

Suprema Integration with Paxton Net2

ADMINISTRATOR GUIDE

Version 1.03 English

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Target Audience

This document describes the integration between Suprema biometric devices and Paxton Net2 Access Control system using the Suprema Integration with Paxton Net2.

This document is intended for OEM Clients. The OEM Clients require basic knowledge of the Paxton Net2 and Suprema biometric devices.

Introduction

Features

Suprema Integration with Paxton Net2 is a middleware that allows the Paxton Net2 Access Control System to communicate with the Suprema biometric devices, which can register a variety of credentials to users from the Net2, and to manage connected devices. With Suprema Integration with Paxton Net2, you can easily setup and build the Biometric Management System for the Net2 using Suprema biometric devices.

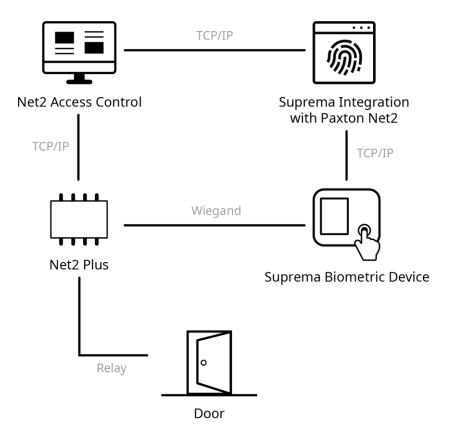
Suprema Integration with Paxton Net2 provides the following features.

- Enable Biometrics: Not only the RFID cards and PINs but also fingerprints and face as credentials.
- **Easy User Management**: No need to register or manage users separately because user data on Net2 Access Control system is synchronized in real time.
- Easy Enrollment and Management: Allows to register the user's credentials directly from the device.
- Enterprise-level Configuration: Allows to connect and manage up to 1,000 Biometric Devices.

NOTE

• For more details on the functionality of Paxton Net2 access control system, see the user manuals for Net2.

System diagram



Installation

System Environment

Suprema Integration with Paxton Net2 operates normally in the same system environment as Paxton Net2. You can find the minimum system requirements for Paxton Net2 at https://www.paxton-access.com/systems/net2/access-control-software/net2-software-compatibility-and-support/. Check the support conditions before installing the Suprema Integration with Paxton Net2.

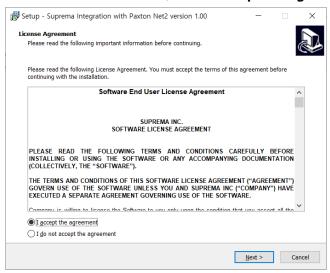
Compatible Systems and Devices

- Operating System
 - Microsoft Windows 8 or later
- Paxton Net2 Access Control
 - V6.01.8319.4827
- Suprema Biometric Device
 - FaceStation F2, FaceStation 2, FaceLite, BioStation 2, BioStation A2, BioStation L2, BioLite N2, BioEntry W2, BioEntry P2
- USB Fingerprint Scanner
 - BioMini Plus 2

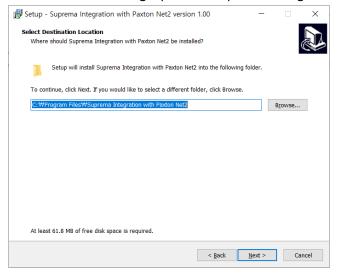
Installing the Suprema Integration with Paxton Net2

NOTE

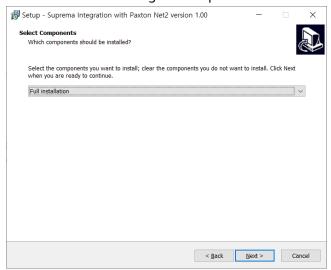
- This section describes how to install the Suprema Integration with Paxton Net2. For more details on the installation of the Paxton Net2 System, see the manuals for the Net2.
- 1 Run the downloaded setup program. (ex. 'Setup.for.suprema.integration.with.paxton.net2.x64.x.xxxx')
- **2** To continue the installation, select **I accept the agreement** and click **Next**.



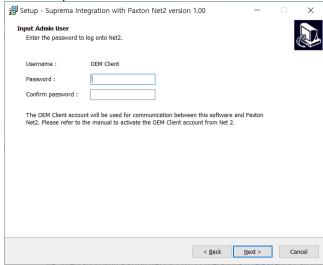
3 Click **Next** after setting a path for Suprema Integration with Paxton Net2 to be installed.



4 Click **Next** after selecting the components to install.



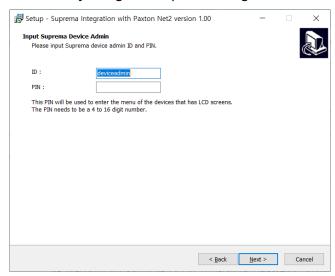
5 Enter the password for OEM Client account and click **Next**.



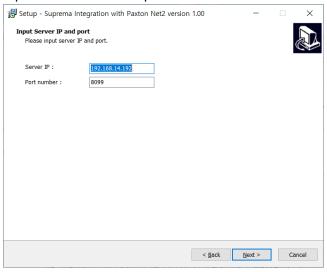
NOTE

• The OEM Client account must be set up to sync user information stored in Net2 Access Control. Activate the OEM client account by referring to Activate the Paxton Net2 OEM Client.

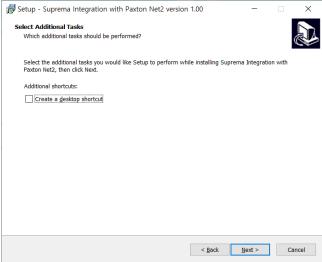
6 Enter the Suprema device admin ID and PIN, and then click **Next**. The ID and PIN set in this step will be used when you log in to Suprema Integration with Paxton Net2 or to access the devices.



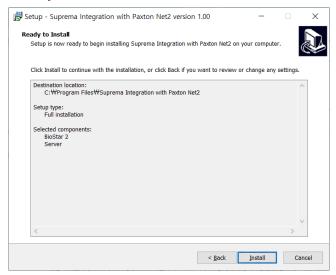
7 Input the server IP and port number.



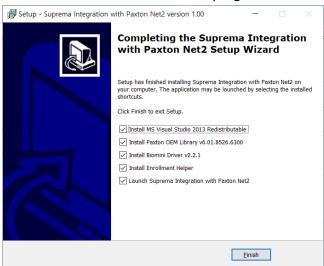
8 To create a shortcut on the desktop, select **Create a desktop shortcut** and click **Next**.



9 If ready to install, click **Install**.



10 Select whether to install additional program and click **Finish**.



NOTE

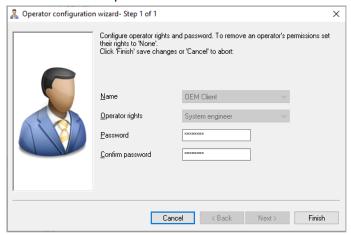
• If you install the Enrollment Helper, you can also enroll fingerprints by opening a window for fingerprint enrollment directly from the Net2 Access Control system. For more information on the Enrollment Helper, refer to Enrollment Helper Client.

Getting started

Activate the Paxton Net2 OEM Client

In order to use Suprema Integration with Paxton Net2, you must first activate the OEM Client on Paxton Net2.

- 1 Run Net2 Access Control.
- 2 Click Net2 operators and double-click OEM Client.
- **3** Enter the desired password in the **Password** and **Confirm password** field.



4 Click **Finish** to activate the OEM Client.

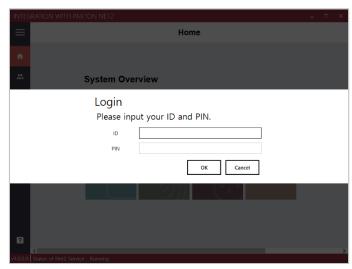
NOTE

• For more details on the Net2 Access Control system, see the manuals for the Net2.

Login

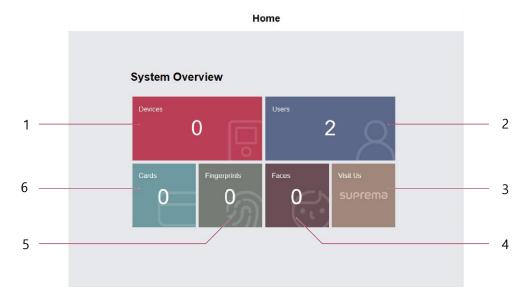
Log in with the device administrator account.

The ID is 'deviceadmin', and PIN is the password you set when you installed Suprema Integration with Paxton Net2.



Home

The **Home** menu is the starting point for accessing all menus of the Suprema Integration with Paxton Net2. You can also check the number of registered devices, users, faces, fingerprints, and cards.

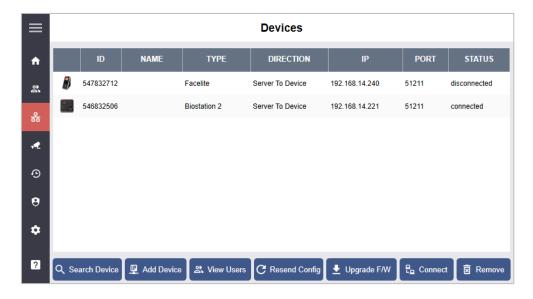


1	You can view the number of connected devices.	4	You can view the number of registered faces.
2	You can view the number of registered users.	5	You can view the number of registered fingerprints.
3	You can access the Suprema website.	6	You can view the number of registered cards.

Devices

Devices Overview

You can use the Devices menu to add, delete or edit registered devices, fetch the user information registered within the device to the server or upgrade the firmware.



- **Search Device**: You can search for devices connected to Suprema Integration with Paxton Net2 and register them.
- Add Device: You can add a device by entering the IP of the device.
- View Users: You can see a list of users stored on devices.
- Resend Config: You can apply device settings configured in the Settings menu to devices.
- **Upgrade F/W**: You can upgrade the device's firmware.
- Connect: You can reconnect the selected device to the Suprema Integration with Paxton Net2.
- Remove: You can remove the selected device from the Suprema Integration with Paxton Net2.

Adding the Device (from the Server)

Search and Registration

You can automatically search for devices connected to Suprema Integration with Paxton Net2 and register them. Before searching for devices, check whether they are correctly connected. When adding multiple devices at once, it will be more convenient to know the ID, Type and IP address information of each device in advance.

- 1 Click & to move to the **Devices** menu.
- **2** Click **Search Device**. All available devices will appear.



3 Select the device to connect and click **REGISTER**.

Enter the Device IP

You can add a device by entering the IP of the device.

- 1 Click & to move to the **Devices** menu.
- 2 Click Add Device.
- **3** Enter the IP of the device to register and click **Okay**.



4 Click Okay.

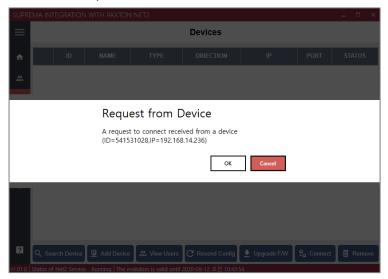
NOTE

• Up to 1,000 biometric devices can be connected.

Adding the Device (from the Device)

You can send a connection signal from the device to Suprema Integration with Paxton Net2 with the input information directly. The steps may vary depending on the device you use. For more details, refer to the manual. In this section, BioStation A2 is in use.

- 1 On the device, press == > **NETWORK**.
- **2** Press **Server** and activate **Device -> Server**.
- **3** Enter the IP address on **Server IP**. The device will automatically request the connection to the server.
- 4 On the server, press **OK**.

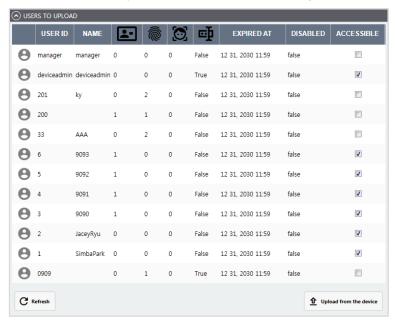


The device is added on the list.

Upload Users Registered from Devices

You can view the list of users stored on the device and import the users to the server.

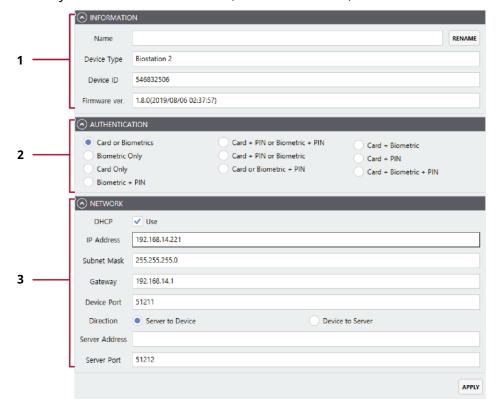
- 1 Click & to move to the **Devices** menu.
- **2** Click a device to view the list of users.
- **3** Select all users to upload to the server and click **Upload from the device**.



Editing Device Settings and Information

You can edit detailed information of registered devices.

- 1 Double-click the device to edit. Or, Right-click on the device and click **Config Device**.
- **2** Edit the necessary fields of the INFORMATION, AUTHENTICATION, and NETWORK.



No.	Item	Description
	INFORMATION	You can edit the name of the device or see the device information.
		Name: Enter a device name.
1		Device Type: View the device type.
		Device ID: View the device ID.
		Firmware ver.: View the kernel version.
2	AUTHENTICATION	You can configure the authentication modes of the device.
	NETWORK	You can configure the connection settings.
		DHCP: Select this option to allow the device to use a dynamic IP address.
		IP Address: Enter network settings of the device.
		Subnet Mask: Enter network settings of the device.
3		Gateway: Enter network settings of the device.
		Device Port: Enter a port to be used by the device.
		Direction: Select the direction.
		Server Address: Enter the IP address of the Suprema Integration with Paxton Net2 server.
		Server Port: Enter the port number of the Suprema Integration with Paxton Net2 server.

3 Click **APPLY** to save the settings.

Resend Configuration

You can apply device settings configured in the **Settings** menu to devices.

NOTE

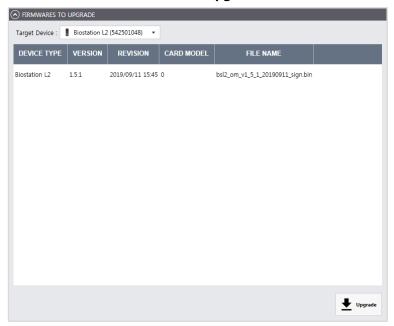
- · Make sure that Global Device Configuration is set up correctly before running Resent Config.
- 1 Click & to move to the **Devices** menu.
- Click a device to apply settings and click Resend Config.
 If you click Resend Config with nothing selected, the settings are applied to all devices.

Upgrade F/W

You can easily upgrade the firmware on any device connected to Suprema Integration with Paxton Net2 without any additional connection or action.

Copy the firmware files that you have downloaded to the following folder. If the folder does not exist, you need to create it.

- 1 Click & to move to the **Devices** menu.
- 2 Select a device and click **Upgrade F/W**.
- **3** Select the firmware file and click **Upgrade**.



Connect Device

You can reconnect the selected device from the Suprema Integration with Paxton Net2.

- 1 Click & to move to the **Devices** menu.
- **2** Select devices to reconnect and click **Connect**.

Remove Device

You can delete the selected device from the list.

- 1 Click & to move to the **Devices** menu.
- **2** Select devices to delete and click **Remove**.

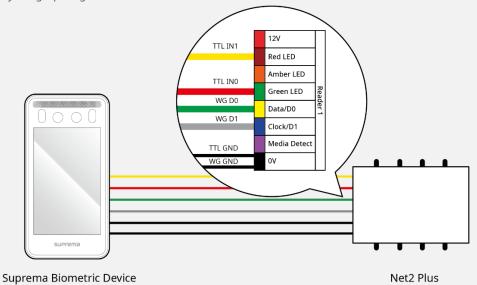
Other Settings

You can reboot or reset to factory default by selecting individual devices. You can also edit other settings, such as a lock or unlock the device.

- 1 Click & to move to the **Devices** menu.
- **2** Right-click the device for which you want to edit the settings.
- **3** Select and set the item to edit.
 - **Rename**: You can change the device name.
 - Resync: Delete all user data in the device and send the user data of the server.
 - Reboot: You can restart the device.
 - Here I am: You can check the location of the device by making a sound on the selected device.
 - Lock: You can lock the device. When a device is locked, the user cannot authenticate on that device.
 - Unlock: You can unlock the device.
 - All alarms off: You can turn off all alarms on the device.
 - Factory Reset: You can delete all data and root certificate on the device and reset the settings. The network settings will not be reset.
 - Delete All Users: Delete all user data.
 - **Device Config**: You can edit the device settings.

NOTE

• It is possible to light up a LED status indicator or display a message on Suprema's devices when the access is granted or denied by using input signals.



To use this feature, you must upgrade the firmware included in the setup package and deselect the **Display reader LED's in OEM style (not nano's)** option.

1. Click Start > All programs > Net2 Access Control > Net2 Configuration Utility.

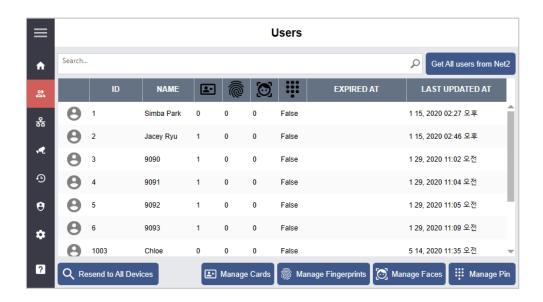


- 2. Click General and deselect Display reader LED's in OEM style (not nano's).
- 3. Click **Apply** to save the setting.

Users

Users Overview

The list of users registered in the Paxton Net2 Access Control system is automatically synchronized to Suprema Integration with Paxton Net2. Also, if the users are deleted or registered in the Paxton Net2 Access Control system, the revised list is automatically synchronized in real-time to Suprema Integration with Paxton Net2. You can register various credentials by selecting a user from the **Users** menu in Suprema Integration with Paxton Net2.

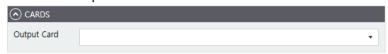


- **Search...**: You can search for users by entering the user name or ID.
- Get All users from Net2: You can manually import user data stored in the Net2 Access Control system.
- **Resend to All Devices**: You can send users to all devices connected to Suprema Integration with Paxton Net2.
- Manage Cards: You can select the card value to communicate with Net2 via Wiegand.
- Manage Fingerprints: You can add, edit, or delete a user's fingerprint template.
- Manage Faces: You can add, edit, or delete a user's face template.
- Manage Pin: You can add, edit, or delete a user's Pin.

Select Card

When a user authenticates with a biometric credential on the device, Suprema Integration with Paxton Net2 sends that user's card ID to Paxton Net2 via Wiegand. Select the card you want to send to Net2.

- 1 Add users on the **Net2 Access Control** system.
- 2 Click at to move to the Users menu.
- 3 Select users and click Manage Cards.
- **4** Select the output card.



5 Click **APPLY** to save the settings.

Enroll Pin

- 1 Add users on the **Net2 Access Control** system.
- 2 Click 🕰 to move to the Users menu.
- **3** Select users and click **Manage Pin**.
- **4** Enter a PIN to use.



5 Click **APPLY** to save the settings.

Enroll Fingerprint

In Suprema Integration with Paxton Net2 server, you can enroll user's fingerprints by selecting the device or USB fingerprint scanner. Or, you can also select the user on the device with an LCD display to enroll the fingerprint directly.

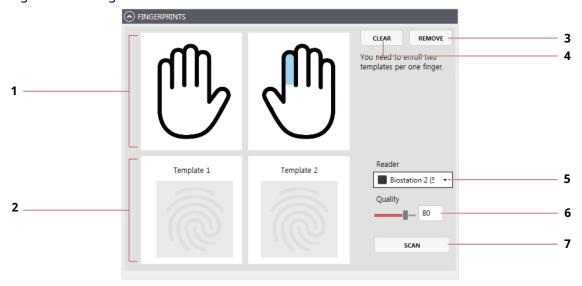
Whether you enroll the fingerprint on a server or on a specific device, that user's information is synchronized in real time on all devices connected to Suprema Integration with Paxton Net2.

NOTE

- You can register up to 10 fingerprints per user.
- If the fingerprint authentication rate is low, delete the existing fingerprint information and add a new fingerprint.
- For best fingerprint scanning quality, make sure to cover the entire surface of the fingerprint sensor with the finger. We recommend using the index finger or the middle finger.

Server

- 1 Add users on the **Net2 Access Control** system.
- 2 Click 🕰 to move to the Users menu.
- 3 Select a user and click Manage Fingerprints.
- **4** Configure the settings.



No.	Item	Description	
1	Finger Selection	Select a finger from image to enroll a fingerprint.	
2	Fingerprint Image	This section shows the analysis of the fingerprint enrolled. Template 1 Template 2	
3	Remove	Delete a selected fingerprint template.	
4	Clear	Delete all registered fingerprints templates.	
5	Reader	Select a device or USB fingerprint scanner to enroll the fingerprint with. NOTE Only devices connected to Suprema Integration with Paxton Net2 are displayed in the Reader list. Register the device first by referring to Search and Registration and then enroll fingerprints.	
6	Quality	Select a fingerprint enrollment quality level. Any fingerprint which does not meet the quality requirement will not be enrolled.	
7	Scan	Click SCAN and then place a finger on the fingerprint scanner or the device sensor.	

5 Click **APPLY** to enroll the fingerprint.

Device

NOTE

- This section uses the BioStation A2 as an example. The user interface such as the name of functions and the shape of icons may be different for each device.
- For how to register the fingerprint of each device, refer to the user guide of the device.
- 1 Add users on the **Net2 Access Control** system.

You can view the added user in the user list of the device connected to Suprema Integration with Paxton Net2.

- **2** On the device, press **and** authenticate with the Admin level credential.
- **3** Press **User** and select a user to add a fingerprint.
- **4** Press **/** and **Fingerprint**.
- **5** Press \blacksquare and enroll the fingerprint. Scan the fingerprint of a finger you wish to enroll, and then scan the fingerprint of the same finger again.

Enroll Face

In Suprema Integration with Paxton Net2 server, you can enroll user's face by selecting the device. Or, you can also select the user on the device with an LCD display to enroll the face directly.

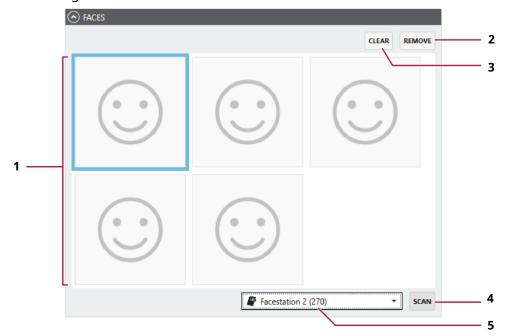
Whether you enroll the face on a server or on a specific device, that user's information is synchronized in real time on all devices connected to Suprema Integration with Paxton Net2.

NOTE

- You can register up to 5 face templates per user. On FaceStation F2, you can register up to 2 face templates per user.
- If the face authentication rate is low, delete the existing face information and add a new face.
- When registering a face, maintain a distance of 40cm to 80cm between the device and the face.
- Be careful not to change the facial expression. (smiling face, drawn face, wink, etc.)
- If you do not follow the instructions on the screen, the face registration may take longer or may fail.
- Be careful not to cover the eyes or eyebrows.
- Do not wear hats, masks, sunglasses or eyeglasses.
- Be careful not to display two faces on the screen. Register one person at a time.
- It is recommended for a user wearing glasses to register both faces with and without glasses.

Server

- 1 Add users on the **Net2 Access Control** system.
- 2 Click at to move to the **Users** menu.
- **3** Select a user and click **Manage Faces**.
- **4** Configure the settings.



No.	Item	Description
1	Face Image	Select the face.
2	Remove	Delete the selected face template.
3	Clear	Delete all registered face templates.
4	Scan	Click SCAN and then follow the instructions on the device screen to scan.

5	Device	Select a device to enroll the face with.
_	201.00	

5 Click APPLY to enroll the face.

Device

NOTE

- This section uses the FaceLite as an example. The user interface such as the name of functions and the shape of icons may be different for each device.
- For how to register the face of each device, refer to the user guide of the device.
- 1 Add users on the **Net2 Access Control** system.

You can view the added user in the user list of the device connected to Suprema Integration with Paxton Net2.

- **2** Press **ESC** and authenticate with the Admin level credential.
- **3** Select **USER** > **Search User** and press **OK**.
- **4** Select a user to add a face.
- 5 Press Edit > OK and select Face > OK.
- 6 Press + Add Face > OK.
- **7** Register a face according to the instructions on the screen.
- **8** Press **Apply** to enroll the face.

Resend to All Devices

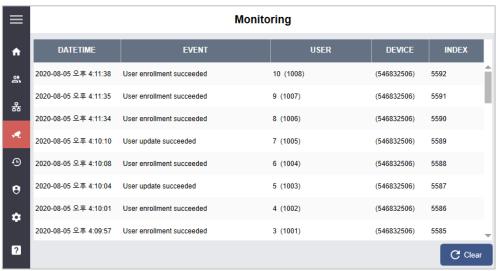
You can send users to all devices connected to Suprema Integration with Paxton Net2.

- 1 Add users on the **Net2 Access Control** system.
- 2 Click at to move to the Users menu.
- **3** Select users to send and click **Resend to All Devices**.
- **4** Check the list of users on the device.

Monitoring

You can use the Monitoring menu to view lists of events that occurred on device.

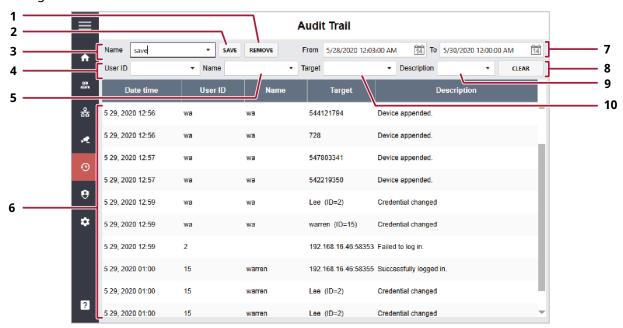
- 1 Click **t** to move to the **Monitoring** menu.
- 2 Check the list of events. Click **Clear** to refresh the list of events.



Audit Trail

Audit trail tracks user access information as well as all the information changed in the system. You can set a filter for each item for sorting.

- 1 Click **9** to move to the **Audit Trail** menu.
- **2** Configure the filters.

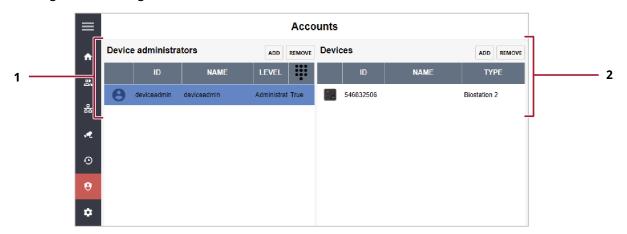


No.	Item	Description
1	REMOVE	You can remove the applied filter. Click REMOVE to remove the filter.
2	SAVE	You can set conditions for each filter item. Click Save to save the filter.
3	Name	If the filter is already saved, you can select the filter to sort the audit trail list.
4	User ID	You can select the user ID to sort the audit trail list.
5	Name	You can select the name to sort the audit trail list.
6	Audit List	Shows the audit list.
7	Period	You can set the period to sort the audit trail list.
8	CLEAR	You can clear the set filter.
9	Description	You can select the description to sort the audit trail list.
10	Target	You can select the target to sort the audit trail list.

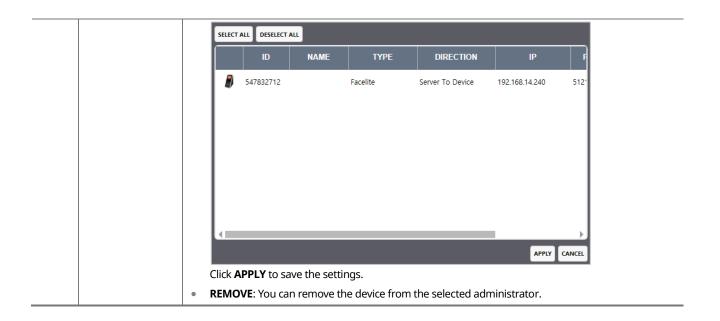
Accounts

You can assign administrator account levels to registered users.

- 1 Click 9 to move to the **Accounts** menu.
- **2** Configure the settings.



No.	Item	Description
1	Device administrators	A list of administrators registered with Suprema Integration with Paxton Net2 is displayed. If the pin is set in the administrator account, the administrator can log in directly to Suprema Integration with Paxton Net2. • ADD: You can assign the administrator level by selecting a user. Select an account level type, then click on the user to whom you want to assign that level. Device operator Device Operator: If a PIN is registered with the user, the user can log in to Suprema Integration with Paxton Net2. Also, users can register user accounts in the client system and configure device settings by accessing devices. - User Operator: If a PIN is registered with the user, the user can log in to Suprema Integration with Paxton Net2. Also, users can register user accounts in the client system and enroll users in devices. - REMOVE: You can remove an administrator.
2	Devices	The list of devices that can be managed by the user selected in the Device administrator list is displayed. • ADD: You can add devices to the selected administrator.

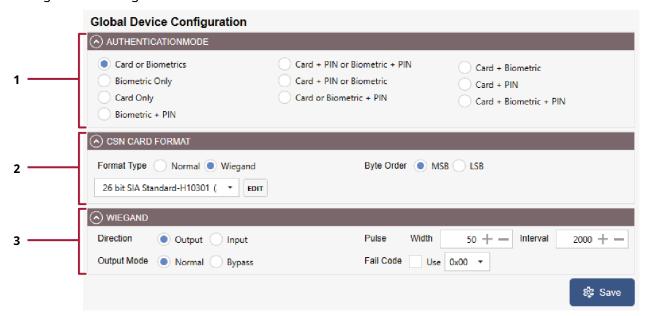


Settings

Global Device Configuration

You can edit detailed setting of registered devices.

- 1 Click to move to the **Settings** menu.
- **2** Configure the settings.



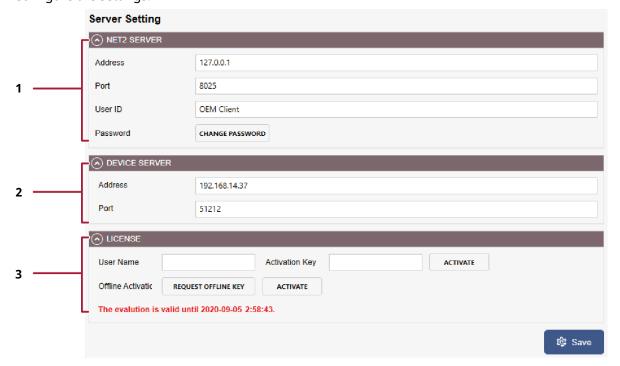
No.	Item	Description
1	Authentication Mode	You can configure the authentication modes of the device. Suprema Integration w ith Paxton Net2 can use any combinations of biometric credentials, card, and PIN as authentication modes.
	CSN Card Format	You can set the CSN card format used by the device.
2		 Format Type: If Format Type is set to Normal, the device will read the card serial number (CSN). If the option is set to Wiegand, the device will read the card serial number in a Wiegand format that the user has defined.
		If Format Type is set to Wiegand , you can set the Wiegand format to be used in the device. Click EDIT to edit the Wiegand format.
		You can configure the number of bits and rules for the Wiegand format directly in Suprema Integration with Paxton Net2, as in Net2 Access Control.
		 Byte Order: When Byte Order is set to MSB, the device reads a card ID from the highest byte to the lowest byte. When the option is set to LSB, the device reads a card ID from the lowest byte to the highest byte.
	Wiegand	You can define the Wiegand Input/Output.
		Direction: You can select input/output mode.
		• Pulse Width: You can set the pulse width of the Wiegand signal.
		• Pulse Interval : You can set the pulse interval of the Wiegand signal.
3		 Output Mode: You can set the Wiegand signal output mode. If it is set to Normal, a card will be scanned in the set Wiegand format. If it is set to Bypass, CSN will be sent regardless of Wiegand authentication. Bypass should be set when using the device without an entrance door control function.
		If it is set to Normal mode, it is possible to set Fail Code , and select a value to be transmitted when Wiegand card authentication fails.

³ Click **Save** to save the settings.

Server Setting

You can set up the network for connecting with Net2 Access Control and devices. You can also activate the purchased license.

- 1 Click to move to the **Settings** menu.
- **2** Configure the settings.



No.	Item	Description
		Address: Enter the IP address of the Net2 Access Control server.
		Port: Enter the port number of the Net2 Access Control server.
1	Net2 Server	User ID: Enter the operator ID of Suprema Integration with Paxton Net2.
		 Password: If you changed the password of the OEM Client in Net2 Access Control, click CHANGE PASSWORD to enter the changed password.
	Davies Commun	Address: Enter the IP address to be used by the device.
2	Device Server	Port: Enter the port number to be used by the device.
	License	User Name: Enter the user name.
		 Activation Key: Enter the activation key that you've received from the Suprema local distributor.
		NOTE
3		 To activate the license online, click ACTIVATE after entering your name and the activation key. To activate the license offline, click REQUEST OFFLINE KEY.
		 You can find contact details of your local distributor on the Suprema website (https://www.supremainc.com/en/wheretobuy/list.asp).
		The valid date of the evaluation will be shown in LICENSE.

3 Click **Save** to save the settings.

Enrollment Helper Client

The Enrollment Helper provides an enrollment window for fingerprints and faces on the Net2 Access Control system. If you install the Enrollment Helper, you can enroll fingerprints and faces by opening a window for enrollment directly from the Net2 Access Control system.

NOTE

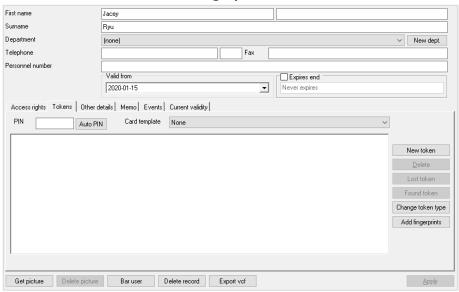
You can choose whether to install the Enrollment Helper when you install the Suprema Integration with Paxton Net2.

Enroll Credentials with Enrollment Helper

You can enroll fingerprints and faces for both existing and new users.

Enroll Credentials to Existing User

- 1 Run Net2 Access Control.
- 2 Click **Users** menu and select the user to enroll fingerprints or faces on the user list.
- 3 Click **Tokens** and then click **Add fingerprints**.

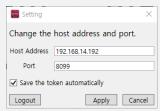


4 Click **Login** after entering the User ID and PIN.



NOTE

- A user can login with an account that has the administrator permission for Suprema Integration with Paxton Net2.
- Click Setting to change the host Address and port. And you can also choose whether to save tokens automatically. If
 you select Save the token automatically option, the automatically generated token will be registered in the Paxton
 Net2 system.



5 Enroll fingerprints by referring to Enroll Fingerprint. Or, Enroll faces by referring to Enroll Face.



NOTE

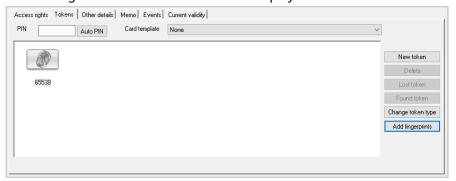
The user name and the value of the automatically generated token are displayed on the enrollment window.



Token values can be changed, but we recommend that you use auto-generated values to prevent duplicate values from being generated.

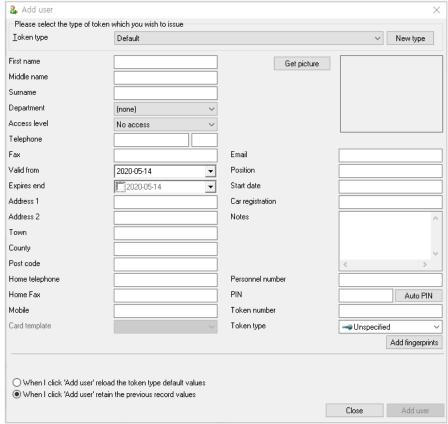
6 Click **Add user** to save the settings.

The token generated for the credential is displayed on the Tokens tab.

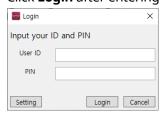


Enroll Credentials to New User

- 1 Run Net2 Access Control.
- 2 Click **Users** menu and double-click **New user**.
- 3 Enter the user information to add and click Add fingerprints.

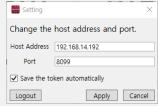


4 Click **Login** after entering the User ID and PIN.



NOTE

- A user can login with an account that has the administrator permission for Suprema Integration with Paxton Net2.
- Click **Setting** to change the host Address and port. And you can also choose whether to save tokens automatically. If you select **Save the token automatically** option, the automatically generated token will be registered in the Paxton Net2 system.





5 Enroll fingerprints by referring to Enroll Fingerprint. Or, Enroll faces by referring to Enroll Face.

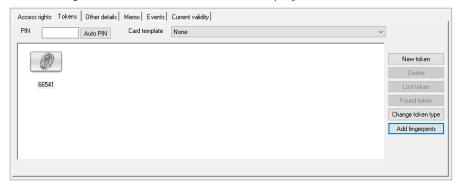
NOTE

• The user name and the value of the automatically generated token are displayed on the enrollment window.

| Name : Chloe | Token | 66541 | |

Token values can be changed, but we recommend that you use auto-generated values to prevent duplicate values from being generated.

6 Click Add user to save the settings.
The token generated for the credential is displayed on the Tokens tab.



Appendices

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google/uuid

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gorilla/websocket

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