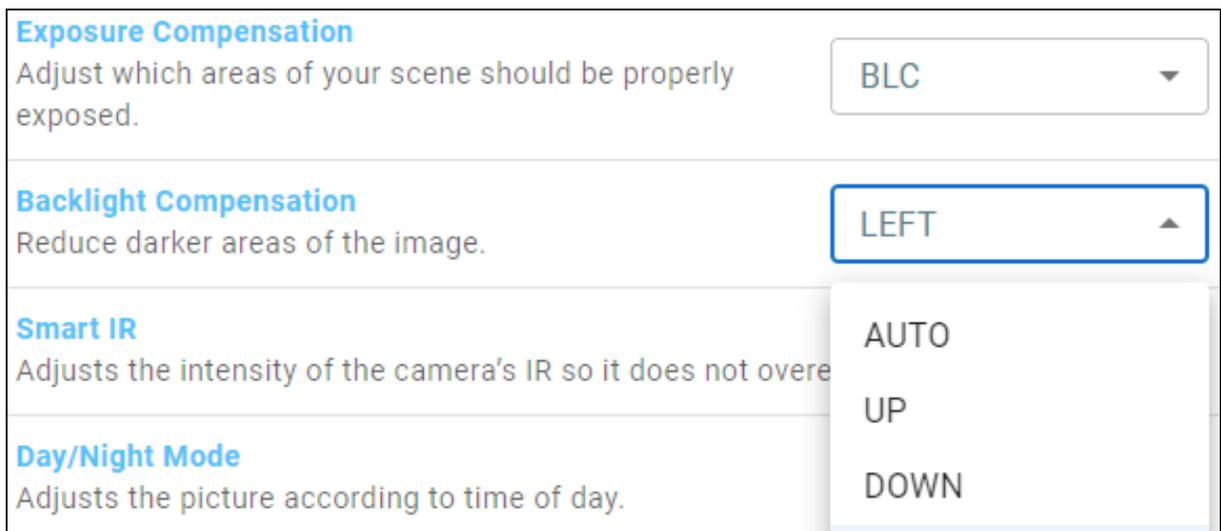
(Right Column)

The right column has a number of image settings.

Image Sliders: Adjust the sliders either by clicking on the track, or clicking and dragging the dot. When dragging, the image does not change while your mouse button is down.

Exposure Compensation compensates for areas with uneven lighting. You can choose one of the following options:

- **BLC** is backlight compensation. It adjusts for areas where the backlight is strong, making areas that are too dark brighter. When BLC is selected, a new option appears below: Backlight Compensation. Here you select which area of the screen has the backlight. To preserve a natural look, BLC affects the look of the whole screen.



- **HLC** is high light compensation. It adjusts for areas where the light is too strong, making areas that are too bright darker. It is most commonly used to compensate for IR light that is too close to the subject. When HLC is selected, two new options appear below: Set start time and Set end time. Here you select when HLC is active.

Exposure Compensation Adjust which areas of your scene should be properly exposed.	HLC
Set start time Reduce bright areas of the image.	12:00 AM
Set end time Reduce bright areas of the image.	11:59 PM

- **HWDR** stands for hardware wide dynamic range (that is, WDR that happens immediately, not in post-processing). If your image usually contains both bright and dim areas, this brings everything toward the middle. When HWDR is selected, a new option appears below: Wide Dynamic Range Levels. Here you choose how much HWDR adjusts your camera image.

Exposure Compensation Adjust which areas of your scene should be properly exposed.	HWDR
Wide Dynamic Range Levels Adjust which areas of your scene should be properly exposed.	LOW
Smart IR Adjusts the intensity of the camera's IR so it does not overexpose.	
Day/Night Mode Adjusts the picture according to time of day.	

Smart IR uses the camera's AI to ensure the IR image does not wash everything out.

Day/Night Mode lets you (or the camera) decide how to deal with the ambient light.

IR Mode sets the method the camera uses to add IR light to boost the image visibility.

White Balance customizes the way that colors appear in the image.

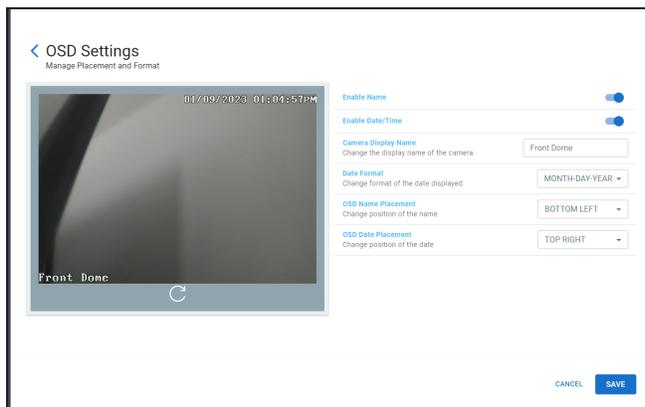
Scheduled Reboot

Use this toggle to set a time for your camera and reboot. Use the dropdown to choose a day of the week (or all days). You can directly edit the time. Changes to this setting are saved automatically.

On Screen Display Settings

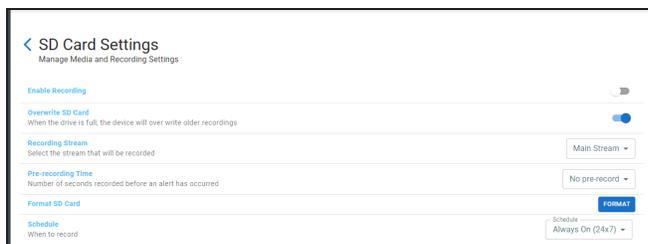
Here you set what additional information appears on the camera's channel, and where on the screen it appears.

Click the refresh icon below the camera view image to reset the display to the current specs.



SD Card Settings

If you installed an SD card in your camera, you can customize its use here. The SD card is used only for scheduled recording only; it does not record motion or AI events.



Changes to these settings are saved automatically.

Enable Recording: This toggle determines whether or not you use the SD card.

Overwrite SD Card: Here you decide whether your camera will overwrite old data on the SD card when it gets full.

Recording Stream: Choose which stream you want to use. The main stream is the full resolution feed. The sub stream is a lower-resolution stream used when viewing multiple cameras simultaneously on your NVR or through LumaView. The third stream is optimized for use with control systems, and is typically the stream with the lowest bandwidth.

Pre-recording Time: Your camera always has several seconds of current video in memory; it uses this to analyze for motion. When motion is detected, the camera can add a few seconds of this video to the start of the motion recording to provide some context.

Format SD Card: Click Format to prepare a new SD card for use.

Schedule: Here you choose when you want the video feed to be recorded to the SD card.

Camera Credentials

The passwords for SupportAdmin (your technicians) and System Connect (end users) are found here. You cannot change these usernames or passwords. Icons are also available to copy the username and password to your clipboard.

Video Quality

Use the dropdown to adjust your video quality to your network capacity. Changes to this setting are saved automatically. The Custom option activates if you make changes to the stream in the camera's or NVR's web interface.

Microphone / Audio Input

OvrC detects your camera model. If your camera has a built-in microphone or a microphone jack in its tail, this section is labeled Microphone. Otherwise, it's labeled Audio Input.

You can toggle audio operation on and off here, as well as adjust sound sensitivity. Changes to these settings are saved automatically.

Apply Video Quality Settings

This applies the Video Quality setting (above) to all x20 cameras that you select.

Camera Details Tab

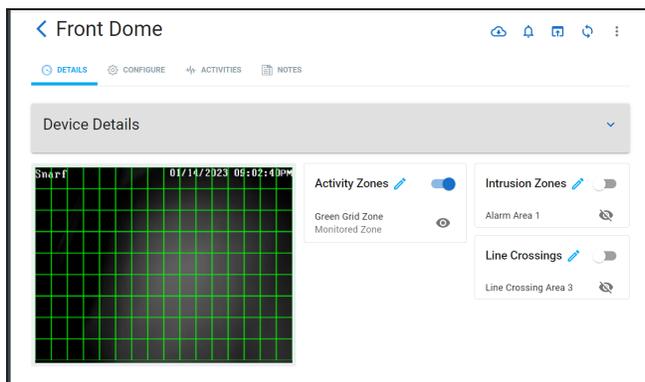
You can customize the operations of a given camera by clicking on the camera under the Devices page and navigating to the Configure tab.

The left side of this page shows a (reasonably) current view from the camera.

To the center and right, control boxes allow you to manage the following:

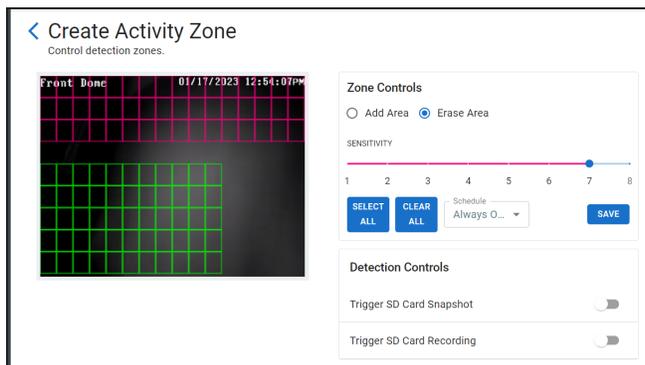
Activity Zones

These are where the camera checks for basic motion events.



Click the toggle on the right to activate or deactivate the use of activity zones. Click the eyeball icon to display all zones currently defined (the eyeball icon does not appear if no zones are configured).

Click the pencil icon to create or edit zones. This opens the Create Activity Zone window.



The camera divides its view into a grid of squares, 9 rows tall and 16 columns wide. The activity zone is the collection of these squares that the camera uses when detecting motion.

Under **Zone Controls**, select whether you are adding squares or removing squares from the activity zone. Click and drag in the camera view image to add or remove squares from being analyzed. Click Select All to use the entire view, or Clear All to use none of the camera's field of view.

Sensitivity determines how readily the camera decides if something is motion. You can have multiple activity zones each using different motion sensitivities. To create such zones, first set the sensitivity level (note that the color of the sensitivity slider likewise changes as you adjust it), then draw your box. The color of the box matches that of the sensitivity level.

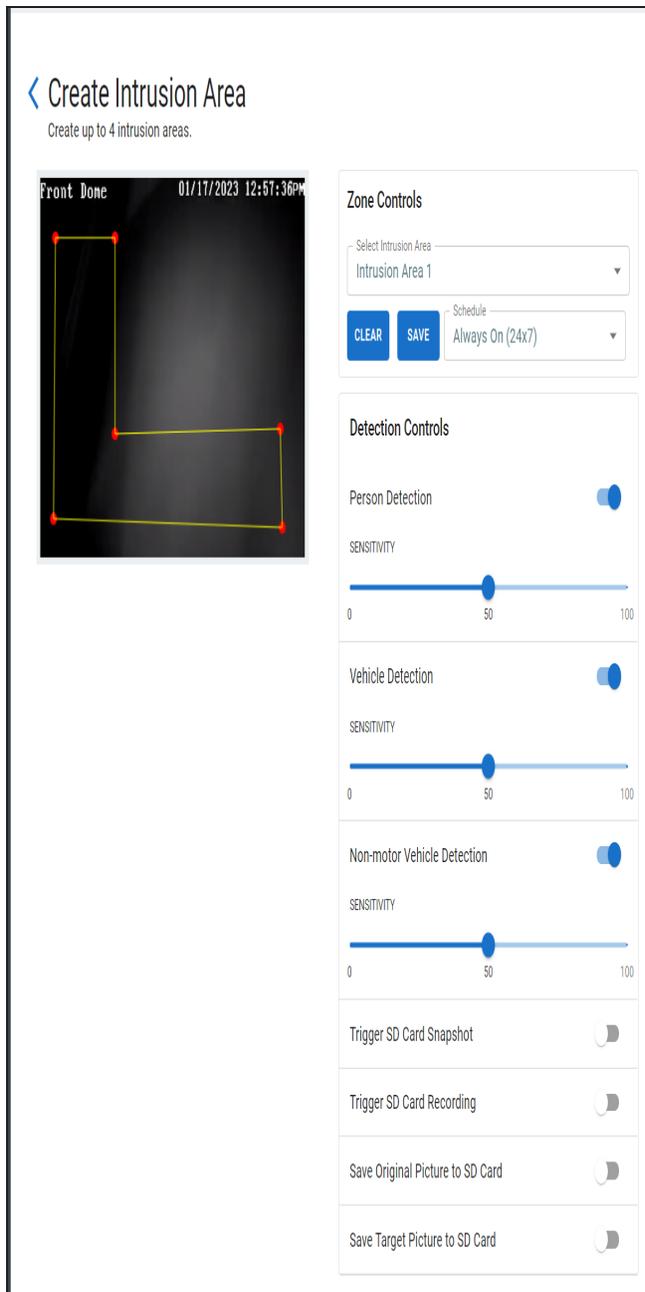
Choose your schedule preference from the dropdown.

Under **Detection Controls**, adjust the SD settings as desired to cover for low hard disk space, or to ensure against a network outage.

Click **Save** before exiting.

Intrusion Zones

The camera can use AI to determine whether someone enters the marked area. Intrusion cannot be used if line crossing (below) is being used.



Once you have created an intrusion zone, click the toggle on the right to activate or deactivate the use of intrusion zones. Click the eyeball icon to display all zones currently defined (the eyeball icon does not appear if no zones are configured).

Click the pencil icon to create or edit zones. This opens the Create Intrusion Area window.

Under **Zone Controls**, select which of the 4 zones you want to modify. Each zone has six corners; click in the camera view image to add each corner one at a time. If you want fewer than six corners, make the corners you want, then click **Stop Draw**. The camera will complete your shape when you click **Save**.

You cannot edit a zone; you must instead click **Clear** and start a new one.

If you don't want to use the default of 24/7 recording, choose your schedule preference from the dropdown. Click Clear to delete the selected zone.

Under **Detection Controls**, choose whether to analyze for people, vehicles, or non-motor vehicles like bikes. Set the sensitivity levels, then test your settings for efficacy.

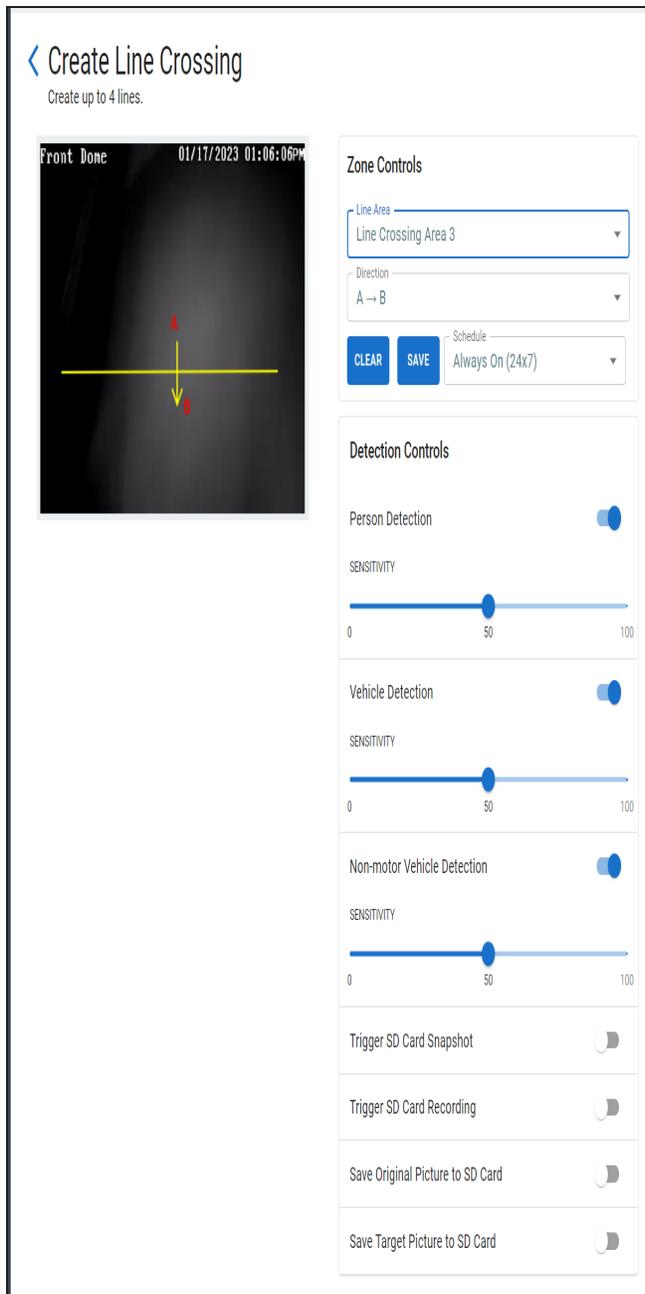
Adjust the SD settings as desired to cover for low hard disk space, or to ensure against a network outage.

- **Save Original Picture:** This saves the complete image of the moment that the event was triggered.
- **Save Target Picture:** This saves just a cutout of the target object that triggered the event.

Click **Save** before exiting.

Line Crossings

The camera can use AI to determine whether something crosses a line. Line crossing cannot be used if area intrusion (above) is being used.



Click the toggle on the right to activate or deactivate the use of lines. Click the eyeball icon to display all lines currently defined (the eyeball icon does not appear if no lines are configured).

Click the pencil icon to create or edit lines. This opens the Create Line Crossing window.

Under **Zone Controls**, select which of the 4 lines you want to modify. Click and drag in the camera view image to create the line. You cannot edit a line; as soon as you click in the camera view, it erases any old line and starts a new one.

If you don't want to use the default of 24/7 recording, choose your schedule preference from the dropdown. Click Clear to delete the selected line.

Under **Detection Controls**, choose whether to analyze for people, vehicles, and/or non-motor vehicles like bikes. Set the sensitivity levels, then test your settings for efficacy.

Adjust the SD settings as desired to cover for low hard disk space, or to ensure against a network outage.

- **Save Original Picture:** This saves the complete image of the moment that the event was triggered.
- **Save Target Picture:** This saves just a cutout of the target object that triggered the event.

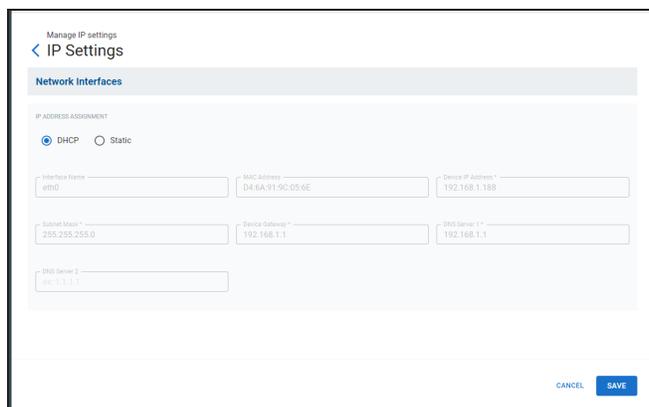
Click **Save** before exiting.

NVR Configure Tab

You can customize your NVR by clicking on the NVR under the Devices page and navigating to the Configure tab.

IP Settings

Here you can change the NVR's IP address between DHCP and static. We recommend keeping your gear set to DHCP and handling all IP addresses through the router.



The screenshot shows the 'Manage IP settings' page with a sub-header 'IP Settings'. Under 'Network Interfaces', there is a section for 'IP ADDRESS ASSIGNMENT' with radio buttons for 'DHCP' (selected) and 'Static'. Below this are several input fields: 'Interface Name' (value: eth0), 'MAC Address' (value: DA-6A-91-9C-2D-6E), 'Device IP Address' (value: 192.168.1.100), 'Subnet Mask' (value: 255.255.255.0), 'Device Gateway' (value: 192.168.1.1), 'DNS Server 1' (value: 192.168.1.1), and 'DNS Server 2' (value: 192.168.1.1). At the bottom right, there are 'CANCEL' and 'SAVE' buttons.

Time Settings

In this section you choose the time zone for your NVR. This affects the time as it appears on your channel feeds.

Channel Settings

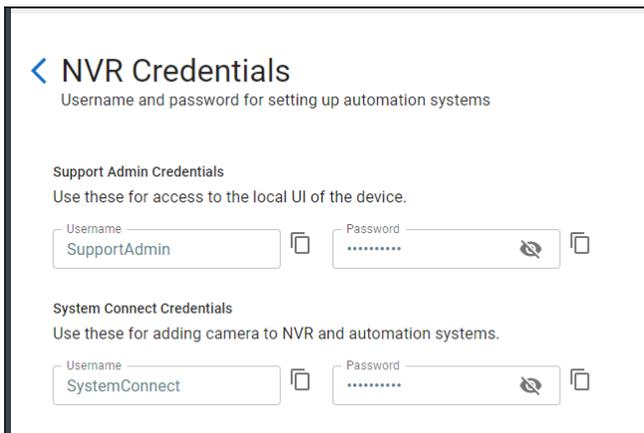
This page displays all of the NVR's channels. You can directly edit the channel name here. This changes the camera name that shows on the OSD. It does not change the name of the camera as shown in OvrC's device list.

Disk Management

This lists details of each hard drive in your NVR. If you have installed a new hard drive, you can format it for use by clicking Format Disk.

NVR Credentials

The passwords for SupportAdmin and System Connect are found here. You cannot change these usernames or passwords. Icons are available to copy the username and password to your clipboard.



Enable Recording

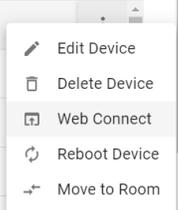
This toggle turns recording off or on.

Overwrite Hard Drive

This toggle determines whether the NVR can overwrite old surveillance data when the hard drive gets full.

Luma x20 Camera Interface

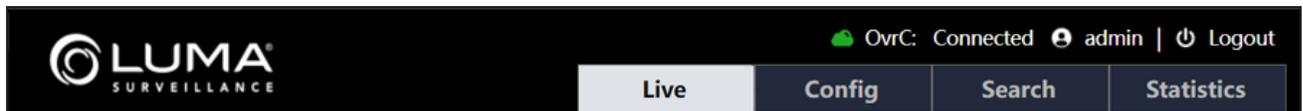
Most common functions can be handled via OvrC. However, if you need to access an x20 camera's web interface, go to its Devices page in OvrC, open the extended menu at right, and select the **Web Connect** option. When the new page opens, click the **Connect** icon. Log in as SupportAdm in using the password provided under [Camera Credentials in OvrC's Configure Tab](#).

<input type="checkbox"/>	●	Front Dome	🔔	Unassigned	10.151.151.101	Luma	 <ul style="list-style-type: none">Edit DeviceDelete DeviceWeb ConnectReboot DeviceMove to Room
<input type="checkbox"/>	●	Rack 310 Switch	🔔	Unassigned	192.168.1.190	Araknis Networks	
<input type="checkbox"/>	●	Rack NVR	🔔	Unassigned	192.168.1.189	Luma	
<input type="checkbox"/>	●	WB-800-IPVM-12	🔔	Unassigned	192.168.1.141	WattBox	
<input type="checkbox"/>	●	OvrC Hub	🔔	Unassigned	192.168.1.237	OvrC	

Main Controls

The interface opens to the Live Page.

Across the top of the windows are several controls that appear on all pages.



At the top right, the camera shows the OvrC status and the name of the account you are using. Click to the right to log out.

Below that are tabs that navigate to the main pages.

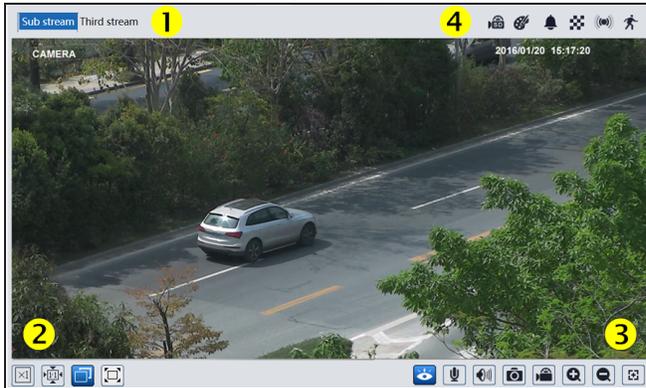
Contents

- [Live Page](#)
- [Config Page](#)

- [Alarm Tile](#)
- [Event Tile](#)
- [Image Tile](#)
- [Maintenance Tile](#)
- [Network Tile](#)
- [Security Tile](#)
- [System Tile](#)
- [Search Page](#)
- [Statistics Page](#)

Luma x20 IPC UI - Live Page

This shows the camera's current video feed and presents various controls and alerts.



(1) Feed Selection Buttons

At the top left of the image window, click to select which feed you want to view.

(2) Image Sizing Buttons

To the lower left, you can adjust how the feed appears.

- **Original Size:** Displays the feed at its native resolution.
- **Proper Size:** Corrects the aspect ratio of the feed.
- **Adapt:** Fills the image window with the feed (may cause distortion).
- **Full Screen:** Fills your monitor with the feed. Double-click your mouse or press the **Esc** key to exit full-screen mode.

(3) Control Buttons

- **Live View:** This toggle allows you to suspend or resume the live view.
- **Enable Audio:** If your camera has a microphone that has been enabled, this toggle adds live audio to the surveillance feed.
- **Enable Audio:** Adds the camera's audio feed to the live view.
- **Snapshot:** Captures the screen.
- **Local Recording:** This toggle only appears when using IE with the surveillance plugin. It allows you to record the feed to the SD card regardless of schedule.
- **Zoom In:** Digitally zooms in to the feed (click multiple times for greater zoom, though the image pixelates once you surpass its resolution). You can then click and drag the screen to pan around the image.
- **Zoom Out:** Digitally zooms out of the feed. Click multiple times to decrease zoom until the entire feed is visible.
- **Zoom/Focus:** If your camera is equipped with a motorized lens, this opens the Zoom/Focus control panel. This panel appears at the right side of your window. In order, the buttons are wide-angle, telephoto, focus closer, focus farther, and one-touch focus.



- **Rule Info:** This toggle overlays the active line crossing or intrusion zone rules on the screen.

(4) Alerts

When the camera detects an anomaly, icons appear to the upper right of the video feed.



The camera is recording to its SD card.



A sensor alarm has been triggered.



Motion has been detected.



Abnormal color alert.



Abnormal clarity alert.



Abrupt scene change alert.



Line crossing alert.



Intrusion alert.



Target count activated.

Luma x20 IPC UI - Config Page

This holds all the configuration tools for the camera, organized into tiles.

Pro Tip: Most common configuration can be handled more easily through the improved OvrC interface.

The tiles are presented in alphabetical order. The tiles are not clickable, but each tile holds several hotlinks.

When you click a hotlink, the tiles all move to the left side; all the hotlinks remain. At the top of the main section are hotlinks that show you where in the navigation tree you are.

Config > Alarm Tile

This handles basic motion and exception alarms

Contents:

- [Motion Detection](#) - See if something is moving in the view
- [Exception Alarm](#) - Protect against internal system errors
- [Alarm In](#) - Configure how your camera handles incoming alerts
- [Alarm Out](#) - Configure your camera to send an alert

Motion Detection

Pro Tip: This is easily handled using OvrC. Go to the camera's Device Details tab and use Activity Zones.

This is for basic motion detection. For advanced AI detection such as line crossing and area intrusion, see the [Alarm Out](#).

Detection Config Tab

This configures how your camera reacts to the events.

Enable (if present): This box must be checked to edit anything else on the page.

Alarm Holding Time: This allows the alarm to continue after the event that triggers it ends (for example, if someone opens and quickly shuts a door sensor).

Alarm Out: If your camera is equipped with physical alarm out connections, enabling this has the camera send the alarm.

Trigger SD Card Snapshot (if present): Sends a photo of what triggered the alarm to the SD card.

Trigger SD Recording (if present): Records to the SD card for the duration of the alarm.

Trigger Email: This opens a dialog in which you can list email addresses to receive the alert, set that email's subject line and body text, and decide whether to attach a photo of the incident.

Trigger FTP: Add the server address for your FTP site, and the camera uploads any alert recordings to that site for remote viewing.

Click **Save** when finished.

Area and Sensitivity Tab

This section replicates the "Activity Zones" on page 45 feature found in OvrC.

The only extra functionality here is the **Invert** button, which switches each grid square between active and inactive.

Schedule Tab

This sets which times the given activity is enabled.

The screenshot shows the 'Schedule' tab selected in a navigation bar with 'Detection Config' and 'Area and Sensitivity' also visible. Below the navigation bar are radio buttons for 'Erase' (selected) and 'Add'. The main area is titled 'Week Schedule' and contains a grid for scheduling activity. The grid has 24 columns representing hours of the day. For Sunday (Sun.), there are two active time bands: one from 00:00 to 16:53 and another from 17:53 to 24:00. For Monday (Mon.), there is one active time band from 00:00 to 24:00. A 'Manual Input' dialog box is open over the Monday grid, showing a time range from 16:53 to 17:53 and an 'OK' button.

The **Week Schedule** section is where you determine when the camera sends data to be recorded for normal days. Click the **Erase** or **Add** radio buttons, then click and drag your mouse across one of the bands. The exact time spread for that band appears below the band as you click and drag. Alternatively, click **Manual Input** at the right end of each band to enter specific times.

The **Holiday Schedule** section lets you set alternate behavior that overrides the normal daily schedule. In the **Date** text box, enter a month and day in numeric format (i.e., use 02-14 for February 14th). Click **+** to add that date to the list of holidays shown at right. To remove a holiday, click on it in the textbox to the right and click the **-** button. All holidays follow the same schedule.

Exception Alarm

This section sets how your camera reacts to internal events that may interfere with surveillance. For external interference, see [Video Exception](#).

There are tabs for:

- SD Card Full (no space to record)
- SD Card Error (a flaw prevents recording)
- IP Address Collision (a problem at the router or switch)
- Cable Disconnected (a physical disconnect)

They all work the same way, though some tabs do not have all of the controls.

Each tab configures how your camera reacts to that event.

Enable (if present): This box must be checked to edit anything else on the page.

Alarm Type: Choose either normally open or normally closed.

Alarm Holding Time: This allows the alarm to continue after the event that triggers it ends (for example, if someone opens and quickly shuts a door sensor).

Sensor Name: To aid in troubleshooting.

Alarm Out: If your camera is equipped with physical alarm out connections, enabling this has the camera send the alarm.

Trigger SD Card Snapshot (if present): Sends a photo of what triggered the alarm to the SD card.

Trigger SD Recording (if present): Records to the SD card for the duration of the alarm.

Trigger Email: This opens a dialog in which you can list email addresses to receive the alert, set that email's subject line and body text, and decide whether to attach a photo of the incident.

Trigger FTP: Add the server address for your FTP site, and the camera uploads any alert recordings to that site for remote viewing.

Click **Save** when finished.

Alarm In

Certain models have alarm contacts on their pigtail (for door sensors, etc.). This configures what your camera does when an alarm reaches it through the pigtail.

Detection Config Tab

This configures how your camera reacts to an incoming alarm.

Enable (if present): This box must be checked to edit anything else on the page.

Alarm Holding Time: This allows the alarm to continue after the event that triggers it ends (for example, if someone opens and quickly shuts a door sensor).

Alarm Out: If your camera is equipped with physical alarm out connections, enabling this has the camera send the alarm .

Trigger SD Card Snapshot (if present): Sends a photo of what triggered the alarm to the SD card.

Trigger SD Recording (if present): Records to the SD card for the duration of the alarm .

Trigger Email: This opens a dialog in which you can list email addresses to receive the alert, set that email's subject line and body text, and decide whether to attach a photo of the incident.

Trigger FTP: Add the server address for your FTP site, and the camera uploads any alert recordings to that site for remote viewing.

Click **Save** when finished.

Schedule Tab

This sets which times the given activity is enabled.

The screenshot shows the 'Schedule' tab in a configuration interface. At the top, there are three tabs: 'Detection Config', 'Area and Sensitivity', and 'Schedule'. Below the tabs, there are two radio buttons: 'Erase' (selected) and 'Add'. The main area is titled 'Week Schedule' and contains a grid for scheduling. The grid has two rows for 'Sun.' and 'Mon.' and a horizontal axis for hours from 0 to 24. For Sunday, there are two green bars representing active periods: one from 00:00 to 16:53 and another from 17:53 to 24:00. For Monday, there is one green bar from 00:00 to 24:00. A 'Manual Input' dialog box is open over the Monday bar, showing the time range '16:53 - 17:53' and an 'OK' button.

The **Week Schedule** section is where you determine when the camera sends data to be recorded for normal days. Click the **Erase** or **Add** radio buttons, then click and drag your mouse across one of the bands. The exact time spread for that band appears below the band as you click and drag. Alternatively, click **Manual Input** at the right end of each band to enter specific times.

The **Holiday Schedule** section lets you set alternate behavior that overrides the normal daily schedule. In the **Date** text box, enter a month and day in numeric format (i.e., use 02-14 for February 14th). Click **+** to add that date to the list of holidays shown at right. To remove a holiday, click on it in the textbox to the right and click the **-** button. All holidays follow the same schedule.

Alarm Out

This allows the camera to send out an alarm through its pigtail.

There are four Alarm Out Modes:

- **Alarm Linkage:** The camera is directly linked to the other device via the phoenix connector in the camera's tail. You must also enter the alarm's name in the Alarm Out Name text box.
- **Manual Operation:** This lets the operator manually trigger or cancel an alarm.
- **Day/night switch linkage:** This controls the alarm based on the camera switching between day mode and night mode.
- **Timing:** This controls the alarm based on time of day using the Schedule tool.

Schedule Tool

This sets which times the given activity is enabled.

Detection Config Area and Sensitivity **Schedule**

Erase Add

Week Schedule

Sun. 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24
00:00-16:53, 17:53-24:00 Manual Input

Mon. 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24
00:00-24:00 16:53 - 17:53 OK Manual Input

The **Week Schedule** section is where you determine when the camera sends data to be recorded for normal days. Click the **Erase** or **Add** radio buttons, then click and drag your mouse across one of the bands. The exact time spread for that band appears below the band as you click and drag. Alternatively, click **Manual Input** at the right end of each band to enter specific times.

Holiday Schedule

Date 09-05 + 01-01 02-14 12-25

0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24
00:00-24:00 Manual Input

Save

The **Holiday Schedule** section lets you set alternate behavior that overrides the normal daily schedule. In the **Date** text box, enter a month and day in numeric form at (i.e., use 02-14 for February 14th). Click **+** to add that date to the list of holidays shown at right. To remove a holiday, click on it in the textbox to the right and click the **-** button. All holidays follow the same schedule.

Config > Event Tile

This tile organizes how your camera reacts to noteworthy situations.

Contents:

- [Video Exception](#) - Protect against vandalism and malfunction
- [Line Crossing](#) - Watch to see if someone crosses a boundary
- [Target Counting by Line](#) - Tally how many targets cross the line
- [Region Intrusion](#) - Track those who enter a specific area

Video Exception

Exceptions are events that the camera deems abnormal.

Detection Config Tab

In this tab, you decide which exceptions the camera should monitor for:

- **Scene Change Detection:** Sends an alert if the camera's view abruptly changes. This can happen if the camera is knocked or blocked.
- **Video Blur Detection:** Sends an alert if the image loses focus.
- **Video Tampering Detection:** Sends an alert if the camera detects an abnormal feed, or someone trying to interfere with a feed.

Next, configure how your camera reacts to the selected events.

Alarm Holding Time: This allows the alarm to continue after the event that triggers it ends (for example, if someone opens and quickly shuts a door sensor).

Alarm Out: If your camera is equipped with physical alarm out connections, enabling this has the camera send the alarm.

Trigger SD Card Snapshot (if present): Sends a photo of what triggered the alarm to the SD card.

Trigger SD Recording (if present): Records to the SD card for the duration of the alarm.

Trigger Email: This opens a dialog in which you can list email addresses to receive the alert, set that email's subject line and body text, and decide whether to attach a photo of the incident.

Trigger FTP: Add the server address for your FTP site, and the camera uploads any alert recordings to that site for remote viewing.

Click **Save** when finished.

Sensitivity Tab

This determines how easily the camera decides whether or not one of these exceptions has occurred. Higher sensitivity means smaller changes create an alert.

Line Crossing

Pro Tip: Line crossing is easily configured [in the OvrC interface](#). However, OvrC does not configure differing sensitivities based on target type.

The camera can use AI to determine whether something crosses a line. Line crossing cannot be used if area intrusion (above) is being used.

Detection Config Tab

This configures how your camera reacts to the events.

Enable: This box must be checked to use anything else on the page.

Save Original Picture to SD Card: This saves the full video image of the moment the event is triggered.

Save Original Picture to SD Card: This saves the cropped image of the object that triggered the alarm.

Below that, you can select whether the camera will look for people, motor vehicles (like cars), and/or non-motor vehicles (like bicycles). Each option has its own sensitivity setting.

Alarm Holding Time: This allows the alarm to continue after the event that triggers it ends (for example, if someone opens and quickly shuts a door sensor).

Alarm Out: If your camera is equipped with physical alarm out connections, enabling this has the camera send the alarm.

Trigger SD Card Snapshot (if present): Sends a photo of what triggered the alarm to the SD card.

Trigger SD Recording (if present): Records to the SD card for the duration of the alarm.

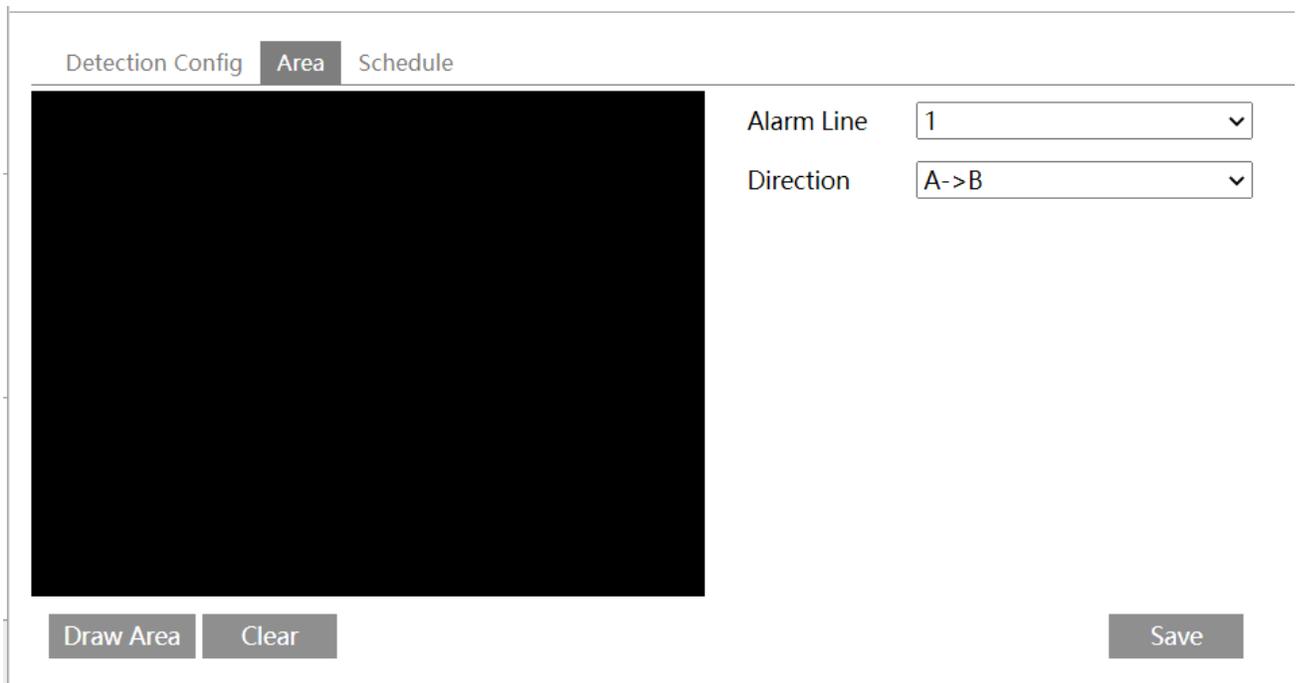
Trigger Email: This opens a dialog in which you can list email addresses to receive the alert, set that email's subject line and body text, and decide whether to attach a photo of the incident.

Trigger FTP: Add the server address for your FTP site, and the camera uploads any alert recordings to that site for remote viewing.

Click **Save** when finished.

Area Tab

Pro Tip: Line crossing is more easily configured [in the OvrC interface](#).



Under **Alarm Line**, select which of the 4 lines you want to modify. Click **Draw Area**. Click and drag in the camera view image to create the line. Click and drag one end of a line to edit it.

Note the arrow in the camera image, and the selection in the **Direction** dropdown. The camera counts line crossings in that direction only. You can change the dropdown selection to reverse the direction.

Click **Clear** to delete the selected line.

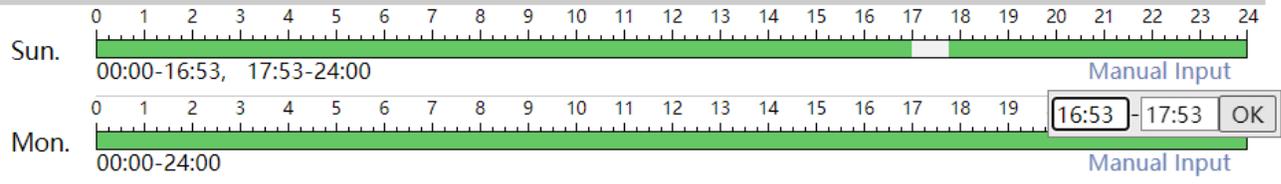
Click **Save** before exiting.

Schedule Tab

This sets which times the given activity is enabled.

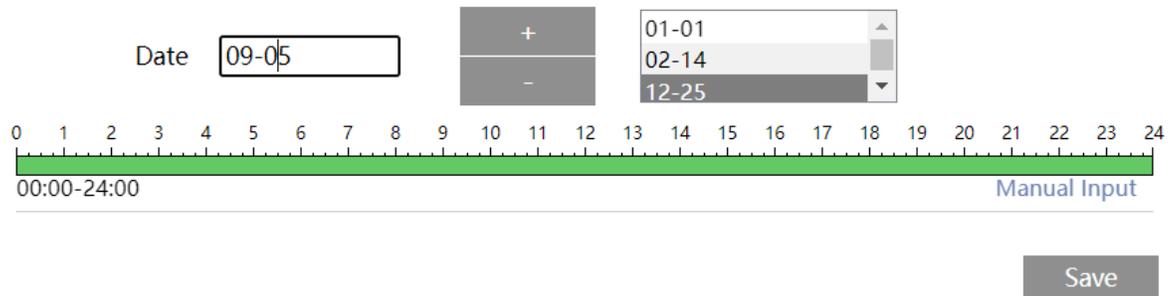
Erase Add

Week Schedule



The **Week Schedule** section is where you determine when the camera sends data to be recorded for normal days. Click the **Erase** or **Add** radio buttons, then click and drag your mouse across one of the bands. The exact time spread for that band appears below the band as you click and drag. Alternatively, click **Manual Input** at the right end of each band to enter specific times.

Holiday Schedule



The **Holiday Schedule** section lets you set alternate behavior that overrides the normal daily schedule. In the **Date** text box, enter a month and day in numeric form at (i.e., use 02-14 for February 14th). Click **+** to add that date to the list of holidays shown at right. To remove a holiday, click on it in the textbox to the right and click the **-** button. All holidays follow the same schedule.

Region Entrance (PTZ only?)

Region Exiting (PTZ only?)

Target Counting by Line

Here you can track how many people, cars, etc., cross your line. **This line is different from the lines used in the Line Crossing alarm.** Unlike line crossing, you can only have one counting line.

Detection Config Tab

This configures how your camera reacts to the events.

Enable: This box must be checked to use anything else on the page.

Save Original Picture to SD Card: This saves the full video image of the moment the event is triggered.

Save Original Picture to SD Card: This saves the cropped image of the object that triggered the alarm.

Below that, you can select whether the camera will look for people, motor vehicles (like cars), and/or non-motor vehicles (like bicycles). Each option has its own sensitivity setting.

Staying Threshold: Each type of target also has a threshold that needs to be met before triggering an alarm. When this is set to zero, every crossing sets off the alarm. When set to higher numbers, the camera only triggers the alarm if it sees excess traffic.

Counting Reset: In the middle of the alarm section, the Counting Reset section tells the camera when to start its count over. You can choose daily, weekly, monthly, or not at all. Click the **Reset** button to restart the count manually.

Alarm Holding Time: This allows the alarm to continue after the event that triggers it ends (for example, if someone opens and quickly shuts a door sensor).

Alarm Out: If your camera is equipped with physical alarm out connections, enabling this has the camera send the alarm.

Trigger SD Card Snapshot (if present): Sends a photo of what triggered the alarm to the SD card.

Trigger SD Recording (if present): Records to the SD card for the duration of the alarm.

Trigger Email: This opens a dialog in which you can list email addresses to receive the alert, set that email's subject line and body text, and decide whether to attach a photo of the incident.

Trigger FTP: Add the server address for your FTP site, and the camera uploads any alert recordings to that site for remote viewing.

Click **Save** when finished.

Area Tab

Detection Config **Area** Schedule

Entry: human-# car-# bike-#
Exit: human-# car-# bike-#
Stay: human-# car-# bike-#

Alarm Line 1

Direction A<-B

Statistics

OSD

Entrance Entry

Exit Exit

Stay Stay

Human human

Car car

Bike bike

Under Threshold Welcome

Over Threshold Please wait

Stop Draw Clear

Save

On the left side, you control the detection area.

Click **Draw Area**. Click and drag in the camera view image to create the line. Click and drag one end of a line to edit it.

Note the arrow in the camera image, and the selection in the **Direction** dropdown. The camera counts line crossings in that direction only. You can change the dropdown selection to reverse the direction.

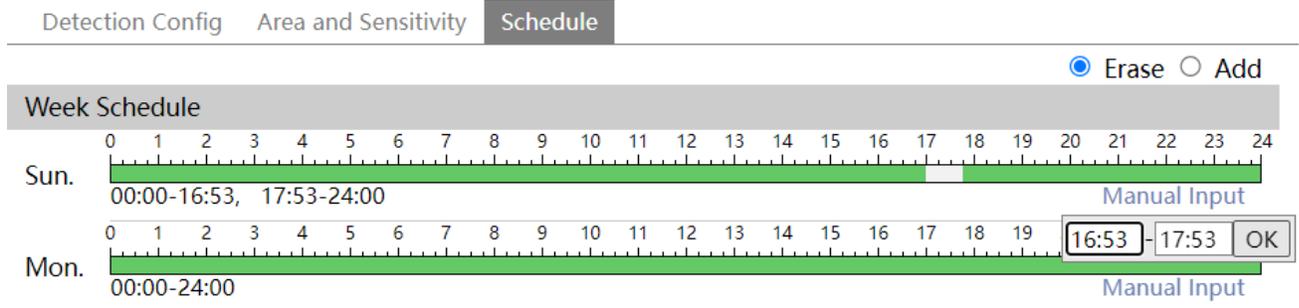
Click **Clear** to delete the selected line.

Click **Save** before exiting.

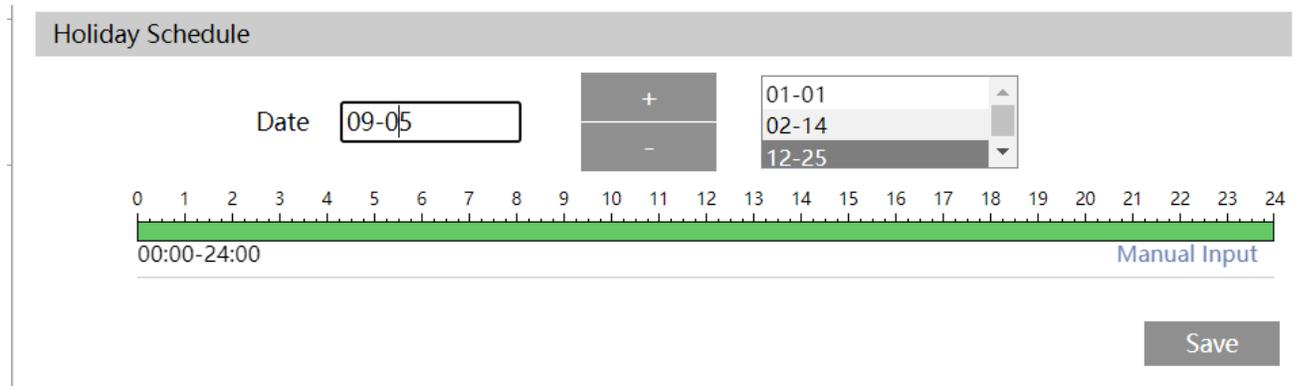
On the right side, you can enable Statistics to add information text to the screen, detailing your preferences in the OSD area. Be sure to click **Save** once you've customized your data.

Schedule Tab

This sets which times the given activity is enabled.



The **Week Schedule** section is where you determine when the camera sends data to be recorded for normal days. Click the **Erase** or **Add** radio buttons, then click and drag your mouse across one of the bands. The exact time spread for that band appears below the band as you click and drag. Alternatively, click **Manual Input** at the right end of each band to enter specific times.



The **Holiday Schedule** section lets you set alternate behavior that overrides the normal daily schedule. In the **Date** text box, enter a month and day in numeric form at (i.e., use 02-14 for February 14th). Click **+** to add that date to the list of holidays shown at right. To remove a holiday, click on it in the textbox to the right and click the **-** button. All holidays follow the same schedule.

Region Intrusion

This lets you define an area. The camera watches for anything entering that area.

Detection Config Tab

This configures how your camera reacts to the events.

Enable: This box must be checked to use anything else on the page.

Save Original Picture to SD Card: This saves the full video image of the moment the event is triggered.

Save Original Picture to SD Card: This saves the cropped image of the object that triggered the alarm.

Below that, you can select whether the camera will look for people, motor vehicles (like cars), and/or non-motor vehicles (like bicycles). Each option has its own sensitivity setting.

Alarm Holding Time: This allows the alarm to continue after the event that triggers it ends (for example, if someone opens and quickly shuts a door sensor).

Alarm Out: If your camera is equipped with physical alarm out connections, enabling this has the camera send the alarm.

Trigger PTZ Smart Tracking: If the camera is a PTZ camera, you can set it to follow the subject.

Trigger SD Card Snapshot (if present): Sends a photo of what triggered the alarm to the SD card.

Trigger SD Recording (if present): Records to the SD card for the duration of the alarm.

Trigger Email: This opens a dialog in which you can list email addresses to receive the alert, set that email's subject line and body text, and decide whether to attach a photo of the incident.

Trigger FTP: Add the server address for your FTP site, and the camera uploads any alert recordings to that site for remote viewing.

Click **Save** when finished.

Area Tab

Pro Tip: Region intrusion is more easily configured in the OvrC interface.

The camera can use AI to determine whether someone enters the marked area. Intrusion cannot be used if line crossing (below) is being used.

Under **Alarm Area**, select which of the 4 zones you want to modify. Each zone has six corners; click in the camera view image to add each corner one at a time. If you want fewer than six corners, make the corners you want, then click **Stop Draw**. The camera will complete your shape when you click **Save**.

You cannot edit a zone; you must instead click **Clear** and start a new one.

Click **Save** before exiting.

Schedule Tab

This sets which times the given activity is enabled.

Detection Config Area and Sensitivity **Schedule**

Erase Add

Week Schedule

Day	Time Range
Sun.	00:00-16:53, 17:53-24:00
Mon.	00:00-24:00

Manual Input: 16:53 - 17:53 OK

The **Week Schedule** section is where you determine when the camera sends data to be recorded for normal days. Click the **Erase** or **Add** radio buttons, then click and drag your

mouse across one of the bands. The exact time spread for that band appears below the band as you click and drag. Alternatively, click **Manual Input** at the right end of each band to enter specific times.

The screenshot shows a user interface for setting a holiday schedule. At the top, there is a grey header labeled "Holiday Schedule". Below the header, there is a "Date" text box containing "09-05". To the right of the text box are two buttons: a "+" button and a "-" button. Further right is a list of dates: "01-01", "02-14", and "12-25". Below these elements is a horizontal timeline from 0 to 24, representing hours. A green bar spans the entire timeline from 00:00 to 24:00. The text "00:00-24:00" is written below the bar on the left, and "Manual Input" is written in blue text on the right. At the bottom right of the interface is a grey "Save" button.

The **Holiday Schedule** section lets you set alternate behavior that overrides the normal daily schedule. In the **Date** text box, enter a month and day in numeric form at (i.e., use 02-14 for February 14th). Click **+** to add that date to the list of holidays shown at right. To remove a holiday, click on it in the textbox to the right and click the **-** button. All holidays follow the same schedule.

Config > Image Tile

Here you control how the surveillance feed appears.

Contents:

- [Display Settings](#) - Adjust how the image appears
- [Video/Audio](#) - Manage your streams
- [OSD](#) - On-screen Display: add information to the feed
- [Video Mask](#) - Block out sensitive areas
- [ROI Config](#) - Region of interest: keep your best images where it counts
- [Zoom/Focus](#) - Adjust your motorized camera

Display Settings

Pro Tip: Many of these controls can be found in the OvrC interface.

Camera Parameters Tab

The Camera Parameters tab lets you adjust the image. There is no save button; settings are applied dynamically as you work and saved when you exit the tab.

The camera has three separate configuration profiles, one for daytime, one for nighttime, and one generic-use one. Select which one you want to edit at the top right. Whenever you select a profile, the interface automatically adjusts the screen image to show you what it looks like.

Video Adjustment

Lens Distortion Correction	<input type="checkbox"/>		<input type="text" value="80"/>
HFR		<input type="text" value="On"/> ▼	
Frequency		<input type="text" value="60HZ"/> ▼	
Infrared Mode		<input type="text" value="Auto"/> ▼	
Corridor Pattern		<input type="text" value="180"/> ▼	
Image Mirror	<input type="radio"/>	Open	<input checked="" type="radio"/> Close
Image Flip	<input type="radio"/>	Open	<input checked="" type="radio"/> Close

In the Video Adjustment section below the screen image, cameras have some or all of the following:

- **Lens Distortion Correction:** This setting has the camera try to smooth out the edges of the view.
- **HFR:** If you enable High Frame Rate, the camera reboots. After it finishes, you can set the main stream to either 50 or 60 frames per second. This is useful for high-speed environments like cashiers and casinos. Disable this, and the camera reboots, setting the frame rate back to 30.
- **Frequency:** If you have lights that flicker in your image, try changing this setting.
- **Infrared Mode:** Choose how the camera decides to engage its infrared lighting.

- **Corridor Pattern:** Enable this for situations like long hallways. Set the video resolution to 1080P or below, and choose the rotation of the camera image (in 90° increments).
- **Image Mirror:** Reverse the image horizontally.
- **Image Flip:** Reverse the image vertically.

Below that, PTZ cameras have these additional settings:

The screenshot shows a settings panel for a PTZ camera. It includes the following controls:

- Focus Limit:** A dropdown menu currently set to "1M".
- Zoom Display:** An unchecked checkbox.
- Zoom Speed:** A slider control with a value of 3 displayed in a box to the right.
- Scan Speed:** A slider control with a value of 10 displayed in a box to the right.
- Lens Initialization:** A grey button labeled "Lens Initialization".
- Set North:** A grey button labeled "North".

- **Focus Limit** determines how close the PTZ will focus while tracking.
- **Zoom Display** causes the OSD to display the camera's zoom.
- **Zoom Speed** and **Scan Speed** sets the maximum rate at which the PTZ moves.
- **Lens Initialization** *does a thing*.
- **Set North** aligns your system geographically. Manually aim your camera north, then push this button. Once this is set, you can access the direction your camera is aiming through the OSD settings.

The right-hand column holds several settings.

Let's start with the sliders, which cover basic image settings.

Config File	Common ▼		
Brightness			50
Contrast			50
Hue			50
Saturation			50
Sharpness	<input type="checkbox"/>		128
Noise Reduction	<input type="checkbox"/>		128
Defog	<input type="checkbox"/>		128
Auto Iris	<input checked="" type="checkbox"/>	(disable without auto iris lens)	

- **Brightness:** Set the brightness level of the camera's image.
- **Contrast:** Set the color difference between the brightest and darkest parts.
- **Hue:** Adjust the total color of the image.
- **Saturation:** Set the degree of color purity. High saturation makes for vivid color; low makes the image more grayscale.
- **Sharpness:** Set the resolution level of the image plane and the sharpness level of the image edge.
- **Noise Reduction:** Decrease the visual noise (snow, random pixel errors, etc.). Increasing the value improves the noise reduction effect but reduces image resolution.

- **Defog:** Enable this and test the settings to improve visibility in foggy, dusty, smoggy, or rainy environments.

Auto Iris: If your camera is motorized, enable this; otherwise disable it.

BLC	<input type="text" value="HWDR"/>	▼
Level	<input type="text" value="Low"/>	▼
Smart IR	<input type="text" value="Off"/>	▼
White Balance	<input type="text" value="Auto"/>	▼
Day/Night Mode	<input type="text" value="Auto"/>	▼
Sensitivity	<input type="text" value="Mid"/>	▼
Delay Time(Second)	<input type="range" value="2"/>	<input type="text" value="2"/>
Exposure Mode	<input type="text" value="Auto"/>	▼
Gain Mode	<input type="text" value="Auto"/>	▼
Gain Limit	<input type="range" value="50"/>	<input type="text" value="50"/>

Below, you set how the camera handles difficult lighting situations. These settings vary slightly depending on the BLC option chosen:

- **BLC:** Select which backlight compensation option to use:
 - **Off:** Disables the backlight compensation function. It is the default mode.
 - **HWDR:** Hardware Wide Dynamic Range adjusts the image when there are both very bright and very dark areas in the field of view. It dims the bright areas and boosts the dark areas. Recording stops for a few seconds when the camera switches into or out of WDR mode.
 - **HLC:** Highlight Compensation suppresses the brightness of the image's bright areas and reducing the size of any halo.
 - **BLC:** Enabling backlight compensation makes dark areas (especially backlit areas) clearly visible.
- **Start Time / End Time** (HLC selected): These settings tell the camera when to use highlight compensation.
- **Location** (BLC selected): This tells the camera which part of the field of view suffers from backlighting.
- **Antiflicker** (HWDR not selected): If lights pulsate or flicker in your video feed, test the settings here to try to eliminate it.
- **Level** (HWDR selected): Sets the amount of WDR to use. The higher the level, the less contrast there is between the lightest and darkest areas.
- **Smart IR:** This function avoids overexposure and underexposure by controlling the brightness of the IR lights according to the ambient light.
- **White Balance** Adjust the color temperature according to the environment automatically.
- **Day/Night Mode:** This tells the camera when to switch to night mode. Auto lets the camera decide, Day and Night leaves the camera in that mode constantly, and Timing switches according to a set schedule.
- **Daytime / Nighttime** (Timing mode selected): Makes the switch according to a set schedule.

- **Sensitivity** (Auto mode selected): This sets how readily the camera switches. Higher sensitivity requires less change to make the switch.
- **Delay Time (Seconds)** (Auto mode selected): How long a change in light must remain at that light level before the camera switches modes.
- **Exposure Mode** (HWDR not selected): If you select Manual, another dropdown appears where you select a fixed value for the digital shutter speed.
- **Gain Mode** (HWDR not selected): If you select Manual, this activates the Gain Limit slider below. The higher the value is, the brighter the image is.

The **Default** button performs a factory reset of just these settings.

The **Reset Display Settings** button returns all of the above to where they were when you opened this tab. Remember, changes are saved dynamically when you exit this page.

Profile Management Tab

This sets the basis for switching between day and night mode.

- With **Schedule** at Full time and **Config** at Common, then the camera stays in Common mode at all times.
- With **Schedule** at Full time and **Config** at Auto, then the camera switches between day and night mode whenever it senses the need.
- With **Schedule** at Timing, you can use the slider to tell the camera when to switch between night mode and day mode.

Click **Save** before leaving this page.

Video/ Audio

This tab manages your streams.

Video Tab

In the table, you set the parameters for each video stream as follows:

Index	Stream Name	Resolution	Frame Rate	Bitrate Type	Bitrate(Kbps)	Video Quality	I Frame	Video	Profile
1	Main stream	1920x1080	30	VBR	2048	Higher	60	H265	High Profile
2	Sub stream	704x480	30	VBR	768	Higher	60	H264	High Profile
3	Third stream	704x480	30	VBR	768	Higher	60	H264	High Profile

Send Snapshot Sub stream Size: (704x480)

Video encode slice split

Watermark (Only support H264, H265) Watermark content:

Save

- **Resolution:** The dimensions of the feed.
- **Frame Rate:** Measured in frames per second.
- **Bitrate Type:** Choose either CBR (constant bitrate) or VBR (variable bitrate). CBR keeps the volume of the feed constant, no matter how much change occurs in the video. VBR adjusts the bitrate according to scene changes: scenes with little to no movement have a low bitrate, while scenes with a lot of motion have a higher bitrate. Which option you choose depends on your plan to optimize the network bandwidth load.
- **Bitrate (Kbps):** Higher bitrate provides better images at the expense of heavier network traffic.
- **Video Quality:** This adjusts the maximum bitrate your camera uses.
- **I Frame Interval:** An I frame is a frame in a video feed that has full resolution for every pixel. Frames after the I frame reduce their bandwidth by just noting changes from the most recent I frame. This setting determines how often the camera uses an I frame. Higher numbers save on bandwidth, but can reduce image quality, especially when there is a lot of motion.
- **Video Compression:** We recommend you use H265 as it uses less disk space.

Below the table are several additional options:

- **Send Snapshot:** This determines which stream handles the snapshot, and therefore what resolution the snapshot is.
- **Video encode slice split:** This feature helps provide a smooth video on low-performance computers..
- **Watermark:** If you are using H264 or H265, you can have watermark text appear when playing local recorded video in the search interface. Check the Watermark box to enable it, and enter the desired message in the text box.

Audio Tab

If you Enable audio, the following options appear:

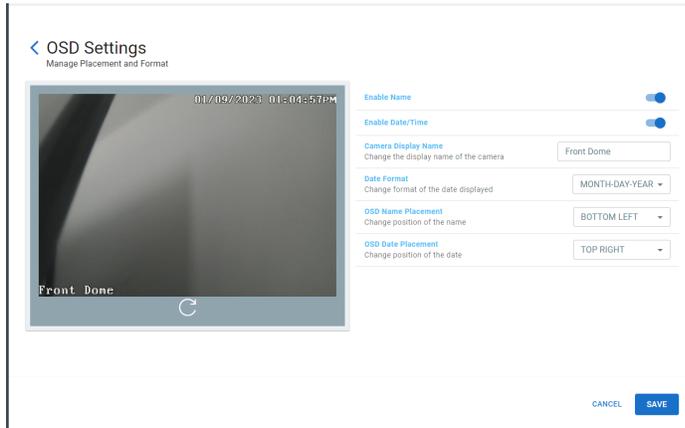
The screenshot shows the 'Audio' configuration tab. At the top, there are two tabs: 'Video' and 'Audio', with 'Audio' being the active tab. Below the tabs, there is a checked checkbox labeled 'Enable'. Underneath, there are four settings: 'Audio Encoding' with a dropdown menu showing 'G711A', 'Audio Type' with a dropdown menu showing 'MIC', 'MIC In Volume' with a slider set to 75, and 'Audio Out Volume' with a slider set to 100. At the bottom center, there is a 'Save' button.

- **Audio Encoding:** We recommend G711U
- **Audio Type:** Choose whether the input is from a built-in microphone or an external line. Use the built-in microphone whenever possible.
- **MIC/LIN In Volume:** Sets the volume of the incoming audio.
- **Audio Out Volume:** Controls the volume of an attached speaker.

OSD

Pro Tip: You can perform basic OSD functions in OvrC.

This supplies additional OSD options beyond those enabled in OvrC.



To the left is the camera's video feed showing how all of your OSD options will look.

At the top, select the visibility and format of the date, the content and visibility of the camera name, and the language to use for alerts.

PTZ cameras have the additional options to display the camera's aim (shown as an azimuth from north as set under Image Settings), and the preset number (if the camera is at a preset).

You can also add up to four additional pieces of information, each with one or two lines of text. Click the checkbox to the left to activate the OSD option and enter up to 15 characters in the text box. If desired, you can add a second line of text with 15 more characters.

OSD option 1 can support a graphic instead of text. This graphic must be a JPG that is no more than 200x200.

These OSD options initially appear down the left side of the screen, however you can drag them to any location on the screen.

Video Mask

Your Lumina camera supports up to four video masks to preserve privacy, whether it's a secure item of yours, or a window into a neighbor's house. Areas covered by a mask are excluded from all recordings.

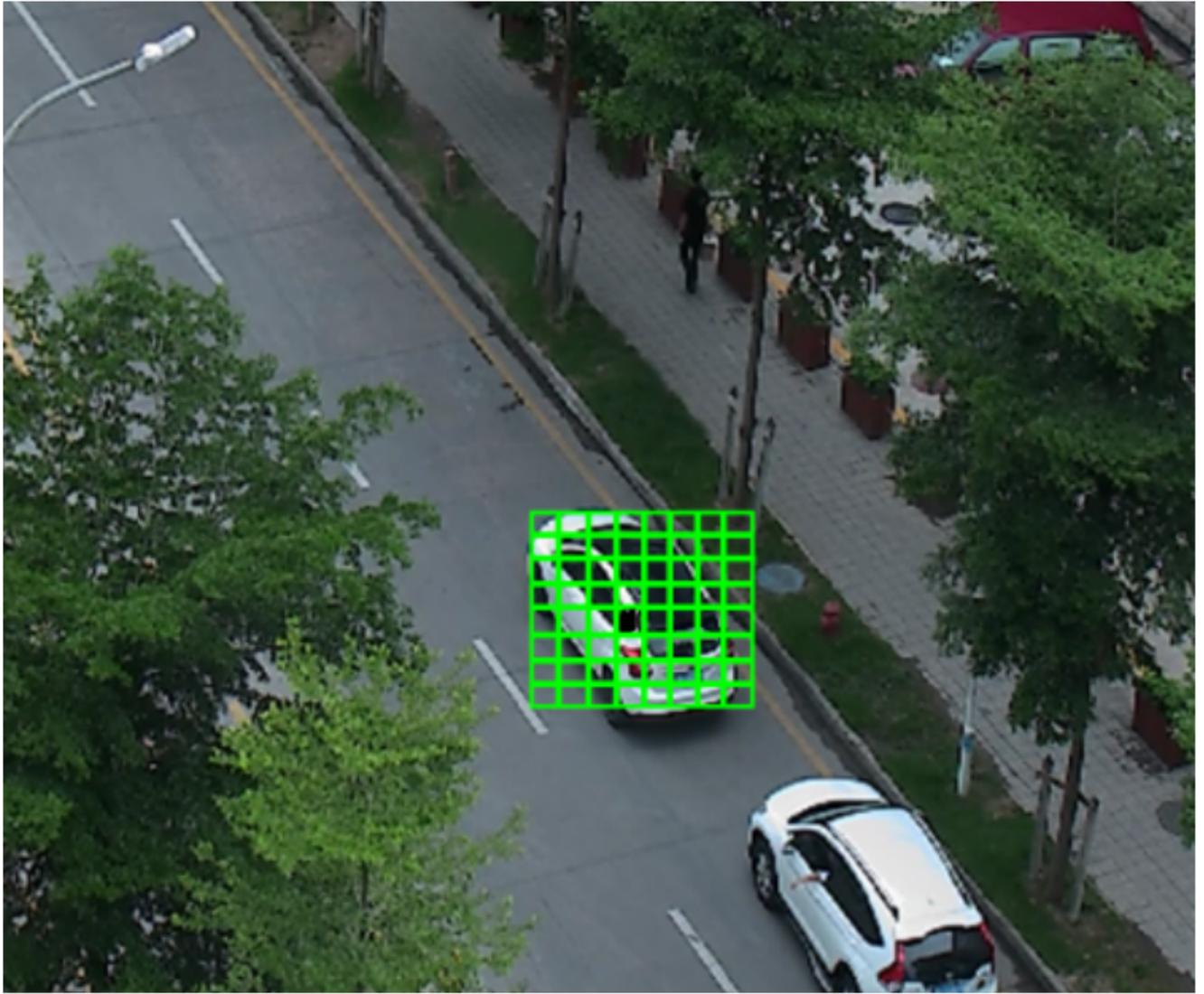
Click **Enable** to use a video mask.

Click **Draw Area** to begin drawing your mask(s). Click and drag across the screen to set the areas to block. **Clear** erases all masks. Click **Stop Draw** when you are finished, then **Save**.

PTZ cameras have a PTZ navigation tool at right for your convenience.

ROI Config

Region of interest (ROI) lets you outline one area in your video that received special attention. The camera uses a higher bitrate for the ROI at the expense of other areas. Thus ROI places the best image quality in the area that you mark as most important.



Enable Draw Area Clear Level 1 Save

Click **Enable** to activate ROI. Then click **Draw Area** and click and drag across the image. Clear erases that area.

Level determines how much the camera shifts image quality toward the ROI; higher levels mean more detail in the ROI and less in other areas.

Zoom / Focus

Pro Tip: This (other than the day/night switch) can be done using OvrC. See Image Settings under [OvrC's Camera Configure Tab](#).

If you have a motorized camera, you can adjust its zoom and focus here.

Canopy 2023/01/19 21:40:35

Day and night switching Focus One Click Focus Reset

Zoom - Zoom +

Focus - Focus +

Home Position

One- Key Focus lets the camera use its AI to determine the best focus value. It can be adjusted from there.

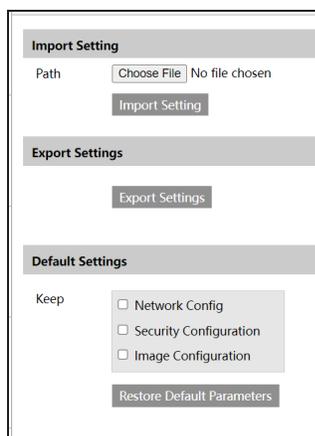
Config > Maintenance Tile

This tile helps you keep your system in top shape.

Contents:

- [Backup and Restore](#) - Save important configurations for later use
- [Reboot](#) - Schedule regular maintenance reboots
- [Upgrade](#) - Check your status after an update
- [Operation Log](#) - See what's been happening in the system

Backup and Restore



Import Setting: Click **Choose File** to open a standard file explorer. Locate the config file you want to use for your camera and click **Import Setting**. Your camera loads the new config and reboots.

Export Settings: Click this button, and the camera downloads a copy of its current config file to your Downloads folder.

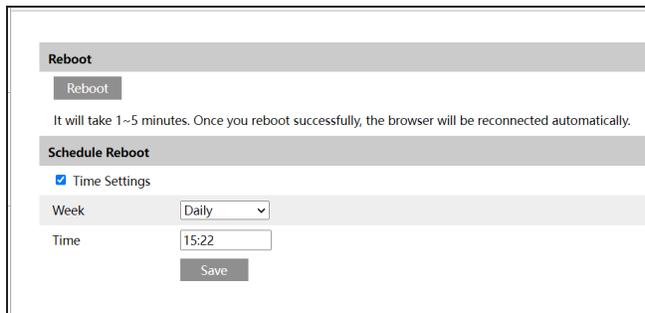
Default Settings: When installing a new config file, this lets you preserve some portion of your camera's current settings. Select any or all of:

- **Network Configuration** (your camera's IP settings, etc.)
- **Security Configuration** (password and accounts)
- **Image Configuration** (all image adjustments and day/night settings)

Restore Default Parameters: Click this button to restore all system settings to the default factory settings (except those you selected to preserve, above).

Reboot

Pro Tip: The OvrC interface does everything this option does. See the camera's Configure tab.



The screenshot shows a web interface for rebooting a camera. At the top, there is a 'Reboot' button. Below it, a message states: 'It will take 1~5 minutes. Once you reboot successfully, the browser will be reconnected automatically.' Underneath, there is a 'Schedule Reboot' section with a checked 'Time Settings' checkbox. The 'Week' dropdown is set to 'Daily', and the 'Time' input field contains '15:22'. A 'Save' button is located at the bottom of the scheduling section.

The **Reboot** button forces an immediate reboot of the camera.

Below, the **Time Settings** checkbox enables a regular reboot of the camera.

In the **Week** dropdown, select which day (or all) to perform the reboot.

In the **Time** box, you can enter the time manually (place your cursor immediately before the digit you want to replace), or you can click in the hours or minutes section and use the up and down arrows to adjust the time.

Rebooting takes 1–5 minutes. After a reboot, the browser reconnects automatically.

Upgrade

This provides a quick view of your firmware update's success.

Luma x20 devices run in a dual-firmware mode to protect the hardware (and your installs) from unforeseen glitches.

Once the firm ware has been applied to the first (operational) partition, the device goes into an observation mode to ensure the new firm ware operates properly. Observation mode lasts for about ten minutes once the firm ware update is completed.

Once proper function has been verified, the device applies the firm ware to the second (backup) partition and logs the new firm ware version with OvrC. If the new firm ware fails, the device restores the backup firm ware to the first (operational) partition.

As of this writing, OvrC does not track whether a Lum a x20 device is in observation mode. This means that, for about ten minutes in OvrC, it looks like the firm ware update didn't take, and that an update is available. If you try to update the firm ware again while your Lum a is in observation mode, the update will fail in OvrC but this will not impact the performance of the device.

Operation Log

Pro Tip: The OvrC interface provides a quick summary of activities under the camera's Activities tab.

Here you can download complete records of everything that your camera has been up to.

In the **Main Type** dropdown you can choose to view all events or select a major filter, as well as a Sub Type that varies based on the Main Type chosen.

Below these dropdowns, you set the time frame that you are interested in.

Click **Search** to execute the filters you have chosen, and **Export** to save the results as a text file to your computer.

Index	Start Time	Main Type	Sub Type	User Name	Login IP	Details
1		Operation	Video config modify	admin	192.168.1.165	video config change
2	01-19-2023 07:41:54 PM	Operation	Log in	admin	192.168.1.165	login
3	01-19-2023 07:40:50 PM	Operation	Log out	admin	192.168.1.165	logout
4	01-19-2023 07:35:44 PM	Operation	Log in	admin	192.168.1.165	login
5	01-19-2023 12:47:30 PM	Alarm	Perimeter Alarm			start
6	01-19-2023 10:21:28 AM	Operation	Video config modify	admin		video config change
7	01-19-2023 10:21:21 AM	Operation	Video config modify	admin		video config change
8	01-19-2023 10:18:01 AM	Operation	Video config modify	admin		video config change
9	01-19-2023 10:17:43 AM	Operation	Video config modify	admin		video config change
10	01-19-2023 10:05:16 AM	Operation	Log out	admin	192.168.1.165	logout
11	01-19-2023 09:59:25 AM	Operation	Log in	admin	192.168.1.165	login

View 1 - 11 of 11

Config > Network Tile

Explaining networking details is beyond the scope of this document. If you are a network professional, you know what you're doing. If not, we suggest enrolling in the [Professional Certified Network Administrator \(PCNA\) course](#).

Contents:

- [TCP/IP](#)
- [Port](#)
- [Server](#)
- [ONVIF](#)
- [DDNS](#)
- [SNMP](#)
- [802.1x](#)
- [RTSP](#)
- [RTMP](#)
- [UPnP](#)
- [Email](#)
- [FTP](#)
- [HTTP POST](#)
- [HTTPS](#)
- [P2P](#)
- [QoS](#)

TCP/ IP

Set network configurations.

IPv4 Tab

Choose DHCP or static. We recommend DHCP with a reservation at the router.

IPv6 Tab

Choose DHCP or static. We recommend DHCP with a reservation at the router.

PPPoE Config Tab

Set the user name and password for Point-to-Point Protocol over Ethernet communication.

IP Change Notification Config Tab

Set the camera to send an email or upload files if its IP address changes.

Port

Here you configure the port settings for HTTP, HTTPS, etc. Be sure to click **Save**.

Server

Authentication server configuration and settings.

ONVIF

Here you set your ONVIF user accounts, which can log in to RTSP and ONVIF protocol (and use addition, modification, deletion, and query).

Click on the list to select a specific user. The buttons across the top let you add a user, edit the selected user, or delete the selected user.

DDNS

If you want to set up your camera on a DDNS server, click **Enable** and fill in the appropriate information in the text boxes.

SNMP

Monitor your network for any concerns.

802.1x

Manually select the camera's authentication mode.

RTSP

RTSP configuration for remote video streaming.

RTMP

RTMP configuration for remote video streaming.

UPnP

Enable or disable Universal Plug-and-Play, and name the camera.

Email

Here you configure the emails that the camera sends with alerts.

Sender Address: This is who the email appears to be from .

User Name and **Password:** Enter the credentials for the email server, or click **Anonymous Login**.

Next, fill in the **Server Address** and select the **Secure Connection** setting and **SMTP Port** number.

To limit the frequency of emails, enable **Send Interval** and enter a number between 10 seconds and an hour. Emails will send no more frequently than the interval you set.

The Recipients text box shows who gets the alert emails. Enter an address in the text box and click **Add**, or select an address in the display and click **Delete**.

FTP

Here you configure the settings for your FTP server.

The table shows the FTP servers you have set up. Click **Add** to create a new server to use, or select a server in the display and click **Test**, **Modify**, or **Delete**.

HTTP POST

Set up an HTTP POST server that can be used to receive notifications, alarms from devices, etc.

HTTPS

If you want to create a self-signed certificate, you can do so here.

P2P

Enable the peer-to-peer function.

QoS

Rank the importance of different data packets by adding DSCP to network packet data.

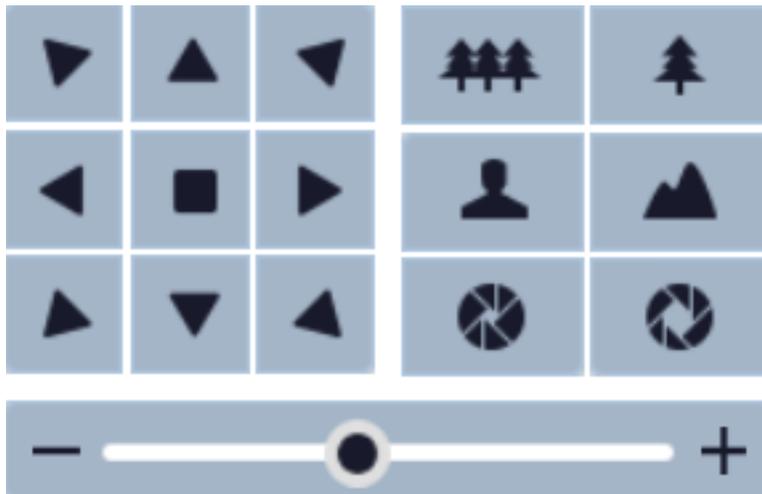
PTZ Page

Obviously, only PTZ cameras have this page.

Pro Tip: If your PTZ is having issues with tracking, check its install ment height. We recommend PTZ cameras be placed 15 feet / 4.5 meters above ground level. PTZ auto-tracking works best at heights of 19 feet / 6 meters.

PTZ Function

Every page contains the camera's view, as well as the PTZ control panel, discussed here.



On the left side, the rosette moves the camera. The square in the center stops the camera if it is moving, for example when executing an automated patrol.

On the right, paired buttons zoom in and out (top), focus near or far (middle), and tighten or open the aperture (bottom).

On the bottom is the camera speed slider, which sets the maximum speed.

Preset Tab

A preset comprises a camera's aim, zoom, focus, and iris.

To generate a new preset, move the camera to the desired position and click **Create**. Name the preset (up to 10 characters), then click **OK**.

Once a preset is generated, three buttons appear in the preset's line in the table. Click **Call** to move the camera to that preset, click **Save Position** to update the preset to the camera's current values, and click **Delete** to remove the preset. You can also click a preset's entry and click **Modify Name** at the top to edit the preset's name.

Trace Tab

A trace cycles the camera through a series of presets, pausing at each one. Your camera comes with one trace already loaded. Click **Create** to generate a new one, or **Modify** to edit one that already exists. Both options use the same interface.

Modify Trace
✕

Trace Name

Preset List

ID	Preset Name	Time	Speed
1	Front walk	15 Seconds	8
2	Side door	15 Seconds	8
3	Cargo dock	15 Seconds	8

Modify

Delete

Add preset

OK

Cancel

Within the dialog, click on a preset to select it (it shows in blue). Click **Modify** to edit that preset by changing which preset to use or adjusting the dwell time, or click **Delete** to remove that preset. Click **Add Preset** to append a new one to the end of the trace.

Group Tab

A group is a series of traces executed in a specific order. Your system has only one group available, with assigned traces shown in the list below. Click **Run** and **Stop** to review the camera's activities. **Delete** clears all traces from the list.

Within the trace list, click **Add Trace** to insert a trace on its associated line (the line shows in blue). Click **Edit Trace** to change or remove that trace.

Patrol Tab

A patrol is a recorded series of actions up to three minutes in length. Your camera can have up to four patrols; click to select a given patrol (it shows in blue). Click **Run** and **Stop** to review the selected patrol. **Delete** clears the selected patrol from the list.

To record a patrol, click **Add** on any empty slot, or **Edit** to save the new patrol over an existing one. As soon as you click either, a timer appears at the bottom right of the preview screen, counting down your remaining time from 180 seconds. Use the PTZ controls to move your camera as desired, then click **Save** or **Cancel**. If you run out of time, the system automatically saves your patrol.

Task Tab

A task is an activity that you want the PTZ to perform at specific times throughout the day.

When you click **Create**, the system opens a dialog that asks for a starting and ending time for the task, which function you want the PTZ to run at that time, and (where applicable) the function number (e.g., which preset to run). Click **Add** to finish creating that task.

To adjust a task, click to select it (it turns blue) and click **Modify** or **Delete**.

Click **Run** (if the check box in the button is checked) to review the activity.

Alarm Tab

The table gives a brief summary of your settings. Click **Edit** to adjust them.

The image shows a dialog box titled "Edit" with a close button (X) in the top right corner. It contains five rows of settings, each with a label and a dropdown menu:

Alarm Type	NO	▼
Alarm In	On	▼
Alarm Trigger	No	▼
Alarm Over	No	▼
Alarm Out	Off	▼

At the bottom of the dialog box are two buttons: "OK" and "Cancel".

In the popup, you set the following:

- For the incoming alarm, whether it is normally open or closed.
- For the incoming alarm, whether you can it active.
- Which activity the incoming alarm triggers.
- When the alarm ends, which activity the camera uses.
- Alarm Out is for the camera's outgoing alarm. Here you set which action the outgoing alarm triggers (e.g., a flashing light).

Home Position Tab

This is where you set the default action for your camera.

Set the default activity for your camera using the dropdown(s). Set the wait time, which is how long the camera wait after manual control or auto-tracking to revert to its default. Click **Save**.

Click **Run** (if the check box in the button is checked) to review the activity.

Smart Tracking

Under **Tracking Mode**, specify whether the camera's auto-tracking or manual control should have priority when there are conflicting signals.

Still Time: When enabled, if the camera has been tracking but detects no motion for this amount of time, it returns to its normal function.

Config > Security Tile

This tile manages access to your camera.

Contents:

- [User](#) - Edit account
- [Online User](#) - Edit online accounts
- [Block and Allow Lists](#) - System access IP address
- [Security Management](#) - Various other settings and alerts

User

Here you create and edit all users for the camera.

Add				Modify				Delete				Security Question			
Index	User Name				User Type										
1	admin				Administrator										
2	SupportAdmin				Advanced User										
3	SystemConnect				Advanced User										

The page opens to a list of the available accounts, listing their user name and their type. Use the buttons to add or delete a customer, modify their permissions, and change their security questions.

When you click **Add**, the camera opens the Add User dialog.

At the top, click **Enable** to activate (or suspend) the user, and **Web Login** to allow the user remote access.

Set the user's name and password, and select a user type. The user type is an informal classification; it just changes which permissions a user has selected by default.

Finally, in the box at the bottom, select which permissions that user has. Each user can have differing permissions.

When you click **Modify**, the camera opens the Edit User dialog, which is almost identical.

Finally, when you click Security Question, the camera opens a dialog in which the user can select three security questions to verify their identity.

Online User

This shows which users are currently accessing the camera. You can press **Kick Out** to eject them from the system.

Index	Client Address	Port	User Name	User Type	
1	10.151.151.1	16619	POE	Anonymous User	Kick Out

Block and Allow Lists

This page lets you block IP addresses, keeping out scammers, ex-spouses, etc.

When enabled, use the radio buttons to select whether you want to block addresses (allow every IP unless specified) or allow addresses (block every IP unless specified).

To add an address, enter it in the box at the bottom, and click **Add**. Click an address in the lists and click **Delete** to remove it.

Click **Save** when finished.

Security Management

Security Service Tab

Enable "Illegal Login Lockout" Function

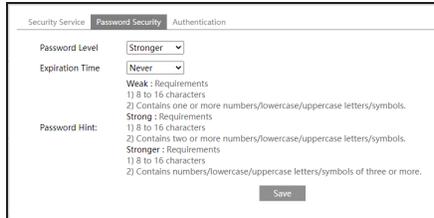
limits the number of times a single IP can attempt to log in to the system. After that limit is reached, that IP cannot log in again for several minutes.

Enabling **Trigger Email** opens a dialog where you can list recipients to be alerted

Logout Time sets a time limit after which any user is logged out and must renew their access.

Logout Time sets a time limit after which any user is logged out and must renew their access.

Password Security Tab



The screenshot shows the 'Password Security' configuration tab. It features two dropdown menus: 'Password Level' set to 'Stronger' and 'Expiration Time' set to 'Never'. Below these are detailed requirements for Weak, Strong, and Stronger password levels. A 'Save' button is located at the bottom right of the configuration area.

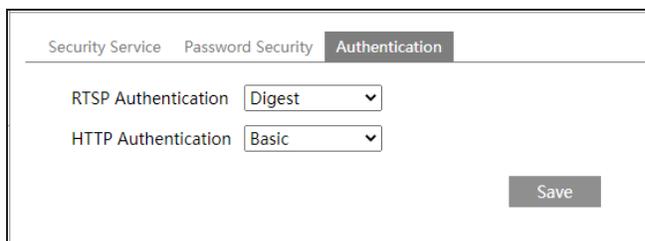
Here you set expiration times for passwords based on how strong they are.

These settings apply to all passwords on the camera.

Select the level in the top dropdown, and the expiration time in the second.

Click **Save** when finished.

Authentication Tab



The screenshot shows the 'Authentication' configuration tab. It contains two dropdown menus: 'RTSP Authentication' set to 'Digest' and 'HTTP Authentication' set to 'Basic'. A 'Save' button is positioned at the bottom right of the configuration area.

This determines which method the camera uses to authenticate remote logins.

Click **Save** when done.

Config > System Tile

This tile covers informational and administrative tasks.

Contents:

- [Basic Information](#) - Useful for troubleshooting
- [Date and Time](#) - Set it here
- [Local Config](#) - Add bitrate to your OSD
- [Storage](#) - Manage your recordings

Basic Information

This gives you information about the camera and its firmware. You may be asked for this information when receiving technical support.

This is all self-explanatory, with the possible exception of **Device ID**, which is used for P2P communications.

Date and Time

Time settings are typically pushed by your camera's NVR. If you have an NVR, we recommend you do not edit these here.

Pro Tip: The OvrC interface is a much easier way to set date and time.

Zone Tab

Set the customer's Time Zone, choose whether or not to use Daylight Saving Time, and, if used, whether to let the system calculate it, or enter the data yourself.

Date and Time Tab

Here you can set these for your camera, as well as format the time display. We recommend that you synchronize time settings with the NTP server.

Local Config

Activate the **Show Bitrate** option to show the bitrate of the camera on its OSD.

Storage

Here you manage your recordings.

Management Tab

Management	Record	Snapshot
Total picture capacity	<input type="text" value="6086 MB"/>	
Picture remaining space	<input type="text" value="4679 MB"/>	
Total recording capacity	<input type="text" value="54721 MB"/>	
Record remaining space	<input type="text" value="0 MB"/>	
State	<input type="text" value="Normal"/>	
Snapshot Quota	<input type="text" value="10"/>	%
Video Quota	<input type="text" value="90"/>	%

Changes in the quota ratio need to be formatted before they become effective.

In the Management tab, you can review the capacity of your SD card. The only item here that is editable is the ratio of space reserved for video and snapshots.

If you change the ratio, click **Format** to save those changes.

When swapping out your SD card, click **Eject** so the camera safely forgets the item.

Record Tab

In the Record tab, you select which data gets sent to the SD card for preservation.

In the **Record Stream** dropdown, select which stream you want sent.

Pre-Record Time lets you add extra video (taken before an event occurs) to the recording of that event. Your camera always has several seconds of video stored in its memory as it analyzes the feed for motion, etc. When an event occurs, it can add some of this video to the front of the event to add context to the recording.

Cycle Write determines whether new recordings can overwrite old recordings.

Enable Schedule Record has the camera use the schedule you detail in the calendar below; the default schedule is to record events 24/7. Instructions for the schedule tool are at [the bottom of the page](#).

Click **Save** before leaving this page.

Snapshot Tab

In the Snapshot tab, you select which data gets sent to the SD card for recording.

Under Snapshot Parameters, in the **Image Format** dropdown, select which stream you want sent.

Resolution is where you choose the image size.

Image Quality sets the level of compression. Low quality means high compression (and therefore small file size), and vice versa.

Under Event Trigger, **Snapshot Interval** tells the camera how frequently to take a photo once an event is triggered. **Snapshot Quantity** tells the camera how many photos to take once an event is triggered.

Under Timing, **Enable Timing Snapshot** tells the camera to take snapshots on a regular basis based on the schedule outlined below. **Snapshot Interval** tells the camera how frequently to take a photo during its normal recording schedule.

The Schedule Tool

This sets which times the given activity is enabled.

Erase Add

Week Schedule

Sun. 00:00-16:53, 17:53-24:00 Manual Input

Mon. 00:00-24:00 16:53 - 17:53 OK Manual Input

The **Week Schedule** section is where you determine when the camera sends data to be recorded for normal days. Click the **Erase** or **Add** radio buttons, then click and drag your mouse across one of the bands. The exact time spread for that band appears below the band as you click and drag. Alternatively, click **Manual Input** at the right end of each band to enter specific times.

Holiday Schedule

Date 09-05 + 01-01 02-14 12-25

00:00-24:00 Manual Input

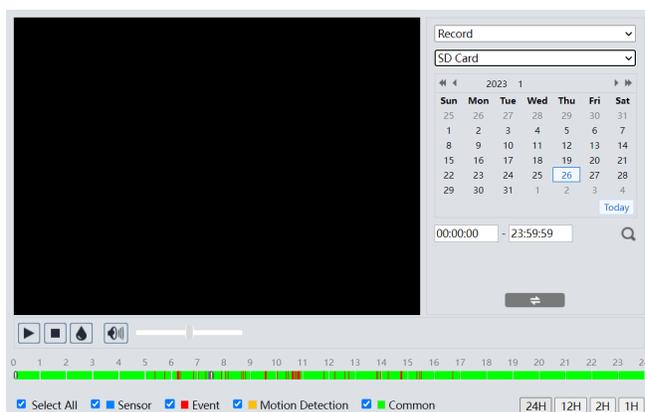
Save

The **Holiday Schedule** section lets you set alternate behavior that overrides the normal daily schedule. In the **Date** text box, enter a month and day in numeric form at (i.e., use 02-14 for February 14th). Click **+** to add that date to the list of holidays shown at right. To remove a holiday, click on it in the textbox to the right and click the **-** button. All holidays follow the same schedule.

Click **Save** before leaving this page.

Search Page

Here you can search through your surveillance recordings.



Playback

The top left of the screen holds the video playback display. Immediately below the video are buttons to:

- Start and stop playback
- Add a watermark to the video
- Enable/disable audio and set the volume

Search Detail

The search area at the top right lets you search for:

- Photographs or video files
- Stored on the SD card or NVR
- Specific date and time

Click the search icon to execute the search.

The Timeline

The bottom of the screen shows a record of all surveillance activity. This can help you narrow your search.

To the left, select which surveillance events you want displayed. To the right, select how much time to show.

Statistics Page

If you have set up [Target Counting by Line](#) in the Event tile, you can track the results here.

The screenshot shows a web interface titled "Target Counting by Line". At the top, there are several filters: "Report Type" set to "Daily Report", "Count Type" set to "Enter", and "Count Time" set to "2023", "Year" set to "1", "Month" set to "23", and "Day" set to "Day". There are "Table" and "Chart" buttons below the filters, and a "Count" button on the right. Below the filters is a table with the following data:

Index	Count Time	Human	Motor Vehicle	Non-motor Vehicle
1	01-23-2023 12:00:00 AM ~ 01-23-2023 1...	0	0	0
2	01-23-2023 01:00:00 AM ~ 01-23-2023 0...	0	0	0
3	01-23-2023 02:00:00 AM ~ 01-23-2023 0...	0	0	0

This gives you target count tallies for humans, motor vehicles, and non-motor vehicles that crossed the camera's lines.

Report Type: Here you choose to view

- **Report Type:** Daily, weekly, monthly, or annual.
- **Count Type:** Select either entering or leaving.
- **Count Time:** This lets you set the year, month, week, and/or day ranges for the data (selections adapt to the report type).

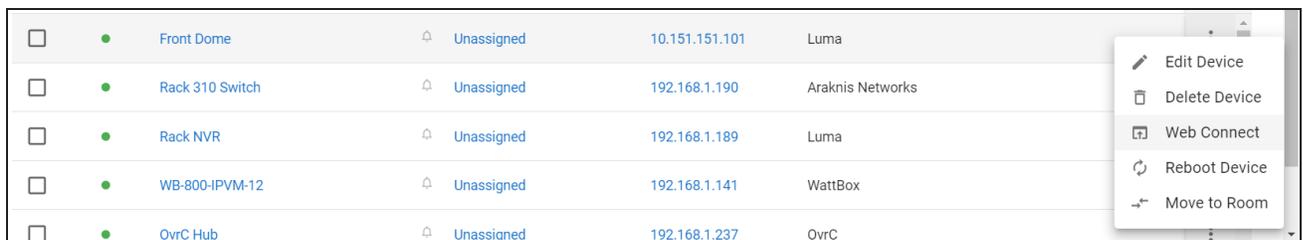
Click **Count** to generate a new set of data based on the new selections you've made.

Click **Table** to see the data as a table (as shown above). Click **Chart** to view the data as a graph.

Luma x20 NVR Web Interface

Most common functions can be handled via OvrC. However, if you need to access the x20 NVR's web interface, go to its Devices page in OvrC, open the extended menu at right, and select the **Web Connect** option. If you are local to the NVR, you can just click the NVR's IP address.

When the new page opens, click the **Connect** icon. Log in as SupportAdmin using the password provided under NVR Credentials in OvrC's Configure Tab.



<input type="checkbox"/>	●	Front Dome	🔔	Unassigned	10.151.151.101	Luma
<input type="checkbox"/>	●	Rack 310 Switch	🔔	Unassigned	192.168.1.190	Araknis Networks
<input type="checkbox"/>	●	Rack NVR	🔔	Unassigned	192.168.1.189	Luma
<input type="checkbox"/>	●	WB-800-IPVM-12	🔔	Unassigned	192.168.1.141	WattBox
<input type="checkbox"/>	●	OvrC Hub	🔔	Unassigned	192.168.1.237	OvrC

- Edit Device
- Delete Device
- Web Connect
- Reboot Device
- Move to Room

Main Controls

The interface opens to the Live Page.

At left, beneath the logo, are the various tabs of the NVR interface. At the top right are several controls that appear on all pages.

If the system detects you need it, there is a hotlink to download a plugin for your browser.

After that, the NVR shows name of the account you are using, a hotlink to log out, and a hotlink to change the account's password.

Below that, the NVR displays the latest OvrC status.

Luma x20 NVR UI - Live Display

This shows the camera's current video feed and presents various controls and alerts.

Left Panel

This area holds camera information. Click the chevron at top to collapse or expand this panel.

Camera Tab

View a list of your cameras. At the top, the title shows which camera you are viewing, and the total of all cameras available. Enter a camera name in the search box to find a specific camera, or click refresh to update the list.

Group Tab

The top displays all the groups you have set up. Select a group by clicking in it. Below the divider, it displays all the cameras in the selected group.

Pro Tip: It's easier to edit a camera group under the Function Panel > Camera > Manage Camera > Edit Camera Group, plus it provides more controls.

The **Add** button creates a new group. You must name the group, set a dwell time, and use the checkboxes to select which camera(s) belong to that group. Each group must have at least one camera, and a camera can belong to more than one group.

If you click on a group to select it, you can click **Edit** to adjust the name or dwell, or **Delete** to remove it.

Layout Tab

All customized schemes display in the left panel. Double-click a scheme to launch it immediately.

Video Area

Here you view your feeds.

Select a window in the preview area and then click a camera in the left panel to launch that camera in the window.

With a multi-camera display, drag one camera view to another window to swap those two views.

The Video Toolbar

At the left, you have buttons for single-camera and multi-camera views.

The OSD button displays (or hides) the recording status symbols: green stands for manual recording, red stands for sensor-based recording, yellow stands for motion-based recording, blue stands for scheduled recording, and cyan stands for AI recording.

The fullscreen button works with any view. Hit the Esc key to end fullscreen mode.

To the right are system control buttons.

Click the bell to trigger a manual alarm.

Click the multi-screen button to toggle the visibility of all cameras.

The large recording button toggles recording all feeds to your computer.

The small recording button toggles recording all feeds to the NVR.

Right Panel

This area holds system controls. Click the chevron at top to collapse or expand this panel.

Target Detection Tab

This gives you a list of items that have been detected by AI analysis.

Operation Tab

At the top are several command buttons.

- **Snapshot:** Take a photo of the active camera feed.
- **Close Image:** Suspend the video feed.
- **Client Record On/Off:** Record to your computer.
- **Remote Manual Record On/Off:** Record to the NVR.
- **Zoom In / Zoom Out:** Click this, then click and drag in the camera's screen to zoom in on that area.
- **3D Zoom (PTZ only):** Click this, then click and drag in the camera's screen to zoom in on that area. You can then click in the image to center on that area.
- **Enable/Disable Two-way Talk** (associated microphone only): Allows you to talk with whomever is at the camera.
- **Restore Original Proportions:** Returns the display to its original size.
- **Enable/Disable Audio:** When enabled, use the slider to adjust the volume of the camera's microphone.

At the bottom, you select which of the active camera's streams to view. If you select sub stream, you can set the parameters as well.

Lens Control Tab

This panel only functions for motorized or PTZ cameras. Here you can adjust the focus and zoom manually, Click One-key Focus to have the camera adjust itself, and decide whether the camera should automatically refocus itself when switching from day mode to night mode.

PTZ Tab

Here you can control your PTZ and call presets. See the Function Panel > Camera > PTZ for details.

Luma x20 NVR UI - Playback

This lets you review recorded video.

Left Panel

This area holds camera and incident filters that assist in finding specific recordings.

Click the chevron at top to collapse or expand this panel.

Camera Tab

At the top, select or deselect the type of recording you wish to search for: green stands for manual records, red stands for sensor-based records, yellow stands for motion-based records, blue stands for scheduled records, and cyan stands for AI event records.

Below is a list of your cameras. When searching for a recording, use the checkboxes to select any or all of your cameras.

Enter a camera name in the search box to find a specific camera, or click refresh to update the list. (Set the date using the calendar below the video window.)

At the bottom, click the search button to display all records that match the filters. Click the play button or click on the timeline to begin playback.

Sequences Tab

You can also select sequenced streams to view.

At the top, select or deselect the type(s) of recordings you wish to search for: green stands for manual records, red stands for sensor-based records, yellow stands for motion-based records, blue stands for scheduled records, and cyan stands for AI event records.

The top displays all the groups you have set up. Below the divider, it displays all the cameras in the selected group.

Group Tab

The top displays all the groups you have set up. Select a group by clicking in it. Below the divider, it displays all the cameras in the selected group.

Pro Tip: It's easier to edit a camera group under the Function Panel > Camera > Manage Camera > Edit Camera Group, plus it provides more controls.

The **Add** button creates a new group. You must name the group, set a dwell time, and use the checkboxes to select which camera(s) belong to that group. Each group must have at least one camera, and a camera can belong to more than one group.

If you click on a group to select it, you can click **Edit** to adjust the name or dwell, or **Delete** to remove it.

Video Area

Here you view the recordings.

Click the play button (in the left panel), or click in the timeline (at bottom center), to begin playback at that point. Your NVR can handle simultaneous playback of up to four cameras.

Below the video to the left are the layout buttons: single-camera view, four-camera view, OSD on/off, and fullscreen mode. The fullscreen button works with any view; hit the Esc key to end fullscreen mode.

Below and center are the playback controls.

Below to the right are the download controls. Enable a POS insert, add a watermark, adjust start and end times for the clips, and download files to network drives or USB drives.

The Calendar and Timeline

All recordings for the selected camera(s) on the date selected in the calendar are displayed in the timeline at right. Click anywhere in the timeline to begin playback at that time.

Right Panel

This area provides extra controls. Click the chevron at top to collapse or expand this panel.

Operation Tab

At the top are several command buttons.

- **Snapshot:** Take a photo of the active camera feed.
- **Close Image:** Suspend the video feed.
- **Zoom In / Zoom Out:** Click this, then click and drag in the camera's screen to zoom in on that area.
- **Restore Original Proportions:** Returns the display to its original size.
- **Enable/Disable Audio:** When enabled, use the slider to adjust the volume of the camera's microphone.

At the bottom, you select which of the active camera's streams to view. If you select sub stream, you can set the parameters as well.

Search and Backup

Here you can perform extensive searches and create backups of important recordings.

The left column contains all your search criteria; the right side displays all recordings that fulfill the criteria.

By Event Tab

At the top left, select or deselect the type(s) of recordings you wish to search for: green stands for manual records, red stands for sensor-based records, yellow stands for motion-based records, blue stands for scheduled records, and cyan stands for AI event records.

Use the calendar tools to select the dates for the start and stop times. In the clock at the bottom of each calendar, set the times desired for start and stop (click in each of the hour, minute, and second, and use the up and down arrows to adjust).

Select the cameras to use in the search, then click the **Search** button.

Once the list populates, select the files you want and click **Backup**.

By Time Tab

Use the calendar tools to select the dates for the start and stop times. In the clock at the bottom of each calendar, set the times desired for start and stop (click in each of the hour, minute, and second, and use the up and down arrows to adjust).

Select the cameras to use in the search, then click the **Search** button.

Once the list populates, select the files you want and click **Backup**.

Image Management Tab

This displays all images in list form .

Click the image icon to launch a preview window. This window lets you browse all images. You can export the image (left), delete it (right), play or pause the affiliated recording, or step forward or backward through the list.

Click the save icon to load a pop-up where you can save it.

Click the trash icon to delete the image.

Backup Status Tab

Here you can view the status of your download tasks, pause and resume tasks as need, or delete to cancel those tasks.

Luma x20 NVR UI - Intelligent Analysis

Here you can review the results of AI alerts for specific events.

Search

This page lets you search for video of specific incidents.

Customize your search using the dropdowns. First select the target type in the left column. Next, select the day and times you're interested in, which camera(s) to check, and which type(s) of event you're looking for. If you choose "Vehicle", an additional dropdown appears that allows you to select cars and/or non-motor vehicles. You can also choose "Combine", which searches for people and/or designated vehicles.

Search results display in the window at right.

Click the star button and select "Add to favorite" to create and name a favorite group comprising the current searched pictures. Later, you can quickly view these pictures by clicking the star and choosing the group name.

Click a search result to play the associated video in the window at lower left. Select **Picture** or **List** to change how the results appear, and **Snap** or **Original Image** to view the object or the entire video frame. To the right, select whether to sort by **Time** or **Camera**.

Statistics

This page lets you view graphs of AI-reported incidents.

Customize your search using the dropdowns. First select the target type in the left column. Next, which type of event you're looking for, and which camera(s) to check. If you choose "Vehicle", an additional dropdown appears that allows you to select cars and/or non-motor vehicles. You can also choose "Combine", which searches for people and/or designated vehicles.

The graph displays in the window at right. Across the top, you can select the time period for the data.

Luma x20 NVR Interface - Function Panel

The function panel has seven tiles. Click on any tile title to go to that section.

Below the title, each tile features links to several of the most-used subpages as well, so you can hop directly to those screens as desired.

Live Display Playback Search and Backup Intelligent Analysis **Function Panel**  OvrC: Connected

Camera  Edit Camera Image Settings Motion PTZ	Record  Mode Settings Encode Parameters Record Status	AI / Event  People/Vehicle Detection Sensor Alarm-out Motion	
Disk  Disk Management Storage Mode	Network  TCP/IP Port E-mail Network Status	Account and Authority  Add User Edit User Edit Permission Group Block and Allow List	System  Basic Settings View Log Config Backup an...

NVR Function Panel - Account and Authority Tile

Contents

- Account
- Security
- User Status

Account

Users

At right, this displays the user list. You can search this table with the tool at the top right.

Click a user in the list to display its user permissions in the table at left.

There are three default permission groups (Administrator, Advanced, and Common) available for accounts. You can manually add a new permission group under Permission Management.

Only the Administrator account and users that have the “Account and Authority” permission can manage the system’s accounts. The Administrator group owns all the permissions, and its permissions cannot be changed. Permissions for Advanced and Common can be changed.

To add a user, click the + icon next to the search box. Set the username, password, group, and (if desired) the e-mail address. Enable Web Login if you want the user to be able to log in remotely.

To edit a user's permissions, select the user in the roster. In the table at left, enable or disable permissions as desired.

To edit a user's account, select the user in the roster and click the edit icon. Note: If you close permission control, the user gets all the permissions that the Administrator has. Click **OK** to save the settings.

Pro Tip: You cannot delete the Administrator account. You can still change the Administrator password by clicking **Modify Password** in the top right corner.

Permission Management

Click on any permission group to edit its default permissions (you can still edit individual permissions later).

To add a new group, click the + icon. Type the group's name, check the default permissions, and set whether the user is local only, or has remote access.

In the permission group roster, you can click on an entry and edit their permissions. Click the edit icon to change the group name, or, within that dialog, click the disk icon to create a new group with those settings.

Click the trashcan to delete a group (other than the three default groups).

Security

Block and Allow List

Here you can block all internet connections except those you specify (white list) or allow all internet connections except those you specify (black list).

Check **Enable**, then choose which list you want to use.

Click **Add IP** or **Add MAC**. In the pop-up, check **Enable**. Enter the IP (or IP segment) or MAC address and click **OK**. In the list itself, you can click the edit or delete icons to adjust your entries.

Preview on Logout

Select a camera in the dropdown, then enable or disable the preview permission. If a camera's preview permission on logout is on, you can view the live image of the camera while logged out of the system; if disabled, the camera cannot be viewed unless you log in first.

Network Security

ARP Guard: Address Resolution Protocol Guard protects the LAN from ARP attacks and keeps the network stable. If enabled, you can enable auto gateway MAC or manually set gateway MAC. Enable detection defense as needed.

Password Security

Here you set the minimum password strength and expiration time for users' passwords.

User Status

Here you view the information about users currently online user. Click the expanded view icon to pop up a window that shows the preview occupied channel number and playback occupied channel number.

NVR Function Panel - AI/Event Tile

Contents:

- Event Notification
- AI Event
- General Event
- Alarm Status

Event Notification

Alarm - out

This table lists all the alarms coming from your NVR and cameras. From here you can set delays to the alarm (allowing, for example, an employee time to enter a passcode), select or set a schedule, and (using the triangle at top right) set whether the alarm is normally open or closed.

E-mail

Here you create the list of people who receive email alerts from alarms. To add a person, enter their email, select the schedule during which they'll receive notifications, and click **Add**.

You can edit the schedule for a recipient in the table, or delete them outright.

At the bottom, you can click the eye toggle to hide or reveal the sender's email address.

Edit Sender takes you to the Network > Email page.

Schedule Management: This opens the Schedule dialog. You can have up to three schedules for your system. The first is the default 24x7 schedule. This cannot be edited or deleted.

The other two default to weekdays (24x5) and weekends (24x2), but can be edited and renamed to fit your needs.

When you click **Edit**, it opens to the **Edit Schedule** dialog. At the top you can rename the schedule. Click **Erase** or **Add** to modify the schedule bars. Click and drag in a schedule bar to add or erase times.

Apply saves all your changes.

Display

Here you set how alert messages behave on the Live View page.

You can set the duration of a pop-up alert video, as well as message alerts.

Enable **Don't Show Later** if you don't want the popup to linger.

Buzzer

Here you set the duration time of the audio alarm for your camera. Click **Apply** to save, and **Test** to hear it.

Push Message

Check **Enable** to send push messages to the mobile clients. Select the push schedule and then click **Apply** to save the settings. If the push server is online, it sends notifications of alerts to the Luma View app.

Schedule Management: This opens the Schedule dialog. You can have up to three schedules for your system. The first is the default 24x7 schedule. This cannot be edited or deleted.

The other two default to weekdays (24x5) and weekends (24x2), but can be edited and renamed to fit your needs.

When you click **Edit**, it opens to the **Edit Schedule** dialog. At the top you can rename the schedule. Click **Erase** or **Add** to modify the schedule bars. Click and drag in a schedule bar to add or erase times.

Audio

In the Voice Broadcast tab, you set parameters for any speaker you have attached to your system.

Note: The Voice Broadcast tab is for active deterrence cameras and is not currently supported.

Select the camera, the voice (audio .WAV file) to use, how many times to repeat it, volume, and language (currently English only). When an alarm is triggered, the camera's speaker broadcasts the file as specified.

Click **Listen** to test the uploaded audio, and **Apply** to save the settings.

In the Audio Device tab, you set parameters for any microphones and speakers you have attached to your system. Most x20 cameras have built-in microphones.

Note: The Audio Device tab is for active deterrence cameras and is not currently supported.

- **Camera:** Select the camera you are editing.
- **Audio Device:** Click Enable to activate both speaker and microphone.
- **Audio IN Device:** Select the built-in microphone or an external line microphone.
- **Input Volume:** How sensitive the microphone is to noise.
- **Speaker (built-in):** Luma x20 cameras do not currently have built-in speakers. This is included for future compatibility or third-party integration.

- **LOUT (external):** For an attached speaker, choose whether it is to be used for playing alarms or for two-way communication.
- **Audio Out Volume:** How loudly your speaker plays.
- **Audio In Encode:** Set to either G711A or G711U as your project requires.
- **Apply:** Saves all your changes.

Light

If you have an alarm light attached to the camera, you can set the strobe duration and frequency when an alarm is triggered. No X20 cameras currently support this; it is supplied for future use.

AI Event

Here you set the parameters for AI analysis. There are four tabs to this page, two under People/Vehicle Detection, and two under More.

People Vehicle Detection / Line Crossing

Pro Tip: This is also easily configured in OvrC

The camera can use AI to determine whether something crosses a line. Line crossing cannot be used if area intrusion (below) is being used.

Click Enable Detection by IPC to activate or deactivate the use of lines.

Parameter Settings Tab

Under **Rule** (center screen), select which of the 4 lines you want to modify. Enable **Draw Line**, then click and drag in the camera view image to create the line. You cannot edit a line; as soon as you click in the camera view, it erases any old line and starts a new one.

When you are satisfied with your line, under Rule, set the duration of the alarm trigger (additional motion during this time do not trigger an additional alarm) and crossing direction from the dropdown.

To the right, under Advanced, choose whether the NVR should save a representative photo. These are also sent with any push notifications.

- **Save Original Picture:** This saves the complete image of the moment that the event was triggered.
- **Save Target Picture:** This saves just a cutout of the target object that triggered the event.

Click **Apply** before exiting.

Detection Target Tab

Under **Detection Controls**, choose whether to analyze for people, vehicles, and/or non-motor vehicles like bikes. Set the sensitivity levels, then test your settings for efficacy.

To the right, under Advanced, choose whether the NVR should save a representative photo. These are also sent with any push notifications.

- **Save Original Picture:** This saves the complete image of the moment that the event was triggered.
- **Save Target Picture:** This saves just a cutout of the target object that triggered the event.

Click **Apply** before exiting.

Trigger Mode Tab

Here you set up how the NVR reacts to these events.

- In the Trigger General Click activities you want Line Crossing to effect (click Trigger General itself to enable all actions).
 - Snapshot: The camera captures images when targets are detected.
 - Push: The system sends messages when targets are detected.

- **Buzzer:** The system buzzes when targets are detected. To set the delay time of the buzzer, please see Buzzer for details.
- **Pop-up Video:** The system pops up a window of the corresponding video. To set the duration of the video, please see Display.
- **E-mail:** The system send e-mail alerts when targets are detected, attaching the captured target picture and the original picture so that you can view the whole scene when the alarm occurs. See E-mail Configuration for details on setting up recipients.
- **IPC_Audio** is not yet available on any X20 cameras; this is included for future products. To set the camera audio track, repetition, and volume, refer to Audio for details.
- **IPC_Light** is not yet available on any X20 cameras; this is included for future products. To set the light duration and frequency of the alarm strobe, please refer to Light for details.
- **Record:** Click the Configure button. This pops up a window select the cameras to be triggered. Click **OK** to save. The trigger cameras record automatically when targets are detected.
- **Alarm - out:** Click the Configure button. This pops up a window select the alarms to be triggered. When targets are detected The system will trigger the alarm - out automatically when targets are detected. To set the delay and schedule of the alarm outputs, see Alarm - out.
- **Preset:** Click and then select the preset for each camera. To add presets, please see Preset Setting for details.

People Vehicle Detection / Intrusion

Pro Tip: This is also easily configured in OvrC

The camera can use AI to determine whether someone enters the marked area.

Intrusion cannot be used if line crossing (above) is being used.

Parameter Settings Tab

Each camera has four intrusion zones that can be defined.

Under **Rule**, use the bottom dropdown to select which of the 4 zones you want to modify. Each zone has six corners; enable **Draw Line** and click in the camera view image to add each corner one at a time. If you want fewer than six corners, make the corners you want, then disable **Draw Line**. The camera will complete your shape when you click **Apply**. Click **Clear** to delete the drawing so you can draw a new shape.

Duration is the length of the alarm trigger. Additional motion during this time do not trigger an additional alarm.

Regional Activities and Direction are disabled at this time, but have been left for future compatibility.

Detection Target Tab

Under **Detection Controls**, choose whether to analyze for people, vehicles, and/or non-motor vehicles like bikes. Set the sensitivity levels, then test your settings for efficacy.

To the right, under Advanced, choose whether the NVR should save a representative photo. These are also sent with any push notifications.

- **Save Original Picture:** This saves the complete image of the moment that the event was triggered.
- **Save Target Picture:** This saves just a cutout of the target object that triggered the event.

Click **Apply** before exiting.

Trigger Mode Tab

Here you set up how the NVR reacts to these events.

- In the Trigger General Click activities you want Line Crossing to effect (click Trigger General itself to enable all actions).

- Snapshot: The camera captures images when targets are detected.
 - Push: The system sends messages when targets are detected.
 - Buzzer: The system buzzes when targets are detected. To set the delay time of the buzzer, please see Buzzer for details.
 - Pop-up Video: The system pops up a window of the corresponding video. To set the duration of the video, please see Display.
 - E-mail: The system send e-mail alerts when targets are detected, attaching the captured target picture and the original picture so that you can view the whole scene when the alarm occurs. See E-mail Configuration for details on setting up recipients.
 - IPC_Audio is not yet available on any X20 cameras; this is included for future products. To set the camera audio track, repetition, and volume, refer to Audio for details.
 - IPC_Light is not yet available on any X20 cameras; this is included for future products. To set the light duration and frequency of the alarm strobe, please refer to Light for details.
- Record: Click the Configure button. This pops up a window select the cameras to be triggered. Click **OK** to save. The trigger cameras record automatically when targets are detected.
 - Alarm - out: Click the Configure button. This pops up a window select the alarms to be triggered. When targets are detected The system will trigger the alarm - out automatically when targets are detected. To set the delay and schedule of the alarm outputs, see Alarm - out.
 - Preset: Click and then select the preset for each camera. To add presets, please see Preset Setting for details.

To the right, under Advanced, choose whether the NVR should save a representative photo. These are also sent with any push notifications.

- **Save Original Picture:** This saves the complete image of the moment that the event was triggered.
- **Save Target Picture:** This saves just a cutout of the target object that triggered the event.

Click **Apply** before exiting.

More / Target Counting

Tallies of human, motor vehicle, and/or non-motor vehicle traffic can be displayed by day, week, and month.

Currently, target count is only available for line crossing, and there is one line to tally from.

Rule Setting Tab

Under the screen, enable **Draw Line**, then click and drag in the camera view image to create the line. You cannot edit a line; as soon as you click in the camera view, it erases any old line and starts a new one.

Enable **Statistical OSD** to display the live count on the screen.

Under **Pass Line Info** (upper center), select the direction of the traffic you want to count.

Under **Reset Information** (lower center), click **Enable** if you want the count to reset automatically, then select the frequency under **Mode**. Finally, click in the time display and use up and down arrows to select when you want the count reset. Alternatively, click **Manual Reset** in the lower right.

To the right, under **Advanced**, choose whether the NVR should save a representative photo. These are also sent with any push notifications.

- **Save Original Picture:** This saves the complete image of the moment that the event was triggered.

- **Save Target Picture:** This saves just a cutout of the target object that triggered the event.

If you want summary emails send, click **Enable**, choose the frequency, and set the day/month and time. You cannot enter text into the time box; use the up and down arrows to adjust the time.

Click **Add** to enter the emails of those who should receive the email.

Changes are saved automatically when you close the dialog.

Detection Target Tab

Under **Detection Controls**, choose whether to analyze for people, vehicles, and/or non-motor vehicles like bikes. Set the sensitivity levels, then test your settings for efficacy.

To the right, under **Advanced**, choose whether the NVR should save a representative photo. These are also sent with any push notifications.

- **Save Original Picture:** This saves the complete image of the moment that the event was triggered.
- **Save Target Picture:** This saves just a cutout of the target object that triggered the event.

Click **Apply** before exiting.

More / Exception Detection

Here the NVR detects attempts to disrupt cameras' view. These parameters apply to all IPCs on the NVR.

Under **Rule**, **Duration** determines how long the disruption must remain before it is considered a problem.

Below that, select which exceptions the NVR looks for:

- **Scene Change:** If the video view changes abruptly.
- **Video Blurred:** If the video goes out of focus.

- **Video Color Cast:** If the video becomes obscured.

The **Sensitivity** slider adjust how readily a change is considered an exception.

Trigger Mode Tab

Here you set up how the NVR reacts to these events.

- In the Trigger General Click activities you want Line Crossing to effect (click Trigger General itself to enable all actions).
 - Snapshot: The camera captures images when targets are detected.
 - Push: The system sends messages when targets are detected.
 - Buzzer: The system buzzes when targets are detected. To set the delay time of the buzzer, please see Buzzer for details.
 - Pop-up Video: The system pops up a window of the corresponding video. To set the duration of the video, please see Display.
 - E-mail: The system send e-mail alerts when targets are detected, attaching the captured target picture and the original picture so that you can view the whole scene when the alarm occurs. See E-mail Configuration for details on setting up recipients.
 - IPC_Audio is not yet available on any X20 cameras; this is included for future products. To set the camera audio track, repetition, and volume, refer to Audio for details.
 - IPC_Light is not yet available on any X20 cameras; this is included for future products. To set the light duration and frequency of the alarm strobe, please refer to Light for details.
- Record: Click the Configure button. This pops up a window select the cameras to be triggered. Click **OK** to save. The trigger cameras record automatically when targets are detected.

- Alarm - out: Click the Configure button. This pops up a window select the alarms to be triggered. When targets are detected The system will trigger the alarm - out automatically when targets are detected. To set the delay and schedule of the alarm outputs, see Alarm - out.
- Preset: Click and then select the preset for each camera. To add presets, please see Preset Setting for details.

General Event

These handle non- AI events.

Motion

Here you select which cameras detect basic motion, and what they do when motion is detected. Note that this is prone to false alarms; for example, a lightning flash trigger a basic motion event.

For each camera, set its schedule, which cameras the motion triggers to record and/or take a snapshot, and what non- surveillance events it triggers. Click the **Motion Settings** button to jump to Function Panel > Camera > Motion Settings.

Sensor

Here you select which sensors trigger recordings.

For each sensor, set its schedule, which cameras the sensor triggers to record and/or take a snapshot, and what non- surveillance events it triggers. Click **Apply** to save changes.

Combination Alarm (for 120/ 220 NVRs)

Here you select which specialized system you have to trigger recordings.

For each system, set its schedule, which cameras the system triggers to record and/or take a snapshot, and what non-surveillance events it triggers. Click **Apply** to save changes.

Combination Alarm (for 420/820 NVRs)

Here you create complex and multi-layered alarm responses.

Alarm Name: Double-click this text to customize the name.

Combination Alarm: Click to enable this, then select the combination of alarms that trigger the response.

In **Record** and **Snapshot**, you set which cameras should undertake those activities.

Push sends notifications to your Luma View app.

Alarm-out lets you select multiple alarms to trigger.

Preset Name is the specific preset you want the activated PTZ to use.

You can also have the alarm trigger a buzzer, set a video or text message to pop up on the monitors, and send an email.

Click **Apply** to save changes.

IPC Offline

Here you set how the NVR handles it when one of its cameras goes offline for whatever reason.

For each camera, set its schedule, which cameras the motion triggers to record and/or take a snapshot, and what non-surveillance events it triggers. Click **Apply** to save changes.

Exception Alarm

Here you set what the NVR does to notify you when the surveillance system is not operating properly. Click **Apply** to save changes.

Alarm Status

Alarm Status

Here you can review your alarms to ensure everything is operating properly. Click the chevron at right for details on any problems.

NVR Function Panel - Camera Tile

Contents:

- Manage Camera
- Image
- Motion
- PTZ

Manage Camera

Add Camera

Pro Tip: Use OvrC to add cameras. It grabs all x20 cameras automatically, and adds third-party cameras with a few clicks.

Edit Camera

This table lists data for all of the cameras in your system. If you have a large system use the Search bar in the top right to find your camera.

A few tips:

- The camera's Name column also shows which NVR port it's plugged into in brackets.
- Click the icon in the Preview column to load a pop-up with a live video stream.
- Click **Delete** to unassign a network camera from the NVR (it remains available in OvrC).
- The Settings icon opens the web UI of the IP camera.

Edit Camera Group

Here you edit camera groups, which are used by display schemes. See System > Output Settings for details on schemes.

The Add Group button at the top right creates a new group. You must name the group, set a dwell time, and use the checkboxes to select which camera(s) belong to that group. Click a camera's Preview icon to launch a quick pop-up for that camera. Each group must have at least one camera, and a camera can belong to more than one group.

If you click on a group to select it, you can click the Edit icon to adjust the name or dwell, or the down arrow to add or remove cameras from the group, or the trash icon to delete it entirely.

Image

OSD Settings

Pro Tip: Pro Tip: This is more easily done in OvrC. In addition, OvrC gives you more options and control.

The right side of the page shows a list of all cameras on the NVR. The table includes data on the OSD settings for each camera. At the bottom, you can navigate multiple pages of the table if needed.

The top left shows the video feed of the camera that is selected in the dropdown list below. Immediately above this dropdown, you can activate or deactivate the OSD for name and time.

You can change the name of the selected camera. This change propagates across the NVR.

You can change the date and time format in the Function Panel System tile.

The watermark text appears when using video playback.

Image Settings

Pro Tip: This is more easily done in OvrC.

The right side of the page shows a list of all cameras on the NVR. The table includes data on the image settings for each camera. At the bottom, you can navigate multiple pages of the table if needed.

The top left shows the video feed of the camera that is selected in the dropdown list below.

At the bottom, edit the settings for that camera. You can click on the bars, or click and drag the circles. You cannot enter values in the text boxes, but you can use up and down arrows to adjust the values.

Brightness: Set the brightness level of the camera's image.

Contrast: Set the color difference between the brightest and darkest parts.

Saturation: Set the degree of color purity. High saturation makes for vivid color; low makes the image more grayscale.

Hue: Adjust the total color of the image.

Click **Default** to restore the image settings to factory default.

Click **Advanced** to open additional options. There are three tabs:

Image Adjustment Tab

The dropdown at top lets you edit the Common configuration file (used all the time) or the separate config files for day and night.

- **Sharpness:** Set the resolution level of the image plane and the sharpness level of the image edge.
- **Wide Dynamic:** All x20 device have WDR, so this has been disabled.

- **Noise Reduction:** Decrease the visual noise (snow, random pixel errors, etc.). Increasing the value improves the noise reduction effect but reduces image resolution.
- **Fog Reduction:** Enable this and test the settings to improve visibility in foggy, dusty, smoggy, or rainy environments.
- **Image Shift:** This setting is used on the DVR only.
- **BLC:** Select which backlight compensation option to use:
 - **Off:** Disables the backlight compensation function. It is the default mode.
 - **HWDR:** Hardware Wide Dynamic Range adjusts the image when there are both very bright and very dark areas in the field of view. It dims the bright areas and boosts the dark areas. Recording stops for a few seconds when the camera switches into or out of WDR mode.
 - **HLC:** Highlight Compensation suppresses the brightness of the image's bright areas and reducing the size of any halo.
 - **BLC:** Enabling backlight compensation makes dark areas (especially backlit areas) clearly visible.
 - **Grade (HWDR only):** Sets the amount of WDR to use. The higher the level, the less contrast there is between the lightest and darkest areas.
- **White Balance:** Adjust the color temperature according to the environment automatically.
- **Anti Flicker:** If lights pulsate or flicker in your video feed, test the settings here to try to eliminate it.
- **Exposure Mode:** If you select Manual, another dropdown appears where you select a fixed value for the digital shutter speed.
- **Gain Mode:** If you select Manual, this activates the Gain Limit slider below. The higher the value is, the brighter the image is.

- **Gain Limit:** Increasing the gain limit improves nighttime visibility at the cost of adding more noise.
- **Corridor Pattern:** Enable this for situations like long hallways. Set the video resolution to 1080P or below, and choose the rotation of the camera image (in 90° increments).
- **Image Mirror:** Reverse the image horizontally.
- **Image Flip:** Reverse the image vertically.
- **High FPS Mode:** Enable this to record at settings higher than the standard 30fps.
- **Day/Night Mode:** This tells the camera when to switch to night mode. Auto lets the camera decide, Day and Night leaves the camera in that mode constantly, and Timing switches according to a set schedule.
- **Sensitivity (Auto mode selected):** This sets how readily the camera switches. Higher sensitivity requires less change to make the switch.
- **Smart IR:** This function avoids overexposure and underexposure by controlling the brightness of the IR lights according to the ambient light.
- **Delay Time (Seconds) (Auto mode selected):** How long a change in light must remain at that light level before the camera switches modes.
- **Shutter Mode:** If you are using manual controls, you can adjust the shutter speed to avoid flicker.
- **Infrared Mode:** Choose how the camera chooses to engage its infrared emitter.

Schedule Control Tab

The schedule dropdown lets you choose whether to use one configuration around the clock (Full Time, then select Common or Auto, which leaves it to the camera to switch between day and night), or to switch between the Day and Night configurations on a schedule (select Timing). To set the times that the camera switches, use the text boxes to define which time span uses the Day config. All other times are considered night. You cannot edit the schedule by clicking and dragging.

When you click **Apply**, all settings are saved for the selected camera only.

Lens Control Tab

If the selected camera has a motorized lens, you can adjust the zoom and focus here.

Enable the Day/night mode switch autofocus to have the camera refocus itself when switching modes.

Mask Settings

Your Lumina NVR supports up to four video masks per camera to preserve privacy, whether it's a secure item of yours, or a window into a neighbor's house. Areas covered by a mask are excluded from all recordings.

The right side of the page shows a list of all cameras on the NVR. The table includes whether the mask is active, and the mask color (which cannot be edited). At the bottom, you can navigate multiple pages of the table if needed.

The top left shows the video feed of the camera that is selected in the dropdown list below.

Click **Draw** to begin drawing your mask(s). Click and drag across the screen to set the areas to block. **Delete** erases all masks.

Use the dropdown to turn that camera's mask on or off.

Click **Apply** to save your changes.

Motion

Motion Settings

Pro Tip: This is more easily done in OvrC (though OvrC doesn't have the duration setting). In addition, OvrC allows multiple activity zones each using different motion sensitivities.

The right side of the page shows a list of all cameras on the NVR. The table includes whether motion detection is active, the camera's sensitivity, and the duration. At the bottom, you can navigate multiple pages of the table if needed.

The top left shows the video feed of the camera that is selected in the dropdown list below.

Click and drag in the video image to add areas to the camera's motion detection analysis. The **All** button fills the screen, **Clear** empties the screen, and **Reverse** inverts the selection.

Enable or disable motion for the selected camera below. **Sensitivity** determines how readily the camera decides if something is motion. **Duration** refers to the assumed time that a motion event lasts. For example, if the duration time is set to 10 seconds, when the system detects motion, any other motion detected by that camera within the next 10 seconds is considered a continuation of that motion event, and not a new event.

Click **Processing Mode** to go to the Alarm handling configuration interface of the motion alarm.

PTZ

Although this page is designed for PTZ cameras, the zoom and focus controls can also be used with varifocal cameras.

Preset

Here you set fixed scenes (a combination of aim, speed, focus, iris, and zoom) that your camera can move to with the click of a button.

Below the camera image are the PTZ controls. Control the aim using the buttons on the left. The central button on the left stops the camera's motion. To the right, the top slider controls the camera's panning speed. Below that, the paired buttons let you control the zoom, focus, and iris of the camera.

Below the controls, you select which camera you are controlling and which preset (if any) you wish to edit.

To create a preset, aim the camera as desired and click **Add**. A dialog pops up where you can select a number for the preset and give it a name.

After creating a preset, you can edit the name in the text box and click the disk icon to save the change. To adjust a preset's aim, select that preset, adjust the settings, and click **Save Position**. Note that the NVR and camera have separate presets.

To delete a preset, select it from the dropdown menu and click **Delete**.

To the right, a table shows the cameras you have and the various presets created for each. Click the arrow icon to go to that preset, or the x icon to delete it.

Cruise

A cruise cycles the camera through a designated series of presets. It is therefore only enabled for PTZ cameras.

To add a new cruise, click the down carat at the right side of the camera's entry, then click the + button. Name the cruise, then click **Add Preset** for each preset you want the camera to visit. **Duration** is how long the camera stays at that preset, and speed is how quickly the camera moves to that preset. This overrides the preset's inherent speed setting.

When you have several presets added, click on a preset and use the **Move Up** and **Move Down** buttons to change the order that the cruise uses. Click **OK** to save.

Once you have one or more cruises, you can select a cruise to edit in the dropdown, and add or remove presets, change their order, rename it, etc.

Cruise Group

A cruise group cycles the camera through a designated series of cruises. Each camera has one cruise group.

To add a cruise to a group, click the down carat to the right of the camera's entry, and click the + button. Select the cruise to add from the dropdown. You can also click the Add Cruise button at the bottom of the table.

Click **Play** and **Stop** to view the cruise group shown in the table below.

At the bottom, click **Add Cruise** to select a cruise to add to the group.

In the table, click the trashcan to remove that cruise from the group.

Pattern

Here you set fixed scenes (a scene is a combination of direction and zoom) that your camera can move to with the click of a button.

SNIPPET

Below the controls, you select which camera you are controlling and which pattern (if any) you wish to edit.

To create a pattern, aim the camera as desired and click **Add**. A dialog pops up where you can select a number for the preset and give it a name.

After creating a preset, you can edit the name in the text box and click the disk icon to change it.

To delete a preset, select it from the dropdown menu and click **Delete**.

Task

Here you schedule your PTZ camera to undertake certain activities at certain times of day. This page does not work with motorized cameras.

Select the camera, then select which function (activity) it should use. If there are several options (for example, several presets), select the specific under the Name dropdown. Then set the start and end time, and click **Add**.

The table at right shows all the cameras. To see which Tasks are assigned to each camera, click the down carat at the right of the camera's entry. You can enable or disable all tasks on a per-camera basis, and edit individual tasks by clicking the edit icon at right.

Smart Tracking

Your PTZ can track objects that it detects moving.

Select the camera, and select either:

- **PTZ Auto Tracking Priority:** If selected, when an event triggers tracking, you cannot control the PTZ through the PTZ control panel in the live view interface.
- **Manual PTZ Control Priority:** If selected, when an event triggers tracking, you can control PTZ by clicking the buttons on the PTZ control panel in the live view interface while it is engaged in smart tracking. After you cease control for 5 seconds, the PTZ camera returns to its pre-defined detection area to await a new target.

Still time: While enabled, when the tracking target stops or hides behind an obstacle for the length of the indicated time, or the target tracking is complete and no target appears in the detection area during the indicated time, the PTZ returns to its home position.

If it is not enabled, the PTZ returns to its home position after 5 seconds.

NVR Function Panel - Disk Tile

Disk Management

Disk Management

This gives data on each hard drive in your system, and a button to format a newly added drive.

Unlock: If you have transferred an encrypted disk from another NVR to this NVR, its status reads "locked". Select the locked disk by clicking on its row, then click Unlock.

Enter the password for its encryption, and the disk status changes to "Read Only". This allows you to read and export the data of this disk (you still cannot write to it).

Storage Mode

Storage Mode Settings

Disk groups let you restrict which cameras can record to which disks.

During installation, all disks and cameras are added to group 1 automatically.

Each group can add disks and cameras from other groups. To create a new group, select a disk group by clicking on it in the left column and then click the + button in the disk or camera row. This opens a pop-up where you select the disks or cameras in the window and then click **Add**.

To delete disks and cameras from a group, select a disk group and then click on the top right corner of the added disk or camera to delete it. Deleted disks and cameras move into group 1 automatically, which means you cannot delete them from group 1.

Pro Tip: Each HDD and each camera can only be in one group.

Information

View Disk Information

This gives basic information on NVR's available disk drives to assist with troubleshooting. You cannot edit anything, but you can refresh the data by clicking the button in the upper right-hand corner.

S.M.A.R.T. Information

SMART stands for Self-Monitoring, Analysis, and Reporting Technology. This page shows detailed information for whichever disk you have selected in the dropdown menu.

NVR Function Panel - Network Tile

Explaining networking details is beyond the scope of this document. If you are a network professional, you know what you're doing. If not, we suggest enrolling in the Professional Certified Network Administrator (PCNA) course at <https://www.snapav.com/shop/en/snapav/pcna>.

Contents:

- Network
- Stream Settings
- Integration
- Network Status

Network

The 420 NVR can handle up to 160Mbps bandwidth. The 820 can handle up to 196Mbps.

TCP/IP (for 120/220 NVRs)

Ethernet Port 1: Here you can set your NVR's IP address manually, or let the router handle it automatically (using DHCP). We recommend leaving this set to automatic.

Advanced: This button lets you set a secondary IP and subnet.

Internal Ethernet Port: Here you configure the settings for your gateway.

Click **Apply** to save your changes.

TCP/IP (for 420/820 NVRs)

These high-capacity NVRs have two Ethernet ports. Each port acts as a failover for the other. Plug both ports into your surveillance switch.

Ethernet Port # : Here you can set your NVR's IP address manually, or let the router handle it automatically (using DHCP). We recommend leaving this set to automatic.

Advanced: This button lets you set MTUs for each port.

Default Route: Select which Ethernet port has priority for data transmission.

Internal Ethernet Port: Here you configure the settings for your gateway.

Click **Apply** to save your changes.

Port

Here you configure the port settings for HTTP, HTTPS, etc. Be sure to click **Apply** to save any changes.

PPPoE

Set the user name and password for Point-to-Point Protocol over Ethernet communication.

DDNS

If you are not using OvrC or Control4, here you can configure a DDNS name for remote access to your system.

E-mail

Here you configure the emails that the camera sends with alerts.

Sender Name: This is who the email appears to be from.

Email Address: If someone replies to this message it'll go here.

Next, fill in the **Server Address** and **SMTP Port**, and select the security mode.

If **Attaching Image** is enabled, the NVR adds a snapshot of the event to the email.

Finally, enter the credentials for the email server, or click **Anonymous Login**.

Click **Test** to verify all settings, and **Apply** when it works.

Click **Edit Recipient** to open a page that lets you select who gets the alert emails.

- To add a recipient, enter their email in the text box, and select whether they get emails 7 days a week, or on another schedule (the default schedules are weekdays only or weekends only). Click **Add**.
- Once a recipient is added, you can change their schedule or click the trashcan to delete them.
- Click **Apply** to save your changes before clicking any of the other buttons.
- **Edit Sender:** Sends you back to the base email page. To view or redact the sender's assigned email, click the eye icon to the left.

Schedule Management: This opens the Schedule dialog. You can have up to three schedules for your system. The first is the default 24x7 schedule. This cannot be edited or deleted.

The other two default to weekdays (24x5) and weekends (24x2), but can be edited and renamed to fit your needs.

When you click **Edit**, it opens to the **Edit Schedule** dialog. At the top you can rename the schedule. Click **Erase** or **Add** to modify the schedule bars. Click and drag in a schedule bar to add or erase times.

UPnP

Enable or disable Universal Plug- and- Play, and name the camera.

802.1x

Manually select the camera's authentication mode.

NAT

This displays our P2P server information, which is used for the Luma View app.

Https

If you want to create a self-signed certificate, you can do so here.

FTP

Here you configure the settings for your FTP server.

The table shows the FTP servers you have set up. Click **Add** to create a new server to use, or select a server in the display and click **Test**, **Modify**, or **Delete**.

SNMP

Monitor your network for any concerns.

Stream Settings

Here you set the parameters of each camera's sub streams. These vary based on your network capacity and need, though we recommend using H.265+ wherever possible.

Integration

This handles automated access into your surveillance system.

ONVIF

Enable ONVIF if you plan to use third-party VMS platforms.

Click **Add** to add a user for your ONVIF system , then use the dialog box to set that user's a username, password, and capability.

Platform Access

This is for integration into 3rd party VMS platforms.

UPnP Report

To enable the UPnP Report, you must first enable UPnP functionality, which is done in the Network section, above. Some third- party VMS platforms support this protocol, and it is used to get the NVR to work with these systems.

Network Status

This gives basic information regarding IP addresses, bandwidth, ports, etc., to assist with troubleshooting. You cannot edit anything, but you can refresh the data by clicking the button in the upper right-hand corner.

NVR Function Panel - Record Tile (mode set, advanced)

Contents:

- Record
- Encode Parameters
- Record Status

Record

Mode Settings

Here you set which types of recordings your NVR uses, and when.

Auto Mode uses the selected recording types 24/7.

Customization Mode lets you set different schedules for each type of recording.

Schedule Management: This opens the Schedule dialog. You can have up to three schedules for your system. The first is the default 24x7 schedule. This cannot be edited or deleted.

The other two default to weekdays (24x5) and weekends (24x2), but can be edited and renamed to fit your needs.

When you click **Edit**, it opens to the **Edit Schedule** dialog. At the top you can rename the schedule. Click **Erase** or **Add** to modify the schedule bars. Click and drag in a schedule bar to add or erase times.

Use the radio buttons to select which sorts of recordings you want. If the mix you want doesn't appear, click **Advanced** to pick and choose the recording types.

Under Manual Record Settings, set the record time for a default when manually initiating recording.

Advanced

Check the Overwrite box if it's all right for your new recordings to overwrite old ones. The frequency with which this happens depends on multiple factors including disk size, activity, etc.

In the dropdown, check with of the camera's streams you wish recorded.

In the table, set pre-record and post-record times for each camera. The camera adds these to the front or back of any event to provide better context. Also set the time that must pass before a recording is considered "old" and automatically deleted from the system to free up disk space.

Click **Apply** to save all changes. This reboots your system .

Encode Parameters

Event Recording Settings

Here you define the settings for the main stream of each camera when it is recording an event (for example, motion was detected or an alarm triggered a recording).

A few tips:

- **Encode:** We recommend H.265+
- **Bitrate Type:** Use VBR (variable bitrate) if the scene is largely static, or CBR (constant bitrate) if the scene is constantly changing.
- **GOP:** Group of Pictures is basically the same as i-frame interval. Lowering this value increases the quality of your video, but makes the stream larger.

At the bottom, Remain Bandwidth shows how much traffic your cameras are using with their current settings, compared to how much traffic your NVR can handle.

Click **Apply** to save all changes.

Schedule Recording Settings

Here you define the settings for the main stream of each camera when it is operating under a scheduled recording.

A few tips:

- **Encode:** We recommend H.265+
- **Bitrate Type:** Use VBR (variable bitrate) if the scene is largely static, or CBR (constant bitrate) if the scene is constantly changing.
- **GOP:** Group of Pictures is basically the same as i-frame interval. Lowering this value increases the quality of your video, but makes the stream larger.

At the bottom, Remain Bandwidth shows how much traffic your cameras are using with their current settings, compared to how much traffic your NVR can handle.

Click **Apply** to save all changes.

Record Status

Record Status

This gives basic information on each camera's surveillance streams to assist with troubleshooting. You cannot edit anything, but you can refresh the data by clicking the button in the upper right-hand corner.

NVR Function Panel - System Tile

This tile covers informational and administrative tasks.

Contents:

- Basic Settings
- Maintenance
- Information

Basic Settings

General Settings

Here you prescribe fundamental settings for your system .

Device Name and Number does not appear in displays; it's available for housekeeping/inventory use.

Set the **Video Format** based on your location (NTSC in North America, and PAL in Europe).

Enable **Fixed Display Resolution** to adjust the resolution of the stream to your specifications.

Main Output and **Secondary Output** (420/820 only): High-capacity NVRs can support two independent screens displaying 9 channels each. Here you set the resolution of those screens.

Enable Wizard: The setup wizard launches on both the local and web UI when you first activate the NVR, or after you factory reset it. You can disable it here.

App Live Self-adaptation: When enabled, the NVR adjusts resolution for the Luma View app based on the internet connection.

When you enable **Dwell Automatically** and select a time, then, if the system has not been operated by a user in that specified amount of time, the system switches to the next camera or grid view.

Date and Time

You have three options for maintaining your NVR's time clock.

If you want it to coordinate with one of the national servers, set **Synchronous** to **NTP** and select your preferred NTP server. This is our recommended setting.

If you want it to synchronize with your computer, set **Synchronous** to **Manual** and enable **Synchronize with computer time**. The NVR syncs with the computer once, then maintains its own time henceforth.

You can also define the NVR time yourself. Set **Synchronous** to **Manual**. Click in the **System Time** box, set the date, and set the NVR time at the bottom. Click **OK**. The NVR resets to that time, then maintains its own time going forward.

Use the dropdowns to adjust how the timestamp appears.

Output Settings

This is where you manage your display schemes. A scheme is a selection of cameras in a specific arrangement. This page has three primary areas.

- **Left Column:** To the left, the NVR displays the NVR's dwell schemes.
- **Center Area:** The center area shows the selected display scheme and a toolbar.
- **Right Column:** To the right you can select various cameras and groups.

To create a new scheme, click the + icon in the left column. When you have at least one scheme, you can select it by clicking on it (the outline turns blue), or delete it by clicking the X at the top right. When a scheme is selected, you can edit it using the center toolbar. Note that the toolbar allows you to select the scheme as a favorite (starred button at left).

To customize a scheme,

1. select it in the left column,
2. choose the multicamera display in the toolbar,
3. select a camera window in the display, then
4. double-click a camera or sequence in the right column.

A single camera cannot appear twice in the same scheme. To remove a camera from a scheme, select its window then click the trashcan icon in the toolbar, or right-click the camera and select **Clear**.

Click **Apply** to save all changes.

POS Settings

To use POS surveillance, choose one of the POS lines in the table. Set Enable to ON and choose the connection type. Click **Configure** to open a dialog where you set the POS IP address. If needed, click the POS Port checkbox and enter its port number in the text box. Finally, select your POS protocol.

Click the **Trigger Camera** checkbox, then click the just-enabled Configure button to bind the POS to the camera. One POS can be bound to multiple channels, but each channel can be bound to only one POS.

Under Display Settings, click **Configure** to set the

- **General Settings**, where you set the characters that define the text
- **Display Position**, where you can draw a box to define the POS inset
- **Display Mode**, where you select the font color(s) and display method of the POS information.

Finally, set the format for the data. Click **Apply** to save all changes.

PoE Power Management

Set PoE on or off on a port-by-port basis.

Recorder OSD Setting

This controls the OSD for the signal sent through the NVR's local HDMI output. It also allows you to create custom views on the live page with the Web UI.

Maintenance

View Log

Here you can review all activities in your system.

When the window opens, it displays all events. To filter, choose the type of log you want to view, select the starting and ending time, and click **Search**.

Click **Export** to save a text file of the logs to your computer's Downloads folder.

Factory Default

In the top box you can set all NVR parameters to their default states (including or excluding network settings as desired). If you exclude network settings, the defaulted recorder is still activated, and maintains the settings for passwords, time zone, language, video format (PAL/NTSC), date format, and time format.

In the bottom box you can restore everything in your NVR to its original state (though it does not roll back firmware). The NVR acts as if it were just removed from its box.

Upgrade

To update your NVR's firm ware, click **Browse** and use your system's standard explorer window to navigate to and select the file. Click **Upgrade** to install the firm ware on your system, or **Backup and Upgrade** to first export a copy of your current firm ware to your computer's Downloads folder, and then update.

Luma x20 devices run in a dual-firm ware mode to protect the hardware (and your installs) from unforeseen glitches.

Once the firm ware has been applied to the first (operational) partition, the device goes into an observation mode to ensure the new firm ware operates properly. Observation mode lasts for about ten minutes once the firm ware update is completed.

Once proper function has been verified, the device applies the firm ware to the second (backup) partition and logs the new firm ware version with OvrC. If the new firm ware fails, the device restores the backup firm ware to the first (operational) partition.

As of this writing, OvrC does not track whether a Luma x20 device is in observation mode. This means that, for about ten minutes in OvrC, it looks like the firm ware update didn't take, and that an update is available. If you try to update the firm ware again while your Luma is in observation mode, the update will fail in OvrC but this will not impact the performance of the device.

The status of these firm ware files is shown below the controls.

Config Backup and Restore

Import System Configuration: To load an NVR configuration file, click **Browse** and use your system's standard explorer window to navigate to and select the file. Click **Import** to install the config on your system.

Export System Configuration: To create a backup of your NVR's config, select the desired options, then click **Export**. The NVR creates a config file and copies it to your computer's Downloads folder.

Reboot

This forces an immediate reboot of the NVR.

Schedule Reboot

If you want the NVR to perform a regular maintenance reboot, click **Enable** and select the frequency and time for each reboot. Your system will be offline while the NVR reboots. Click **Apply**.

Information

Basic

This gives basic information on the NVR's network to assist with troubleshooting. You cannot edit anything

Camera Status

This gives basic information for each camera's operation. You cannot edit anything, but you can refresh the data by clicking the button in the upper right-hand corner.

Alarm Status

This displays each alarm the NVR handles (including those on active cameras). If an alarm has an alert or exception, click the down arrow at right to see more information.

Record Status

This gives basic information for each camera stream to assist with troubleshooting. You cannot edit anything, but you can refresh the data by clicking the button in the upper right-hand corner.

Network Status

This gives basic information on the NVR's network to assist with troubleshooting. You cannot edit anything, but you can refresh the data by clicking the button in the upper right-hand corner.

Disk Status

This gives basic information on NVR's available disk drives to assist with troubleshooting. You cannot edit anything, but you can refresh the data by clicking the button in the upper right-hand corner.

Firm ware Release Notes

This page aggregates all firm ware updates by platform .

Luma View

Android app ver 1.10.19.5861

Released: 26 Sep 2023

Change Log:

1. Uses API version 33.
2. Added Snapshot to the Notifications menu.
3. Moved Search by Event to the bottom menu.
4. Improved the Search by Event icons.
5. Added Select and Deselect All to Search by Event.
6. Added Previous Event and Next Event icons to the playback function bar.
7. Added an event filter to the lower half of the playback menu.
8. Added 10s forward and backward to the video scrub bar.
9. Added a filter (IPC, NVR or ALL) under Server List that corresponds to the dropdown menu in Live View.
10. Improved the overlay icon on cameras for better visibility.
11. Added Favorite Groups to Live View layout.

Version 1.10.19

Released: 13 Sep 2023

Change Log:

1. Added snapshot to the notifications menu.
2. Moved "Search by Event" to the bottom menu.

3. Improved the Search by Event Icons.
4. Added Select and Deselect All to Search by Event.
5. Added previous and next event icons to the playback function bar.
6. Added an event filter to the lower half of the playback menu.
7. Added 10s Forward and Backward buttons to the video scrub bar.
8. Added a filter (IPC, NVR or ALL) under Server List that corresponds to the dropdown menu in Live View.
9. Improved the overlay icon on cameras for better visibility.
10. Added Favorite Groups to the Live View layout.

IPC

Versions 5.1.1.0.44681 (2MP and 4MP), 1.1.0.47524 (8MP, 5MP AI, 5MP IPC)

Released: 13 Sep 2023

Change Log:

1. Added Home Position for varifocal cameras.
2. Copy and pasting a password in the web UI is now allowed.
3. Various bug fixes and improvements.

NVR

Version N7W_ UI1L_ 230731_ 146_ 61731

Released: 13 Sep 2023

Change Log:

1. Added support for C4 Navigation driver.
2. Copy and pasting a password in the web UI is now allowed.
3. Various bug fixes and improvements.

Technical Support

For chat and telephone, visit snp1.co/techsupport • Email:

TechSupport@SnapOne.com. Visit snp1.co/tc for discussions, instructional videos, news, and more.

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