Quintic Software Tutorial 6f

GigE 1.6MP

Camera Set-up

CVB

V35

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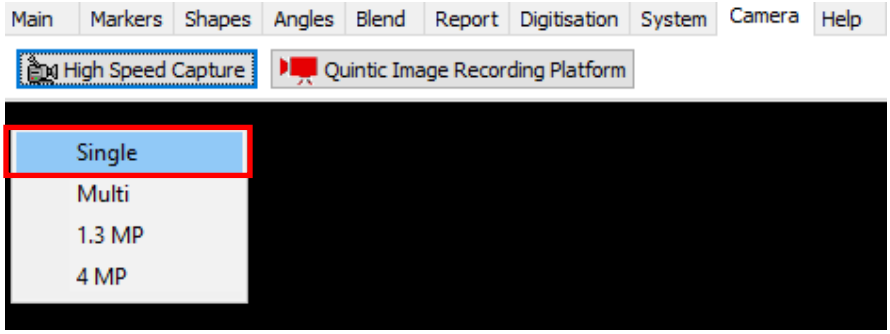
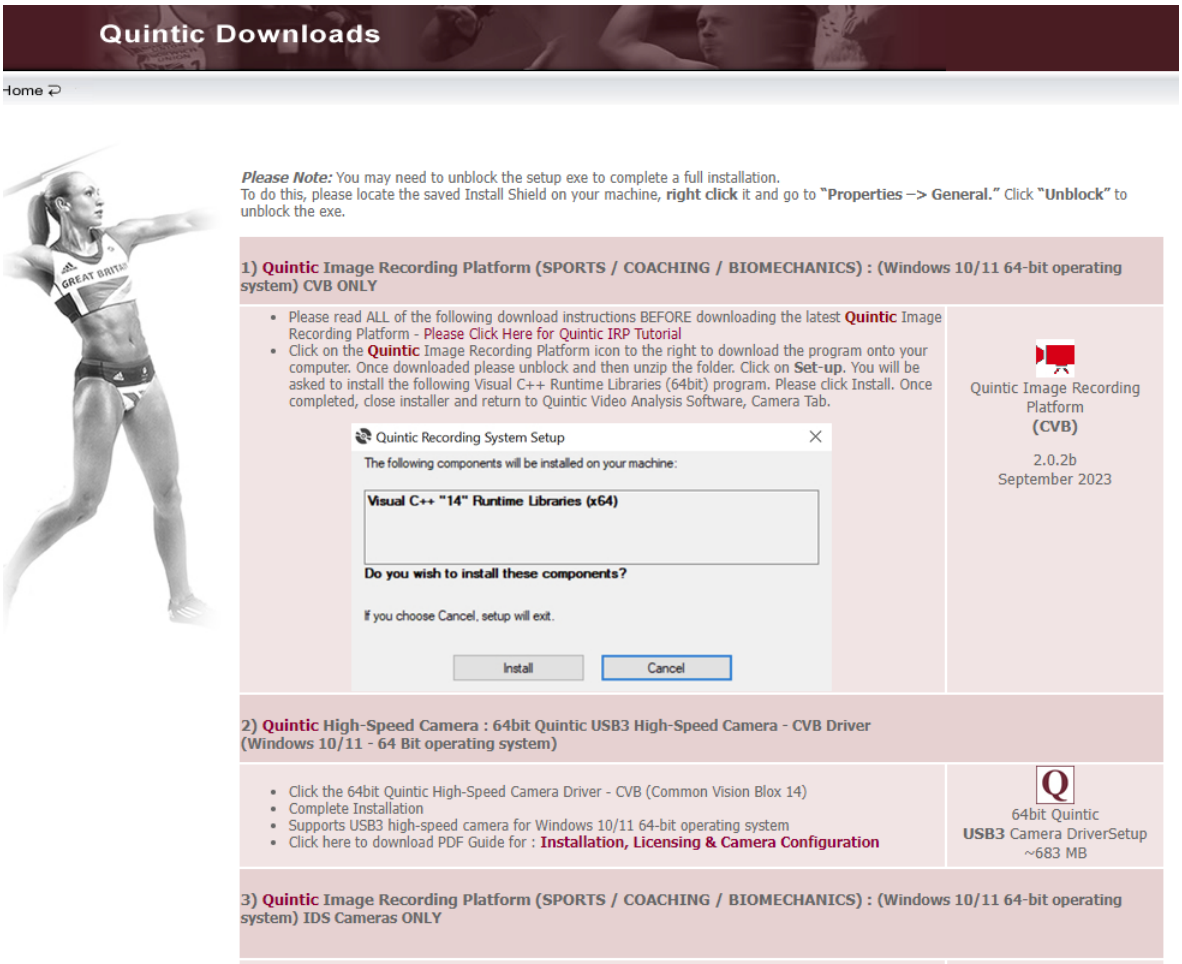
1. Camera Driver Installation

In order for Quintic High Speed Cameras to work within Quintic Software, camera drivers need to be installed.

Once you have correctly licensed your Quintic Software (see your Licence Letter for further information on this process) you are able to access the Camera Drivers by simply clicking on **'High Speed Capture'** then **'Single'**.



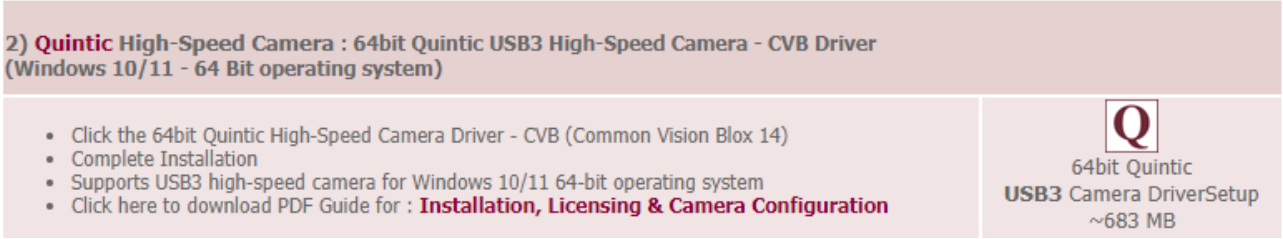
As none of the Camera drivers have yet been installed, this will bring you to the following webpage (secure internet connection required):



The user is then able to select which camera drivers they wish to be installed out of the options available to them.

For the Quintic GigE cameras we would recommend the following driver:

2) Quintic High Speed Camera Driver – CVB Driver



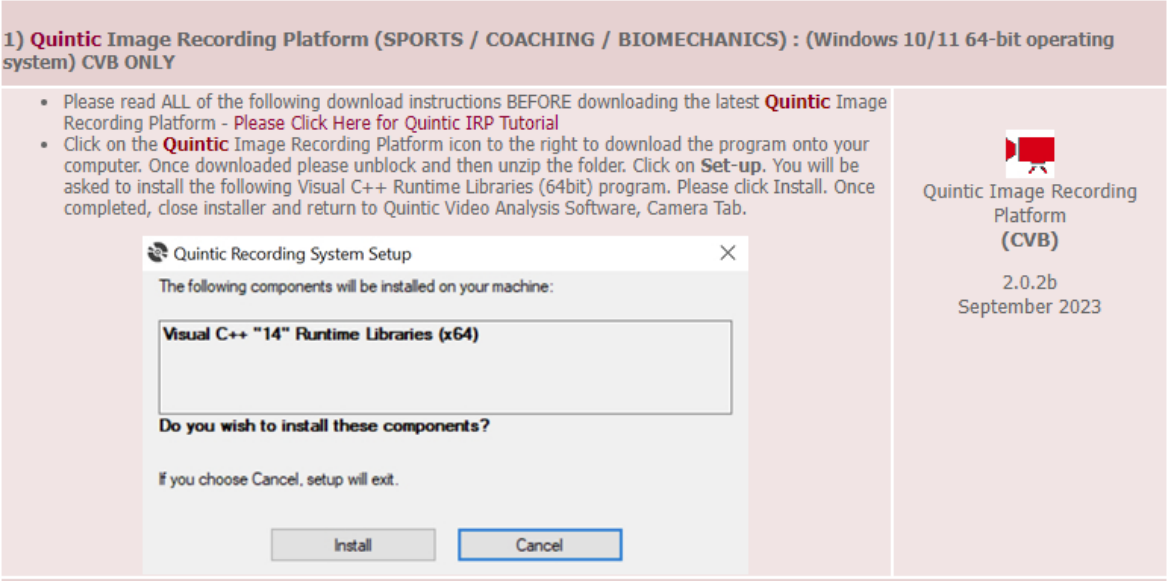
Once you have located the correct Camera Driver, please complete the installation by following these instructions:

1. **Please ensure any Quintic Cameras are not connected to the computer at this stage.**
2. Click on the Quintic Logo for the Camera Driver you require (Option 2) and select Save. Once saved run the install shield.
3. The CommonVisionBlox install shield will now launch.
4. Select ‘Next’ and then accept the terms in the licence agreement and then select ‘Next’.
5. The software will now install to the default location C:\Program Files\STEMMER IMAGING\Common Vision Blox\. To continue the installation, click ‘Next’.
6. Ensure that ‘Complete’ is selected as the setup type and click ‘Next’.
7. Click ‘Install’ to begin the installation.
8. Once the set-up has been completed click on the ‘Finish’ button.

2. Quintic Image Recording Platform Installation

Now that the Quintic High Speed Camera Drivers have been installed, you will also require the Quintic Image Recording Platform to be installed. The Quintic Image Recording Platform Program is available on the same webpage where the Quintic Camera Drivers were downloaded from.

1. Quintic Image Recording Platform (SPORTS / COACHING / BIOMECHANICS) : (Windows 10/11 64-bit operating system) – CVB Cameras ONLY

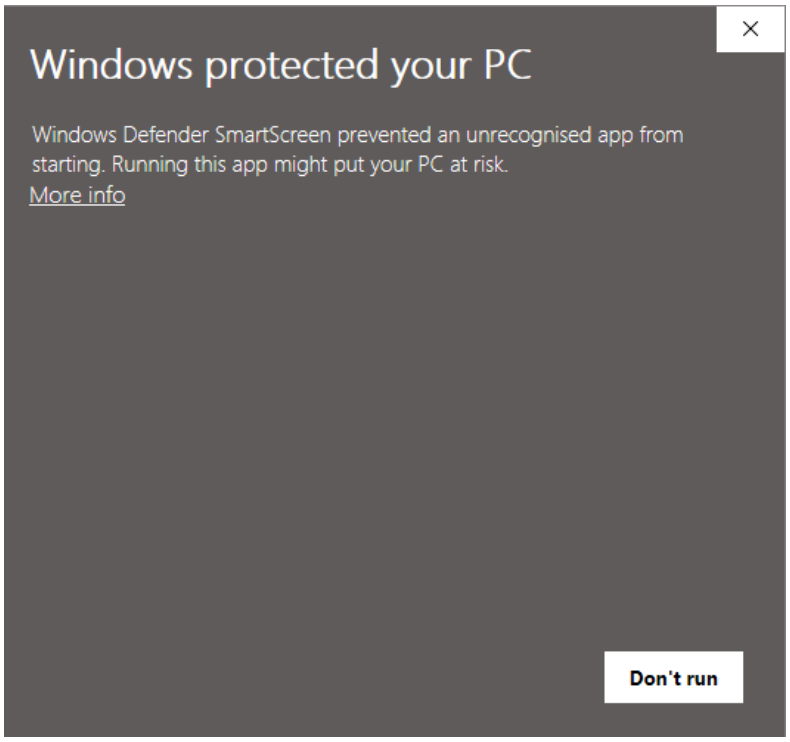


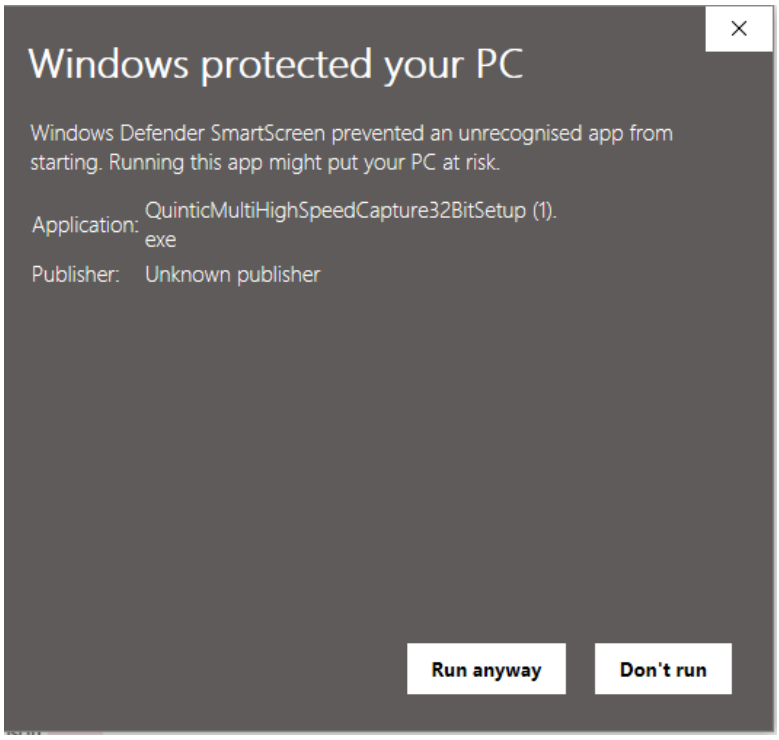
The Quintic Image Recording Platform program is very simple to download and install.

Simply click on the Logo next to the Quintic Image Recording Platform and save this program to a location on the machine of your choice. Once downloaded please unblock and then unzip the folder.

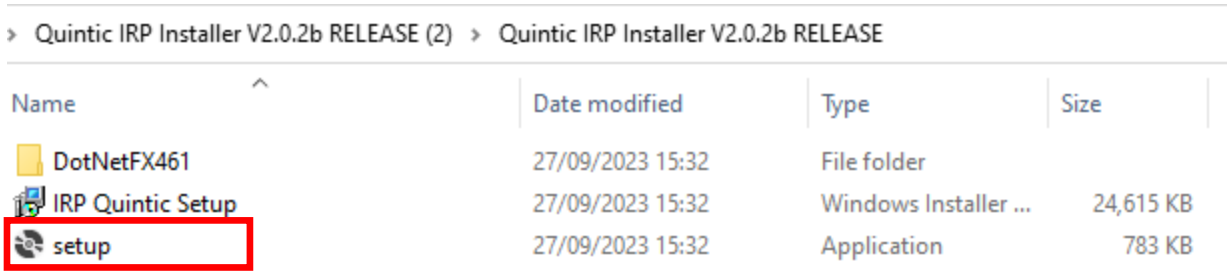
N.B Please ensure any Quintic Cameras are not connected to the computer at this stage.

If Windows blocks the program and a pop – up window similar to below appears, please select ‘More Info’ then ‘Run Anyway’





Click on Set-up.



You may be asked to install the Visual C++ Runtime Libraries (64bit) program. Please click Install if so. Then follow through all the Quintic Image Recording Platform installation screens.

Once completed, a Desktop Icon will not be created, the software will run in the background once clicked within the Quintic software. If you would like to double check the Quintic Camera Capture software have been installed, you can do this through ‘Control Panel’ then ‘Programs and Features’.

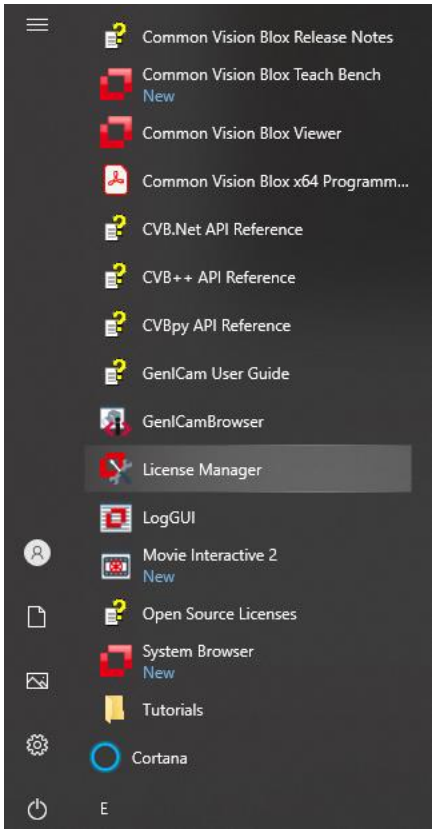
Once both the CommonVisionBlox and Quintic Image Recording Platform have been installed, you can now plug in your Quintic GigE 1.6MP High Speed Camera(s).

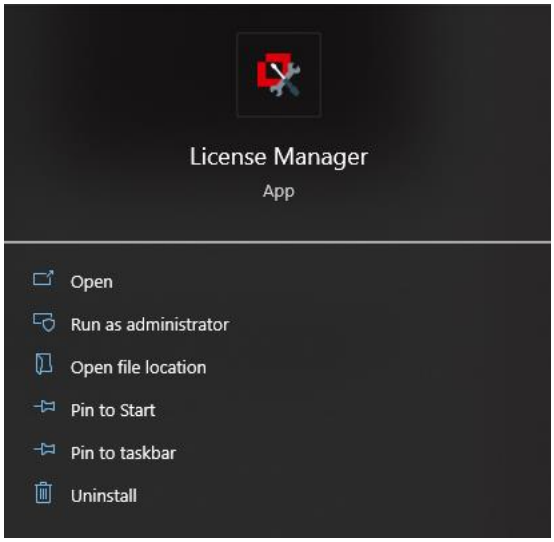
3. Quintic GigE 1.6MP Camera Licensing

The Quintic GigE 1.6MP High Speed Camera has to be licensed on the machine being used to capture the video footage. If the camera is not licensed, you will get a watermark on your video footage.

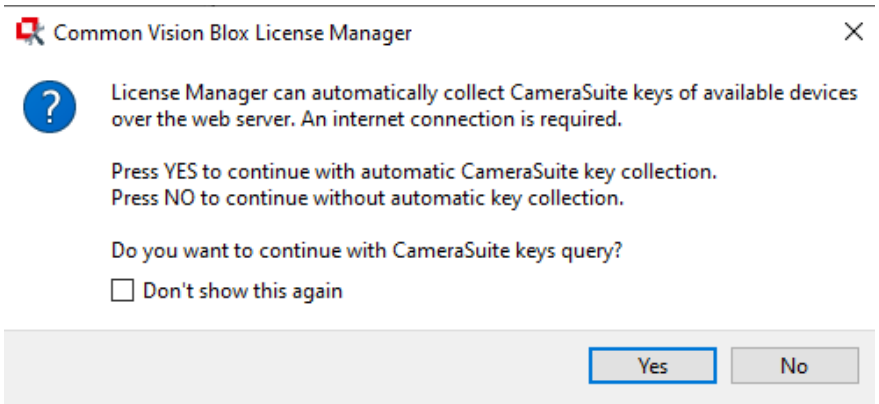
The camera licence key is supplied with your Quintic Camera, and this should either be a sticker on the camera box or a card supplied with the camera. You are looking for a 28-digit licence key, split up into 7 blocks of 4 (e.g. BG45-GH45-6578-VCQ5-QC98-PO98-8K9P).

In order to licence your Quintic Camera, please locate the ‘License Manager’.

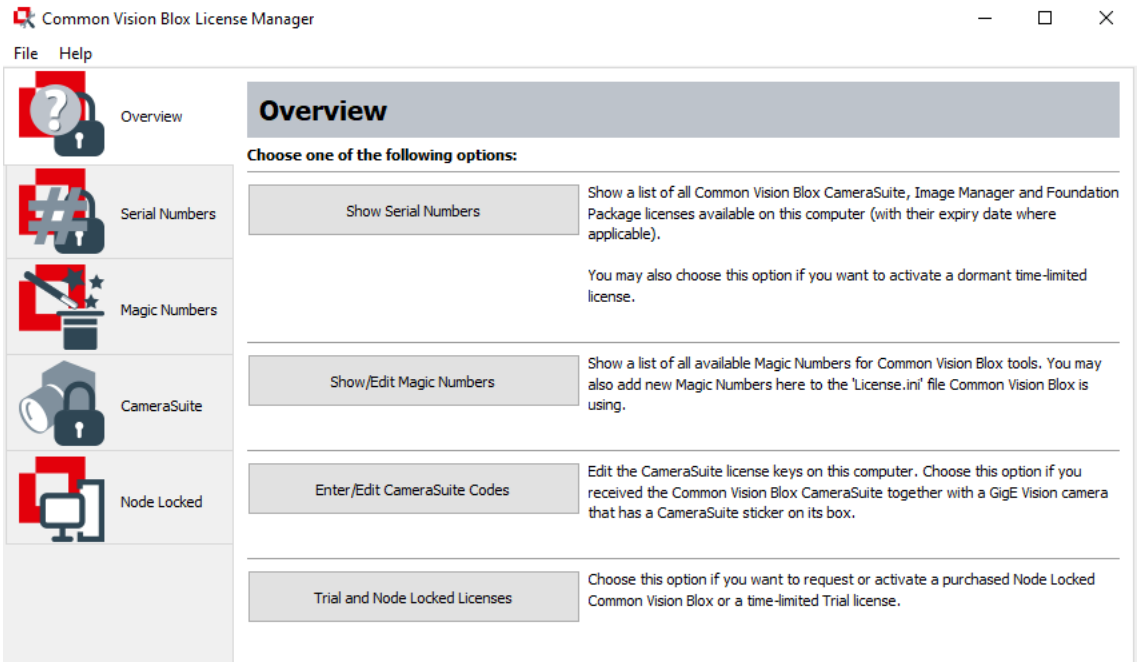




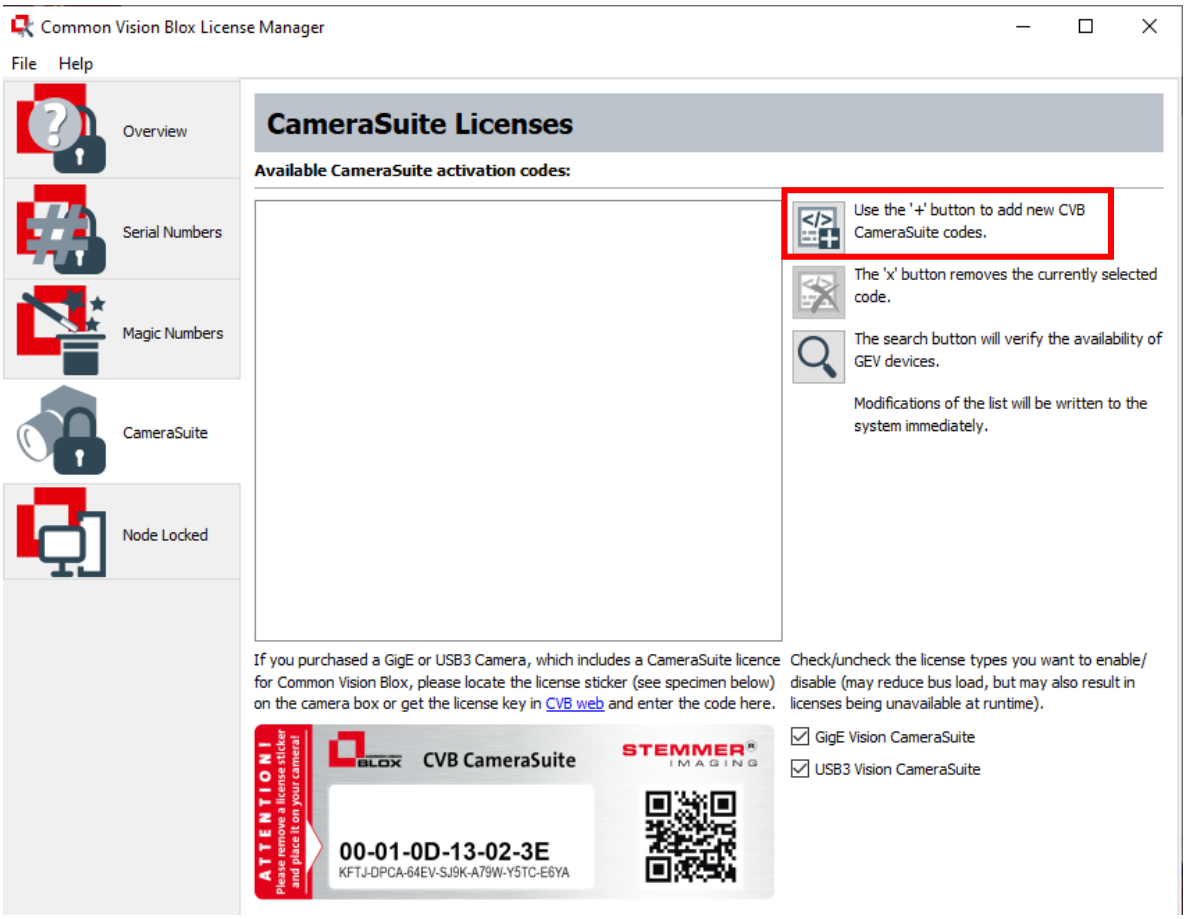
Once ‘License Manager’ has been clicked, a pop up will appear asking whether the License Manager can automatically collect CameraSuite Keys over the web server. Please click yes (an Internet connection is required). If you are not connected to the Internet, please click no.



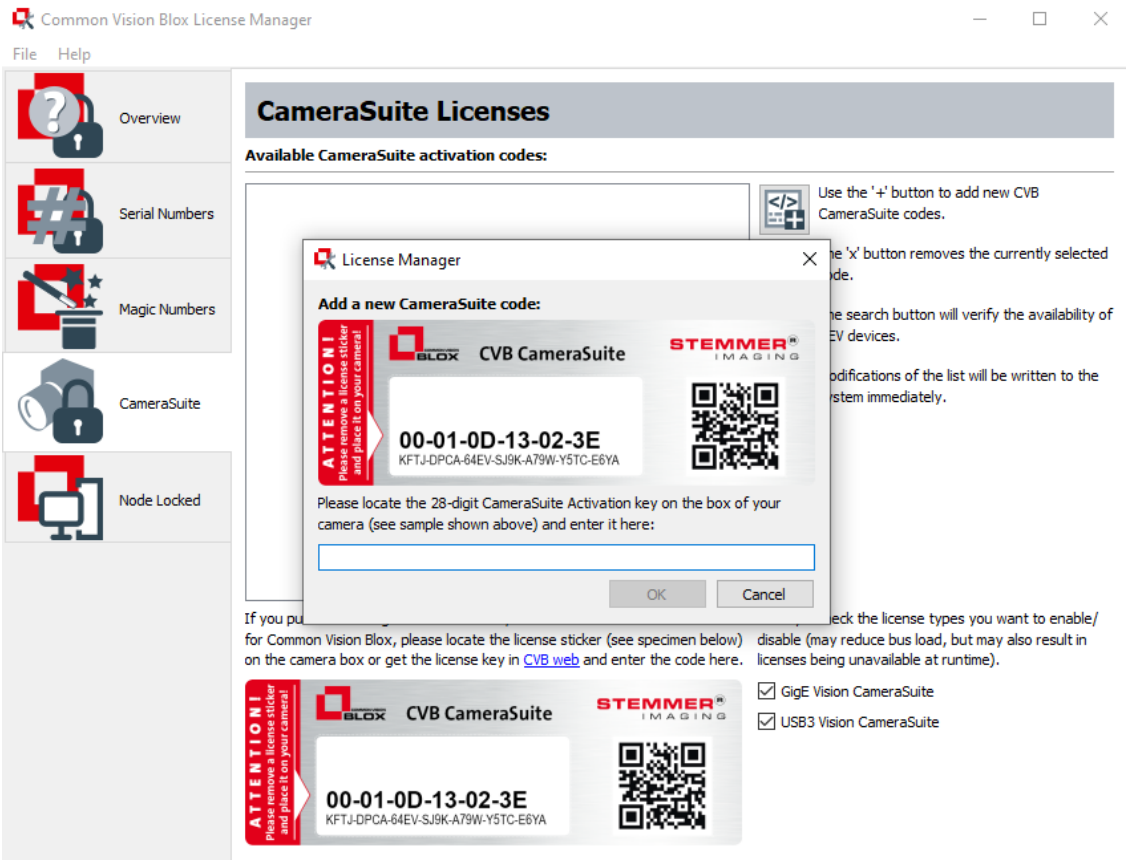
The Common Vision Blox Licence Manager will now open.



Click ‘CameraSuite’ on the left hand panel, and then click the add licence key button on the right hand side of the window, as illustrated below.



This will pop up the licence window, where you will be able to add the 28 digit camera licence code.



Once you have input the 28 digit licence code, please click OK to finish the camera licensing process. The 28 digit code should then be listed under the ‘Available CameraSuite activation codes’ heading.

It is recommended that you input all of the licence codes for all of the Quintic GigE 1.6MP High Speed Cameras you want to use on the same machine.

Also, if you want to use the same Quintic GigE 1.6MP Camera on a different machine, you will have to repeat this licence process on the different machine.

4. Camera Configuration

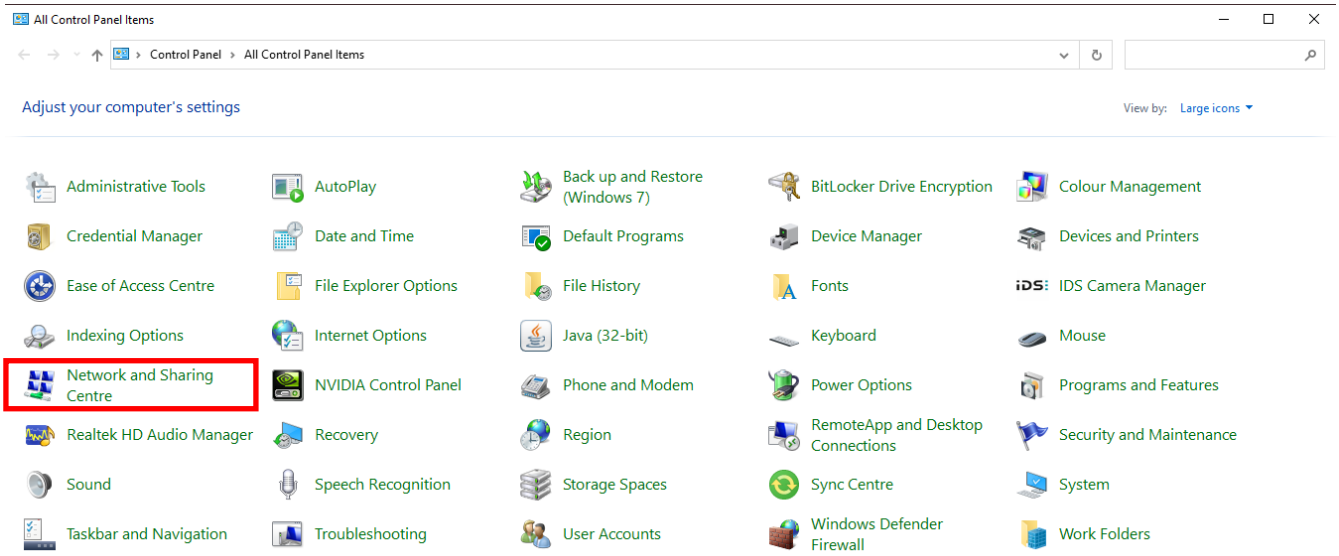
Once the Quintic GigE 1.6MP High Speed Cameras have all been licensed, you have to configure your cameras, so that they appear in the Quintic Image Recording Platform.

a. Ethernet Port Set Up

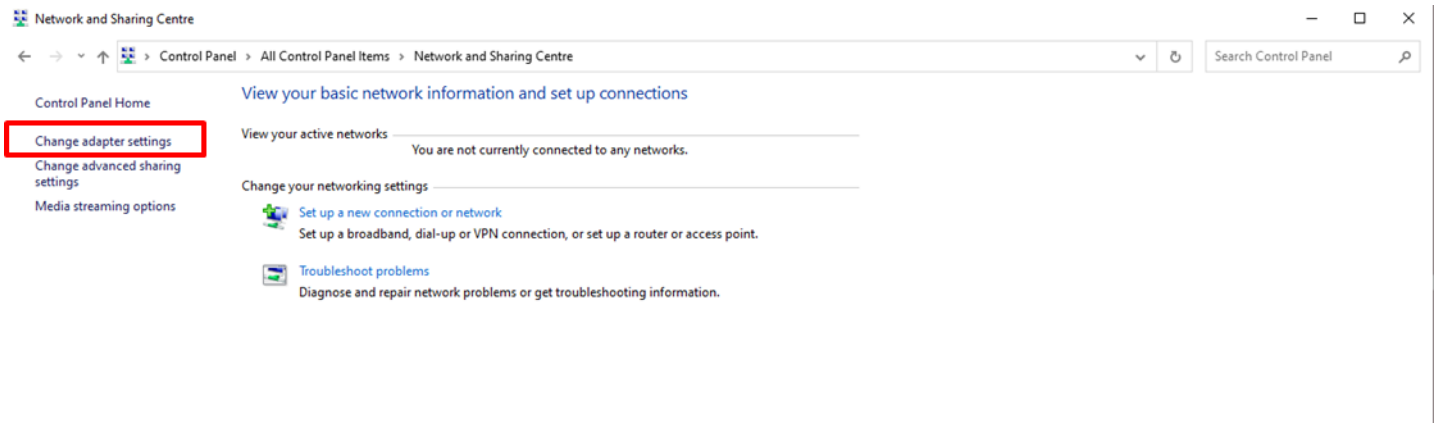
The Quintic GigE 1.6MP High Speed Cameras require an IP Address and a Subnet Mask to be set for the Ethernet ports into which the cameras are connected.

Please now attach your Quintic GigE 1.6MP High Speed Cameras to the PC.

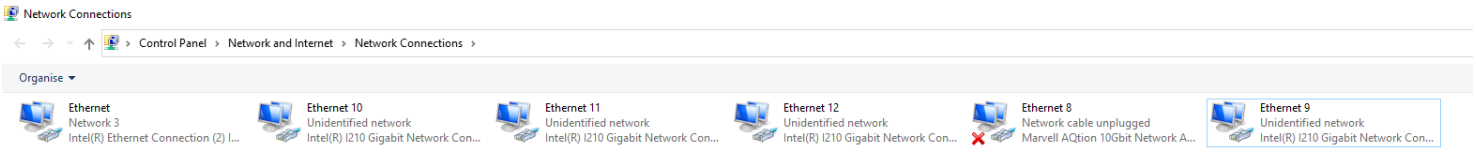
To set the IP addresses for the Ethernet ports which are going to be used for the Quintic GigE 1.6MP High Speed Cameras, firstly go to Control Panel > Network and Sharing Centre.



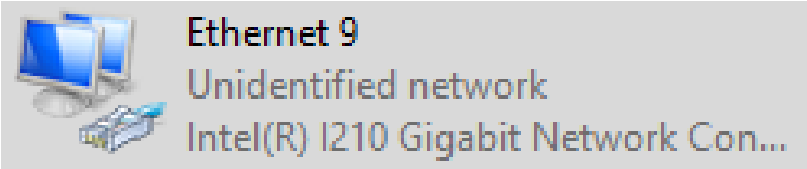
Once in the Network and Sharing Centre, select 'Change Adaptor Settings' on the left-hand side panel.



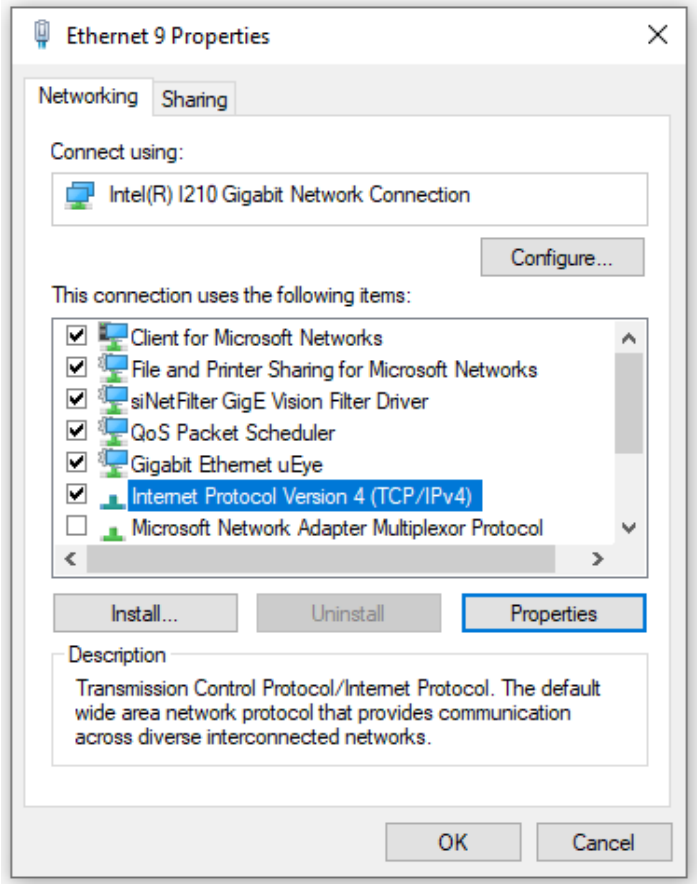
This will bring up all the available Ethernet connections available on your PC.



The Ethernet ports in which the Quintic GigE 1.6MP High Speed Cameras are plugged into will show 'Unidentified Network' under the Ethernet port name (e.g in the example above, Ethernet Ports 9, 10, 11 and 12 all show Unidentified Network as the cameras are plugged into these ports.

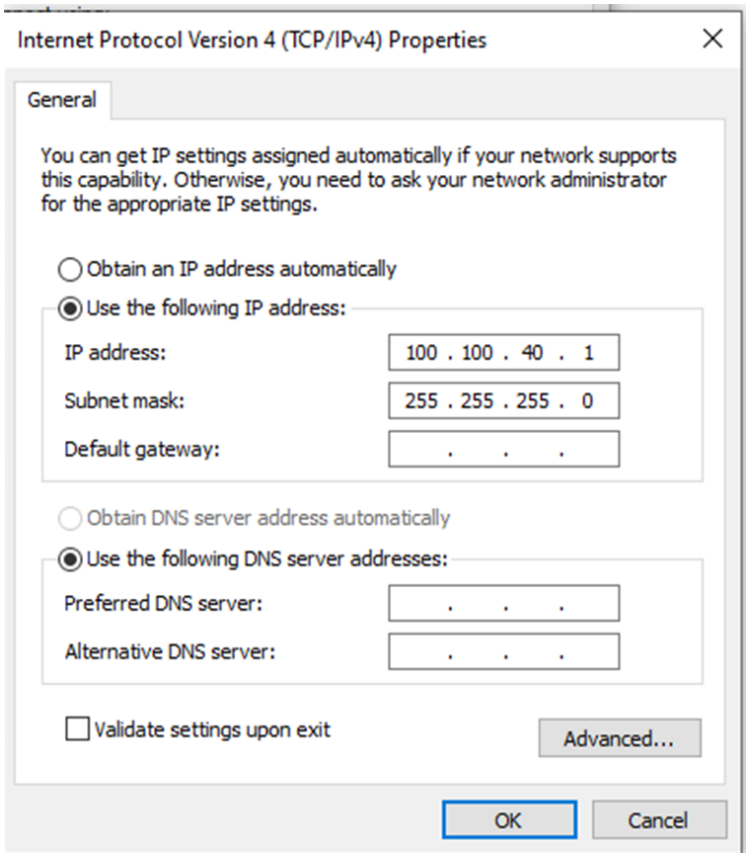


Right click on one of the Ethernet ports the Quintic GigE 1.6MP High Speed Cameras are plugged into and select 'Properties'.



Locate ‘Internet Protocol Version 4 (TCP/IPv4)’ within the Properties menu and select ‘Properties’.

This will bring up a window which will allow you to assign a Static IP address and Subnet Mask for that Ethernet Port.



Select ‘Use the following IP address’ and use the following IP Addresses:

Camera 1 IP Address: 100.100.40.1

Camera 2 IP Address: 100.100.41.1

Camera 3 IP Address: 100.100.42.1

Camera 4 IP Address: 100.100.43.1

Camera 5 IP Address: 100.100.44.1

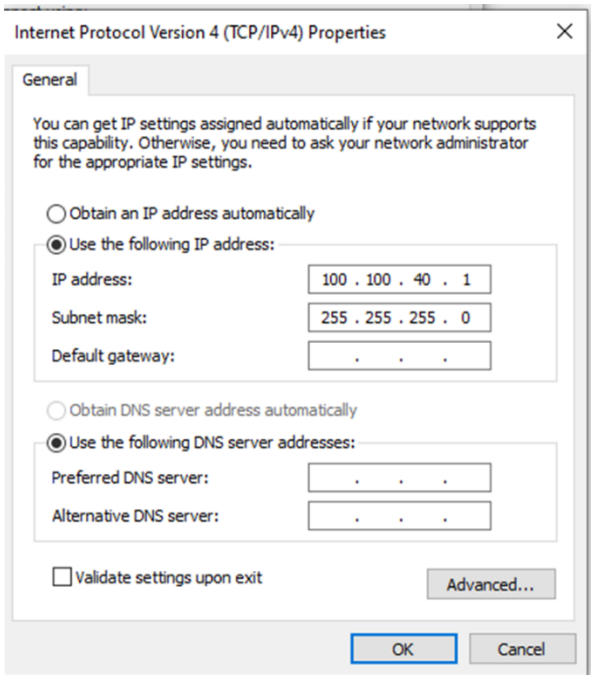
Camera 6 IP Address: 100.100.45.1

Subnet mask for every camera: 255.255.255.0

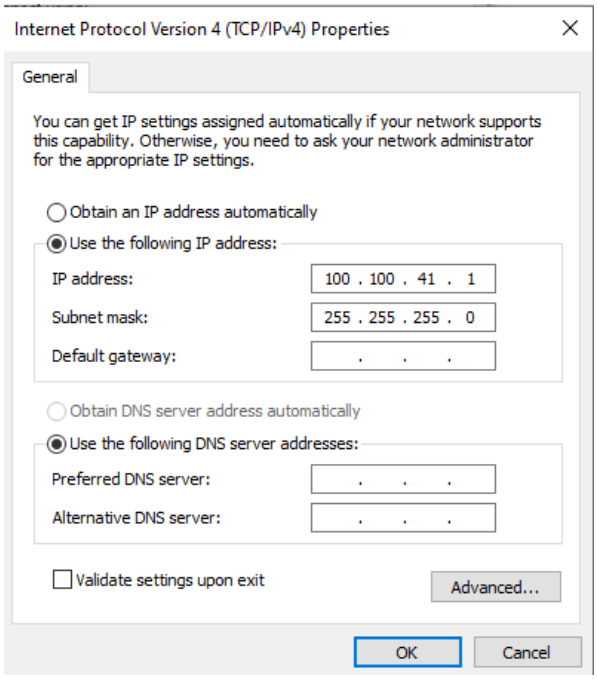
Once the IP address and Subnet Mask has been changed, please press OK to confirm the change.

You would have to repeat this process for every port in which you have a Quintic GigE 1.6MP High Speed Camera plugged in (e.g in this case Ethernet port 9, 10, 11 and 12 for Cameras 1, 2, 3 and 4).

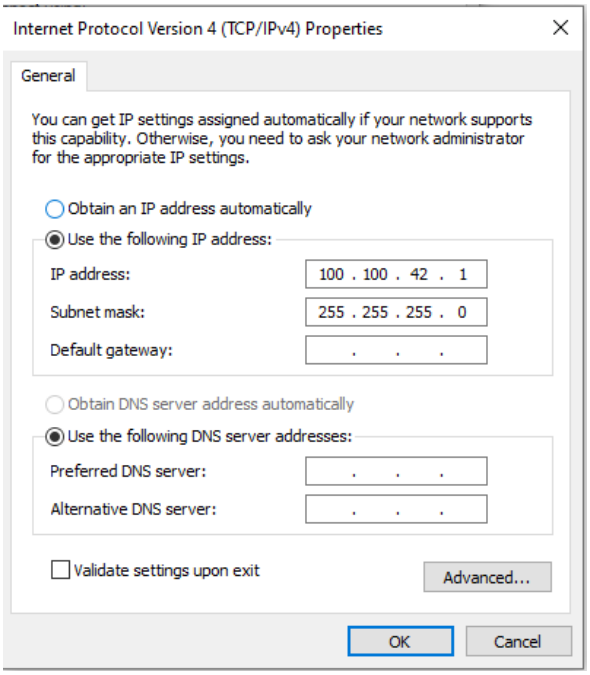
Please see the example IP Addresses for a 4 Quintic GigE 1.6MP High Speed Camera set up:



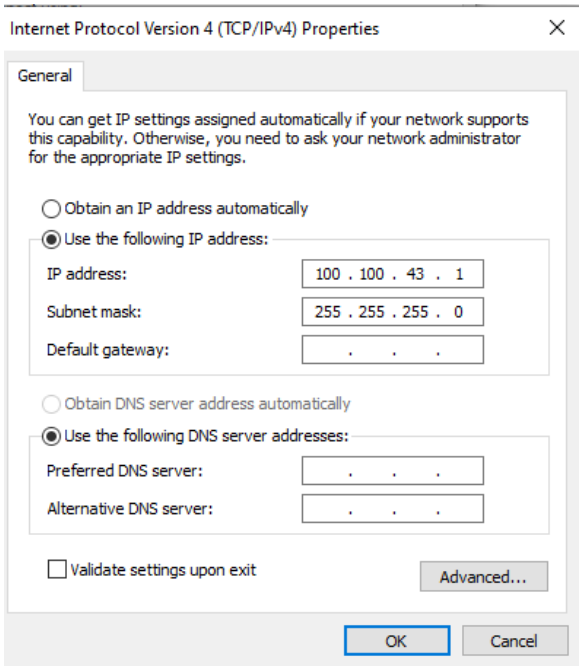
Camera 1 IP Address & Subnet Mask



Camera 2 IP Address & Subnet Mask



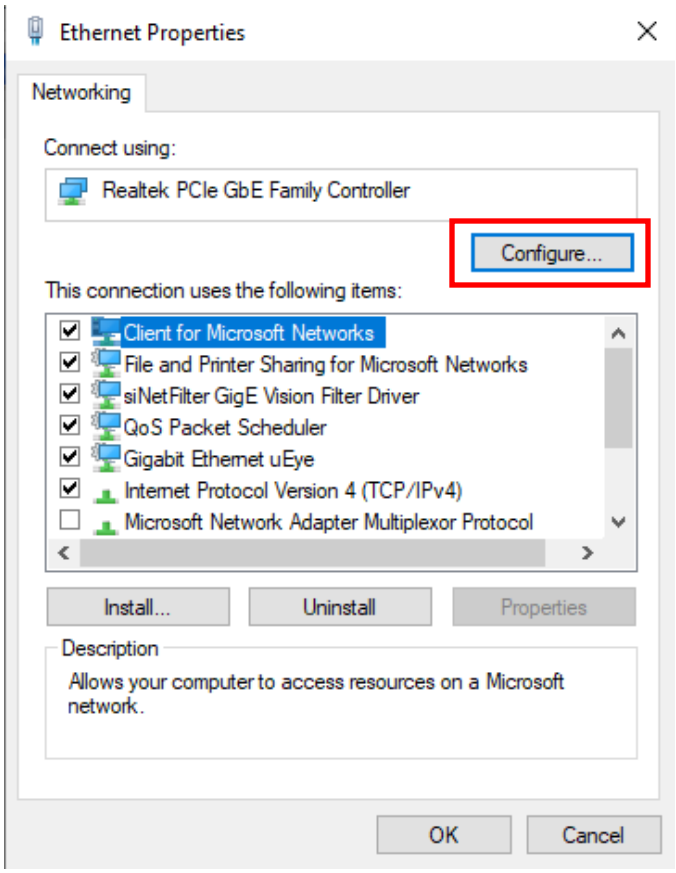
Camera 3 IP Address & Subnet Mask



Camera 4 IP Address & Subnet Mask

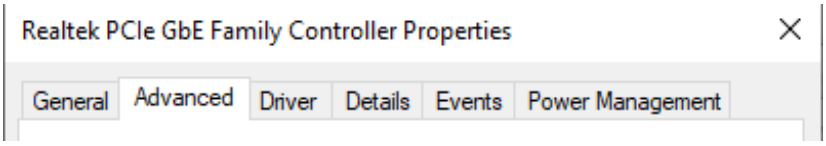
Once the IP Addresses are set for each of the Ethernet ports, there are other Ethernet port settings that need to be changed to ensure that the ports are running at full capacity to cope with the camera feed.

Within the ‘Network Connections’ page, right click on an Ethernet Port with a Quintic GigE 1.6MP High Speed plugged in and select ‘Properties’.

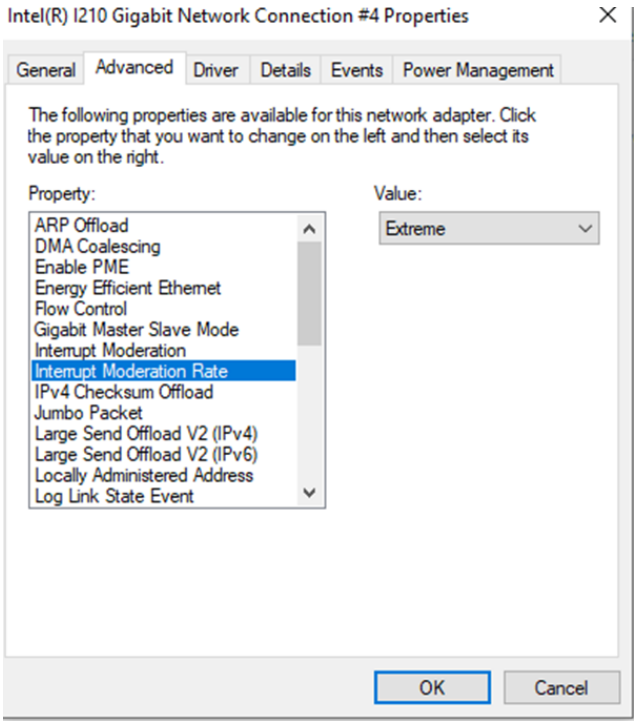


Select ‘Configure’.

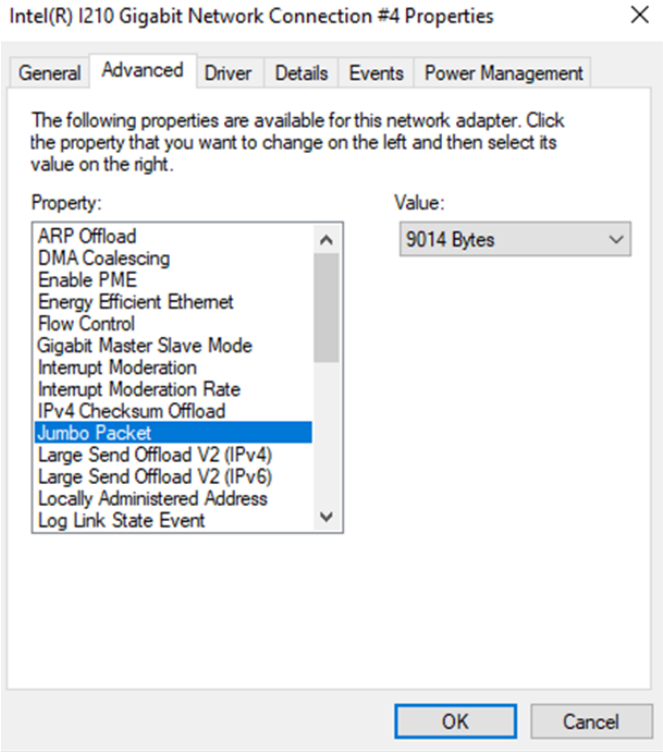
This will bring up the properties of the Ethernet Port. First, the settings that require changing are within the advanced tab.



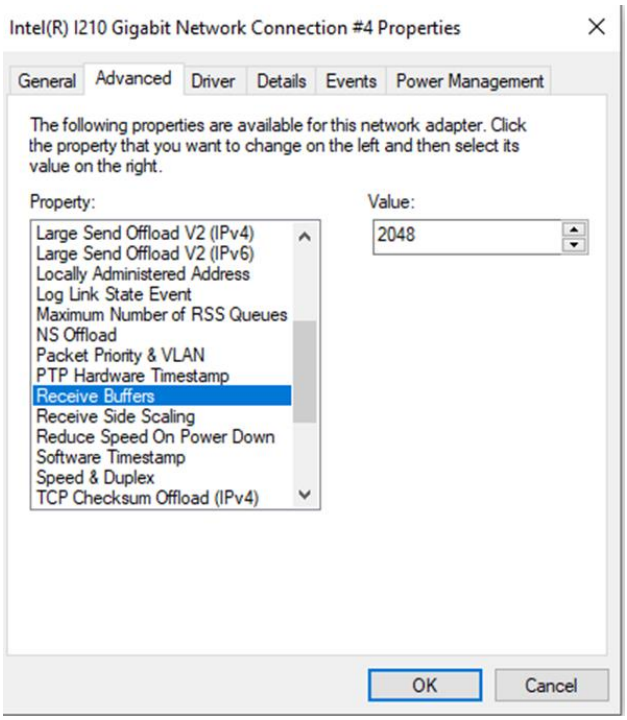
Locate ‘Interrupt Moderation Rate’ and have this set to ‘Extreme’ or the highest value it can go to.



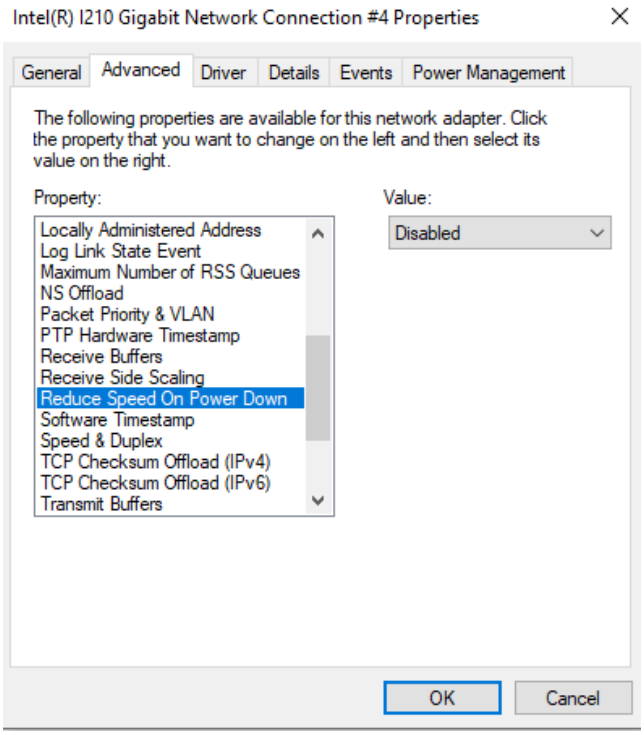
Locate ‘Jumbo Packet’ and have this set to ‘9014 Bytes’ or the highest value it can go to.



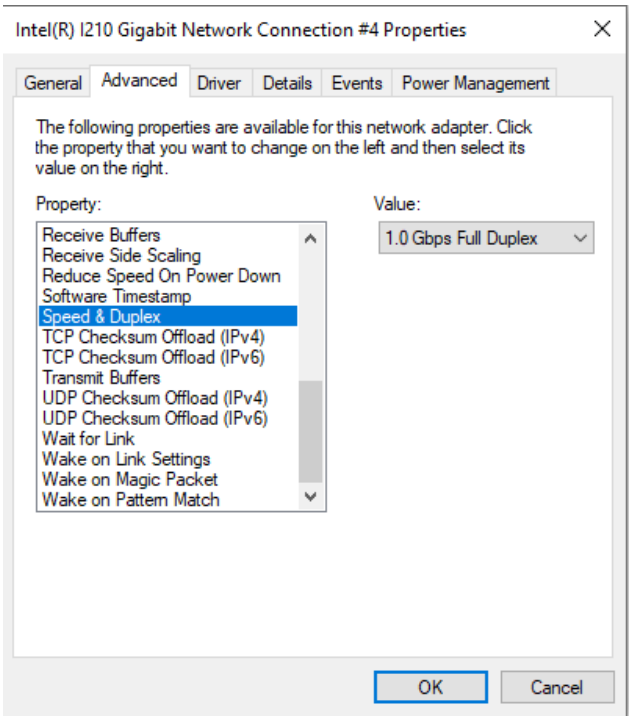
Locate ‘Receive Buffers’ and have this set to ‘2048’ or the highest value it can go to.



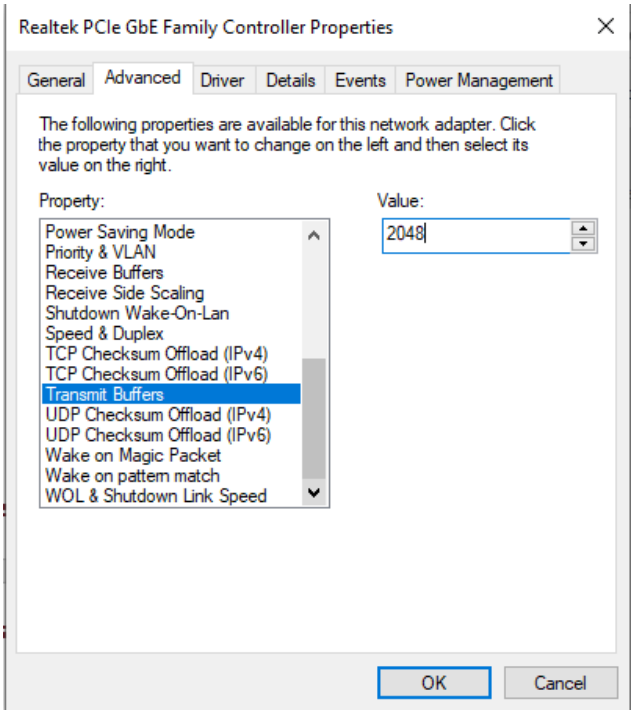
Locate ‘Reduce Speed on Power Down’ and have this set to ‘Disabled’.



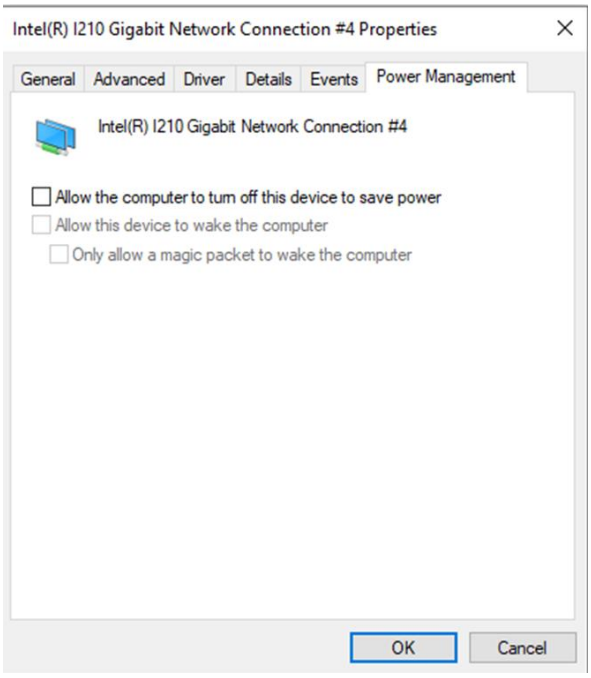
Locate ‘Speed & Duplex’ and have this set to ‘1.0 Gbps Full Duplex’ or the highest value it can go to.



Locate ‘Transmit Buffers’ and have this set to ‘2048’ or the highest value it can go to.



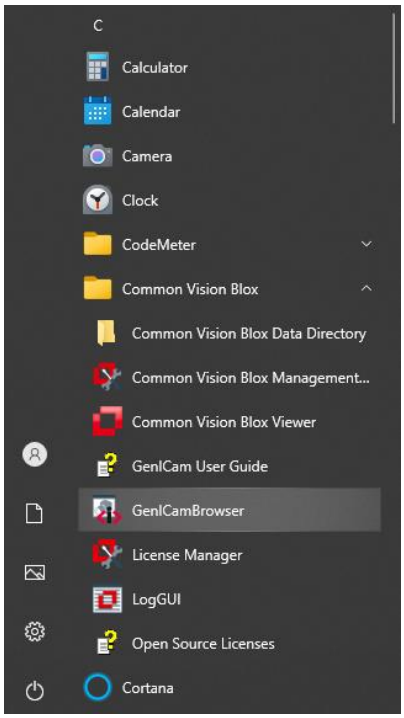
Within the ‘Power Management’ tab, ensure that the ‘Allow the computer to turn off this device to save power’ option is unticked.



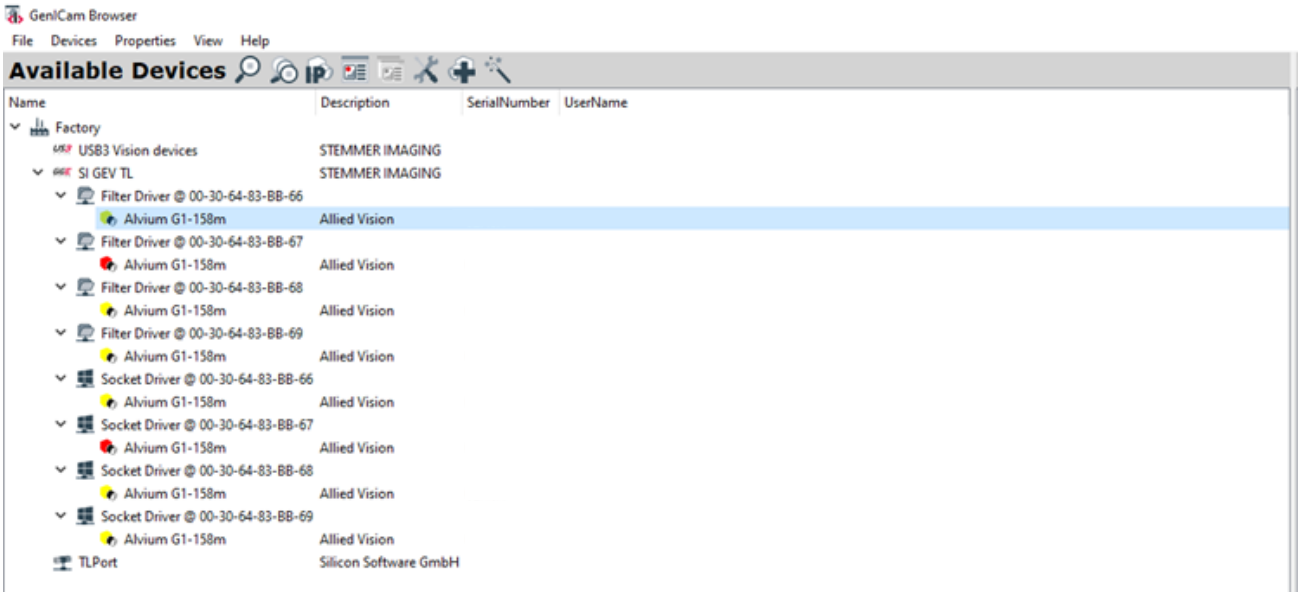
Once all of these settings have been changed, you would have to repeat this for every Ethernet Port in which a Quintic GigE 1.6MP High Speed Camera is plugged into.

b. CVB GeniCam Camera Set Up

Once the Ethernet settings and IP Addresses have been correctly configured, please locate ‘GenICam Browser’ on your PC and open this.



Once the GenICam Browser has opened, all Quintic GigE 1.6MP High Speed Cameras plugged into the machine should appear under ‘Available Devices’, as highlighted below.



Each Quintic GigE 1.6MP High Speed Camera should appear twice in the GeniCam list, once under a Filter Driver and once under a Socket Driver. So for the example above, we have 4 Quintic GigE 1.6MP High Speed Cameras plugged in, as 4 appear under Filter Drivers and 4 appear under Socket Drivers.

If the Cameras do not appear in the GeniCam Browser list, you may have to press the 3x Magnifiers button. This will search for cameras outside of the current subnet.

The cameras can appear in the GeniCam browser list in three different colours.

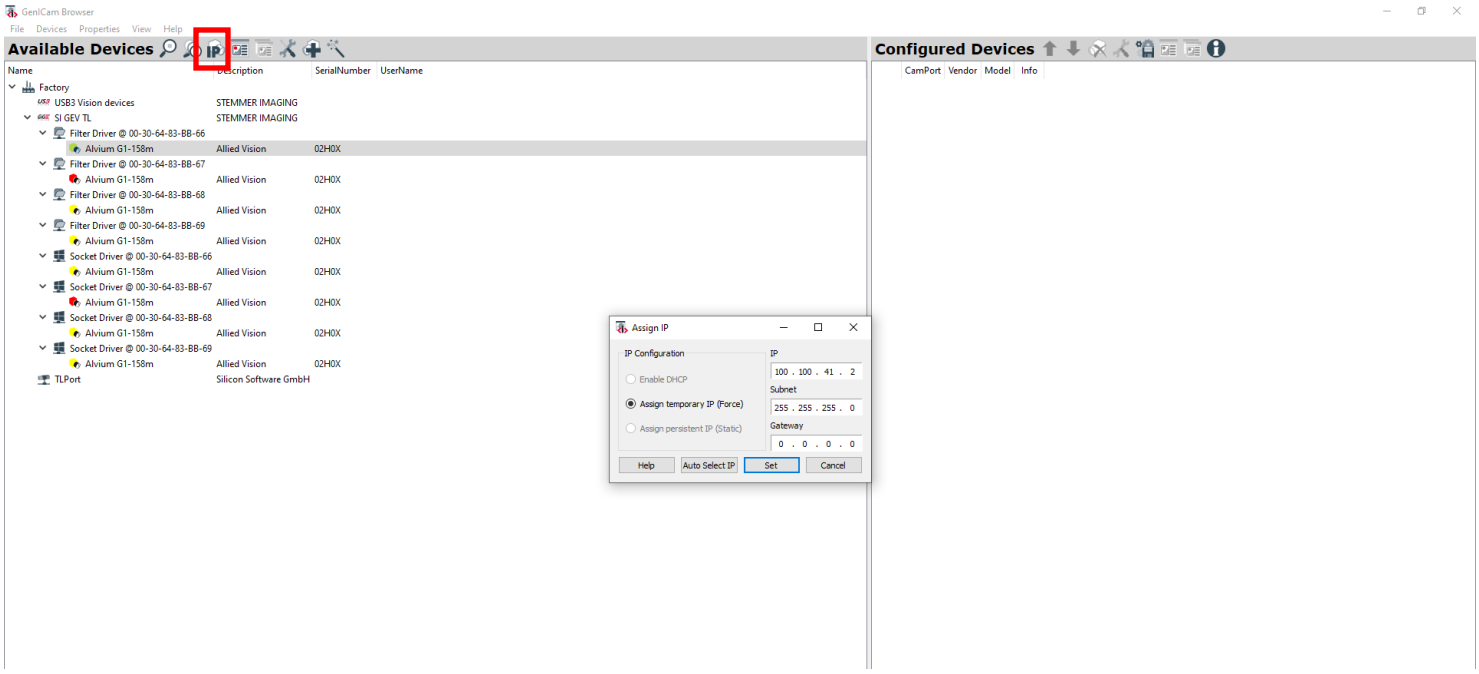
Green means the camera is correctly configured and is able to be open.

Yellow means the camera is visible to GeniCam browser but is not in the correct IP Address Range (this is most common when opening the cameras within GeniCam for the first time).

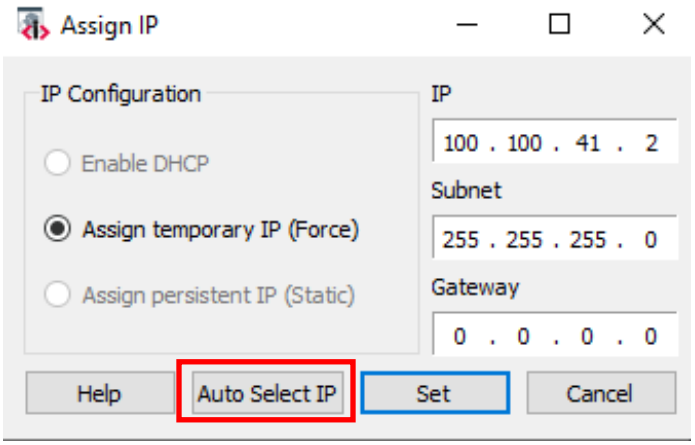
Red means the camera is unable to be opened, this could be due to the camera having an incorrect IP Address or already having a live feed of the camera open.

We require that the IP address for the Quintic GigE 1.6MP High Speed Camera matches up to the IP address that was set for the Ethernet port. You are able to do this by selecting a camera within GeniCam browser and pressing the IP button.

We recommend selecting the cameras which are listed under the ‘Filter Driver’.



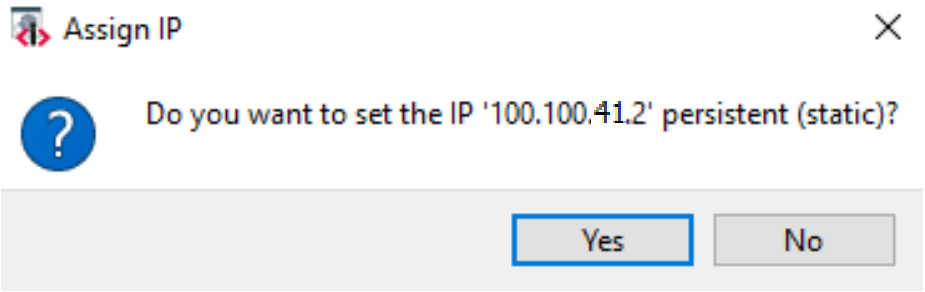
This will bring up the Assign IP Window.



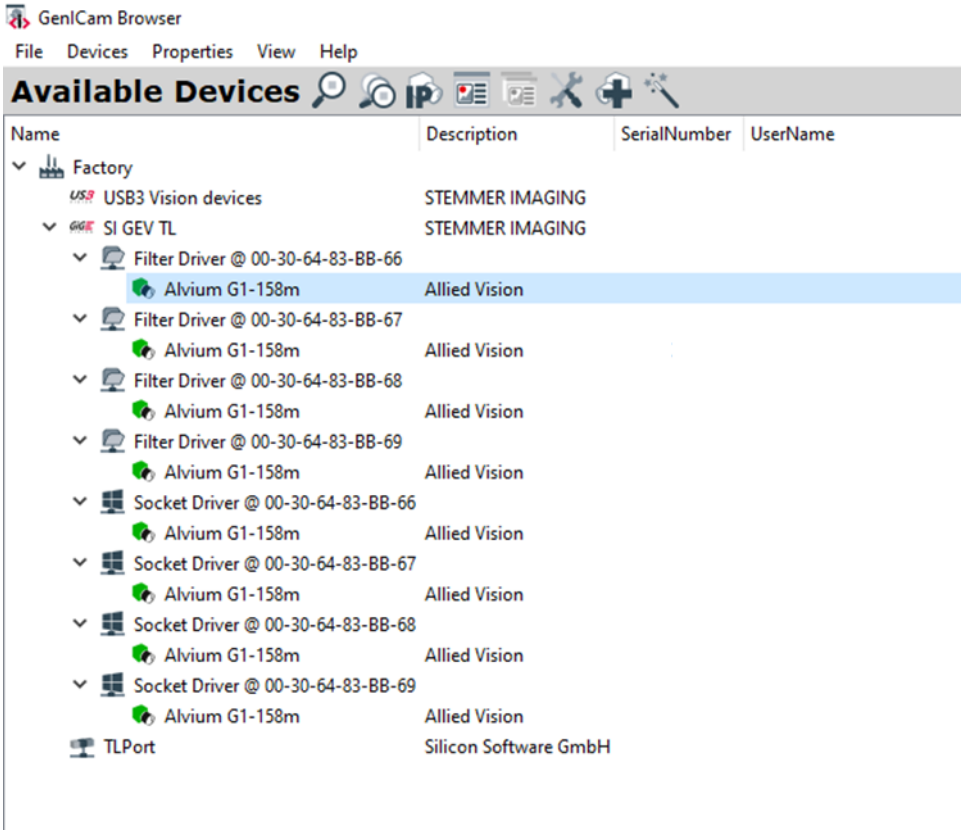
Please select ‘Auto Select IP’ and this should automatically change the IP and Subnet for the Quintic Camera, so it matches up to the Ethernet port it is plugged into. The only difference should be the last digit should be 2.

Once the IP address has changed, please press set to change this for the Quintic Camera.

Once the IP Address has changed, a Pop up window will appear in GeniCam asking whether you would like to make the IP Address persistent (static), please press Yes.



You will have to repeat this process for each of the Quintic GigE 1.6MP High Speed Cameras you have plugged into your machine.

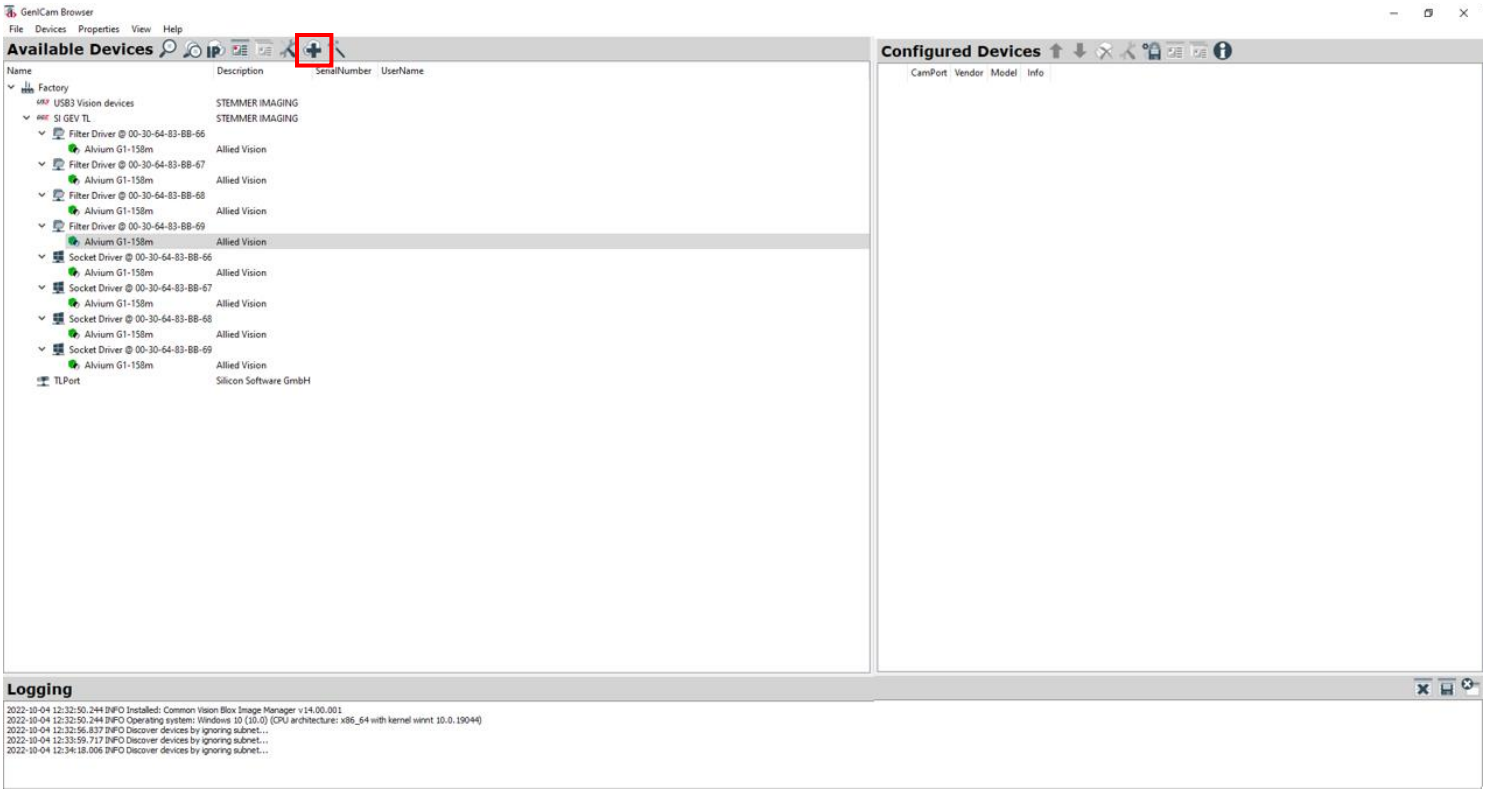


Once the IP Addresses have been set for all the Quintic GigE 1.6MP High Speed Cameras within GeniCam, they should all appear green.

If when setting IP Addresses, some cameras disappear from the list or appear in red (once the IP address has been set), please close and re-open GeniCam so that the IP address change can take place.

Now the IP Addresses have been correctly changed and all of the Quintic GigE 1.6MP High Speed Cameras are appearing green in the GeniCam list, the cameras have to be ordered (configured) so that they appear within the Quintic Image Recording Platform.

Select the Quintic camera from the Available devices that you would like to configure and click the add button at the top of the window, as highlighted below. This will send the camera over to the 'Configured Devices' list on the right-hand side of the window.

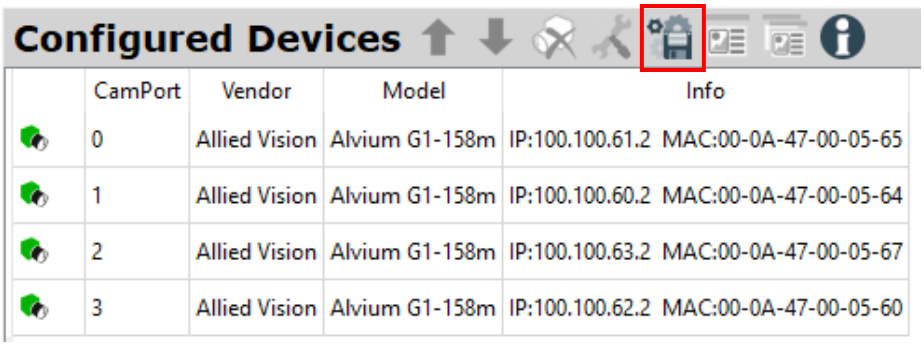


Please configure the cameras in the order you want them to appear in the Quintic Image Recording Platform.

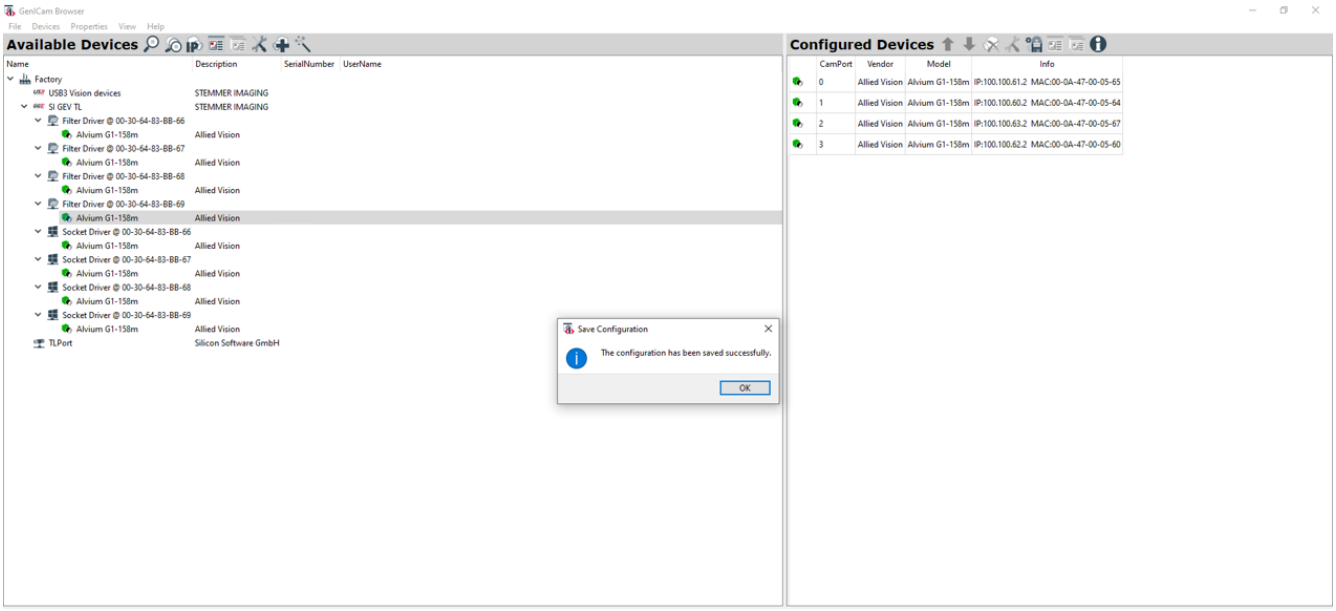
CamPort 0 = Cam1,
CamPort 1 = Cam2,
CamPort 2 = Cam3,
CamPort 3 = Cam4,
CamPort 4 = Cam5,
CamPort 5 = Cam6

The Cameras should now be listed under the 'Configured Devices' list, as shown above.

Once you are happy with the order of your Quintic GigE 1.6MP High Speed Cameras and they are all appear under the ‘Configured Devices’ list, please press the save configuration button, as highlighted below.



Once saved, a pop up will appear to confirm that the configuration has been successfully saved.

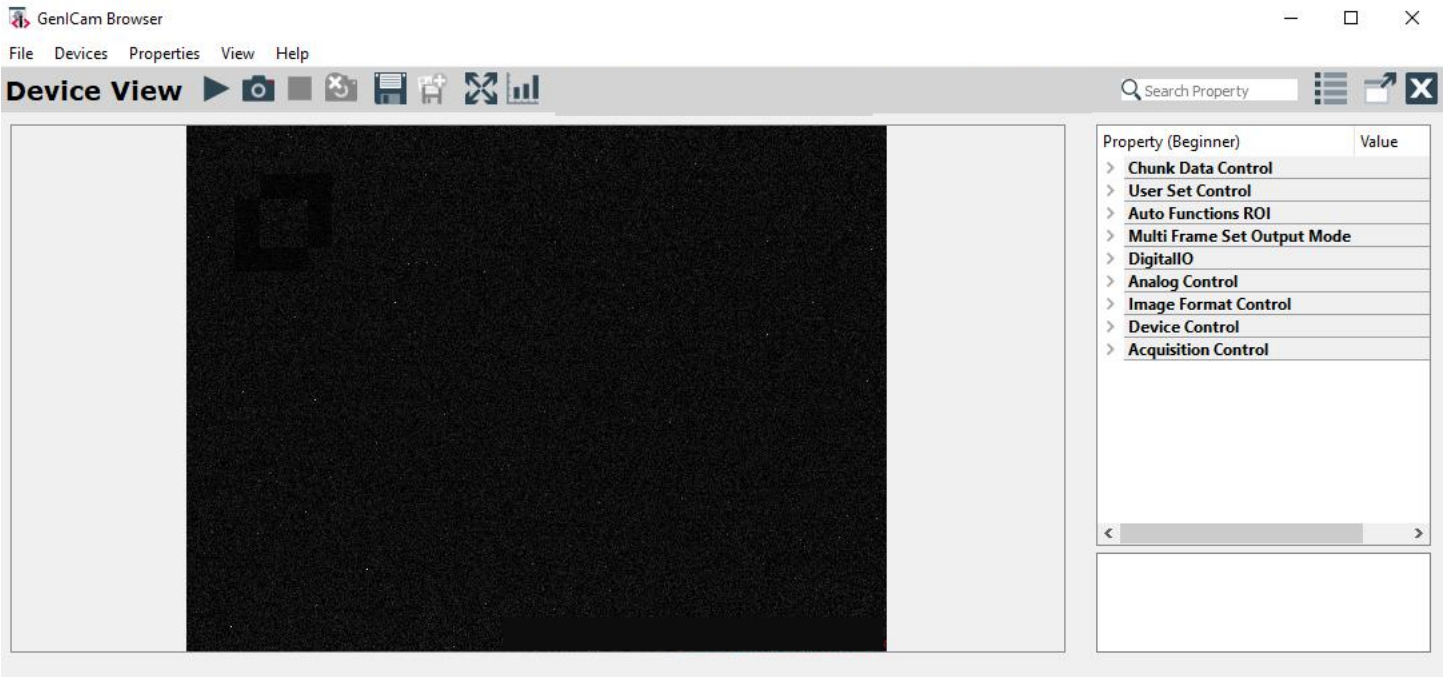


If you are using multiple Quintic GigE 1.6MP High Speed Cameras, the order in which the cameras are configured within the GenICam Browser, is the order in which they will appear within the Quintic Image Recording Platform.

Under the Configured Devices list, a CamPort is stated, which starts from 0 and goes up to 5. This corresponds to Cameras 1 – 6 which are able to be captured within the Quintic Image Recording Platform (Quintic Coaching v33 and Quintic Biomechanics v33 only).

If you double click on the camera under the ‘Configured Devices’ list, this will allow you to view a live image from the camera, so you can verify the cameras are in the correct order you want them to be.

This will bring up the device view window, as highlighted below.



There is no need to adjust any of the camera settings within the Device View window, this is all controlled through the Quintic Image Recording Platform.

The Play button is used to open the live camera

The Stop button is used to stop the live camera

The Close button will close the Quintic Camera and return you to the main GenICam Browser

Should you need to adjust the order in which the cameras are configured, you can do this within the 'Configured Devices' window. You can use the Up and Down arrows to change the order of the cameras to how you want them to be ordered. Remember:
CamPort 0 = Cam1,
CamPort 1 = Cam2,
CamPort 2 = Cam3,
CamPort 3 = Cam4,
CamPort 4 = Cam5,
CamPort 5 = Cam6

Whenever you change your configured devices (i.e a different camera or the order in which the cameras appear), please remember to click the SAVE button so that the camera configuration is saved.

Once you are happy that your cameras are successfully configured, you are then able to capture video footage directly via the Quintic Software (Quintic Image Recording Platform). Please ensure that no live Quintic Camera feeds are already open before opening the Quintic Image Recording Platform.

For more information on how to use and capture videos via the Quintic Image Recording Platform, please see Tutorial 6g – Quintic Image Recording Platform.