



## Adding and Configuring the CV4IP16-8TB

If this CheckVideo device will be monitored by a central station, please contact the central station for a username and password on their existing CheckVideo account. The central station will add the device to their account.

The following items can be found within the box:

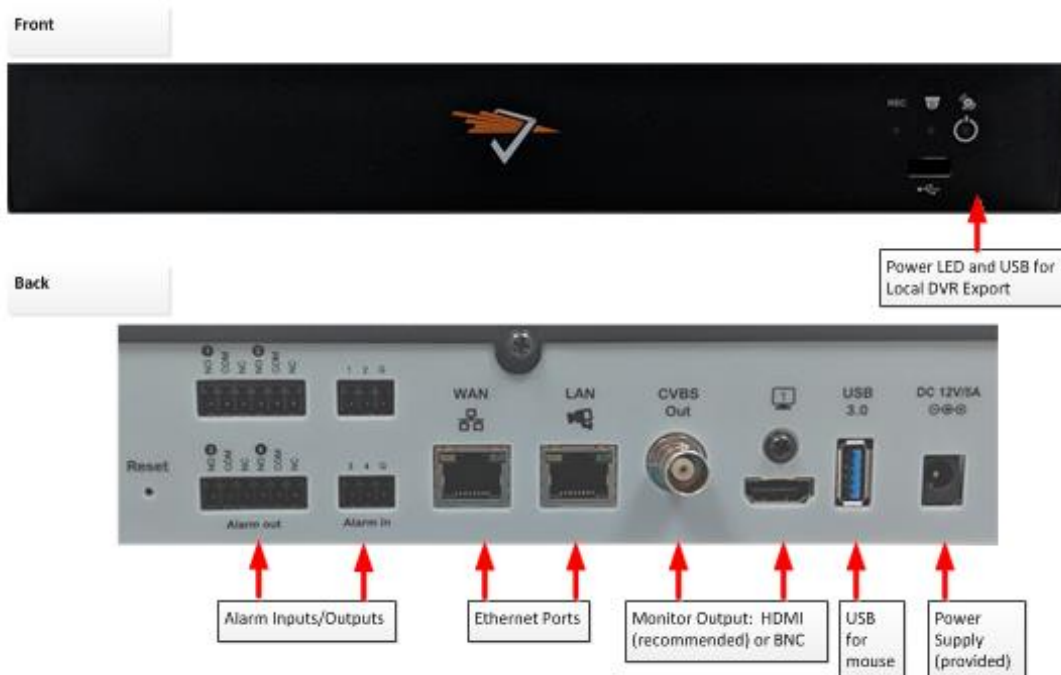
- CV4IP16-8TB
- CV4IP16 power supply
- 3 foot Ethernet cable
- Mouse for local display

- Terminal blocks for Digital I/O

Items not included:

- A display monitor
- HDMI cable or BNC cable for monitor

The CV4IP16 has connectors on both sides. The primary connectors can be found on the back panel. Only connectors shown with a red arrow are active at this time. Other connectors are reserved for future use.



To install the Gateway, make the following connections to the CV4IP16:

- Ethernet cable to the router. **Note: Do not connect the CV4IP to a POE port on a router/switch. Power is provided by the included power supply. Providing power via a POE port to the WAN connection on the device will damage the Gateway.**
- HDMI (preferred) or CVBS monitor to CV4IP16.
- Provided power supply to power outlet.

If you plan to use a local monitor, make sure that it is plugged in to the CV4IP16 before the Gateway is powered up. With the monitor connected, the CV4IP16 will display the “awaiting configuration from portal” message. At this time, you are ready to add the device to the CheckVideo portal.

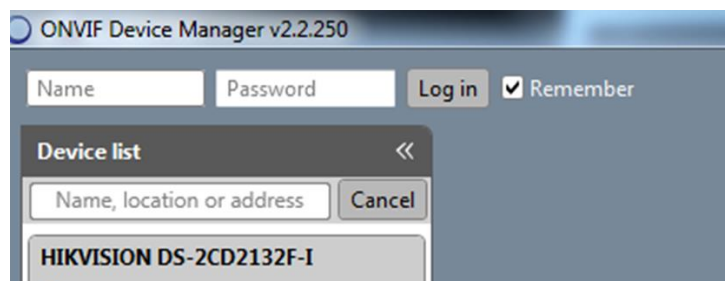
### Adding Cameras:

Open a web browser and log in to the CheckVideo portal (portal.checkvideo.net). From the Navigation bar, select Devices>Add a Device. Enter the CV4IP16 serial number/MAC ID, beginning with “00210F”. The number can be found on the product sticker on the left side of the back panel of the device. Enter a Device Name and click the Test Device button. Upon receipt of the “success” message, you can now match cameras to the CV4IP16. On the Firmware Update page, click the Device Name from the System Map to update the device. Once started, firmware update should take no more than 10 minutes.

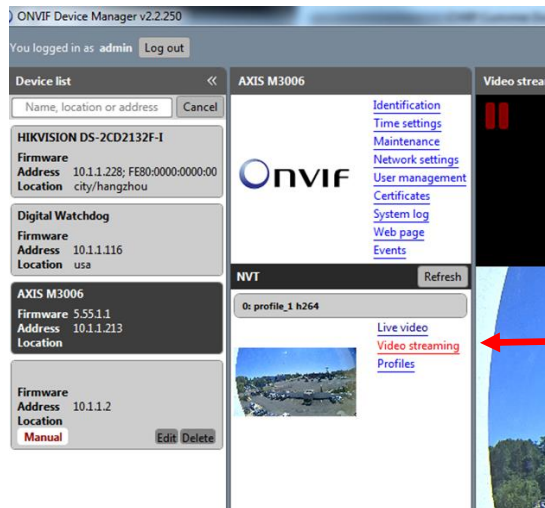
In preparation for adding cameras to the CV4IP16, you should complete the following steps:

- Like other CheckVideo devices, the CV4IP16 requires DHCP. This includes setting a DHCP address reservation for the CV4IP.
- The IP cameras require an IP address reservation. Working with the network administrator on site, the cameras must be assigned either a static IP address or a DHCP address reservation. This is critical because if the camera’s IP address changes, the CV4IP will lose connectivity to the camera. To resolve the issue, you will be required to reconfigure the connections via the Devices>Configure IP Gateway page. Instructions for this can be found below.
- Using the IP camera’s management tools, adjust the camera’s Video Settings to work with the CV4IP16. The parameters are:
  - Bitrate to less than 4Mbps
  - Frame rate to a multiple of 5 fps to a maximum of 30 fps
  - GOV length to 2X the frame rate **OR** i-frame interval of 2 seconds
  - Resolution up to 1080p
  - Profile – Main (preferred) or High

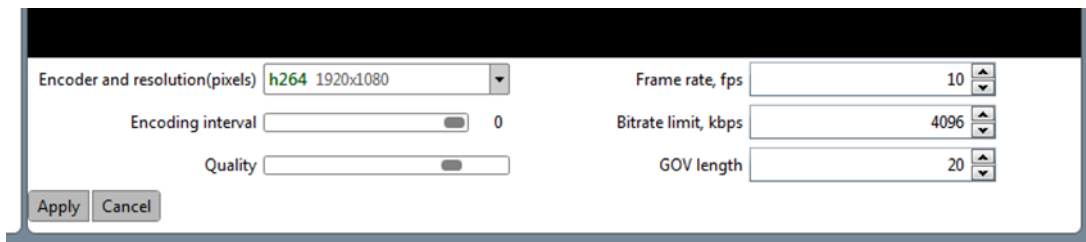
If your camera’s management tools do not display the option to change all of the settings above, you may find the ONVIF Device Manager helpful. You can install this tool from <http://sourceforge.net/projects/onvifdm/>. Once installed, start the program and enter the 3<sup>rd</sup> party camera’s admin access credentials in to the ONVIF Device Manager interface. You can get these credentials from the camera manufacturer.



Select the camera from the list of visible cameras on the left side of the screen. Click on the Video Streaming link.



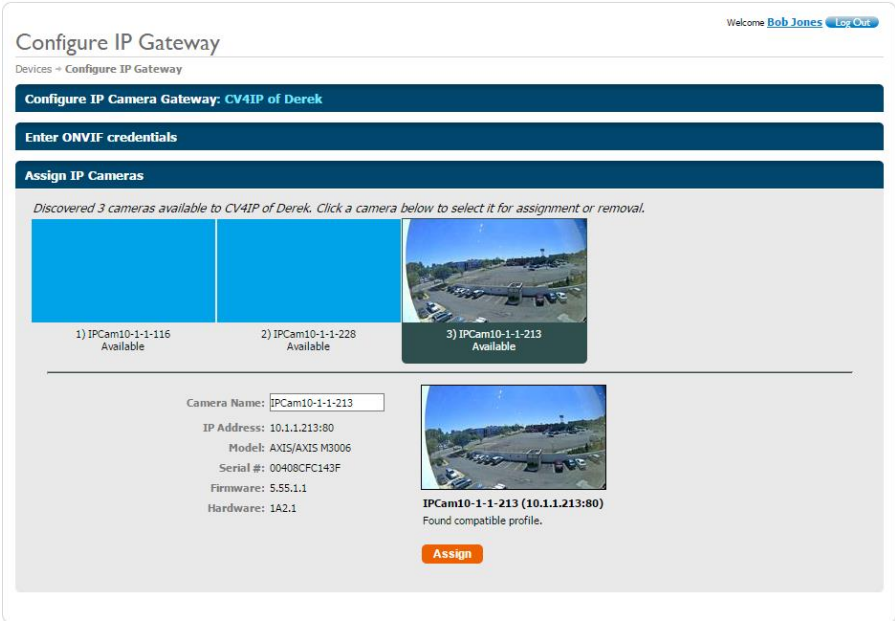
Go to the Settings page where you can set the Resolution, Frame Rate and GOV length values as required by the CheckVideo CV4IP. Select Apply to save these settings.



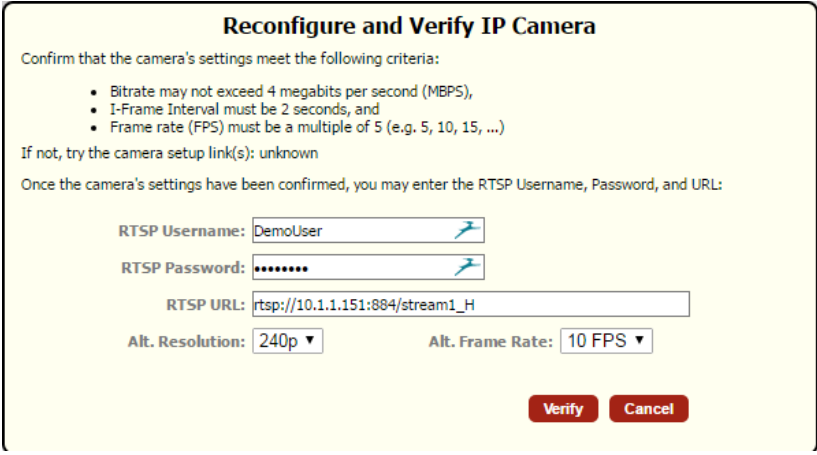
To confirm that the camera settings will work with the CV4IP, CheckVideo has created an HD Analytics Gateway Validation tool. The tool can be found at [www.checkvideo.com/support](http://www.checkvideo.com/support). Instructions for using this tool can be found on the document "How to Use the Camera Validation Tool". We recommend that you run the Validation Tool before moving forward with the installation.

Now that the camera settings are updated, associate the CV4IP to cameras on the same network. From the CheckVideo portal, go to Devices>Configure IP Gateway:

- Select the CV4IP16 from the drop-down menu
- Enter the ONVIF credentials for the camera. If you have more than one set of ONVIF credentials for the cameras you wish to add, use those credentials that apply to the majority of cameras to be added.
- Click Discover Cameras. At this point, all cameras visible on the CV4IP16's network will appear at the top of Assign IP Cameras image carousel. The default camera name is created using the local/internal IP address of that camera.



- If a background image could be obtained via the ONVIF credentials, the camera view will appear. If not, a blue box will appear. This does not mean that there is anything necessarily wrong. It is possible that the background image did not complete in time or that the camera does not support background image.
- Click a thumbnail within the image carousel to begin camera assignment. The camera details will appear below. It is at this point that you can rename the camera. If you have not updated your camera settings, you will receive a reminder to do this before you continue. Click the Assign button. The CheckVideo portal will let you know if you are successful.
- Should the camera assignment fail because the CV4IP16 cannot configure the RTSP connection, a warning message will appear:



First, confirm that your camera’s Video Settings have been adjusted to meet the CV4IP16 requirements. Next enter the requested RTSP information for your camera:

- RTSP Username (if required by camera)
- RTSP Password (if required by camera)
- RTSP URL

If the RTSP URL does not populate, look for it within ONVIF Device Manager. If you are unable to find it, please refer to your camera manufacturer’s documentation. Once the RTSP details are populated, click Verify to complete assignment of camera to the CV4IP16.

Once all cameras have been assigned to the CV4IP16, go to Devices>Configure Device. Select the CV4IP from the dropdown and begin setting the Event zones, schedule and notifications for each camera. Remember to Save at the completion of each camera's configuration.

### Local Video Matrix Setup:

Once the cameras are assigned to the CV4IP in the CheckVideo Portal, you can configure the local display. REMINDER: If you plan to use the local display monitor, it must be plugged in to the CV4IP16 HDMI **OR** CVBS output before power up.

Right-Click the provided USB mouse to bring up the Menu and Left-Click to select.

- Use the Menu to configure the display layout (ex: 2x2, 3x3, 4x4).



- Once the layout is selected, assign a camera to each window. Right-Click on the desired location to highlight the window orange. Right-Click again for the Menu and choose Select Camera. A list of cameras associated to the CV4IP will display for selection. Once selected, the camera's Live view will appear.



### Local Video Features

From the Local Video Menu, you can access enhanced features:

- View or export DVR footage without requiring CheckVideo portal interface
- View camera settings including resolution and frame rate
- Configure PTZ camera settings for those discovered via ONVIF. PTZ controls are found under Settings

There are several display options available outside of the Menu:

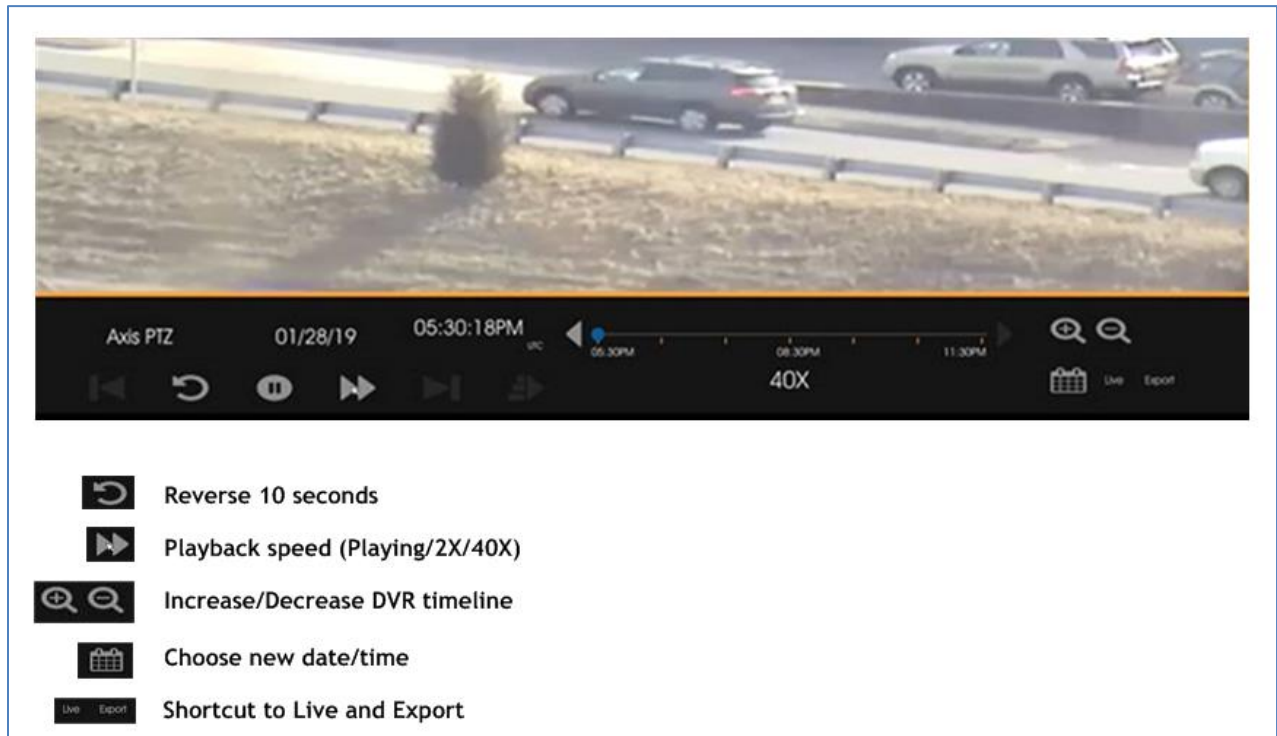
- To view a camera in full screen (single window) - Double Left-Click. To exit full screen – Double Left-Click.
- Digital Zoom on an object – Left-Click and hold to drag the red box over the object. To exit: Left-Click.

- For Tour Mode – Set Layout to 2x2 or 3x3, then select “Enable Tour Matrix” in the menu. To exit: Select “Disable Tour Matrix” in the menu.

NOTE: The CVBS output will display the same image as the HDMI.

**DVR Playback:**

To begin, select DVR Playback from the Menu. Select your date and time. The DVR window will appear:



Alternatively, you can change state, from DVR to Live or vice versa, by Right-Click in the window.

**Local DVR Export to Thumb Drive:**

To Export DVR footage to an external drive for later playback, please follow these steps:

- Plug a FAT-32 formatted, thumb drive in to the USB port on the front panel’s USB port. *NOTE: USB storage must be formatted to FAT32 to be compatible. FAT32 requires that the storage device cannot exceed 32GB. If your device is larger than 32GB you will need to be partitioned it before you can format it to FAT32.*
- Click and highlight the correct camera. Right-click the mouse to bring up the menu and select “Export DVR”. Select the date in the calendar, the start time, and the duration. Click “Export” to complete the back up.

