



HIRSCHMANN

A **BELDEN** BRAND

User Manual

GUI Application HiView 3.2

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1 Introduction

HiView is a stand-alone application. HiView thus allows you to use the graphic user interface of Hirschmann Ethernet devices with management independently of other applications, such as a browser.

HiView is convenient in that it allows you to store HiView on a portable storage medium and start it on other computers in your data network.

HiView also supports your security efforts, as accessing Hirschmann devices with product certificate is possible solely with a valid product certificate.

■ Application Example

As the administrator of a large data network, you sometimes have to visit sites within your data network.

With a USB stick in your pocket, on which you have previously copied HiView with your settings, you have barrier-free access to the graphical user interface of Hirschmann Ethernet devices.

Forget difficulties such as the incompatibility of browsers, Java versions or Java plug-ins, installation with entries in the registry or the changing cache content of browsers on different computers.

■ Password change during first time log on

To help prevent undesired access to the devices, it is imperative that you change the default password during initial setup.

Starting with the following software releases, it is necessary to change the default password during the initial setup:

- ▶ HiOS
08.1.00
07.1.00
- ▶ Classic
09.1.00
09.0.17
- ▶ RSB
05.4.00

- ▶ Eagle 20/30/40
03.3.00
- ▶ EagleOne
05.4.00

You can find detailed information about changing the password in [“First time log on \(Password change\)”](#) on page 24.

2 Starting the application

HiView is a stand-alone, portable application. This section describes the prerequisites and preparations for starting the HiView application.

2.1 System Requirements

2.1.1 Hardware

- ▶ Processor
 - x86 compatible CPU, min. 1 GHz
- ▶ RAM
 - at least 1 GB, 2 GB recommended
 - HiView requires approx. 200 MB free RAM.
 - For every open window, HiView requires an additional 500 MB RAM
 - To start Industrial HiVision, HiView requires an additional 2 GB RAM
- ▶ Disk space
 - 1 GB free.
- ▶ Monitor resolution
 - at least 1024x768 pixels.

2.1.2 Operating system

- ▶ Windows 7 (64 Bit)
- ▶ Windows 8.1 (64 Bit)
- ▶ Windows 10, Version 1803 (64 Bit)
- ▶ PC Linux (64 Bit: Kernel 3.10, libc 6):
 - Debian 8
 - Debian 9
 - Debian 10
 - Red Hat 7
 - Red Hat 8

Note: Install the `libgtk2.0-0` packages for Debian.

2.2 Installation

2.2.1 Installation under Windows

If you use the installation wizard proceed as follows:

- Download the `hiview032000_windows.exe` file.
- To install HiView, double click on the program file.
- Answer the questions of the installation script and follow its instructions.
If you do not answer a question of the installation script, then the installation script selects the default answer.

If you wish to use HiView as a portable application, then proceed as follows:

- Download the `hiview032000_windows.zip` file.
 - Verify that authentication is available for data read-write access.
 - Extract the archive onto your portable medium (SD card, USB stick) or onto the hard drive of your computer.
-
- To start the HiView application, double click the program symbol `HiView.exe`.

Note: If you get the message `Error during installation of ikernel.exe`, then the user does not have administration rights.

The first time you start the HiView application, HiView asks you to accept the license conditions.

After you have accepted the license conditions, HiView creates the configuration file `HiView2.0.cfg`.

Among other things, the configuration file also contains the languages of the application interface that you can select.

Note: HiView opens the last saved configuration when you restart the application.

2.2.2 Installation under Linux

- Download the `hiview032000_linux.tar.gz` file.
- Extract the archive file into a file system that supports “Execute” rights. Depending on the Linux derivative, the file system can be stored onto a portable medium (SD card, USB stick) or onto the hard drive of your computer.
- Provide “Execute” rights to the HiView applications `HiView.sh` and `AppletLauncher.sh` with the command `chmod +x HiView.sh`.
- Start the HiView application `HiView.sh`.

The first time you start the HiView application, HiView asks you to accept the license conditions.

After you have accepted the license conditions, HiView creates the configuration file `HiView2.0.cfg`.

Among other things, the configuration file also contains the languages of the application interface that you can select.

You will find details on the different Linux derivatives on the product pages of Belden.

www.beldensolutions.com

Note: HiView opens the last saved configuration when you restart the application.

2.3 Deinstallation

2.3.1 Deinstallation under Windows

- Quit the program HiView before you start the deinstallation.
- To uninstall HiView, select:
`Start:Control Panel:Software`
- Select the program HiView.
- Click on Change/Remove and follow the instructions of the deinstallation routine.

If you installed HiView as a portable application, then proceed as follows:

- Navigate to the extracted files on your portable medium (SD card, USB stick) or on the hard drive of your computer. Verify that authentication is available for data read-write access.
- Delete the directory where you extracted the application files.

2.3.2 Deinstallation under Linux

- Log on with the `su` command so that you have root access rights.
- Delete the directory where you extracted the application files with the command `rm -rf`

3 Using HiView

After you start it the first time, HiView displays the following program window:



Figure 1: HiView program window after you start it the first time

The dialog contains the following tabs:

- ▶ [Devices Tab](#)
- ▶ [Discovery Tab](#)

3.1 Devices Tab

The Devices tab displays your devices as either a tile or a list item. You can verify the reachability and configure the devices displayed in the dialog. The dialog allows you to configure the devices using a web browser, telnet or SSH.

If you use HTTPS to connect to a device and get the message, “Secure connection failed, please try again using a URL prefix and port.”, then update the device software.

After you update the device software, proceed as follows:

- Make a new certificate.
Use an up-to-date hash algorithm to make the new certificate.
- Upload the new certificate on the device.


If you can not use HTTPS to connect to your device, then you can try to access the device with HTTP.

Note: An HTTP connection is an unsecure connection. Hirschmann recommends that you use only secure methods to access your device.

- To use HTTP to access your device, enter `http:\\<IP address>` in the URL field.

3.1.1 Adding a device

To add a device to the Devices tab, proceed as follows:

- In the URL field at the bottom of the dialog, enter the path with the IP address of your device or its domain name.
- Click the “Open GUI” button.  HiView establishes a connection to the device, opens the graphical user interface of the device and adds the device to the dialog. HiView copies the program file of the device to the cache directory of the HiView installation directory.

The HiOS devices, with software version 7.0 and higher, have an HTML5 based Graphical User Interface (GUI). When you enter an IP address of a device with an HTML5 based GUI, HiView connects to the device with your default browser. After accessing the device, HiView adds the device to the dialog.

The BAT devices also have HTML dialogs. When you enter an IP address of a BAT device, HiView connects to the device with your default browser.

Note: HiView does not support BAT-C devices.

Note: To help provide secure communications, use HTTPS to connect to a device and disable the HTTP function in the Web Server dialog of the device.

3.1.2 Tile view

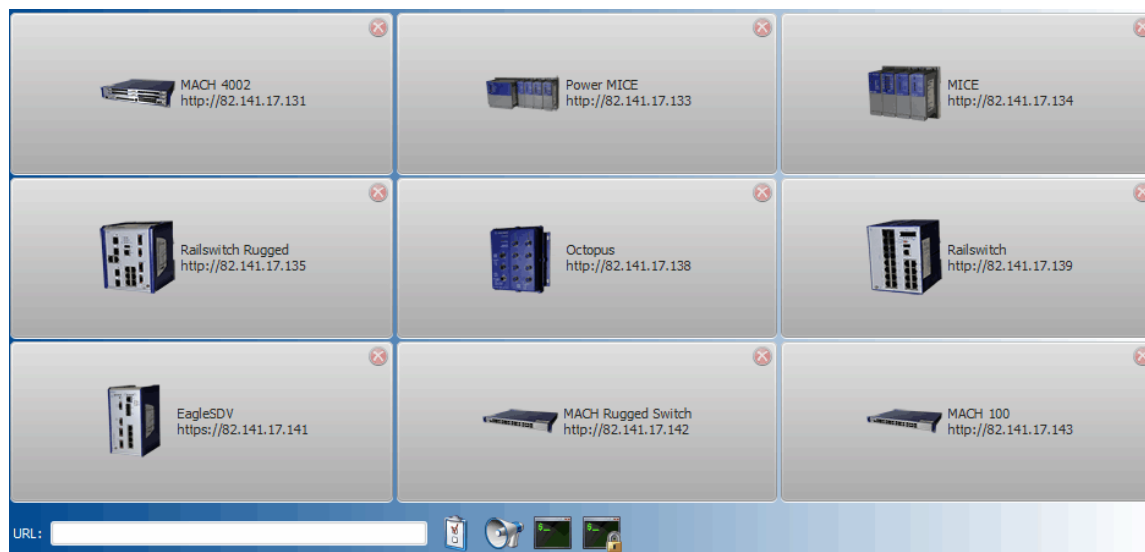


Figure 2: Tile view

The Tile view is the HiView default setting. If you want to switch from Tile View to Table view, proceed as follows:

- To display the Table view, select `Preferences:View:Table view`.

Every tile represents one device and displays the device symbol, the device name and the device address.

The more often you establish a connection to the device, the further forward HiView places the device in the Tile view.

3.1.3 Table view

HiView provides a Table view as an alternative to the Tile view:

	MACH 4002	http://82.141.17.131	<input type="checkbox"/>	
	Power MICE	http://82.141.17.133	<input type="checkbox"/>	
	MICE	http://82.141.17.134	<input type="checkbox"/>	
	Railswitch Rugged	http://82.141.17.135	<input type="checkbox"/>	
	Octopus	http://82.141.17.138	<input type="checkbox"/>	
				

Figure 3: Table view


To display the Tile view, select `Preferences:View:Tile` view.

Every table row represents one device and displays the device symbol, the device name and the device address. Furthermore, HiView indicates with a check mark in the “Open” column if the graphical user interface of the device is open.

The more often you establish a connection to the device, the further up the list HiView places the device in the Table view.

3.1.4 Removing a device

To remove a device from the `Devices` tab, proceed as follows:

- ▶ Tile view
 - Select the tile of the device you want to delete.
 - Click the  button.
- ▶ Table view
 - Select the table row with the device you want to delete:
 - Select `Devices:Delete Selected Devices`.

3.1.5 Device access

When you access a device for the first time using HTTPS, HiView displays the “Security Alert” dialog containing the fingerprint of the certificate on the device. Verify that the dialog contains the correct fingerprint for the device.

If you do not know the fingerprint of a device, there are several ways to get the fingerprint. After the network administrator gets the fingerprint, the network administrator sends the fingerprint to the remote client. To send the fingerprint to the remote client, use a secure channel. The remote client compares the fingerprint received from the network administrator to the fingerprint of the device. The following list describes different methods in which the network administrator gets the fingerprint:

- ▶ During device configuration, the network administrator uses the following work steps to get the fingerprint of a device:
 - When the network administrator uploads a certificate on the device, the network administrator records the fingerprint of the certificate.
- ▶ After device configuration, the network administrator uses the GUI to get the fingerprint of a device:
 - Connect an Ethernet cable directly to the device.
 - To log into the device, use a web browser.
 - Navigate to the fingerprint of the device in the `Device Security> Management Access> Sever` dialog.

- Open the `HTTPS` tab.
- The fingerprint of the certificate is in the `Fingerprint` field.
- ▶ After device configuration, the network administrator uses the CLI to get the fingerprint of a device:
 - Connect a serial cable directly to the device.
 - To log into the device, use a serial console program for example, `putty`.
 - To display the fingerprint of the device, enter the `show https` command.

■ Graphical user interface (GUI)

To access a device through the graphical user interface, proceed as follows:

- ▶ Tile view
 - Select the tile of the desired device.
- ▶ Table view
 - To view the context menu, right-click the table row of the desired device.
 - Select “GUI”.

Note: If you use your computer to connect to the device through a firewall, enter a rule in the firewall that allows the data traffic through port 161.

■ Command Line Interface (CLI)

To access a device through the Command Line Interface (CLI), proceed as follows:

- ▶ Tile view
 - To view the context menu, right-click the tile with the desired device.
 - Select either “Telnet” or “SSH”.
- ▶ Table view
 - To view the context menu, right-click the table row of the desired device.
 - Select either “Telnet” or “SSH”.

As an alternative, HiView allows you, in both the Tile view and the Table view, to start the CLI through the URL field and the buttons at the bottom of the program window.

Note: To help provide secure communications, use “SSH” and disable “Telnet” on the device.

Note: If your computer is connected to the device through a firewall, enter a rule in the firewall that allows the data traffic through port 22 (SSH) or port 23 (Telnet).

■ **Displaying a certificate**

Hirschmann devices, with a software version lower than 7.0, usually have certificates for the Web application (jar file). Depending on the device you access, the connection also has a certificate.

- To view the certificates of HiOS devices, with a software version lower than 7.0, select in the graphical user interface of the device `Tools:Retrieve Product Certificate`.
- To view the certificates of the HiOS devices, with software version 7.0 or higher, open the connection certificate in the web browser.

3.1.6 Connecting to Industrial HiVision

To establish a connection to the Web server of Industrial HiVision, proceed as follows:

- Allow remote access in the Industrial HiVision settings and activate the Web server.
- In the URL field of the Devices tab, enter the path with the IP address and the port of the Industrial HiVision Web server.
For example, `https://10.0.1.159:11180`, “https” is the Web server protocol. The IP address, `10.0.1.159` is the IP address of the network management station on which Industrial HiVision is active.
- Click the “Open” button.

Note: The Web server port that Industrial HiVision uses is version-dependent. You can find the port that Industrial HiVision uses in the settings under `Preferences:Advanced:Services`.

Starting with Industrial HiVision version 7.0 you can find the port number in the `Preferences:Advanced:Services Access` dialog

3.2 Discovery Tab

The Discovery tab allows you to search for devices in your network. The tab also allows you to specify the IP parameters for the devices. The tab also allows you to configure the devices using a web browser, telnet or SSH.

The Discovery tab is compatible with devices that support HiDiscovery v2.

- ▶ Classic Switch since version 09.0.01
- ▶ HiOS since version 05.0.00
- ▶ HiSecOS since version 03.0.00

3.2.1 Discovery Tab Visibility

If you do not have devices in your network that support HiDiscovery v2 then HiView allows you to hide the Discovery tab.

To hide the Discovery tab proceed as follows:

- Start HiView.
- In the menu bar, click “Preferences> Options”.
- Unmark the “Display Discovery tab” checkbox.
- Click the “Close” button.
- In the menu bar, click “File> Exit”.
- Restart the HiView program.

3.2.2 HiDiscovery v2

HiDiscovery v2 is a primary setup tool based on the SNMPv2 protocol. After you select the network adapter and click the Refresh button, the Discovery tab displays a line for every device that responds to a HiDiscovery v2 inquiry.

Note: After you have assigned the IP parameters, disable the HiDiscovery v2 function in the Network dialog of the device.

To disable the HiDiscovery v2 function, use the following work steps:

- Open the Devices tab.
- Log on to the device by double-clicking on the device entry.
- Open to the Networks dialog.
- In the HiDiscovery v2 frame, click the `off` radio button.

Note: When using HiDiscovery v2 to search for devices behind a firewall, configure the firewall to forward UDP packets on port 51973.

3.2.3 Network Adapter

The Discovery tab uses the first network interface found for the PC. If your computer has several network cards, you can select the one you desire in the adapter field at the bottom of the tab.

Note: If you change the network interface parameters on the PC, then restart HiView.

3.2.4 Signaling a Device

The Discovery tab allows you to identify the devices displayed in the list.

- To set the LEDs to flashing for the selected device, mark the Signal checkbox.
- To stop the flashing, unmark the Signal checkbox.

3.2.5 First time log on (Password change)

The Password Change column displays devices for which it is necessary to change the default password. If the checkbox in the Password Change column contains a mark, then the device still has the default password configured. The Password Change function is only available for devices that support the HiDiscovery v2 protocol.

■ Example configuration

To change the default password on several devices at the same time proceed as follows:

- Open the Discovery tab.
- Select the devices which have a marked checkbox in the Password Change column.
- Right-click on a selected device.
- In the context menu select the Change Password option.
- In the Change Password> New password field, type in the password that you want to use to access the device.
- You can use the following methods to verify your password:
 - Mark the Show Password checkbox. The New password field displays the password in plain text.
 - Type in the same password in the Confirm password field.
- Click the OK button.

3.2.6 IP address management

The Discovery tab displays which IP addresses are configured on your devices. When a device has both an IPv4 and IPv6 address assigned to it, you can select which address HiView uses to connect to the device. The addresses displayed in the IPv6 Address (Link Local) column are local addresses. The devices use Link-local addresses only to communicate within the network segment or broadcast domain.

To select which IP address HiView uses to communicate with the device proceed as follows:

- Open the Discovery tab.
- In the tool bar, select Preferences> Options.
- In the Options dialog, activate the radio button for the preferred version.

3.2.7 Device access

When you access a device for the first time using HTTPS, HiView displays the Security Alert dialog containing the host key fingerprint. Verify that the dialog contains the correct key for the device which you are attempting to access.

Right clicking on a device line in the table displays a pull down list with the following functions:

■ **Configure**

The Configure function opens the Discovery Configuration dialog which allows you to specify the IP parameters and name of a device.

Note: After you make changes to the parameters in the Discovery Configuration dialog, the changes are only saved in the running configuration. To save the changes in the permanent memory, use the Load/Save function in the Graphical User Interface of the device.

■ GUI

The GUI function opens the graphical user interface of the device which allows you access to the device configuration.

Note: If you use your computer to connect to the device through a firewall, enter a rule in the firewall that allows the data traffic through port 161.

■ GUI / Add to devices

The GUI / Add to devices function opens the graphical user interface of the device and adds the device to the Devices tab.

■ SSH

The SSH function allows you to remotely login to the Command Line Interface (CLI) of the device using an encrypted network protocol. The prerequisite is that the SSH server using SSHv2 is enabled in the device.

■ Telnet

The Telnet function allows you to remotely login to the Command Line Interface (CLI) of the device.

Note: To help provide secure communications, use SSH and disable “telnet” on the device.

■ Ping

The Ping function allow you to test the reachability of a device in an IP network. The function also measures the round trip time of the ICMP echo request and reply.

4 Saving an individual configuration

HiView allows you to create configurations for particular application cases in the `.hvw` format and to save them to a location of your choice. Thus, you determine which devices the Devices tab displays. Application examples are a network related device selection and a selection on the basis of device families.

- To save an individual configuration, select `File:Save as`.
- To open an individual configuration, select `File:Open`.

5 Delete cache directory

When establishing a connection to a device, HiView loads the device-specific application to the cache directory of your HiView folder.

When you are setting up the connection to this device again, the device-specific application saved in the cache directory keeps you from having to wait for a reload.

In order to free memory space on your storage medium, HiView allows you to delete the cache directory completely or in part.

Select `Preferences:Cache`.

HiView displays the “HiView - Cache” dialog.

Select the devices which you want to delete from the cache directory.

Click the  button.

6 Devices in the Hirschmann Application Lab

HiView allows you to access a selection of devices in the Hirschmann Application Lab through the Internet. These devices allow you to familiarize yourself with the graphical user interface of the devices.

Select File:Hirschmann Application Lab.

7 Maintenance

Hirschmann are continually working on improving and developing their software. You should regularly check whether there is a new version of the software that provides you with additional benefits.

You will find information about updates and upgrades on the Internet pages of Hirschmann Automation and Control GmbH.

www.beldensolutions.com

8 Third Party Libraries

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Trilead SSH-2 for Java includes code that was written by Dr. Christian Plattner during his PhD at ETH Zurich. The license states the following:

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Their license states the following:

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A Tested products and software versions

The HiView Devices tab has been tested and is compatible with the following devices and software versions:

Note: The * symbol entered next to the version means the software version, and later versions, support the HiDiscovery v2 protocol.

■ Products with “Classic Switch Software”

- ▶ EAGLE20
05.4.00*
05.3.02
- ▶ MACH100 L2P
09.1.00*
09.0.16*
09.0.04*
08.0.11
- ▶ MACH100GE L2P
09.1.00*
09.0.16*
09.0.04*
08.0.11
- ▶ MACH1000 L2P
09.1.00*
09.0.16*
09.0.04*
08.0.11

- ▶ MACH1000GE
09.1.00*
09.0.16*
09.0.04*
08.0.11
- ▶ MACH1000GE L3P
09.1.00*
09.0.16*
09.0.04*
08.0.11
- ▶ MACH3000
3.46
- ▶ MACH4000 L2P/L3E
09.1.00*
09.0.16*
09.0.04*
08.0.11
- ▶ MACH4000 L3P
09.1.00*
09.0.16*
09.0.04*
08.0.11
- ▶ MACH40XG L2P/00L3E/L3P
09.1.00*
09.0.16*
09.0.04*
08.0.11
- ▶ MS20/30 L2E
09.1.00*
09.0.16*
09.0.04*
08.0.11
- ▶ MS20/30 L2P
09.1.00*
09.0.16*
09.0.04*
08.0.11

- ▶ Octopus OM L2E
09.1.00*
09.0.16*
09.0.04*
08.0.11
- ▶ Octopus OM L2P
09.1.00*
09.0.16*
09.0.04*
08.0.11
- ▶ Octopus OS L2P
09.1.00*
09.0.16*
09.0.04*
08.0.11
- ▶ PowerMice L2P/L3E/L3P
09.1.00*
09.0.16*
09.0.04*
08.0.11
- ▶ RS20/30/40 L2E/L2P
09.1.00*
09.0.16*
09.0.04*
08.0.11
- ▶ RSB
05.4.00*
05.3.03
- ▶ RSR
09.1.00*
09.0.16*
09.0.04*
08.0.11

■ **Products with software “HiOS” / “HiSecOS”**

- ▶ BRS
08.1.00*
07.4.01*
- ▶ EAGLE20 Ruggedized
03.3.00*
03.0.00*
02.0.01
01.0.00
- ▶ EES, (EES-PRP)
07.1.00*
07.0.06*
06.1.00*
06.0.02*
05.0.03
04.0.04
03.0.04
- ▶ EES-HSR, EES-MRP
02.0.03
- ▶ GRS1020/30
08.1.00*
07.0.06*
06.1.00*
06.0.02*
05.0.03
04.0.04
- ▶ MSP30
08.1.00*
07.0.06*
06.1.00*
06.0.02*
05.0.03
04.0.04
03.0.04
- ▶ MSP40
08.1.00*
07.0.06*
06.1.00*

- ▶ RSP, (RSP-MRP, RSP-PRP)
 - 08.1.00*
 - 07.0.06*
 - 06.1.00*
 - 06.0.02*
 - 05.0.03
 - 04.0.04
 - 03.0.04

- ▶ RSP-HSR
 - 08.1.00*
 - 05.0.03
 - 04.0.04
 - 03.0.04

- ▶ RSPL
 - 07.1.00*
 - 07.0.06*
 - 06.1.00*
 - 06.0.02*
 - 05.0.03
 - 04.0.04
 - 03.0.04

- ▶ RSPS, (RSPS-HSR, RSPS-MRP, RSPS-PRP)
 - 07.1.00*
 - 07.0.06*
 - 06.1.00*
 - 06.0.02*
 - 05.0.03
 - 04.0.04
 - 03.0.04

- ▶ Octopus OS2-37
 - 07.1.00*
 - 04.1.02

- ▶ Octopus 3
 - 08.1.00*

- ▶ Dragon
 - 08.1.00*