

# Suprema Device Manager

## USER GUIDE

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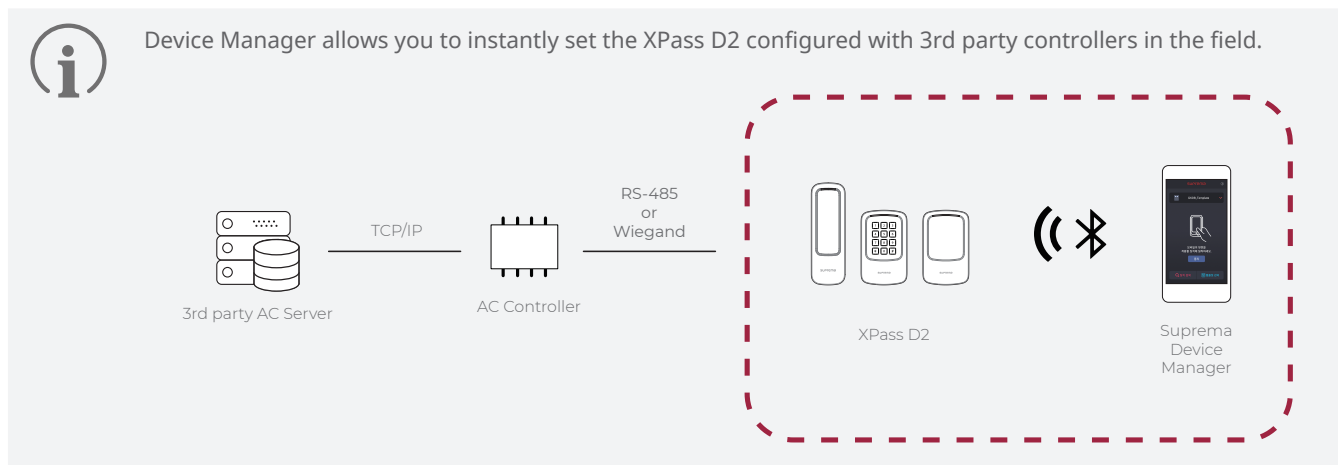
# Getting Started

## Introduction

The Device Manager is a mobile application that can set XPass D2 and XPass 2 of Suprema using BLE connection.



This application eliminates the need for administrators to access the server on the PC or physically disconnect the device. You can set the network, server, RS-485 connection, card format, keypad setting, PIN, LED and buzzer of the device directly from mobile device, and you can use additional functions such as device restart or firmware upgrade. In addition, you can save the set values as a template and apply quickly and easily to multiple devices.



# Minimum Requirements

## Mobile Device

Check whether your mobile device supports BLE connection.

- Android 5.0 Lollipop OS or later
- iOS 9.0 or later

## Device and Firmware

Check the compatible device and firmware version.

- XPD2-MDB FW 1.1.0 or later
- XPD2-GDB FW 1.1.0 or later
- XPD2-GKDB FW 1.1.0 or later
- XP2-MDPB FW 1.0.0 or later
- XP2-GDPB FW 1.0.0 or later
- XP2-GKDPB FW 1.0.0 or later



- Compatible devices and firmware are subject to change.
- If the firmware of the device is lower than the version in the above list, upgrade the firmware from BioStar 2. If you are using the device as a slave, the firmware of the connected master device must also be the latest version compatible with BioStar 2.7.0 or later.
- For details about upgrading the device firmware, refer to the BioStar 2 Administrator Guide.
- For more information about the devices, refer to the Suprema's home page ([www.supremainc.com](http://www.supremainc.com)).

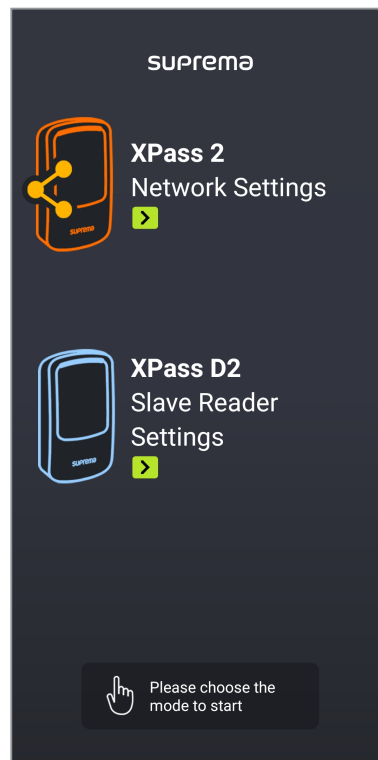


# Selecting the Device

Choose the model to set up by Suprema Device Manager.

You can choose XPass 2 or XPass D2, and the items that can be set vary depending on the model you choose.

- 1 Download the **Suprema Device Manager** application to the mobile device. You can download the application from the **App Store** and **Play Store**.
- 2 Run the **Suprema Device Manager**.
- 3 Select the model you want to set up.




# Setting the XPass 2

You can change the settings of XPass 2 in the Suprema Device Manager. It is possible to apply the device setting much faster than setting the management program from the PC or using the command card.

## Changing the Settings

You can change the Network, Server, RS-485, LED / Buzzer and other settings.

- 1 Activate the Bluetooth on your mobile device and run the Device Manager.
- 2 Select XPass 2 on the main screen.
- 3 Check the device ID in the list of connectable devices and select the device. Or place your mobile device close to the device which you want to connect.
- 4 Set the device password and tap **OK**. Tap  to display the entered password on the screen.



- The device password can be set from 6 to 32 characters.
- Be careful not to forget the device password. If you forgot the device password, the device factory reset will be necessary to connect to the device.

- 5 Edit the necessary items in the **Network** tab.

Network Settings	
Port	<input type="text" value="51211"/>
DHCP	<input checked="" type="checkbox"/>
IP Address	<input type="text" value="192.168.12.174"/>
Gateway	<input type="text" value="192.168.12.1"/>
Subnet	<input type="text" value="255.255.255.0"/>
DNS	<input type="text"/>

- **Port:** Enter a port to be used by the device.
- **DHCP:** Select this option to allow the device to use a dynamic IP address. If this option is selected, network settings cannot be entered.
- **IP Address, Gateway, Subnet:** Enter network settings of the device.
- **DNS:** Enter a DNS server address.

## 6 Edit the necessary items in the **Server** tab.

Server	
Server Connection	Server > Device
Server IP	<input type="text"/>
Server URL	<input type="text"/>
Server Port	51212

- **Server Connection:** You can set the server communication method. Select **Server > Device** to search and connect devices on the server. To enter the server information directly on the device and connect to the server, select **Device > Server**.
- **Server IP:** Enter the IP address of the BioStar 2.
- **Server URL:** Enter the domain name of the BioStar 2.
- **Server Port:** Enter the port number of the BioStar 2 server.

## 7 Edit the necessary items in the **RS-485** tab.

RS-485	
RS485 Mode	Default >
Baudrate	115200 >

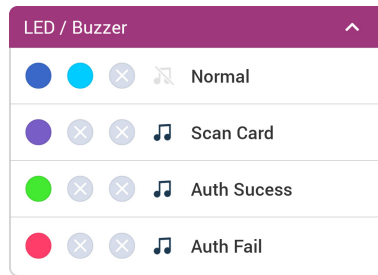
- **RS485 Mode:** Set the RS-485 mode.
- **Baudrate:** Set a baud rate of the RS-485 connection.

## 8 Edit the necessary items in the **Others** tab.

Others	
Memory	43.0/60.0 (MB)
Secure Tamper	<input checked="" type="checkbox"/>


- **Memory:** View the status of memory usage.
- **Secure Tamper:** If a tamper event occurs on the device, you can set to delete the entire user information, the entire log, and the security key stored on the device. To use the secure tamper, enable this option.

## 9 Edit the necessary items in the **LED / Buzzer** tab.



- **Normal:** You can set the color that is normally displayed on the device LED.
- **Scan Card:** You can set the LED color and the number of times the Buzzer plays when scanning the card to the device.
- **Auth Success:** You can set the LED color and the number of times the Buzzer plays when the authentication is successful.
- **Auth Fail:** You can set the LED color and the number of times the Buzzer plays when the authentication is failed.




You can set the LED to display repeatedly up to three colors. Tap the slot to select a color. If you select , that slot is skipped and the color of next slot is displayed.

## 10 To save the template settings, tap **Apply Device**.

## Connecting the Device

The Device Manager allows you to search for and connect Suprema's access control and time & attendance devices installed nearby. If you connect to the Device Manager, you can use various functions such as restarting the device, restoring to default, restoring to default without network, and changing the device password.

- 1 Activate the Bluetooth on your mobile device and run the Device Manager.
- 2 Select XPass 2 on the main screen. A list of connectable devices appears.
- 3 Check the device ID in the list of connectable devices and select the device. Or place your mobile device close to the device which you want to connect.
- 4 Set the device password and tap **OK**. Tap  to display the entered password on the screen.
- 5 Click OK to complete the device connection.

## Upgrading Firmware

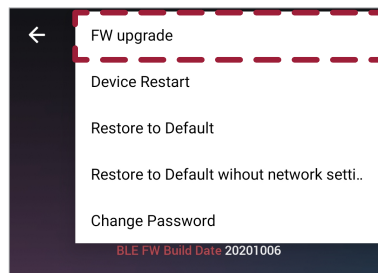
You can easily upgrade the firmware of the device using the Suprema Device Manager.



- Firmware upgrade using Suprema Device Manager will be supported in a future version of XPass 2 firmware.
- To upgrade the firmware, you need to download the firmware file to your mobile device. You can download the firmware file from the Suprema's home page ([www.supremainc.com](http://www.supremainc.com)).
- Keep the distance between the device and the mobile device within 1 m during firmware upgrade.

1 Connect the device that you want to upgrade the firmware by referring to [Connecting the Device](#).

2 Tap → FW upgrade.



3 Select the firmware from the path where the firmware file is stored. The firmware upgrade will proceed.

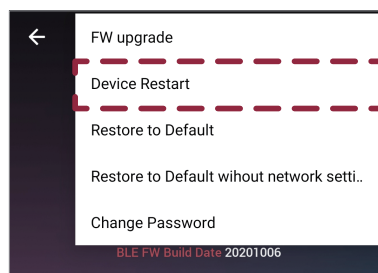
4 Tap **OK** to complete the firmware upgrade.

## Restarting the Device

You can restart the device using the Suprema Device Manager.

1 Connect the device that you want to restart by referring to [Connecting the Device](#).


2 Tap → Device Restart.

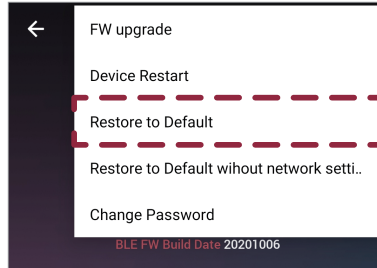


3 If you restart the device, the BLE with the mobile device is disconnected. Tap **OK** to reconnect.

## Restoring the Factory Defaults

You can reset the device settings using the Suprema Device Manager.


- 1 Connect the device that you want to reset by referring to [Connecting the Device](#).
- 2 Tap  → Restore to Default.

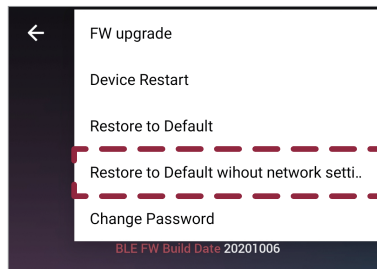


- 3 All of the device settings are restored to the default values. Tap **OK** to continue.

## Restoring to Default without network settings

You can reset the device settings exclude the network using the Suprema Device Manager.


- 1 Connect the device that you want to reset without network settings by referring to [Connecting the Device](#).
- 2 Tap  → Restore to Default without network setti..

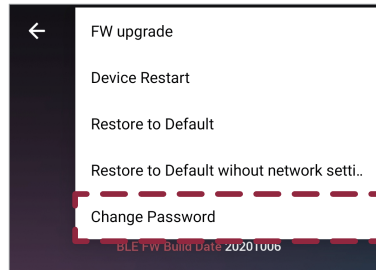


- 3 All of the device settings without network settings are restored to the default values. Tap **OK** to continue.

## Changing Password

You can change the password of the device.

- 1 Connect the device that you want to change the password by referring to [Connecting the Device](#).
- 2 Tap  → **Change Password**.



- 3 Enter the current password and the new password.

 A screenshot of a 'Change Password' dialog box. The title bar at the top says 'Change Password'. The main text reads 'Please set a password'. Below this are three input fields: 'Current password input', 'Enter a new password', and 'Enter a confirm password'. At the bottom, there is a 'Caution!' message: 'Caution! If you forgot your password, The device factory reset will be necessary.' Below the message are two buttons: 'Cancel' and 'OK'.

- 4 Tap **OK** to complete the password change.



- The device password can be set from 6 to 32 characters.
- Be careful not to forget the Admin Password. If you forgot the Admin Password, the device factory reset will be necessary to apply the template.

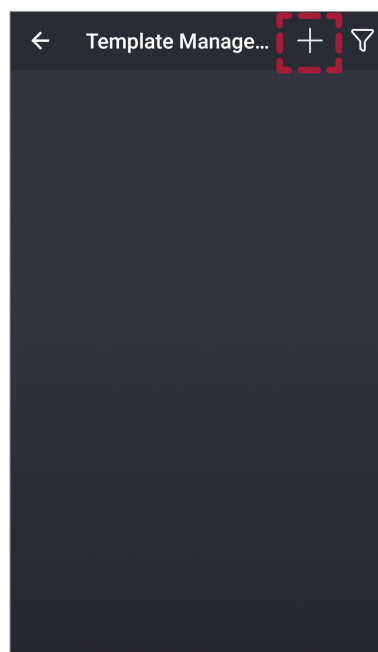
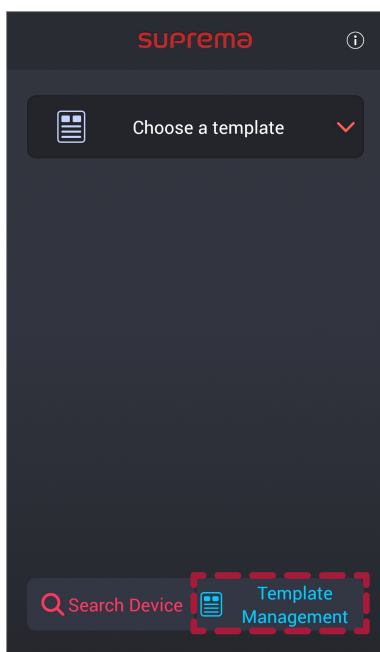
# Setting the XPass D2

You can configure the settings to apply to the XPass D2 in advance as a template in the Suprema Device Manager and then apply them directly to individual devices. It is possible to apply the device setting much faster than setting the management program from the PC or using the command card.

## Adding Templates

You can set the RS-485, card format, keypad setting, PIN, LED, and buzzer and then save them as a template. The template allows you to quickly and easily apply settings to devices without having to set up multiple individual devices each time.

- 1 Activate the Bluetooth on your mobile device and run the Suprema Device Manager.
- 2 Select XPass D2 on the main screen.
- 3 Tap **Template Management** → +.



- 4 Select the model for which you want to add a template.



## 5 Enter **Template Name** and **Admin Password**.

Template Name
Admin Password

- **Template Name:** Enter a template name.
- **Admin Password:** Enter an administrator password.



- Be careful not to forget the Admin Password. If you forgot the Admin Password, the device factory reset will be necessary to apply the template.
- For details about changing the Admin Password, refer to [Changing Administrator Password](#).

## 6 Set the RS-485 connection in the **Interface** tab.

Interface ^	
RS-485	
OSDP	0
Baudrate	115200

- **OSDP:** Set the OSDP address to be used for connection between the device and the master device. You can set it to a number from 0 to 126.
- **Baudrate:** Set a baud rate of the RS-485 connection.

## 7 Set the **Card Type** in the **Authentication** tab.

Authentication ^	
Card Type	>

- **Card Type:** You can set the type of card used by the device.
  - **CSN Card:** You can select the CSN card type and set the byte order.
  - **Suprema Smart Card Layout:** You can select the type of smart card issued by Suprema.
  - **Custom Smart Card Layout:** You can select the type of smart card issued by a 3rd party.
  - **Mobile:** You can set the type of mobile card.



When Byte Order is set to **MSB**, the device reads a card ID from the highest byte to the lowest byte. For example, the highest byte of the card ID 0x12345678 is 0x12 and the device sequentially reads 0x12, 0x34, 0x56 and 0x78. When the option is set to **LSB**, the device reads a card ID from the lowest byte to the highest byte.

## 8 Set the necessary items in the **Wiegand Card Format** tab.

Wiegand Card Format	
<b>Format</b>	
26bit SIA Standard-H10301	>
<b>Setting</b>	
Pulse width (us)	40
Pulse interval (us)	10000

- **Format:** You can configure the format for reading card data. The card data is processed in the set Wiegand format. If there is no format you want, tap  $\oplus$  to add a new Wiegand format.
  - **Name:** Enter a Wiegand format name.
  - **Total Bits:** Enter the total bit count.
  - **ID field:** Enter a Start Bit and End Bit of the ID to use. Click **+ Add** to add an ID field.
  - **Parity field:** Enter a Position, Start Bit, and End Bit of the Parity field to use. Click **+ Add** to add a parity field.



You must enter the total bit to add a parity bit.

- **Pulse width ( $\mu$ s):** You can set the pulse width of the Wiegand signal.
- **Pulse interval ( $\mu$ s):** You can set the pulse interval of the Wiegand signal.

## 9 Set the necessary items in the **Suprema Smart Card Layout** tab.

Suprema Smart Card Layout	
Secondary Key	<input type="checkbox"/>
<b>Layout</b>	
MIFARE	>
DESFire	>
Output Byte Order	MSB

- **Secondary Key:** You can set whether or not to use the secondary key. When a secondary key is set, authentication is carried out using the secondary key when the primary key of the card does not match.
- **MIFARE:** You can set the MIFARE card.
  - **Primary Key:** Key which encrypts the communication between the smart key and the card reader.
  - **Secondary Key:** When a secondary key is set, authentication is carried out using the secondary key when the primary key of the card does not match. The secondary Key of MIFARE is displayed only when you activate the **Secondary Key**.
  - **Start Block Index:** Select the start block where each template will be saved. This block is the index of block where user information will be saved. If the user already has the smart key, set available block for saving. Setting is available only for MIFARE.

- **DESFire:** You can set the DESFire card.
  - **DESFire Advanced:** You can use a DESFire card issued by a 3rd party.
  - **Primary Key:** Key which encrypts the communication between the smart key and the card reader.
  - **Secondary Key:** When a secondary key is set, authentication is carried out using the secondary key when the primary key of the card does not match. The secondary Key of DESFire is displayed only when you activate the **Secondary Key**.
  - **App ID:** Set the application ID. This plays a role of directory which includes file ID. Setting is available only for DESFire.
  - **File ID:** Set the file ID. Setting is available only for DESFire.
  - **Encryption Type:** It is possible to set the encryption type to DES/3DES or AES. Setting is available only for DESFire.
- **Output Byte Order:** You can set the smart card output byte order.



- To use **DESFire Advanced**, enter the information for **App Master Key**, **App Master Key Index**, **File Read Access Key**, **File Read Access Key Index**, **App ID**, **File ID**, and **Encryption Type** correctly.
- **App Master Key** and **File Read Access Key** can only be entered in hexadecimal numbers up to 32 bytes.
- When Byte Order is set to **MSB**, the device reads a card ID from the highest byte to the lowest byte. For example, the highest byte of the card ID 0x12345678 is 0x12 and the device sequentially reads 0x12, 0x34, 0x56 and 0x78. When the option is set to **LSB**, the device reads a card ID from the lowest byte to the highest byte.

## 10 Set the necessary items in the **Custom Smart Card Layout** tab.

Custom Smart Card Layout	
Secondary Key	<input type="checkbox"/>
<b>Layout</b>	
MIFARE	>
DESFire	>
Byte Order	MSB

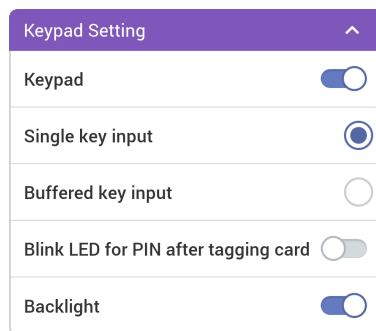
- **Secondary Key:** You can set whether or not to use the secondary key. When a secondary key is set, authentication is carried out using the secondary key when the primary key of the card does not match.
- **MIFARE:** You can set the MIFARE card.
  - **Primary Key:** Key which encrypts the communication between the smart key and the card reader.
  - **Secondary Key:** When a secondary key is set, authentication is carried out using the secondary key when the primary key of the card does not match. The secondary Key of MIFARE is displayed only when you activate the **Secondary Key**.
  - **Block Index:** Select the start block where each template will be saved. This block is the index of block where user information will be saved. If the user already has the smart key, set available block for saving. Setting is available only for MIFARE.
  - **Skip Bytes:** You can set the starting point for reading the card number.
  - **Data Size:** (When the set **Primary Key** and **Secondary Key** are the same as the set value of the card) You can set the data size of the card to be read.

- **DESFire:** You can set the DESFire card.
  - **DESFire Advanced:** You can use a DESFire card issued by a 3rd party.
  - **Primary Key:** Key which encrypts the communication between the smart key and the card reader.
  - **Secondary Key:** When a secondary key is set, authentication is carried out using the secondary key when the primary key of the card does not match. The secondary Key of DESFire is displayed only when you activate the **Secondary Key**.
  - **App ID:** Set the application ID. This plays a role of directory which includes file ID. Setting is available only for DESFire.
  - **File ID:** Set the file ID. Setting is available only for DESFire.
  - **Encryption Type:** It is possible to set the encryption type to DES/3DES or AES. Setting is available only for DESFire.
  - **Skip Bytes:** You can set the starting point for reading the card number.
  - **Data Size:** (When the set **Primary Key** and **Secondary Key** are the same as the set value of the card) You can set the data size of the card to be read.
- **Byte Order:** You can set the smart card output byte order.



- To use **DESFire Advanced**, enter the information for **App Master Key**, **App Master Key Index**, **File Read Access Key**, **File Read Access Key Index**, **App ID**, **File ID**, and **Encryption Type** correctly.
- **App Master Key** and **File Read Access Key** can only be entered in hexadecimal numbers up to 32 bytes.
- When **Byte Order** is set to **MSB**, the device reads a card ID from the highest byte to the lowest byte. For example, the highest byte of the card ID 0x12345678 is 0x12 and the device sequentially reads 0x12, 0x34, 0x56 and 0x78. When the option is set to **LSB**, the device reads a card ID from the lowest byte to the highest byte.

## 11 Set the necessary items in the Keypad Setting tab.

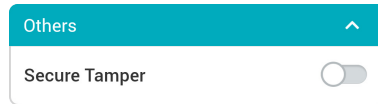


- **Keypad:** You can set whether or not to use the keypad. Enabling the keypad allows authentication by entering the card ID on the keypad.
- **Single key input:** When a user enters a card ID on the keypad, the device sends the ID value each time a key is pressed.
- **Buffered key input:** When a user enters a card ID on the keypad, the entire ID value will be sent at once after pressing all the keys and then pressing the # key.
- **Blink LED for PIN after tagging card:** When the device's auth mode is set to Card+PIN, if a user tags a card, the device's LED operates to induce PIN input.
- **Backlight:** You can turn the backlight of the keypad on or off.



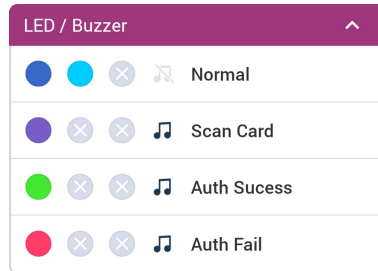
- The Keypad Setting is displayed only on the template setting of the XPD2-GKDB.
- The values entered through the device's keypad are transmitted in 4-bits. When the keypad is enabled, it is sent the same as the card ID according to the Wiegand card format.

## 12 Set the **Secure Tamper** in the **Others** tab.




- **Secure Tamper:** If a tamper event occurs on the device, you can set to delete the security key stored on the device. To use the secure tamper, enable this option.

## 13 Edit the necessary items in the **LED / Buzzer** tab.



- **Normal:** You can set the color that is normally displayed on the device LED.
- **Scan Card:** You can set the LED color and the number of times the Buzzer plays when scanning the card to the device.
- **Auth Success:** You can set the LED color and the number of times the Buzzer plays when the authentication is successful.
- **Auth Fail:** You can set the LED color and the number of times the Buzzer plays when the authentication is failed.



You can set the LED to display repeatedly up to three colors. Tap the slot to select a color. If you select , that slot is skipped and the color of next slot is displayed.

## 14 To save the template settings, tap **Save**.



You can add up to 100 templates.

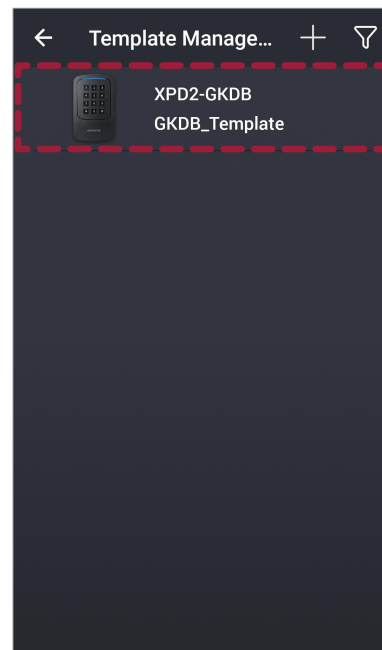
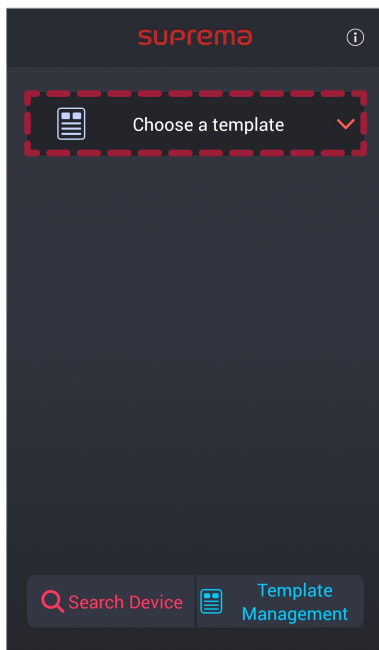
## Applying Templates

The templates can be applied equally to multiple devices using BLE.

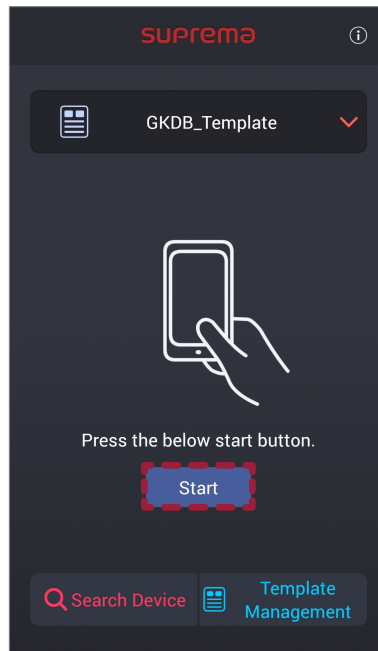


If the firmware version of the device is low, some settings may not be applied to the device. Firmware upgrade is recommended.

- 1 Activate the Bluetooth on your mobile device and run the Suprema Device Manager.
- 2 Select XPass D2 on the main screen.
- 3 Tap **Choose a template**. A list of selectable templates appears.



- 4 Select the template in the templates list.

**5** Tap **Start**.

**6** Place the back of your mobile device to the device to which you want to apply the template.

**7** When you are finished applying the template, tap **OK**.

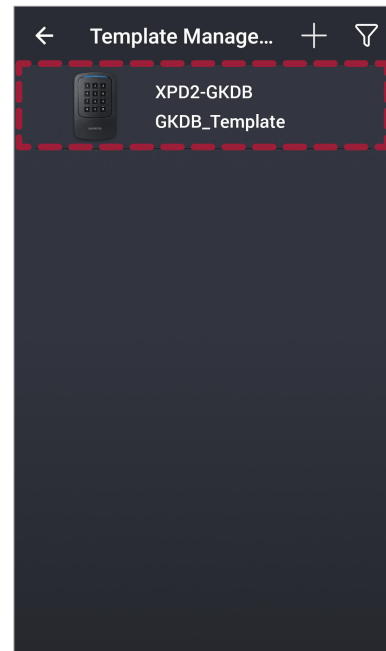
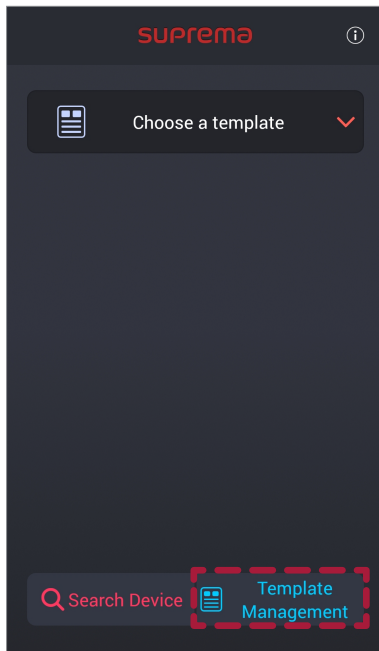


- Settings that you changed using the Suprema Device Manager apply only to the device and are not synchronized to the server.
- If the device is connected to the master device or if the Wiegand output settings have been changed, you can not connect with Suprema Device Manager using the default key. To connect with Suprema Device Manager, reset the device.

# Managing Templates

## Editing Templates

- 1 Run the Suprema Device Manager.
- 2 Select XPass D2 on the main screen.
- 3 Tap **Template Management**.

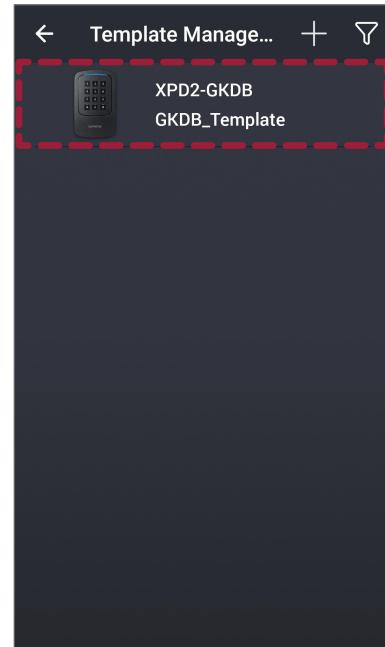
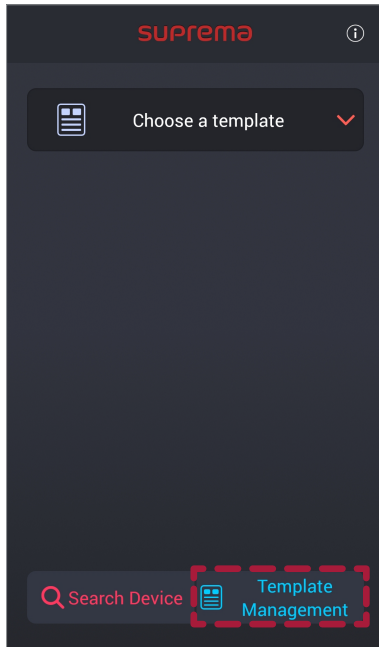



- 4 Select the template in the templates list.
- 5 Edit template by referring to [Adding Templates](#).
- 6 To save the changed settings, tap **Save**.



## Deleting Templates

- 1 Run the Suprema Device Manager.
- 2 Select XPass D2 on the main screen.
- 3 Tap **Template Management**.



- 4 Select the template in the templates list.
- 5 To delete the template, tap  → OK.

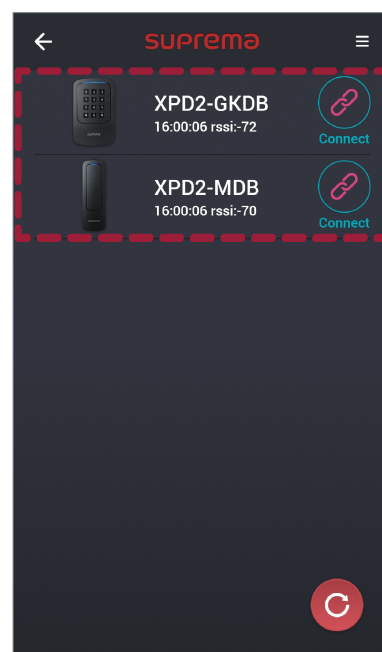
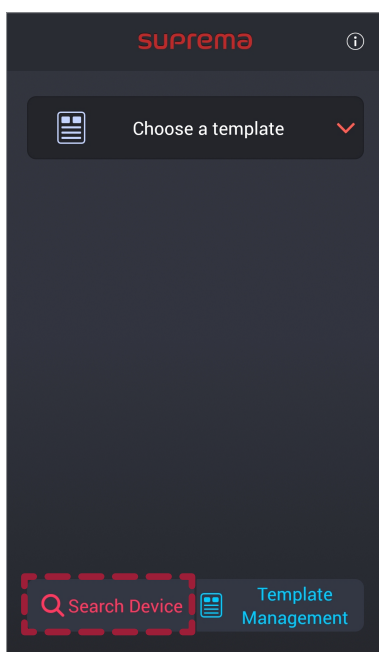
## Search and Connect Devices


The Suprema Device Manager allows you to search for and connect Suprema's access control and time & attendance devices installed nearby. If you connect to the Device Manager, you can use various functions such as upgrading the firmware of the device, restarting the device, checking card information, and changing the template password.



If the firmware version of the device is low, some settings may not be applied to the device. Firmware upgrade is recommended.

- 1 Activate the Bluetooth on your mobile device and run the Suprema Device Manager.
- 2 Select XPass D2 on the main screen.
- 3 Tap **Search Device**. The list of connectable devices is displayed on the screen.



- 4 Select the device in the devices list or place the mobile device closer to the device you want to connect.
- 5 Enter the password. Tap  to display the entered password on the screen.
- 6 Tap **OK**. The device connection is complete.

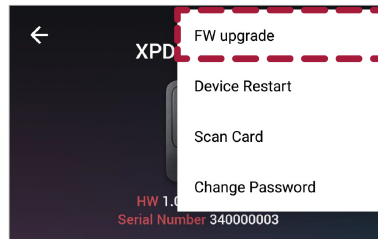
## Upgrading Firmware

You can easily upgrade the firmware of the device using the Suprema Device Manager.



- To upgrade the firmware, you need to download the firmware file to your mobile device. You can download the firmware file from the Suprema's home page ([www.supremainc.com](http://www.supremainc.com)).
- Keep the distance between the device and the mobile device within 1 m during firmware upgrade.

- 1 Connect the device that you want to upgrade the firmware by referring to [Search and Connect Devices](#).
- 2 Tap → **FW upgrade**.

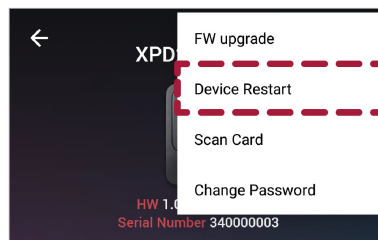


- 3 Select the firmware from the path where the firmware file is stored. The firmware upgrade will proceed.
- 4 Tap **OK** to complete the firmware upgrade.

## Restarting Device

You can restart the device using the Suprema Device Manager.


- 1 Connect the device that you want to restart by referring to [Search and Connect Devices](#).
- 2 Tap → **Device Restart**.

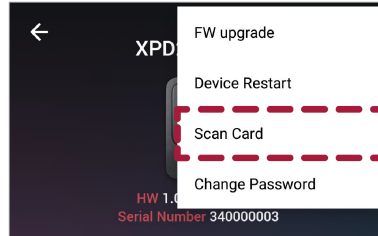


- 3 If you restart the device, the BLE with the mobile device is disconnected. Tap **OK** to reconnect.

## Checking Card Information

You can check the card ID by scanning the card directly to the device.

- 1 Connect the device that you want to use for card scanning by referring to [Search and Connect Devices](#).
- 2 Tap  → Scan Card.




- 3 Place a card on the selected device. The card ID is displayed on the screen.

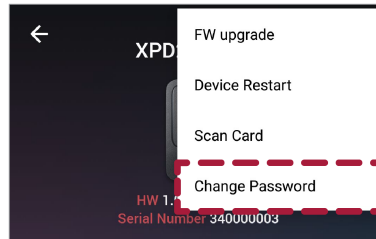


Scan Card is available only when using CSN card.

## Changing Administrator Password

You can change the administrator password of the template.

- 1 Connect the device with the template whose password you want to change by referring to [Search and Connect Devices](#).
- 2 Tap  → **Change Password**.



- 3 Enter the current password and the new password.

 A screenshot of a 'Change Password' dialog box. The title bar at the top has a back arrow and the text 'Change Password'. The main content area contains the text 'Please set a password' followed by three input fields: 'Current password input', 'Enter a new password', and 'Enter a confirm password'. Below the input fields is a caution message: 'Caution! If you forgot your password, The device factory reset will be necessary.' At the bottom are two buttons: 'Cancel' and 'OK'.

- 4 Tap **OK** to complete the password change.



Be careful not to forget the Admin Password. If you forgot the Admin Password, the device factory reset will be necessary to apply the template.

# Appendices

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<https://github.com/google/gson>

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## **ios**

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