

X-Station 2

USER GUIDE

Version 1.04

English

EN 102.00.XS2-ODPB, XS2-OAPB

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Safety instructions

Please read this safety instructions before you use the product to prevent injury to yourself and others and to prevent property damage. The term 'product' in this manual refers to the product and any items provided with the product.

Instructional icons



Warning: This symbol indicates situations that could result in death or severe injury.



Caution: This symbol indicates situations that may result in moderate injury or property damage.



Note: This symbol indicates notes or additional information.



Warning

Installation

When using a high-capacity power supply, please pay special attention to avoid miswiring.

- Miswiring may result in serious fire, electric shock, or product damage.

Do not install or repair the product arbitrarily.

- This may result in electric shock, fire, or product damage.
- Damages caused by any modifications or failure to follow installation instructions can void your manufacturer's warranty.

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

- This may result in electric shock or fire.

Install the product in a well-ventilated and cool place away from direct sunlight to prevent overheating when installing it outside.

Do not place the product inside the sealed enclosure when installing it outside.

- It increases the internal temperature of the enclosure and this may result in electric shock, fire, or malfunction.

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

- This may result in fire due to overheating.

Install the product in a dry location.

- Humidity and liquids may result in electric shock or product damage.

Do not install the product in a location where it will be affected by radio frequencies.

- This may result in fire or product damage.

Operation

Keep the product dry.

- Humidity and liquids may result in electric shock, fire, or product damage.

Do not use damaged power supply adapters, plugs, or loose electrical sockets.

- Unsecured connections may cause electric shock or fire.

Do not bend or damage the power cord.

- This may result in electric shock or fire.



Caution

Installation

Please read this manual before installing the product to ensure a safe and correct installation.

When wiring the power cable and other cables, make sure to connect them with the power turned off for all devices involved.

- The product may malfunction.

Before connecting power to the product, double-check the manual to ensure that the wiring is correct, then connect the power.

Do not install the product under direct sunlight or UV light.

- This may result in product damage, malfunction, discoloration, or deformation.

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

- This may result in injury or product damage.

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

- The product may malfunction.

Keep the minimum distance between products when installing multiple products.

- The product may be affected by radio frequencies emitted by other products and the product may malfunction.

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

- If the right power supply is not used, the product may malfunction.
- Refer to the **Power** in the product specifications for maximum current consumption specifications.

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

- If connecting and using the same power supply, the product may malfunction.

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

- The product may malfunction.

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.

- The product may malfunction if the water-resistant and dust-resistant features are damaged.



Caution

Operation

Do not drop the product or cause impacts to the product.

- The product may malfunction.

Do not disconnect the power supply while upgrading the firmware of the product.

- The product may malfunction.

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

- This may result in illegal intrusion.

Do not press buttons on the product by force or do not press them with a sharp tool.

- The product may malfunction.

Do not store your product in very hot or very cold places. It is recommended to use your product at temperatures from -20 °C to 50 °C.

- The product may malfunction.

When cleaning the product, mind the following.

- Wipe the product with a clean and dry towel.
- If you need to sanitize the product, moisten the cloth or the wipe with a proper amount of rubbing alcohol and gently clean all exposed surfaces including fingerprint sensor. Use rubbing alcohol (containing 70% Isopropyl alcohol) and a clean, non-abrasive cloth like lens wipe.
- Do not apply liquid directly to the surface of the product.

Do not use the product for anything other than its intended use.


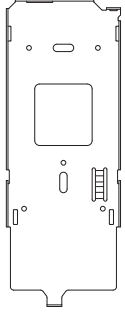
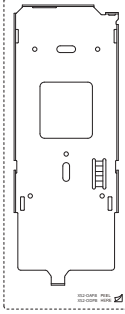

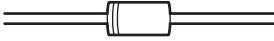




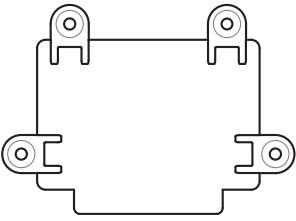



- The product may malfunction.

RTC Battery

Use of an unapproved or incorrect type of battery may result in a risk of explosion. Discard the battery according to the appropriate regional or international waste regulations.

Introduction

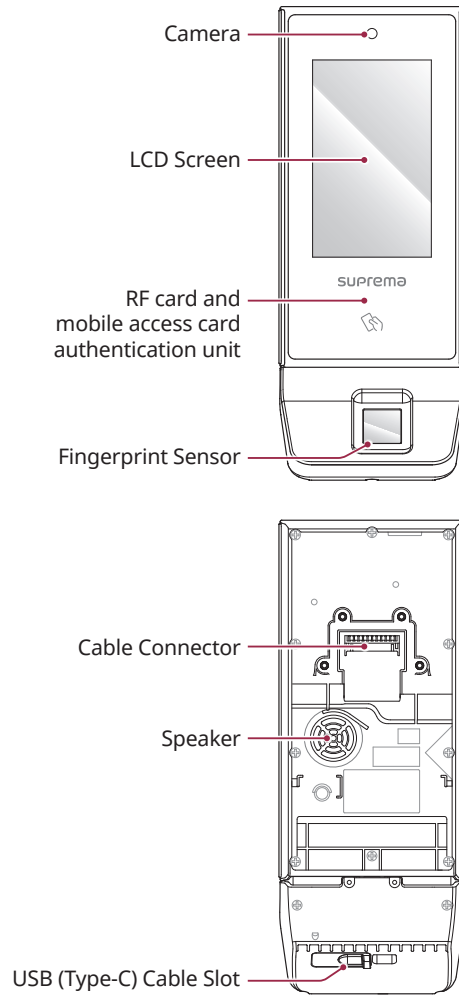
Components

| | | | |
|---|---|---|---|
|  |  |  | |
| <p>X-Station 2</p> | <p>Wall Bracket</p> | <p>Drilling Template</p> | |
|  |  |  | |
| <p>Connection Cables</p> | <p>Diode</p> | <p>120 Ω Resistor</p> | |
|  |  |  | |
| <p>PVC Anchor x2</p> | <p>Fixing Screw x2</p> | <p>Bracket Fixing Screw (Star Shaped)</p> | |
|  |  |  |  |
| <p>Cable Cover</p> | <p>Shrink Tube</p> | <p>Quick Guide</p> | <p>Open Source Software Guide</p> |



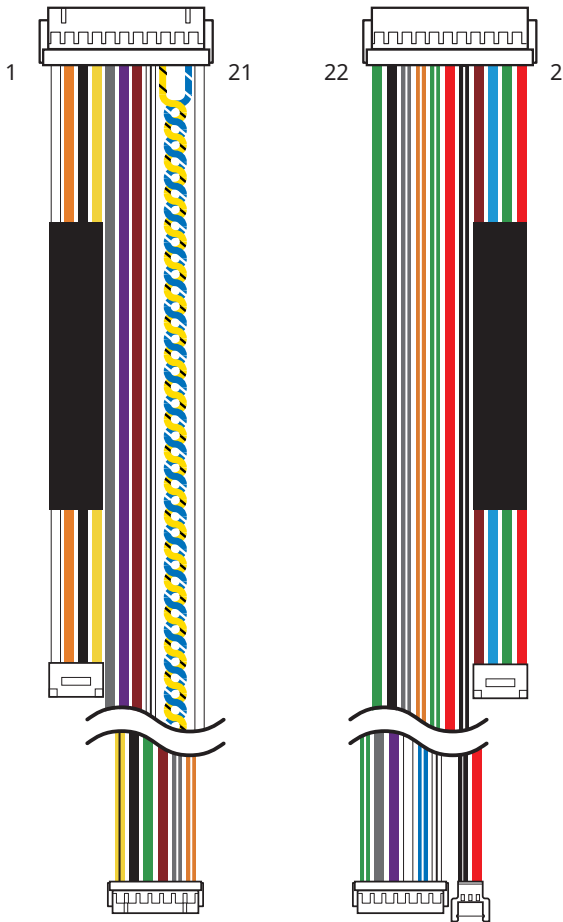
- Components may vary according to the installation environment.
- When assembling the product with the bracket, you can use the included bracket fixing screw (Star Shaped) instead of the product fixing screw for enhanced security.
- For more details regarding the product installation, visit the Suprema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

Name and function of each part



| Name | Description |
|--|---|
| Camera | Captures actual images. |
| LCD Screen | Provides UI for operation. |
| RF card and mobile access card authentication unit | Part to scan a RFID card or mobile access card for entrance. |
| Fingerprint Sensor | Reads fingerprints. |
| Cable Connector | Connects cables. <ul style="list-style-type: none"> • Power supply • Ethernet + PoE • RS-485 • Wiegand input and output • TTL input • Relay |
| Speaker | Delivers sound. |
| USB (Type-C) Cable Slot | Connects the USB cable. |

Cables and connectors



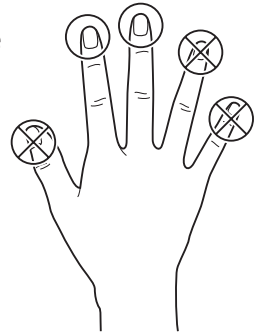
| Cable | PIN | Name | Color |
|------------------------------|-----|----------|-----------------------|
| RJ-45 (Ethernet + PoE) | 1 | ENET TXP | White |
| | 3 | ENET TXN | Orange |
| | 5 | ENET RXP | Black |
| | 7 | ENET RXN | Yellow |
| TTL input | 9 | TTL GND | Gray |
| | 11 | TTL IN0 | Purple |
| | 13 | TTL IN1 | Brown |
| RS-485 | 15 | 485 GND | White (Black stripe) |
| | 17 | 485 TRXN | Yellow (Black stripe) |
| | 19 | 485 TRXP | Blue (White stripe) |
| Wiegand | 21 | WG D1 | White |
| | 22 | WG D0 | Green |
| | 20 | WG GND | Black |
| Relay | 18 | RLY NO | Gray (White stripe) |
| | 16 | RLY NC | Orange (White stripe) |
| | 14 | RLY COM | Green (White stripe) |
| Power | 12 | PWR +VDC | Red |
| | 10 | PWR GND | Black (White stripe) |
| RJ-45 (Ethernet + PoE) | 8 | VB2 | Brown |
| | 6 | VB2 | Blue |
| | 4 | VB1 | Green |
| | 2 | VB1 | Red |

How to enroll a fingerprint

In order to improve the fingerprint authentication rate, register the fingerprint correctly. X-Station 2 can recognize a fingerprint even if the angle and position of a user's fingerprint input change. If you register the fingerprint with attention to the following matters, the authentication rate can be improved.

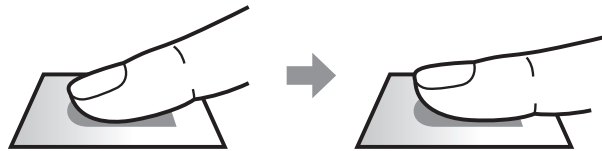
Selecting a finger for fingerprint input

- In preparation for the case that the fingerprint of a specific finger cannot be used, for example if the user is lifting a load with one hand or a finger gets hurt, up to 10 fingerprints for each user can be registered.
- In the case of a user whose fingerprint cannot be recognized well, the authentication rate can be improved by enrolling the same finger twice repeatedly.
- If a finger has a cut or the fingerprint is blurry, select another finger for the fingerprint.
- It is recommended to use the index finger or the middle finger when scanning the fingerprint. The authentication rate can be reduced if it is difficult to place another finger at the center of fingerprint sensor accurately.



Fingerprint enroll method

- 1 When a message saying "Scan Finger" is displayed on the LCD screen for enrolling the fingerprint, place the finger with the fingerprint you wish to enroll on the fingerprint sensor and press the finger gently for better authentication.



- 2 When the re-input screen is displayed after a beep sound, scan the fingerprint of the enrolled finger again. (scan the fingerprint of a finger to be enrolled twice)



Cautions for enrolling a fingerprint

When a fingerprint is recognized, it is compared with the initially registered fingerprint, so the initial fingerprint enroll is the most important. Pay attention to the following matters when enrolling the fingerprint.

- Place the finger deep enough to contact with the sensor completely.
- Place the center of the fingerprint in the center of the sensor.
- If a finger has a cut or the fingerprint is blurry, select another finger for the fingerprint.
- Scan the fingerprint correctly without moving according to the instruction on the screen.
- If you make the finger upright so that the contact area with the sensor is decreased or the angle of finger is warped, fingerprint authentication may not be performed.



When the fingerprint recognition fails

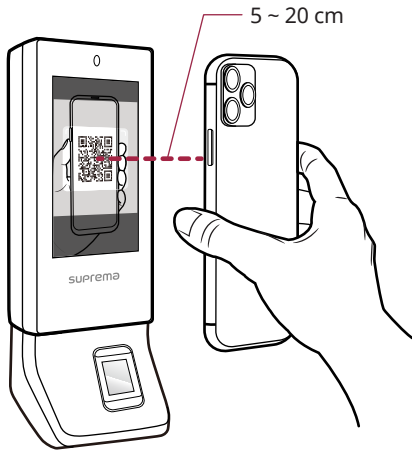
X-Station 2 can recognize a fingerprint regardless of a change in season or finger condition. However, the authentication rate may vary according to the external environment or fingerprint input method. If the fingerprint authentication cannot be done smoothly, it is recommended to take the following measures.

- If the finger is smeared with water or sweat, dry off the finger and then scan the finger.
- If the finger is too dry, blow your breath on the fingertips and then scan the finger.
- If the finger has a cut, register the fingerprint of another finger.
- The initially enrolled fingerprint often may have not been scanned correctly, so enroll the fingerprint again according to 'Cautions for enrolling a fingerprint'.

Note for QR/Barcode Usage and Device License

You can issue a QR/Barcode to a user and use it as an authentication method. Scan the QR/Barcode properly by following the instructions on the screen to increase the recognition rate.

How to scan a QR/Barcode




- Keep 5-20 cm of distance between the device's camera and the QR/Barcode.
- Position the QR/Barcode in the center of the scan screen of the device.
- When authenticating with the QR/Barcode downloaded to your smartphone, adjust the brightness of your smartphone so that the device can read the QR/Barcode clearly.
- If do not follow the instructions on the screen, it may take a long time to scan the QR/Barcode, or it may fail.

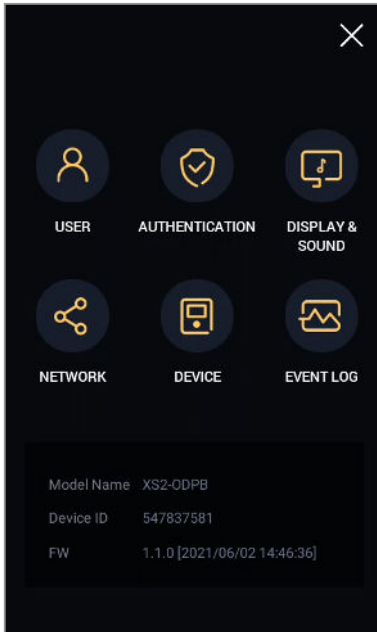
Notes for Device License


- Using the QR/Barcode authentication requires a separate device license. Contact the place of purchase to issue a device license.
- The device license file is an encrypted file and cannot be modified arbitrarily.
- Device licenses are issued based on device ID. If the device ID is changed in an unusual way, the warranty service for the license is not provided.

Admin Menu

All Menus


- 1 Press  and authenticate with the Admin level credential.
- 2 Select the desired menu.




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

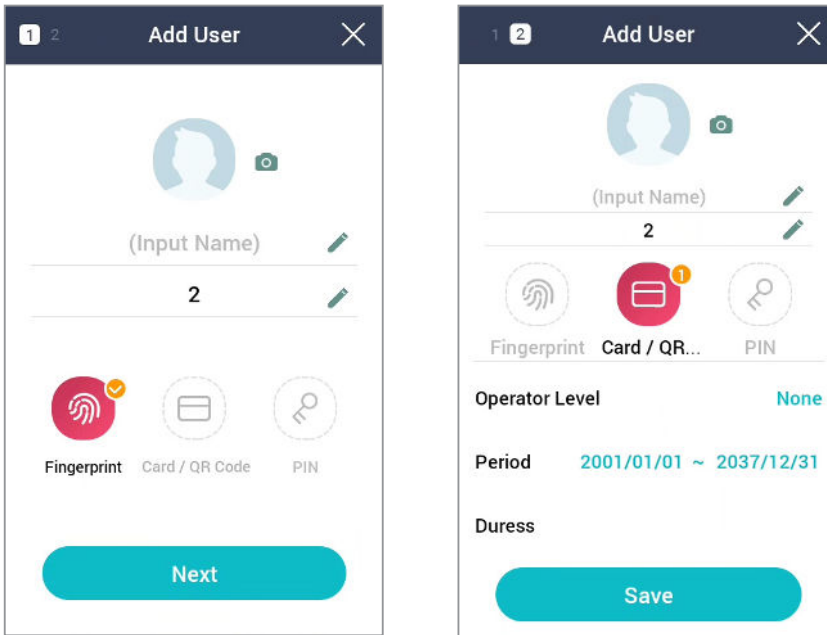
Registering user information




The user information including credentials can be registered.

1 Press  and authenticate with the Admin level credential.

2 Select **USER** → , and choose a credential you want to register.

There are two steps for the user registration. Some options are available after the credential has been registered.



-  : Take a picture of a user with the built-in camera.
- **Name:** Enter the username.
- **ID:** Enter a number between 1 and 429467295 to register as the user ID. If User ID Type set to Alphanumeric, a combination of alphanumeric characters and symbols (., -) can be used for the ID. Up to 32 characters can be input.
- **Fingerprint:** Register a fingerprint for user authentication. Press **Fingerprint** → **Next** and register a fingerprint according to the instructions on the screen. To add more fingerprint, press . Refer to [Registering a fingerprint](#) to learn more about the fingerprint registration.
- **Card / QR Code:** Register a card for user authentication. Press **Card / QR Code** → **Next** and scan the card that will be assigned to the user. To register an additional card, press .
- **PIN:** Enter the PIN you wish to use. Enter the PIN you wish to use, and then enter the same PIN again for confirmation. Enter a number between 4 and 16 digits to prevent leaking.
- **Operator Level:** Select the level you wish to assign to a user.






Available menus vary according to the set user level.

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

- **Period:** Set an expiry date to use the user account.
- **Duress:** Select this option to add the fingerprint as a duress fingerprint. When threatened by someone to open the door, the user can authenticate using this fingerprint to send an alarm signal to BioStar 2.
- **Private Auth Mode:** Change the authentication method according to the user.

Registering a fingerprint




- 1 Press  and authenticate with the Admin level credential.
- 2 Select **USER** → .
- 3 Select  **Fingerprint** → **Next**.



- Place the finger deep enough to contact with the sensor completely.
- Place the center of the fingerprint in the center of the sensor.
- If a finger has a cut or the fingerprint is blurry, select another finger for the fingerprint.
- Scan the fingerprint correctly without moving according to the instruction on the screen.
- If you make the finger upright so that the contact area with the sensor is decreased or the angle of finger is warped,
- fingerprint authentication may not be performed.

Modifying User Information

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



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



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

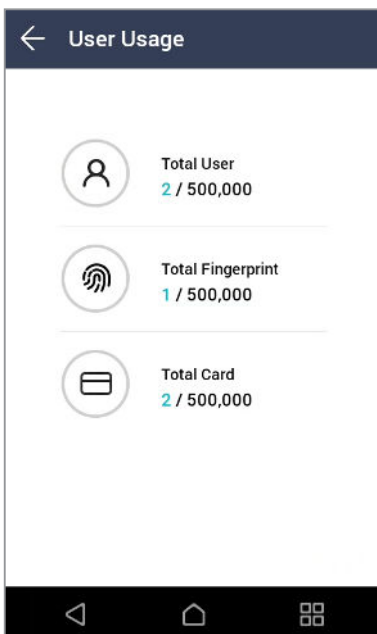
You can delete all registered users at once.

- 1 Press  and authenticate with the Admin level credential.
- 2 Select **USER** → .
- 3 Check **Delete All** to delete all registered users and press **OK**.
- 4 When you press **OK**, all registered users will be deleted.

View User Usage

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

- 1 Press  and authenticate with the Admin level credential.
- 2 Select **USER** → . User usage information appears.






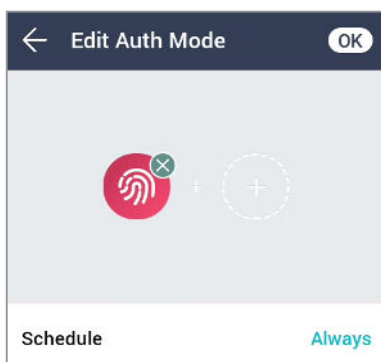
Authentication

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 Select **AUTHENTICATION** → **Auth Mode**.
- 3 Select the authentication mode to modify.
- 4 When you press , the selected credential will be deleted, and when you press , available credentials to be added will be displayed on the screen.





- 5 Set the desired auth mode and select a schedule.
- 6 When you press **OK**, settings will be saved.






- You can combine selected authentication mode to authenticate all in order or only some of the selected authentication mode to authenticate. For example, if you combines the authentication mode with  + , a user should authenticate fingerprint and a PIN, and if you combine the authentication mode with  +  / , a user authenticates a card first and fingerprint or a PIN.
- 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.
- To use **QR/Barcode** authentication, **QR/Barcode** must be activated in **AUTHENTICATION** → **QR/Barcode Operation**, and a separate device license is required. For more information, refer to [License](#).


Delete Auth Mode

- 1 Press  and authenticate with the Admin level credential.
- 2 Select AUTHENTICATION → Auth Mode.
- 3 Press  and select the authentication mode to delete. You can select multiple options.
- 4 Press OK. To delete the selected option, press OK. Or, press Cancel to cancel the deletion.

Add Auth Mode

- 1 Press  and authenticate with the Admin level credential.
- 2 Select AUTHENTICATION → Auth Mode.
- 3 Press .
- 4 Set the desired auth mode by pressing , and 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 items below Operation.

| Operation | |
|-----------------|--------------------------|
| Auth Timeout | 10 Sec |
| Server Matching | <input type="checkbox"/> |

- **Auth Timeout:** If the authentication is not completed during a set time, the authentication will fail. You can set a time between 3 seconds and 20 seconds.
- **Server Matching:** When you set Server Matching, the user authentication is not carried out in the device, but instead is carried out in BioStar 2. Server Matching can be useful when there is a large amount of user information in the device or you do not wish to publicly expose the device where user credential information is saved.

QR/Barcode Operation

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


| QR/Barcode Operation | |
|----------------------|-------------------------------------|
| QR/Barcode | <input checked="" type="checkbox"/> |
| Camera Timeout | 10 Sec |
| Motion Sensor | Medium |
| Use QR as Card | <input type="checkbox"/> |

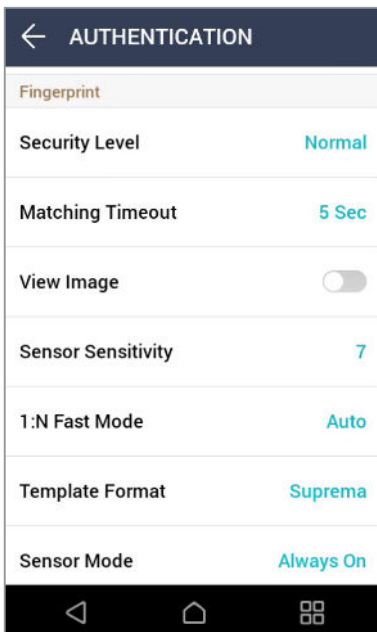
- **QR/Barcode:** Set to use QR code or Barcode to authenticate.
- **Camera Timeout:** If you do not scan the QR code or Barcode within the set time, the authentication will fail. You can set a time between 3 seconds and 20 seconds. It can be set only when **QR/Barcode** is activated.
- **Motion Sensor:** Set the sensitivity for detecting motion near the device. It can be set only when **QR/Barcode** is activated.
- **Use QR as Card:** Allows authentication with a QR code of the same data as the issued CSN card or Wiegand card. It can be set only when **QR/Barcode** is activated.



Using the **QR/Barcode** authentication requires a separate device license. For more information, refer to [License](#).

Fingerprint


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




- **Security Level:** Set the security level for 1:N authentication.
- **Matching Timeout:** Set the fingerprint matching timeout. If the authentication is not completed during a set time, the authentication will fail.
- **View Image:** Set to view the original image when scanning the fingerprint.
- **Sensor Sensitivity:** Set the sensitivity of the fingerprint authentication sensor. To obtain more precise fingerprint information by increasing the sensor sensitivity, set the sensor sensitivity higher.
- **1:N Fast Mode:** Set the fingerprint authentication speed. If you select **Auto**, the authentication speed will be set according to all fingerprint templates enrolled on the device.
- **Template Format:** Set the fingerprint template format. SUPREMA is set as the default, and if you change the template format, all fingerprints saved previously cannot be used. Use caution when changing the Template Format.
- **Sensor Mode:** When **Auto On** is set, the fingerprint sensor recognizes a user's fingerprint and turns on. When **Always On** is set, the sensor is always on.
- **Live Fingerprint Detection:** Set the level of the fake fingerprint detection. The higher the fake fingerprint detection level, the higher the rejection rate of fingerprint.
- **Advanced Enrollment:** Inspect the quality of a scanned fingerprint in order to save high quality fingerprint information. When Use is set and the quality of the fingerprint is low, it notifies such information to the user and helps the user scan the fingerprint correctly.
- **Duplicate Check:** When registering fingerprints, you can check duplicates.

T&A Mode

You can set how to register T&A Mode.


- 1 Press  and authenticate with the Admin level credential.
- 2 Press **AUTHENTICATION** and then modify items below **T&A Mode**.

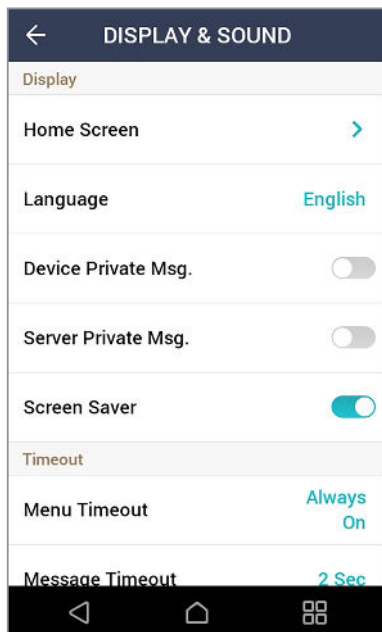
| T&A Mode | |
|---------------|--------------------------|
| T&A Mode | Fixed |
| T&A Code | 0 |
| Fixed T&A Key | Code 1 (In) |
| Job Code | <input type="checkbox"/> |

- 3 Select and set the desired item.
 - **T&A Mode:** Set the method to use T&A mode.
 - **T&A Code:** You can register T&A events. Select **T&A Code** →  to register a T&A event and set an icon, name of T&A event, and schedule.
 - **T&A Required:** Set to require a user to select a T&A event when authenticating. This option can be used when **T&A Mode** is set to **By User**.
 - **Fixed T&A Key:** Set to use only a T&A event selected by the administrator. This option can be used when **T&A Mode** is set to **Fixed**.
 - **Job Code:** Select whether to use **Job Code**.
- 4 To save settings, press **OK**.

Display & Sound

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

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



- **Home Screen:** Select items to be displayed in the background of the home screen.
- **Language:** Set the language you wish to use.
- **Device Private Msg.:** Set whether to use a Private Message, which will be displayed on the screen when the user authenticates. You can set **Device Private Msg.** by using the BioStar 2 Device SDK.
- **Server Private Msg.:** Set whether to use a Private Message, which will be displayed on the screen when the user authenticates. You can set the **Server Private Msg.** by using the BioStar 2 API. If you have not set it on the server, the device does not display a message when authentication is successful even if **Server Private Msg.** is enabled on the device.
- **Screen Saver:** Set this option to use the screen saver feature. It reduces unnecessary energy consumption by lowering the brightness of the LCD screen when the device is not in use.
- **Menu Timeout:** Set the time (sec) 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 (sec) for a setting complete message or information message to disappear automatically.
- **Backlight Timeout:** Set the time (second) to turn off the lighting of LCD screen.
- **Voice Instruction:** Set to use the voice instruction instead of alarm sounds.
- **Volume:** Set the volume.




Refer to the BioStar 2 Device SDK webpage on the Suprema Knowledge Base website (kb.supremainc.com/bs2sdk/) for more information on the BioStar 2 Device SDK.

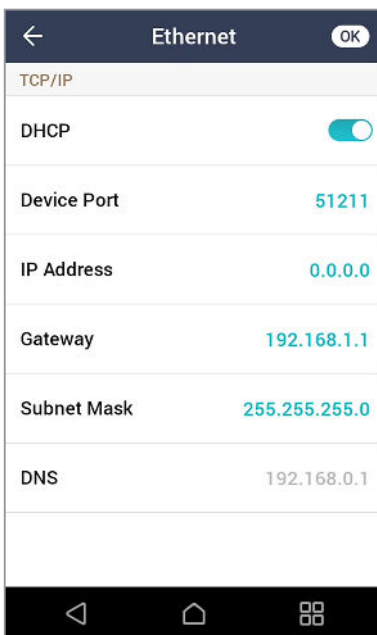
Network

Network Settings

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


Ethernet

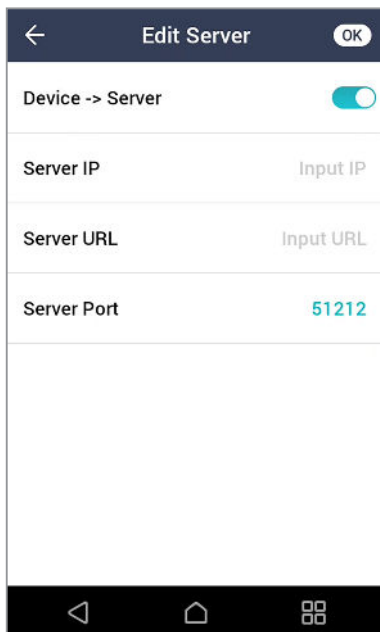
- 1 Press  and authenticate with the Admin level credential.
- 2 Select **NETWORK** → **Ethernet**.
- 3 Change the desired item.



- **DHCP:** Set whether to use DHCP. If DHCP setting is disabled, the user can modify **IP Address**, **Gateway** and **Subnet Mask**.
 - **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:** Set the DNS server address.
- 4 To save settings, press **OK**.


Server

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



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

OSDP Setting

- 1 Press  and authenticate with the Admin level credential.
- 2 Press **NETWORK** and then modify items below **OSDP Setting**.



| OSDP Setting | |
|-----------------------|--------------------------------|
| RS-485 | Default |
| Baud Rate | 115200 |
| Authentication Result | Display Result from Controller |

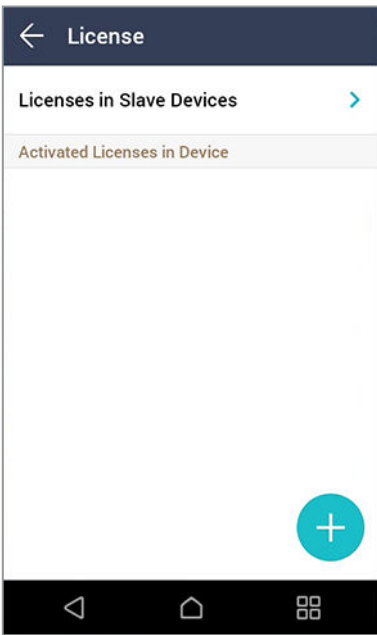
- **RS-485:** Select the RS-485 mode.
 - **Baud Rate:** Select the desired baud rate.
 - **Authentication Result:** When using **Intelligent Slave**, the authentication results of 3rd party controllers or devices can be selected to be displayed on the screen. This option can be used when **RS-485** is set to **Default** or **Slave**.
- 3 To save settings, press **OK**.

Device

License

You can activate device licenses or view **Licenses in Slave Devices** and **Activated Licenses in Device**.

- 1 Press  and authenticate with the Admin level credential.
- 2 Select **DEVICE** → **License**.
- 3 To activate the device license, connect the USB with the license to the device and select .




- 4 Licenses that can be activated appear on the screen. Activate the desired license.



- Contact the place of purchase to issue a device license.
- One feature is available per device license.
- You can include multiple device licenses in one device license file. (Supports up to 100)
- The device license file is an encrypted file and cannot be modified arbitrarily.
- Device licenses are issued based on device ID. If the device ID is changed in an unusual way, the warranty service for the license is not provided.


Relay

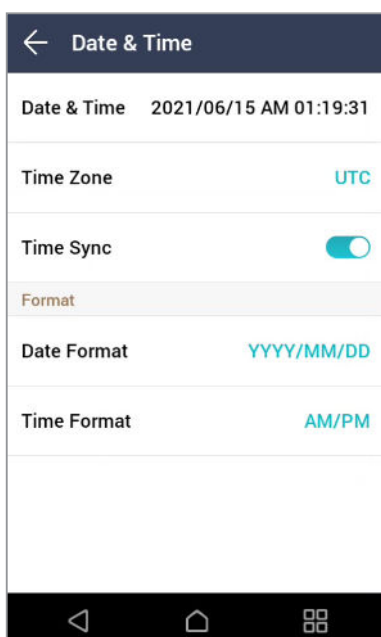
You can set the open time and the input port of the exit button in the device.

- 1 Press  and authenticate with the Admin level credential.
- 2 Select **DEVICE** → **Relay**.
 - **Relay:** You can set whether relay is enabled or not. To set the open time and the input port of the exit button, activate this option.
 - **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 the open time and the input port of the exit button in the device.



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

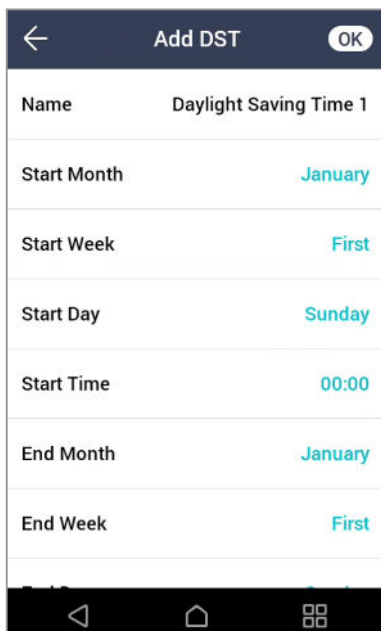


- **Date & Time:** Check the current date and time. To modify it manually, disable **Time Sync**.
- **Time Zone:** Set the time reference of the current location.
- **Time Sync:** Synchronize the server and the time. If you wish to synchronize the server and the time, enable Time Sync.
- **Date Format:** 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**.

Daylight Saving Time

You can use the device by applying daylight saving time. Set the start and end time correctly.

- 1 Press  and authenticate with the Admin level credential.
- 2 Select **DEVICE** → **Daylight Saving Time** and press  to add additional daylight-saving time.
- 3 Select the desired item and change the setting.




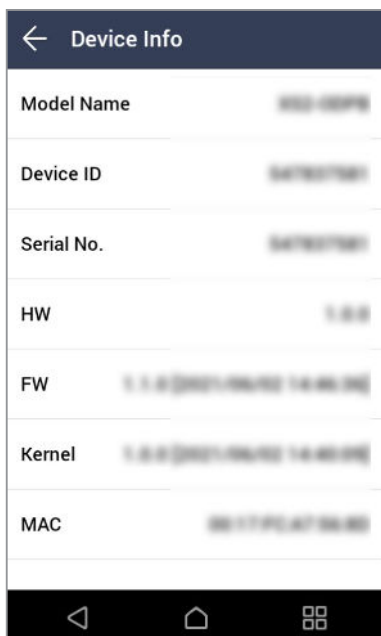
| Add DST | |
|-------------|------------------------|
| Name | Daylight Saving Time 1 |
| Start Month | January |
| Start Week | First |
| Start Day | Sunday |
| Start Time | 00:00 |
| End Month | January |
| End Week | First |

- **Name:** Check the name of daylight-saving time.
 - **Start Month / Start Week / Start Day / Start Time:** Set details of when the daylight-saving time option begins.
 - **End Month / End Week / End Day / End Time:** Set details of when the daylight-saving time ends.
- 4 To save settings, press **OK**.

Device Info


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

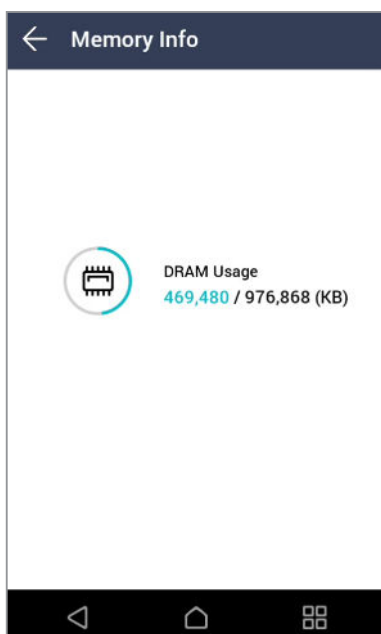
- 1 Press  and authenticate with the Admin level credential.
- 2 Select **DEVICE** → **Device Info**. You can view the information including **Model Name**, **Device ID**, **Serial No.**, **HW**, **FW**, **Kernel**, and **MAC**.



Memory Info


View the status of memory usage.

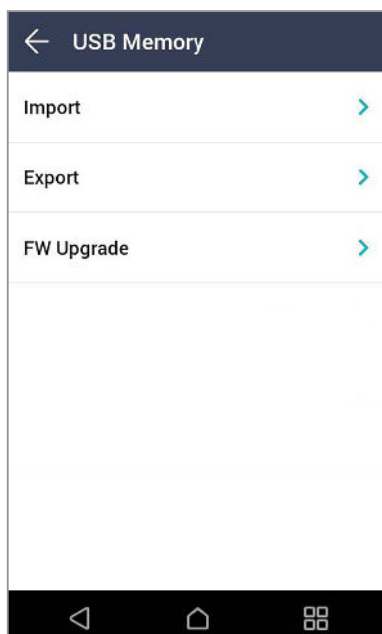
- 1 Press  and authenticate with the Admin level credential.
- 2 Select **DEVICE** → **Memory Info**. You can view the memory usage status of the device.



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 Select **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.



Do not disconnect the power supply while upgrading the firmware of the device. The device may malfunction.




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 8 GB, SUM-PSB 8 GB, SUM-PSB 16 GB, SUM-BSG 32 GB
- LG Electronics: XTICK J3 WINDY 8 GB, SMART USB MU1 White 8 GB, MU 1 USB 32 GB, MU28GBC 32 GB, XTICK MOBY J1 16 GB
- SanDisk: Cruzer 16 GB, Cruzer Blade CZ50 4 GB, Cruzer Blade CZ50 32 GB, CZ48 Ultra USB 3.0 64 GB, CZ80 USB3.0 64 GB, CZ52 64 GB, Cruzer Glide Z60 128 GB, Cruzer Force CZ71 32 GB
- Sony: Micro Vault Click 8 GB, MicroVault CLICK 16 GB, USM-SA1 32 GB
- Transcend: JetFlash 760 8 GB, JetFlash 760 32 GB, JetFlash 500 8 GB
- Memorette: MINI500 8 GB
- A-DATA: S102 PRO 8 GB
- Trigem Pastel 8 GB

The supported USB flash drives listed above were all tested with USB Type-A. To connect these USB flash drives to X-Station 2, a separate USB Type-C gender is required.


Secure Tamper

When the tamper is turned on, you can set to delete the entire user, the entire log, and the security key.

- 1 Press  and authenticate with the Admin level credential.
- 2 Select **DEVICE**.
- 3 Activate **Secure Tamper** to delete data of all registered users, all logs, and secure keys when a temper event occurs.


Restart Device

The user can restart the device.

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

Restore Default

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


- 1 Press  and authenticate with the Admin level credential.
- 2 Select **DEVICE** → **Restore Default**.
 - **All settings:** You can reset all settings stored on the device. Press **OK** to reset all device settings. To return to the previous screen, press **Cancel**.
 - **Keep Network Settings:** You can reset all settings except network settings. Press **OK** to reset all settings except network settings. To return to the previous screen, press **Cancel**.
 - **Factory Default:** You can delete all the information saved in the device and the root certificate and restore default settings.
 - **Delete the Root Certificate:** You can delete the root certificate saved in the device.
- 3 If you proceed to restore the defaults, the device will restart.



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

User ID Type



You can set the type of user ID to be registered on the device to a combination of alphabetic characters, numbers, and symbols (., -).

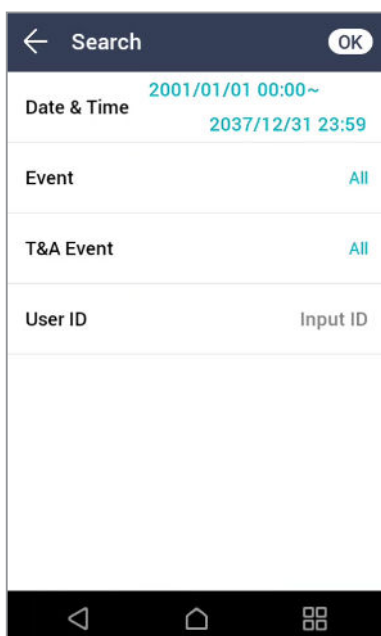
- 1 Press  and authenticate with the Admin level credential.
- 2 Select **DEVICE** → **User ID Type**.
- 3 Change to the desired item and press **OK**.

Event Log

Search Log

You can set a condition and search a log.



- 1 Press  and authenticate with the Admin level credential.
- 2 Select **EVENT LOG**. All event logs appear.
- 3 Press  to search a specific log and change the condition.



- 4 Press **OK**. A log that matches the condition will be displayed on the screen.



Delete All Logs

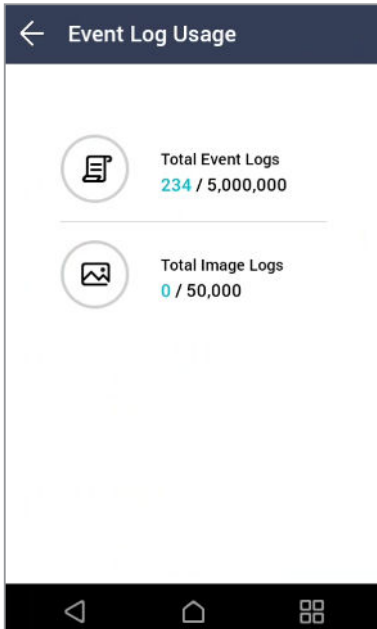
You can delete all saved logs.

- 1 Press  and authenticate with the Admin level credential.
- 2 Select **EVENT LOG**.
- 3 To delete all logs, select  and then press **OK**. To return to the previous screen, press **Cancel**.

View Log Usage

You can check the status of log usage.

- 1 Press  and authenticate with the Admin level credential.
- 2 Select **EVENT LOG** → . You can check the capacity of event and image logs on the device.



Troubleshooting

This troubleshooting provides information to solve unexpected issues that you may encounter when using the device.

| Category | Problem | Solution |
|--------------|--|--|
| Power | The power is being supplied but the device does not operate. | <ul style="list-style-type: none"> • If the terminal and the bracket are far away from each other, the device may not operate due to the temper switch. • Check the adapter or the power cable. |
| PIN | I lost my PIN. | <ul style="list-style-type: none"> • For a normal user PIN, request it from the administrator and enter it again. • 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. | <ul style="list-style-type: none"> • Check if you have entered the registered PIN correctly. • Check if you have changed the PIN recently. • If you cannot remember the PIN, request it from the administrator and enter it again. |
| QR/Barcode | It fails to scan a QR/Barcode. | <ul style="list-style-type: none"> • Refer to How to scan a QR/Barcode and try again. • Position the QR/Barcode in the center of the scan screen of the device. • Adjust the brightness of your smartphone so that the device can read the QR/Barcode clearly and try again. • If the problem persists, contact the administrator who issued the QR/Barcode. |
| Door Lock | The door cannot be locked when I close the door. | <ul style="list-style-type: none"> • The electric lock may be malfunctioning. Have an inspection through the installation company. |
| Time | Suddenly the time has become incorrect. | <ul style="list-style-type: none"> • X-Station 2 is equipped with a built-in battery but if power is not supplied for a long time, the built-in battery may die, causing the time to become incorrect. You can correct the time by referring to Date & Time. |
| Admin Access | I lost my Admin PIN, so I cannot access the Admin mode. | <ul style="list-style-type: none"> • The administrator grants an access permission in X-Station 2, so only the administrator can access the Admin menu. • If you have lost the Admin PIN, contact the installation company. |

Product specifications

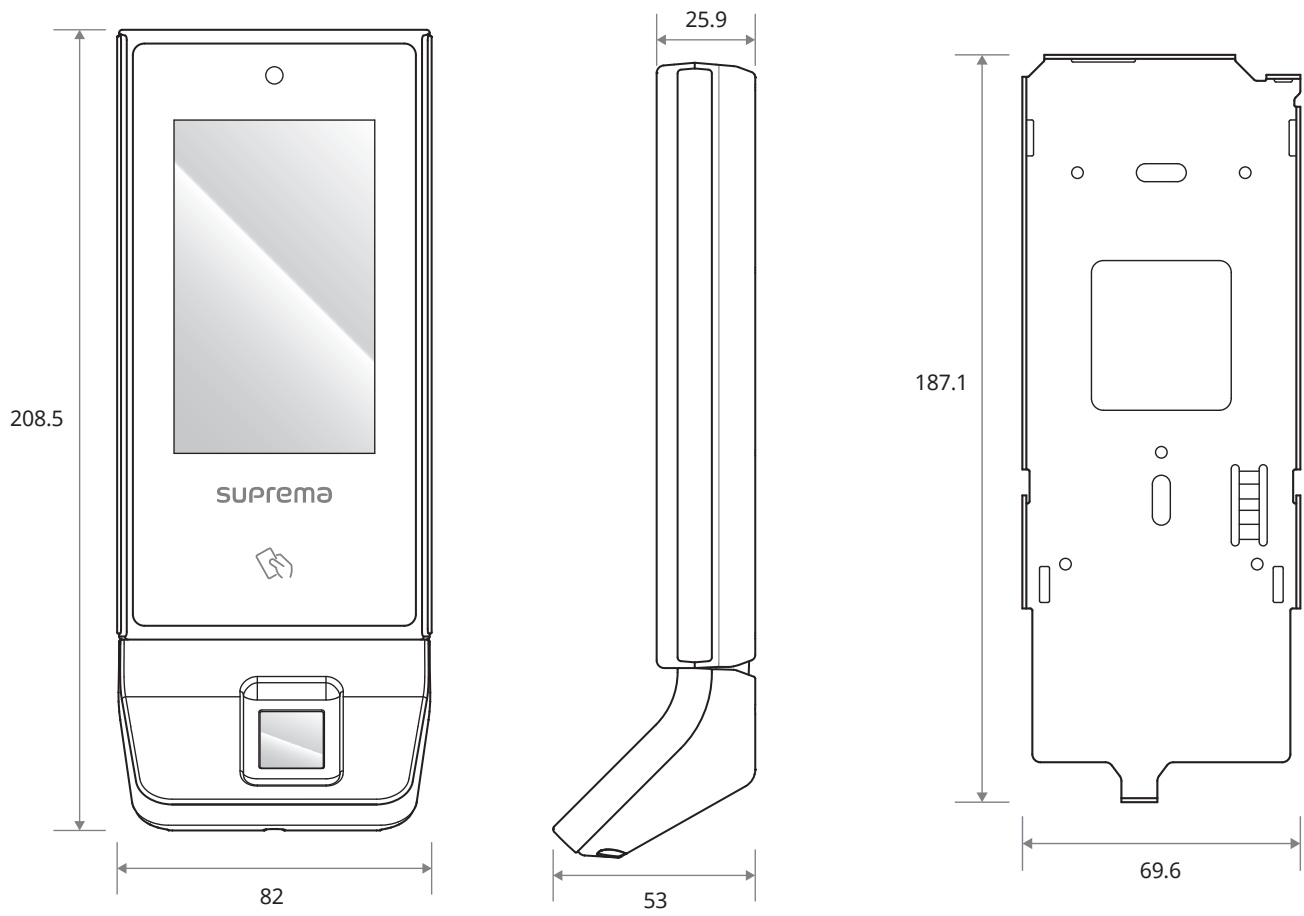
| Category | Feature | Specification |
|--------------|---|---|
| Credential | RF Option | <ul style="list-style-type: none"> XS2-ODPB: 125 kHz EM & 13.56 MHz MIFARE, MIFARE Plus, DESFire, DESFire EV1/EV2/EV3¹⁾, FeliCa XS2-OAPB: 125 kHz EM, HID Prox & 13.56 MHz MIFARE, MIFARE Plus, DESFire, DESFire EV1/EV2/EV3¹⁾, FeliCa, iCLASS SE/SR/Seos |
| | RF Read Range ²⁾ | EM/HID Prox/MIFARE/DESFire/HID iCLASS: 50 mm, Felica: 30 mm |
| | Mobile | NFC, BLE |
| | Scramble Keypad (PIN) | Supported |
| | QR/Barcode ³⁾ | Supported ⁴⁾ |
| General | CPU | 1.5 GHz Quad Core |
| | Memory | 16 GB Flash + 1 GB RAM |
| | Crypto Chip | Supported |
| | LCD Type | 4" IPS color LCD |
| | LCD Resolution | 480 x 800 |
| | Sound | 24 bit |
| | 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 2M pixels |
| | Camera Resolution | 1600 x 1200 |
| | Dimension (W x H x D) | 82 x 208.5 x 53 (Bottom) / 25.9 (Top) (mm) |
| | Weight | <ul style="list-style-type: none"> Device: 375 g Bracket: 86 g (Including washer and bolt) |
| | IP Rating | IP65 |
| Certificates | CE, UKCA, KC, FCC, IC, RCM, BIS, ANATEL, SIG, RoHS, REACH, WEEE | |
| Fingerprint | Image Dimension | 300 x 400 pixels |
| | Resolution | 500 dpi |
| | Template | SUPREMA / ISO19794-2, ANSI-378 |
| | Extractor / Matcher | MINEX certified and compliant |
| | Sensor Certificates | FBI PIV and FBI Mobile ID FAP20 |
| | Live Fingerprint Detection | Supported (SW-based) |
| Capacity | Max. User | 500,000 ⁵⁾ |
| | Max. Credential (1:N) | Fingerprint: 100,000 |
| | Max. Credential (1:1) | <ul style="list-style-type: none"> Fingerprint: 500,000 Card: 500,000 PIN: 500,000 |
| | Max. Text Log | 5,000,000 |
| | Max. Image Log | 50,000 |

| Category | Feature | Specification |
|------------|-----------------------------------|--|
| Interface | Ethernet | Supported (10/100 Mbps, auto MDI/MDI-X) |
| | RS-485 | 1 ch Master or Slave (Selectable) |
| | RS-485 Communication Protocol | OSDP V2 compliant |
| | Wiegand | 1 ch Input or Output (Selectable) |
| | TTL Input | 2 ch Inputs |
| | Relay | 1 Relay |
| | USB | USB 2.0 (Host) |
| | PoE | Supported (IEEE 802.3af compliant) |
| | Tamper | Supported |
| Electrical | Power | <ul style="list-style-type: none"> Voltage: 12 Vdc Current: Max. 0.8 A |
| | | <ul style="list-style-type: none"> Voltage: 24 Vdc Current: Max. 0.5 A |
| | Switch Input VIH | <ul style="list-style-type: none"> Min.: 3 V Max.: 5 V |
| | Switch Input VIL | Max.: 1 V |
| | Switch Pull-up Resistance | 4.7 k Ω (The input pots are pulled up with 4.7 k Ω .) |
| | 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 k Ω |
| | Relay | 2 A @ 30 VDC Resistive load 1 A @ 30 VDC Inductive load |

- 1) DESFire EV2/EV3 cards are supported by having backward compatibility of DESFire EV1 cards. CSN and smart card functions are compatible with X-Station 2.
- 2) RF read range will vary depending on installation environment.
- 3) Supports QR/Barcodes composed of up to 32 ASCII code strings.
- 4) Requires a separate license.
- 5) The number of users registered without having any credential data.

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.



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 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 into 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 could void the user's authority to operate the equipment under FCC rules..

- This appliance and its antenna must not be co-located or operation in conjunction with any other antenna or transmitter.
- A minimum separation distance of 20 cm must be maintained between the antenna and the person 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 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, contact us at the following contact information.

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

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Version 3, 29 June 2007

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1. Source Code.

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