Readme for the blaze SDK for Windows and Basler blaze-101 Cameras

System Requirements

The blaze software will work with any GigE network adapter.

ℹ️	The Basler blaze SDK 2.0.0 is compatible only with blaze-101 cameras that have firmware version 2.1.0 or above. If the hardware revision of your camera is 7 or above, the camera will have the appropriate firmware.
	If you have an older camera, you have to update its firmware to 2.1.0 or above. You can download an update package and update instructions from this site:
	https://www.baslerweb.com/baslermedia/blaze-getting-started/Firmware
	Use the following login credentials:
	User name: blaze
	Password: b4sl3ersw

Feature Scope of the blaze SDK

- blaze Viewer: GUI tool for configuring and operating the blaze-101 camera
- blaze IP Configurator: GUI tool for configuring the IP address of the blaze-101 camera
- Basler GenTL producer for the blaze-101 camera and runtime prerequisites
- Basler GigE Vision driver
- C++ API
- Sample programs

Software Installation

This installation procedure assumes that you have already extracted the archive to a network location of your choice.

To install the Basler blaze SDK:

1. Navigate to the extracted **Basler\blaze-SDK-2.x.y.z** subfolder.
2. Launch the **Install.cmd** script.

   This installs the runtime prerequisites, the Basler GigE Vision driver, and the environment variables required for the Basler GenTL producer for the blaze-101 camera.

IP Address Configuration

The blaze-101 camera is configured to use DHCP (Dynamic Host Configuration Protocol) to obtain an IP address. If no DHCP server is available or if your network adapter is configured differently, the camera will use link-local address autoconfiguration as a fallback. For this to work, you have to make sure that your network adapter is configured accordingly. Follow the instructions on the next page to confirm whether your network adapter has the correct settings.

Alternatively you can assign a static IP address using the blaze IP Configurator tool.

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ℹ	Note that it may take approximately a minute for the camera to receive an IP address via link-local address autoconfiguration.

To check the settings of your network adapter:

1. Open the **Network Connections** dialog.
   a. Press the **Windows+R** keys to open the **Run** dialog.
   b. Enter `ncpa.cpl` in the **Open** field.
   c. Click **OK**.
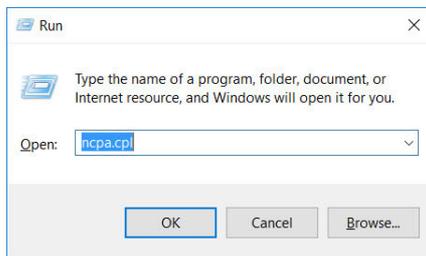
2. In the **Network Connections** dialog, right-click the desired connection and click **Properties**.
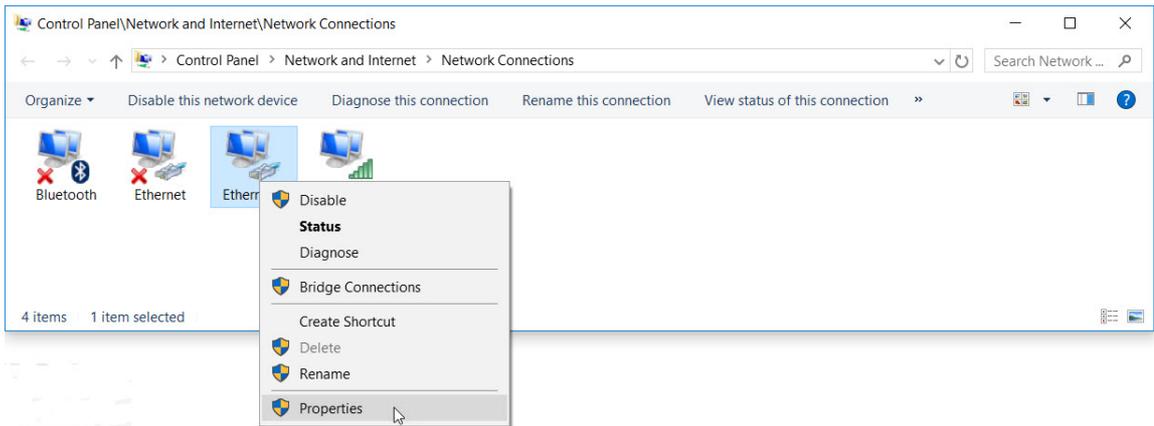
3. In the **... Properties** dialog, select **Internet Protocol Version 4 (TCP/IPv4)** and click **Properties**.
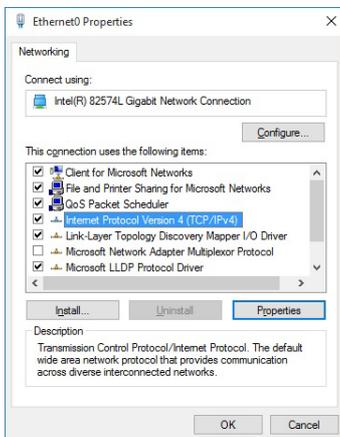
4. In the **... Properties** dialog, make sure that the following options are enabled:

   ■ **General** tab: **Obtain an IP address automatically**

   ■ **Alternate Configuration** tab: **Automatic private IP address**
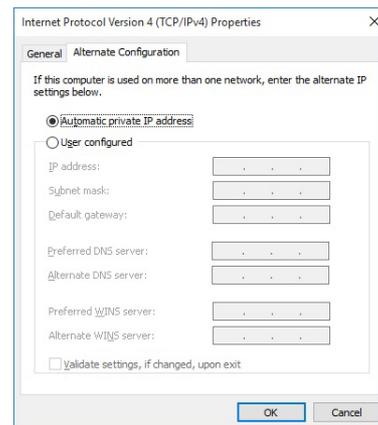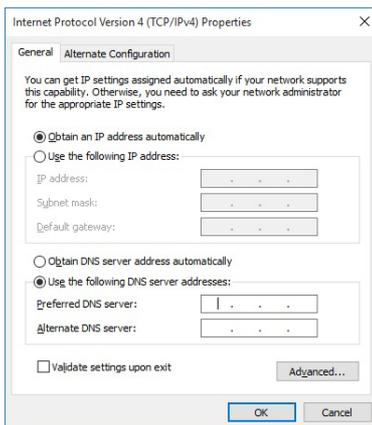
5. Click **OK** to close the **... Properties** dialog.

6. Click **Close** in the **... Properties** dialog.

Firewall Settings

Basler strongly recommends disabling the Windows Firewall for the adapter that the camera is connected to. Leaving the firewall enabled may cause errors during image grabbing. Errors will be reported as incomplete buffers in the blaze Viewer.
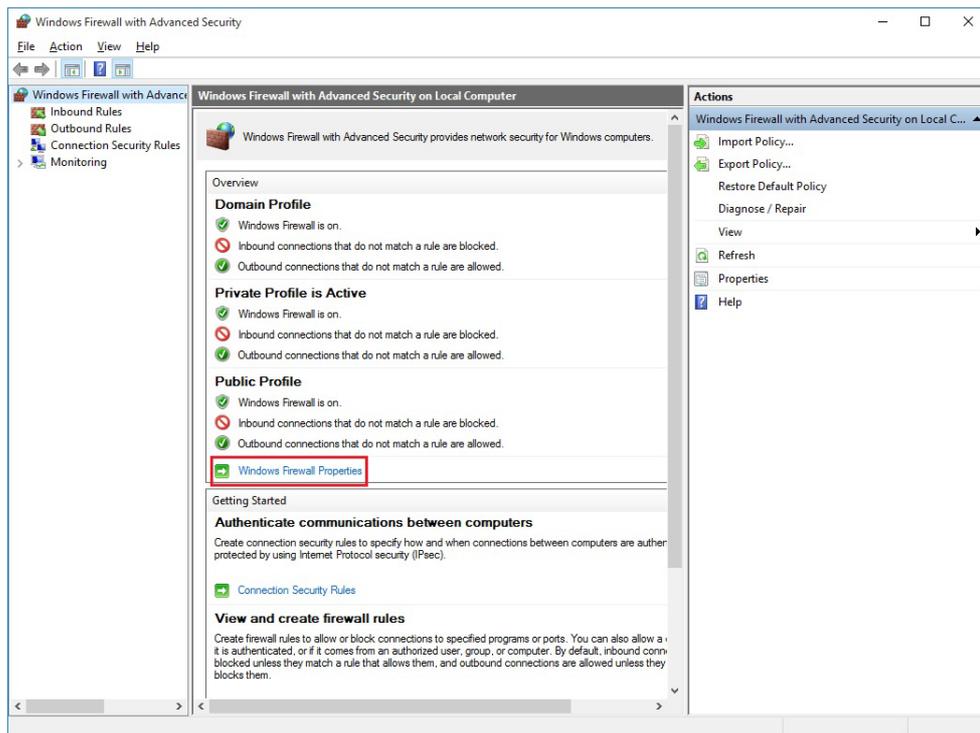
To disable the Windows Firewall:

1. Open the **Windows Firewall with Advanced Security** window:
    a. Press the **Windows+R** keys to open the **Run** dialog.
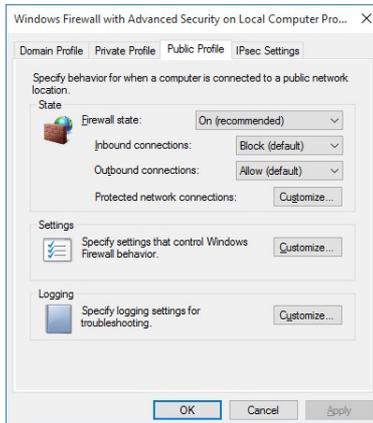   b. Enter `wf.msc` in the **Open** field.
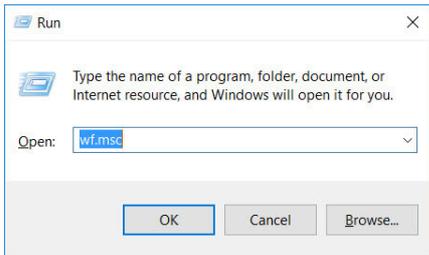
    c. Click **OK**.

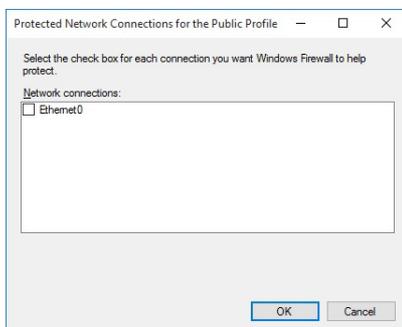   The **Windows Firewall with Advanced Security** window opens.

2. In the **Overview** pane, click the **Windows Firewall Properties** link.

3. In the **Windows Firewall with Advanced Security on Local Computer Properties** dialog, select the **Public Profile** tab.

4. In the **State** pane, click **Customize** to configure which network interfaces are to be protected by the Windows Firewall.

5. Deselect the network connection, that the blaze-101 camera is connected to.

6. Click **OK**.

7. Click **OK** in the **Windows Firewall with Advanced Security on Local Computer Properties** dialog.

8. Close the **Windows Firewall with Advanced Security** window.

Hardware Installation

	To achieve reliable distance measurements, you might find the following tips useful: ■ Avoid using the camera in bright sunlight. ■ Avoid placing any objects in the scene that are not part of your intended target, especially mirrors or other shiny surfaces/objects. ■ Avoid placing the camera flat in the middle of a surface. ■ Maintain a stable housing temperature during operation ■ Take measures to provide cooling. ■ Mount the camera securely.

Before installing the camera, check the following:

■ You have read and understood the warnings listed in the *Basler blaze-101 Getting Started Guide* (included in the product package).

■ All necessary accessories are present.

To install the camera:

1. Mount the camera in an appropriate fixture, e.g., a camera bracket.
2. Plug the M12 8-pin plug of the GigE cable into the M12 8-pin x-coded connector at the back of the camera, and plug the RJ45 connector into the Ethernet port of your computer.
3. Insert the M12 8-pin plug of the power supply cable into the M12 8-pin connector at the back of the camera.
4. Insert the AC power plug of the power supply into a mains socket.

   If the green LED lights up, the camera is ready for use.

 | | It takes a while until the camera reaches a stable operating temperature. After 5 minutes there may still be a measurement error of 3–4 cm. After 20 minutes the distance measurement should be reliable. |
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blaze Viewer

The blaze Viewer is an application for configuring and operating the blaze-101 camera using a graphical user interface.

To start the blaze Viewer:

1. Navigate to the **Basler\blaze-SDK-2.x.y.z\blazeViewer** subfolder.
2. Double-click **blaze_Viewer.exe**.

The blaze Viewer also includes an online help with information about how to start image acquisition and how to work with the images that the blaze-101 camera captures.

Another useful feature of the blaze Viewer is the **Documentation** pane which offers help with parameterizing the camera.
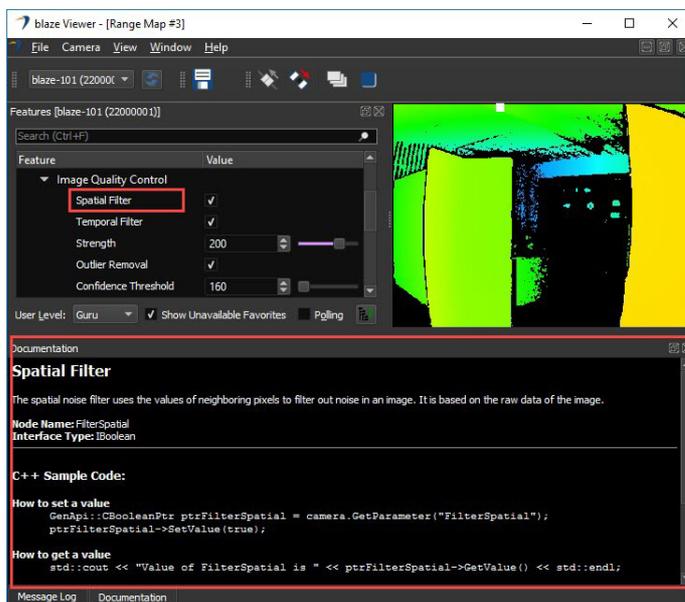
When you select a feature in the **Feature** tree, the following information will be displayed in the **Documentation** pane:

- short description of the feature
- parameter information, e.g., interface type
- sample code
  You can copy and paste these code snippets into your application to speed up programming.

Sample Programs

The installation archive includes a set of sample programs. These sample programs are simple command line programs that demonstrate how to configure and operate the blaze-101 camera. They are located in the **Samples** folder. The corresponding subdirectories contain instructions for building and executing the programs.

Troubleshooting

Camera not found by blaze Viewer

- Check whether the IP configuration is correct. See "IP Address Configuration".
- Check whether the firewall has been disabled. See "Firewall Settings".
- Check the hardware installation. See "Hardware Installation".
- Make sure that the camera hardware revision is 7 or above. For revision 3 to 6 cameras, a firmware update has to be performed. See note in "System Requirements" section.

Windows security alert when starting the blaze Viewer for the first time

If you receive a security alert about the firewall blocking some of the blaze Viewer features, select the **Allow access** option.