BioEntry W3

INSTALLATION GUIDE

Version 1.04

English
EN 101.00.BEW3

suprema
SECURITY & BIOMETRICS

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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.

Compliance Information

Warning

Used to indicate warning information that could lead to serious injury or death if violated while using the product.

Caution

Used to indicate caution information that may result in minor injury or product damage if violated while using the product.

Info

Used to provide notes or additional information while using the product.

Note

Used to provide notes or additional information while using the product.

⚠ Warning

Install

Be especially careful of miswiring when using high-capacity power supplies.

- Serious fires, electric shocks, or product damage may occur due to miswiring.

Do not allow users to install or repair the product arbitrarily.

- Causes fire, electric shock, or injury.
- No free repair service will be provided if the product is damaged due to arbitrary installation or repair by the user.

Do not install the product in places exposed to direct sunlight, moisture, dust, or soot, or where gas may leak.

- May cause fire or electric shock.

When installing the product outdoors, make sure to install it in a shaded and well-ventilated area.

Do not use a completely sealed enclosure when installing the product outdoors.

- The internal temperature of the enclosure may rise due to direct sunlight, causing fire, electric shock, or product damage.

Do not install the product in places where heat is generated, such as near heaters.

- May cause fire or electric shock due to overheating.

Do not install in damp places.

- May cause electric shock or product damage due to moisture.

Do not install in places with electromagnetic interference.

- May cause electric shock or product damage.

Usage

Do not allow liquids such as water, beverages, or chemicals to enter the product.

- May cause fire, electric shock, or product damage.

Do not use damaged power adapters or plugs, or loose outlets.

- If connections are unstable, may cause fire or electric shock.

Do not bend or break the power cord excessively.

- May cause fire or electric shock.

⚠ Caution

Install

Read this manual carefully before installing the product to ensure safe and correct installation.

When wiring power cables and connectors, make sure to turn off the power to all devices you are connecting before wiring and connecting.

- Devices may malfunction.

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

Do not install the product in places directly exposed to sunlight or ultraviolet light.

- May cause product damage, malfunction, discoloration, or deformation.

Do not leave power cables in passageways.

- May cause bodily injury or product damage.

Do not install near strong magnetic objects such as magnets, TVs, CRT monitors, or speakers.

- The device may malfunction.

When installing the product on a wall, do not seal around the product with silicone or similar materials.

- The device may malfunction.

When installing multiple devices, ensure the minimum spacing distance is observed.

- May affect the RF and BLE performance of other devices, causing them to malfunction.

Use a power adapter that has IEC/EN 62368-1 approval and is rated above the power consumption of the terminal device. It is recommended to use the power adapters sold by Suprema.

- Using an unsuitable power supply may cause devices to malfunction.
- Refer to the Power in the product specifications for maximum current consumption specifications.

Ensure that the product and Secure I/O 2, electric lock (electronic locking device) use separate power supplies.

- Devices may malfunction.

Do not connect the power supply and PoE power together.

- Devices may malfunction.

It is recommended to use an enclosure when installed outdoors with full exposure.

- Decreased waterproof and dustproof performance may cause malfunction.

Usage

Do not drop or subject the product to shock.

- The device may malfunction.

Ensure the power supply is not interrupted during firmware upgrades of the product.

- The device may malfunction.

Use the product within -20 °C to 50 °C and store it at appropriate temperatures, not too low or too high.

- The device may malfunction.

Be careful when cleaning the product.

- Gently wipe the product surface with a clean, dry cloth.
- If disinfecting the product, dampen a clean cloth with a suitable amount of disinfectant alcohol and gently wipe the product surface. Use disinfectant alcohol that contains 70-75% isopropyl alcohol and a clean, lint-free soft cloth.
- Do not spray disinfectant directly onto the product.

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

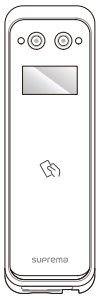
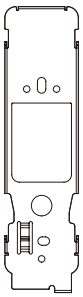
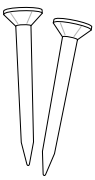
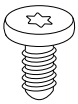
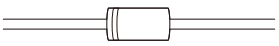
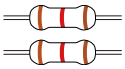
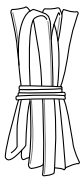
- The device may malfunction.

> **RTC Battery**
>
> Replacing with unauthorized or incorrect types of batteries may pose a risk of explosion. Dispose of batteries according to local or international waste regulations.

Getting Started

Provides initial procedures for getting started with the device.

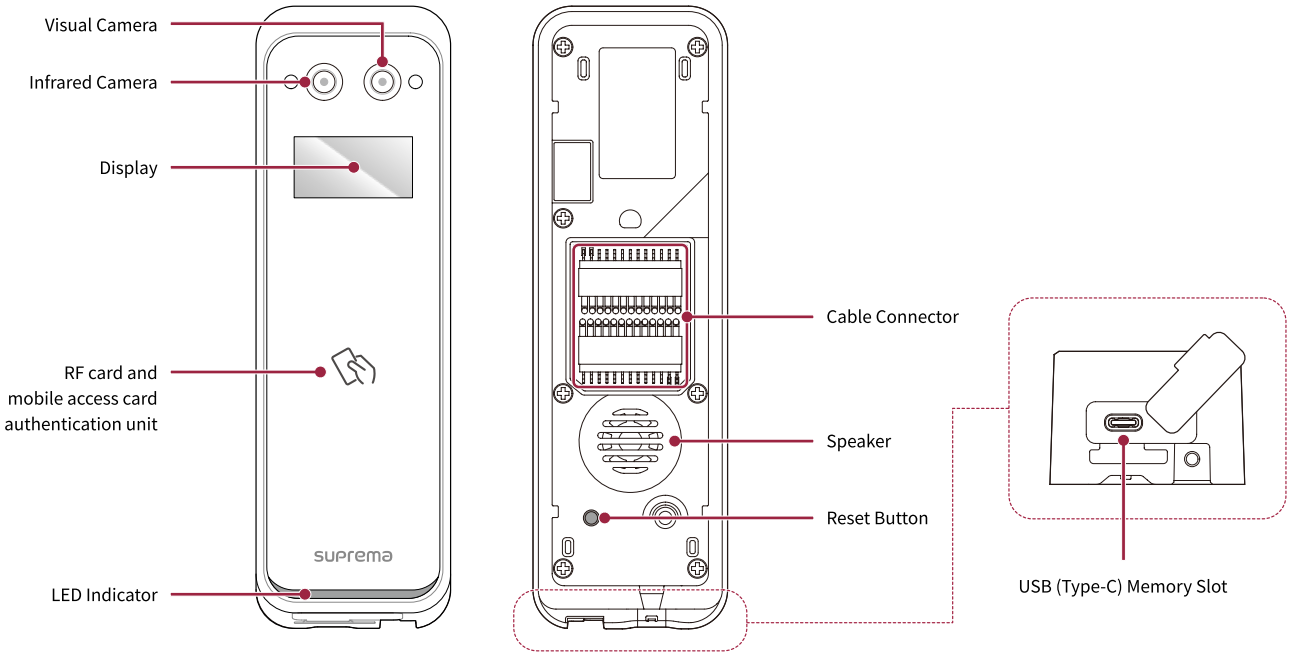
Components

		
BioEntry W3	Wall Bracket	Fixing Screws x2
		
Bracket Fixing Screw (Star Shaped)	Diode	120 Ω Resistor x2
		
Shrink Tube	Quick Guide	Open Source Software Guide

Info

- 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.

Name and function of each part



- **Visual Camera**: Capture an actual face image.
- **Infrared Camera**: Capture the infrared face image.
- **Display**: Indicates user authentication result.
- **RF card and mobile access card authentication unit**: Part to scan a RFID card or mobile access card for entrance.
- **LED Indicator**: Indicates the operational status of the device with the color of the LED.
  - Green: Authentication success.
  - Red: Authentication failure.
  - Blue/Cyan blinking: Normal operation.
  - Blue/Green blinking:
    - When setting **DHCP** to use, unable to retrieve IP address.
    - When in **Slave** mode, the connection to the master device is disconnected.
  - Red/Purple blinking: Device is locked.
  - Green blinking: Waiting for input.
- **Cable**

  Power / Ethernet / RS-485 / Wiegand Input/Output / Input / Relay
- **Speaker**: Delivers sound.
- **Reset Button**

  - Initializes network settings. For more information on initializing network settings, refer to Initialize Network Settings.

  - Deletes all information and certificates stored on the device and initializes the settings. For more information on factory initialization, refer to Factory reset.

- **USB (Type-C) Memory Slot**: Connects the USB memory.

Cable



Pin	Name	Color
1	INPUT2	Orange
2	INPUT1	Brown
3	INPUT0	Purple
4	ETX+	White
5	ETX-	Orange
6	ERX+	Black
7	ERX-	Yellow
8	RS485_0 TRXN	Yellow (black stripe)
9	RS485_0 TRXP	Blue (white stripe)
10	RS485_1 TRXN [1)]	Yellow
11	RS485_1 TRXP [1)]	Blue
12	PWR GND	Black (white stripe)
13	PWR +VDC	Red
14	VB2	Brown
15	VB2	Blue
16	VB1	Green
17	VB1	Red
18	GND	Black
19	RELAY NO	Gray (white stripe)

Pin	Name	Color
20	RELAY NC	Orange (white stripe)
21	RELAY COM	Green (white stripe)
22	GND	Black
23	WGD OUT1	White (black stripe)
24	WGD OUT0	Green (black stripe)
25	WGD IN1	White
26	WGD IN0	Green

Info

There are various conductors of size AWG 26, which should be protected with standard sheathing or equivalent material when wiring. Also, ensure the lead does not contact conductors larger than 18 AWG (0.82 mm2).

1) In the **standard firmware, only RS485_0 (pins 8 and 9)** is supported. **RS485_1 (pins 10 and 11) can only be used with custom firmware.** If you need to use both RS485_0 and RS485_1, please contact the Suprema Global Technical Support Team.

Correct face enrollment and authentication method

Cautions for enrolling a faces

- Keep the distance between the device and your face at 60-100 cm when enrolling your face.
- Do not change your face expression.
- Do not wear masks, hats, or eye patches.
- Do not enroll a face wearing a mask. It may increase the False Acceptance Rate (FAR) if both faces with and without a mask are enrolled.
- Do not raise head up or lower head.
- Do not wear thick makeup.
- Do not close your eyes.
- Stand still and enroll your face by staring at the screen.
- Ensure the device recognizes only one face at a time. Enroll one person at a time.
- If you do not follow the instructions above, face enrollment may take longer or fail.

Cautions for authenticating a face

- Position your face in the center of the device.
- 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.
- Authenticate at a location 60~100 cm away from the device.
- Stand still, and then authenticate your face. Authentication may fail if your shoulders are not at the same height.

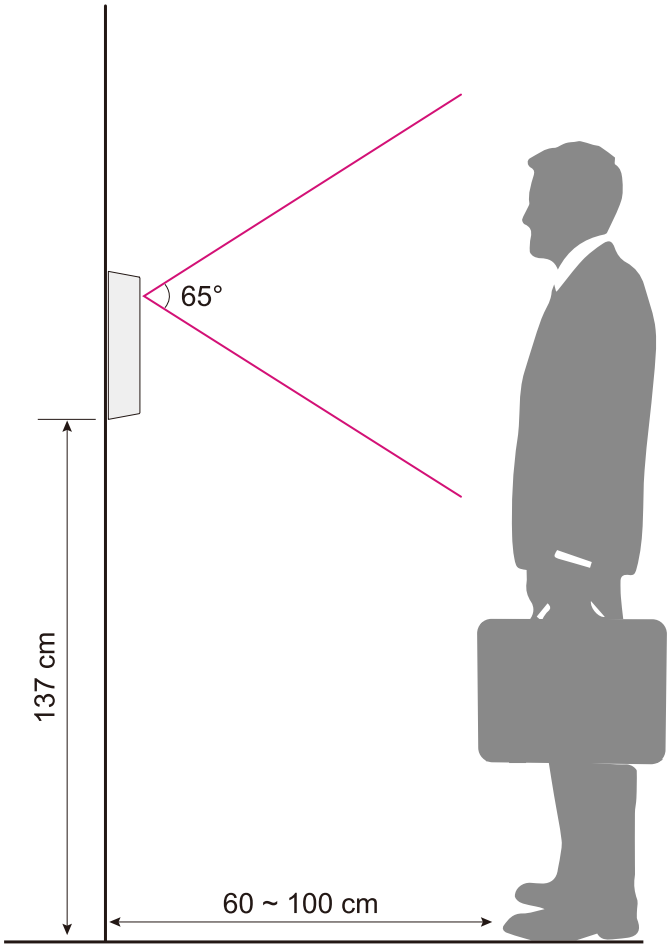
Installation

Provides the complete installation procedures and connection examples required for the device.

Fixing the bracket and the product

General bracket

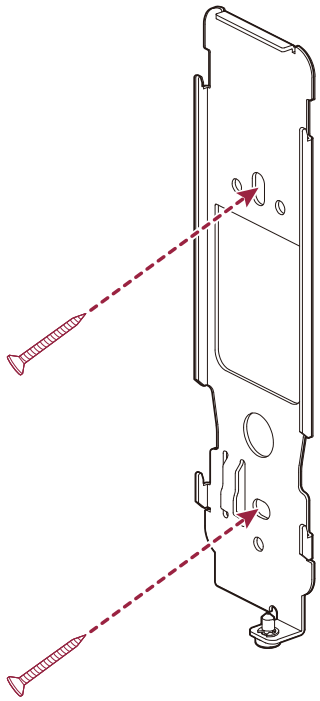
1. Determine the location to mount the product.



Info

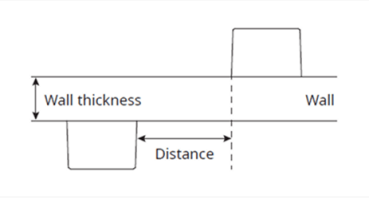
- The optimal height for installing device is 137 cm.
- Install the device where it does not reach the direct sunlight or UV light.
- Adjust the installation position so that the face is not exposed to direct sunlight when a user tries to authenticate.

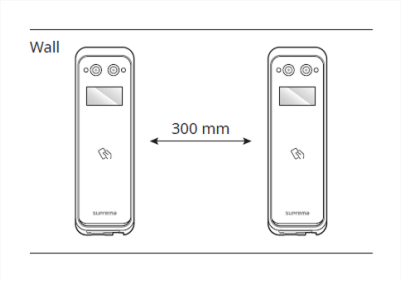
2. Secure the bracket tightly using the fixing screws at the location where the product will be mounted.



Info

- If installing the product on a concrete wall, drill a hole, insert a PVC anchor, and secure it with a fixing screw.
- To avoid RF interference, a minimum separation distance must be maintained.

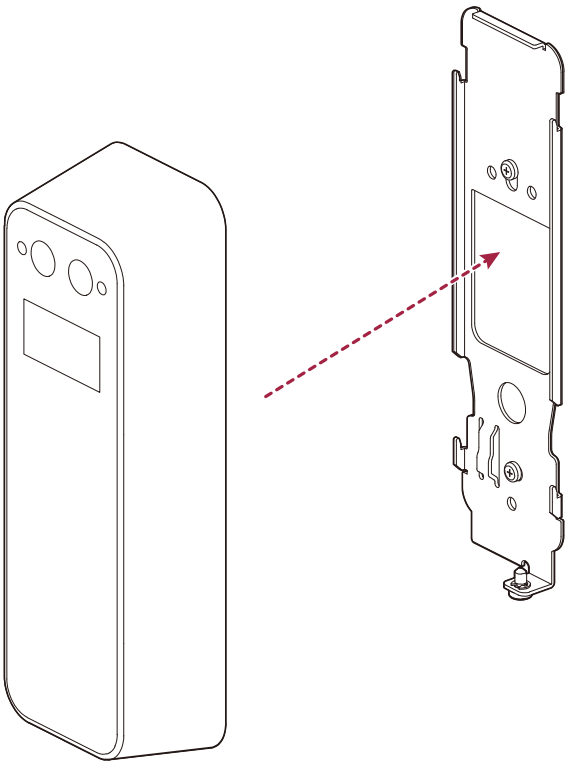




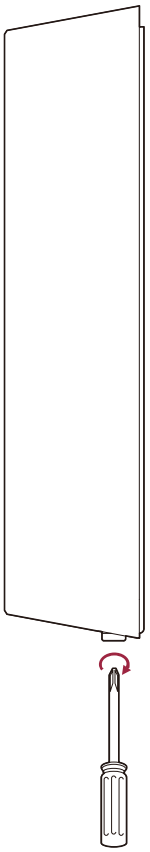
Wall thickness	Distance
100 mm	270 mm
120 mm	250 mm
150 mm	170 mm

- When using a mobile access card, install devices maintaining a minimum distance of 1 m between devices to avoid BLE interference.

3. Mount the product on the fixed bracket.



4. Rotate the fixing screws to assemble the product with the bracket.



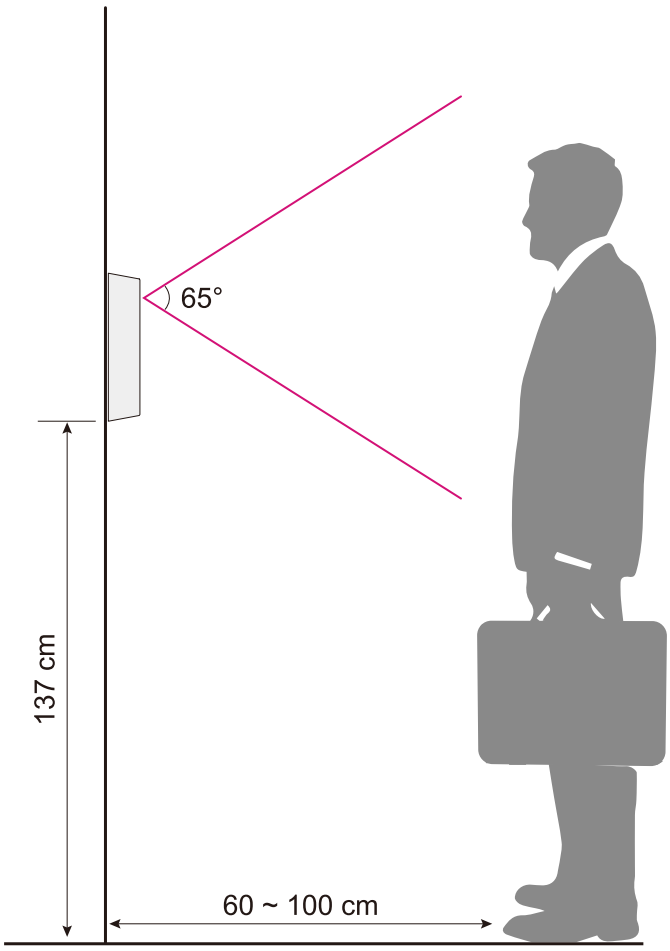
Info

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.

Tilting Bracket

Use the dedicated tilting bracket to adjust the authentication angle to suit the installation environment. The tilting bracket is sold separately.

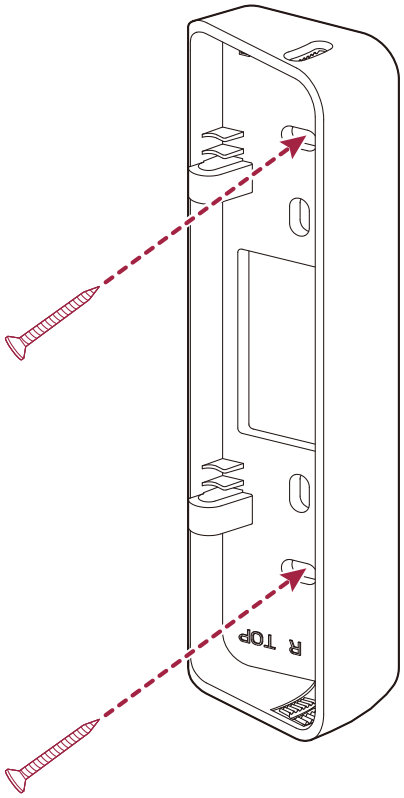
1. Determine the location to mount the product.



Info

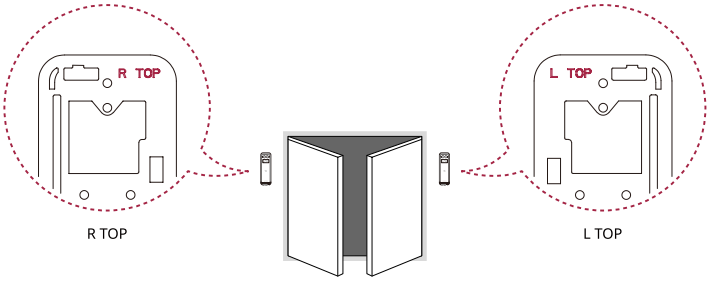
- The optimal height for installing device is 137 cm.
- Install the device where it does not reach the direct sunlight or UV light.
- Adjust the installation position so that the face is not exposed to direct sunlight when a user tries to authenticate.

2. Use the tilting bracket mounting screws to secure the back of the tilting bracket firmly to the installation location (wall).



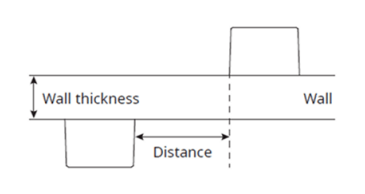
Depending on the installation location, install the tilting bracket with the top and bottom orientation as follows.

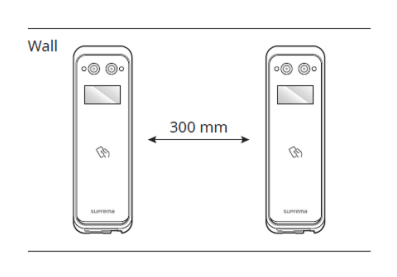
- When installing on the left side of the entrance: Install so the "R TOP" marking faces upward
- When installing on the right side of the entrance: Install so the "L TOP" marking faces upward



Info

- If installing the product on a concrete wall, drill a hole, insert a PVC anchor, and secure it with a fixing screw.
- To avoid RF interference, a minimum separation distance must be maintained.

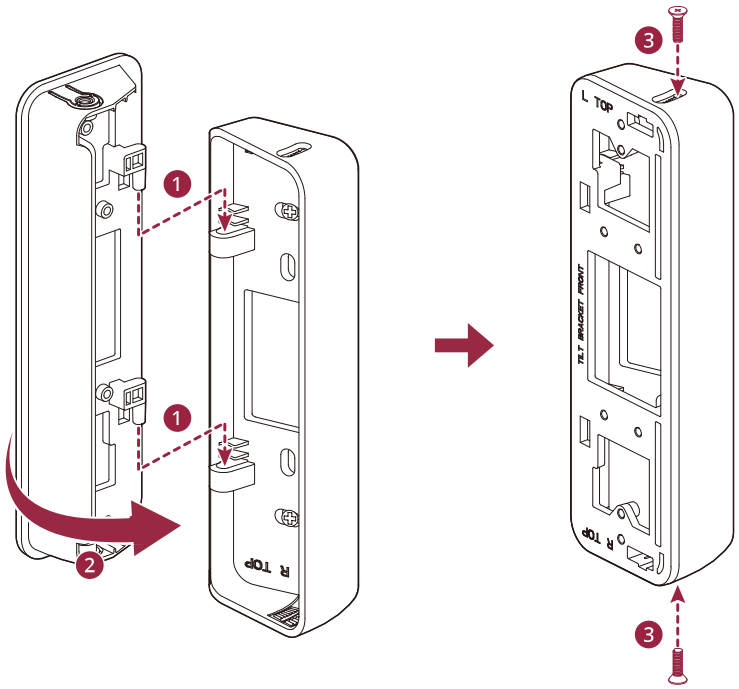




Wall thickness	Distance
100 mm	270 mm
120 mm	250 mm
150 mm	170 mm

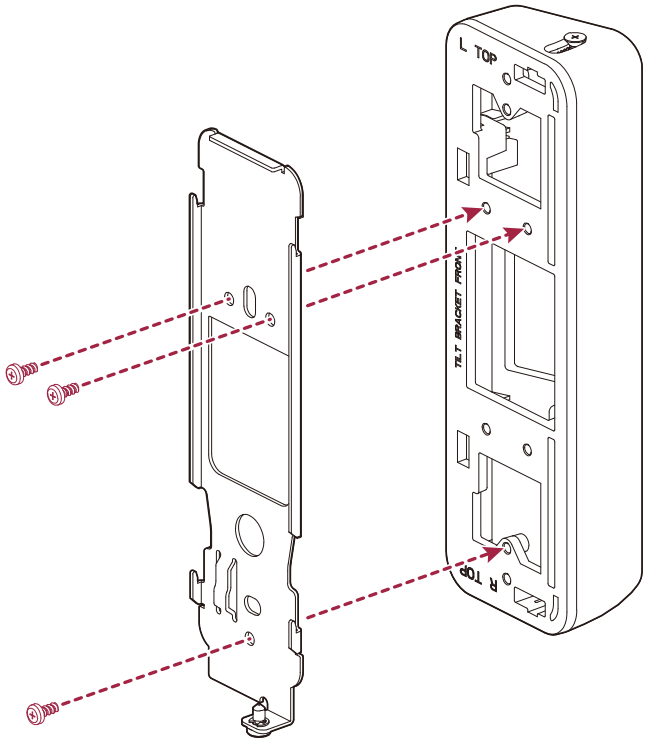
- When using a mobile access card, install devices maintaining a minimum distance of 1 m between devices to avoid BLE interference.

3. Join the front of the tilting bracket to the groove in the back, close it, and secure it with two screws in the upper and lower screw holes.

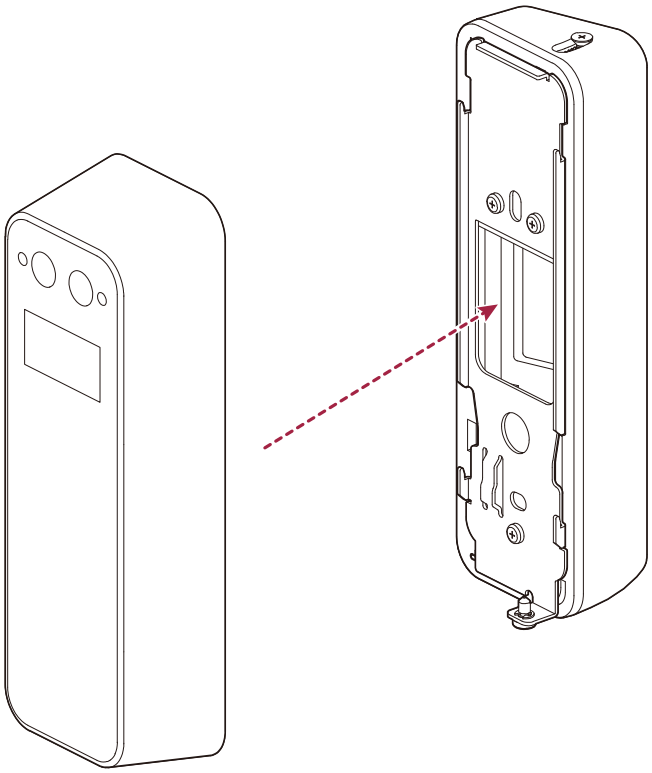


> **Info**
> If you tighten the screws too much, the angle cannot be adjusted. Tighten the screws to the proper level.

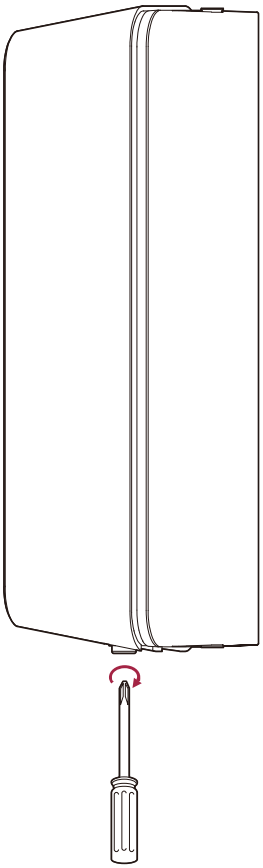
4. Secure the wall-mount bracket firmly on top of the tilting bracket.



5. Mount the product on the secured wall-mount bracket.

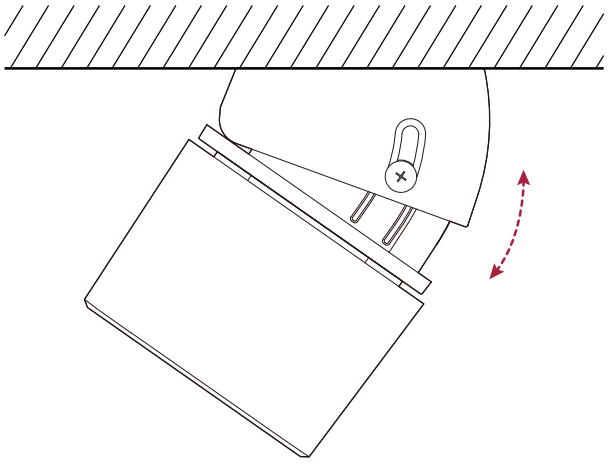


6. Tighten the product fixing screws to assemble the product and the wall-mount bracket.

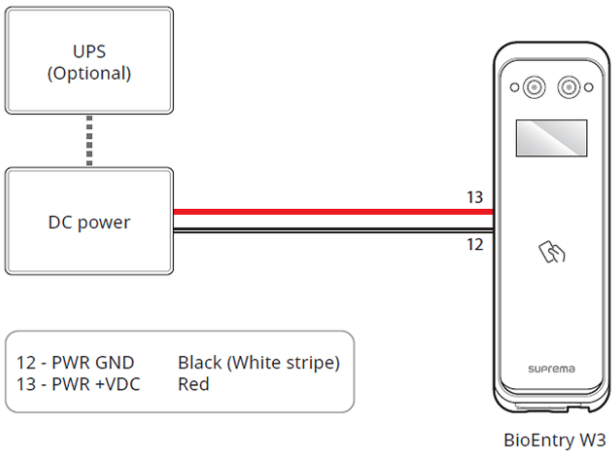


> **Info**
> When assembling the product with the bracket, you can use the included bracket fixing screw (Star Shaped) instead of the product fixing screw for enhanced security.

7. Adjust the tilting bracket to the desired angle.



Power supply connection



Caution

- Listed Class 2 power unit shall be recommended to use.
- DO NOT connect the device to the DC power supply (or adapter) and PoE power supply at the same time.
- Use the IEC/EN 62368-1 approved power adapter that supports higher power consumption than the product. If you wish to connect and use another device to the power supply adapter, you should use an adapter with a current capacity which is the same or larger than the total power consumption required for the terminal and another device.
  - Refer to the Power in the product specifications for maximum current consumption specifications.
- Use a separate power supply for Secure I/O 2, the electric lock, and the product respectively. If connecting and using the power supply to these devices together, the devices may malfunction.
- When connecting the power supply, be aware of the distance between the device and the power supply. The device should be connected as close as possible to the power supply so that the length of the connecting cable is kept to a minimum. If cable connections are made improperly it may cause the device to malfunction. It is recommended to use a 16 AWG or 18 AWG cable if the product is far from the power supply. The connection distance may differ depending on the standard of the cable used and the installation environment. This product supports both DC 24 V and DC 12 V power, so check the maximum length according to the cable specification to ensure that the unit is properly powered.

Cable standard	Max. extended length	
	DC 12V	DC 24V
16 AWG	50 m	150 m
18 AWG	30 m	136 m
20 AWG	20 m	90 m

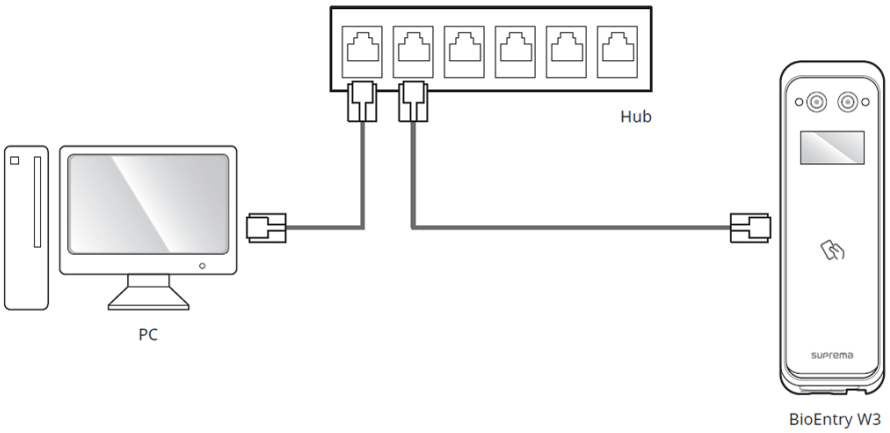
- DO NOT extend the length of power cable when using the power adapter.
- DO NOT use the CAT5 UTP 2-Wire for power supply purpose.

Network Connection

TCP/IP

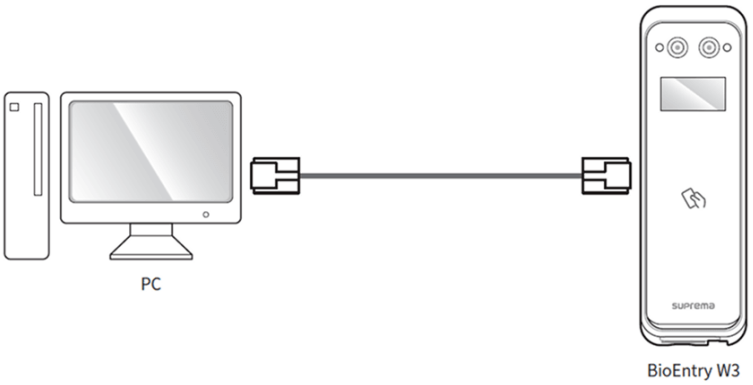
LAN connection (connecting to a hub)

You can connect to a hub using a standard CAT-5 or higher cable.



LAN connection (connecting to a PC directly)

This product supports automatic MDI/MDIX, so it can connect directly to a PC using either a crossover cable or a standard straight CAT-5 or higher cable.



Network ports and services

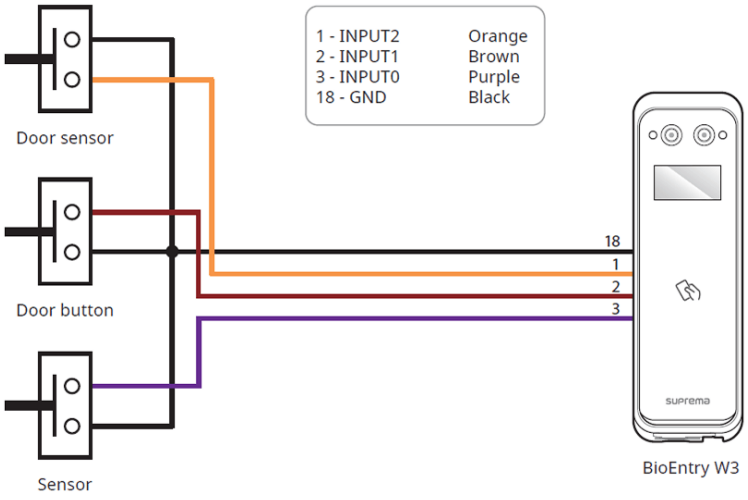
This device uses the following ports for network communication and stable service operation.

Protocol	Service
TCP	Used for communication services between the server and the device, and for the device operation status switching service.
UDP	Used for the device discovery service to search for devices on the network.

Info

These ports provide the product's normal network features. When configuring firewall rules or network security settings, allow these ports.

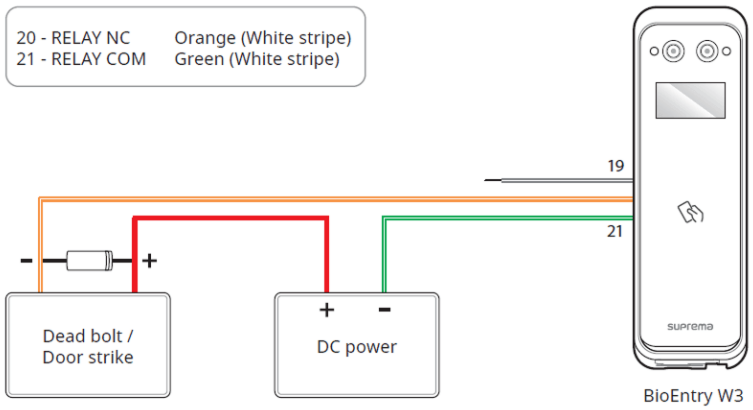
Input connection



Relay Connection

Fail Safe Lock

In order to use the Fail Safe Lock, connect N/C relay as shown in the figure below. There is normally a current flowing through the relay for the Fail Safe Lock. When the relay is activated, blocking the current flow, the door will open. If the power supply to the product is cut off due to a power failure or an external factor, the door will open.



Caution

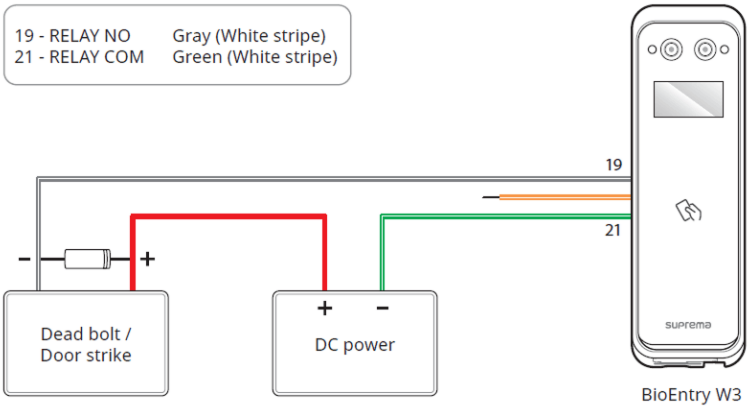
- Install a diode at both sides of the door lock wire as shown in the figure to protect the relay from the reverse current, which occurs when the door lock operates.
- Use a separate power supply for the product and the door lock.
- Suprema's standalone intelligent readers contain internal relays that can directly lock/unlock doors without external controllers for added convenience. For access control applications in need of security, however, it is NOT recommended to use the internal relay of a reader to prevent any tampering attacks which can potentially trigger the door unlock. For such applications, it is highly recommended to use a separate relay unit for a lock control such as Suprema's Secure I/O 2, DM-20 or CoreStation installed at a secure side of a door.

Info

Take caution of the installation direction of the diode. Install the diode close to the door lock.

Fail Secure Lock

In order to use the Fail Secure Lock, connect N/O relay as shown in the figure below. There is normally no current flowing through the relay for the Fail Secure Lock. When the current flow is activated by the relay, the door will open. If the power supply to the product is cut off due to a power failure or an external factor, the door will lock.



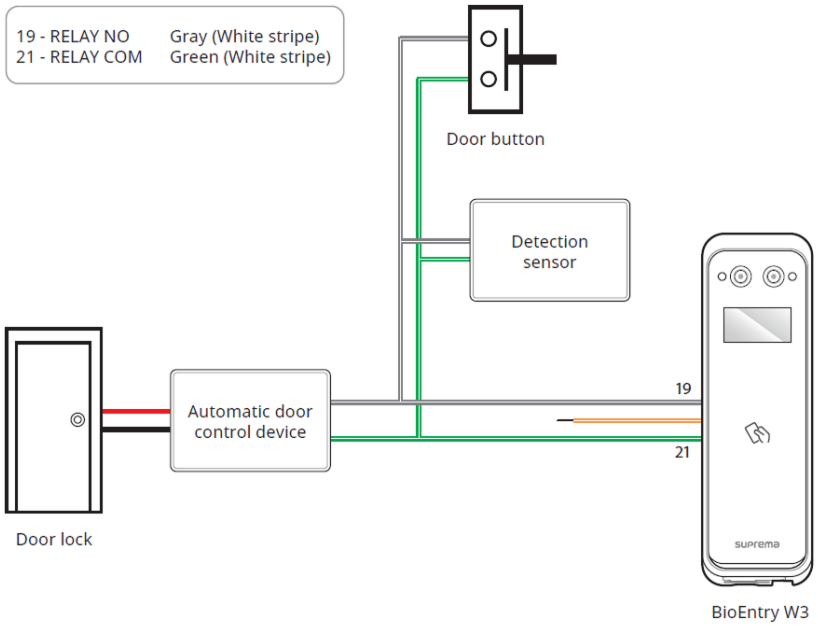
Caution

- Install a diode at both sides of the door lock wire as shown in the figure to protect the relay from the reverse current, which occurs when the door lock operates.
- Use a separate power supply for the product and the door lock.
- Suprema's standalone intelligent readers contain internal relays that can directly lock/unlock doors without external controllers for added convenience. For access control applications in need of security, however, it is NOT recommended to use the internal relay of a reader to prevent any tampering attacks which can potentially trigger the door unlock. For such applications, it is highly recommended to use a separate relay unit for a lock control such as Suprema's Secure I/O 2, DM-20 or CoreStation installed at a secure side of a door.

Info

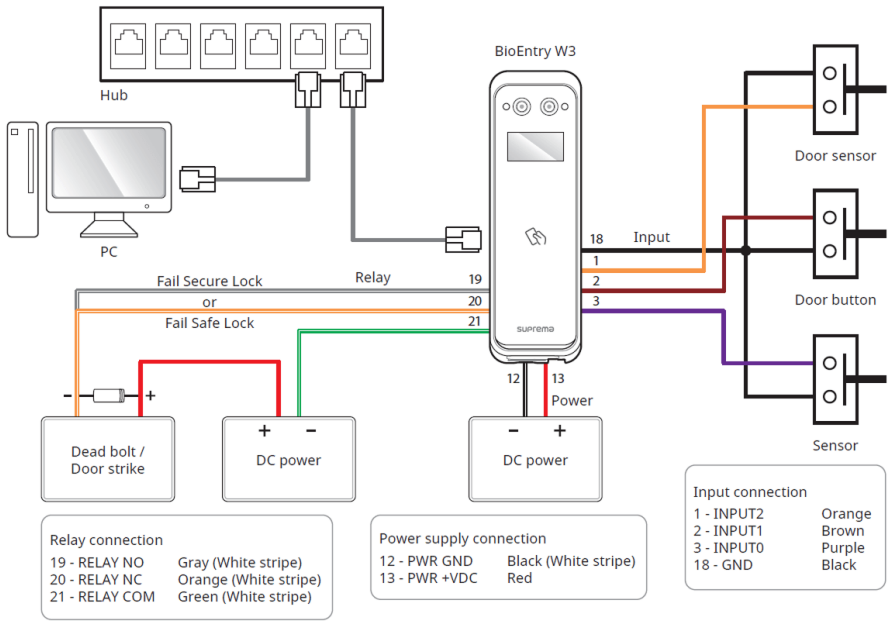
Take caution of the installation direction of the diode. Install the diode close to the door lock.

Automatic door connection



Connecting as a Standalone

The product can be connected to the door lock, door button, and door sensor directly without connecting a separate I/O device.



Caution

Suprema's standalone intelligent readers contain internal relays that can directly lock/unlock doors without external controllers for added convenience. For access control applications in need of security, however, it is NOT recommended to use the internal relay of a reader to prevent any tampering attacks which can potentially trigger the door unlock. For such applications, it is highly recommended to use a separate relay unit for a lock control such as Suprema's Secure I/O 2, DM-20 or CoreStation installed at a secure side of a door.

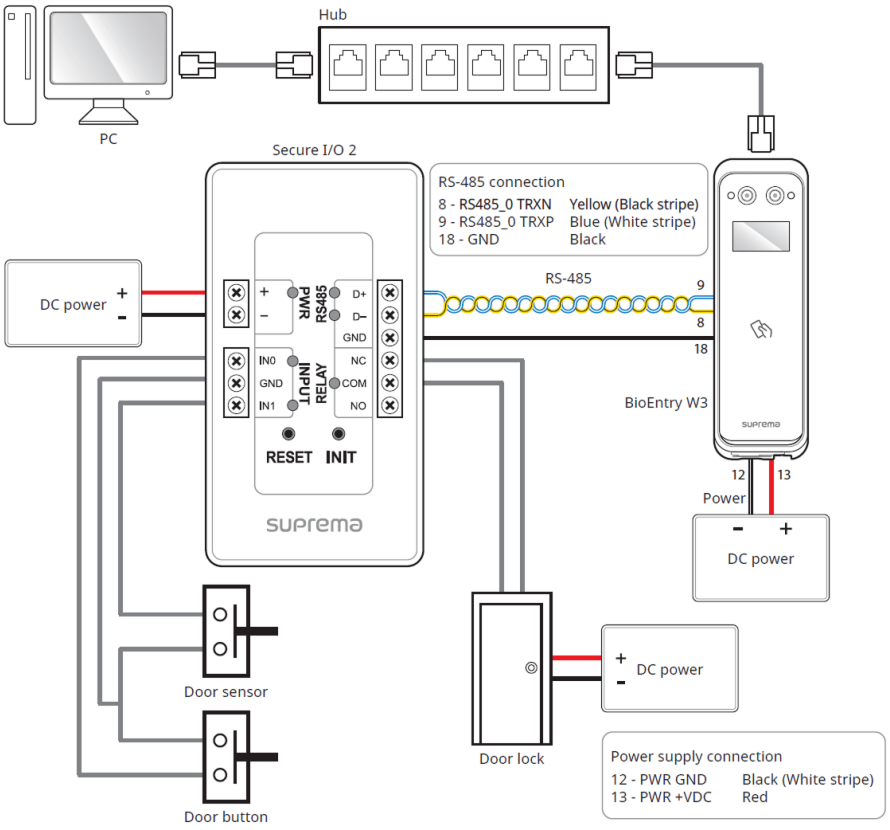
Info

- The device can be used as a multi-door controller with the slave devices with the RS-485 cable. The slave devices are used as dummy readers and authentication is performed in the master device.
- If XPass or XPass 2 is connected to the master device, only card authentication can be used.
- The maximum number of slave devices available to connect varies according to the authentication method, number of users, and number of devices. Also note that the number of slave devices affects the authentication performance.
- Connect up to 31 slave devices to a master device. The bandwidth of RS-485 allows for up to 7 fingerprint authentication devices to be connected.
- For more information, contact the Suprema Technical Support Team.

Connecting to Secure I/O 2

Secure I/O 2 is an I/O device, can be connected to the product with the RS-485 cable. Security can be maintained even if the connection between the product and Secure I/O 2 has been lost or the power supply to the product has been shut off due to external factors.

- Use an AWG24 twisted pair with a maximum length of 1.2 km for the RS-485 cable.
- It is recommended to use RS-485 cables with a characteristic impedance of 120 Ω.
- If connecting with a RS-485 daisy chain, connect the termination resistor (120 Ω) to both ends of the daisy chain connection. If connected to the middle line, the signal level becomes smaller and the communication performance will deteriorate. Make sure to connect it to both ends of the daisy chain connection.

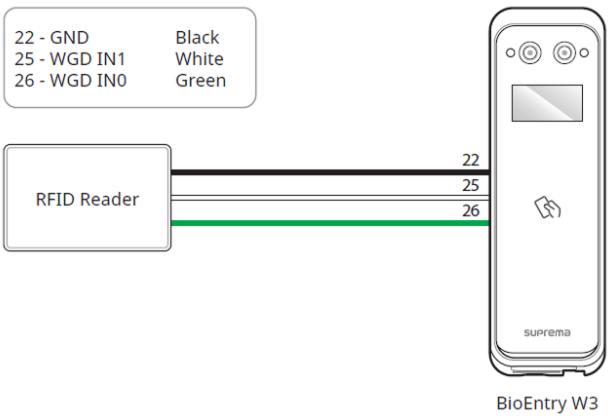


Info

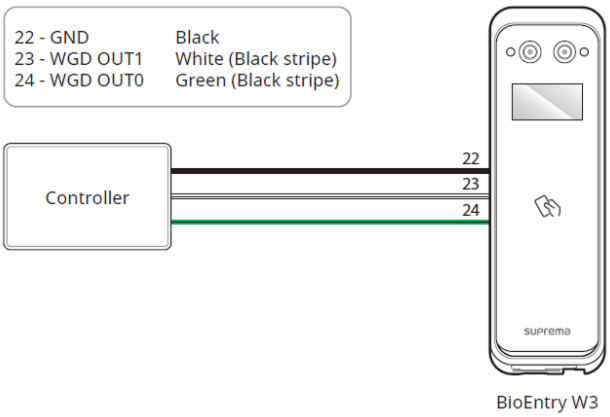
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- For more information, contact the Suprema Technical Support Team.

Wiegand Connection

Used as a Wiegand input device.



Used as a Wiegand output device.



Initialize Network Settings

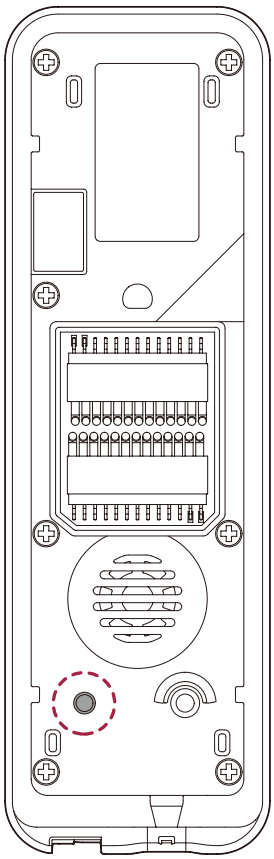
Initialize the device's network settings.

1. Power on.
2. Press the reset button until the device automatically reboots.
3. Connect the device using the initialized network information.
    - **TCP/IP Address**: DHCP address assignment (if DHCP address assignment fails, will be set to 169.254.x.x).
    - **Server Mode**: Disable
    - **RS-485**: Default, 115200 bps
4. Change the TCP/IP or RS-485 information.
5. Check if the network information is correctly set after turning the power off and on.

Factory reset

Delete all information stored on the device and initialize the settings.

1. Power on.
2. Quickly press the reset button three times.



3. Press the reset button once more when the device's LED blinks green.

> **Info**
> You can only use Factory Default when the root certificate is stored on the device.

Firmware upgrade

You can connect a USB memory stick to upgrade the firmware.

1. Save the firmware file to a USB memory stick for upgrade.

   > **Info**
   > It is recommended to save only one firmware file on the USB memory stick for the upgrade.

2. Connect the USB memory stick to the device.
3. If the 'Admin Auth Required' message appears, authenticate using administrator credentials.

   > **Info**
   > Register the administrator on BioStar X for the device. You cannot proceed with the firmware upgrade if an administrator is not registered on the device. For detailed instructions on how to register an administrator, please refer to the BioStar X Administrator Guide.

4. Once the administrator authentication is successful, the firmware file will be transferred to the device.
5. When the firmware file transfer is complete, a message to remove the USB memory stick will appear on the screen. Remove the USB memory stick.

   > **Info**
   > If you do not remove the USB memory stick, the firmware upgrade will run again after the device restarts.

6. After proceeding with the firmware upgrade, the device will restart automatically.

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

Product Specifications

Provides key specifications of the product, including size, features, and performance.

Credentials

Biometric	**Face** • **Authentication Distance[1]:0.3 ~ 1.0 m** • **Authentication Height:1.4 ~ 1.9 m** • **Matching Speed:Within 0.2 seconds** • **Live Face Detection:Supported**	
RF Card	**BEW3-DB**	**125kHz EM & 13.56MHz MIFARE, MIFARE Plus, DESFire, DESFire EV1/EV2/EV3, FeliCa**
	BEW3-APB	**125kHz EM, HID Prox & 13.56MHz MIFARE, MIFARE Plus, DESFire, DESFire EV1/EV2/EV3, FeliCa, iCLASS SE/SR/Seos**
RF Read Range[2]	**EM/MIFARE/DESFire/HID iCLASS: 50 mm, HID Prox/FeliCa: 30 mm**	
Mobile	**NFC, BLE**	

General

Model Name	**BEW3-DB, BEW3-APB**
CPU	**1.5 GHz Quad Core**
Memory	**16 GB Flash + 2 GB RAM**
Crypto Chip	**Supported**
Display	**1.3" PMOLED**
LED	**Multi-color**

Sound	**16 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	• **IR: 2M pixels** • **Visual: 2M pixels**	
Dimensions (W x H x D)	**Device**	**50 x 160 x 34.15 (mm)**
	Bracket	**39.4 x 153.2 (mm)**
Weight	**Device**	• **BEW3-DB: 283 g** • **BEW3-APB: 291 g**
	Bracket	**36 g (including washers and bolts)**
IP Rating	**IP67**	
IK Rating	**IK08**	
Authentication	**CE, UKCA, KC, FCC, IC, RCM, BIS, ANATEL, SIG, RoHS, REACH, WEEE, EAC, TELEC**	

Capacity

Max. User	**100,000**[3)]
Max. Credentials (1:N)	• **Face: 30,000** • **Card: 100,000**
Max. Credentials (1:1)	• **Face: 30,000** • **Card: 100,000**
Max. Text logs	**1,000,000**

Max. Image logs	**10,000**

Interface

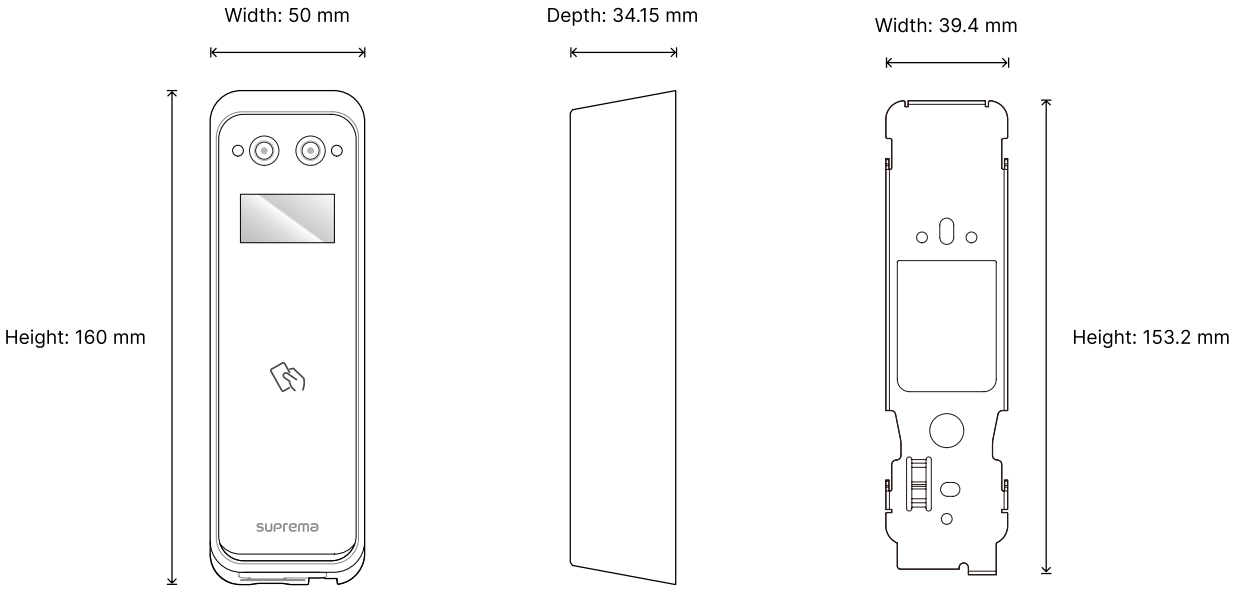
Ethernet	**Supported (10/100 Mbps, auto MDI/MDI-X)**	
Network Protocol	**TCP, UDP**	
RS-485	**1 ch Master / Slave (Selectable)**	
RS-485 Communication Protocol	**OSDP V2 compliant**	
Wiegand	**1 ch Input, 1 ch Output**	
Input	**3 ch Inputs**	
Relay	**1 relay**	
PoE	**BEW3-DB**	**Not supported**
	BEW3-APB	**Supported (IEEE 802.3af compliant)**
RTSP	**Supported**	
USB	**USB 2.0 (Type C), only FW-Upgrade**	
USB Expansion Port	**Supported**	
Tamper	**Supported**	

Electrical

Power	**12 Vdc**	**Current: Max. 1.0 A**
	24 Vdc	**Current: Max. 0.6 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 ports 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	• **2 A @ 30 VDC Resistive load** • **1 A @ 30 VDC Inductive load**

Dimensions and Weight



Weight
- BEW3-DB: 283 g
- BEW3-APB: 291 g

Weight: 36 g
(Including washer and bolt)

---

1) The minimum facial authentication distance indicated is the default setting for the product, and the recommended facial authentication distance is 0.6-1.0 m.

2) The RF detection range may vary depending on the installation environment.

3) The number of users registered without having any credential data.

Info

Product specifications are subject to change without notice for performance improvement.

Regulatory Information

Provides information on regulations and certifications complied with by the product.

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.

Info

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

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

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

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 20 cm between the radiator and your body. Do not install or operate this device and its antenna in conjunction with any other antenna or RF transmission device.

IC information

This device complies with Industry Canada's licence-exempt RSSs.

Operation is subject to the following two conditions:

1. This device may not cause interference; and
2. This device must accept any interference, including interference that may cause undesired operation of the device.

Le présent appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radio exempts de licence.

L'exploitation est autorisée aux deux conditions suivantes :

1. l'appareil ne doit pas produire de brouillage ;
2. l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

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 and is marked with the CE mark. This device is a Class 1 radio device according to the instructions.

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

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

Suprema Inc.

Address: 17F Parkview Tower, 248, Jeongjail-ro, Bundang- gu, Seongnam-si, Gyeonggi-do, 13554, Rep. of KOREA

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

Appendices

Includes legal notices contained in the product.

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- This product uses the “OpenSSL”, which is licensed under the OpenSSL and Original SSLeay licenses. For more information about the OpenSSL and Original SSLeay licenses, please see the OpenSSL License and Original SSLeay License.
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- The fonts NotoSans, NotoNaskh, Pixel12x10, NeoDunggeunmo included in this product follow the SIL Open Font License. For more information about the SIL Open Font License, please see the SIL Open Font License.
- The source modified based on Linux kernel 4.x and glibc library included in this product can be downloaded by contacting the Suprema Technical Support Team.

Suprema Inc.

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