

# QUICKSTART GUIDE

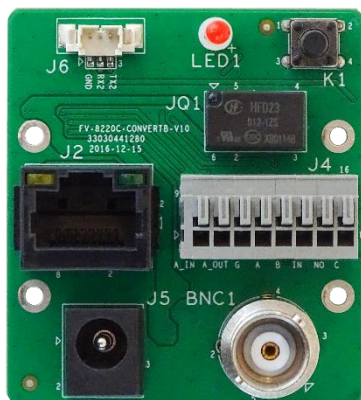
## HARRIER 23x AF-ZOOM IP 4K CAMERA

### Introduction

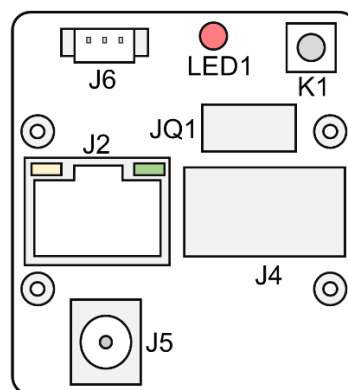
This guide is designed to get you quickly up and running with the **Harrier 23x AF-Zoom IP 4K Camera** (AS-CAM-23IP4K-A). This document should be read in conjunction with the datasheet and technical reference manual for the Harrier 23x AF-Zoom IP 4K Camera. The camera is shipped with a fixed IP address of 192.168.1.108; this can be changed once you have connected to the camera.



**Figure 1. Harrier 23x AF-Zoom IP 4K Camera**



**Figure 2. Harrier 23x/52x IP Camera Evaluation Board**



**Figure 3. Harrier 23x/52x IP Camera Evaluation Board**



## Evaluation Kit Contents

The Evaluation Kit for the Harrier 23x/52x IP Camera (AS-CAM-23IP4K-EVAL-A) contains all the parts needed to evaluate the Harrier 23x AF-Zoom IP 4K Camera. Note that the evaluation kit does not include a camera, this needs to be ordered separately.

Please check that you have all the parts listed below:

- Harrier 23x/52x IP Camera Evaluation Board (Issue 02; see Figures 2 and 3).
- Fixing posts and screws to mount evaluation board on to the camera.
- 36-way 0.5mm pitch FFC cable
- 12V multi-standard power supply and mains socket adapters.

## Mounting the Evaluation Board on the Camera (optional)

1. Connect the Harrier 23x/52x IP Camera Evaluation Board (J2) to the camera (J2) using the 36-way 0.5mm pitch FFC cable. Ensure that the cable is connected the right way round. The metal contacts should face towards the PCB.
2. Screw the mounting posts into the back of the camera.
3. Using the screws, carefully mount the Harrier 23x/52x IP Camera Evaluation Board to the camera. Without creasing the FFC cable, gently fold the FFC cable between the evaluation board and the camera so it does not protrude excessively.



## Quick Start

1. Download and install the [ONVIF Device Manager](https://sourceforge.net/projects/onvifdm/) from <https://sourceforge.net/projects/onvifdm/>
2. Configure the network adapter on a PC to have an address of 192.168.1.1 (or similar).
3. Using a Cat5/6 RJ45 cable, connect the RJ45/Ethernet port of the Harrier 23x/52x IP Camera Evaluation Board (J2) to the network adapter of the PC.
4. Connect the 12V power supply to the barrel connector socket (J5) of the evaluation board.
5. When you are ready the power supply can be plugged in and switched on, the camera will start up. After a while the camera will have initialized and a blinking LED on the PC ethernet port and on the Harrier 23x/52x IP Camera Evaluation Board will indicate network activity.
6. On the PC, open the Microsoft Edge or Chrome browser and browse to 192.168.1.108.
7. The camera configuration website will open, and you will see a login prompt (Figure 4).
8. Before logging in, click on the Plug-in download and install the plug-in. This will enable the video preview to work on the website. You may need to close the browser to install the plug-in.
9. Login using user: admin; password: 123456
10. You will be prompted to change the default password, but you can cancel the request if you don't want to change it.
11. You should see a video preview from the camera.
12. Go to the settings tab and select System Settings->Encode settings (Figure 5).
13. Set all streams to H.264 and save the settings.  
Note: The ONVIF Device Manager cannot display H.265 encoded streams.
14. On the PC, open the ONVIF Device Manager and use it to locate the camera. Click the Refresh button and the camera will appear on the Device List with the IP address 192.168.1.108.
15. Open the connection to the camera by clicking on the box in the left-hand pane that shows the camera and its IP address. The panes on the right will populate and show a video preview image and camera stream settings.
16. By clicking on the **Live video** menu option, you can view the streaming video from the camera (see Figure 6).  
Selecting the **Profiles** option on the menu will allow you to select different video streams served by the camera (as set up in the website encoder settings).  
Use the **Video streaming** option on the menu to change the resolution and frame rate of the video stream (make the selection, then click on "Apply", see Figure 7).  
Note: selecting 3840x2160 resolution requires a reasonably high-performance PC as the video has to be decoded and re-scaled for display.  
Sometimes when the camera first starts up the ONVIF Device Manager will not display 3840x2160 live video; if this is the case try selecting 1080p resolution then changing back to 3840x2160.
17. The camera can be zoomed in and out using the Zoom +/- buttons in the PTZ control option screen.
18. The video stream can also be opened using a media player application (e.g. VLC media player or GStreamer). Use **rtsp://192.168.1.108:554/type=0&id=1** to connect to the camera.

E.g. for VLC media player: Select the Media menu, select Open Network Stream.  
In the Open Media dialog, enter **rtsp://192.168.1.108:554/type=0&id=1**.  
Click the Play button.



The image shows a 'Web Server' login dialog box. It contains three input fields: 'User Name' with the text 'admin', 'Password' with six dots, and 'Language' with a dropdown menu showing 'English'. Below these fields are two checkboxes: 'Remember' (checked) and 'Extranet' (unchecked), followed by a 'Plug-in Download' link. At the bottom are 'Login' and 'Cancel' buttons.

Figure 4. Camera configuration website – login dialog

The image shows the 'encoding setting view' of the camera configuration website. It is divided into two columns for 'Channel' and 'Second Stream'. Each column has settings for Type (H265), Level (Main Profile), Enable (Video checked, Audio unchecked), Resolution (1920\*1080 for Channel, 720\*576 for Second Stream), Frame Rate(FPS) (20), Bitrate (512), Bitrate Control (VBR), Picture (Good), GOP(100ms) (20), and Bitstream Smoothing (slider at 50). There are also 'Input Volume' and 'output Volume' sliders at 50, and an 'H264+-H265+' checkbox which is unchecked. 'Save' and 'Refresh' buttons are at the bottom.

Figure 5. Camera configuration website – encoding setting view

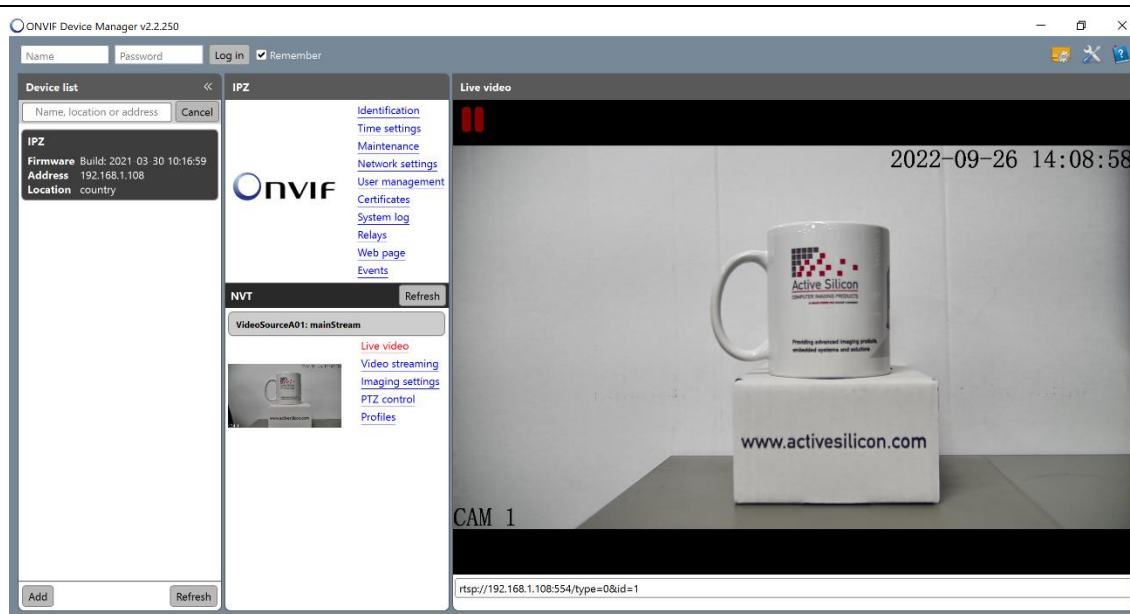
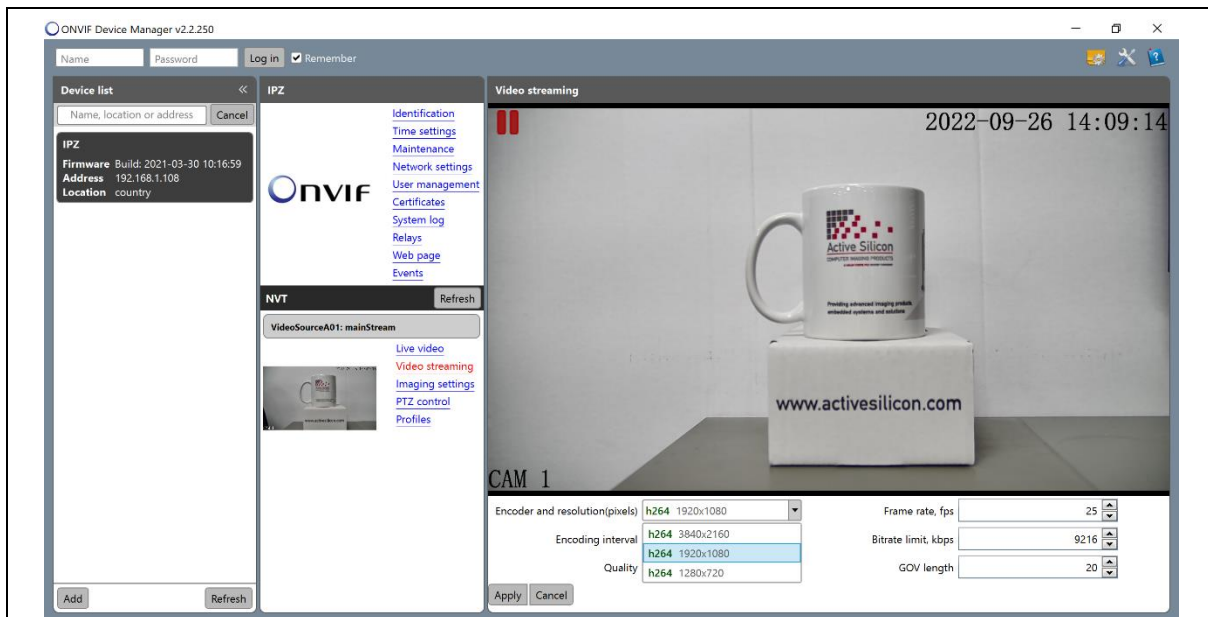


Figure 6. ONVIF Device Manager – video streaming screen



**Figure 7. ONVIF Device Manager – setting the video resolution**

## Opening the Camera Configuration Website

Open Microsoft Edge or Chrome and browse to the IP address of the camera. A login page will open.

To display video the website requires a plug-in that is downloaded from the camera. This plug-in works with Microsoft Edge or Chrome.

On the login dialog (Figure 4) you will see 'Plug-in Download'. If you have not done this before, click on the option to download and install the file: Setup.msi.

Once the plug-in is installed you can log in:

User: **admin**

Password: **123456 (or password123)**

This will open the configuration website where you can control the camera and change the camera settings.

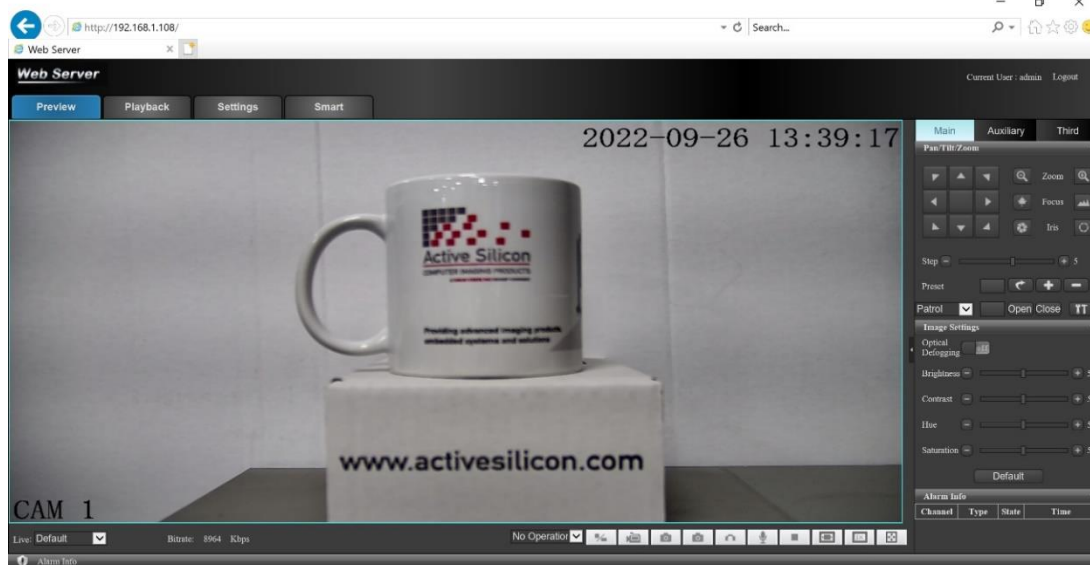


Figure 8. Camera configuration website – main screen

## Changing the Network Address

The network address can be changed using ONVIF Device Manager or the camera configuration website. Care must be taken when changing the address to ensure that you are always able to find the camera.

To change the network address using ONVIF Device Manager (see Figure 9):

- Open/connect to the camera by clicking on the box in the left hand panel.
- Select 'Network settings' in the centre panel and edit the settings.
- Select 'Apply' and the settings on the camera will change – note you will need to refresh the view as the camera will now be at a different IP address.

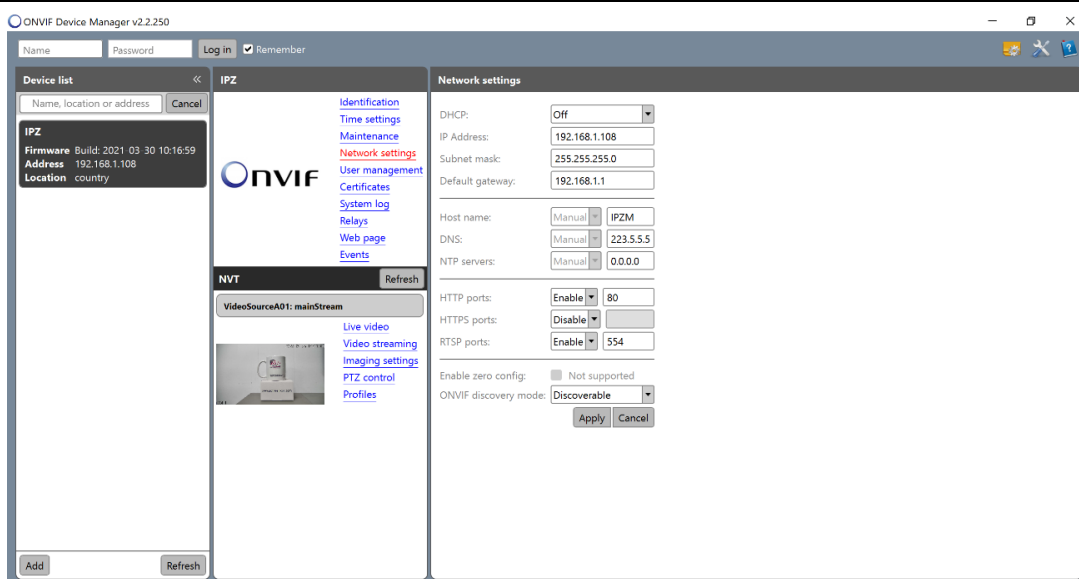


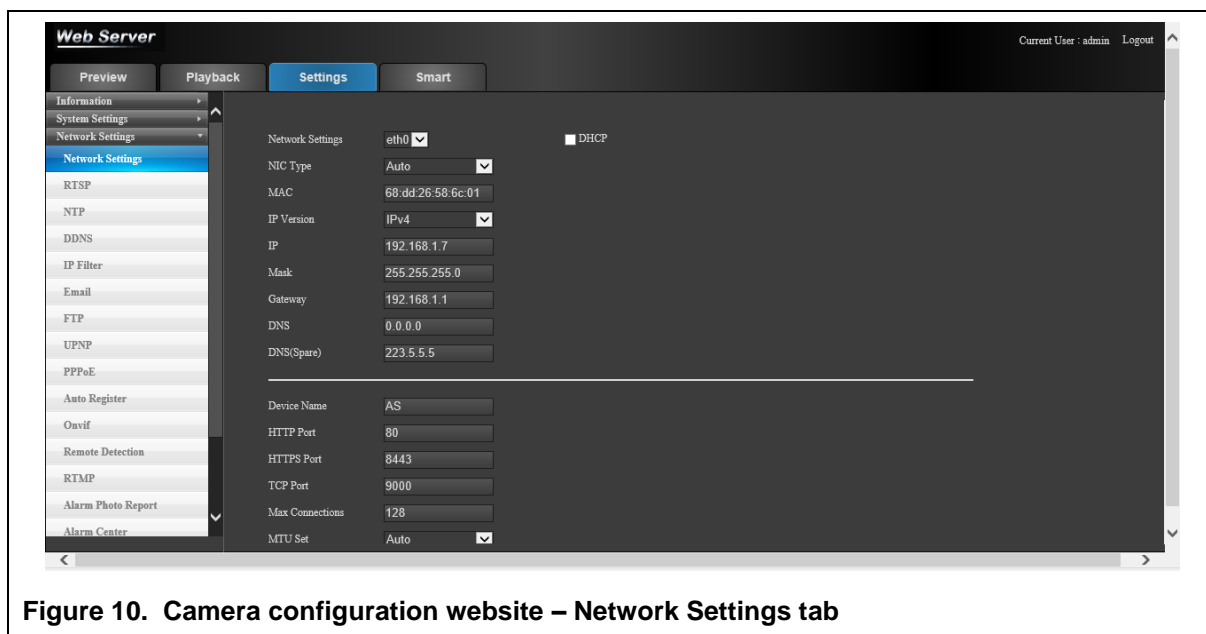
Figure 9. ONVIF Device Manager – network settings



To change the network address using the camera configuration website (see Figure 10):

- Log in to the camera configuration website
- Select the 'Settings' tab
- Select the 'Network Settings' option from the menu on the left and edit the settings.
- Select 'Apply' and the settings on the camera will change – note you will need to reconnect to the camera as it will now be at a different IP address.

For more information, please refer to the Technical Reference Manual of the camera.



**Figure 10. Camera configuration website – Network Settings tab**

## SD Card Recording

Applications should use the ONVIF service to control the recording, but the configuration website can also be used to set up recording on the SD card.

- Insert an SD card into the camera.
- Open the camera configuration website and log in.
- Open the 'Settings' tab and select 'Storage Settings' -> 'Disk Manager'.
- Click on 'Refresh' and select the SD card (it will be listed as a hard drive).
- Select 'Format' and accept the prompts.
- The camera will re-boot, log in again and re-select the 'Disk Manager' to check that the card is formatted correctly.
- Select 'Record Settings'.
- The configuration page has been designed to emulate a security system and can be set to operate at set periods of time or with alarms.
- Set the 'General' tick box on Period 1, a green line will appear in the display for Sunday.
- Set the 'Copy To All' tick box, the green line will now appear on all days. Click on the 'Save' button. This has now enabled 24 hour/7 days a week recording.
- Go to the 'Disk Manager' or 'Information' -> 'Disk Information' and you will see that the free space is slowly going down as the camera records the video to the SD card.
- To stop the recording return to 'Storage Settings' -> 'Record Settings' and use the 'Reset All' button to clear the recording schedule then click on 'Save'.

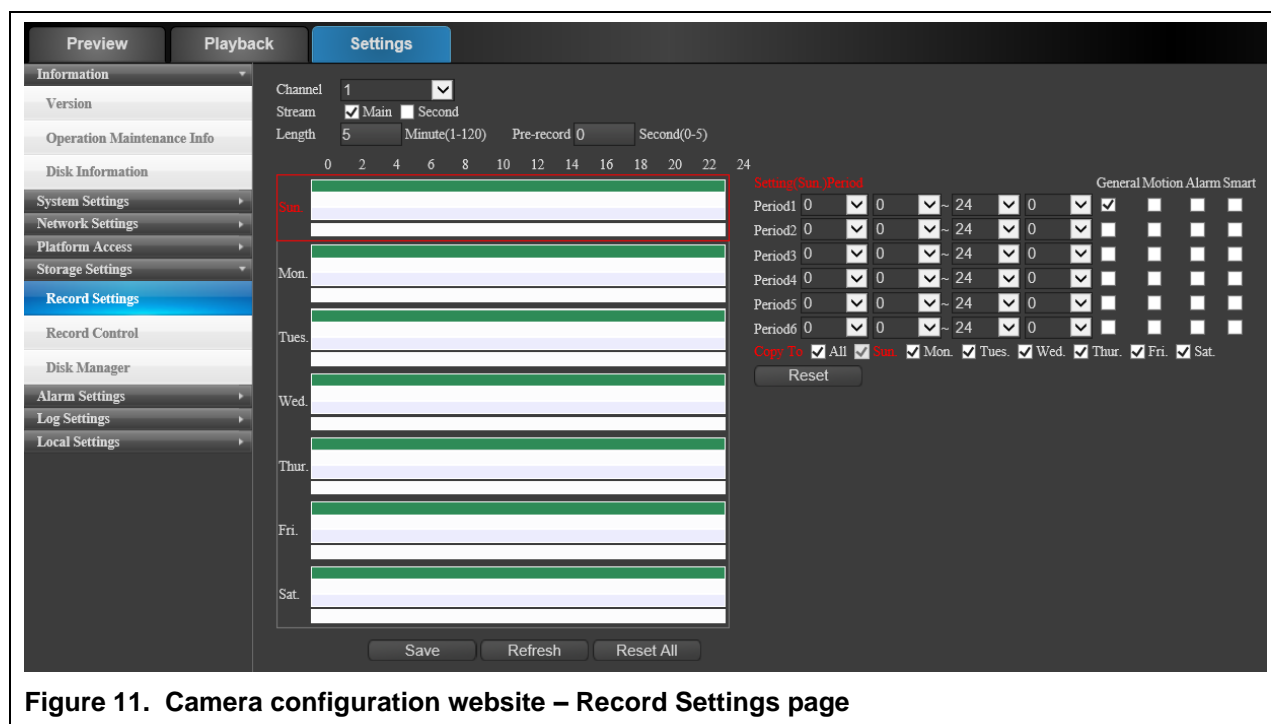


Figure 11. Camera configuration website – Record Settings page





To view the recordings:

- Select the Playback tab.
- Click on the 'Query Terms'-'>'Query' button.
- The timetable row/bar at the bottom of the frame will update to show the times where recordings have been made (shown in green).
- Click on and slide the timetable row/bar until the recoding region you want to view is under the green maker line shown at the centre of the timetable row/bar.
- Click on the play button and the recording will be played back to the display.

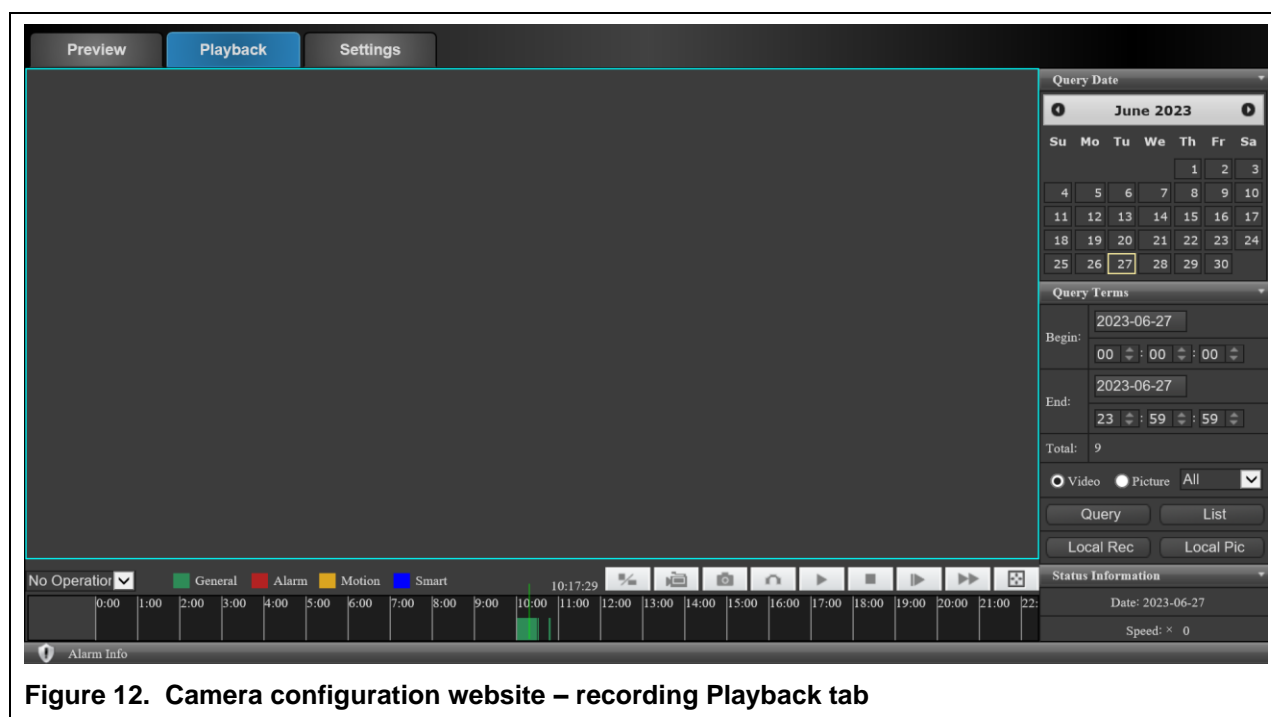


Figure 12. Camera configuration website – recording Playback tab

## Downloads

ONVIF reference documentation: <https://www.onvif.org/resources/>

ONVIF Device Manager: <https://sourceforge.net/projects/onvifdm/>

VLC: <https://www.videolan.org/vlc/index.en-GB.html>

GStreamer: <https://gstreamer.freedesktop.org/download/>

## Technical Support

In case of any issues, please contact Active Silicon Technical Support by email on [techsupport@activesilicon.com](mailto:techsupport@activesilicon.com).



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