

Setting the network interface for the GigE cameras

Overview of the settings

For the first camera:

IP address of the camera	10.255.255.1
IP address of the computer	10.255.255.2
Subnet mask	255.255.255.248
Number of usable IP addresses:	6

For the second camera:

IP address of the camera	10.255.255.9
IP address of the computer	10.255.255.10
Subnet mask	255.255.255.248
Number of usable IP addresses:	6

For third camera:

IP address of the camera	10.255.255.17
IP address of the computer	10.255.255.18
Subnet mask	255.255.255.248
Number of usable IP addresses:	6

Procedure

1. Start by setting the network addresses for the cameras. (Note: The cameras can only be accessed again after the computer)
2. interfaces have been set Setting the network interfaces on the computer
3. Deactivate the firewall
4. Additional adapter settings

1. Setting via the pylon IP Configurator

The following image was copied from the Basler documentation. Further information on the configurator is available from Basler directly on the [website](#).

These steps can be performed when all cameras are connected to the computer.

With the first camera

The screenshot shows the Basler pylon IP Configurator interface for a Basler acA4112-8gm camera. The left panel, titled 'Static IP', is highlighted with a red border and contains the following fields: 'IP Address' (10.255.255.1), 'Subnet Mask' (255.255.255.248), 'Gateway' (empty), and radio buttons for 'DHCP' and 'Auto IP (LLA)'. Below these is a 'Device User ID' field and a 'Save' button. The right panel, titled 'Basler acA4112-8gm ([redacted])', displays device information: Vendor (Basler), Model Name (acA4112-8gm), Device User ID (empty), Serial Number (redacted), MAC Address (redacted), IP Configuration (Auto IP), IP Address (169.254.210.10), Subnet Mask (255.255.0.0), and Gateway (0.0.0.0).

With the second camera

The screenshot shows the Basler pylon IP Configurator interface for a second Basler acA4112-8gm camera. The left panel, titled 'Static IP', is highlighted with a red border and contains the following fields: 'IP Address' (10.255.255.9), 'Subnet Mask' (255.255.255.248), 'Gateway' (empty), and radio buttons for 'DHCP' and 'Auto IP (LLA)'. Below these is a 'Device User ID' field and a 'Save' button. The right panel, titled 'Basler acA4112-8gm ([redacted])', displays device information: Vendor (Basler), Model Name (acA4112-8gm), Device User ID (empty), Serial Number (redacted), MAC Address (redacted), IP Configuration (Auto IP), IP Address (169.254.210.10), Subnet Mask (255.255.0.0), and Gateway (0.0.0.0).

With the third camera

<div><div><div><input checked="" type="radio"/> Static IP</div><div>IP Address: <input type="text" value="10.255.255.17"/></div><div>Subnet Mask: <input type="text" value="255.255.255.248"/></div><div>Gateway: <input type="text"/></div><div><input type="radio"/> DHCP</div><div><input type="radio"/> Auto IP (LLA)</div></div><div>Device User ID: <input type="text"/></div><div><input type="button" value="Save"/></div></div>	<div><div>Basler acA4112-8gm (<input type="text" value=""/>)</div><div>Vendor: Basler</div><div>Model Name: acA4112-8gm</div><div>Device User ID: <input type="text"/></div><div>Serial Number: <input type="text" value=""/></div><div>MAC Address: <input type="text" value=""/></div><div>IP Configuration: Auto IP</div><div>IP Address: 169.254.210.10</div><div>Subnet Mask: 255.255.0.0</div><div>Gateway: 0.0.0.0</div></div>
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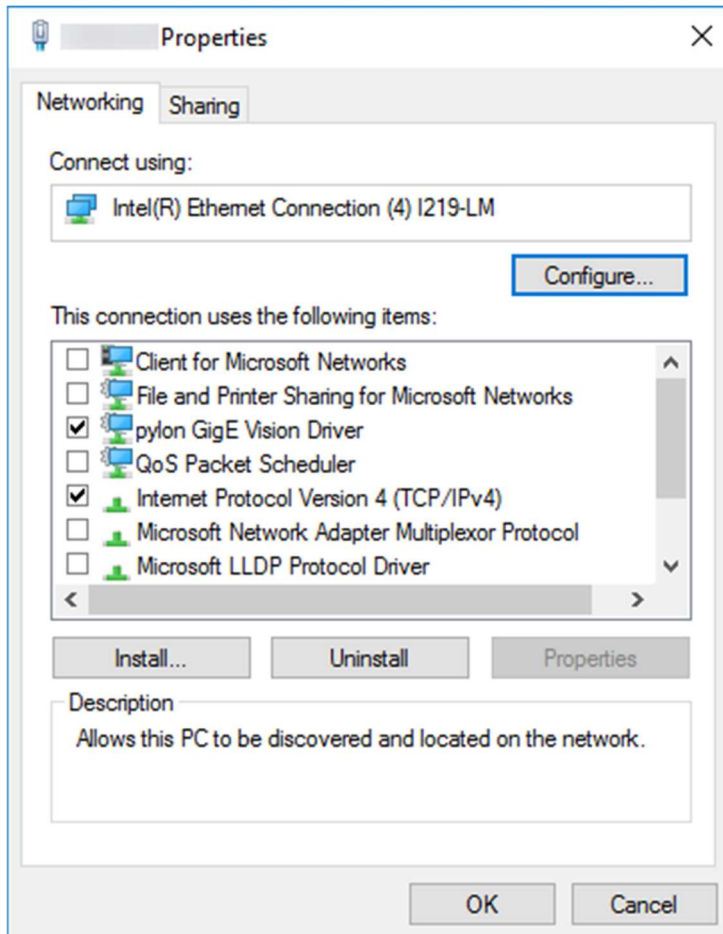
2. Settings of the computer interfaces

General settings at the interface

Everything except ...

- Internet protocol, version 4 (TCP / IPv4) and
- pylon GigE Vision Driver

... must be deactivated. The following picture is a symbolic picture. The designation and name are different for the customer computers.



For the first camera

Eigenschaften von Internetprotokoll, Version 4 (TCP/IPv4)

Allgemein

IP-Einstellungen können automatisch zugewiesen werden, wenn das Netzwerk diese Funktion unterstützt. Wenden Sie sich andernfalls an den Netzwerkadministrator, um die geeigneten IP-Einstellungen zu beziehen.

☐ IP-Adresse automatisch beziehen

☒ Folgende IP-Adresse verwenden:

IP-Adresse: 10 ,255 ,255 , 2

Subnetzmaske: 255 ,255 ,255 ,248

Standardgateway: . . .

☐ DNS-Serveradresse automatisch beziehen

☒ Folgende DNS-Serveradressen verwenden:

Bevorzugter DNS-Server: . . .

Alternativer DNS-Server: . . .

☐ Einstellungen beim Beenden überprüfen

Erweitert...

OK Abbrechen

For the second camera

Eigenschaften von Internetprotokoll, Version 4 (TCP/IPv4)

Allgemein

IP-Einstellungen können automatisch zugewiesen werden, wenn das Netzwerk diese Funktion unterstützt. Wenden Sie sich andernfalls an den Netzwerkadministrator, um die geeigneten IP-Einstellungen zu beziehen.

☐ IP-Adresse automatisch beziehen

☒ Folgende IP-Adresse verwenden:

IP-Adresse: 10 ,255 ,255 , 10

Subnetzmaske: 255 ,255 ,255 ,248

Standardgateway: . . .

☐ DNS-Serveradresse automatisch beziehen

☒ Folgende DNS-Serveradressen verwenden:

Bevorzugter DNS-Server: . . .

Alternativer DNS-Server: . . .

☐ Einstellungen beim Beenden überprüfen

Erweitert...

OK Abbrechen

For the third camera

Eigenschaften von Internetprotokoll, Version 4 (TCP/IPv4) X

Allgemein

IP-Einstellungen können automatisch zugewiesen werden, wenn das Netzwerk diese Funktion unterstützt. Wenden Sie sich andernfalls an den Netzwerkadministrator, um die geeigneten IP-Einstellungen zu beziehen.

☐ IP-Adresse automatisch beziehen

☒ Folgende IP-Adresse verwenden:

IP-Adresse: 10 ,255 ,255 , 18

Subnetzmaske: 255 ,255 ,255 ,248

Standardgateway: . . .

☐ DNS-Serveradresse automatisch beziehen

☒ Folgende DNS-Serveradressen verwenden:

Bevorzugter DNS-Server: . . .

Alternativer DNS-Server: . . .

☐ Einstellungen beim Beenden überprüfen

Erweitert...

OK Abbrechen

3. Deactivate the firewall

Basler recommends further settings under the following URL

[https://docs.baslerweb.com/network-configuration-\(gige-cameras\)](https://docs.baslerweb.com/network-configuration-(gige-cameras))

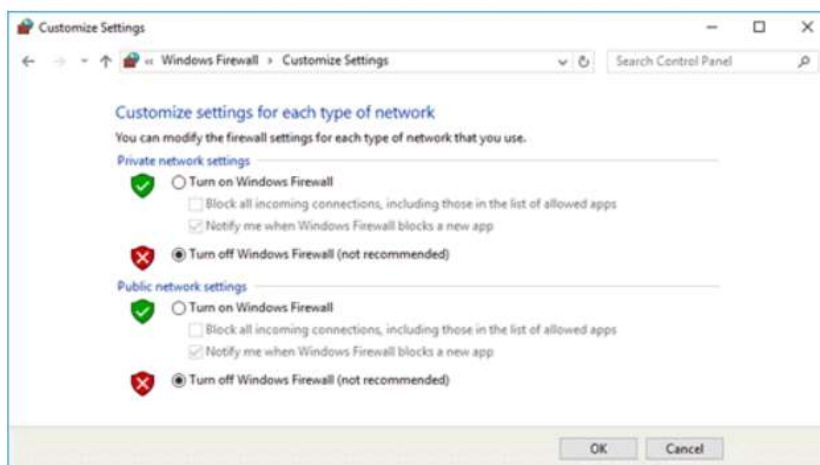
This disables the firewall for the entire computer.

Turning off Windows Firewall via Windows Control Panel

This option allows you to turn off the firewall for all connections.

To turn off the firewall via Windows Control Panel:

1. Open the **Windows Firewall** window in the Windows Control Panel.
For quick access, press **Win + R**, type `firewall.cpl`, and press **Enter**.
2. In the left pane, click **Turn Windows Firewall on or off**.
The **Customize Settings** window opens.
3. In the **Customize Settings** window, find the network location section where you want to turn off firewall protection.
Typically, this will be the **Public network location settings** section. However, if you use a dedicated network card, Basler recommends also disabling firewall protection for the other network locations.
4. In the desired sections, click **Turn off Windows Firewall (not recommended)**.

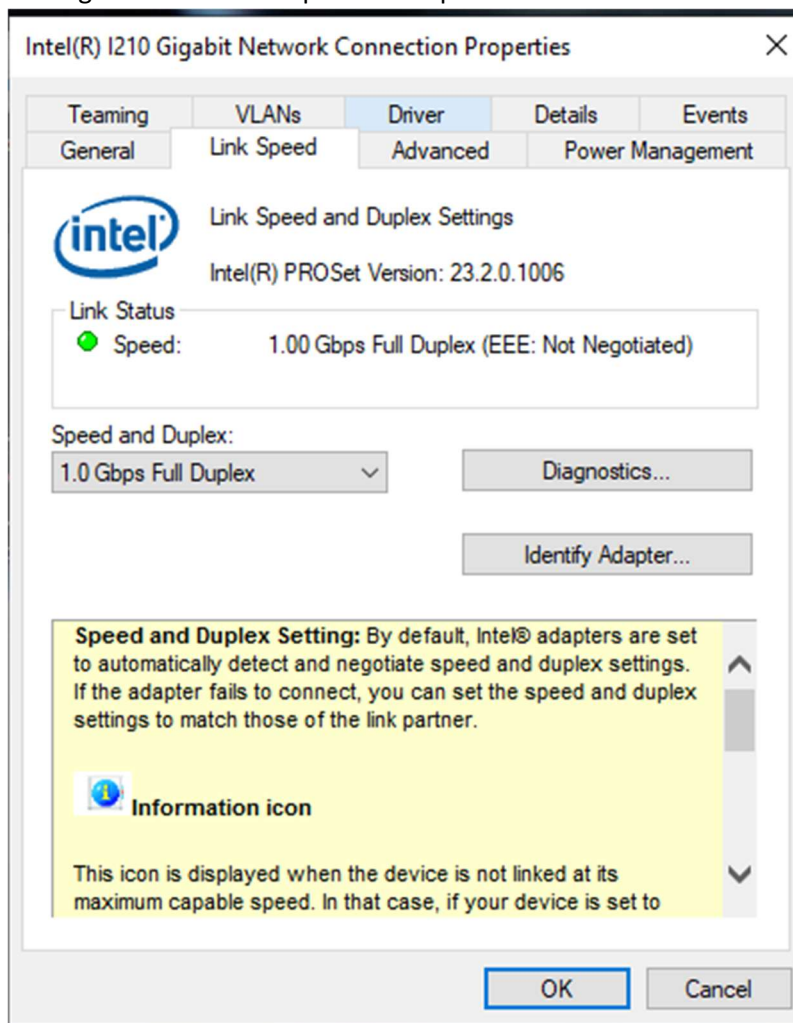


4. Further adapter settings

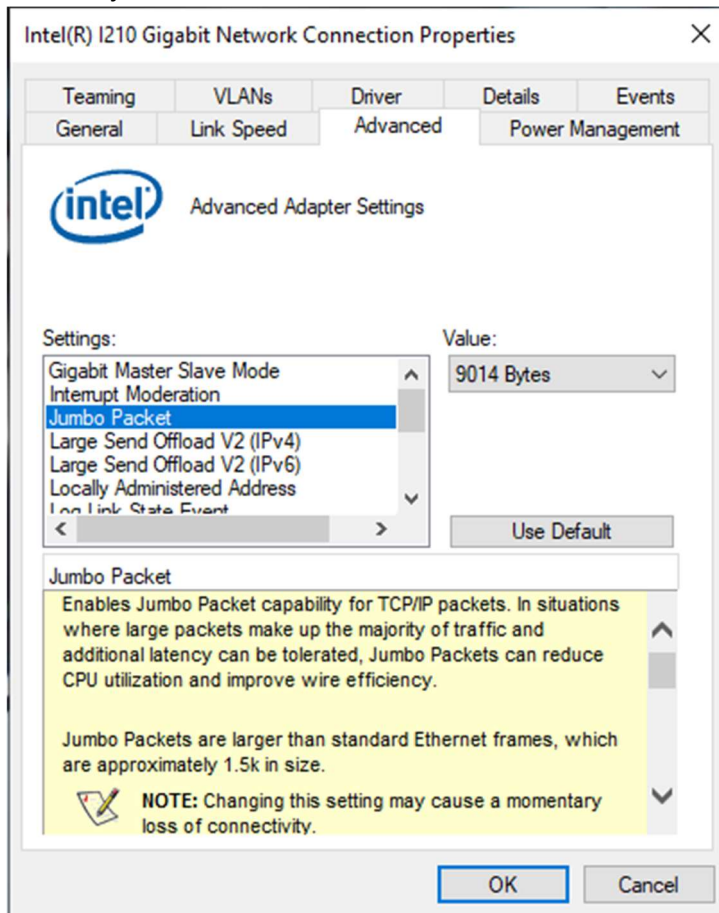
In addition, there are further settings that are set in the settings of the respective network adapter.

For this it is important that the "standard network card" is installed according to the parts list.

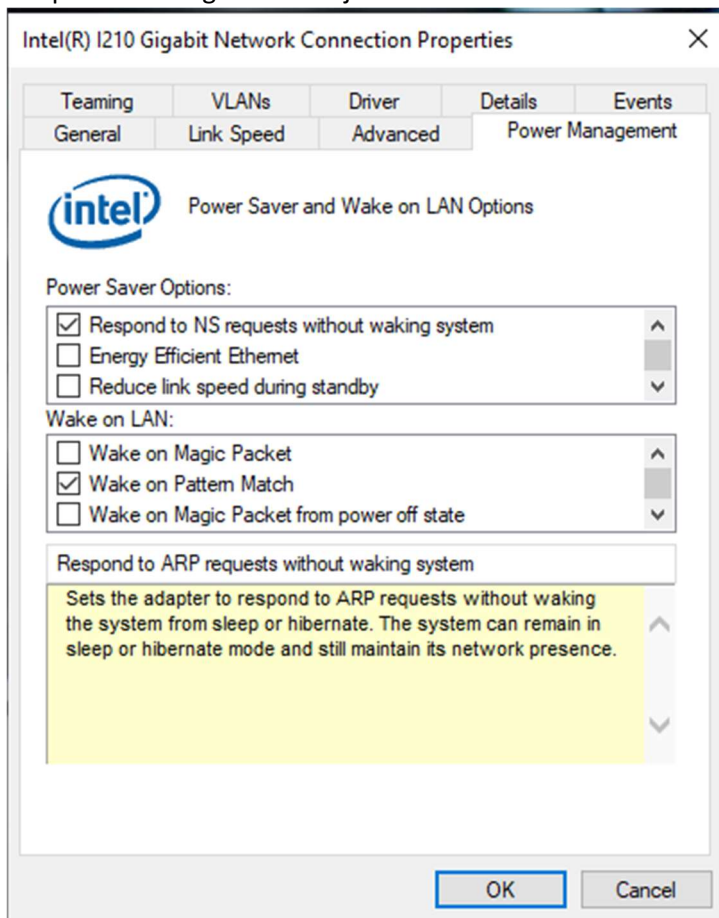
1. First the device manager has to be opened.
 - a. Either by searching for "Device Manager"
 - b. or by pressing Win + R to start the Run dialog, then by entering devmgmt.msc the device manager can be started. Look
2. for the branch for network adapter or network adapter and open it.
3. Unfortunately, the network interfaces of the Power-over-Ethernet card do not have a separate designation. So you have to search for the correct network adapters manually.
 - a. The adapters have this name "Intel (R) I210 Gigabit Network Connection"
 - b. The second adapter also has this name and has an additional number at the end, eg "# 2".
4. The following settings must be made for all PoE Network adapters.
5. Setting a fixed network speed 1.0Gbps:



6. Activate jumbo frames and set to the maximum:

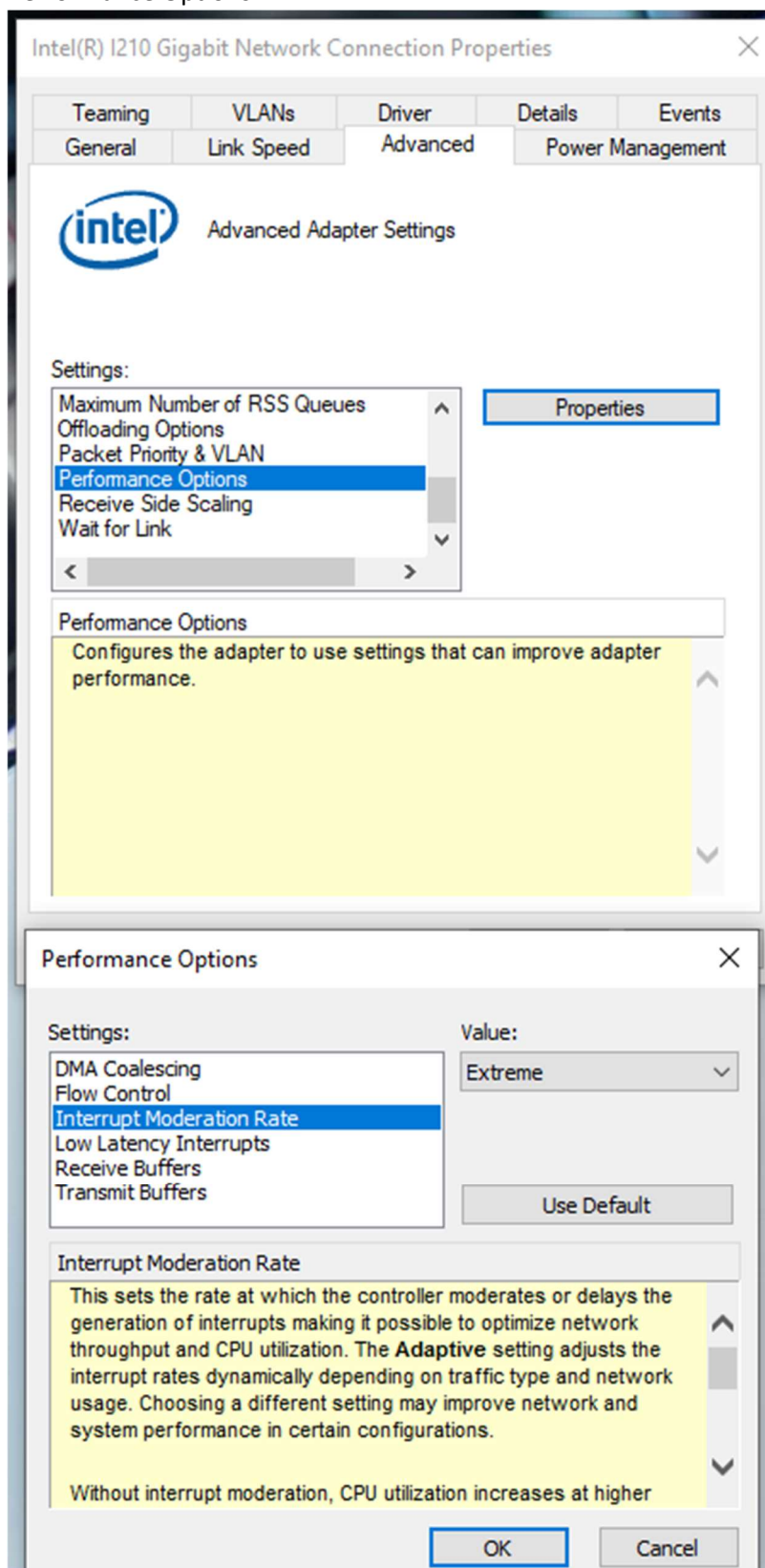


7. Set power management : adjusted



8. Two parameters now need to be under Advanced

a. Performance Options:



b. Receive & Transmit Buffers

Receive = 256

Transmit = 512

