NovaFace-2N^{TM} User Manual

Next Generation Embedded Face Recognition Terminal

Version 1.0.5, May 2024

NOTE

All references in this document to NovaFace-2N refer to NovaFace-2, NovaFace-2N, and NovaFace-2NP (PoE version) model. Please refer to product label on back of device for confirmation.

About This Manual

NovaFace-2N (all references include both 2 and 2N models) is an advanced face recognition terminal that provides highly accurate face recognition in an embedded system. This manual contains the descriptions and operational instructions for NovaFace-2N device. It is intended and written for system administrators who are in charge of overall operation including installation and management. We recommend you familiarize yourself with this manual in order to make use of the product correctly and effectively.

- The figures and screenshots in this guide are given for illustration purposes only and may differ from the actual product.

- Due to continuous technological improvements, the guide may not contain the most updated information. For further information not covered in this guide, please contact us at service@cmi-tech.com.

Revision History

Version	Date	Description	Note
1.0.0	2021-06-18	Initial release	
1.0.1	2021-10-18	Updated **Appendix A: OSD Menu List**	
1.0.4	2023-12-01	Added NovaFace-2N	
1.0.5	2024-05-19	Updated specifications and OSD Menu List, Added NovaFace-2NP	

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Conventions in This Manual

The following symbols are used throughout this manual. Make sure that you fully understand the meaning of each symbol and follow the instructions accompanied.

Symbol	Name	Description
	WARNING	Indicates information that should be followed with the utmost care. Failure to comply with a warning could cause severe damage to the equipment or injury to personnel.
	CAUTION	Indicates a potentially hazardous situation which, if not avoided, could result in equipment damage, data loss, performance degradation, or unexpected results.
	IMPORTANT	Emphasizes essential information required for user success.
	NOTE	Provides important supplemental information that might enhance users' understanding or alternative steps to accomplish their goals.
	TIP	Provides optional information to help users be more successful in their tasks.

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Safety Instructions

Follow the safety instructions to use the product safely and prevent any risk of personal injury or damage to the product.

⚠️ **WARNING**

Choosing Location

- DO NOT expose the product to direct sunlight, excess heat, open flames, corrosive gasses, moisture, or dust. Doing so may cause electrical shock, electrical short, or fire.

- DO NOT install the product near heaters, air conditioners, electrical fans, refrigerators, or water. Doing so may create the risk of a short circuit or fire caused by water or condensation that may come into contact with the product.

- DO NOT install the product in an environment that is susceptible to explosion.

Operation

- DO NOT let any type of liquid, mists, or sprays get into the product. Doing so may cause electrical shock, electrical short, or product damage.

- If smoke, odors or noise rise from the device, stop using the device immediately, disconnect the power cable, and contact our customer support.

Maintenance

- DO NOT attempt to dissemble, repair, or modify the device yourself. Opening or removing covers may expose you to electrical shock or other risks and may void your warranty. If the product does not work correctly, contact your dealer or our customer support.

⚠️ **CAUTION**

Choosing Location

- Keep the front side of the device away from strong ambient light, direct sunlight, or both. Sunlight, halogen lamps or other strong illumination may degrade the performance of the device, that is, increase in failure-to-capture rates or occasional authentication problem.

- DO NOT install the product outdoors unless environmental factors such as water, temperature, or sunlight in the location are controlled by means of proper protection.

- DO NOT expose the product to high electro-magnetic radiation. Device failure or performance degradation may occur caused by electro-magnetic interference.

- DO NOT install the product next to devices that contain magnets or generate magnetic fields such as speakers. Device malfunction or performance degradation may occur caused by magnetic interference.

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Installation

- DO NOT install the product on a surface subject to vibration or physical shock. Doing so can cause damage to the product.

- When you install the product on a wall, make sure that you secure the product with the provided fasteners. Dropping from the wall may cause damage to device casing, internal parts, or both.

- DO NOT install the power supply cable in a high-traffic area where people pass by. Doing so may create a trip hazard and cause the cable to become worn or frayed.

- Use only a power cord set complying with the national regulation of the countries intended for sale.

- Use only the power adapter which is either provided or approved by CMITECH for the product to operate properly and safely.

- DO NOT connect multiple devices to one power adapter. Overload on power adapter may cause over-heat or fire hazard.

- DO NOT use any type of extension cord to connect the product to a power supply.

Operation

- DO NOT use any sharp tools when pressing the buttons to prevent damage to the touch screen from scratches or cuts.

Maintenance

- When cleaning the product, wipe the product with a soft and dry cloth. Do not apply water, benzene, alcohol, or spray cleaner. These may cause product failure or fire.

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Contents

1. Introduction to NovaFace-2N

NovaFace-2N is a face recognition terminal that provides face recognition in an embedded system with real-time subject finding and local authentication for high throughput access control and time & attendance applications.

1.1. Features

The key features of NovaFace-2N are shown in the following table:

Feature	Description
Advanced real time subject tracking with simple user instructions	NovaFace-2N accurately locates the subject face in real time and tracks in 2 sides of angle to provides wider and deeper positioning.
Robust subject to camera operating range	Operating distance range (stand-off) from 0.4 to 2.0 meters
Wide angle face imaging for outstanding capture volume	Allows height range of 145 to 210 cm at subject to device distance of 2.0 m
Utilization of ultra-high performance face matching engines	Advanced, dedicated co-processor allows utilization of latest and most powerful face algorithms.
Supplemental display of authorization results	Can display authorization decision when coupled to access control provisioning logic so that "subject recognized, but not granted permission" information can be displayed.
Supports multiple languages in GUI	English, Korean, Simplified Chinese, Traditional Chinese, Japanese, Arabic, Spanish, Italian, Turkish, French
Large on-board (embedded) face template database	Store up to 50,000[1] active face templates on-board in 1:1 recognition (verification) identification mode. Store up to 50,000[1] active face templates on-board in 1:N identification mode.
High speed face matching	Can provide up to 50,000[1] matches per second on-board.
Use in widest range of lighting conditions	Embedded illuminators in both white and NIR ranges expand use in adverse ambient light environments.
Standard multi-band RFID reader	MiFare, DesFire, FeliCa card support with standard embedded ISO/IEC 14443 reader.
Full range of deployment options	Standard connections in include Wiegand (IN and OUT), GPI, RS 485, and contact relay.
Full compatibility with CMITech CMID Manager V2	Supports full integration with CMID Manager V2 software for distributed access control and T&A solutions on single network.

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Feature	Description
Power-over-Ethernet	Optional configuration for PoE power delivery (for NovaFace-2NP model only)

1.2. Components

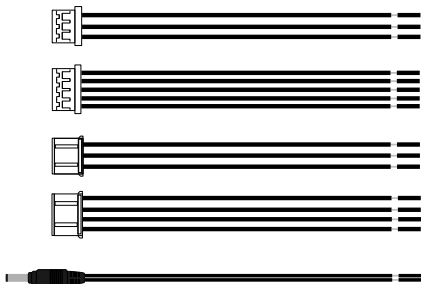Before you begin, make sure that all the following items are included with your device. If you find anything is missing, contact your dealer.
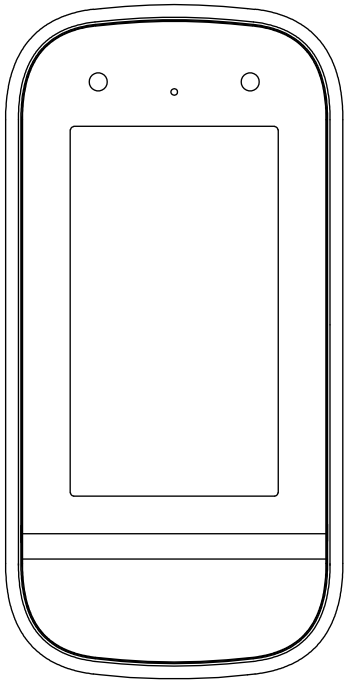
Terminal
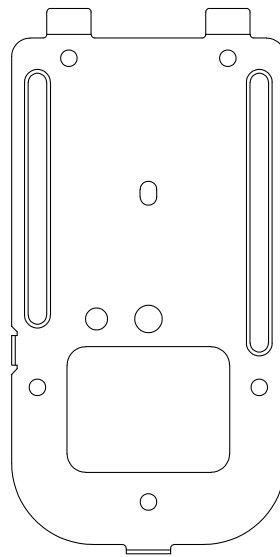
Mounting Plate

Quick Guide
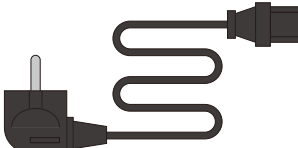
Cables

Diode

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NovaFace-2N component table

Name	Quantity	Description	Note
Terminal	1	Face recognition terminal	
Mounting Plate	1	Installs the unit on a wall or on an outlet box	
Quick Guide	1	Gives brief instructions and information needed for product use and installation	
Diode	1	Prevents currents in unintended directions (See Relay Connection for an example of its use)	
Cables — Power cable	1		
Cables — Relay cable	1		
Cables — GPI cable	1		
Cables — Wiegand cable	1		
Cables — RS-485 cable	1		
AC adapter	1		Output: 15VDC, 3.0A
Power code (optional)	1		

> ℹ️ Optional configuration for PoE power input (not shown above) is available upon request.

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1.3. Parts and Controls
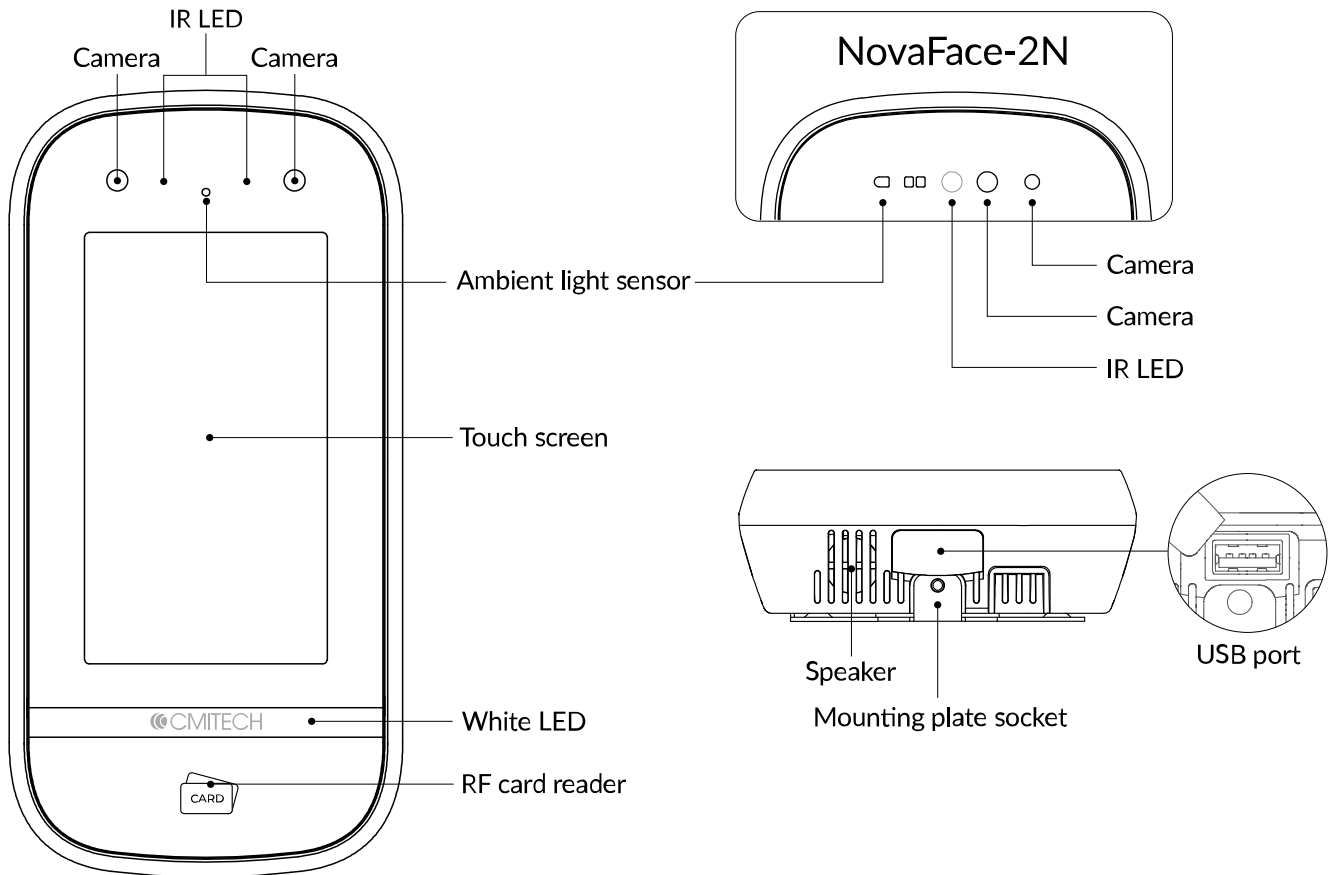
Name	Description	Note
Camera	Captures the face images	
IR LED	Illuminates the face using the NIR lighting when capturing the faces	
Touch screen	Shows preview images before capture and provides a graphical interface for enrollment and device configuration	
White LED	Gives supplemental light in dim light	
RF card reader	Indicates the area where RF cards can be read	
Ambient light sensor	Detects the changes of light in the surrounding environment	
Speaker	Delivers sound from device	
Mounting plate socket	Attaches the unit with the mounting plate	
USB port	Connects a USB flash drive	

I/O terminal
❶ Ethernet port
❷ Power plug
❸ Factory reset button
❹ RS-485 termination switch
❺ RS-485
❻ Wiegand IN and OUT
❼ GPI input
❽ Relay
❾ Debug

Tripod socket
Tamper switch
SIM card slot (optional)
Removable tabs (x 3)
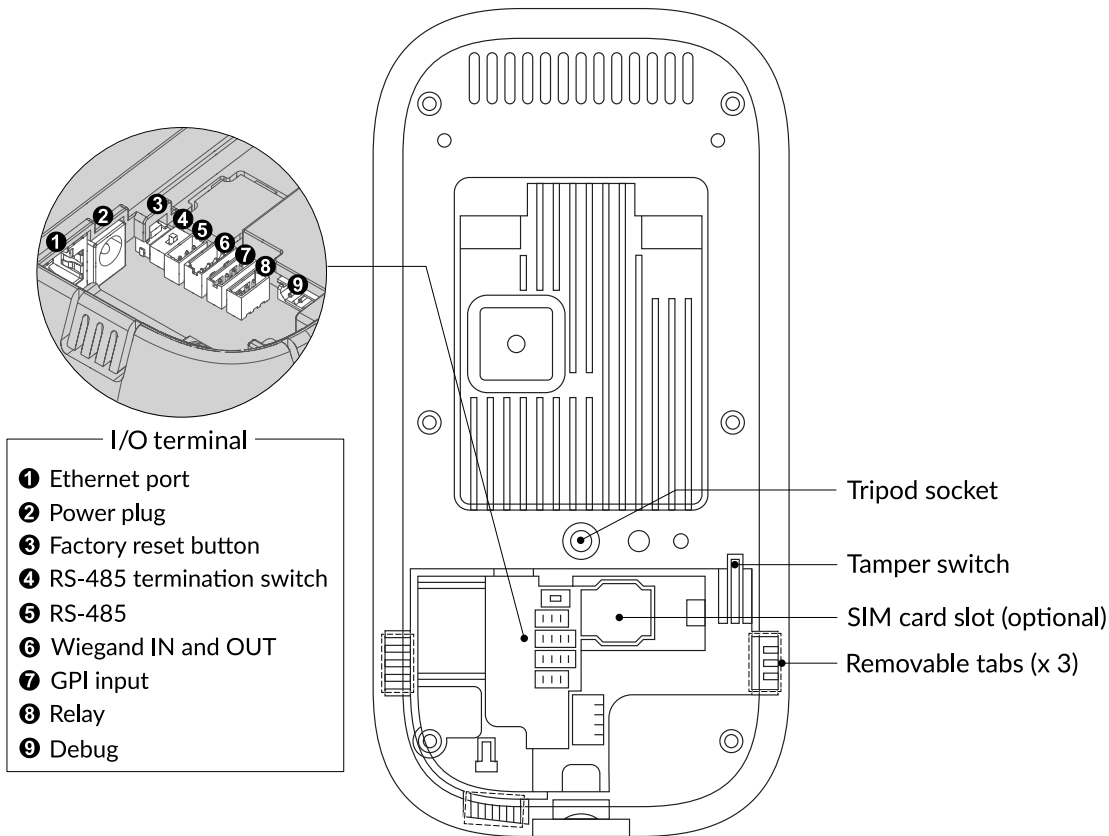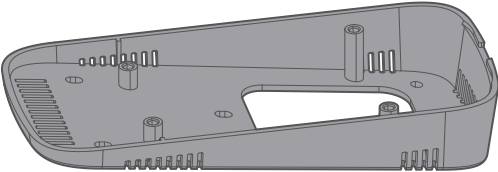
Name	Description	Note
Tripod socket	Attaches the unit with a tripod that has the standard 1/4-20 UNC screw	
Tamper switch	Starts an alarm, if configured, when a physical tampering attempt is detected	
SIM card slot	Indicates the area where a SIM card can be connected	Optional
Removable tabs	Allow the wire routing and let cables go through the openings when removed	
Ethernet port	Connects an ethernet cable	
Power plug	Connects the power cable	
Factory reset button	Restores the device to its original manufacturer settings	
RS-485 termination switch	Provides termination when the device is located at the physical end of RS-485 wiring	
RS-485	Connects the RS-485 cable	
Wiegand	Connects the Wiegand cable (input and output)	
GPI input	Connects the GPI cable	
Relay	Connect the relay cable	
Debug	Reserved for debugging purposes only	

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1.3.1. Touch Screen
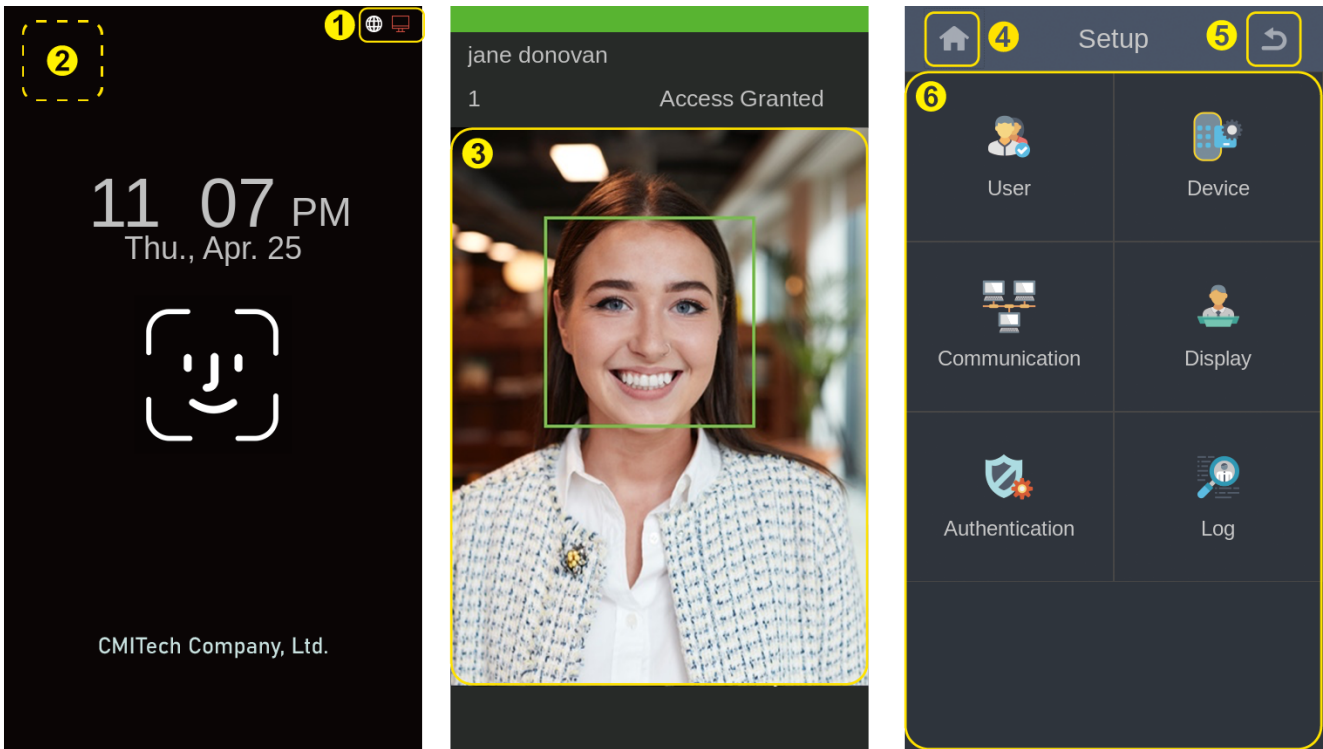
No.	Name	Description	Note
1	Status indicator	Shows the status of network connection and third party application	• White: online • Red: offline or not usable
2	**Settings** area	Enters the device setup menu screen	
3	Preview screen	Gives a preview of subject's face	
4	**Home** button	Goes to the home screen	
5	**Back** button	Goes back to the previous menu screen	
6	Settings	Shows settings menu – User, Device, Communication, Display, Authentication, Log	See Menu List for more information

1.4. Accessories

Name	Quantity	Description	Note
Mounting bracket	1		
Secure I/O	1		
RF card writer	1	Duali RF card reader/writer	

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2. Installing NovaFace-2N

This chapter gives the information about the requirements and the prerequisites for installing NovaFace-2N and the installation procedures.

2.1. Installation Requirements

Before installation, make sure that the following requirements are met.

2.1.1. Environmental Requirements

> **(!)** The NovaFace-2N is designed and intended for indoor use only. The device is not weatherproof and must not be exposed to water, ice, extreme temperatures or other adverse weather conditions. If it is required to use the device in outdoor or extreme environments, contact local sales or service@cmi-tech.com for more information.

☑ Avoid the location that is exposed to backlight, direct sunlight, and other strong illumination.

☑ Choose the location with moderate ambient light.

Environmental requirements
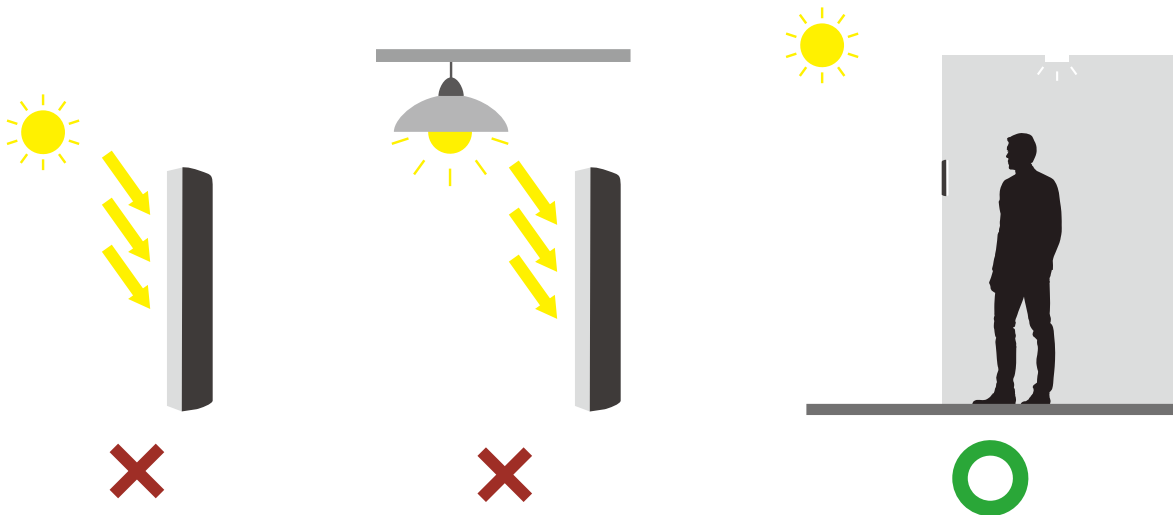
☑ Determine the height at which you install the device.

> **(i)** The recommended mounting height is 135 cm (53 inches) from the floor to the bottom of the device. It covers a person's height from 145 cm (57 inches) up to 210 cm (83 inches) at the distance of 220 cm (78 inches) from

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the device.

Recommended mounting height

| Default | Mounting bracket (optional) |

2.1.2. Electrical Requirements

☑ Use a stable power supply adapter in accordance with the following table. Minimum current is 2.0A. (Maximum actual voltage is 25V DC.)

> ℹ The 12V DC is allowed if there is no voltage drop due to either cable loss or fluctuations in mains (AC) power. Please contact CMITech for more information.

☑ Make sure that the power cable is as short as possible and have correct wire gauge in accordance with the following table.

☑ Use CAT5 or later for ethernet cable.

Power requirements depending on cable length and wire gauge

Input voltage (V)	Wire gauge (AWG)	Power cable length (m)		Note
		Recommended	**Maximum**	
15	20	25.0	37.5	*Standard Configuration*
	22	15.7	23.6	
24	20	70.1	105.1	
	22	44.0	66.0	

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2.1.3. Power over Ethernet (PoE) Requirements (for NovaFace-2NP model only)

Power over Ethernet (PoE) is a technology that allows electrical power to be transmitted along with data over standard Ethernet cables. This eliminates the need for a separate power supply and electrical outlet at the device location, simplifying installation and reducing costs.
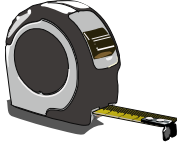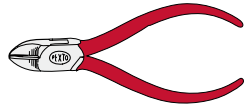
Before using PoE for your NovaFace-2NP, ensure the following:

☑ **PoE Compatibility**: Verify that your network switch or injector supports PoE and provides the correct power output (wattage) that matches the power standard of your device. The NovaFace-2NP is compliant with the IEEE 802.3af standard.

☑ **Cable Quality**: Use high-quality Ethernet cables (CAT5e or higher) specifically designed for PoE applications.

☑ **Cable Length**: Keep Ethernet cable runs under 100 meters (328 feet) to avoid voltage drop. For longer distances, consider using a POE extender or additional switches.

☑ **Power Sources**: Avoid applying PoE and an external power supply to the device simultaneously. This can damage the device and lead to unstable operation.

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2.1.4. Tool Requirements

The following tools can be necessary for installation and are not supplied by default.

Required tools

Purpose	Name	Figure	Note
General	Screw driver		Cross head
	Tape ruler		For measuring the installation height
	Cutting plier		
Concrete wall mount	Electric drill		With a drill bit and anchor bolts
	Marker		
	Hammer		

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2.2. Installation Procedure

2.2.1. Mounting Device (Wall Mount)

You can install the device onto a wall directly by using the mounting plate.

1. Remove the screw that attaches NovaFace-2N to the mounting plate and disassemble the plate.
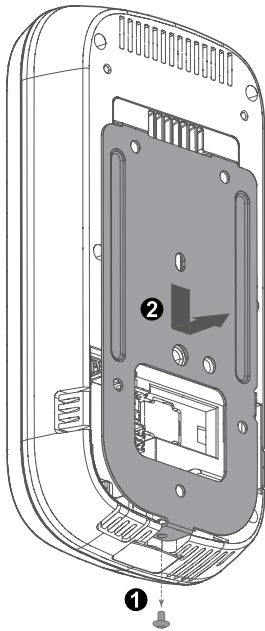
> **❗** Keep the screw because it will be used to attach them again.

2. Put the mounting plate at the predetermined position and attach the plate onto the wall with the screws (M4 x 8).

Wall mounting points
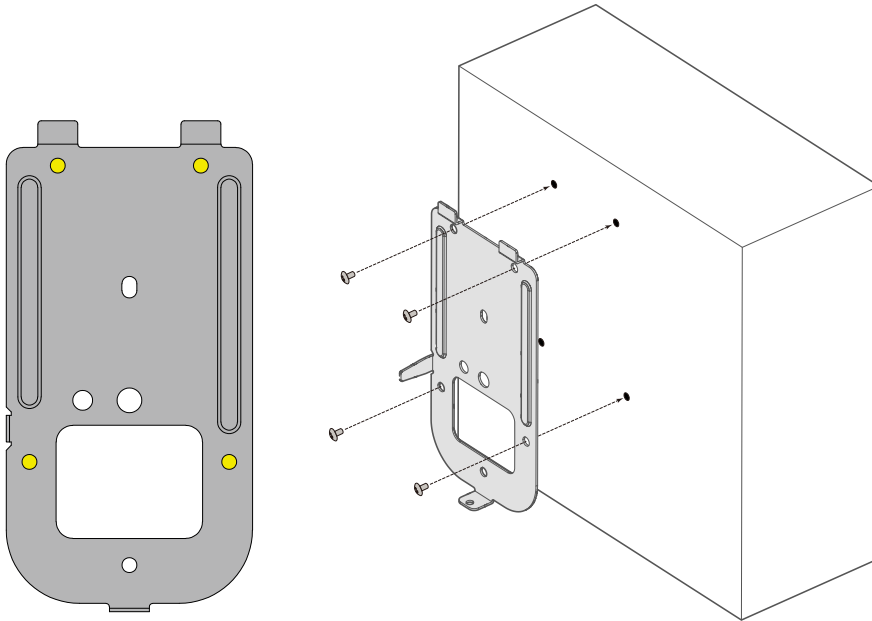
ℹ️ For concrete wall mount, do the steps that follow:

1. Put marks on the wall through the holes of plate by using a marker.

2. Drill the marked points by using a electric drill.

3. Attach the anchor bolts to the holes by using a hammer.

4. Attach the plate to the wall with the screws.

3. Connect the power cable and peripherals cables, if necessary, to the connectors in the rear panel. (See Connecting Cables for more information.)

4. Remove one or more plastic tabs to allow the wire routing and let the cables go through the openings.

Removable tabs
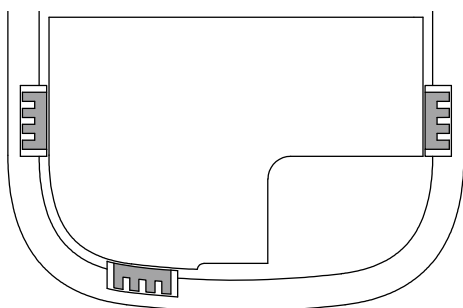
5. Put the device onto the installed plate, slide it downward, and attach them with the screw (M3 x 6)

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2.2.2. Mounting Device (Gang Box Mount)

You can also install the device on a gang box (outlet box) by using the mounting plate.

1. Remove the screw that attaches NovaFace-2N to the mounting plate and disassemble them.

> **!** Keep the screw because it will be used to attach them again.

2. Put the mounting plate onto the gang box and attach it to the box with the screws (M4 x 8).

Gang box mounting points
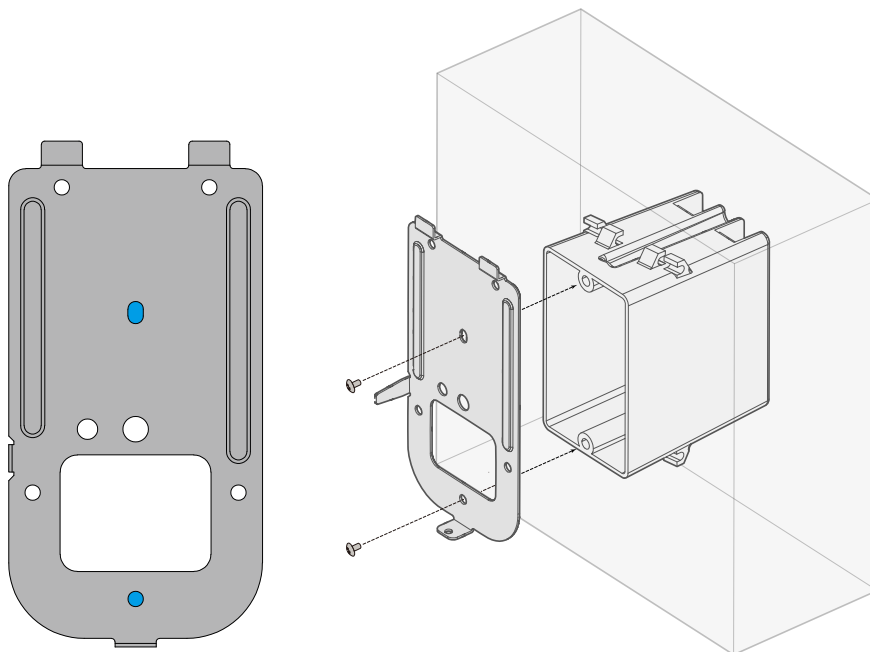
> **!** Make sure that the outgoing cables from the gang box go through the rectangular opening in the plate.

3. Connect the power cable and peripherals cables, if necessary, to the connectors in the rear panel. (See Connecting Cables for more information)

4. Put the device onto the installed plate, slide it downward, and assemble them with the screw (M3 x 6)

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2.2.3. Connecting Cables

Power Connection
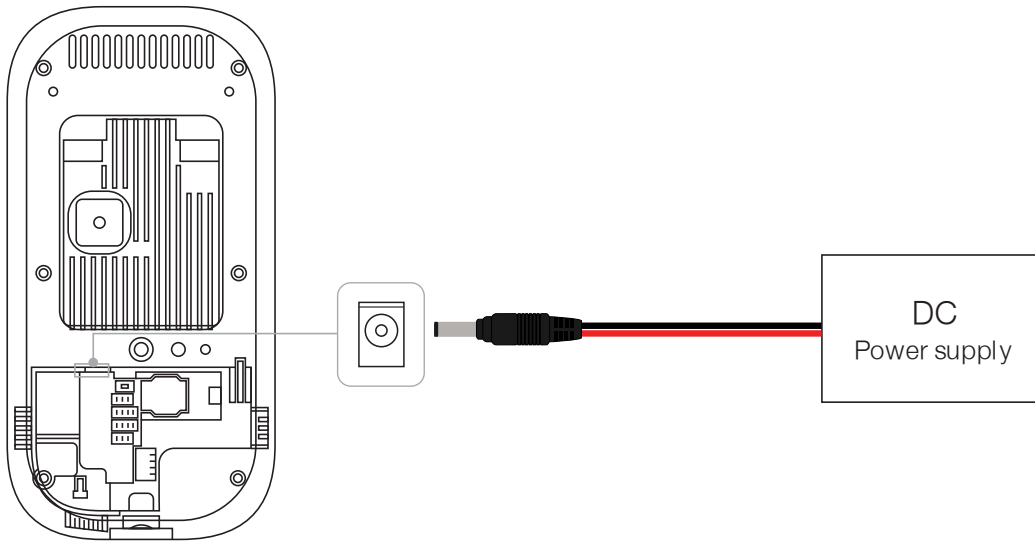
⚠️ For NovaFace-2NP (the PoE version of NovaFace-2N), avoid using both a PoE connection and an external power supply simultaneously. This can lead to hardware damage or operational instability. Always ensure that the device is powered exclusively by one source — either PoE or its dedicated power supply. If you need to switch between these sources, make sure to disconnect from one before connecting to the other to maintain the integrity and safety of the system.

Network Connection

RJ-45 connector for 10/100/1000Base-T Ethernet communication, minimum CAT5 cable.

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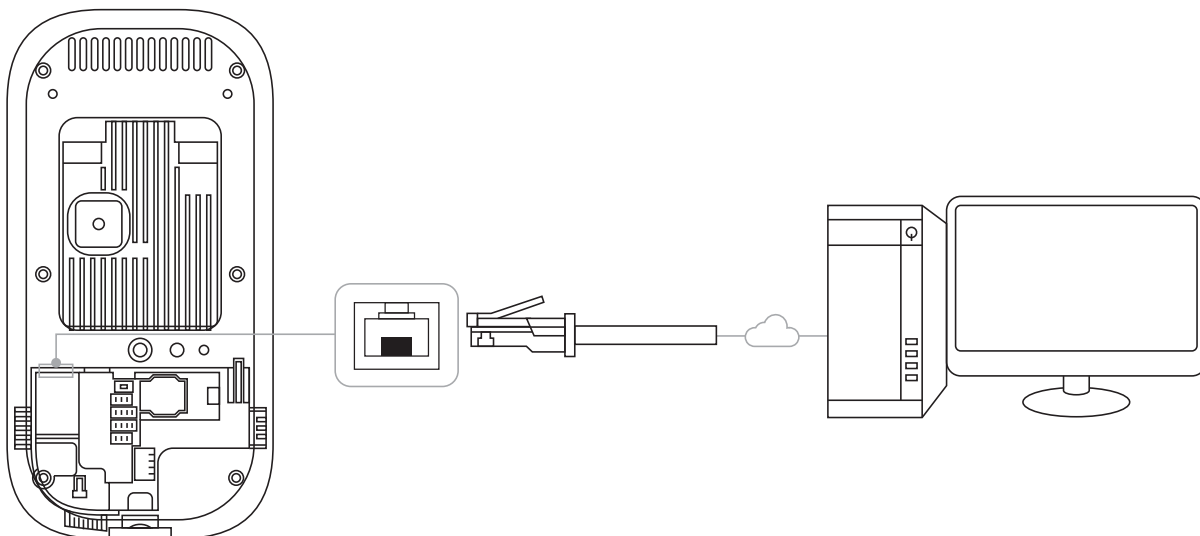
> ℹ️ For NovaFace-2NP, the device will automatically receive power through the Ethernet cable and power on once connected.

Relay Connection – Dead-Bolt Type Door Lock

There are two types of dead-bolt door lock connections and configuration supported – fail-safe and fail-secure.

> ❗
> - Use different power supplies for the NovaFace-2N and the door lock.
> - Install the diode at both ends of the circuit as shown in the figure below close to the door lock to protect the relay contact from the reverse current that occurs when the door lock works.
> - Make sure that the diode direction is correct.

Fail-Safe Configuration

	Pin N o.	Name
RELAY	1	Normal Open (NO)
	2	Common (COM)
	3	Normal Close (NC)
GPI	1	GPI 0
	2	GPI 1
	3	GPI 2
	4	Ground (GND)

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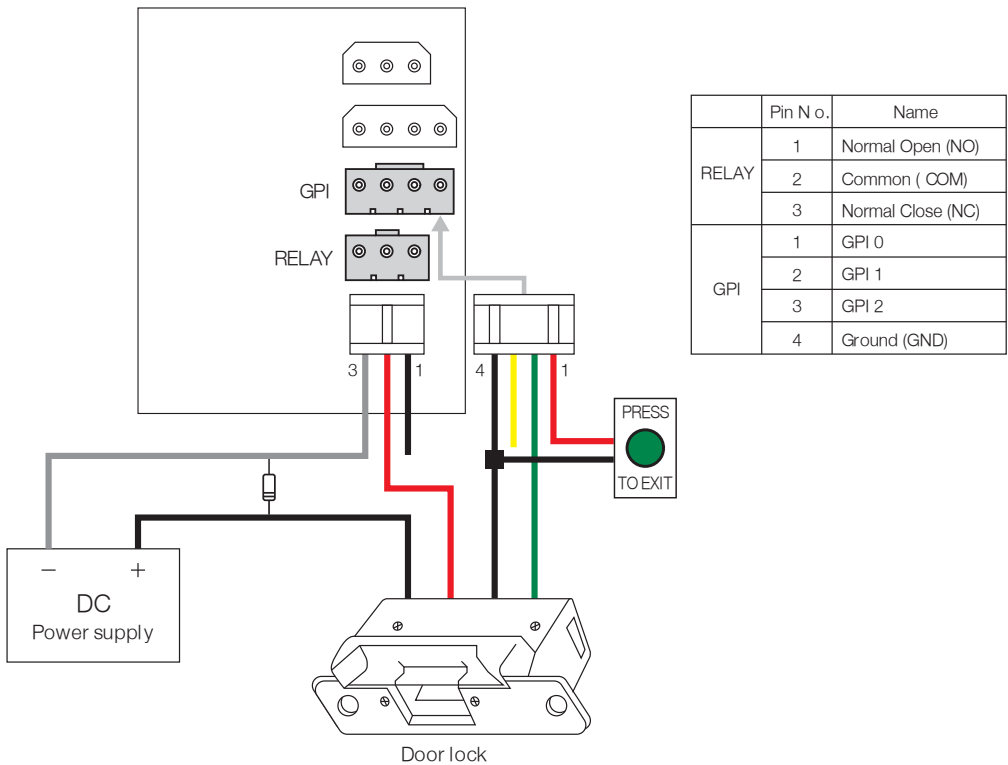
Fail-Secure Configuration

	Pin N o.	Name
RELAY	1	Normal Open (NO)
	2	Common (COM)
	3	Normal Close (NC)
GPI	1	GPI 0
	2	GPI 1
	3	GPI 2
	4	Ground (GND)
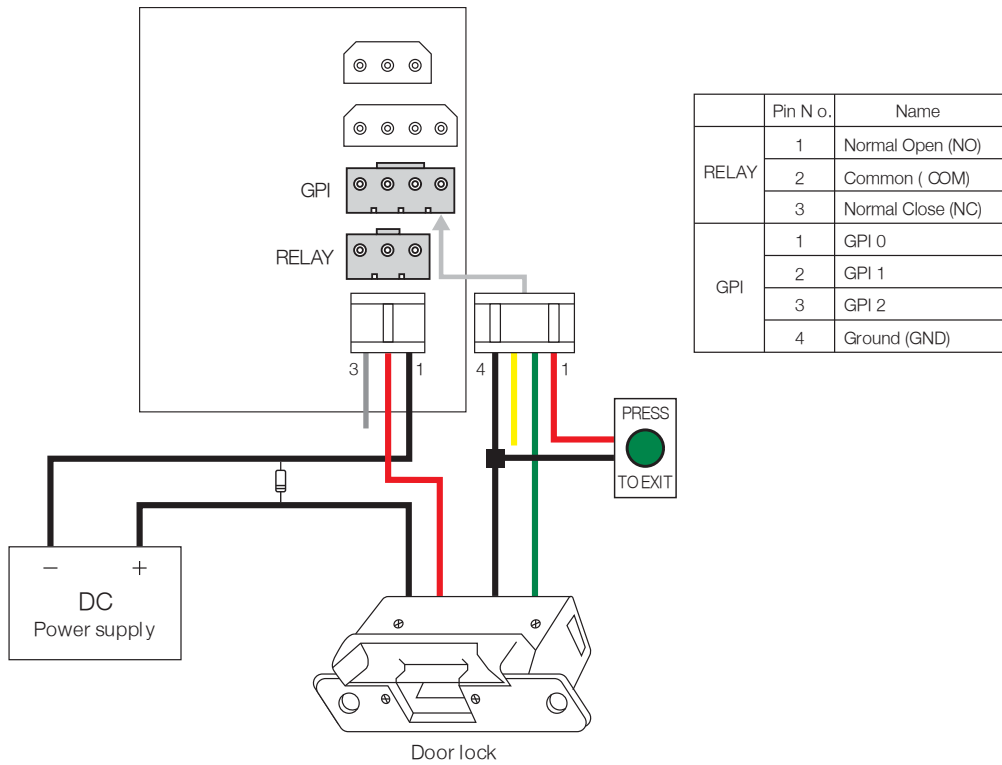
Relay Connection – Automatic Door

	Pin N o.	Name
RELAY	1	Normal Open (NO)
	2	Common (COM)
	3	Normal Close (NC)

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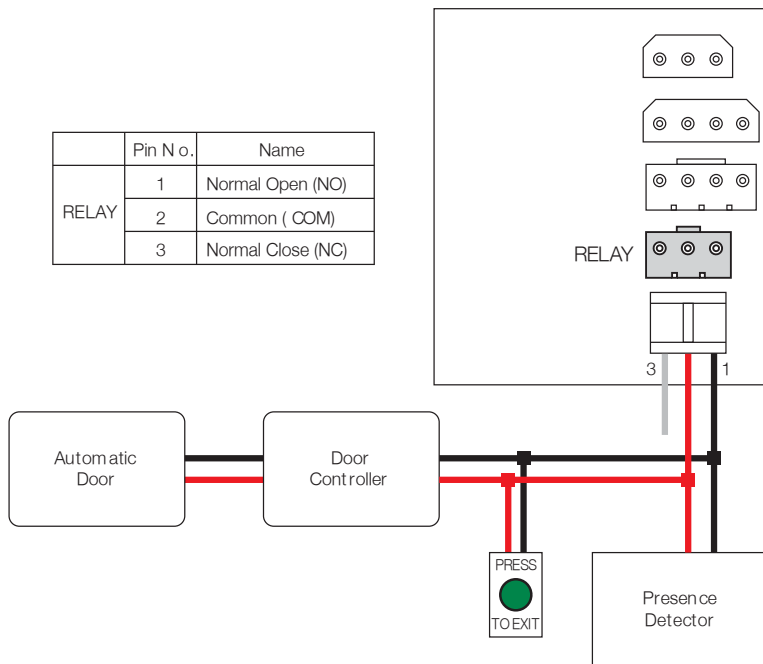
Relay Connection – Alarm Light

Internal relay interface with nominal switching capacity of 1 A, 30 VDC or 0.3 A, 120 VAC, resistive load.

RELAY	Pin N o.	Name
	1	Normal Open (NO)
	2	Common (COM)
	3	Normal Close (NC)

DC +12V – +30V

GND

GPI Connection

GPI	Pin N o.	Name
	1	GPI 0
	2	GPI 1
	3	GPI 2
	4	Ground (GND)

Door open button

PRESS TO EXIT

Door sensor

Fire detector

GPI

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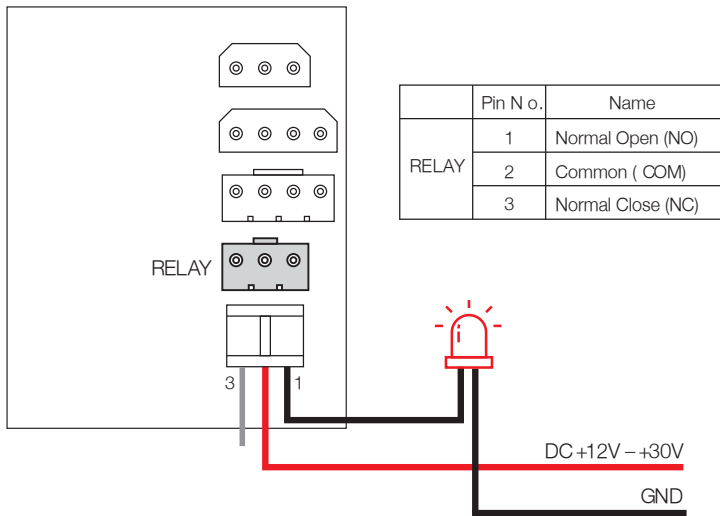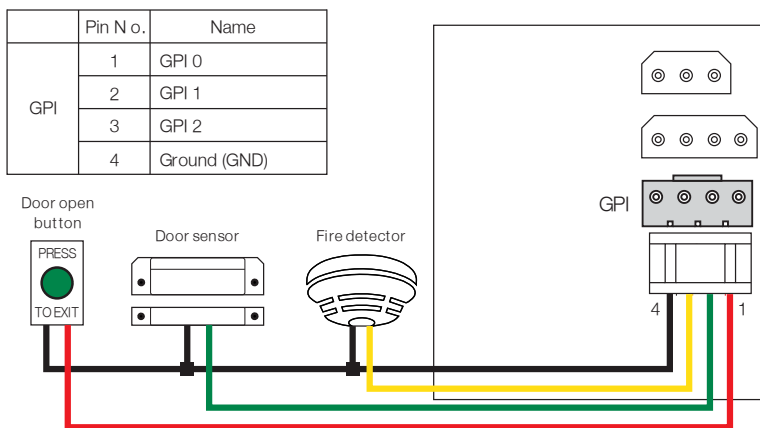
Wiegand IN Connection

Wiegand	Pin No.	Name
	1	IN DATA 0
	2	IN DATA 1
	3	OUT DATA 0
	4	OUT DATA 1
	5	Ground (GND)

WIEGAND

Wiegand Reader (IN)

GND
DATA 1
DATA 0

5   1

Wiegand OUT Connection

Wiegand	Pin No.	Name
	1	IN DATA 0
	2	IN DATA 1
	3	OUT DATA 0
	4	OUT DATA 1
	5	Ground (GND)

WIEGAND

Access Controller (OUT)

GND
DATA 1
DATA 0

5   1

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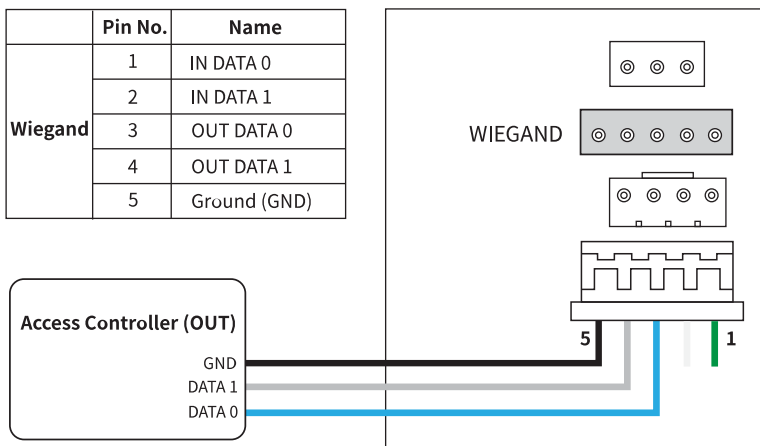
3. Using NovaFace-2N

3.1. Enrollment

This section gives the procedural information to enroll users to the device.

1. Press the Settings area on the main screen.

2. Press the **User** icon.

3. Press **Enroll** (⊕ Enroll) in the bottom.

4. Type **ID** and **Name**.

5. Press one or more credential type buttons (Face, Card) to add to the user.

   ◦ For **Face**, let the user stand in front of device and complete the face capture.

   ◦ For **Card**, put the card on the device's card reader. When the CSN (card serial number) appears on the screen, press **OK**.

> **i** Optionally, select **Bypass card** to allow the user to get access permission by using a registered card alone regardless of authentication mode

6. Press **OK** to complete the enrollment.

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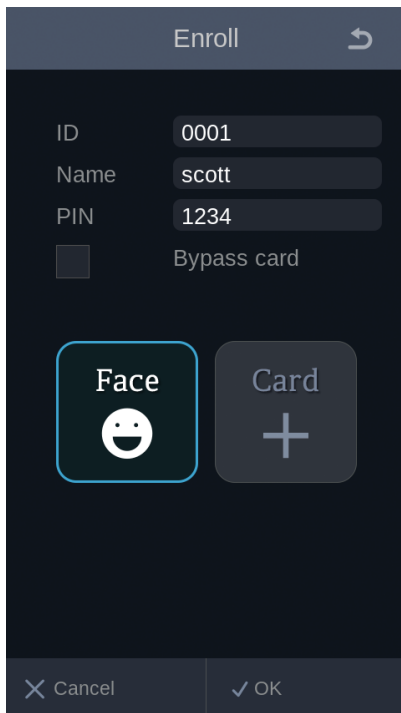
3.2. Authentication

NovaFace-2N detects and displays the subject's face over 2.0 meters from the system on the high-resolution color display. The subject will simple and naturally walk toward the face capture range of 0.4 to 2.0 meter. Once the system recognizes the subject, the result will be displayed immediately with indication line over the subject's face image.
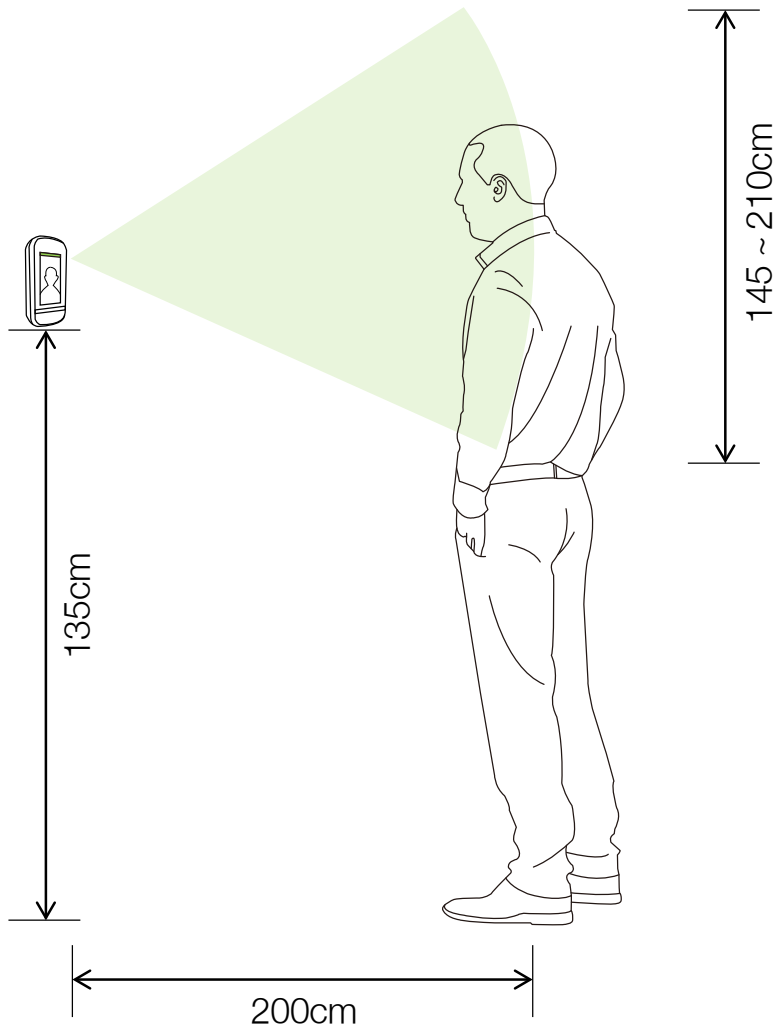
Capture height range at recommended camera installation height of 135 cm

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3.2.1. User Instructions

1. Position yourself in front of device, while looking at screen. White box appears around the face when your face is detected.
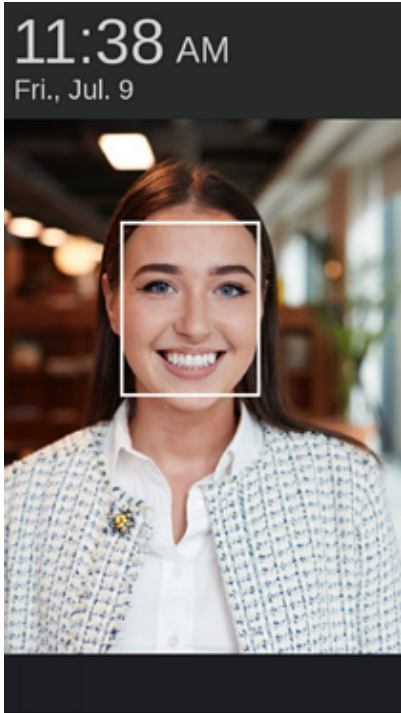
2. Authentication result is displayed on the top of the screen depending on whether your face is recognized successfully.
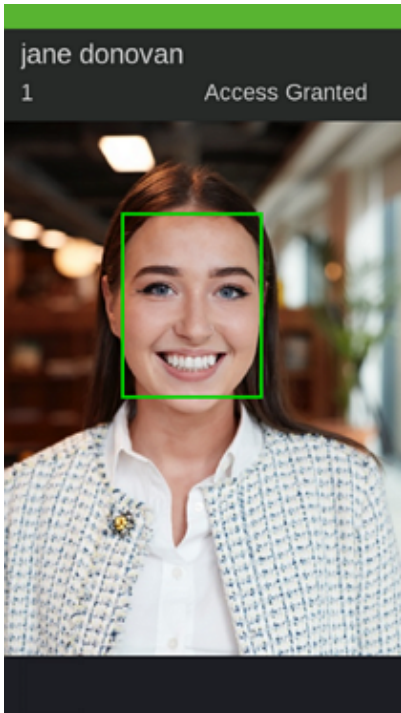
4. Product Specifications

4.1. Mechanical Specifications

4.1.1. Dimensions (unit: mm)

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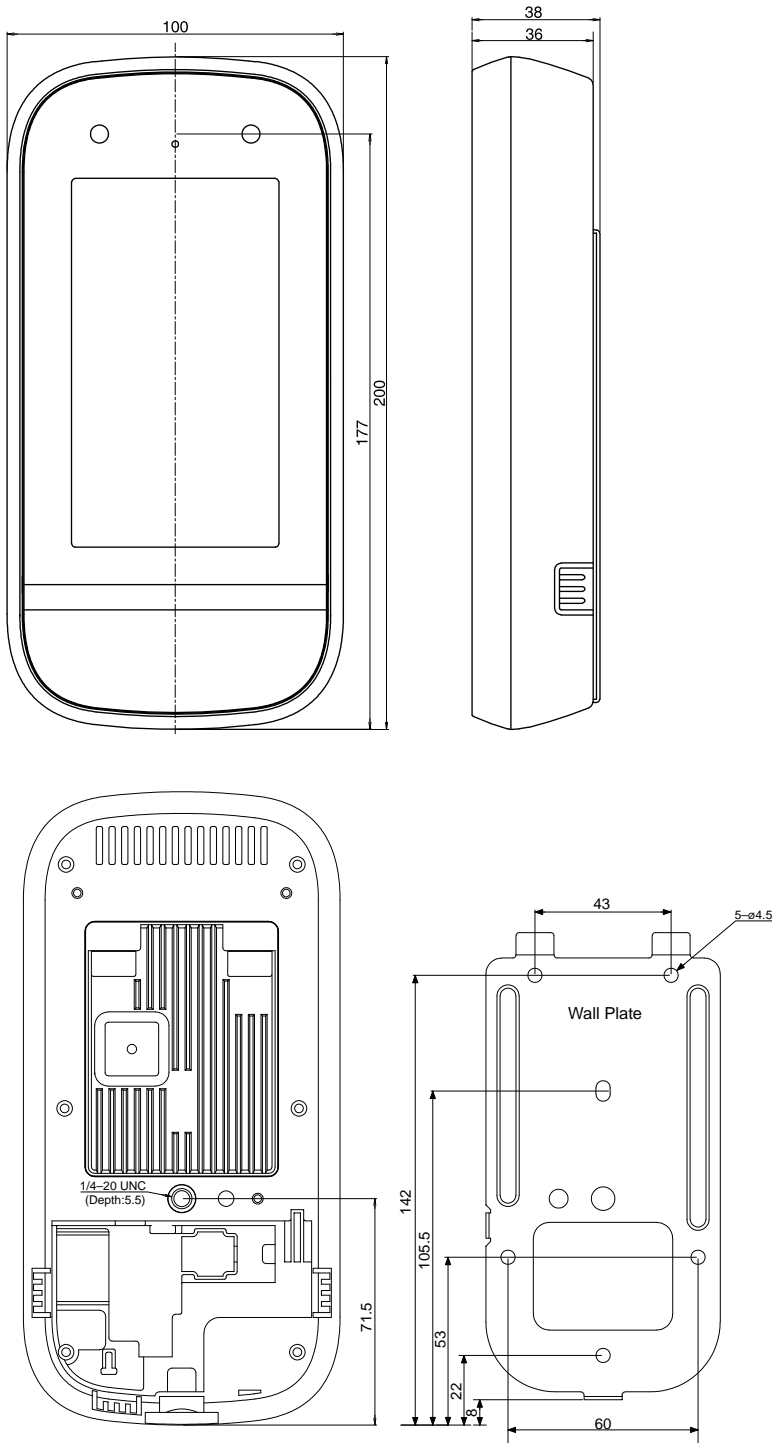
4.2. Technical Specifications

Item	Description
CPU	ARM Cortex A53 octa-core[1]
Memory	DRAM 2GB, FLASH 8GB
Number of cameras	Two
Display	5" LCD with touch
IR LED	YES, for low ambient light levels and supplementary face detection support
White LED	YES, for adjunct lighting of face
Ethernet	10/100/1000 Mbps (RJ45 connector)
Dimensions	100 x 200 x 36 mm
Weight	450 g (1.0 pounds)
Capture range	40 cm to 200 cm
User's height range	145 cm to 210 cm (with system installed at 135 cm at 2.0 m subject to camera distance)
Enrollment speed	Within 5 seconds
Recognition speed	Within 1 second total in 1:N mode with 50,000[2] subjects in local database
Enrollment	50,000[2] users total DB size (Max 50,000[2] users in 1:N mode)
Fake face detection	YES
Mask detection	YES
Temperature range	-20 to 50°C, operating
Audio	Speaker and microphone[3]
Power	12 to 24 V DC, Maximum 23 W[4]
RF Card reader	Standard ISO/IEC 14443 A/B, MiFare, DesFire, FeliCa, and HID[5]
Connections	RJ45 for LAN, RJ45 for PoE[6], Wiegand (IN and OUT), GPIO (3), RS485, dry contact relay
USB	For service mode only

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4.2.1. Cables and Connectors

Relay
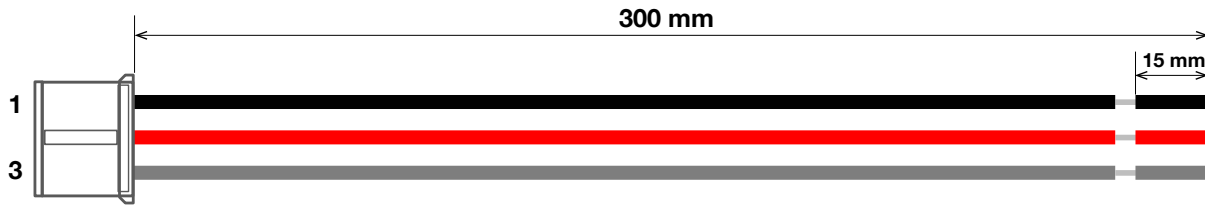
Pin	Name	Color	Wire Gauge
1	Normal Open (NO)	Black	
2	Common (COM)	Red	24 AWG
3	Normal Close (NC)	Gray	

GPI
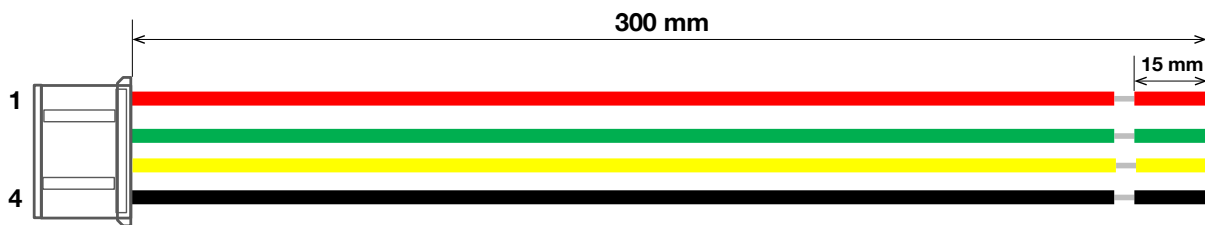
Pin	Name	Color	Wire Gauge
1	GPI 0	Red	
2	GPI 1	Green	
3	GPI 2	Yellow	24 AWG
4	Ground (GND)	Black	

RS-485
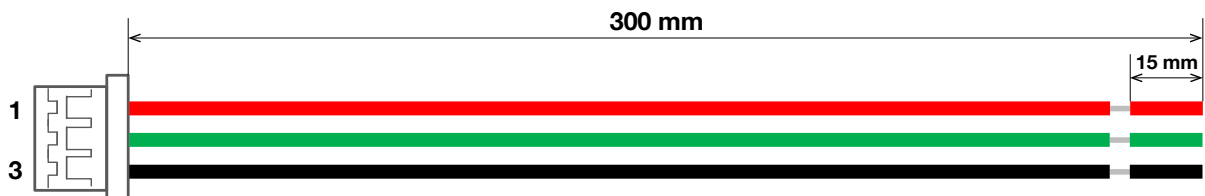
Pin	Name	Color	Wire Gauge
1	DATA (-)	Red	
2	DATA (+)	Green	24 AWG
3	Ground (GND)	Black	

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Wiegand IN/OUT
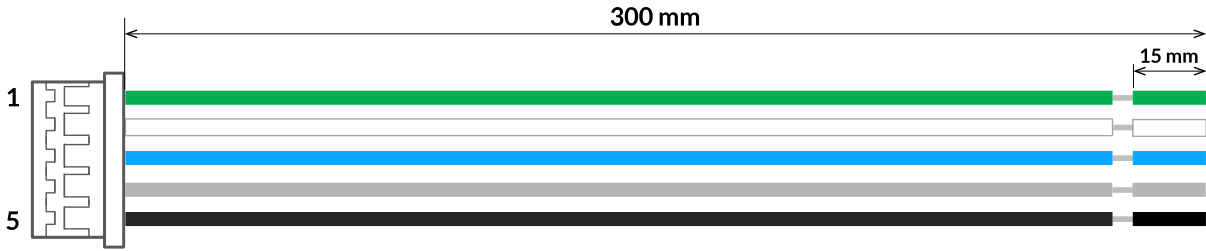
Pin	Name	Color	Wire Gauge
1	IN DATA 0	Green	
2	IN DATA 1	White	
3	OUT DATA 0	Blue	24 AWG
4	OUT DATA 1	Gray	
5	Ground (GND)	Black	

Power
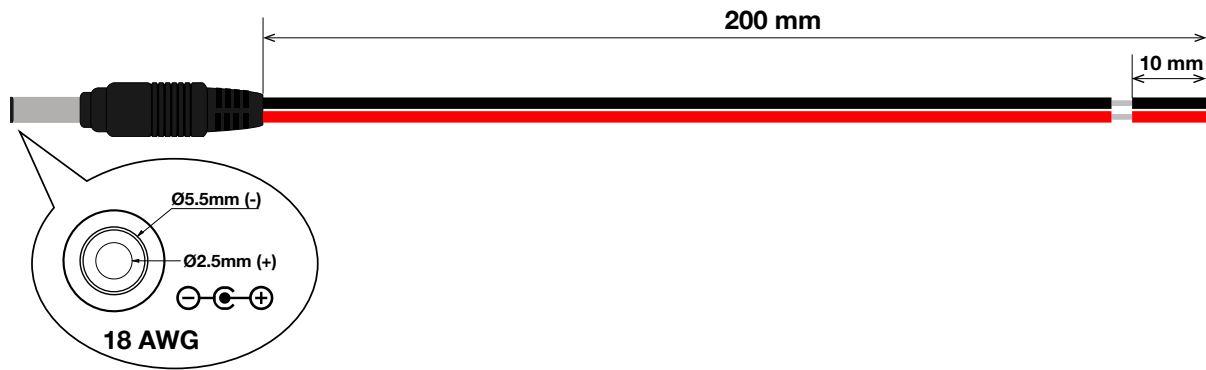
4.3. Environmental Specifications

Item		Description	Note
Temperature	Operating	-20 to 50°C (-4 to 122°F)	
	Non-operating	-40 to 70°C (-40 to 158°F)	
Humidity	Operating	10 to 90 % relative humidity, non-condensing	
	Non-operating	10 to 90 % relative humidity, non-condensing	

[1] *NovaFace-2: ARM Cortex A53 octa-core, NovaFace-2N: ARM Cortex A7 quad-core*
[2] *NovaFace-2: 20,000, NovaFace-2N: 50,000*
[3] *NovaFace-2 supports a speaker only.*
[4] *NovaFace-2: Max 23 W, NovaFace-2N: Max 15 W*
[5] *Optional and available for NovaFace-2N only*
[6] *Optional and available for NovaFace-2NP only*

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Appendix A: OSD Menu List

This appendix gives the details about advanced setting menus of NovaFace-2N device that appears when you press the **Gear** button () on the main screen.
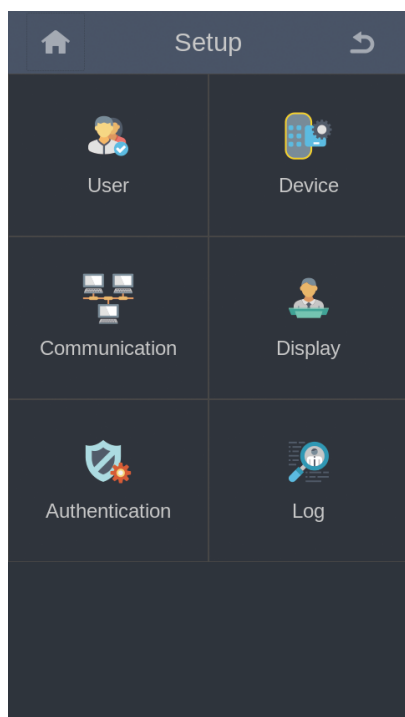
A.1. User

Name	Description
Enroll	Starts user enrollment
Delete	Deletes users
Modify	Edits user information by pressing an registered user
Search	Finds users by ID

A.2. Device

Name		Description
Bio	Use mask	Select whether to use mask detection
	Mask alarm	Select the type of action that the device should take when no mask is detected (**Not used**, **Warning message**, **Access deny**)
	Face image log	Select whether to show face image on event log
Sound	Speaker volume	Adjusts the speaker volume (0 — 10)

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Name		Description
Date/Time	Time settings	Configures device date and time
Door	Relay	Select whether to use relay
	Open duration	Configures time duration for door open relay
	Use exit	Select a GPI port number connected to exit door button (**Not used**, **GPI Port 0**, **GPI Port 1**, **GPI Port 2**)
	Exit type	Select contact state of the GPI port that exit door button uses (**NC**, **NO**)
	Use alarm	Select a GPI port number connected to alarm sensor (**Not used**, **GPI Port 0**, **GPI Port 1**, **GPI Port 2**)
	Alarm type	Select contact state of the GPI port that alarm sensor uses (**NC**, **NO**)
	Use sensor	Select a GPI port number connected to sensor (**Not used**, **GPI Port 0**, **GPI Port 1**, **GPI Port 2**)
	Sensor type	Select contact state of the GPI port that sensor uses (**NC**, **NO**)
	Held open duration	Enter acceptable door held open period
	Use LS	Enable when using the lock sensor which is built in an EM lock system
Tamper	Mode	Select a tamper protection mode (**Not used**, **Beep mode**, **Secure mode**)

> **i** If you select **Secure mode**, all the data and settings are deleted permanently in device when a physical tampering is attempted.

Name		Description
Device info	Device name	Configures the device name
	Model	Shows the model name
	FW version	Shows the device firmware version
	APP version	Shows the application version
	MAC	Shows the MAC address
	S/N	Shows the serial number
	IOMicom version	Shows the IO Micom revision number
	H/W version	Shows the hardware revision number
	RFMicom version	Shows the RF Micom revision number
	Algo version	Shows the algorithm revision number
Database	User import	Imports the user database from connected USB drive
	User export	Exports the user database to connected USB drive
	Log import	Imports the log data from connected USB drive
	Log export	Exports the log data to connected USB drive
	Debug export	Exports the debug data to connected USB drive
Camera	Camera mode	Configures the power supply frequency of an electric light where the camera is used (**50Hz**, **60Hz**)
Reset	Device reboot	Restarts device
	Factory reset	Resets all configuration settings and deletes all user data
	Reset all config	Sets all configuration settings to default
	Reset all users	Deletes all user data
Enroll guide	Use animation	Select whether to show a pictogram that helps users to enroll correctly for a short time before starting enrollment

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A.3. Communication

Name		Description
TCP/IP	User DHCP	Select whether to use DHCP
	IP	Shows the device's IP address
	Subnet	Shows the subnet mask
	Gateway	Shows the gateway address
	DNS 1	Shows the DNS #1
	DNS 2	Shows the DNS #2
Server	User server	Select whether to use server authentication
	Use manual command	Select whether to use the manual command functionality
		Manual command allows for device control by using REST commands. It is an experimental function, not intended for general use.
	Authentication mode	Select a data modality in which the device communicates with the server (**Not used**, **Image**, **Template**)
	Server IP	Enter the server's IP address
	Port	Enter the server's port number
	Commute Uri	Enter server URI to receive T&A event logs from device
	Sync Uri	Enter server URI to receive T&A event logs backed up by device while server is offline
	Accept Uri	Enter server URI where device sends request to check periodically if server is online
Serial	RS485 ID	Enter device ID when its operating mode is SLAVE
	RS485 baudrate	Select a baud rate for RS485 communication
	RS485 function	Select a device type connected to RS485 (**Not used**, **OSDP**)

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A.4. Display

Name	Description
Language	Select a display language
Time display	Select time notation between 12-hour and 24-hour clock format (**12 Hours**, **24 Hours**)
Screensaver	Select whether to use screensaver (**Not used**, **Screensaver**, **Burn-in prevention**) • **Screensaver**: Shows a pre-set image when the device is in idle state • **Burn-in prevention**: Keeps shifting the on-screen location of the time and date to avoid static image burn-in on your LCD screen
Waiting time	Select the time duration of inactivity before a screensaver starts
Menu timeout	Select timeout for auto exit from menu display after leaving it untouched

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A.5. Authentication

Name		Description
Auth mode	Mode	Select a authentication mode (**Face only**, **Face or card**, **Face and PIN**, **Card and face**, **Card an PIN**)
	Bypass	Allows unregistered users to access
	Mask reject	Denies access if wearing a mask is detected
	Touch start	Starts recognition by touching the screen
	Recog threshold	Adjusts match threshold (permitted value range: 90 — 100)
		ℹ Increasing the value increases FRR (false rejection rate) whereas decreasing the value increases FAR (false acceptance rate).
	Recog distance	Select the distance from where the face detection starts
	Enroll sensitivity	Determines how strict the device is about facial orientation during enrollment. It can be set to high (**sensitive**), medium (**common**), or low (**insensitive**).
	Recog sensitivity	Determines how strict the device is about facial orientation during recognition. It can be set to high (**sensitive**), medium (**common**), or low (**insensitive**).
	Enroll liveness	Prevents enrolling with fake faces, such as photos or mannequins by checking for liveness
	Recog liveness	Prevents authentication with fake faces, such as photos or mannequins by checking for liveness
	Liveness threshold	Determines how strict the device is at detecting fake faces during enrollment and recognition.
		ℹ A higher threshold means the system requires a stronger sign of liveness (e.g., blinking, head movement). This reduces false positives (accepting a fake face) but might also increase false negatives (rejecting a real person).
	1:1 Recog threshold	Determines how strict the device is at matching a face to a single user.

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Name		Description
TA	Use T&A	Select whether to use T&A
Admin password	Use admin password	Select whether to use admin password
	Password	Enter admin password
Card	Use CSN	Select whether to use card serial number
	CSN order	Select CSN order on card reading (**MSB**, **LSB**)
	Use face TOC	Select whether to use TOC (Template on Card) for face recognition
Wiegand	Output type	Select Wiegand output type (**Wiegand**, **Card**, **ID**)

A.6. Log

Name		Description
Log info	Total used	Shows the used space for logs in percent
	Total count	Shows the total count of logs
Log list		Shows the list of logs
Log search		Searches logs by date, time, event type, log info, user ID, and additional data
Delete all logs		Deletes all logs

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Appendix B: Legal Information

B.1. Disclaimer

The words of which the initial letter is capitalized have meanings defined under the following conditions. The following definitions shall have the same meaning regardless of whether they appear in singular or in plural.

For the purposes of this Disclaimer:

- **Company** (referred to as either "the Company", "We", "Us" or "Our" in this Disclaimer) refers to CMITech Co. Ltd.

- **You** means the individual accessing the Product, or the company, or other legal entity on behalf of which such individual is accessing or using the Product, as applicable.

- **Product** means the electronic device provided by the Company named NovaFace-2N and its manual.

The information contained on the Product is for general information purposes only. The Company assumes no responsibility for errors or omissions in the contents of the Product. In no event shall the Company be liable for any special, direct, indirect, consequential, or incidental damages or any damages whatsoever, whether in an action of contract, negligence or other tort, arising out of or in connection with the use of the Product or the contents of the Product. The Company reserves the right to make additions, deletions, or modifications to the contents on the Product at any time without prior notice.

The Product may contain links to external websites that are not provided or maintained by or in any way affiliated with the Company. Please note that the Company does not guarantee the accuracy, relevance, timeliness, or completeness of any information on these external websites.

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B.2. Copyright Notice

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Appendix C: Regulatory Information

C.1. FCC compliance statement

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 B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation.

This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation.

If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

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

Changes or modifications to this product not authorized by CMITech could void the electromagnetic compatibility (EMC) and wireless compliance and negate your authority to operate the product.

This product has demonstrated EMC compliance under conditions that included the use of compliant peripheral devices and shielded cables between system components. It is important that you use compliant peripheral devices and shielded cables between system components to reduce the possibility of causing interference to radios, television sets, and other electronic devices.

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C.2. EU Declaration of Conformity (CE)

This product is CE marked according to the provisions of the RED (Radio Equipment Directive) Directive (2014/53/EU). CMITech Co., Ltd. hereby declares that this product is in compliance with the essential requirements and other relevant provisions of Directive 2014/53/EU. This device is a class 1 radio device according to the directive. For more information, contact us using the following contact information.

CMITech Company, Ltd.

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