



User's Guide

IP Configuration Tool for Gigabit Ethernet Cameras Microsoft® Windows®

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1. Introduction

The GigE Vision™ standard, which also covers the UDP application protocol, offers a variety of possible configurations of the IP address and subnet mask for cameras for professional machine vision. Errors can occur when establishing connections between the PC and camera due to unintended, incorrect operation or connection of a camera to another network. In this case the Force-IP feature, as defined in the GigE Vision™ stan-

dard, may be the last solution. Using this feature, it is possible to force a camera into a valid network temporarily, making the device accessible again. Once Force-IP is complete, the camera can be set to LLA or DHCP, or a persistent IP can be assigned. In larger multi-camera systems, the processing of Force-IP may take a considerable amount of time and can easily become unmanageable. With the introduction of the “IP Con-

figuration Tool for Gigabit Ethernet Cameras”, Baumer gives you the option to check whether cameras in a multi-camera system are reachable. If one or more cameras are not reachable, the tool provides processes for fully automatic Force-IP. Furthermore, the user is able to set several IP parameters, which are specified in the GigE Vision™ standard. The easy to understand Graphical User Interface (GUI) makes IP configuration as simple as possible.

2. General System Requirements

	Single-camera system Recommended	Multi-camera system Recommended
CPU	DUAL-Core, Intel® Xeon® W3503	DUAL-Core, Intel® Xeon® W3503
Clock	2.4 GHz	2.4 GHz
RAM	4 GB	4 GB
Operating system (OS)	Microsoft® Windows® 7 32 / 64 bit systems Microsoft® Windows® 8 32 / 64 bit systems	
Graphics	Recommended resolution: 1280 x 1024; Color depth: at least 16 bit	
Ethernet	Gigabit Ethernet compliant NIC (Recommended: Intel® chipset)	
Frame-work (optional)	Windows® OS: .NET™ Framework 4.0 or higher for C# implementation	

3. Installation Procedure

Baumer GigE IPConfig is provided as a standard ZIP file. In order to install this tool, simply extract the file. Next, enter the path (Extract to:), for where you wish to install Baumer GigE IPConfig (Fig. 1).

Notice

The extraction tool will suggest a predefined path.
The installation process will not create a start menu entry.

After this, all required files will be copied to your system.

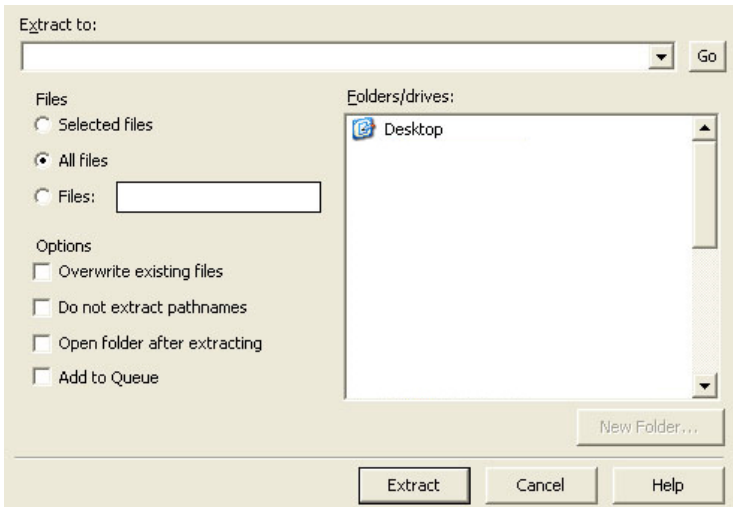


Fig. 1: Path selection for Baumer GigE IPConfig

4. Startup Behavior

On startup, the tool scans for all available network interface cards (NIC) and cameras.

If one or more cameras are in an incorrect subnet, the tool will inform you of this by displaying “Force-IP Options”¹⁾.

5. Graphical User Interface (GUI)

The GUI of Baumer GigE IPConfig (Fig. 2) is divided into several areas:

- Available cameras
- Available interfaces
- Config options (for establishing connections)
- User-defined name
- Camera information
- Force-IP Options.

5.1. Available cameras

This list provides information such as type and serial number of the connected cameras.

For any setting, one of these cameras must be selected.

5.2. Available interfaces

Here, all available NICs and their IP parameters are displayed.

5.3. Options

If a camera is selected²⁾, Baumer GigE IPConfig gives you the option to switch this camera to one of three mechanisms for establishing connections:

- LLA³⁾ (Link Local Address)
- DHCP (Dynamic Host Configuration Protocol) and
- Persistent IP.

Notice

In order to effect changes within these options, the camera must be de-energized.

1) Please see Section 5.7.

2) The camera must also be in the correct subnet.

3) Changes are written directly to the camera's flash memory.

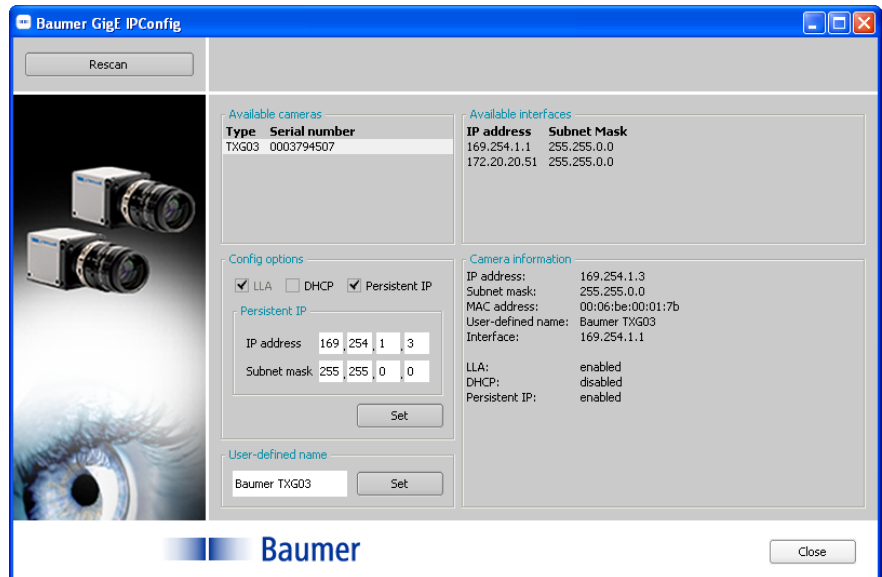


Fig. 2: Baumer GigE IPConfig GUI



Fig. 3: Force-IP options

5.4. Persistent IP options

Once “Persistent IP” is selected within “Options”⁴⁾, this area will become activated.

The desired IP address and subnet mask for the selected camera can be entered here.

Changes are transferred to the camera by clicking the “set” button.

Notice

By selecting the NIC to which you want to connect the camera (from the “Available Interfaces” area), its subnet mask and the first three digits of the IP address will be entered automatically.

5.5. User-defined name

A user-defined name for the selected camera can be assigned here. This string can be up to 15 characters long.

5.6. Camera information

A variety of information about the selected camera is displayed within this area.

The currently valid parameters are read from the camera's registry, the

lower-level ones (LLA, DHCP, Persistent IP) are read from the camera's flash memory.

5.7. Force-IP options

If Baumer GigE IPConfig detects one or more cameras in an incorrect subnet⁵⁾, the “Force-IP options” (Fig. 3) will appear in the upper part of the GUI.

Here, it is possible to temporarily force a valid IP subnet combination on the camera⁶⁾. Once this is complete, the camera can be located in the correct subnet by using the connection options described in sections 5.3 and 5.4.

5.8. Rescan button

Once one or more cameras have been de-energized and then re-energized, the effects of the changes made can be checked by running a new scan for available interfaces and cameras.

5) Cameras in incorrect subnets will be displayed in blue.

6) If you click on the “Force-IP” or “Force-IP all” buttons, a

window will appear containing information about its progress.

6. Troubleshooting

6.1. Camera in incorrect subnet

Please see section 5.7 of this guide.

6.2. Camera in use by other application

If a camera is being used by another application, the IP Configuration Tool will not have exclusive access to the device. In this case, the respective camera (type and serial number) is displayed in red.

Please close the other application accessing the camera and rescan.

6.3. Logging

A log file, which records any action performed using the IP Configuration Tool is stored in the installation directory of the Tool.

7. Support

In case of any questions or for troubleshooting please contact our support team.

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NOTE:

This image shows a full page of white paper with horizontal dotted lines. The lines are evenly spaced and run across the width of the page, providing a guide for handwriting or typing. There are no margins, text, or other markings on the page.



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