Adding and Configuring the Ruggedized IP Gateway

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:
- G1002-16-XT (non-cellular) **OR**
- G1004-8-LTE (cellular services apply)
- Power supply
- Antenna if applicable

The Ruggedized Gateway has connectors on both sides. Only connectors shown with a red arrow are active at this time. Other connectors are reserved for future use. Please make note of the LAN and WAN positioning. Unlike most CheckVideo devices, this Gateway has more than one orientation. ***It is critical to recognize that the WAN is the connector closest to the side of the unit.***

Back Panel:
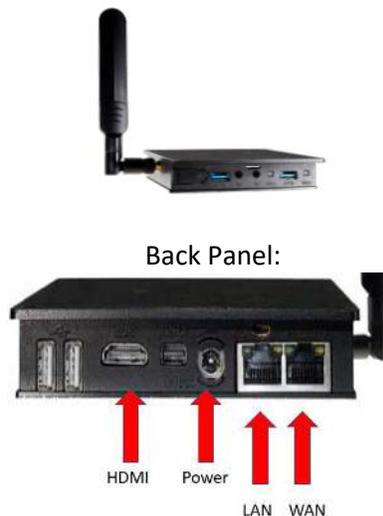
To install the Gateway, make the following connections for the G1002-16-XT :

- Ethernet cable to the router (WAN) and switch with cameras (LAN). If camera network is not separated, please use the WAN port. *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.*
- Provided power supply to power outlet.

To install the Gateway, make the following connections to the G1004-8-LTE with on-board cellular modem:

- Ethernet cable to the switch with cameras (LAN). The outside network connection is provided by Cellular LTE antenna. *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.*
- Provided power supply to power outlet.

Camera Preparation:

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 Ruggedized Gateway's serial number/MAC ID, beginning with "00210F". The number can befound on the Gateway packaging as well as the device. Enter a Device Name and click the Test Device button. Upon receipt of the "success" message, you can continue the set-up process. Click the Device Name from the System Map to begin the firmware update process. One started, firmware update should take no more than 10 minutes.

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

- Like other CheckVideo devices, the Ruggedized Gateway requires DHCP. This includes setting a DHCP addressreservation for the device.
- 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 Ruggedized Gateway 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 in the next section.
- Using the IP camera's management tools, adjust the camera's Video Settings to work with the Gateway.The parameters are:
  - o Bitrate to less than 4Mbps
  - o Frame rate to a multiple of 5 fps to a maximum of 30 fps
  - o GOV length to 2X the frame rate **OR** i-frame interval of 2 seconds
  - o Resolution up to 1080p (G1002-16-XT) or 4MP (G1004-8-LTE)
  - o Profile – Main (preferred) or High

The optimal settings are 2 or 4MP resolution respectively, 10 fps, 20 GOV and a bitrate of 2500. If you are adding cameras with different settings, you may wish to use the IP Gateway calculator to enter channel specific settings. This calculator will help maximize the available channels on the device. Just reach out to support@checkvideo.com for the latest version of the calculator.

CheckVideo Validation Tool:

If your camera's management tools do not display the options to change all of the settings above, you may find the CheckVideo Validation Tool helpful. The tool will assist with updating multiple camera settings at once and confirm camera compatibility. The tool can be found at www.checkvideo.com/Support under Camera Validation Tool for IP Gateway. Click on the link to download the tool and run "CheckVideo_Camera_ValidationTool.msi" file for installation.

- How to Find Cameras on the Network: The tool allows the user to enter the ONVIF user name and password for multiple cameras on the network. Connect your computer to the same network as the IP cameras. Once connected to the camera network, launch the tool. It prompts for a user name and password, defaulting to User Name: admin and Password: admin
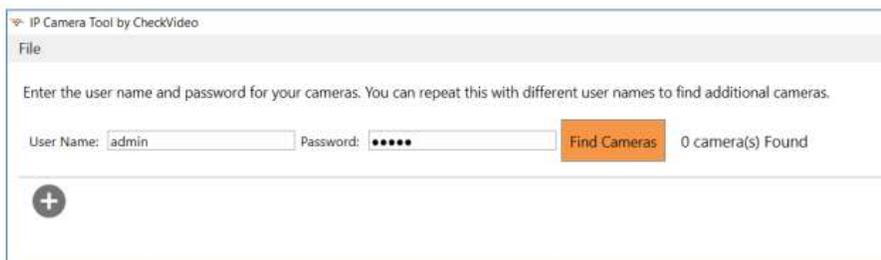
- To discover cameras, enter the correct ONVIF user name and password for cameras on your network and click "Find Cameras". If there are different username/password combinations enter each in turn and click Find Cameras

to discover additional cameras. If the camera does not support ONVIF or if ONVIF discovery is blocked by the net-work, you can use the + icon to add cameras by IP address or RTSP URL.

- Validation Tool User Guide: How to Steps
    - o Once cameras are discovered, this Tool will help test compatibility and configure new and existing 3rd party cameras. Detailed instruction for how to use the Validation Tool can be found at www.check-video.com/support.

ONVIF Device Manager:

An alternative to CheckVideo's IP Camera Validation tool is ONVIF Device Manager. 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 3rd party camera's admin access credentials in to the ONVIF Device Manager interface. You can get these credentials from the camera manufacturer.
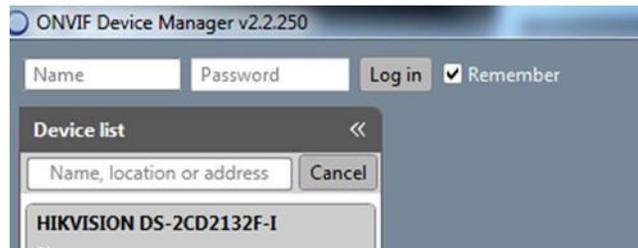
Select the camera from the list of visible cameras on the left side of the screen. Click on the Video Streaming link.

Go to the Settings page where you can set the Resolution, Frame Rate and GOV length values as required by the Ruggedized Gateway. Select Apply to save these settings.
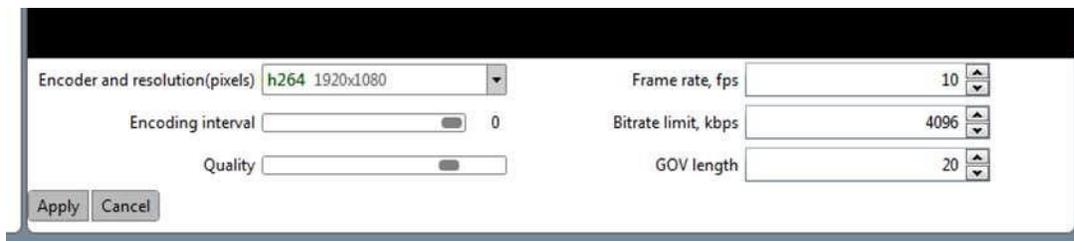
Adding Cameras to the Gateway via the Configure IP Gateway Page:

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

- Select the Gateway 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 Gateway'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.
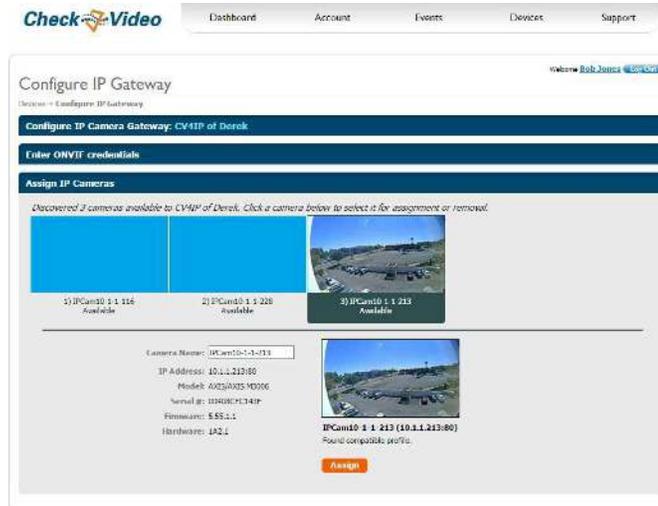
- If a background image could be obtained via the ONVIF credentials, the camera view will appear. If not, a blue box will appear. This does not mean that there is anything necessarily wrong. It is possible that the background image did not complete in time or that the camera does not support background 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 Gateway cannot configure the RTSP connection, a warning message will appear:

First, confirm that your camera's Video Settings have been adjusted to meet the Gateway requirements. Next enter the requested RTSP information for your camera:
- o RTSP Username (if required by camera)
- o RTSP Password (if required by camera)
- o 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 Gateway.

Once all cameras have been assigned to the Gateway go to Devices>Configure Device. Select the Gateway 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.