www.supremainc.com

USER GUIDE

FaceStation 2

English

Version 1.0

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Safety Instructions

Observe the following instructions to use the product safely and prevent any risk of injury or property damage.

⚠Warning

Noncompliance with instructions can lead to serious injury or death.

Installation

Do not install the product in a location with direct sunlight, moisture, dust, or soot.

- Fire or electric shock may occur.

Do not install the product in a location with heat from an electric heater.

- Fire or electric shock may occur due to overheating.

Install the product in a dry location.

- Otherwise, product damage or electric shock may occur due to moisture.

Install the product in a location with no electromagnetic interference.

- Otherwise, product damage or electric shock may occur.

The user should not install or repair the product independently.

- Fire, electric shock, or personal injury may occur.
- If the product has been damaged due to independent installation or repair of the product by the user, free A/S service will not be provided.

Operation

Do not allow liquids such as water, beverages, or chemicals get into the product.

- Fire, electric shock, or product damage may occur.

⚠Caution

Noncompliance of instructions could lead to minor injury or product damage.

Installation

Do not install the power supply cable in a location where people pass by.

- Product damage or physical injury may occur.

Do not install the product near a highly magnetic object such as a magnet, TV, monitor (especially CRT), or speaker.

- Product failure may occur.

Use only a D.C 12 V and 2.5 A or higher power supply adaptor.

- If the proper power supply is not used, the product may not operate properly.

Use a separate power supply for the Secure I/O 2, electric lock, and FaceStation 2, respectively.

- If connecting and using the power supply to these devices together, the devices may malfunction.

Keep the minimum separation distances between the devices when install multiple devices.

- Otherwise, RF performance is affect to the other device, the devices may not operate normally.

Operation

Do not drop the product or apply an impact to the product.

- Product failure may occur.

Manage the password with care; do not to disclose it to others and change it periodically.

- Otherwise, illegal intrusion may occur.

Do not press the buttons on the product forcibly or using a sharp tool.

- Product failure may occur.

When cleaning the product, wipe the product with a soft and dry cloth. Do not apply water, benzene, or alcohol.

- These may cause product failure.

FaceStation 2 uses a capacitive screen and buttons. If the environment is moist from wet weather, or the product surface is smeared with a large amount of water, wipe the product off with a dry towel before using it.

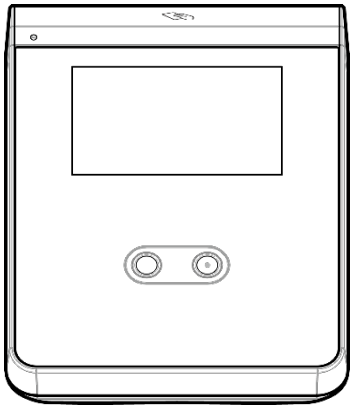
RTC battery

Replacing the battery with an incorrect type of battery may cause explosion.

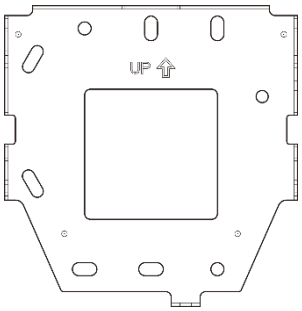
Discard the battery according to appropriate regional or international waste regulations.

Introduction

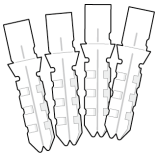
Components



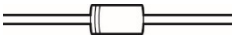
FaceStation 2



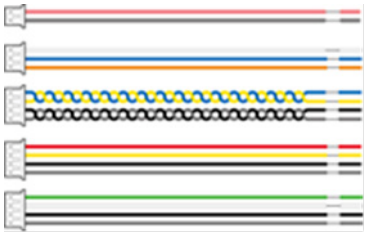
Wall-mount bracket



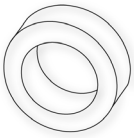
PVC anchor
(4 EA)



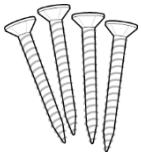
Diode
(1 EA)



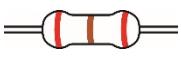
Connection cable
(2 pins 1 EA, 3 pins 1 EA, 4 pins 4 EA)



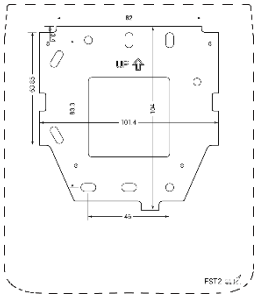
Ferrite core
(1 EA)



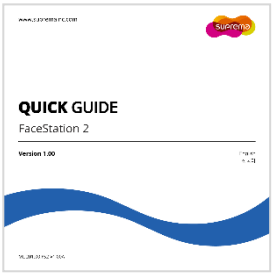
Fixing screw
(4 EA)



120Ω resistor
(1 EA)



Drilling template

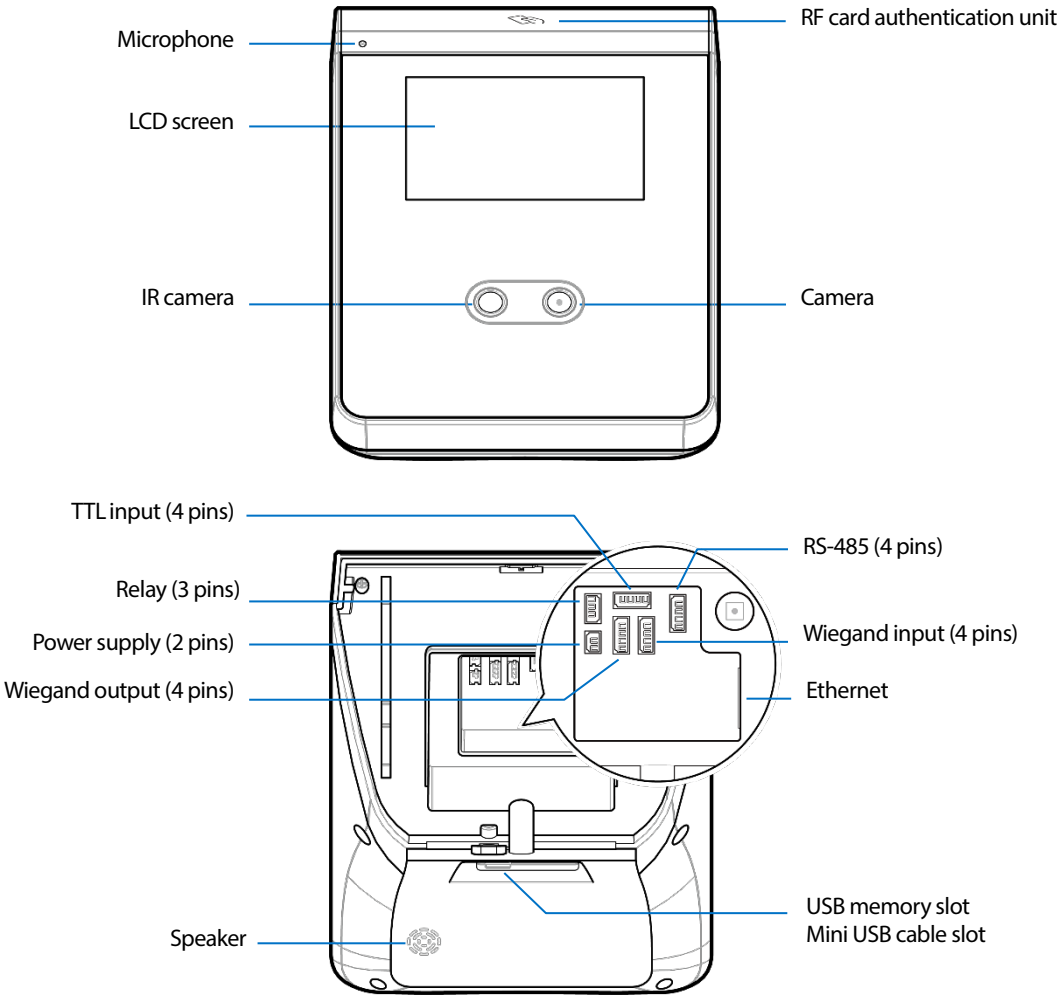


Quick guide

Note

- Components may vary according to the installation environment.
- For additional content regarding product installation, visit the Suprema website (www.suprema.co.kr) and view the installation guide.

Name and function of each part



Name	Description
Microphone	Delivers the voice of the user when the interphone is connected.
LCD screen	Provides UI for operation.
IR camera	Captures IR images.
Camera	Captures actual images.
RF card authentication unit	Scans the card for entrance.
Speaker	Delivers sound.
USB memory slot	Connects USB memory.
Mini USB cable slot	Will be supported in the future.
TTL input (4 pins)	Connects the TTL input cable.
RS-485 (4 pins)	Connects the RS-485 cable.
Relay (3 pins)	Connects the relay cable.

Power supply (2 pins)	Connects the power supply cable.
Ethernet	Connects the Ethernet cable.
Wiegand input (4 pins)	Connects the Wiegand input cable.
Wiegand output (4 pins)	Connects the Wiegand output cable.

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 GND	Black
4	SH GND	Gray

Wiegand input and output

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

Correct face registration and authentication method

Cautions for registering a 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.

Cautions for authenticating a face

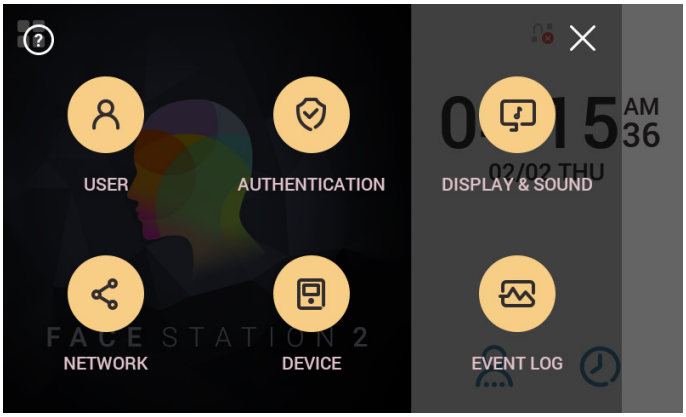
- Ensure that the face appears inside the guideline displayed on the screen of the device.
- If glasses have been changed, authentication may fail. If the face without glasses has been registered, authenticate the face without glasses. If only the face with glasses has been registered, authenticate the face with the previously worn glasses again.
- If a part of the face is covered with a hat, a mask, an eye patch, or sunglasses authentication may fail. Do not cover the face; allow the device to recognize both the eyebrows and the face.

Admin Menu

All Menus

1 Press and authenticate with the Admin level credential.

2 Select the desired menu.



Note

- If the administrator has not been designated, the menu screen will be displayed when you press .

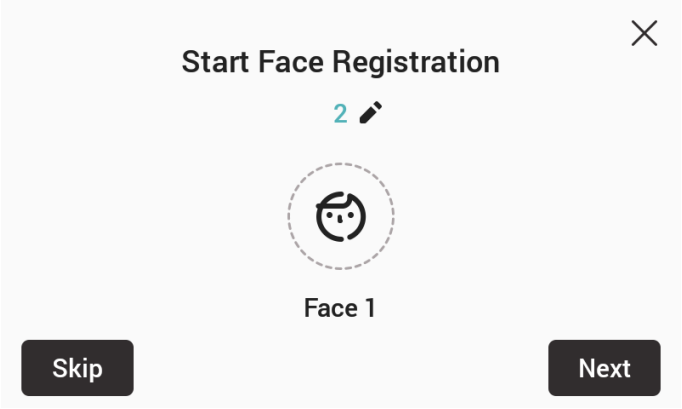
User

Registering user information

The user information, including the face, can be registered.

1 Press and authenticate with the Admin level credential.

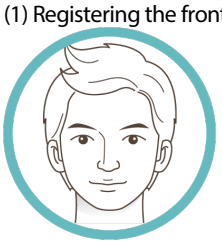
2 Press **User** > . The face registration wizard will begin.



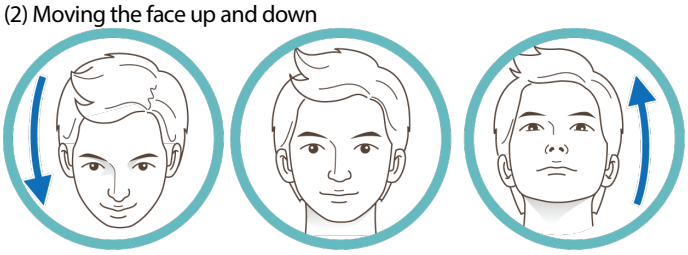
3 To proceed with the face registration wizard, press **Next**. To skip, press **Skip** and go to step 5.

4 If you have pressed **Next**, register the face according to the instructions on the screen. Face registration is carried out in 3 steps.

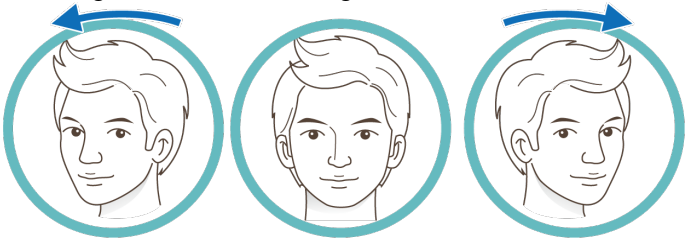
(1) Registering the front face



(2) Moving the face up and down



(3) Moving the face to the left and right

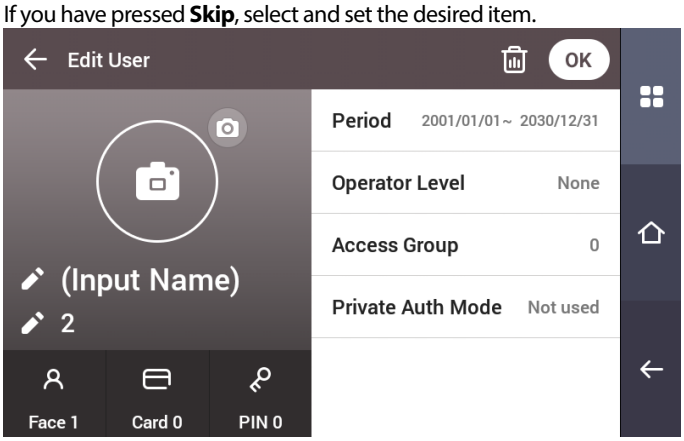


When the face registration wizard is used, only the user's face is registered. Modify other information by pressing **Edit** after registering the face.

Note

- 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.

5 If you have pressed **Skip**, select and set the desired item.



- : Take a picture of a user with the built-in camera.
- **Name**: Enter the user name.
- **ID**: Enter the user ID you wish to register. Numbers between 1 and 4294967295 can be entered for ID. If you have changed **User ID Type** to **Alphanumeric**, you can use a combination of alphabetic characters and numbers as ID.
- **Face**: Register a face for user authentication. Press + and register a face according to the instructions on the screen. To register another face, press + again.
- **Card**: Register a card for user authentication. Press + and scan the card that will be assigned to the user. To register an additional card, press + again.
- **PIN**: Enter the PIN you wish to use. Enter the PIN you wish to use, and then reenter the same PIN for confirmation. Enter a number between 4 and 16 digits to prevent leaking.
- **Validity period**: Set a Start Date and End Date to use the user account. When you press the first date, you can set **Start Date**, and when you press the second date, you can set **End Date**.
- **Operator Level**: Select the level you wish to assign to a user.
- **Face Group**: Select a face group for the user. Face groups can be used only when **Group Matching** is enabled, and these groups can be registered only in BioStar 2.
- **Access Group**: Check an access group for the user. Access groups can only be registered in BioStar 2.
- **Private Auth Mode**: Change the authentication method according to the user.

Note

Available menus vary according to the set operator level.

- **None**: This is the general user level; menus cannot be accessed.
- **Full Administrator**: All menus can be accessed.
- **Configuration**: **AUTHENTICATION, DISPLAY & SOUND**, **DEVICE**, **NETWORK** and **EVENT LOG** menus can be accessed.
- **User Management**: **USER** and **EVENT LOG** menu can be accessed.

6 When you press **OK**, settings will be saved.

Modifying user information

User Management or Administrator can modify the registered user information. A user's face or card can be added, and the PIN and level can be modified.

1. Press and authenticate with the Admin level credential.
2. Press **User** > .
3. Select your search terms. You can search for a user by **User ID**, **Name**, **Face** and **Card**.
4. Select a user you wish to modify and modify the information by referring to **Registering user information**.
   - To select a user, press and then press **OK**.

Note

- **Access Group** can be registered in BioStar 2. For detailed contents regarding registering an access group, refer to the BioStar 2 Administrator Manual.

Delete All Users

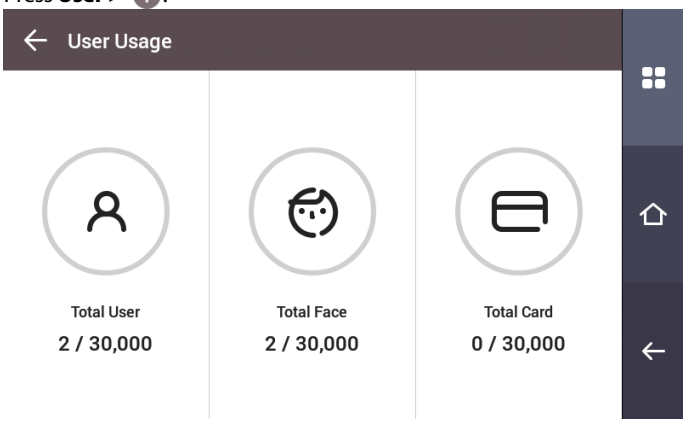
You can delete all registered users at once.

1. Press and authenticate with the Admin level credential.
2. Press **User** > and select **Delete All** or select a user you wish to delete.
3. When you press **OK**, all registered users will be deleted.

View User Usage

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

1. Press and authenticate with the Admin level credential.
2. Press **User** > .



Authentication

Auth Mode

Modifying Auth Mode

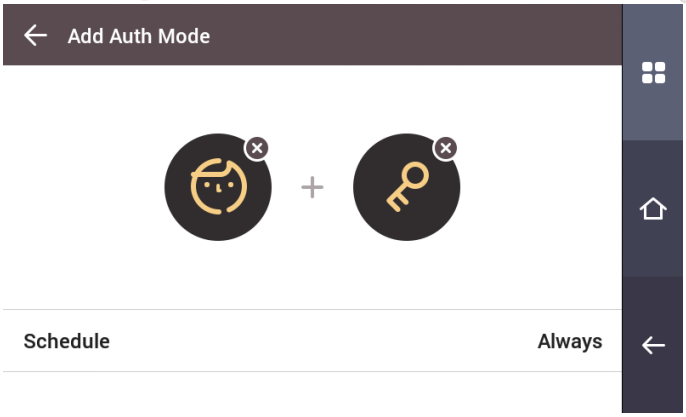
You can set the authentication method and schedule according to each credential.

1 Press and authenticate with the Admin level credential.

2 Press **AUTHENTICATION** > **Auth Mode**.

3 Press to add an auth mode or press an auth mode you wish to modify.

4 Pressing the icon will delete the selected credential, and pressing will display an addable credential on the screen.



5 Set the desired auth mode and select a schedule.

Classification	Description
Face	• : Mode allowing authentication with a face only. • + : Mode to authenticate with a face and PIN.
Card	• : Mode allowing authentication with a card only • + : Mode allowing authentication with a card and then with a face. • + : Mode allowing authentication with a card and PIN. • + / : Mode allowing authentication with a card and then with a face or PIN. • + + : Mode allowing authentication with a card and then with both a face and PIN input.
ID	• + : Mode allowing authentication by entering ID and then authenticating the face. • + : Mode allowing authentication by entering ID and then a PIN. • + / : Mode allowing authentication by entering ID and then authenticating the face or entering a PIN. • + + : Mode allowing authentication by entering ID and then using both face authentication and PIN input.

6 When you press **OK**, settings will be saved.

Note

- A schedule can be set in BioStar 2. If there is no set schedule, only **Always** can be selected.
- For detailed contents regarding setting a schedule, refer to BioStar 2 Administrator's manual.

Delete Auth Mode

1. Press and authenticate with the Admin level credential.
2. Press **AUTHENTICATION** > **Auth Mode**.
3. Press and select an item to delete.
4. When you press **OK**, the selected item will be deleted.

Add Auth Mode

1. Press and authenticate with the Admin level credential.
2. Press **AUTHENTICATION** > **Auth Mode**.
3. Press .
4. Set the desired auth mode by pressing , then select a schedule.
5. When you press **OK**, the auth mode will be added.

Operation

1. Press and authenticate with the Admin level credential.
2. Press **AUTHENTICATION** and then modify the items below **Operation**.

Operation			
Ambient Brightness	Normal	Face Pose Variation	4
Motion Sensor	Medium	Enroll Timeout	60 Sec
Auth Timeout			5 Sec

- **Ambient Brightness**: Detect the ambient brightness and adjust the intensity of IR LED. Change settings according to the installation environment.
- **Motion Sensor**: Set the sensitivity for detecting motion near the device.
- **Auth Timeout**: If the authentication is not completed during the set time, the authentication will fail.
- **Face Pose Variation**: Set the sensitivity for the position, angle, and distance of a face when registering the face. Set high if you wish to obtain a detailed face template
- **Enroll Timeout**: If a face is not registered during the set time, the face registration will be canceled.

Face Recognition

Change settings regarding face authentication.

1 Press and authenticate with the Admin level credential.

2 Press **AUTHENTICATION** and then modify the items below **Face Recognition**.

- **Security Level**: Set the security level for 1:N authentication.
- **Group Matching**: Check whether or not to use Group Matching. If Group Matching is used, you can increase the authentication speed by designing various users' faces in a group.

Note

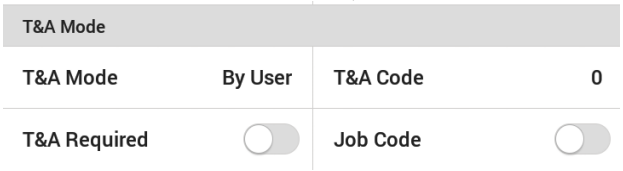
- Group Matching can be set in BioStar 2. For detailed contents, refer to the BioStar 2 Administrator Manual.

T&A Mode

You can set how to register T&A Mode.

1 Press and authenticate with the Admin level credential.

2 Press **AUTHENTICATION** then modify the items below **T&A Mode**.



3 Select and set the desired item.

- **T&A Mode**: Set the method to use T&A mode.
- **T&A Code**: Register a new T&A code.
- **T&A Required**: Set to require a user to select a T&A event when authenticating.
- **Job Code**: Select whether or not to use Job Code.

Network

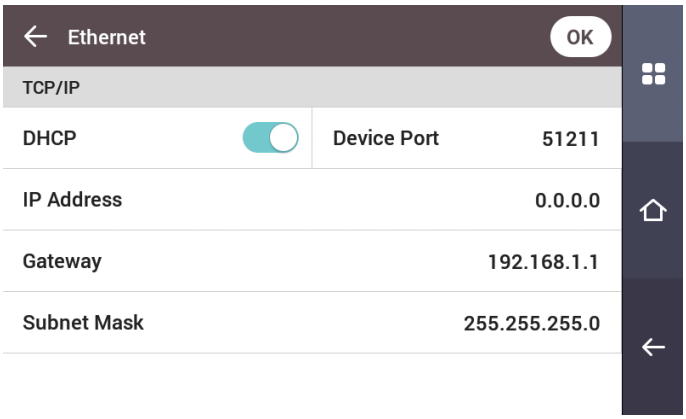
Network Settings

You can change the network settings of the device.

Ethernet

1 Press and authenticate with the Admin level credential.

2 Press **NETWORK** > **Ethernet**.



- **DHCP**: Set whether or not to use DHCP. If DHCP setting is disabled, the user can modify **Device Port**, **IP Address**, **Gateway**, **Subnet Mask**, and **DNS**.
- **Device Port**: Set the device port.
- **IP Address**: View the IP address of the device. To modify, disable DHCP setting.
- **Gateway**: View the gateway of the device. To modify, disable DHCP setting.
- **Subnet Mask**: View the subnet mask of the device. To modify, disable DHCP setting.
- **DNS server**: Set the DNS server address.

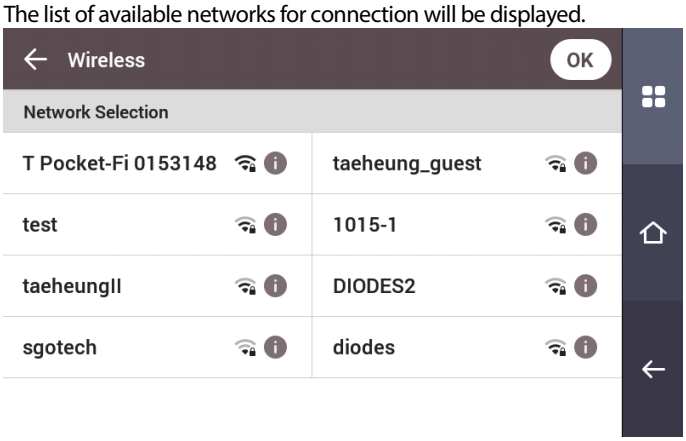
3 To modify network information manually, disable DHCP setting. You can modify **Device Port**, **IP Address**, **Gateway**, **Subnet Mask** and **DNS**.

Note

- **Ethernet** cannot be used at the same time as **Wireless**.

Wireless

1. Press and authenticate with the Admin level credential.
2. Press **NETWORK** > **Wireless**.
3. The list of available networks for connection will be displayed.



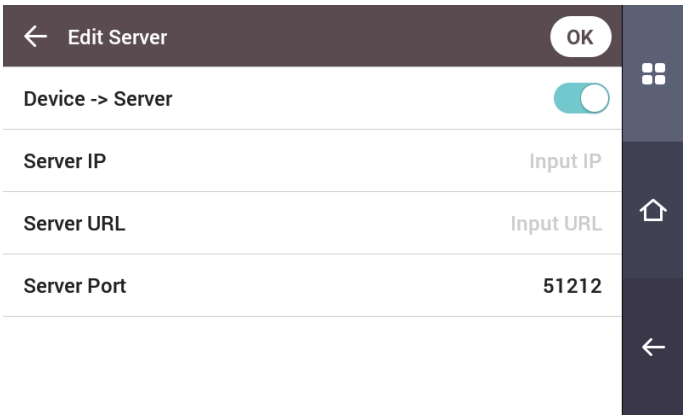
4. Select the network to which you wish to connect and enter the password. When you press **OK**, the connection to the wireless network will be made.
5. To set the network information of the wireless LAN manually, press of the network name you wish to use and disable DHCP setting. You can modify **IP Address**, **Gateway**, **Subnet Mask** and **DNS**.

Note

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

Server

1. Press and authenticate with the Admin level credential.
2. Press **NETWORK** > **Server**.



- **Connection Mode**: When you select **Device -> Server**, you can send a connection signal from the device to a server with the input information directly. When you select **Server -> Device**, **Server IP**, **Server URL** and **Server Port** cannot be entered.
- **Server IP**: Enter the IP address of the PC on which BioStar 2 is installed. Input is accepted only when **Device -> Server** is set for **Connection Mode**.
- **Server URL**: Enter server URL instead of **Server IP**. Input is accepted only when **Device -> Server** is set for **Connection Mode**.
- **Server Port**: Enter the port of the PC on which BioStar 2 is installed. Input is accepted only when **Device -> Server** is set for **Connection Mode**.

Serial Settings

RS-485

1 Press and authenticate with the Admin level credential.

2 Press **NETWORK** and then modify the items below **Serial Setting**.

Serial Setting			
RS-485	Default	Baud Rate	115200

- **RS-485**: Select the RS-485 mode.
- **Baud Rate**: Select the desired baud rate.

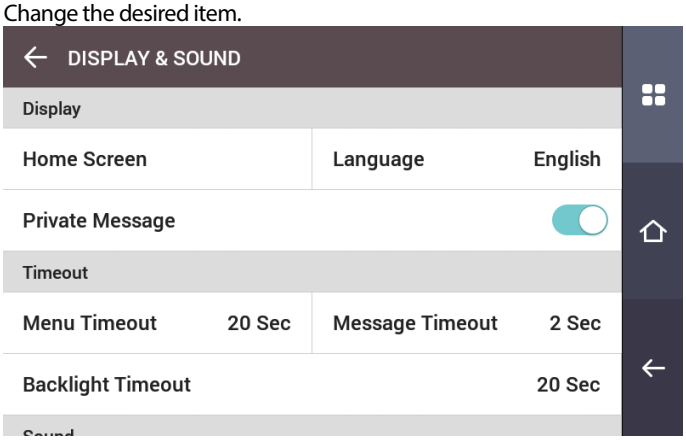
Display & Sound

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

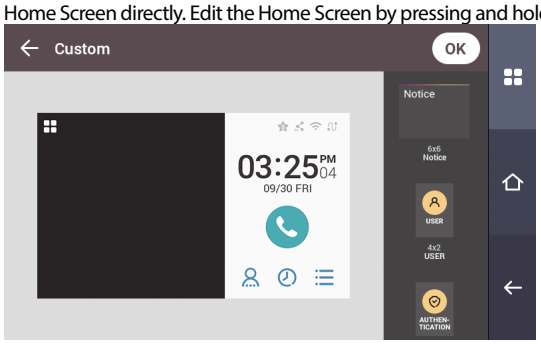
1 Press and authenticate with the Admin level credential.

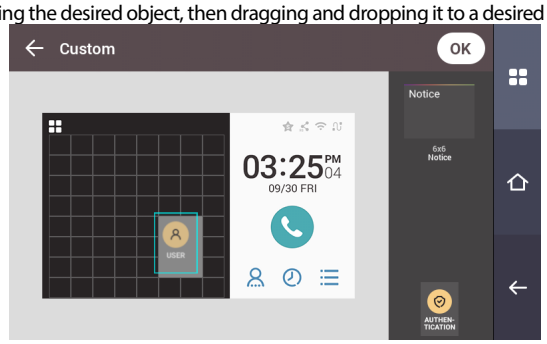
2 Press **DISPLAY & SOUND**.

3 Change the desired item.



- **Home Screen**: Select items to be displayed in the background of the home screen. When **Custom** is selected for **Style**, the user can modify the Home Screen directly. Edit the Home Screen by pressing and holding the desired object, then dragging and dropping it to a desired location.





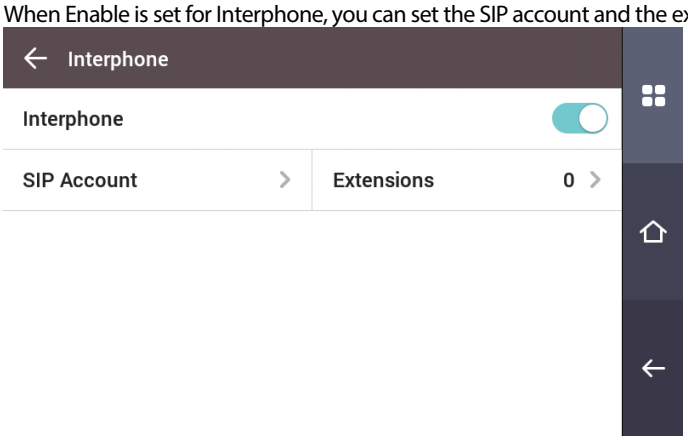
- **Language**: Set the language you wish to use.
- **Private Message**: Set whether or not to use a Private Message, which will be displayed on the screen when the user authenticates.
- **Menu Timeout**: Set the time (in seconds) for the menu screen to disappear automatically. If there is no button input during a set time, the screen will return to the home screen.
- **Message Timeout**: Set the time (in seconds) for a setting complete message or information message to disappear automatically.
- **Backlight Timeout**: Set the time (in seconds) to automatically turn off the lighting of the LCD screen.
- **Voice Instruction**: Set to use the voice instruction instead of alarm sounds.
- **Volume**: Set the volume.

Device

Interphone

Set the account and extensions of SIP interphone.

1. Press and authenticate with the Admin level credential.
2. Press **DEVICE** > **Interphone**.
3. When Enable is set for Interphone, you can set the SIP account and the extensions. Ensure to set each item correctly.



Relay

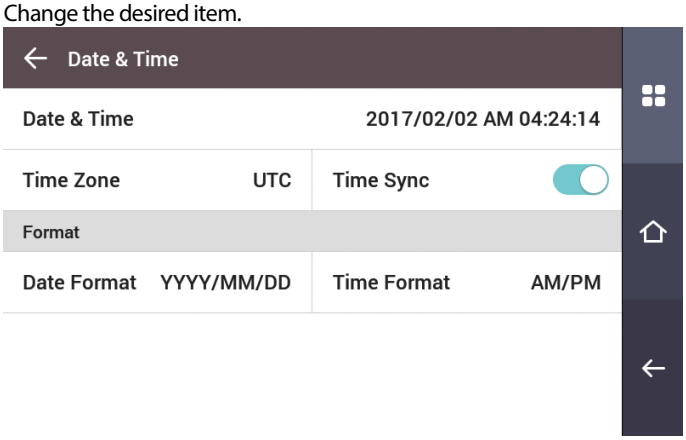
You can set the open time and the input port of the exit button in the device.

1. Press and authenticate with the Admin level credential.
2. Press **DEVICE** > **Relay**.
   - **Open Time**: Set the duration for the door to remain open when standard user authentication has been carried out.
   - **Exit button**: Select the input port where the exit button is connected.
   - **Switch**: Select the relay type (N/O or N/C).

Date & Time

You can set date and time. Set the date and time accurately in order to collect accurate log data.

1. Press and authenticate with the Admin level credential.
2. Press **DEVICE** > **Date & Time**.
3. Change the desired item.



- **Date & Time**: Check the current date and time. To modify it directly, disable **Time Sync**.
- **Standard time zone:** Set the time reference of the current location.

- **Time Sync**: Synchronize the server and the time. If you wish to synchronize the server and the time, enable Time Sync.
- **Date Format**: Set the date format. You can select among **YYYY/MM/DD**, **MM/DD/YYYY** and **DD/MM/YYYY**.
- **Time Format**: Set the time format. You can select either **24-Hour** or **AM/PM**.

Device Info

You can view the model name, firmware version of Device ID, and MAC address.

1. Press and authenticate with the Admin level credential.
2. Press **DEVICE** > **Device Info**.
3. You can view the information including **Model Name**, **Device ID**, **HW**, **FW**, **Kernel**, **MAC**, and **WiFi MAC**.

Memory Info

View the status of memory usage.

1. Press and authenticate with the Admin level credential.
2. Press **DEVICE** > **Memory Info**.

USB Memory

Connect USB Memory and import user information to the device or export log and user information from the device. Upgrade the firmware.

1. Press and authenticate with the Admin level credential.
2. Press **DEVICE** > **USB Memory**.
3. Select the desired item and change the setting.
   - **Import**: Import user information from the connected USB memory.
   - **Export**: Select information you wish to export to the connected USB memory.
   - **FW Upgrade**: Upgrade the firmware if the firmware files are saved in the connected USB memory.

Note

The type of supported USB memory is as follows. If you use a different type of USB memory, the function may not operate normally.

- Samsung Electronics: SUM-LSB 8GB, SUM-PSB 8GB, SUM-PSB 16GB, SUM-BSG 32GB
- LG Electronics: XTICK J3 WINDY 8GB, SMART USB MU1 White 8GB, MU 1 USB 32GB, MU28GBC 32GB, XTICK MOBY J1 16GB
- SanDisk: Cruzer 16GB, Cruzer Blade CZ50 4GB, 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: Micro Vault Click 8GB, MicroVault CLICK 16GB, USM-SA1 32GB
- Transcend: JetFlash 760 8GB, JetFlash 760 32GB, JetFlash 500 8GB
- Memorette: MINI500 8GB
- A-DATA: S102 PRO 8GB
- Trigem Pastel 8GB

Restart Device

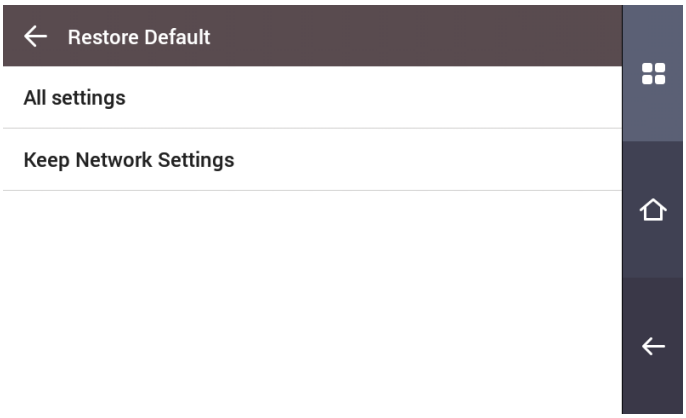
The user can restart the device.

1. Press and authenticate with the Admin level credential.
2. Press **DEVICE** > **Restart Device**.
3. To restart the device, press **OK**. To cancel, press **Cancel**.

Restore Default

Device settings, network settings, and operator levels will be reset.

1. Press and authenticate with the Admin level credential.
2. Press **DEVICE** > **Restore Default**.



3 To reset all device settings, select **All settings** and press **OK**. To reset all settings except for network settings, select **Keep Network Settings** and press **OK**.

Note

- When you reset, the operator level will be reset as well. After resetting, make sure to set the operator level again.
- Language setting will not change after resetting.

Factory Default

Delete all the information saved in the device and the root certificate and restore default settings.

1 Press and authenticate with the Admin level credential.

2 Press **DEVICE** > **Factory Default**.

3 To reset, press **OK**.

Note

- **Factory Default** menu can be used when the root certificate is saved in the device.

Delete the Root Certificate

Delete the root certificate saved in the device.

1 Press and authenticate with the Admin level credential.

2 Press **DEVICE** > **Delete the Root Certificate**.

3 To delete the Root Certificate, press **OK**.

Note

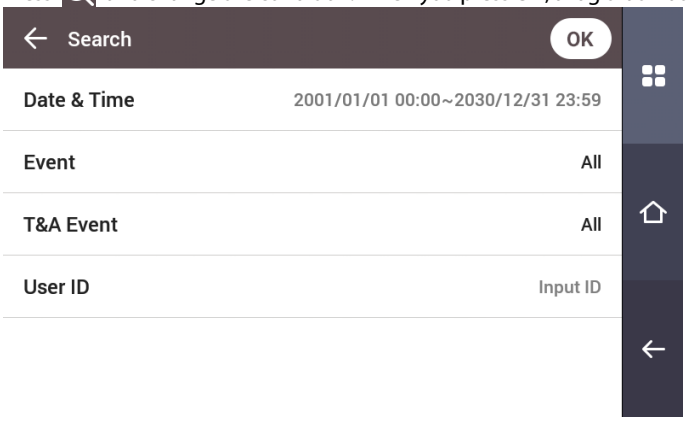
- **Delete the Root Certificate** menu can be used only when the root certificate is saved in the device and Administrator has been designated.

Event Log

Search Log

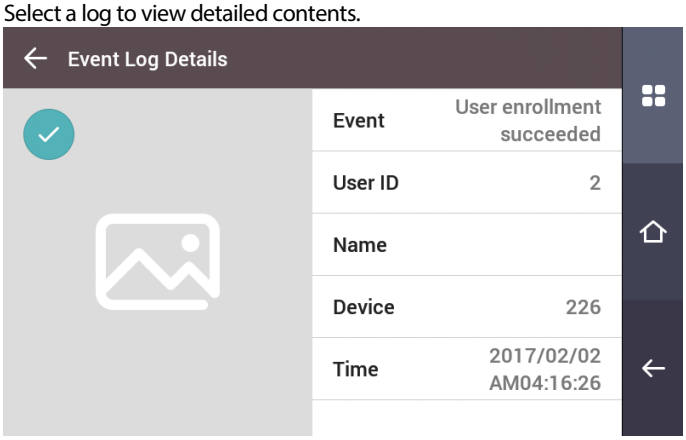
You can set a condition and search a log.

1. Press and authenticate with the Admin level credential.
2. Press **EVENT LOG**.
3. Press and change the condition. When you press **OK**, a log that matches the condition will be displayed on the screen.



Detail View Log

1. Press and authenticate with the Admin level credential.
2. Press **EVENT LOG**.
3. Select a log to view detailed contents.



Delete All Logs

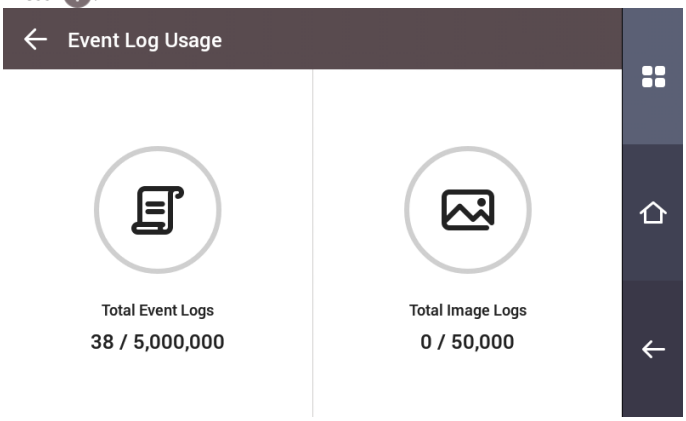
You can delete all saved logs.

1. Press and authenticate with the Admin level credential.
2. Press **EVENT LOG**.
3. To delete all logs, press and then press **OK**. To cancel, press **Cancel**.

View Log Usage

You can check the status of log usage.

1. Press and authenticate with the Admin level credential.
2. Press **EVENT LOG**.
3. Press .



Troubleshooting

Checklist before reporting a failure

Classification	Problem	Solution
Power	The power is being supplied but the device does not operate.	• If the distance between the terminal and the bracket is too great, the device may not operate due to the temper switch. • Check the adaptor or the power cable.
PIN	I forgot my PIN.	• For a normal user PIN, request it from the administrator and reenter the PIN. • If you have lost the Admin PIN, contact the installation company.
	I entered my PIN and pressed the **OK** button, but I still cannot open the door.	• Check if you entered the registered PIN correctly. • Check if you have changed your PIN recently. • If you cannot remember the PIN, request it from the administrator and reenter the PIN.
Face	The face has been registered but face authentication cannot be done smoothly, and errors occur frequently.	• Check '**Cautions for registering a face**' and register the face again. • If there are a large number of registered faces, change **Matching Timeout** and try again.
	Face authentication has suddenly stopped working.	• Check 'Cautions for authenticating a face' and try again.
Door Lock	The door does not lock when I close the door.	• The electric lock may be malfunctioning. Have an inspection performed by the installation company.
Time	The time has suddenly become incorrect.	• FaceStation 2 is equipped with a built-in battery; however, if power is not supplied for a long period of time, the built-in battery may die, causing the time to become incorrect. For information on correcting the time, referring to **Date & Time**.
Admin Access	I lost my Admin PIN, so I cannot access the Admin mode.	• The administrator grants access permission in FaceStation 2, so only the administrator can access the Admin menu. • If you need to access the Admin menu, you can have a PIN issued through a special procedure. Ask the installation company for the procedure to issue the password.

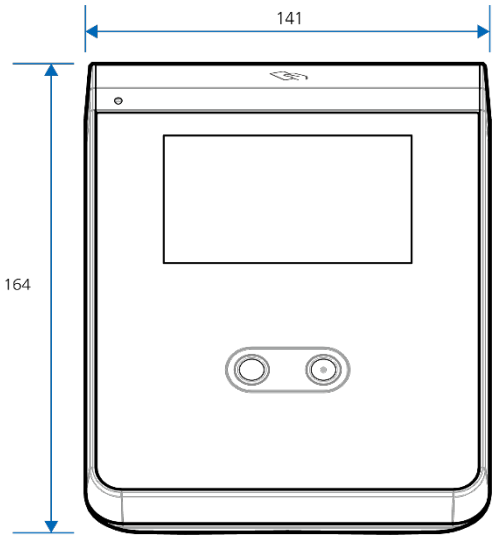
Product specifications

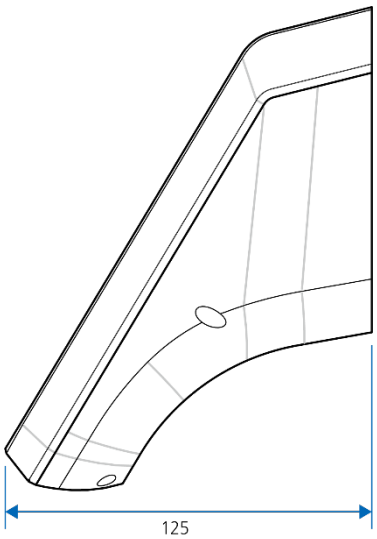
Category	Feature	Specification
Credential	Biometric	Face
	RF Option	• FS2-D: 125kHz EM & 13.56Mhz MIFARE, MIFARE Plus, DESFire/EV1, FeliCa, NFC • FS2-AWB: 125kHz EM, HID Prox & 13.56Mhz MIFARE, MIFARE Plus, DESFire/EV1, FeliCa, iCLASS SE/SR, NFC, BLE
	RF read range*	MIFARE/DESFire/iCLASS : 50 mm / EM/HID Prox/Felica: 30 mm, BLE: 50 mm
	LFD	Supported
General	CPU	1.4 GHz Quad Core
	Memory	8GB Flash + 1GB RAM
	LCD type	4" color TFT touch
	LCD resolution	800 x 480
	Sound	24 bit/Voice DSP (echo cancel)
	Operating temperature	-20 °C - 50 °C
	Storage temperature	-40 °C - 70 °C
	Operating humidity	0% - 80%, non-condensing
	Storage humidity	0% - 90%, non-condensing
	Camera type	CMOS
	Camera resolution	720 x 480
	Camera angle	Visual Lens: Diagonal 92.7° IR Lens: Diagonal 58°
	Dimension (W x H x D)	141 mm x 164 mm x 125 mm
	Weight	Device: 628 g Bracket: 74 g (Including washer and bolt)
	Certificates	CE, FCC, KC, RoHS, REACH, WEEE
Capacity	Max. User (1:1)	30,000
	Max. User (1:N)	3,000
	Max. Template (1:1)	900,000
	Max. Template (1:N)	90,000
	Max. Text Log	5,000,000
	Max. Image Log	50,000
Interface	Wi-Fi	Supported (Built-in, IEEE802.11 b/g)
	Ethernet	Supported (10/100/1000 Mbps, auto MDI/MDI-X)
	RS-485	1ch Host or Slave (Selectable)
	Wiegand	1ch Input, 1ch Output
	TTL input	1ch Input
	Relay	1 Relay
	USB	USB 2.0 (Host)
	Tamper	Supported
Electrical	Power	Voltage: 12 VDC Current: Max. 2.5 A
	Switch input VIH	Min.: 3 V Max.: 5 V
	Switch input VIL	Max.: 1 V
	Switch Pull-up resistance	4.7 kΩ (The input pots are pulled up with 4.7 kΩ.)
	Wiegand output VOH	More than 4.8 V
	Wiegand output VOL	Less than 0.2 V
	Wiegand output Pull-up resistance	Internally pulled up with 1 kΩ
	Relay	Voltage: Max. 30 VDC Current: 1 A, Max. 2 A

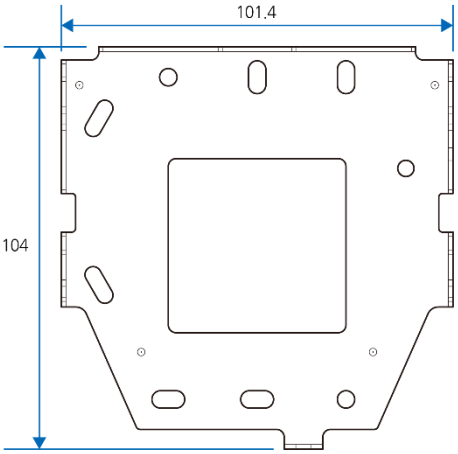
* RF read range will vary depending on installation environment.

Dimensions

(Unit: mm)







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.

Note: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment to an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

Modifications not expressly approved by the manufacturer may void the user's authority to operate the equipment under FCC rules.

This appliance and its antenna must not be located or operated in conjunction with any other antenna or transmitter.
A minimum separation distance of 20cm must be maintained between the antenna and individuals for this appliance to satisfy the RF exposure requirements.

EU Declaration of Conformity (CE)

This product is CE marked according to the provisions of the R&TTE Directive (1999/5/EC).
Suprema Inc. hereby declares that this product is in compliance with the essential requirements and other relevant provisions of Directive 1999/5/EC. This device is a class 1 radio device according to the directive.

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Appendices

Escape clause

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