

Quintic Software

Tutorial 6a

High-Speed Camera Capture Set-up

(Video Capture via GigE or USB)

V33

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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.

Before installing the relevant camera drivers, it will be prudent to check whether your system type is a 32- or 64-bit operating system. You can do this by following these instructions:

a. System Type 32- or 64-Bit Operating System

Click on the Start menu in the bottom left hand corner of your screen or press the start button on your keyboard.

Go to 'Control Panel' then 'System and Security' then 'System'. This will bring up the basic specification of your computer, where you will find the system type as well as other information regarding the machine, such as the RAM and Processor.

[View basic information about your computer](#)

Windows edition

Windows 10 Home

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System

Processor: Intel(R) Core(TM) i5-7400 CPU @ 3.00GHz 3.00 GHz

Installed memory (RAM): 16.0 GB

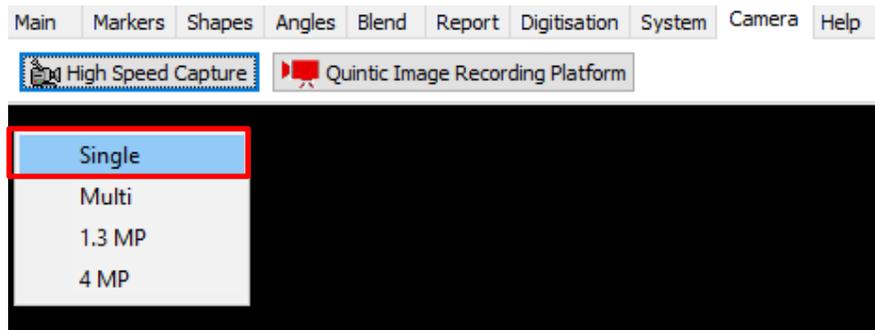
System type: 64-bit Operating System, x64-based processor

Pen and Touch: No Pen or Touch Input is available for this Display

Please make a note of which System type you are using (i.e 32 bit or 64 bit). If the wrong installation is used the camera(s) may not work.

Once the system type has been identified, please begin the Quintic Camera Driver Installation. (See the next page for detailed installation instructions).

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):

A screenshot of the 'Quintic Downloads' webpage. The page has a dark red header with the text 'Quintic Downloads' and a 'Home' link. On the left side, there is a grayscale image of a female athlete in a 'GREAT BRITAIN' singlet. The main content area is divided into three sections, each with a title, instructions, and a download icon. Section 1: '1) Quintic Image Recording Platform (SPORTS / COACHING / BIOMECHANICS) : (Windows Ten 64-bit operating system)'. It includes instructions to read download instructions before downloading, click on the Quintic icon to download, and install. A screenshot of the 'Quintic Recording System Setup' dialog box is shown, listing 'Visual C++ "14" Runtime Libraries (x64)' as a component to be installed. Section 2: '2) Quintic Single High-Speed Camera (SPORTS / COACHING / BIOMECHANICS) : (Windows Seven, Eight, Ten)'. It includes instructions to read download instructions before downloading, click on the Quintic icon to download, and follow install shield instructions. Section 3: '3) Quintic DUAL High-Speed Camera (COACHING) : (Windows Seven, Eight, Ten)'. It includes instructions to click on the Quintic icon to download, follow install shield instructions, and complete associated Quintic Tutorials. Each section has a corresponding download icon on the right.

The user is then able to select which camera drivers they wish to be installed out of the options available to them. Please see the next page for advice on for which camera drivers will be required for which camera.

In order for Quintic Cameras to be recognised on your machine, Quintic High Speed Camera Drivers need to be installed. The type of Quintic Camera you are using (USB2/GigE/USB3 1MP) will determine which Camera driver you require.

Quintic USB2 Cameras Only

If using a USB2 Camera, please install option 10 or 11, depending on which System type you are using, which was noted earlier: -

EITHER

10) Quintic High-Speed Camera: 64bit Quintic USB2 High-Speed Camera 4.80 Driver (Windows 7, Windows 8, Windows 10)

OR

11) Quintic High-Speed Camera: 32bit Quintic USB2 High-Speed Camera 4.80 Driver (Windows 7, Windows 8, Windows 10)

Quintic GigE / USB3 1MP Cameras

If using a GigE or USB3 1MP Camera, please install option 8 or 9, depending on which System type you are using, which was noted earlier -

EITHER

8) Quintic High-Speed Camera : 64bit Quintic GigE / USB3 High-Speed Camera 4.90 Driver (Windows 7, Windows 8, Windows 10)

OR

9) Quintic High-Speed Camera : 32bit Quintic GigE / USB3 High-Speed Camera 4.90 Driver (Windows 7, Windows 8, Windows 10)

Once you have decided which Camera Driver you require, 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 8, 9, 10 or 11) and save this download to a location on your machine. Once downloaded, Run the download.
3. Once downloaded, the uEye install shield will now launch. Please select your setup language.
4. Select 'Install Driver' and select option 1, 'Complete', to install the full driver and then select 'Next'.
5. The software will now install to the default location C:\Program Files\IDS\uEye. If you wish to install the program in a different location click on the 'Change' button (not recommended). To continue the installation, click 'Next'.
6. To begin the installation, click on the 'Install' option.
7. Once the installation has completed, deselect the HTML option as this is not needed, then click on 'Next'.
8. Once the set-up has been completed click on the 'Finish' button. The Camera(s) can now be connected to the computer.

2. Quintic High Speed Camera Capture Programs

Now that the Quintic High Speed Camera Drivers have been installed, you will also require the Quintic High Speed Camera Capture Programs to be installed. This depends on how many Cameras you are using, regardless of which camera type (USB2/GigE/USB3 1MP).

The Quintic High Speed Camera Capture Programs are available to download and install from the same link in which the Camera Drivers were installed. Please see above on how you are able to access this link.

We always recommend installing Options 1 & 2:

- 1) Quintic Image Recording Platform (SPORTS / COACHING / BIOMECHANICS) :
Windows Ten 64-bit Operating System

- 2) Quintic Single High-Speed Camera (SPORTS / COACHING / BIOMECHANICS) :
(Windows Seven, Eight, Ten)

Two Quintic Cameras (Quintic Coaching v31 and before only)

If you are using two Quintic Cameras via our **Quintic Coaching** software, then please install:

EITHER

- 3) Quintic DUAL High-Speed (64 Bit)

OR

- 3) Quintic DUAL High-Speed (32 Bit)

Again, this is depending on which System Type you are using.

Two – Six Quintic Cameras (Quintic Coaching v33 & Biomechanics only)

If you are using two or more Quintic Cameras via our **Quintic Biomechanics** software, then please install:

EITHER

- 4) Quintic MULTI High-Speed (64 Bit)

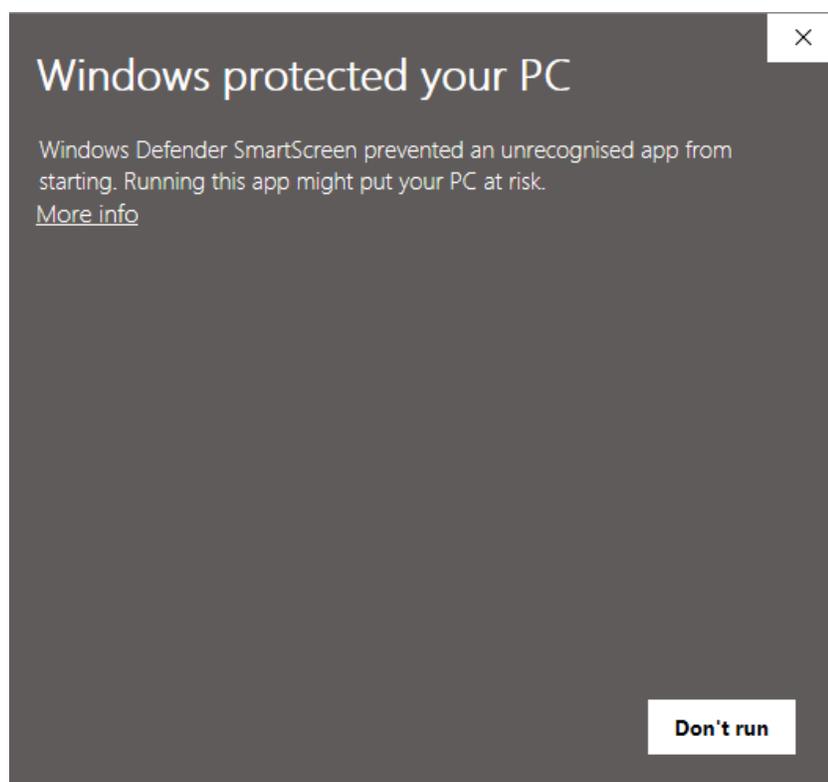
OR

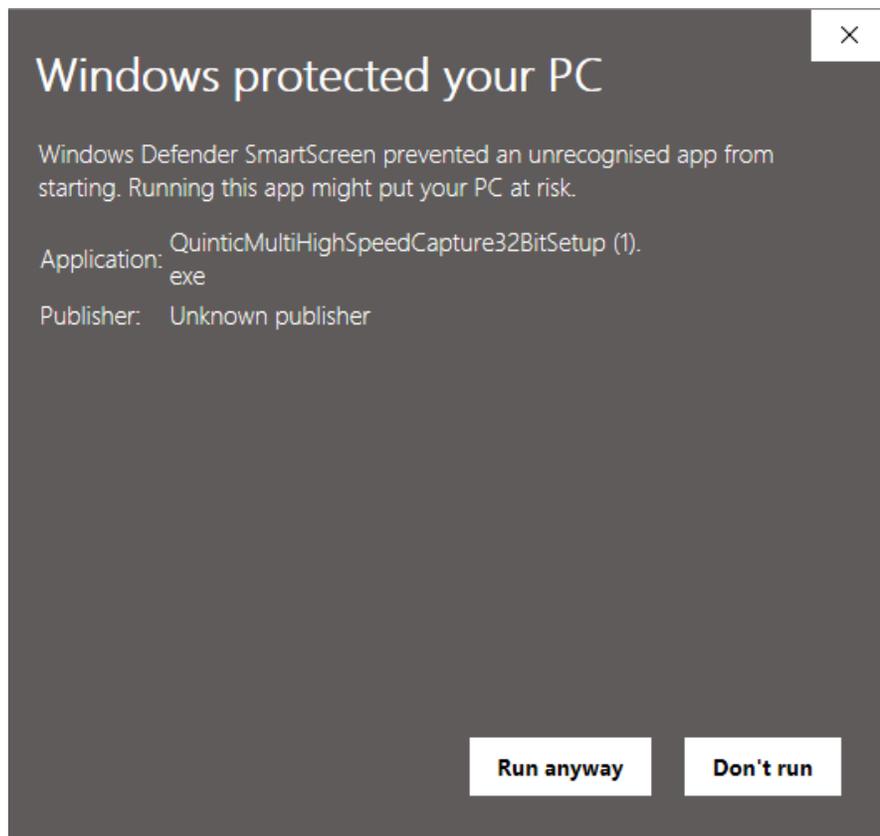
- 4) Quintic MULTI High-Speed (32 Bit)

All of the Quintic High Speed Camera Capture programs are very simple to download and install.

Simply double click on the Quintic Logo of the desired Quintic Camera Capture program and save this. Once downloaded, please run the capture program.

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





Alternatively, on older Windows Operating Systems (i.e Windows 8/7 etc) you may need to unblock the setup exe to complete a full installation.

To do this, please locate the saved Install Shield on your machine, right click it and go to "Properties → General." Click "Unblock" to unblock the exe.

Simply follow through all of the installation screens until the Quintic Camera Capture is installed. Once completed, a Desktop Icon will not be created - the software will run once clicked within the Quintic software. If you would like to double check the Quintic Camera Capture software has been installed, you can do this through 'Control Panel' then 'Programs and Features'.

Now that the Quintic Camera Drivers and Capture software have been installed, please see the following pages for information on how to configure your Quintic Camera (USB2/GigE/USB3 1MP).

3. USB2 Camera Installation & Set-up



Image for illustrative purposes only

Compatible with Quintic Sports, Coaching & Biomechanics software.

Camera comes with tripod mount and USB cable. No external power supply required.

Quintic USB2 Camera:

- Optional frame rate between 80 and 250 fps (with varying image dimensions)
- Housing Size: 60 x 49 x 34 (L x W x H in mm)
- Weight 125gms

Connect the USB2 Camera with the supplied USB2 cable into a USB2 port on your computer. Please do not plug the USB2 camera into a USB3 port as this can have a detrimental effect on the cameras capabilities.

Your computer will recognise the new USB device and may need to install additional drivers automatically to ensure the camera functions correctly. It is advisable to be connected to the internet at this stage, to obtain the latest Microsoft drivers for the USB port.

If / once installed, it is recommended to ALWAYS use this updated USB2 port for the Quintic Camera. Follow any further on screen instructions as further Microsoft drivers for the USB port and device may be required.

Once the camera has been connected/recognised by the computer, the camera can be opened.

To ensure that your Quintic USB2 Camera is configured correctly, simply click on IDS Camera Manager.



This will show all live cameras that are plugged into the computer and have been recognised.

Your Quintic USB2 Camera should appear 'Yes' to free and 'Yes' to available. This will mean the camera is able to be opened within Quintic Software.

IDS: IDS Camera Manager - 64-Bit

| Camera list | | | | |
|-------------|--------|------|--------|--------|
| Free | Avail. | Type | Cam.ID | Dev.ID |
| Yes | Yes | USB | 1 | 1 |

Please Note: You also need to assign the Camera ID: This can be changed manually by using the Camera Information button. In order for the Quintic Multi capture to work, the cameras must be in ID order 1, 2, 3, 4, 5 and 6. It must start with Camera ID 1!

a. USB2 configuration / Maximum Speed (fps)

If when running the Quintic High Speed USB camera, record speeds of over 200fps are not being achieved at appropriate resolutions, it may be due to the computers processor not running at full speed.

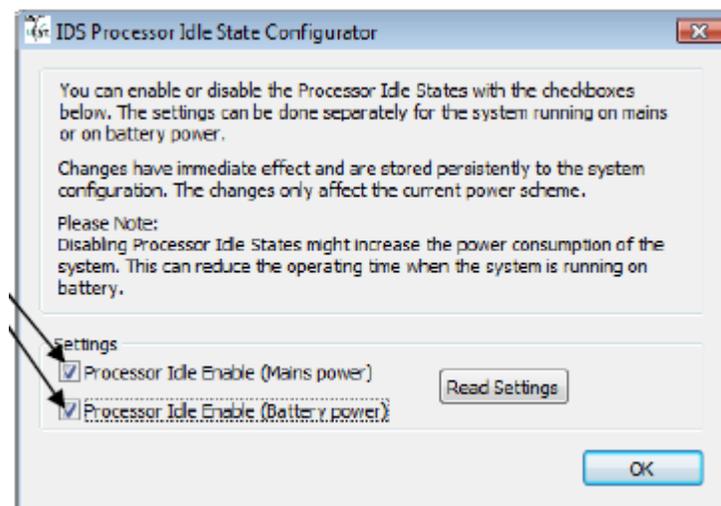
Computers are now being fitted with new power saving or 'Green' Modes, so the processor only works at the rate it requires to try and optimise performance. To achieve the highest video recording speeds possible, the processor has to be running at full speed. The computers processor can be forced to run at full speed by using the 'IDSProIdleConfig' program.

To ensure that the camera runs at 200fps + when the Quintic system is used, please follow these instructions.

Connect the camera to the computer and then double click on IDSProIdleConfig (see below) icon which can be found on your desktop or on the Installation Flash Drive (if on Flash Drive please copy the program to your desktop).



This will open the window below. Un-tick the two check boxes, this forces the processor to work at full power.



Once the tick boxes have been unchecked, close the window and load up your Quintic Software. Open the live camera feed, you should now be able to record at higher frame rates.

Once you have finished using your Quintic Software, click on the IDSProIdleConfig icon again and recheck the tick boxes, to return your processor to its normal running state.

N.B. Using the IDSProIdleConfig to force the processor to run at full speed does cause the battery life to decrease. It is advisable that when running this program and the camera that the laptop or computer is plugged into mains power.

As well as this, users are able to check the power mode of their machine by going to Control Panel > Hardware and Sound > Power Options > then ensuring that the highest performance setting is used.



4. Quintic GigE High Speed Camera Installation & Set-up



Image for illustrative purposes only

Compatible with Quintic Sports, Coaching & Biomechanics software.

Quintic GigE Camera:

- Optional frame rate between 80 and 250 fps (with varying image dimensions)
 - 100 fps avi video capture (752 x 480 image size dimensions)
 - 150 fps avi video capture (560 x 400 image size dimensions)
 - 200 fps avi video capture (460 x 286 image size dimensions)
 - 250 fps avi video capture (352 x 220 image size dimensions)
- Video output via GigE - 5m length supplied
- External 12v power supply and transformer supplied
- Tripod mount supplied
- Housing Size: 42.70 x 41 x 53 (L x W x H in mm)
- Weight 168gms

There are two different ways you are able to connect your Quintic GigE Camera to the computer, these are:

- Directly via an Ethernet Port on your machine. 1 Ethernet port per camera (where more than one GigE camera is used, single, dual or quad port GigE PCI/PCI express cards are recommended). Using your standard Ethernet Port for the Quintic GigE Camera would remove internet capabilities on that port.
- Quintic GigE cameras can also be connected via GigE to USB3 adaptors (sold separately). Single or Dual options available.

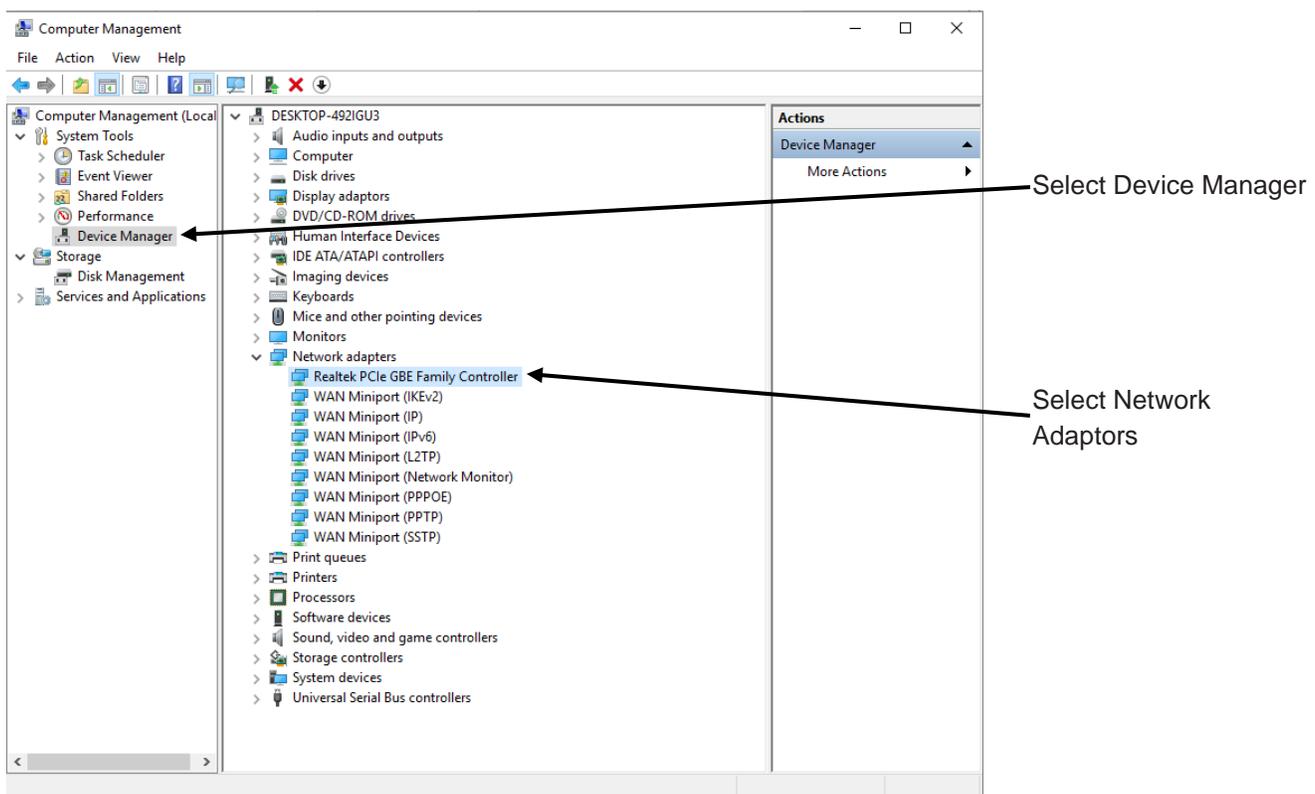
a. Hardware Compatibility for GigE High-Speed Camera

If you are connecting your Quintic GigE camera via an Ethernet port on your computer, you are able to check the compatibility by following these instructions.

Click on the Start menu in the bottom left hand corner of your screen or press the start button on your keyboard.

Highlight the 'Computer' or 'My Computer' option, right click and select 'Manage'. This will open the computer management window.

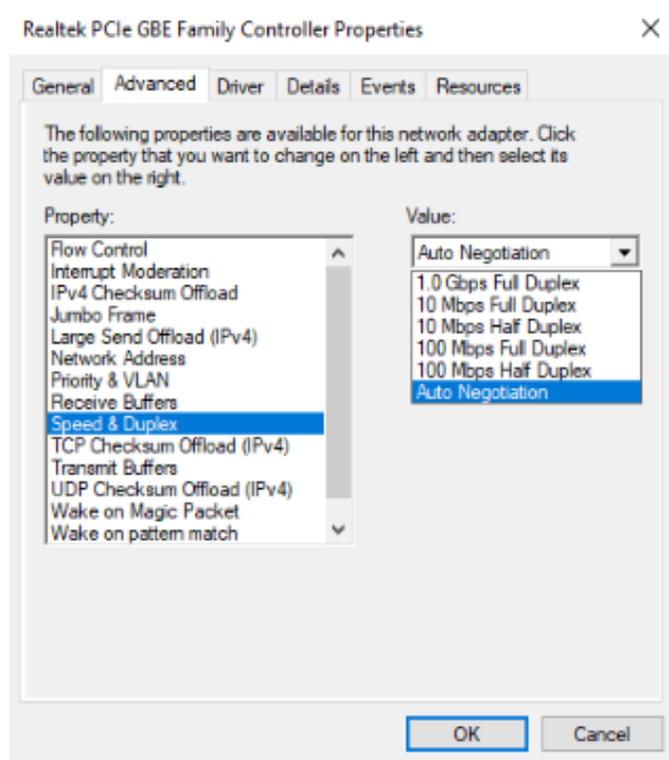
You are able to search for 'Computer Management' as well to open the same window.



Once you've clicked on network adapters, a list of all the network adapters installed on your machine will be shown. To ensure that the GigE camera works at full speed, the network adapter must be 100mb or state Gigabit Network connection.

You are able to check this by selecting the Ethernet port, then right clicking properties.

This will bring up a separate window, where you can select 'Advanced' then 'Speed & Duplex', this will bring up the speed of that Ethernet port.



Ethernet to USB3 Adaptor

If you are using your Quintic High Speed GigE Camera through an Ethernet to USB3 Adaptor, you may be required to install some separate drivers for this to work. Please see the information included within your adaptor at the time of purchase.

b. Single GigE High-Speed Camera Configuration

To start the configuration, click on the IDS Camera Manager icon via the desktop or start menu. This will display any cameras that are currently plugged into the computer in a list.

IDS Camera Manager

IDS Camera Manager - 64-Bit

| Free | Avail. | Type | Cam.ID | Dev.ID | Model | SerNo. |
|------|--------|------|--------|--------|-------------|------------|
| Yes | No | ETH | 1 | 1001 | UI-522xRE-M | 4002782589 |

Control center

Expert mode

General information Camera information

Create support file ETH network service

Additional functions Automatic ETH configuration

English

Close

Highlight the GigE camera you wish to change.

Once you have selected the camera you wish to use Click on 'ETH Network Service'.

If the Cameras are displayed as Yes to Free but No to available, this means that the IP address needs to be set for that Ethernet port.

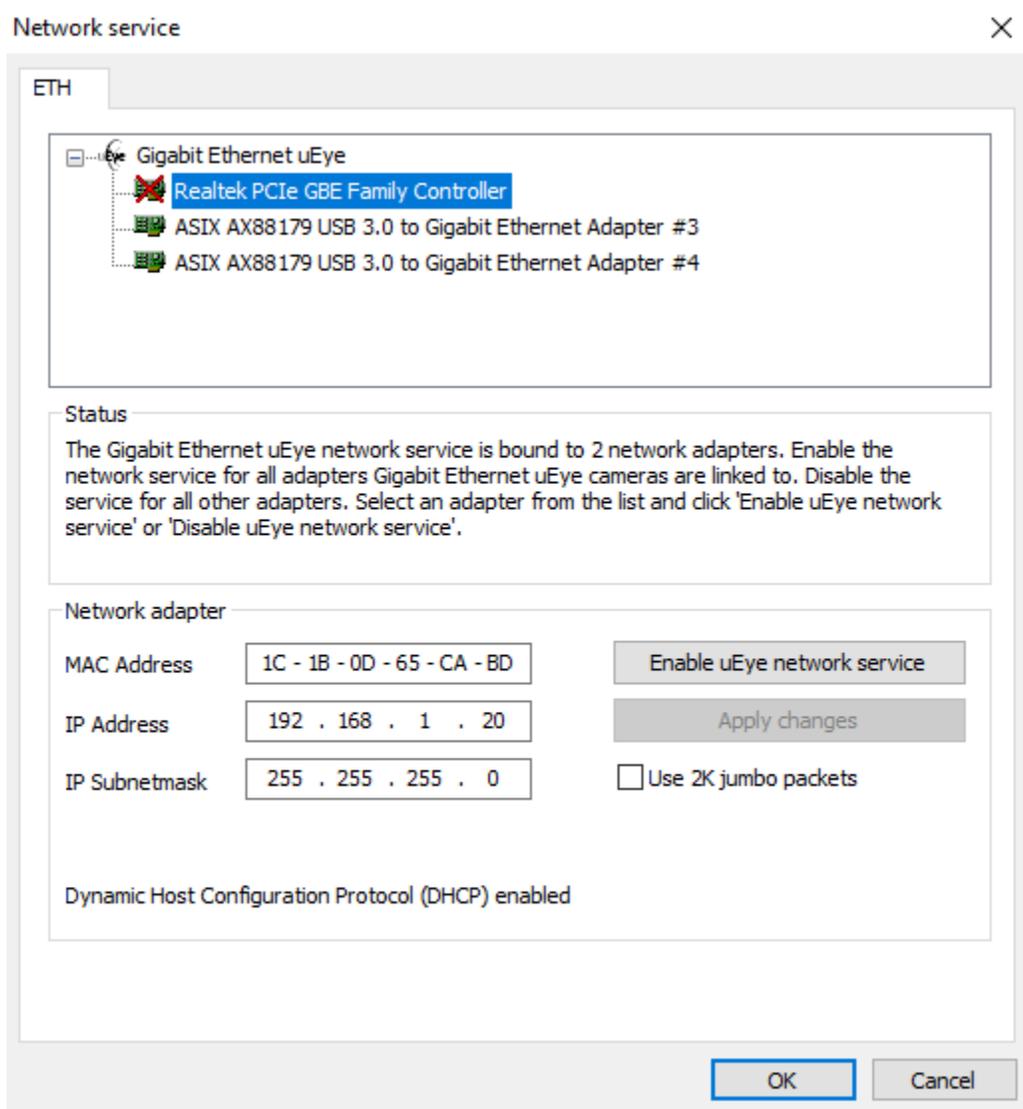
Click on ETH Network service.

The ETH network window will now load, this window shows all of the available networks on your computer.

Quintic advise that the uEye network service is disabled on all the networks APART from the one(s) you wish to use a camera on. If other networks ports are not disabled this can effect internet connectivity!

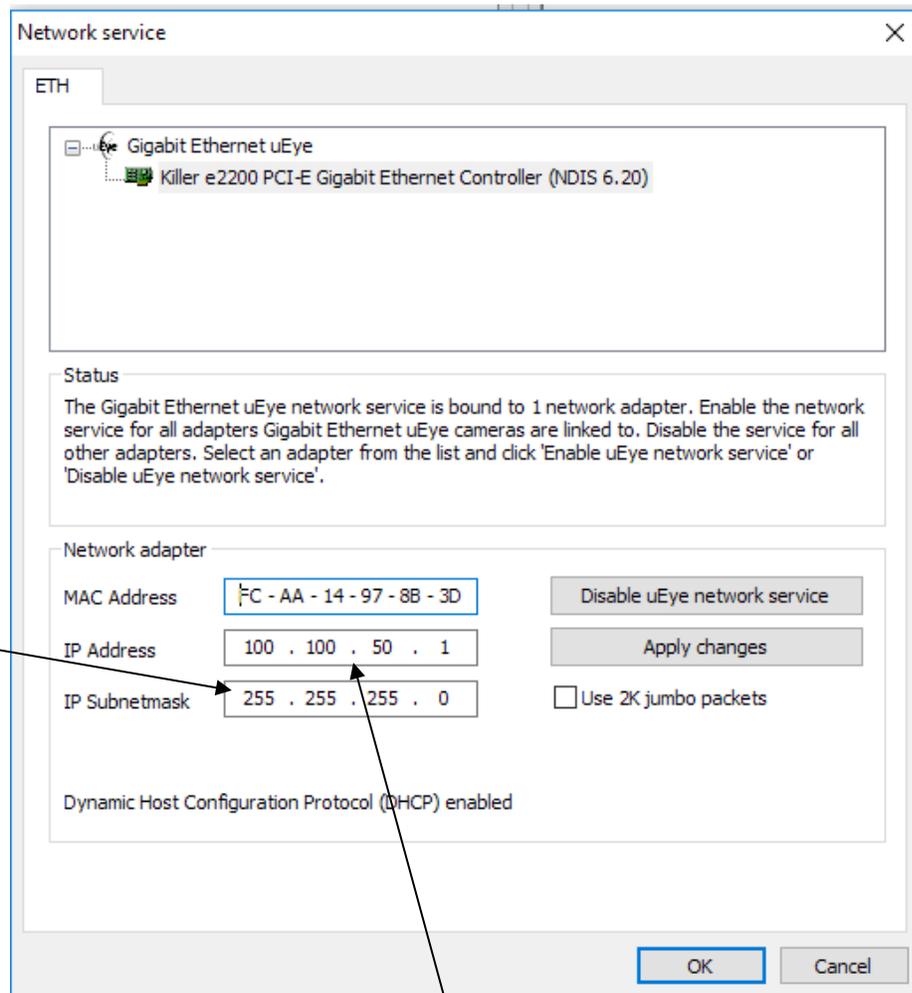
To disable a network select the desired network and select 'Disable uEye network service'

Once the network has been disabled it will be identified by a red cross. If the network is still available the symbol will remain green.



Once a network has been selected which you wish to use a Quintic GigE Camera, an IP address and IP Subnetmask need to be allocated.

An IP Subnetmask must now also be allocated, Quintic recommends using 255.255.255.0.



The IP Address needs to be 100.100.50.1 for Cam 1

Once an IP address and an IP Subnetmask have been allocated, click on the 'Apply Changes' button. A window will now appear asking if you wish to assign a static IP address - click on 'YES'.

A confirmation window will also load stating that the IP address and Subnetmask of the adapter have been changed successfully.

Now that the IP Address and IP Subnetmask have been allocated, the camera now has to be configured. To configure the camera select 'Automatic ETH Configuration' and this will automatically configure the camera.

Once the ETH configuration has been completed, click on 'OK' then the following window will appear.

The Camera manager status will now show that the camera has been configured correctly and can now be used.



Click on the close button, and now open the camera via your Quintic Software.

After the ETH configuration is complete, a window may appear asking you to update the firmware. This will take place automatically on opening the camera through Quintic. After the Firmware update is completed, please reopen the Camera Manager and select 'Automatic ETH configuration' again.

Your Quintic GigE Camera should appear 'Yes' to free and 'Yes' to available. This will mean the camera is able to be opened within Quintic Software.

c. Multi GigE High-Speed Camera Configuration

Should you be using more than one Quintic GigE Camera, they will also need to be configured, with the IP Addresses and Subnetmask needing to be allocated. Similarly to the single GigE configuration above, this will be done through IDS Camera Manager.



Highlight the GigE camera you wish to change. Once you have selected the camera you wish to use, click on 'ETH Network Service'. The ETH network window will now load. Insert the IP address into the boxes using the process previously explained for 'Single GigE High-Speed Camera Configuration'.

For multiple (up to six) GigE cameras, please use 1 as the last digit in the IP address and change the 3rd value...

Cam 1: 100.100.50.1
Cam 2: 100.100.100.1
Cam 3: 100.100.150.1
Cam 4: 100.100.200.1
Cam 5: 100.100.250.1
Cam 6: 100.100.255.1

The last number is to be 1 - DO NOT LEAVE BLANK!

The third value must change - DO NOT HAVE THEM THE SAME!

An IP Subnetmask must now also be allocated, Quintic recommends to use

255 . 255 . 255 . 0

Once an IP address and an IP subnetmask have been allocated, click on the 'Apply Changes' button. A window will now appear asking if you wish to assign a static IP address - click on '**YES**'.

A confirmation window will also load stating that the IP address and Subnetmask of the adapter have been changed successfully.

Now that the IP Address and IP Subnetmask have been allocated, the camera now has to be configured. To configure the camera select 'Automatic ETH Configuration'. This will automatically configure the camera.

Once the ETH configuration has been completed, click on 'OK'. Your Quintic GigE Camera should appear 'Yes' to free and 'Yes' to available. This will mean the camera is able to be opened within Quintic Software.

You need to repeat the process for Cameras 2, 3, 4, 5 and 6. Remember, for multi cameras, please use 1 as the last digit in the IP address and change the 3rd value for each camera.

Cam 1: 100 . 100 . 50 . 1

Cam 2: 100 . 100 . 100 . 1

Cam 3: 100 . 100 . 150 . 1

Cam 4: 100 . 100 . 200 . 1

Cam 5: 100 . 100 . 250 . 1

Cam 6: 100 . 100 . 255 . 1

N.B. THE THIRD VALUE MUST CHANGE: DO NOT HAVE THEM THE SAME!!

Please Note: You also need to assign the Camera ID: This can be changed manually by using the Camera Information button. In order for the Quintic Multi capture to work, the cameras must be in ID order 1, 2, 3, 4, 5 and 6. It must start with Camera ID 1!

After the ETH configuration is complete, a window may appear asking you to update the firmware. This will take place automatically on opening the camera through Quintic.

Click on the close button, and now open the camera via the camera tab within the Quintic Software.

After the Firmware update is completed, please reopen the Camera Manager and select 'Automatic ETH configuration again.

You can now open six cameras in Quintic Multi Camera Capture.

5. Quintic USB3 1 MPixel High Speed Camera

- Optional frame rate between 60 and 300 fps (with varying image dimensions)
 - 60 fps avi video capture (1280 x 1024 image size dimensions)
 - 100 fps avi video capture (1280 x 600 image size dimensions)
 - 200 fps avi video capture (1280 x 288 image size dimensions)
 - 300 fps avi video capture (1280 x 182 image size dimensions)
- Housing Size: 50 x 35 x 35 (L x W x H in mm)
- Weight 60gms



Connect the USB3 Camera with the supplied USB3 cable into a USB3 port on your computer. Please do not plug the USB3 camera into a USB2 port as this can have a detrimental effect on the cameras capabilities.

Your computer will recognise the new USB device and may need to install additional drivers to ensure the camera functions correctly. It is advisable to be connected to the internet at this stage, to obtain the latest Microsoft drivers for the USB port.

If / once installed, it is recommended to ALWAYS use this updated USB3 port for the Quintic Camera. Follow any further on screen instructions as further Microsoft drivers for the USB port and device may be required.

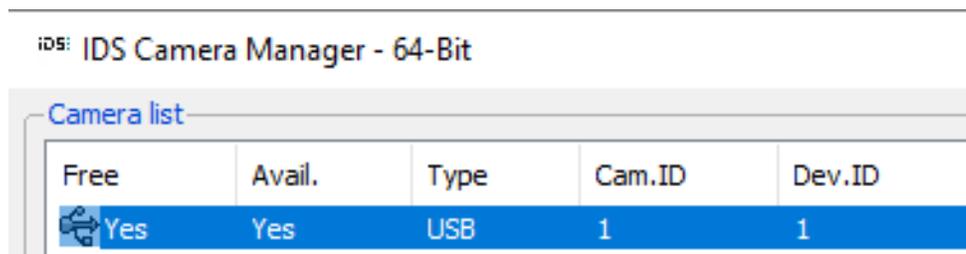
Once the camera has been connected/recognised by the computer, the camera can be opened.

To ensure that your Quintic USB3 Camera is configured correctly, simply click on IDS Camera Manager.



This will show all live cameras that are plugged into the computer and have been recognised.

Your Quintic USB3 Camera should appear and state 'Yes' to free and 'Yes' to available. This will mean the camera is able to be opened within Quintic Software.



The screenshot shows the 'IDS: IDS Camera Manager - 64-Bit' window. It features a 'Camera list' section with a table containing one row of camera information. The table has five columns: 'Free', 'Avail.', 'Type', 'Cam.ID', and 'Dev.ID'. The first row shows 'Yes' for 'Free', 'Yes' for 'Avail.', 'USB' for 'Type', '1' for 'Cam.ID', and '1' for 'Dev.ID'. A blue mouse cursor is positioned over the 'Free' cell.

| Free | Avail. | Type | Cam.ID | Dev.ID |
|------|--------|------|--------|--------|
| Yes | Yes | USB | 1 | 1 |

Please Note: You also need to assign the Camera ID: This can be changed manually by using the Camera Information button. In order for the Quintic Multi capture to work, the cameras must be in ID order 1, 2, 3, 4, 5 and 6. It must start with Camera ID 1!

Once the Cam IDs have been set you can now open six cameras in Quintic Multi Camera Capture.