

# BioStation 3

## USER GUIDE

English  
EN 102.00.BS3.00

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# Safety Precautions

To prevent risks and damage to users' property, make sure to read this manual before using the product for safe and correct use.

The term 'product' in this manual refers to the product and any components provided with the product.

## Instructional icons



**Warning:** This symbol is used to display warnings about violations of product use that may potentially cause serious damage or death.



**Caution:** This symbol is used to display warnings about violations of product use that may potentially cause minor damage or damage to the product.



**Note:** This symbol is used to provide notes or additional information on the use of the product.



## Warning

### Installation

**Do not install or repair the product arbitrarily.**

- This may cause fire, electric shock or injuries.
- If the product is damaged by the user's attempt to install or repair the product, the product repair service will not be provided for free.

**Do not install the product in a place with direct sunlight, moisture, dust, soot, or a gas leak.**

- This may cause fire or electric shock.

**When installing the product in an outdoor place, make sure to install it in a shaded and well-ventilated area.**

**When installing the product in an outdoor place, do not enclose it in a sealed box.**

- The temperature inside the box may rise due to direct sunlight and cause fire, electric shock or product damage.

**Do not install the product in a place where heat is generated by an electric heater, etc.**

- This may cause fire or electric shock due to overheating.

**Do not install the product in a place that is humid or wet.**

- The humidity may cause an electric shock or damage the product.

**Do not install the product in a place with electromagnetic interference.**

- This may cause an electric shock or damage the product.

### Operation

**Ensure that liquids such as water, beverages, medication, etc. do not permeate into the product.**

- This may cause fire, electric shock or product damage.

**Do not use a damaged power adapter or plug or a loose power socket.**

- Unstable connections may cause fire or electric shock.

**Do not bend or damage the power cord.**

- This may cause fire or electric shock.



## Caution

### Installation

**Do not install the product in a place where it is exposed to direct sunlight or UV light.**

- This may cause product damage, malfunction, discoloration, or deformation.

**Do not place the power cable in a passage.**

- This may cause injuries or product damage.

**Do not install the product near magnetic objects such as magnets, TVs, (CRT) monitors, speakers, etc.**

- This may cause product malfunctions.

**Keep the minimum distance between products when installing multiple products.**

- It may impact the RF and BLE performance of other devices and cause product malfunctions.

**Use the IEC/EN 62368-1 approved power adaptor that supports higher power consumption than the product. It is highly recommended to use the power adaptor sold by Suprema.**

- If you fail to use an appropriate power adapter, the product may malfunction.

**Make sure to use separate power adapters for the product, Secure I/O 2, and electric lock.**

- This may cause product malfunctions.

**Do not connect and use the power supply and Power over Ethernet (PoE) simultaneously.**

- This may cause product malfunctions.

**Make sure that the cable cover is completely closed after connecting it to the product to maintain the water-resistant and dust-resistant features (IP65 rating). It is recommended to use the enclosure if the product is installed outside.**

- If water-resistant and dust-resistant features are reduced, this may cause product malfunctions.

### Operation

**Do not drop or shock the product.**

- This may cause product malfunctions.

**Ensure that the power is not cut off when a product firmware upgrade is in progress.**

- This may cause product malfunctions.

**Do not disclose the password to others and change it regularly.**

- This may result in illegal intrusion.

**Do not press buttons(touch pad) on the product by force or do not press them with a sharp tool.**

- This may cause product malfunctions.

**Use the product at a temperature of -20°C to 50°C. Do not keep the product at an extremely low or high temperature.**

- This may cause product malfunctions.

**When cleaning the product, mind the following.**

- Wipe the product with a clean and dry cloth.
- If the product requires disinfection, put a moderate amount of disinfectant alcohol on a dry cloth and gently wipe the surface of the product. Use disinfectant alcohol that contains 70–75% isopropyl alcohol and a soft lint-free cloth.
- Do not spray the disinfectant directly on the product.

**Do not use the product for uses other than its intended use.**


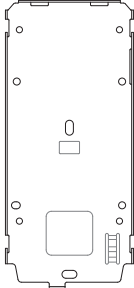
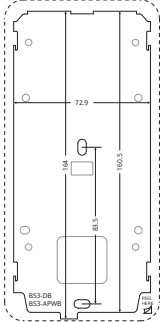
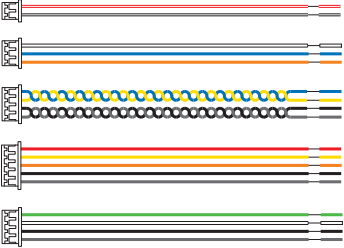


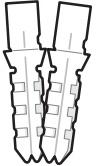



- This may cause product malfunctions.

**RTC Battery**

If you use an unauthorized or incorrect type of battery, this may cause an explosion. Please dispose of the battery in accordance with local or international waste disposal regulations.

# Getting Started

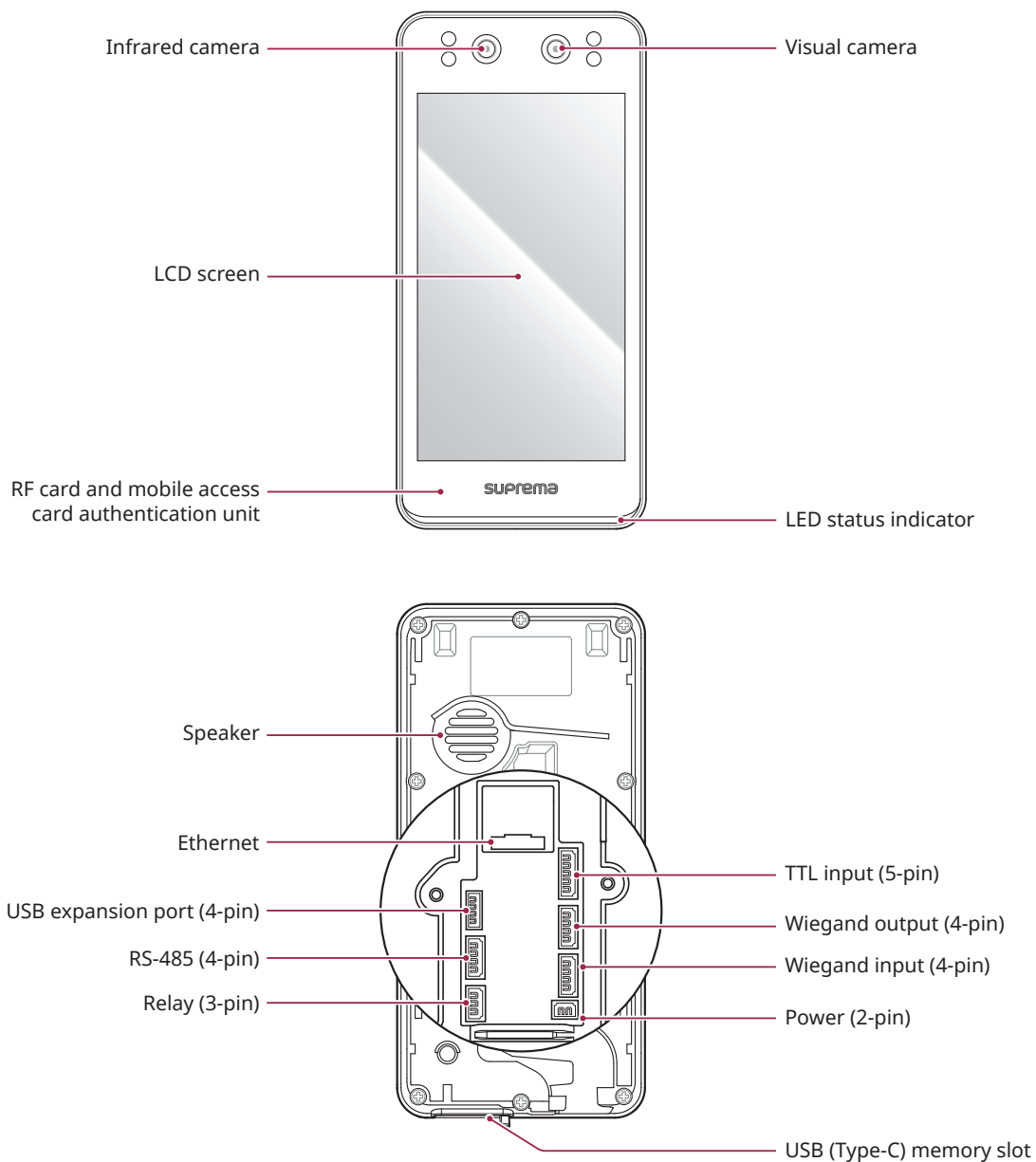
## Components

			
<p><b>BioStation 3</b></p>	<p><b>Wall Bracket</b></p>	<p><b>Drilling Template</b></p>	
			
<p><b>Connection Cables</b></p>	<p><b>Diode</b></p>	<p><b>120 <math>\Omega</math> resistor</b></p>	
			
<p><b>PVC Anchor x2</b></p>	<p><b>Fixing Screw x2</b></p>	<p><b>Bracket Fixing Screw (Star Shaped)</b></p>	<p><b>Quick Guide</b></p>



- Components may vary according to the installation environment.
- When assembling the product with the bracket, you can use the included bracket fixing screw (Star Shaped) instead of the product fixing screw for enhanced security.
- For a more detailed description of product installation, please visit Suprema's official website (<https://www.supremainc.com>) and check the installation guide.

## Name and Function of Each Part



Name	Description of function
<b>Infrared camera</b>	Capture the infrared face image.
<b>Visual camera</b>	Capture an actual face image.
<b>LCD screen</b>	Provides a UI for operation.
<b>RF card and mobile access card authentication unit</b>	Part to scan a RFID card or mobile access card for entrance.

Name	Description of function
<b>LED status indicator</b>	Displays the product's operational status. <ul style="list-style-type: none"> <li>• Green: Authentication successful</li> <li>• Red: Authentication failed</li> <li>• Blue/Sky blue flickering: Operating normally</li> <li>• Blue/Green flickering: IP address not received when DHCP is set to be in use</li> <li>• Blue/Green flickering: Network settings have been reset</li> <li>• Green flickering: Waiting for input</li> <li>• Green/White flickering: Connecting to Suprema AirFob Pass (BLE) application</li> </ul>
<b>Speaker</b>	Delivers sound.
<b>Ethernet</b>	Connects the Ethernet cable.
<b>TTL input (5-pin)</b>	Connects the TTL input cable.
<b>USB expansion port (4-pin)</b>	Connect other accessory products.
<b>Wiegand output (4-pin)</b>	Connects the Wiegand Output cable.
<b>Wiegand input (4-pin)</b>	Connects the Wiegand Input cable.
<b>RS-485 (4-pin)</b>	Connects the RS-485 cable.
<b>Relay (3-pin)</b>	Connects the Relay cable.
<b>Power (2-pin)</b>	Connects the Power cable.
<b>USB (Type-C) memory slot</b>	Connects the USB memory.



## Cables and Connectors

### Power



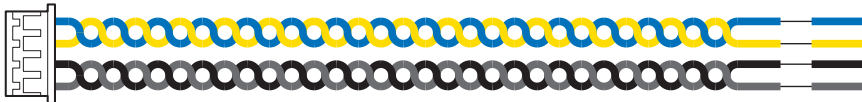
Pin	Name	Color
1	PWR +VDC	Red (White stripe)
2	PWR GND	Black (White stripe)

### Relay



Pin	Name	Color
1	RLY NO	White
2	RLY COM	Blue
3	RLY NC	Orange

### RS-485



Pin	Name	Color
1	485 TRXP	Blue
2	485 TRXN	Yellow
3	485 GND	Black
4	SH GND	Gray

## TTL Input



Pin	Name	Color
1	TTL IN0	Red
2	TTL IN1	Yellow
3	TTL IN2	Orange
4	TTL GND	Black
5	SH GND	Gray

## Wiegand Input



Pin	Name	Color
1	WG D0	Green
2	WG D1	White
3	WG GND	Black
4	SH GND	Gray

## Wiegand Output



Pin	Name	Color
1	WG D0	Green
2	WG D1	White
3	WG GND	Black
4	SH GND	Gray

## Correct face enrollment and authentication method

### Precautions for enrolling a faces


- When enrolling a face, maintain a distance of 60–100 cm between the device and the face.
- Make sure that your expression does not change.
- Do not wear a mask, hat, or eye patches.
- Do not enroll a face wearing a mask. It may increase the False Acceptance Rate (FAR) if both faces with and without a mask are enrolled.
- Do not raise head up or lower head.
- Do not wear thick makeup.
- Do not close your eyes.
- Make sure that both of your shoulders correctly appear on the screen.
- Stand still and enroll your face by staring at the screen.
- Be careful not to display two faces on the screen. Make sure to enroll one face at a time.
- If you do not follow the instructions on the screen, the face enrollment may take longer or may fail.

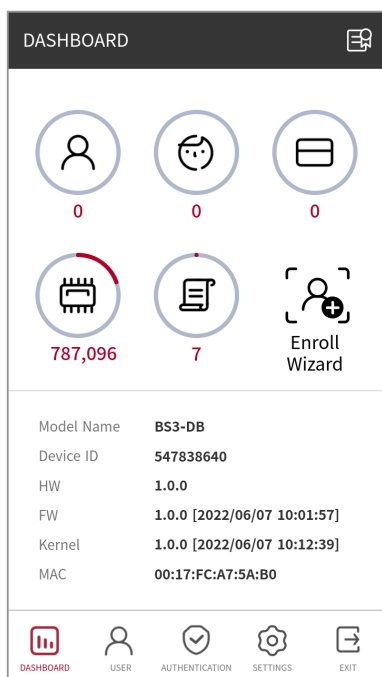
### Precautions for authenticating a face


- Ensure that the face appears in the center of the device's screen. When the guideline is displayed, follow the instructions shown on the screen to authenticate the face.
- If you cover parts of your face with a hat, mask, sunglasses, eye patch, etc., the authentication may fail. Do not cover your face, so that the device can recognize your eyebrows and your entire face.
- Authenticate your face at a distance of 60–100 cm from the device.
- Make sure that both of your shoulders correctly appear on the screen. Authentication may fail if your shoulders are not at the same height. Stand still, and then authenticate your face.

# Administrator Menu

## Dashboard



- 1 Press  and authenticate with the Admin level credential.  
You can check current device usage and information on the **DASHBOARD**. Or you can select **Enroll Wizard** to immediately register a user.
- 2 To Enroll a user or set up a device, select the desired menu from the bottom of the dashboard.



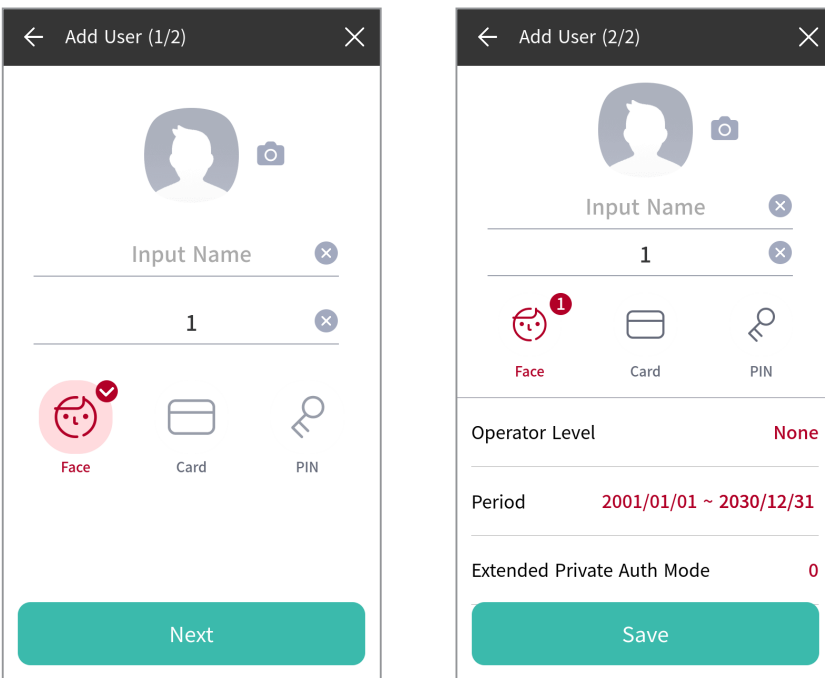
If there is no assigned administrator, press  to display the **DASHBOARD** screen.




## Registering User Information

You can register user information, including facial information.

- 1 Press  and authenticate with the Admin level credential.
- 2 Select **USER** →  then select the desired item.

There are two steps involved in registering user information, and some options are activated after the authentication method has been registered.



- : Register a user photo.
- **Name:** Enter the user name.
- **ID:** Enter numbers between 1 and 4294967295 to enroll the user ID. When the **User ID Type** is **Alphanumeric**, you can use combinations of alphanumeric characters and symbols ( \_ or - ) and enter up to 32 characters.
- **Face:** You can enroll faces for user authentication. Select **Face** → **Next**, then follow the instructions on the screen to enroll a face. To enroll more faces, press . Please refer to [Enrolling User Faces](#) for a more detailed description of facial enrollment.
- **Card:** Enroll a card for user authentication. Select **Card** → **Next**, then scan the card to be assigned to the user at the RF Card recognizer. To enroll more cards, press **Card** → .
- **PIN:** You can enter the PIN that you wish to use. Select **PIN** → **Next** to enroll the PIN to use. Enter the PIN again for confirmation and press **OK**. Use a PIN that is 4–16 characters long to prevent a breach.

- **Operator Level:** Select the authority to assign to a user.





The menus available will differ according to the user authority set.

- **None:** General user grade; cannot access menus.
- **Administrator:** Has access to all menus.
- **Configuration:** Can use the **AUTHENTICATION, DISPLAY & SOUND, DEVICE, NETWORK** and **EVENT LOG** menus.
- **User Management:** Can use the **USER** and **EVENT LOG** menus.

- **Period:** Set the period for use of the user's account.
- **Extended Private Auth Mode:** Set whether or not to use the extended private auth mode. Using the extended private auth mode allows you to combine user-specific authentication methods, including facial recognition. If this mode is not used, the device's basic authentication mode will be used. The extended private auth mode can be edited in BioStar 2.

**3** To complete the registration of user information, press **Save**.

## Enrolling User Faces




- 1** Press  and authenticate with the Admin level credential.
- 2** Select **USER** → .
- 3** Select **Face** → **Next**.
- 4** Adjust the distance to display the face on the screen and face the device's camera straight on.
- 5** When the photo is taken, press **OK** → **Save**. To retake the photo, press **Re-Shot**.



- The visual face data of BioStation 3 are not compatible with face templates of FaceStation 2 or FaceLite.
- You can enroll visual face not only directly from BioStation 3 but from the BioStar 2 by uploading photos or importing CSV files. You can send a visual face enrollment link to users so that individual users can enroll their faces using personal mobile devices. For a detailed description of each registration method, please refer to the BioStar 2 Administrator Manual.
- When enrolling a face, note the following:
  - When enrolling a face, maintain a distance of 60–100 cm between the device and the face.
  - Make sure that your expression does not change.
  - Do not wear a mask, hat, or eye patches.
  - Do not enroll a face wearing a mask. It may increase the False Acceptance Rate (FAR) if both faces with and without a mask are enrolled.
  - Do not raise head up or lower head.
  - Do not wear thick makeup.
  - Do not close your eyes.
  - Make sure that both of your shoulders correctly appear on the screen.
  - Stand still and enroll your face by staring at the screen.
  - Be careful not to display two faces on the screen. Make sure to enroll one face at a time.
  - If you do not follow the instructions on the screen, the face enrollment may take longer or may fail.

## Editing User Information

User Management or Administrator can edit the registered user information. They can add user faces and cards and edit PINs and authorities.



- 1 Press  and authenticate with the Admin level credential.
- 2 Select **USER** → .
- 3 Select the search condition to use. You can search users by **All, User ID, Name, Face** or **Card**.
- 4 Select the user to edit.
- 5 **Registering User Information** should be referenced to edit the information and press **OK**.
  - To delete users, select  and press **OK**.



The **Access Group** can be registered in BioStar 2. For a more detailed description of access group registration, please refer to the BioStar 2 Administrator Guide.



## Deleting All Users

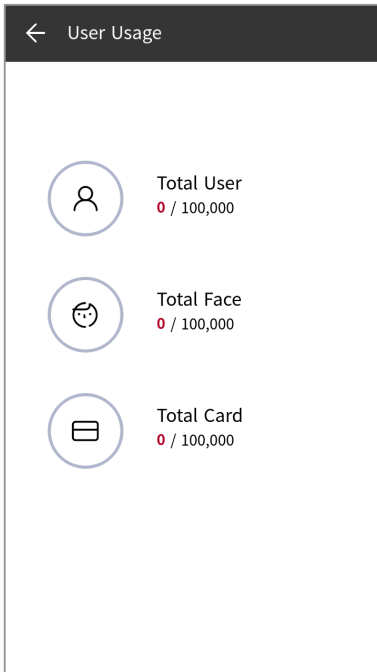
You can delete all registered users at once.

- 1 Press  and authenticate with the Admin level credential.
- 2 Select **User** → .
- 3 Select **Delete All** to check the box and press **OK**.
- 4 To delete all users, press **OK**.

## Checking User Usage

You can see the registered users, faces and the number of cards at a glance.

- 1 Press  and authenticate with the Admin level credential.
- 2 Select **USER** → . You can check the current user registration status.









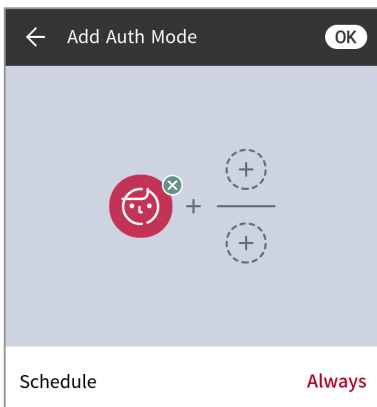
# Authentication

## Auth Mode

























You can set the device's authentication mode. You can use a combination of **Face**, **PIN**, **Card** and **ID** as your authentication mode or set a schedule for each authentication mode.

## Registering the Auth Mode

- 1 Press  and authenticate with the Admin level credential.
- 2 Select **AUTHENTICATION** → **Auth Mode**.
- 3 Select .
- 4 Pressing  will display the credential that can be added on the screen. Select the credentials to add. Press the  while the credential is added, and the added credential will be deleted.



## 5 Set the authentication mode as desired and configure the **Schedule**.


Classification	Description
Face	<ul style="list-style-type: none"> <li>: The mode that uses facial data only.</li> <li> + : The mode that authenticates with facial data followed by entering the PIN.</li> </ul>
Card	<ul style="list-style-type: none"> <li>: The mode that uses card data only.</li> <li> + : The mode that allows card authentication followed by facial authentication.</li> <li> + : The mode that allows card authentication followed by PIN authentication.</li> <li> +  / : Authenticate by card, then proceed to authenticate with facial data or PIN.</li> <li> +  + : Authenticate by card, then proceed to authenticate with facial data and PIN.</li> </ul>
ID	<ul style="list-style-type: none"> <li> + : The mode that allows authentication by facial recognition after entering the ID.</li> <li> + : The mode that allows the PIN to be entered after entering the ID.</li> <li> +  / : The mode that allows authentication with facial data or PIN after entering the ID.</li> <li> +  + : The mode that allows authentication with facial data and PIN after entering the ID.</li> </ul>





- The **Schedule** can be set in BioStar 2. If there is no configured schedule, you can choose **Always** only.
- For a more detailed description of setting the **Schedule**, please refer to the BioStar 2 Administrator Guide.

## 6 To save the settings, press **OK**.

### Editing the Auth Mode


- Press  and authenticate with the Admin level credential.
- Select **AUTHENTICATION** → **Auth Mode**.
- Select the authentication mode to edit.
- Registering the Auth Mode** should be referenced to edit the authentication mode, then press **OK**.

## Deleting the Auth Mode

- 1 Press  and authenticate with the Admin level credential.
- 2 Select **AUTHENTICATION** → **Auth Mode**.
- 3 Press , then select the items to delete. You can choose multiple options.
- 4 To delete the selected item, press **OK**.

## Operation

You can set up server matching.

- 1 Press  and authenticate with the Admin level credential.
- 2 Select **AUTHENTICATION** and change the item as desired in the authentication options.




- **Server Matching (Card, ID):** Set up Server Matching to perform user authentication at BioStar 2 without performing user authentication at the device. Server Matching may be useful when there is too much user information in the device or you do not want to expose the device in which user credential information is saved to the outside.

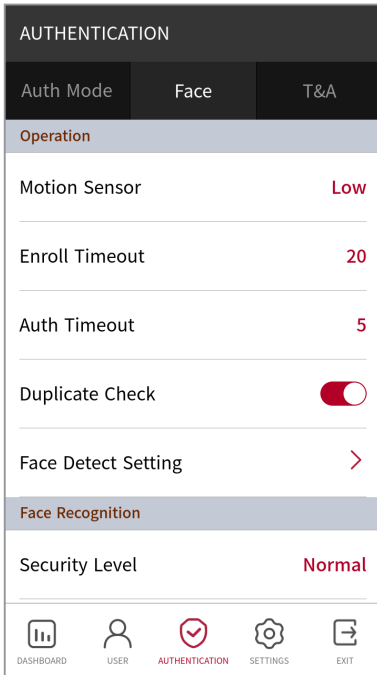


- **Server Matching** is available for cards and IDs only.
- When using **Server Matching**, you must activate Server Matching on the device and in BioStar 2. For a more detailed description of BioStar 2's Server Matching, please see the BioStar 2 Administrator Guide.

## Face

You can change the configuration for facial authentication.

- 1 Press  and authenticate with the Admin level credential.
- 2 Select **AUTHENTICATION** → **Face**.
- 3 Change the item as desired.



- **Motion Sensor:** Set the device's sensitivity for capturing movements around it. If the **Motion Sensor** is **Off**, for facial authentication, please touch the LCD screen and proceed to the authentication.
- **Enroll Timeout:** Facial enrollment is canceled if no face is enrolled within a set time.
- **Auth Timeout:** Authentication fails when the user fails to authenticate within a set time.
- **Duplicate Check:** Check for duplicate facial data when enrolling a face.
- **Face Detect Setting:** You can configure the position and size of the area in which faces can be detected by the device at the time of facial authentication.



- For the best performance, it is recommended to use the default settings in the Face Detect Settings sub-options. The default value for each option is as follows:
  - Maximum Head Pose Angle: 15
  - Detection Distance: Min 30 cm, Max 100 cm
  - Wide Search: Deactivated

- **Security Level:** You can set the security grade for 1:N authentication.
- **Operation Mode:** You can set the device's active mode for facial authentication.
  - **Fusion Matching:** Both visual and IR matching are activated for higher facial recognition accuracy.
  - **Fast Matching:** The user can conduct quick authentication within the device's authentication range (e.g., facial recognition while walking, etc.).


- **Fake Detection:** You can prevent malicious user authentication that uses fake facial data (e.g., photo, etc.). This is activated when the **Operation Mode** is set to **Fusion Matching**.
- **Advanced Settings:** You can change the advanced settings for facial authentication such as mask detection, etc.
  - **Check Mode:** You can set the Check Mode according to use.
  - **Authentication Fail Sound:** You can set whether or not to use the authentication failure alarm, which reports failure to detect a mask or detection of a temperature that goes beyond the set standard.
  - **Mask Detection:** You can set whether or not to use mask detection. The **Enabled (Hard)** setting refuses the authentication of users who are not wearing a mask, and non-detection of a mask will be recorded in the log. The **Enable (Soft)** setting allows authentication by users who are not wearing a mask, but non-detection of a mask will be recorded in the log.
  - **Mask Detection Level:** You can set the sensitivity to detect wearing a mask. This is activated when the **Mask Detection** is set to **Enable**.




- If **Mask Detection** or **Thermal Camera** is in use, you can set the **Check Mode** according to the purpose of the device.
  - **Check After Authentication:** Perform the authentication first, then confirm the mask-wearing status of the user or measure their body temperature.
  - **Check Before Authentication:** Confirm the mask-wearing status of the user or measure their body temperature before performing the authentication. When this mode is in use, users who are not wearing a mask or whose body temperature is above the standard cannot perform authentication.
  - **Check Only:** This can be used to check whether or not a person is wearing a mask or measure a person's body temperature. When this mode is in use, all persons wearing a mask or with a body temperature below the set criterion may enter without authentication.

## T&A Mode

You can set the registration method for T&A mode.

- 1 Press  and authenticate with the Admin level credential.
- 2 Select **AUTHENTICATION** → **T&A**.
- 3 Set up the item as desired.


AUTHENTICATION	
Auth Mode	T&A
T&A Mode	By User
T&A Code	0
T&A Required	<input checked="" type="checkbox"/>
Job Code	<input checked="" type="checkbox"/>

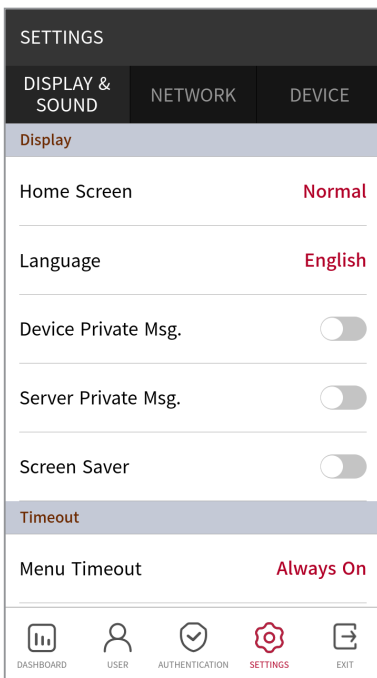
- **T&A Mode:** You can set the method to use T&A mode.
- **T&A Code:** You can register T&A event. To register T&A event, select **T&A Code** → , then set up the icon, **T&A Event Name** and **Schedule** to display on screen.
- **T&A Required:** You can require the user to select the T&A event at the point of authentication.
- **Fixed T&A Key:** You can configure use of the T&A event selected by the administrator only. Available for use when the **T&A Mode** is set to **Fixed**.
- **Job Code:** You can choose to use a Job Code.

# Settings

## Display & Sound

You can change the display and sound settings of the device.

- 1 Press  and authenticate with the Admin level credential.
- 2 Select **SETTINGS** → **DISPLAY & SOUND**.
- 3 Change the item as desired.



- **Home Screen:** You can choose the items to be displayed on the home screen.
- **Language:** You can select the language that will be displayed on the screen.
- **Device Private Msg.:** You can set up the use of a personalized message that will be displayed on the screen when the user authenticates. The **Device Private Msg.** can be set using the BioStar 2 Device SDK. If not set, the message will not be displayed even if **Device Private Msg.** is activated on the device.
- **Server Private Msg.:** You can set up the use of a personalized message that will be displayed on the screen when the user authenticates. **Server Private Msg.** can be set using the BioStar 2 API. If not set, the message will not be displayed even if the device's **Server Private Msg.** is activated.



For more detailed information about the BioStar 2 Device SDK, visit the official BioStar 2 Device SDK web page on the Suprema Knowledge Base ([kb.supremainc.com/bs2sdk/](http://kb.supremainc.com/bs2sdk/)).


- **Screen Saver:** You can set whether or not to use a screen saver. Using a screen saver can save unnecessary power consumption by reducing the LCD screen's brightness when the device is not in use.
- **Menu Timeout:** You can set the time (in seconds) after which the menu screen automatically disappears. If there are no button inputs during the set time, the screen will switch back to the home screen.

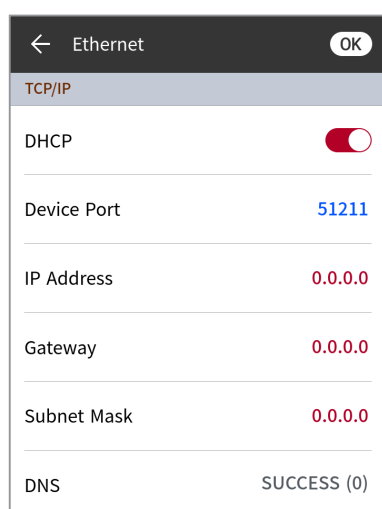
- **Message Timeout:** You can set the time (in seconds) after which the setup completion message or alarm message disappears.
- **Backlight Timeout:** You can set the time (in seconds) after which the LCD screen light is automatically turned off.
- **Voice Instruction:** You can use voice notifications instead of alarm sounds.
- **Volume:** You can set the sound volume.
- **Intercom Speaker Volume:** You can adjust the speaker's output volume when using intercom.
- **Intercom Microphone Volume:** You can adjust the microphone's input volume when using intercom.

## Network

You can change the network settings of the device, such as Ethernet, server, serial communication, etc.

### Ethernet

- 1 Press  and authenticate with the Admin level credential.
- 2 Select **SETTINGS** → **NETWORK** → **Ethernet**.
- 3 Set up the item as desired.



- **DHCP:** Set up the use of DHCP. Turning the DHCP setting off will allow the user to edit the **IP Address**, **Gateway**, and **Subnet Mask**.
- **Device Port:** You can set up the device's ports.
- **IP Address:** You can check the device's IP address. To edit, turn the DHCP setting off.
- **Gateway:** You can check the gateway of the device. To edit, turn the DHCP setting off.
- **Subnet Mask:** You can check the subnet mask of the device. To edit, turn the DHCP setting off.
- **DNS:** You can set the domain name server's address.


- 4 To save the settings, press **OK**.

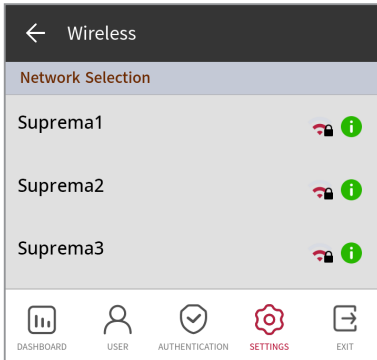



Ethernet cannot be used with **Wireless** at the same time.



## Wireless

- 1 Press  and authenticate with the Admin level credential.
- 2 Select **SETTINGS** → **NETWORK** → **Wireless**.
- 3 The list of networks available to connect will be displayed.




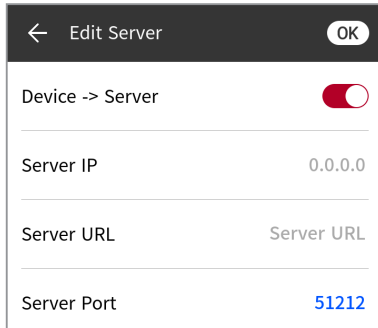
- 4 Select the network you wish to connect to and enter the password. When you press **OK**, the connection to the wireless network will be made.
- 5 You can edit the **IP Address**, **Gateway**, and **Subnet Mask** by pressing  on the wireless network you want to use and then turning off DHCP settings.



- **Wireless** cannot be used with **Ethernet** at the same time.
- To connect to **Wireless**, a wireless router is required. For content regarding the installation and configuration of wireless router, refer to the user's manual of the wireless router.

## Server

- 1 Press  and authenticate with the Admin level credential.
- 2 Select **SETTINGS** → **NETWORK** → **Server**.
- 3 Set up the item as desired.





Edit Server	
Device -> Server	<input checked="" type="checkbox"/>
Server IP	0.0.0.0
Server URL	Server URL
Server Port	51212

- **Device** → **Server**: You can send the connection signal directly to the server that has its information input by the device. When the **Device** → **Server** setting is turned on, the user can enter the **Server IP**, **Server URL** and **Server Port**.
- **Server IP**: Enter the IP of the PC where BioStar 2 is installed.
- **Server URL**: You can enter a **Server URL** instead of a **Server IP**.
- **Server Port**: Enter the port of the PC where BioStar 2 is installed.

- 4 To save the settings, press **OK**.

## Serial Settings

- 1 Press  and authenticate with the Admin level credential.
- 2 Select **SETTINGS** → **NETWORK**.
- 3 Set up the item you wish to configure in the **Serial Setting**.




Serial Setting	
RS-485	Default
Baud Rate	115200

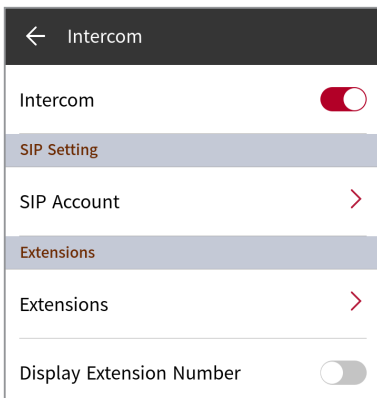
- **RS-485**: You can choose the RS-485 operation mode.
- **Baud Rate**: You can choose your preferred baud rate.

## Devices

### Intercom


You can set up the intercom's account and extensions.

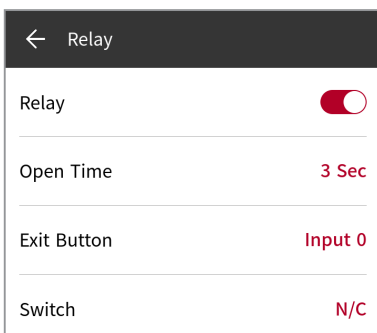
- 1 Press  and authenticate with the Admin level credential.
- 2 Press **SETTINGS** → **DEVICE** → **Intercom**.
- 3 Activating Intercom allows you to set up the SIP Account and Extensions. Make sure to set up each item correctly.



### Relay

You can set up the input ports for **Open Time** and **Exit Button**.


- 1 Press  and authenticate with the Admin level credential.
- 2 Select **SETTINGS** → **DEVICE** → **Relay**.

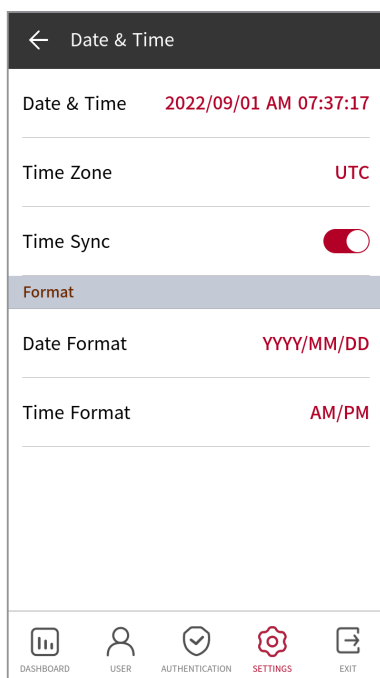


- **Relay:** You can set the activation of Relay. Turning on the Relay setting allows you to set up the **Open Time** and **Exit Button**.
- **Open Time:** You can set the duration that the door stays open when a user authentication has been successfully performed.
- **Exit Button:** Select the input port that the Exit Button is connected to.
- **Switch:** You can select the type of switch (**N/O** or **N/C**) for the Exit Button's input port.

## Date & Time

You can set the date and time. Make sure to set the correct time and date for accurate log data collection.



- 1 Press  and authenticate with the Admin level credential.
- 2 Select **SETTINGS** → **DEVICE** → **Date & Time**.
- 3 Change the item as desired.

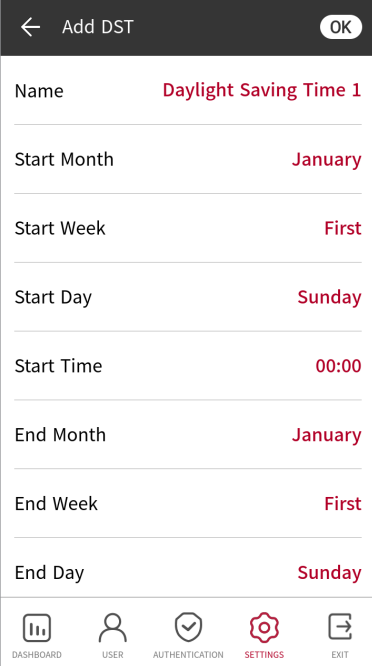


- **Date & Time:** You can check the current date and time. To manually edit, turn **Time Sync** off.
- **Time Zone:** You can set the standard time for the current region.
- **Time Sync:** You can synchronize the time with the server. Activate if you wish to synchronize the time with the server.
- **Date Format:** You can set the date format. You may choose from **YYYY/MM/DD**, **MM/DD/YYYY** or **DD/MM/YYYY**.
- **Time Format:** You can set the time format. Choose from **AM/PM** or **24-Hour**.

## Daylight Saving Time

You can apply Daylight Saving Time (DST) for device operation. Make sure to set the correct start and end time and date.

- 1 Press  and authenticate with the Admin level credential.
- 2 Select **SETTINGS** → **DEVICE** → **Daylight Saving Time** and then press  to add Daylight Saving Time.
- 3 Change the item as desired.




Field	Value
Name	Daylight Saving Time 1
Start Month	January
Start Week	First
Start Day	Sunday
Start Time	00:00
End Month	January
End Week	First
End Day	Sunday

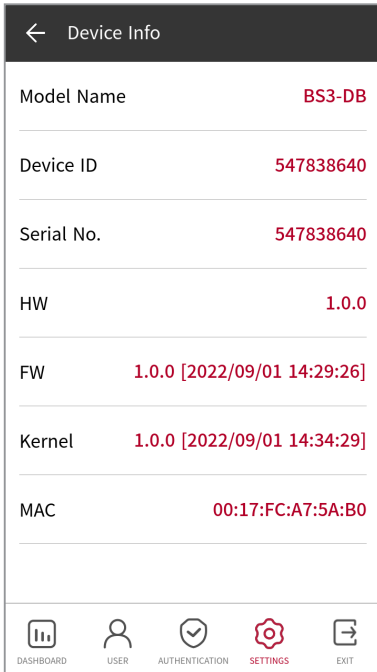
- **Name:** Enter the name of the Daylight Saving Time.
- **Start Month / Start Week / Start Day / Start Time:** Set the month, week, day and time to apply the start of Daylight Saving Time.
- **End Month / End Week / End Day / End Time:** Set the month, week, day and time to apply the end of Daylight Saving Time.

- 4 To save the settings, press **OK**.

## Device Information

You can check the model name, device ID, serial number, device and firmware version, kernel, and MAC address.

- 1 Press  and authenticate with the Admin level credential.
- 2 Select **SETTINGS** → **DEVICE** → **Device Info**. You can check the **Model Name**, **Device ID**, **Serial No.**, **HW**, **FW**, **Kernel** and **MAC** information.




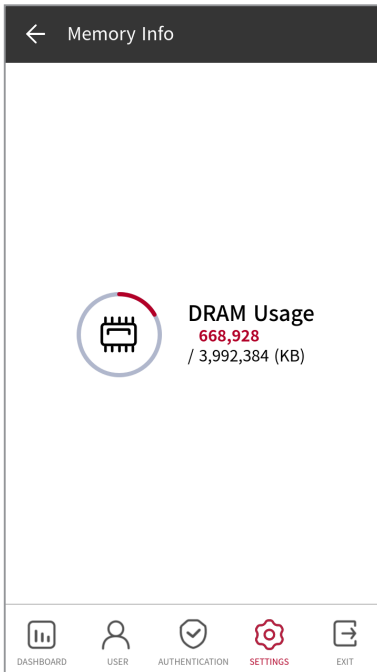
← Device Info	
Model Name	BS3-DB
Device ID	547838640
Serial No.	547838640
HW	1.0.0
FW	1.0.0 [2022/09/01 14:29:26]
Kernel	1.0.0 [2022/09/01 14:34:29]
MAC	00:17:FC:A7:5A:B0

DASHBOARD   USER   AUTHENTICATION   **SETTINGS**   EXIT

## Memory Information


You can check the memory usage information.

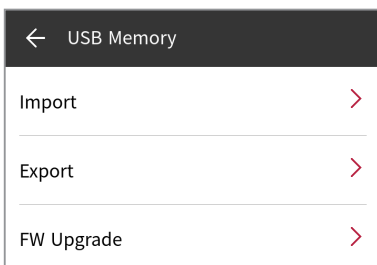
- 1 Press  and authenticate with the Admin level credential.
- 2 Select **SETTINGS** → **DEVICE** → **Memory Info**. You can check the current memory usage of the device.



## USB Memory

You can connect a USB flash drive to the device to import user information to the device or export logs and user information from the device. You can also upgrade the firmware.

- 1 Press  and authenticate with the Admin level credential.
- 2 Select **SETTINGS** → **DEVICE** → **USB Memory**.
- 3 Select the item you wish to change and edit the setting.



- **Import:** You can import user information from the connected USB flash drive.

- **Export:** You can export user information to the connected USB flash drive.
- **FW Upgrade:** If there is a firmware file saved in the connected USB flash drive, you can upgrade the firmware.



Ensure that the power supply is not disrupted during the firmware upgrade. This may cause product malfunctions.




- It is recommended to use a USB flash drive in the exFAT format. USB flash drives in the FAT32 format may experience malfunctions if more than 50,000 facial data items are stored.
- Please check the free space on your USB flash drive. To save 100,000 facial data items, at least 15 GB of free space is required.
- Types of compatible USB flash drives are as follows. The device may not function correctly if another type of memory drive is used.
  - Samsung: SUM-BSG 32GB
  - LG Electronics: MU 1 USB 32GB, MU28GBC 32GB
  - SanDisk: Cruzer Blade CZ50 32GB, CZ48 Ultra USB 3.0 64GB, CZ80 USB3.0 64GB, CZ52 64GB, Cruzer Glide Z60 128GB, Cruzer Force CZ71 32GB
  - Sony: USM-SA1 32GB
  - Transcend: JetFlash 760 32GB

The compatible USB flash drives above have been verified as being USB Type-A flash drives. To connect each USB flash drive to BioStation 3, a separate USB Type-C adapter is required.

## Secure Tamper


You may choose to use Secure Tamper. When a Secure Tamper event occurs, all users, logs and security keys will be deleted.

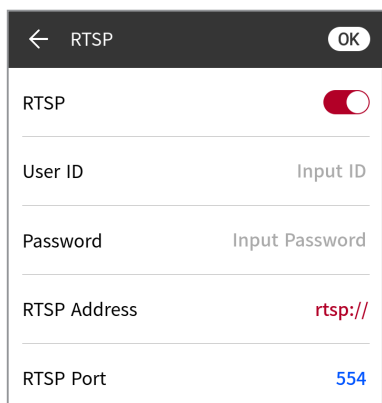
- 1 Press  and authenticate with the Admin level credential.
- 2 Select **SETTINGS** → **DEVICE**.
- 3 To configure the settings to delete all users, logs and security keys when tampering occurs, activate the **Secure Tamper** setting.



## RTSP

A video management system (VMS) of another brand may be connected to monitor videos filmed with the BioStation 3 visual camera.

- 1 Press  and authenticate with the Admin level credential.
- 2 Select **SETTINGS** → **DEVICE** → **RTSP**.
- 3 Select the item you wish to change and edit the setting.




- **RTSP:** You can set up the activation of RTSP. Turn RTSP on to configure the **User ID**, **Password**, **RTSP Address** and **RTSP Port**.
- **User ID:** Enter the User ID. The User ID may have up to 32 characters, in a combination of alphanumeric characters and certain symbols (-, \_).
- **Password:** Enter the password. The password may have 8–32 characters in a combination of alphabetic (capital and lowercase letters) and numeric characters.
- **RTSP Address:** Enter the RTSP address.
- **RTSP Port:** Enter the RTSP Port number.



When the device is configured as a slave device, the RTSP function may not be available.


## Restart Device

You can restart the device.

- 1 Press  and authenticate with the Admin level credential.
- 2 Select **SETTINGS** → **DEVICE** → **Restart Device**.
- 3 To restart the device, press **OK**. To go back to the previous screen, press **Cancel**.

## Restore Default

Reset device settings, network settings, user authorization, etc.


- 1 Press  and authenticate with the Admin level credential.
- 2 Select **SETTINGS** → **DEVICE** → **Restore Default**.
  - **All settings:** Reset all settings saved in the device. To reset all device settings, press **OK**. To go back to the previous screen, press **Cancel**.
  - **Keep Network Settings:** Reset all settings except for the network settings. To reset all settings except for the network settings, press **OK**. To go back to the previous screen, press **Cancel**.
  - **Factory Reset:** Delete all information and route certificates saved in the device and reset the settings.
  - **Delete the Root Certificate:** Delete a root certificate saved in the device.
- 3 When **Restore Default** is executed, the device will restart.



- After resetting, the user authorization will be returned to the default value as well. Make sure to configure the user authorization after resetting.
- Language settings will not be changed on reset.
- The **Factory Reset** menu is available for use when a root certificate is saved in the device.
- The **Delete the Root Certificate** menu is available for use when a root certificate is saved in the device and the managing administrator is designated.

## User ID Type




You can select the type of user ID to enroll to the device.

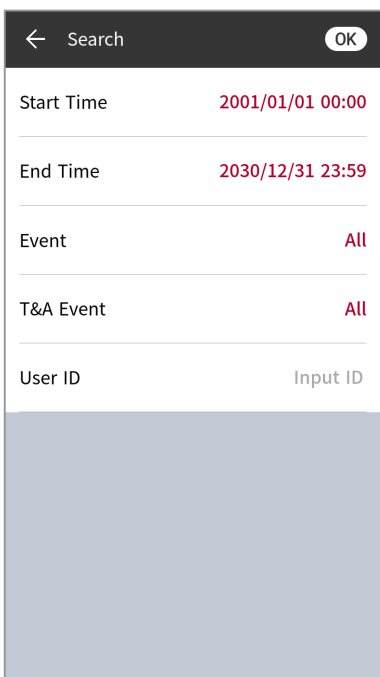
- 1 Press  and authenticate with the Admin level credential.
- 2 Select **SETTINGS** → **DEVICE** → **User ID Type**.
  - **Number:** You can create a user ID with numbers only.
  - **Alphanumeric:** You can create a user ID with alphanumeric characters and symbols (., -).
- 3 Select the item(s) you want.

# Event Logs

## Search Event Logs

Set conditions to search logs.

- 1 Press  and authenticate with the Admin level credential.
- 2 On the **DASHBOARD**, select . This displays the entire event log list.
- 3 To search for a specific event, press  and change the item as desired.






Field	Value
Start Time	2001/01/01 00:00
End Time	2030/12/31 23:59
Event	All
T&A Event	All
User ID	Input ID

- 4 Set the search condition and press **OK** to display logs that meet the condition on the screen.




## Delete All Logs

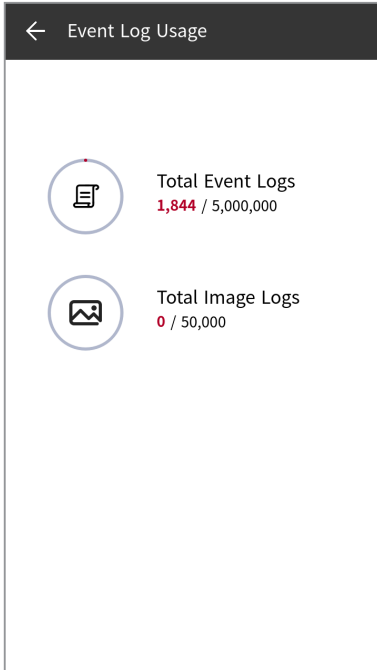
You can delete all saved logs.

- 1 Press  and authenticate with the Admin level credential.
- 2 On the **DASHBOARD**, select . This displays the entire event log list.
- 3 To delete all logs, select  and then press **OK**. To go back to the previous screen, press **Cancel**.

## Check Log Usage

You may check the current log usage.

- 1 Press  and authenticate with the Admin level credential.
- 2 On the **DASHBOARD**, select  → . Check the device's event log and image log usage.



# Troubleshooting

## Check Before Reporting Faults

Category	Issue	Solution
Power	Power is being supplied, but the device does not function.	<ul style="list-style-type: none"> <li>• If the device and the bracket are separated, it may not function due to the tamper switch.</li> <li>• Please check the adapter or power cable.</li> </ul>
PIN	I lost my PIN.	<ul style="list-style-type: none"> <li>• For a general user PIN, please request it from the administrator and enter it again.</li> <li>• If the administrator PIN has been lost, please contact the installation service provider.</li> </ul>
	Pressing the <b>OK</b> button after entering the PIN does not open the locked door.	<ul style="list-style-type: none"> <li>• Please check that the enrolled PIN has been entered correctly.</li> <li>• Check whether or not you have changed the PIN recently.</li> <li>• If you cannot find the PIN, please request it from the administrator and enter it again.</li> </ul>
Face	The face has been enrolled, but facial recognition continues to fail and errors occur frequently.	<ul style="list-style-type: none"> <li>• Check '<a href="#">Precautions for enrolling a faces</a>' and enroll the face again.</li> <li>• If many faces have been enrolled, change the matching wait time and try again.</li> </ul>
	Facial recognition fails all of a sudden.	<ul style="list-style-type: none"> <li>• Check '<a href="#">Precautions for authenticating a face</a>' and try again.</li> </ul>
	The <b>Mask Detection</b> function is set to <b>Enabled</b> , but faces with masks are not recognized and there are errors.	<ul style="list-style-type: none"> <li>• Take the mask off down to the nose and let the face be recognized twice. Then, cover the nose with the mask and try the facial recognition again. If the issue persists, please contact the installation service provider.</li> </ul>
Door lock	The lock does not work even if the door is closed.	<ul style="list-style-type: none"> <li>• The electric locking device may be faulty. Please ask the installation service provider to check the device.</li> </ul>
Time	The time is suddenly not correct.	<ul style="list-style-type: none"> <li>• BioStation 3 has a built-in battery. However, it may show a different time if the power has been turned off for a long period and the battery has drained. <a href="#">Date &amp; Time</a> please refer to this to change the time.</li> </ul>
Administrator access	I lost the administrator PIN and cannot access administrator mode.	<ul style="list-style-type: none"> <li>• In BioStation 3, the administrator can access the menu as access is granted only by the administrator.</li> <li>• If the administrator PIN has been lost, please contact the installation service provider.</li> </ul>

# Product Specifications

Category	Feature	Specifications
Credentials	Biometric	Face
	RF card	<ul style="list-style-type: none"> <li>• <b>BS3-DB</b>: 125kHz EM &amp; 13.56MHz MIFARE, MIFARE Plus, DESFire, DESFire EV1/EV2/EV3*, FeliCa</li> <li>• <b>BS3-APWB</b>: 125kHz EM, HID Prox &amp; 13.56MHz MIFARE, MIFARE Plus, DESFire, DESFire EV1/EV2/EV3*, FeliCa, iCLASS SE/SR/Seos</li> </ul>
	RF detection distance**	EM/HID Prox/MIFARE/DESFire/HID iCLASS: 30 mm, FeliCa: 15 mm
	Mobile	NFC, BLE
	Barcode and QR code	Supported
General	CPU	1.5 GHz Quad Core
	Memory	32 GB Flash + 4 GB RAM
	Crypto chip	Supported
	LCD type	5.5" IPS color LCD
	LCD resolution	720 x 1280 pixels
	Sound	16bit
	Operating temperature	-20°C to 50°C
	Storage temperature	-40°C to 70°C
	Operating humidity	0% to 80%, non-condensing
	Storage humidity	0% to 90%, non-condensing
	Camera	2 MP 2EA
	Dimensions (W x H x D)	82.5 x 171 x 23.4 (mm)
	Weight	<ul style="list-style-type: none"> <li>• Device <ul style="list-style-type: none"> <li>– <b>BS3-DB</b>: 370 g</li> <li>– <b>BS3-APWB</b>: 380 g</li> </ul> </li> <li>• Bracket: 90 g (Including washers and bolts)</li> </ul>
	IP rating	IP65
	IK rating	IK06
Certifications	CE, FCC, IC, KC, RoHS, REACH, WEEE, UKCA, RCM	
Face	Recognition Distance	0.6 to 1.0 m
	Recognition Height	1.4 to 1.9 m
	Matching speed	Within 0.3 seconds
	Live Face Detection	Supported

Category	Feature	Specifications
Storage capacity	Max. User	100,000***
	Max. Credentials (1:N)	<ul style="list-style-type: none"> <li>• Face: 50,000</li> </ul>
	Max. Credentials (1:1)	<ul style="list-style-type: none"> <li>• Face: 100,000</li> <li>• Card: 100,000</li> <li>• PIN: 100,000</li> </ul>
	Max. Text logs	5,000,000
	Max. Image logs	50,000
Interfaces	Ethernet	Supported (10/100/1000 Mbps, automatic MDI/MDI-X)
	Wi-Fi	<ul style="list-style-type: none"> <li>• <b>BS3-DB</b>: Not supported</li> <li>• <b>BS3-APWB</b>: Supported (802.11 b/ g/ n 2.4GHz)</li> </ul>
	RS-485	1 ch Host / Slave (Selectable)
	Wiegand	1 ch Input, 1 ch Output
	TTL Input	3 ch Inputs
	Relay	1 Relay
	PoE+	<ul style="list-style-type: none"> <li>• <b>BS3-DB</b>: Not supported</li> <li>• <b>BS3-APWB</b>: Supported (IEEE 802.3at compliant)</li> </ul>
	Intercom	Supported
	RTSP	Supported
	USB	USB 2.0 (Host)
	USB expansion port	Supported
	Tamper	Supported
Electrical	Power	DC 12 V (current: 2.5 A) or DC 24 V (current: 1.2 A)
	Switch input VIH	Min.: 3 V / Max.: 5 V
	Switch input VIL	Max.: 1 V
	Switch pull-up resistor	4.7 kΩ (The input ports are pulled up with 4.7 kΩ)
	Wiegand output VOH	4.8 V or higher
	Wiegand output VOL	0.2 V or lower
	Wiegand output pull-up resistor	Internal pull-up to 1 kΩ
	Relay	2 A @ 30 VDC Resistive load 1 A @ 30 VDC Inductive load

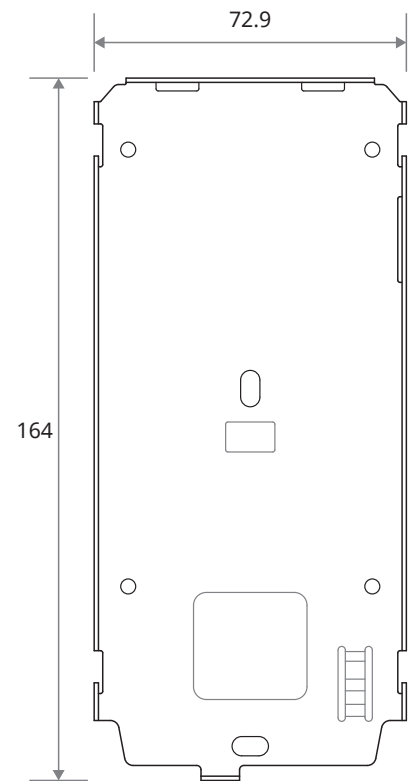
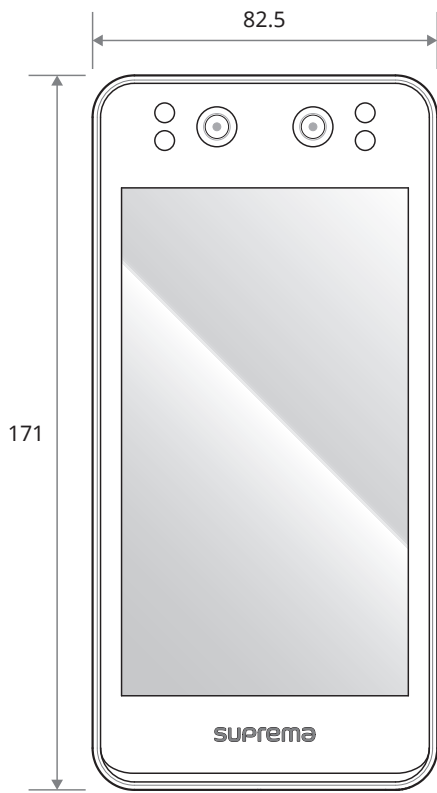
\*The DESFire EV2/EV3 card is backward compatible with the DESFire EV1 card, so it provides the CSN and smart card functions, including those of the DESFire EV1 card.

\*\*The RF detection distance may vary depending on the installation environment.

\*\*\*Refers to the number of registered users without credential data.

# Dimensions

(Unit: mm)







# Regulatory Information


## Regulatory & Licenses

Licenses, Regulatory Information, certifications, and compliance marks specific to BioStation 3 are available from the device.

- CE / FCC / IC / KC / UKCA / RCM

- 1 Press  and authenticate with the Admin level credential.
- 2 You can view **Regulatory & Licenses** press the  on the upper right corner of **DASHBOARD**.



If the administrator has not been designated, the **DASHBOARD** will be displayed when you press .

## FCC Compliance Information

THIS DEVICE COMPLIES WITH PART 15 OF THE FCC RULES.

Operation is subject to the following two conditions:

- (1) This device may not cause harmful interference, and
- (2) This device must accept any interference received, including interference that may cause undesired operation.



This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment.

This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 20 cm between the radiator and your body. This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

## EU Declaration of Conformity (CE)

This product is CE marked according to the provisions of the Radio Equipment Directive (RED) 2014/53/EU. Hereby, Suprema Inc. declares that this product is in compliance with the essential requirements and other relevant provisions of Radio Equipment Directive (RED) 2014/53/EU.

- Bluetooth transmit power: -0.1 dBm
- Bluetooth frequency: 2402–2480 MHz
- NFC frequency: 13.56 MHz
- RFID frequency: 13.56 MHz + 125 kHz

For more information, please contact us via the contact details below.

Suprema Inc.

Website: <https://www.supremainc.com>

Address: 17F-5, Parkview Office Tower, 248, Jeongjail-ro, Seongnam-si, Gyeonggi-do, 13554, Republic of Korea

Tel: +82-31-783-4502 / Fax: +82-31-783-4503

# Appendix

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- The OpenSSL included in this product is under the OpenSSL License and the Original SSLeay License. You can find the OpenSSL License and Original SSLeay License in [OpenSSL License](#) and [Original SSLeay License](#) in this manual.
- You can download the source modified based on Linux kernel 4.x, glibc library, and QT library included in this product by contacting [support.supremainc.com](mailto:support.supremainc.com).

## GNU General Public License

Version 3, 29 June 2007

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Version 3, 29 June 2007

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