



SW3 HikVision Help

Revision 003

24 July 2024

Revision History

Version	Date	Person	Reason For Changes
001	2023-05-01	EMB	Initial
002	2023-09-01	MTL	Reformat
003	2024-07-24	EMB	New Hikvision Client/Server with live video and photo capture

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1 AIM

The aim and goal of this help manual is for the use of Hikvision with the Softcon program SoftWin3 (SW3).

This serves as a guide to install the SCS_SW3_ Hikvision server application and configure SW3 for Hikvision Facial (HVF) integration.

2 APPLICABLE DOCUMENTS

Further information regarding biometric reader setup and event configuration can be found in:

SCS_sw3_Event.help.pdf

SCS_sw3_Biometrics.how2.pdf.

All documents are available on WWW.softconserv.com

3 WARNINGS AND CAUTIONS

Incorrect use of this program may cause the loss of facial biometric data.

Only Hikvision facial capture and card are integrated with Softwin3.

Hikvision fingerprint biometrics will be implemented in future releases.

4 REQUIREMENTS

To use Hikvision Facial Capture devices on a SW3 system, the following is required:

1. SW3 Version 1.04.62 or later must be installed.
2. SW3 External System link feature is required (SCS_ExLink.exe)
3. SCS-Bio is not required for Hikvision Facial recognition integration.
4. SCS_SW3_Hikvision server application must be installed.
The application installation files are available from Softcon.
5. A License fee is required for every Hikvision facial capture device connected to the system.
6. Softcon do not supply any Hikvision facial capture devices.
The installer must supply the device and buy a key from Softcon to activate the device on the system.
7. The following Hikvision models have been tested with SW3

DS-KIT673DWX	100k Face	500k card	10k FP with module
DS-KIT341CNFW	3k Face	3k card	3k finger
DS-KIT341BMW	1k Face	5k card	

New models can be tested if it's supplied to Softcon.
8. **Fingerprint not implemented yet.**

5 SCS_HIKVISION INSTALLATION

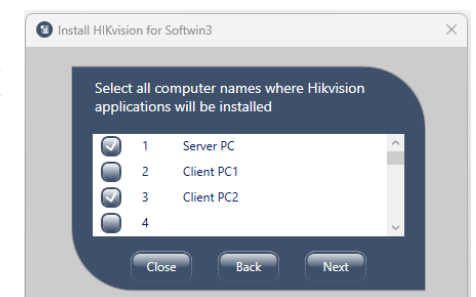
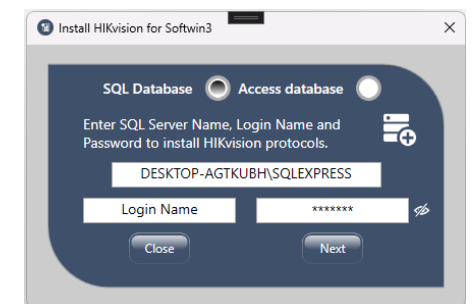
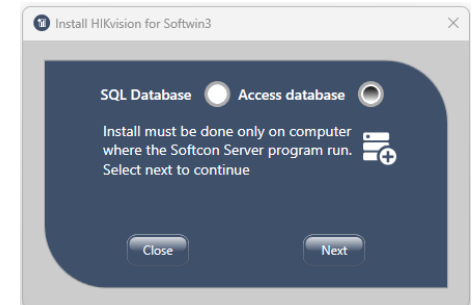
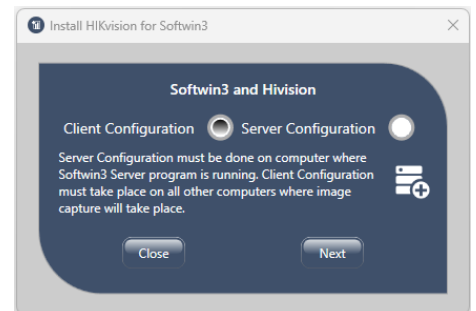
The SCS_SW3_Hikvision server application installation files can be downloaded from www.softconserv.com or can be requested from Softcon. It will be included in future releases of Softwin3.

SCS_SW3_Hikvision_Install.exe installs the SCS_SW3_Hikvision server application for SW3.

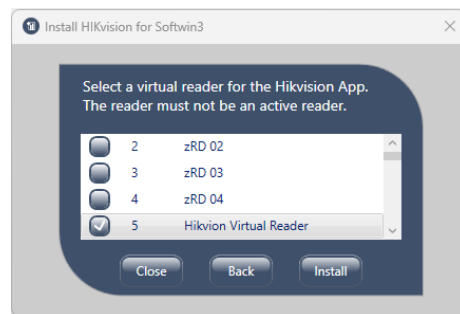
- The Hikvision Client applications can be installed on SW3 Client computers where photo capture will take place.
- The Hikvision Server application must be installed on the computer where the SW3 server application is running
- SW3 Client and Server programs must be shut down before running the installation.



- When the Application Installer is busy installing the SCS_Hikvision application, it prompts to specify if the current installation is on the computer where the Softcon server program is running or if installing the program on a client computer.
- If Client Configuration is selected, the installation process will complete and only install the SCS_Hikvision Client application on the computer
- The Server Configuration must be done on the Server computer where the Softcon Server program is installed. Before this option can be selected and configured all computer names must be configured in Softwin3.
- The Server Configuration option starts an automated configuration process that automatically configures Softwin3 for the Hikvision integration. The installer displays various screen and prompt for selection of different options.
- The first option is a database type selection. By default, Microsoft Access database type selected.
- If SQL Database type is selected the installation requests the SQL Server name as well as the SQL Login name and Password.
- After the database selection, the installer will prompts selection of all the computer names on which the Hikvision application will be installed. Names of the computers must be configured in Softwin3 before it is displayed in this list of computer names. It's important to select the Softcon Server computer name as well as all computer names where the SCS_Hikvision client program will be installed.



- The next screen prompts for selection of a Hikvision virtual reader. Only one reader can be selected from the Softwin3 reader list. This reader will be a virtual reader therefore no physical controller is required for this reader, but the reader must be in the range of allowed readers according to the Softwin3 software license. E.g. If the softwin3 software license allow 10 readers, the selection of the virtual reader must be between reference 1 and 10. The install button completes the installation and automatically configures Softwin3.

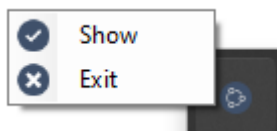
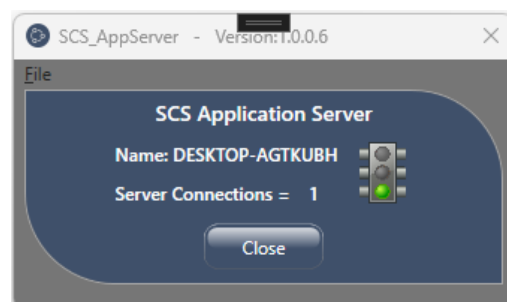


The installation creates a folder called HIKvision in the Softwin3\exe folder where all required files are installed.

A shortcut icon for the program is installed on the desktop.



The installation also modifies the Softwin3 icon and includes a path to the Hikvision server application in the shortcut target line. This causes the SCS_AppServer for Hikvision application to start automatically when softwin3 is started. If the SCS_AppServer program does not start automatically, it can be opened by running the SCS_AppServer.exe program from C:\Softwin3\exe\HIKvision folder. The application is visible for a few seconds on the screen before it disappears and runs in the background. It can be accessed by right clicking on the icon in the Windows System tray.



The only way to stop the server is to right click on the icon and select exit. If the server application is closed it will alert all Hikvision client programs that the server is closed and prompt you to log in again.

6 SW3 SETUP

Please note: The complete Item Menu 6 is not required anymore. The A.I. installation program will configure Softwin3 for you automatically. This is only a guideline to show you what the program will configure for you.

6.1 BIO READER SETUP

Start Softwin3 and open Setup > Setup Editor > Bio – Reader.
Configure all the Hikvision facial capture readers.

Ref	Name	Reader	Type	PC	IP Addr
1	HKvision Face1	CR1 Rd 1 Entry	HIKvision	none	192.168.1.202
2	HKvision Face2	CR1 Rd 2 Exit	HIKvision	none	192.168.1.205

The following columns must be completed.

Column Name	Description
Name	Enter a user-friendly name for the device. This name will be displayed in the SCS_SW3_Hikvision server application.
Reader	Each device must be linked to a Reader Name from this selection that points to the Reader setup. The readers in the Reader Setup are linked to controllers and areas for access control purposes.
Type	Hikvision type must be selected in this column. If Hikvision is not available in the selection, run the Install_SCS_SW3_Hikvision.exe program again.
PC	Please Note – No PC must be selected in this column. Select none for this column
IP Addr	IP address for each device must be completed
All other columns are not required for Hikvision facial capture devices.	

6.2 VIRTUAL READER SETUP

This virtual reader is used to trigger events that will download facial images to Hikvision facial devices.

Open Setup > Setup Editor > **Reader**

Ref	Description	Area In	Area To	Controller	Port	U_Add...	Token Type
8	_Hikvision Virtual	Outside	Inside	zController 4	2		02 Wiegand 30

Select a reader that is not linked to a physical controller in the system and set a user-friendly name.
This name will be selected for events in the Event Setup menu at a later stage of the configuration.
All other settings for the reader can be ignored.

This reader must be in the range of readers that's allowed by the software package.
e.g. if the software allows 10 readers, this reader must be a reader from Ref 1 to 10.

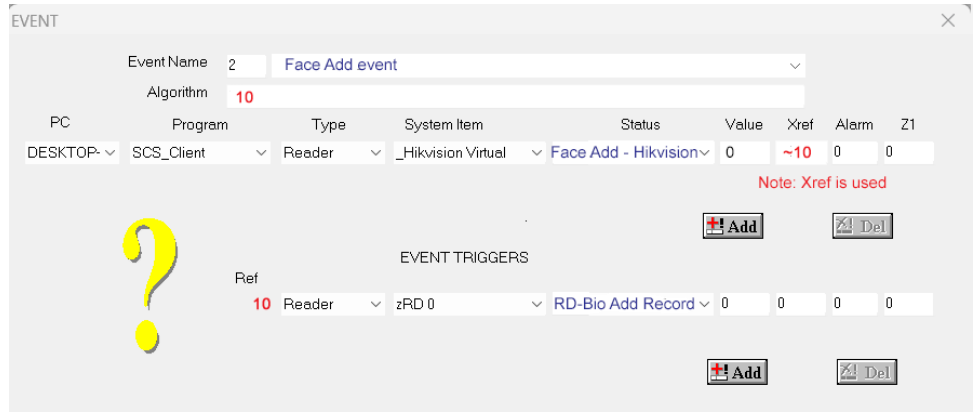
6.3 EVENT SETUP

To send images to Hikvision facial devices, four Face events must be configured in SW3.

- Add Record
- Remove Record
- dB Download
- dB Clean

These are in in the menu Setup > **Event**

Sample event: **Face Add**



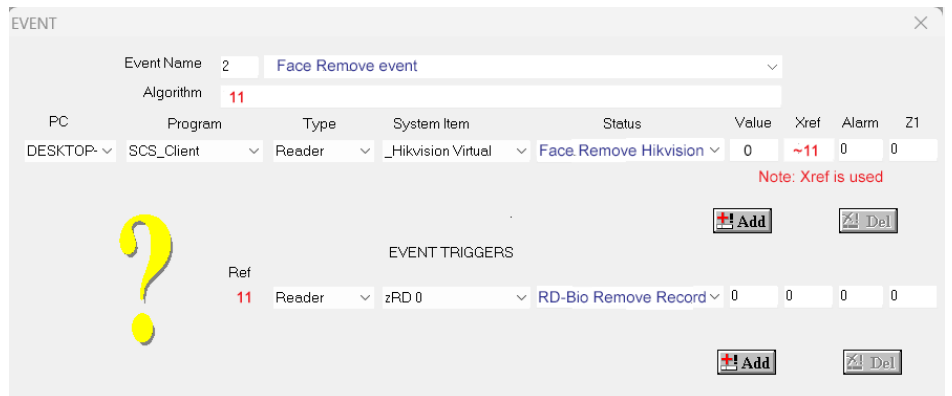
Add new EVENT TRIGGER in bottom section: Bottom section is the trigger that will trigger to section

Trigger	Description
Type	Reader must be selected for the trigger Type
System	Record 0 must be selected as the reader (zRD0)
Status	RD-Bio Add Record must be selected for the Status
Value	Must be set to 0
Xref	Must be set to 0
Alarm	Must be set to 0

Add new EVENT in top section. Top section is the event that will take place.

Event	Description
PC	Name of computer where SCS_SW3_Hikvision is running.
Program	SCS-Client must be selected. The Client program will do the work
Type	Reader must be selected.
System Item	The Hikvision virtual reader in the list must be selected (_Hikvision Virtual)
Status	Face Add Hikvision must be selected for the Status
Value	Must be set to 0
Xref	The Ref number from the bottom section with a ~ in front of the number must be inserted here (~10) This function will transfer the user's number to the top event.
Alarm	Must be set to 0

Sample event: **Face Remove**

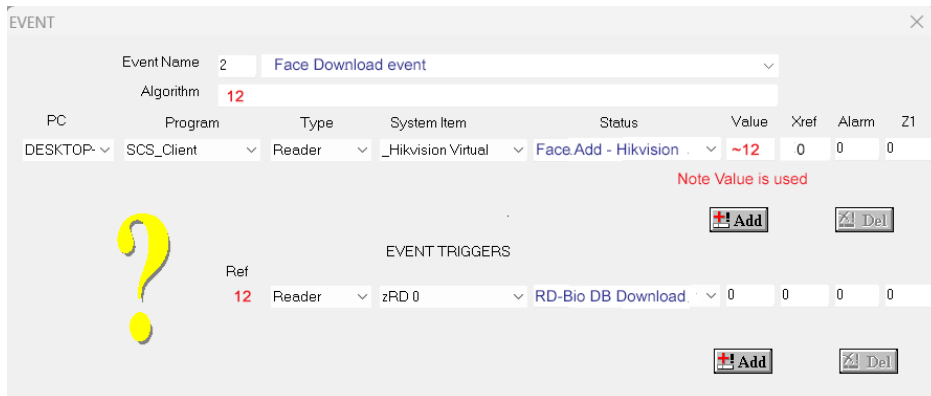


Event to Remove Face Record is the same as Add Face Record, but the *Status* for the Event and Trigger is to Remove Record

Trigger Selection	Description
Status	RD-Bio Remove Record must be selected for the Status

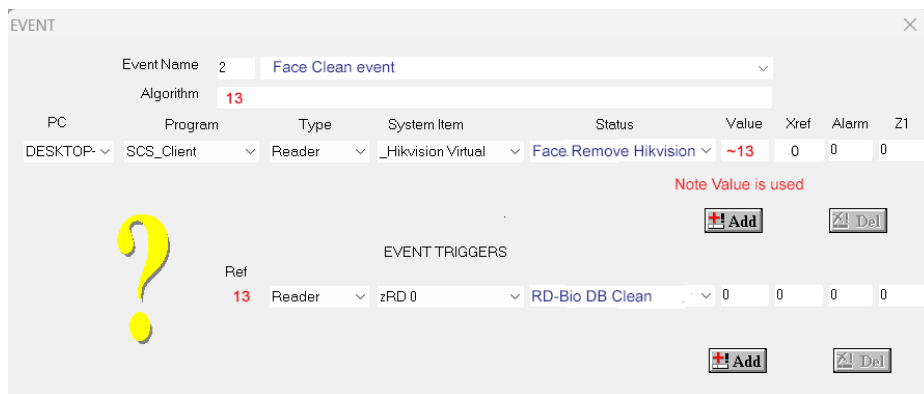
Event Selection	Description
Status	Face Remove Hikvision must be selected for the Status

Sample event: **Face Download:**



To download all faces to Facial readers, a Face Download Event must be created. This event is similar to the Add and Remove events with minor differences.

Sample event: **Face Clean:**



This event must still be implemented on the SCS_SW3_Hikvision server application as shown.

6.4 EXTERNAL LINK SETUP

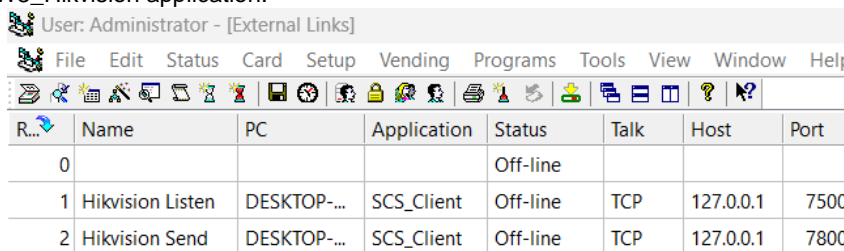
Softwin3 External link Add on license is required for Softwin3.

Two *External links* must be configured.

Link to listen for information from SCS_SW3_Hikvision application.

Link that will send command to the SCS_SW3_Hikvision application.

Sample: **External link configuration:**



PC column must be linked to name of computer where SCS_SW3_Hikvision is running.

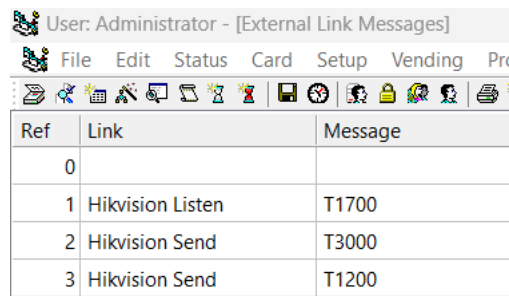
Messages must be configured for the links in the *External Link Message* menu:

T1700 – Add and Remove transactions from Softwin3.

T3000 – Reply from SCS_SW3_Hikvision server application.

T1200 – Softwin3 memory updates.

Sample: **Message:**



For more information on External link configuration see [SCS_sw3_ExternalLink.how2.pdf](#)

7 SCS_SW3_HIKVISION SETUP

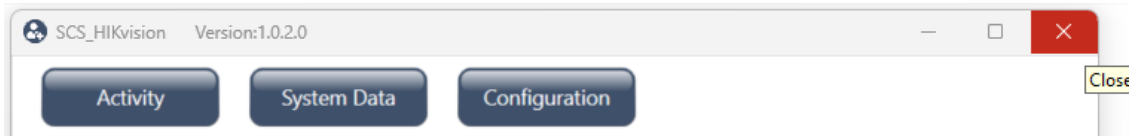
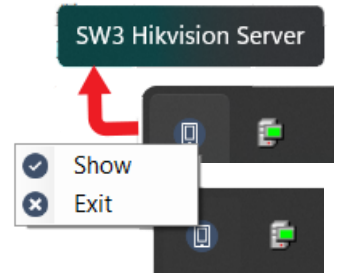
The SCS_SW3_Hikvision server program gets information from Softwin3 and sends it to the Hikvision facial devices. It must run to remove or add any images on the devices.

It runs in the background - if the program is closed, it can be accessed in the system tray.

Double-click on the icon to bring the program to the front.

Right click on the icon to open a menu to exit or show the SCS_SW3_Hikvision program.

Exit stops the SCS_SW3_Hikvision server program.



Three buttons in the menu bar will display different options.

Activity Button

This menu displays all activity that take place between Softwin3, SCS_SW3_Hikvision server and Hikvision devices.

System Data Button

Status of Hikvision devices is viewed and the selected device user information is displayed. User data cannot be changed in this menu.

All changes must be done in SW3 User menu.

This menu can also be used to add, remove or upload user data to devices.

Only users with valid images and Area Groups will be visible and can be added or removed from devices.

User Search.

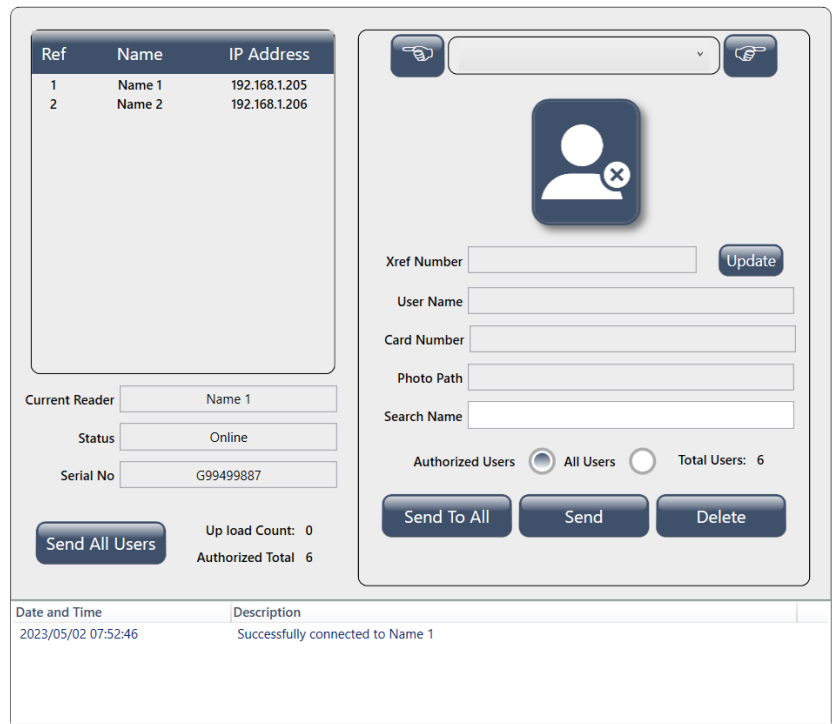
Search on Xref, User Name or Card Number is available.

Double click a field to select where to search.

Device status.

All devices configured in SW3 for Hikvision Type are displayed in the list of devices with its IP address.

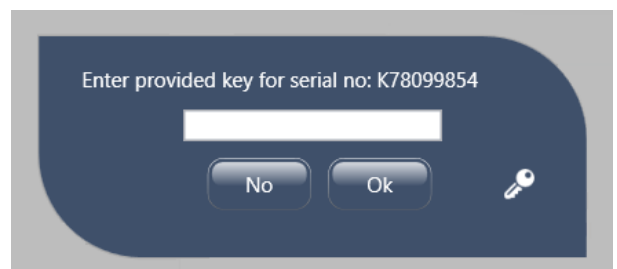
Select a device to view the status of the device.



Device Registration

If a facial capture device is not registered on the system, a registration box will pop to the front and prompt you for a license key for the device.

Serial numbers for Hikvision facial capture devices must be registered with Softcon. A minimal fee will be charged to provide a key for every serial number linked to the system. If a device is not registered with Softcon it will not function on the system.



Configuration Button

Please note:

This page allows users to adjust settings post-installation.

SW3 Database Type

Microsoft Access and SQL are available.

Softwin3 Configuration

- **SW3 Virtual Reader:**
The purpose of this setup is to allow users to specify which virtual reader the Hikvision software should interact with. This selection might affect how the software processes data or communicates with external devices.
- **Auto download face:**
This option is only available if Softwin3 Version 1.04.63 is used. When user data is changed, e.g. Area Group changed, the system will automatically update all Hikvision facial readers with the new information.

The screenshot shows the configuration interface for Softwin3. It is divided into four sections:

- Softwin3 Database Type:** Radio buttons for 'SQL Database' (unselected) and 'Access database' (selected).
- Softwin3 Configuration:** A dropdown menu for 'SW3 Virtual Reader' set to 'Hikvision Virtual Reader' and an 'Auto download face' radio button (unselected).
- Softwin3 External Link:** Input fields for 'Listen to SW3 IP' (127.0.0.1), 'Receive from SW3 Port' (7500), 'Send to SW3 IP' (127.0.0.1), and 'Send to SW3 Port' (7800).
- Hikvision Application:** Input field for 'Hikvision Port Comms' (8000), radio buttons for 'Use 26Bit Format' (selected) and 'Use 34Bit Format' (unselected), and radio buttons for 'Show application on startup' (selected) and 'Hide application on startup' (unselected).

External Link Communication

- The port numbers that are set for receiving and sending data, must match the port numbers configured in the SW3 External Link setup. This ensures proper communication and data exchange between Softwin3 and the SCS_Hikvision system.
- When setting IP addresses for the SCS_Hikvision Client program to communicate with components on the same local computer, use the IP address **127.0.0.1**.

Hikvision Application

- **Hikvision Port Comms:**
Comms port for all Hikvision devices must be set to **8000**. This port must also be configured on all devices.
- **26Bit or 34Bit:**
The system needs to send data in a specific Wiegand output format to the Hikvision facial reader. This will ensure proper communication between the facial reader and the controller.

8 HIKVISION FACIAL DEVICE CONFIGURATION

T & A The T & A option must be disabled on the unit.

User Name Set to “*admin*”

Password Set to “*qwerty123*” on all the devices that is linked with SCS_SW3_Hikvision

Communication

Wiegand Settings

Direction for Wiegand option must be set to Output.
Mode can be selected between 26Bit and 34Bit – (34Bit recommended).

Wired Network

DHCP option must be disabled.
IPv4 Address is the IP address of the device and must be configured with it's subnet mask.

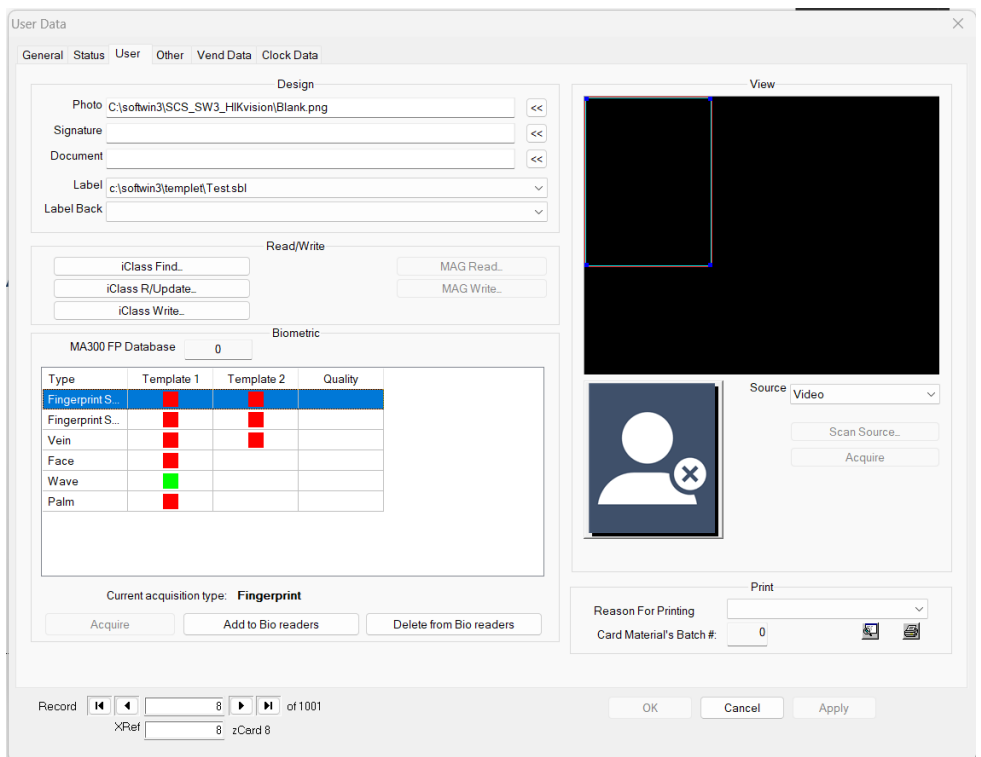
9 SW3 FACIAL CAPTURE PROCEDURES

Before a user's face data can be downloaded to the devices, an image must be captured of the user's face in the properties screen of the user's data in Softwin3 or on the SCS_Hikvision client application. (See Menu Item 10 below)

Two options for sending facial data to Hikvision facial devices are available.

9.1 USER DATA PROPERTIES SCREEN

In the properties screen under the Card tab of the user's data a *FP Add* and *FP Remove* button will be visible.



The location of the buttons vary for different Sotwin3 versions. For these buttons to be active, the Hikvision Templet box must be green.



FP Add Button

Transfers the users face data to all devices where the user has access according to the users Area Group and/or Multi group. If a user had access at a device before the add button process, the system will automatically remove the data from the device if the user doesn't have access to the device anymore.

FP Delete Button

Removes the user from all Hikvision devices in the system.

9.2 BIO READER SETUP MENU

All valid face data can also be downloaded to a device in the Bio Reader Setup.

FP Download DB

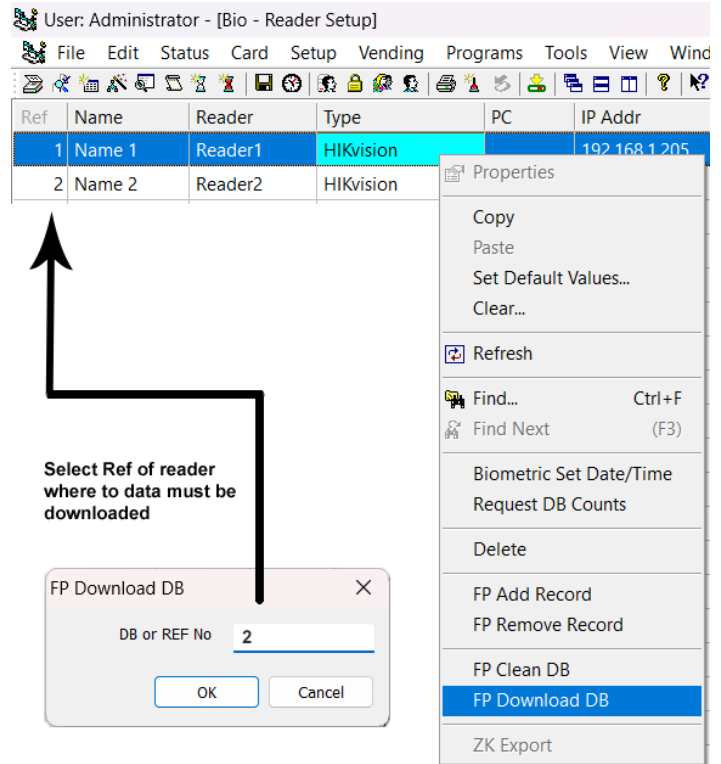
Right click on any device that is configured for Hikvision type and select the *FP Download DB* option.

A FP Download DB Dialog box will appear. Enter the Ref number of the device that requires a database download.

Face data of all valid users will be downloaded to the device.

FP Clean DB

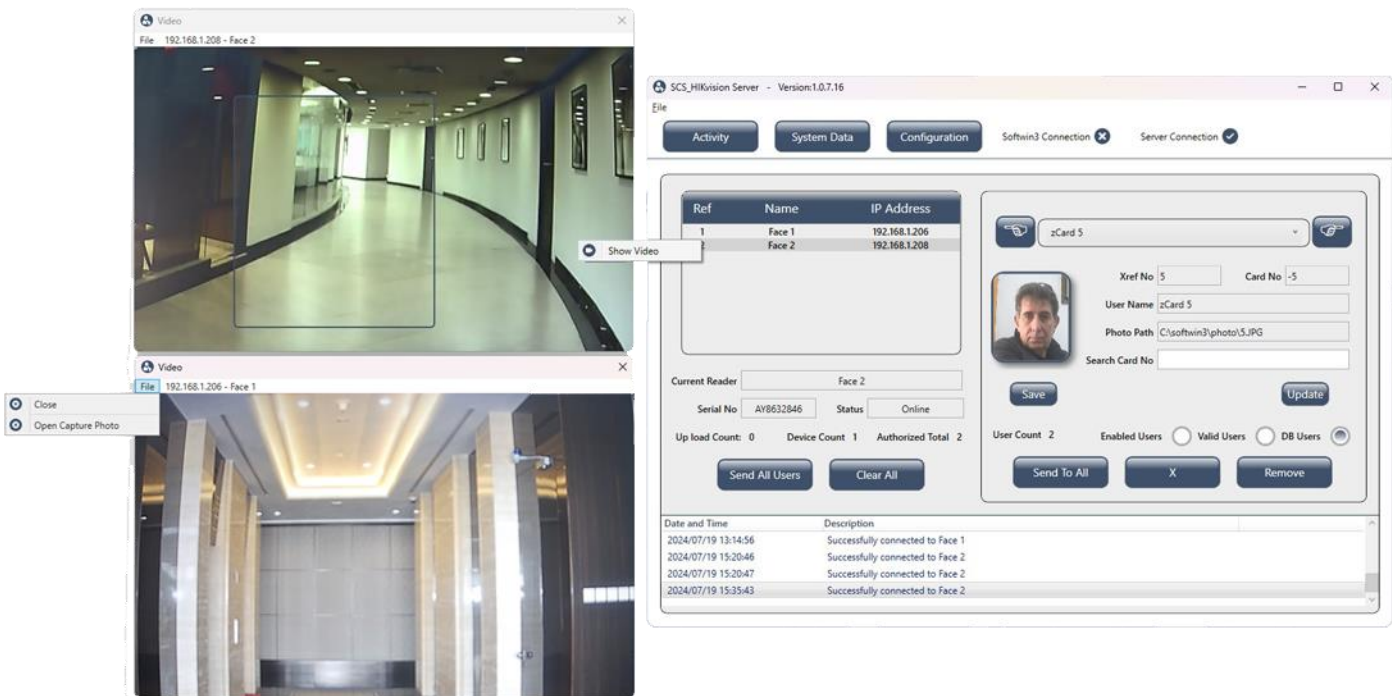
All data will be cleared from the device of the selected Ref no. (*Not operational yet*)



10 LIVE VIDEO AND FACIAL CAPTURE ON HIKVISION DEVICES

10.1 VIEW LIVE VIDEO FROM FACIAL CAPTURE DEVICE

Live video from the facial capture devices can be accessed by right clicking on a device in the device list. If the device is online the **Show Video** menu displays the video stream from the device. Multiple live video screens can be opened at the same time.



10.2 PHOTO CAPTURE FROM FACIAL RECOGNITION DEVICE

To capture photos for facial recognition from live video:

- Select the persons detail in the Hikvision application.
- Move the capture frame by holding left mouse button down, around the person's face. Only one of the live screens will display the capture frame. It can be opened on any live screen by selecting **Open Capture Frame** under the **File** menu on the live video screen.
- A mouse double click action in the capture frame captures the photo. The photo must be saved before it can be sent to a device for facial recognition. The **Save** button under the photo saves the image on the computer. It is automatically sent to other computers that's running the Hikvision application,

