

**NeoFace Access Control
EGW101
User's Guide**

Precautions for Use (Please Be Sure to Read)

Safety Precautions

Follow the instructions in this document for the safe use of NeoFace Access Control.

This document describes hazardous parts of the server, possible hazards, and how to avoid them. The possible dangers for NeoFace Access Control are indicated with a warning label placed on or around them (or, in some cases, by printing the warnings on the unit).

Be sure to read the labels before using NeoFace, please use NeoFace Access Control observing the precautions.

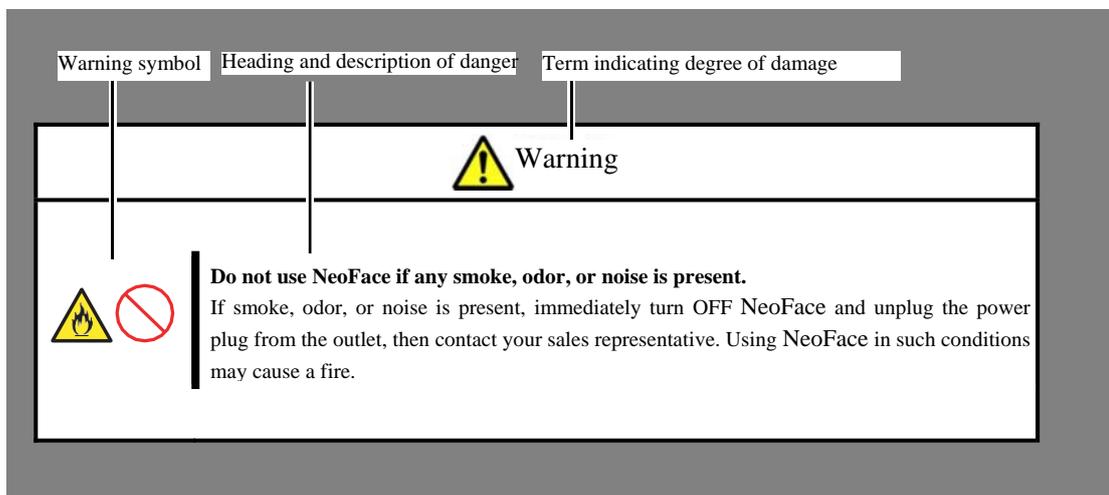
The meaning of the displays and graphic symbols used in this guide are as follows. Please be sure to understand the displays and symbols, and then read this User's Guide.

| | |
|---|--|
|  Warning | Indicates there is a risk of death or serious personal injury. |
|  Caution | Indicates there is a risk of burns, other personal injury, or property damage. |

Precautions and notices for hazards are presented with one of the following three symbols.

| | | | |
|---|--------------------------|---|---|
|  | Attention | This symbol indicates the presence of a hazard if the instruction is ignored. An image in the symbol illustrates the hazard type. | (Example) (Electrical hazard) |
|  | Prohibited action | This symbol indicates prohibited actions. An image in the symbol illustrates a prohibited action. | (Example) (Disassembly prohibited) |
|  | Mandatory action | This symbol indicates mandatory actions. An image in the symbol illustrates a mandatory action to avoid a hazard. | (Example)  (Disconnect a plug) |

(Display example)



The diagram shows a warning label layout with three callout boxes pointing to specific elements:

- Warning symbol:** Points to a yellow triangle with an exclamation mark.
- Heading and description of danger:** Points to the text "Warning".
- Term indicating degree of damage:** Points to the text "Do not use NeoFace if any smoke, odor, or noise is present."

The main content of the label includes:

- A fire warning symbol (flame in a yellow triangle) and a prohibited action symbol (red circle with a slash).
- Do not use NeoFace if any smoke, odor, or noise is present.**
- If smoke, odor, or noise is present, immediately turn OFF NeoFace and unplug the power plug from the outlet, then contact your sales representative. Using NeoFace in such conditions may cause a fire.

Symbols Used in This Document and on Warning Labels

Attention

| | | | |
|---|---|---|---|
|  | Source of Fire Indicates there is a risk of fire or fumes. |  | Electrical hazard Indicates the presence of electric shock hazards. |
|  | Be careful not to get your hand caught Indicates the presence of mechanical parts that can result in bodily injury. |  | High temperatures Indicates the presence of a hot surface or component. Touching this surface could result in bodily injury |
|  | Explosion Indicates there is a risk of explosion. |  | General Caution Indicates a general notice or warning that cannot be specifically identified. |

Prohibited Action

| | | | |
|---|--|---|---|
|  | Disassembly prohibition Do not disassemble, repair, or modify NeoFace. Otherwise, an electric shock or fire may be caused. |  | Splashing of water prohibition Do not use the server in the place where water or liquid may splash. Danger of electric shock or fire when wet with water. |
|  | Magnetism prohibition Do not place NeoFace near fire. Otherwise, a fire may be caused |  | Wet hands prohibited Do not touch NeoFace with wet hands. Otherwise, an electric shock may be caused. |
|  | Contact Prohibited Do not touch the components specified by this symbol. Otherwise, an electric shock or burn may be caused. |  | General prohibitions Indicates a general prohibited action that cannot be specifically identified. |

Mandatory Action

| | |
|---|--|
|  | General Mandatory Actions Indicates a general mandatory action that cannot be specifically identified. Make sure to follow the instructions. |
|---|--|

Safety Instructions

This section shows notes on using the server safely. Read this section carefully to ensure proper and safe use of the server.

General

|  Warning | |
|---|--|
|    | <p>Do not use NeoFace if any smoke, odor, or noise is present. If smoke, odor, or noise is present, immediately turn off NeoFace and disconnect the power plug from the outlet, then contact your sales representative. Using NeoFace in such conditions may cause a fire.</p> <p>Do not insert foreign objects such as metal pieces or liquids into the vents or opening of the connector terminal of NeoFace This may cause fire, electric shock, or failure. If the foreign objects or liquids have entered, switch OFF the power, remove the power plug and contact your sales representative.</p> |
|  Caution | |
|   | <p>Do not use NeoFace outside Japan NeoFace is manufactured and sold for use in Japan only. NeoFace cannot be used outside Japan. Using NeoFace outside of Japan may cause electrical shocks or a fire.</p> |

Precautions for AC Adapter and Power Cord Use

|  Warning | |
|--|--|
|  | <p>Insert the power cord into outlets whose voltage matches that of the power cord When using the AC adapter purchased as an option, plug the power cord into an outlet of 100 V AC in accordance with the voltage of the supplied power cord. Plugging the power cord into an outlet of voltage different from the specified voltage may cause a fire.</p> |
|  | <p>Do not hold the power plug with wet hands Do not disconnect/connect the plug while your hands are wet. Otherwise, this may cause electrical shocks.</p> |
|   | <p>Do not connect or disconnect the earth wire with the power cord of the server plugged to a power source. Unplug the power cord from the power outlet before connecting or disconnecting the earth wire. Touching the ground wire with the power plug plugged even when the power is switched OFF may cause a fire or electric shock.</p> |

 **Caution**
**Use specified power supply voltage (DC 9 V to 30 V)**

Using with an incorrect power supply voltage may cause fire, electric shock, or failure.

**Do not use extension cords**

Do not install NeoFace in any environment that requires an extension cord. Connecting to a cord that does not conform to the power supply specifications of NeoFace may cause fire due to overheating.

**Do not overload the electrical circuit**

The electric current exceeding the rated flow overheats the outlet, which may cause a fire.

**Do not unplug the power cord by holding the cable.**

Pull the power cord straight out by holding the plug. Pulling the power cord by holding the cable or applying extra pressure to the connector may damage the cable and may cause a fire or electric shock.

**Do not drop or subject to an impact**

Do not drop or subject the AC adapter to an impact. This may cause the adapter to break or malfunction.

**Insert the power plug into the outlet.**

Insert the plug of power cords into the outlet completely. Arcing may be caused by inserting the plug halfway, increasing the possibility of fire. Heat will be generated if condensation is formed on a plug that is covered in dust, which may cause a fire.

Use specified AC adapter and power cord

Use the power cord provided with the AC adapter purchased as an option. If electric current exceeding the rating flows in the power cord may cause a fire.

Also, observe the following precautions to prevent electrical shock or fire caused by a damaged power cord.



- Do not stretch the cord harness.
- Do not bend the power cord.
- Do not twist the power cord.
- Do not step on the power cord.
- Do not alter, modify, or repair the power cord.
- Do not use a damaged AC adapter or power cord. Replace the damaged power cord with a power cord of the same standard. Contact your sales representative for replacement.
- Do not pinch the power cord.
- Keep chemicals away from the power cord.
- Do not place any object on the power cord.
- Do not twist the power cord.
- Do not secure the power cord with staples or equivalents.

**Do not use the AC adapter or power cord for any other devices or usage.**

The AC adapter purchased as an option or power cord provided with NeoFace is designed for connecting to and using with NeoFace, and its safety has been tested. Never use the attached power cord for any other purpose. Not following this instruction may cause electrical shocks or a fire.

**Do not disassemble**

Never disassemble the AC adapter. This may cause the adapter to break or malfunction.

**Indoor use**

Use the AC adapter indoors. When using the AC adapter outdoors, take adequate measures such as placing in a dust proof/ waterproof cabinet avoiding exposure to direct sunlight and rainwater.

Installation, Relocation, Storage, and Connection of NeoFace



Caution



- Install or store NeoFace in the specified location
Place NeoFace at the location specified in the chapter "Chapter 2 Installation and Connection" of this guide. Installation or storage in the following locations may cause a fire.
- Places with dust.
 - Humid places such as near boilers
 - Locations exposed to direct sunlight.
 - An unstable place



Measures to prevent falls

Take measures to prevent NeoFace from toppling over or falling during earthquakes to reduce the risk of personal injury. Depending on the strength of the wall or unit to which the toppling over or fall prevention device is attached, the toppling over or fall prevention effect is significantly reduced. Provide appropriate reinforcements based on the strength of the wall or unit.

The measures to prevent toppling over or fall prevention are intended to mitigate harm such as injuries and are not guaranteed to be effective for all earthquakes.



Do not use NeoFace in an environment where corrosive gas is present.

Do not install NeoFace in a place subject to corrosive gases including sulfur dioxide, hydrogen sulfide, nitrogen dioxide, chlorine, ammonia, or ozone. Do not install NeoFace in an environment that contains dust and components (such as sodium chloride, and sulfur) that promote corrosion in the air or conductive metal. Otherwise the wiring on the printed circuit board inside NeoFace may be subject to corrosion causing emission of smoke or failure. If you have any questions on the working environment, contact your sales representative.



Use only specified interface cables

Please use the interface cable specified by NEC and check the devices and connectors to be connected beforehand. Using cables other than those specified or connecting the cables wrongly may cause a fire due to short circuits. Please observe the following caution when handling and connecting interface cables.

- Do not use damaged cable connectors.
- Do not step on the cables.
- Do not place any object on the cables.
- Do not use cables that are loosely connected.
- Do not use damaged cables.

For interface cables, contact your sales representative



Secure the power cord and interface cables

Be sure to secure the power cord and interface cables in place. Incomplete installation cause loose connections and may cause smoke or fire.



Do not unplug by holding the interface cable

To unplug the cable, remove the screw lock, hold the connector part and pull it straight out. Pulling the interface cable by holding the cable or applying extra pressure to the connector may damage the cable and may cause a fire or electric shock.

Cleaning and handling internal devices

|  Warning | |
|--|---|
|  | <p>Do not attempt to disassemble, repair, or modify NeoFace by yourself Only maintenance personnel should disassemble, repair, or alter NeoFace. Since there are parts that are running even when the power is turned off, so not only will NeoFace not operate properly, but can cause electric shock or fire.</p> |
|  | <p>Do not remove the lithium battery Lithium batteries have been used in NeoFace. Do not remove the batteries. Placing the batteries close to the fire or in water may cause an explosion. When NeoFace does not operate properly because the battery is dead, contact your sales representative without disassembling, replacing or charging the battery.</p> |
|  | <p>Lithium battery provided in NeoFace are not to be charged Do not charge the lithium battery provided in NeoFace. Charging the battery may cause fire or explosion.</p> |
|  Caution | |
|  | <p>High temperatures Immediately after the power supply has been switched OFF, NeoFace may be hot depending on the ambient temperature. Allow NeoFace to cool before installing or removing.</p> |
|  | <p>Secure the power cord and interface cables Be sure to secure the power cord and interface cables in place. Incomplete installation cause loose connections and may cause smoke or fire.</p> |
|  | <p>Cleaning To clean NeoFace, wipe gently with a soft cloth moistened with water or mild detergent. Using acidic or alkaline detergents may cause discoloration or deformation.</p> |

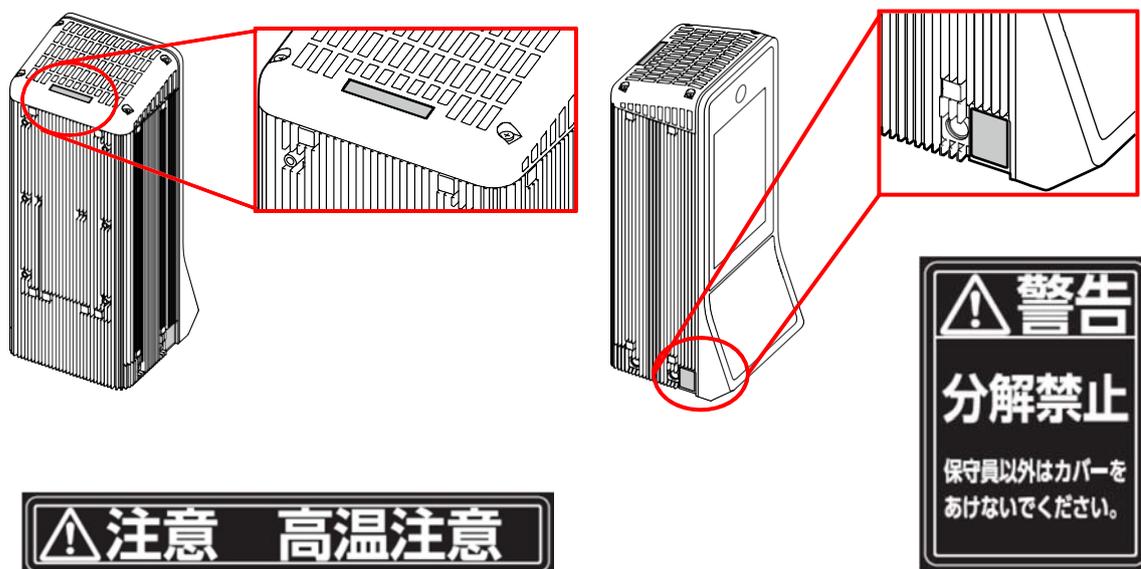
During operation

|  Caution | |
|--|---|
|  | <p>High temperatures The upper part of NeoFace may become hot depending on ambient temperature. Touching the upper plate carelessly may cause burns.</p> |
|  | <p>Avoid contact with NeoFace during thunderstorms When thunder can be heard, do not touch NeoFace including cables. Please do not connect or disconnect any equipment. Otherwise, this may cause electrical shock due to lightning.</p> |
|  | <p>Do not place any object on top of NeoFace Placing objects may block the vents causing fire or failure of NeoFace.</p> |

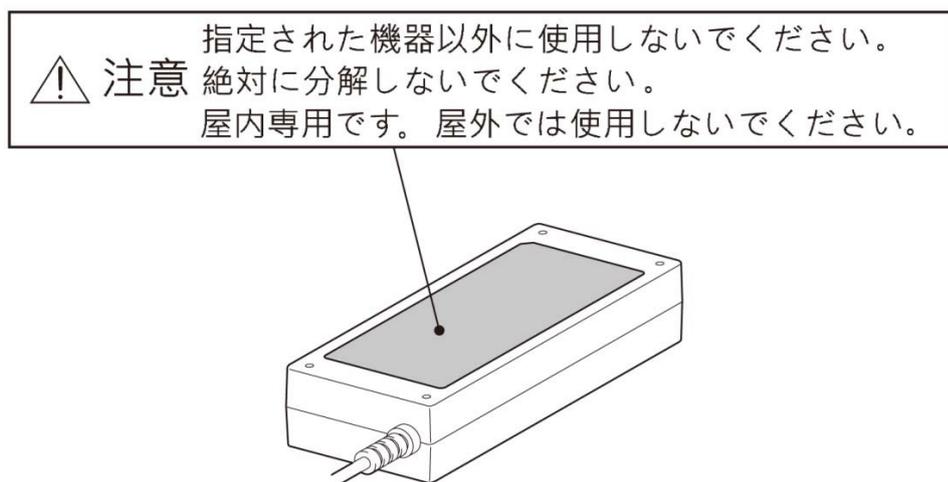
Warning Labels

Warning labels are attached on or near the components (These labels are either attached or printed on the components). These labels are to draw attention from users to potential hazards involved in handling the components (Do not remove or black out these labels and keep them clean). If no labels are attached or printed on the server, or if there is a label coming off or stained, contact your sales representative.

<NeoFace Access Control Unit>



<AC adapter>



Handling Precautions (For Proper Use of the NeoFace)

Be sure to observe the following precautions for the proper functioning of the server. Ignoring the precautions may cause server malfunction or failure.

- Turn OFF NeoFace and unplug the power plug from the outlet before moving NeoFace.
- Do not power OFF or reset NeoFace, or disconnect the power cord before POST completes.
- Wait for at least 60 seconds before connecting the power cord to the power outlet after disconnection of the power cord.
- After connecting the power cord to the power outlet, turn ON the power supply when 10 seconds or more has passed.
- Do not use the optional AC adapter outdoors without dust and water proof measures.
- When Windows such as POST and BIOS Setup does not operate, pressing and holding the POWER switch for a few seconds may restart NeoFace after turning OFF the power.
- If Jumbo Frame size is set to 9 KB in the LAN setting, expected communication performance may not be obtained depending on the operation status and network environment. If this happens, set Jumbo Frame size to 4 KB.
- For optional devices, we recommend you use NEC products. Even if third party's devices are successfully installed or connected, installation of unsupported devices can cause NeoFace to malfunction or even failure. You will be charged to repair failure or damage caused by use of such products even within warranty period.
- When removing and inserting USB devices maintain a reasonable interval (5 seconds or more).
- When USB keyboard and mouse are inserted while the power is ON, NeoFace requires few second to 10 seconds to recognize the devices.

The keyboard or mouse may not function properly if they are inserted and removed instantaneously. If the keyboard and mouse cannot be used properly, connect the keyboard and mouse and then restart NeoFace.

- Refer to chapter "Chapter 2 Installation and Connection" of this guide and install NeoFace at an appropriate location.
- Use the optional AC adapter after placing at a stable location. If the AC adapter is placed at an unstable place or left hanging, the may adapter may fall resulting in damage or failure.
- Do not use the AC adapter when condensation is present. Otherwise, the AC adapter may cause malfunction or fail.
- Maintain ambient conditions of (temperature: -20°C to 60°C, humidity: 5% to 95% (no condensation)) at the storage location.
- When NeoFace is stored for a long duration, please check the operations periodically.
- In the following cases, check and adjust the system clock before operation.
 - After transportation
 - After storage for a long duration
 - After disconnecting from the operation guaranteed environment (temperature: 5 to 45°C, humidity: 20% to 85% (no condensation)) and putting the access control device in a hibernation state.
- Please check the system clock about once a month. For systems that require high precision time, using the time server (NTP server) is recommended.
- Do not calibrate the touch panel from the OS. Otherwise the touch panel may not function properly.
- Please request the gate or door manufacturer to take adequate lighting surge measures for the power cord (Terminal 2 Pin).
- NeoFace is provided with Terminal 2 Pin connector and AC adapter for power supply. Use any of one of the connectors and do not use both the connectors at the same time.

- NeoFace service life is 7 years. Please refrain from using NeoFace beyond the service life. For more information on the effective service life, contact your sales representative.



Maintenance service

Maintenance personnel with expert knowledge have been arranged to provide periodic diagnostic and maintenance services for NeoFace. NEC recommends contract with a maintenance service company for periodic maintenance service to use NeoFace in the correct state.

Handling precautions (Technical laws and regulations)

Voluntary Control of Radio Interference

この装置は、クラスB機器です。この装置は、住宅環境で使用することを目的としていますが、この装置がラジオやテレビジョン受信機に近接して使用されると、受信障害を引き起こすことがあります。

取扱説明書に従って正しい取り扱いをして下さい。

VCCI - B

Harmonic compatible product

NeoFace conforms to the harmonic current standard JIS C 61000-3-2.

JIS C 61000-3-2 compliant products indicates that NeoFace has been designed and manufactured conforming to harmonic environmental target level for commercial electric power system based on the Japanese Industrial Standard "Electromagnetic compatibility (EMC)-Part 3-2: Limits for harmonic current emissions (equipment input current ≤ 20 A per phase)".

Products Complaint with the Guidelines on Static Electricity and Low Frequency Electromagnetic Field for Display Device

NeoFace is complaint with the guidelines (JEITA ITR-3003/ITR-3004) concerning static electricity and low frequency electromagnetic field of display device established by the Japan Electronics and Information Technology Industries Association.

Utilization of Electric Waves

NeoFace is an induction type read and write communication equipment that has received model designation based on the Radio Law. The frequency used is 13.56 MHz. Disassembling or remodeling of, or erasing the model number on NeoFace may be punishable by law. When using multiple reader/writers in the 13.56 MHz band, please provide a gap of 1 m or more between the units. Please ensure there are no other radio devices using the same frequency band nearby.

Radio Wave Protection

The radio wave output of NeoFace is lower than the reference value based on the "Radio Protection Standard (RCR STD - 38)" established by the Japan Radio Industry Association.

Authentication Display

If the certification display of NeoFace is hidden when embedding NeoFace in the customer's device, displaying the following two indications at a location that is easily visible is recommended.

"NeoFace has been designated by the Ministry of Internal Affairs and Communications as an inductive read and write communication device for high-frequency equipment"

"This device has acquired construction design certification based on the Radio Law (Technical conformity mark)".

Connection to Communication Lines

NeoFace has not acquired the technical standard compliance certification of terminal devices under the Telecommunications Business Act.

Please obtain prior permission for connecting to communication line equipment of telecommunications carriers (such as NTT). Ensure that the installation work is performed by qualified personnel (construction staff).

Using NeoFace Outside Japan

NeoFace has been designed with the assumption that it will be used in Japan and safety standards of various other countries have not been implemented. Therefore, if NeoFace is exported, NEC shall be exempt from any direct or indirect responsibility, even if fines and compensation are incurred due to import clearance and accidents in the said country.

Transportation on Aircraft and Ships

Lithium metal batteries are used in NeoFace. Regulations for air/ocean transportation apply when transporting lithium batteries. To transport NeoFace by aircraft or ship, please contact your sales representative.

Application of NeoFace

Do not use NeoFace for services related to human lives or when high reliability is required.

NeoFace is not intended to be used for control facilities or devices concerning human lives, including medical devices, nuclear facilities and devices, aeronautics and space devices, transportation facilities and devices; and facilities and devices requiring high reliability. NEC assumes no liability for any accident resulting in personal injury, death, or property damage if NeoFace has been used in the above conditions.

Transfer to Third Parties

Observe the following precautions if you want to transfer (or sell) NeoFace to a third party. Please hand over this document along when transferring (or selling) NeoFace to a third party.

Data in the fixed disk drive

Erasing all the data from the fixed disk drive mounted in NeoFace with the responsibility of the customer is very important when transferring NeoFace to a third party to ensure that the data (such as customer information and corporate accounting information) is not leaked to the third party.

Customers are requested to delete the data at their own responsibility.

When "Empty trash" operation or "Format" command of the operating system is used for deleting the data, the data appears to be deleted, but the actual data is still present in the fixed disk drive.

Data that has not been completely erased may be restored using special software and diverted to unexpected uses.

NEC strongly recommends customers to erase data securely by using commercially available erasing software (paid) or service (paid).

NEC shall not take the responsibility if important data is leaked during transferring (or selling) without erasing the data.

Bundled Software

Observe the following precautions when transferring the bundled software to a third party.

Transferor shall transfer all the bundled software and not hold any copies.

Assignment and transfer conditions listed in the "Software License Agreement" that comes with each software must be satisfied.

Bundled software that is not authorized for assignment and transfer must be uninstalled from the customer PC before handing over to the third party.

Disposal

NeoFace and auxiliary storage media

When discarding NeoFace and auxiliary storage media (SSD etc.), please contact your sales representative. Customers should ensure that the data stored in the auxiliary storage media cannot be restored, reproduced, or reused by a third party before disposing the media, and take adequate precautions to protect personal privacy and corporate confidential information.

- AC adapter and power cord

Please discard the optional AC adapter and power cord along with NeoFace to prevent diversion to other equipment.

- Lithium battery

Lithium batteries have been used in NeoFace. Placing the battery close to a fire or in the water may cause an explosion. When NeoFace does not operate properly because the lithium battery is dead, contact your sales representative without disassembling, replacing or charging the battery.

Privacy Policy

Please do not keep my number information in information processing terminals such as computers connected to NeoFace. If such information is discovered, providing maintenance support may not be possible.

Federal Communication Commission Interference 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 of the following measures:

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

FCC Caution:

- 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.

Industry Canada statement

This device complies with Industry Canada license-exempt RSS standard(s). 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, et
- 2) l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

This Class B digital apparatus complies with Canadian ICES-003.

Cet appareil numérique de la classe B est conforme à la norme NMB-003 du Canada.

This device and its antenna(s) must not be co-located or operating in conjunction with any other antenna or transmitter, except tested built-in radios.

Cet appareil et son antenne ne doivent pas être situés ou fonctionner en conjonction avec une autre antenne ou un autre émetteur, exception faites des radios intégrées qui ont été testées.

Instructions Booklet of NeoFace Access Control

The instructions of NeoFace are provided as a booklet , as stored as an electronic manual  in the backup media .



Startup guide

Explains step by step procedure from unpacking to operation of NeoFace. First, refer to the guide and understand the outline of NeoFace.



Backup media



User's Guide

| | |
|---------------------------------------|---|
| Precautions for use | This section describes the information required to use NeoFace safely. <u>Be sure to read before handling NeoFace.</u> |
| Chapter 1. Introduction | This section describes the outline, component name, and functions of NeoFace |
| Chapter 2 Installation and Connection | This section describes the expansion of the options, connection with the peripheral devices, and appropriate installation location. |
| Chapter 3 Operation | This section describes the usage method of the application, and various functions. |
| Chapter 4 Others | This section describes the error messages, and recovery method of NeoFace. |

Table of Contents

Table of Contents

| | |
|--|-----------|
| Precautions for Use (Please Be Sure to Read)..... | 2 |
| Safety precautions | 2 |
| Symbols Used in This Document and on Warning Labels | 3 |
| Safety Instructions..... | 4 |
| General | 4 |
| Precautions for AC Adapter and Power Cord Use | 4 |
| Installation, relocation, storage, and connection of NeoFace Access Control | 6 |
| Cleaning and handling internal devices | 7 |
| During operation | 7 |
| Warning labels | 8 |
| Handling Precautions (For Proper Use of the NeoFace)..... | 9 |
| Handling precautions (Technical laws and regulations) | 11 |
| Instructions Booklet of NeoFace Access Control..... | 14 |
| Table of contents..... | 15 |
| Notation | 18 |
| Symbols in the Text..... | 18 |
| Operating System Notation | 18 |
| Trademark..... | 19 |
| License Notification..... | 20 |
| License statement | 20 |
| Precautions and Supplements for This Guide | 43 |
| User's Guide | 43 |
| 1. Component | 45 |
| 2. Options | 46 |
| 3. Main Unit Description | 47 |
| 3.1 Front of the Unit..... | 47 |
| 3.2 Back of the Unit | 48 |

| | |
|--|-----------|
| 3.3 Lamp Indication | 49 |
| POWER Lamp | 49 |
| LINK/ACT Lamp | 49 |
| SPEED Lamp | 49 |
| 4. Basic Operations | 50 |
| 5. Maintenance | 51 |
| 1. Flow Up to the Start of Operations | 53 |
| 2. Items Necessary for Installation | 53 |
| 3. Installation Method | 54 |
| 3.1 Installation Conditions | 54 |
| 3.2 Recommended Installation Location | 56 |
| 4. Connections | 57 |
| 4.1 Bottom Panel | 57 |
| 4.2 AC Adapter | 58 |
| 4.3 Power Cord | 59 |
| 4.4 Tie Wrap | 59 |
| 4.5 Interface Cable | 60 |
| 4.6 DIDO Connector | 60 |
| 4.7 Power Supply Connector | 61 |
| 4.8 I/O Interface | 63 |
| 5. Setup | 65 |
| 5.1 Setup Flow | 66 |
| 5.2 Initial Setup | 67 |
| 5.2.3 Network Settings | 70 |
| 5.2.4 Usage Area Setting for Camera Image | 71 |
| 5.2.5 Linked System Setting | 72 |
| Settings of Connected Gate and Door | 73 |
| 5.2.7 Card Reader Settings | 74 |
| Master and Slave Settings | 75 |
| Database Synchronization Settings | 76 |
| OS Restart | 78 |
| 5.3 Installation and Setup of NeoFace Access Control Manager | 79 |

| | |
|---|-----------|
| 5.4 NeoFace Access Control Information Registration | 81 |
| <i>Login in With WebUI From an External PC</i> | 81 |
| <i>NeoFace Access Control Registration</i> | 82 |

Notation

Symbols in the Text

3 types of symbols are used in this User's Guide in addition to the caution symbols described in "Symbols used in this document and on warning labels". These symbols have the following meaning.

| | |
|---|--|
|  | Indicates the instructions to be observed while handling the hardware and operating the software. When the given procedure is not followed, serious problems such as hardware failure, data loss may occur. |
|  | Indicates the points to be checked while handling the hardware and operating the software. |
|  | Indicates information that is helpful and useful. |

Operating System Notation

In this guide, the following notations are used for Windows operating system.

| Notations Used in This Guide | Name of Windows OS |
|------------------------------|--|
| Windows 10 | Windows 10 IoT Enterprise 2016 LTSB (64-bit version) |

Trademark

Facial recognition AI engine "NeoFace" is a registered trademark of NEC Corporation.

Microsoft and Windows are registered trademarks or trademarks of Microsoft Corporation in the United States and other countries. Intel, Xeon, Celeron, Intel Core, and Intel vPro are trademarks of Intel Corporation. PCI EXPRESS is a trademark of Peripheral Component Interconnect Special Interest Group.

Other company names and product names mentioned are trademarks or registered trademarks of the respective companies.

License Notification

Part of NeoFace (system BIOS) includes the open source software of the following license.

- EDK/EDKII
- UEFI NETWORK STACK II and iSCSI
- Crypto package using WPA Supplicant

Part of Neoface (offline tool) includes open source software of the following license.

- EDK/EDKII

License statement

EDK/EDKII

BSD License from Intel

Copyright (c) 2012, Intel Corporation

All rights reserved.

Copyright (c) 2004, Intel Corporation

All rights reserved.

Redistribution and use in source and binary forms, with or without modification, are permitted provided that the following conditions are met:

- Redistributions of source code must retain the above copyright notice, this list of conditions and the following disclaimer.
- Redistributions in binary form must reproduce the above copyright notice, this list of conditions and the following disclaimer in the documentation and/or other materials provided with the distribution.
- Neither the name of the Intel Corporation nor the names of its contributors may be used to endorse or promote products derived from this software without specific prior written permission.

THIS SOFTWARE IS PROVIDED BY THE COPYRIGHT HOLDERS AND CONTRIBUTORS "AS IS" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL THE COPYRIGHT OWNER OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.

UEFLNETWORK STACK II and iSCSI

OpenSSL License

Copyright (c) 1998-2011 The OpenSSL Project. All rights reserved.

Redistribution and use in source and binary forms, with or without modification, are permitted provided that the following conditions are met:

1. Redistributions of source code must retain the above copyright notice, this list of conditions and the following disclaimer.
2. Redistributions in binary form must reproduce the above copyright notice, this list of conditions and the following disclaimer in the documentation and/or other materials provided with the distribution.
3. All advertising materials mentioning features or use of this software must display the following acknowledgment:
"This product includes software developed by the OpenSSL Project for use in the OpenSSL Toolkit. (<http://www.openssl.org/>)"
4. The names "OpenSSL Toolkit" and "OpenSSL Project" must not be used to endorse or promote products derived from this software without prior written permission. For written permission, please contact openssl-core@openssl.org.
5. Products derived from this software may not be called "OpenSSL" nor may "OpenSSL" appear in their names without prior written permission of the OpenSSL Project.
6. Redistributions of any form whatsoever must retain the following acknowledgment:
"This product includes software developed by the OpenSSL Project for use in the OpenSSL Toolkit (<http://www.openssl.org/>)"

THIS SOFTWARE IS PROVIDED BY THE OpenSSL PROJECT ``AS IS" AND ANY EXPRESSED OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL THE OpenSSL PROJECT OR ITS CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.

This product includes cryptographic software written by Eric Young(ey@cryptsoft.com). This product includes software written by Tim Hudson (tjh@cryptsoft.com).

AMI CRYPTO LIBRARY USING WPA SUPPLICANT

WPA Supplicant

Copyright (c) 2003-2016, Jouni Malinen <j@w1.fi> and contributors All Rights Reserved.

This program is licensed under the BSD license (the one with advertisement clause removed). If you are submitting changes to the project, please see CONTRIBUTIONS file for more instructions.

License

This software may be distributed, used, and modified under the terms of BSD license:

Redistribution and use in source and binary forms, with or without modification, are permitted provided that the following conditions are met:

1. Redistributions of source code must retain the above copyright notice, this list of conditions and the following disclaimer.
2. Redistributions in binary form must reproduce the above copyright notice, this list of conditions and the following disclaimer in the documentation and/or other materials provided with the distribution.
3. Neither the name(s) of the above-listed copyright holder(s) nor the names of its contributors may be used to endorse or promote products derived from this software without specific prior written permission.

THIS SOFTWARE IS PROVIDED BY THE COPYRIGHT HOLDERS AND CONTRIBUTORS "AS IS" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL THE COPYRIGHT OWNER OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.

This product uses the following open-source software.

- Apache License
 - Apache Tomcat
 - Spring Boot
 - commons-logging
 - Apache Log4j
 - Jackson Core
 - ClassMate
 - Jackson Databind
 - Javassist
 - JBoss Logging 3
 - Tomcat El Api
 - Spring AOP
 - Bean Validation API
 - Byte Buddy
 - Java Annotation Indexer
 - Zip4j
 - Apache Commons Logging
 - Hibernate Validator Engine Relocation Artifact
 - Jackson Annotations
 - Spring Beans
 - Spring Context
 - Spring Core
 - Spring Expression Language
 - Spring JDBC
 - Spring Transaction
 - Spring Web
 - Spring Web MVC
 - Apache Standard Taglib Implementation
 - Apache Standard Taglib Specification API
 - Tomcat Jsp Api
 - Tomcat Servlet Api
 - Apache Log4j Core
 - Apache Log4j API

■ LGPL

This product includes software licensed under the GNU Lesser General Public License (LGPL). The customer can obtain the source code of the corresponding software and the code can be copied, distributed and modified according to LGPL.

<Method to obtain the source code>

Please visit the following website for information on how to obtain the source code.

<http://jpn.nec.com/iot/platform/nfaccess/index.html>

Please note that we cannot respond to the questions on the contents of the source code.

=====

Apache License Version
2.0, January 2004
<http://www.apache.org/licenses/>

TERMS AND CONDITIONS FOR USE, REPRODUCTION, AND DISTRIBUTION

1. Definitions.

"License" shall mean the terms and conditions for use, reproduction, and distribution as defined by Sections 1 through 9 of this document.

"Licensor" shall mean the copyright owner or entity authorized by the copyright owner that is granting the License.

"Legal Entity" shall mean the union of the acting entity and all other entities that control, are controlled by, or are under common control with that entity. For the purposes of this definition, "control" means (i) the power, direct or indirect, to cause the direction or management of such entity, whether by contract or otherwise, or (ii) ownership of fifty percent (50%) or more of the outstanding shares, or (iii) beneficial ownership of such entity.

"You" (or "Your") shall mean an individual or Legal Entity exercising permissions granted by this License.

"Source" form shall mean the preferred form for making modifications, including but not limited to software source code, documentation source, and configuration files.

"Object" form shall mean any form resulting from mechanical transformation or translation of a Source form, including but not limited to compiled object code, generated documentation, and conversions to other media types.

"Work" shall mean the work of authorship, whether in Source or Object form, made available under the License, as indicated by a copyright notice that is included in or attached to the work (an example is provided in the Appendix below).

"Derivative Works" shall mean any work, whether in Source or Object form, that is based on (or derived from) the Work and for which the editorial revisions, annotations, elaborations, or other modifications represent, as a whole, an original work of authorship. For the purposes of this License, Derivative Works shall not include works that remain separable from, or merely link (or bind by name) to the interfaces of, the Work and Derivative Works thereof.

"Contribution" shall mean any work of authorship, including the original version of the Work and any modifications or additions to that Work or Derivative Works thereof, that is intentionally submitted to Licensor for inclusion in the Work by the copyright owner or by an individual or Legal Entity authorized to submit on behalf of

the copyright owner. For the purposes of this definition, "submitted" means any form of electronic, verbal, or written communication sent to the Licensor or its representatives, including but not limited to communication on electronic mailing lists, source code control systems, and issue tracking systems that are managed by, or on behalf of, the Licensor for the purpose of discussing and improving the Work, but excluding communication that is conspicuously marked or otherwise designated in writing by the copyright owner as "Not a Contribution."

"Contributor" shall mean Licensor and any individual or Legal Entity on behalf of whom a Contribution has been received by Licensor and subsequently incorporated within the Work.

2. **Grant of Copyright License.** Subject to the terms and conditions of this License, each Contributor hereby grants to You a perpetual, worldwide, non-exclusive, no-charge, royalty-free, irrevocable copyright license to reproduce, prepare Derivative Works of, publicly display, publicly perform, sublicense, and distribute the Work and such Derivative Works in Source or Object form.
3. **Grant of Patent License.** Subject to the terms and conditions of this License, each Contributor hereby grants to You a perpetual, worldwide, non-exclusive, no-charge, royalty-free, irrevocable (except as stated in this section) patent license to make, have made, use, offer to sell, sell, import, and otherwise transfer the Work, where such license applies only to those patent claims licensable by such Contributor that are necessarily infringed by their Contribution(s) alone or by combination of their Contribution(s) with the Work to which such Contribution(s) was submitted. If You institute patent litigation against any entity (including a cross-claim or counterclaim in a lawsuit) alleging that the Work or a Contribution incorporated within the Work constitutes direct or contributory patent infringement, then any patent licenses granted to You under this License for that Work shall terminate as of the date such litigation is filed.
4. **Redistribution.** You may reproduce and distribute copies of the Work or Derivative Works thereof in any medium, with or without modifications, and in Source or Object form, provided that You meet the following conditions:
 - (a) You must give any other recipients of the Work or Derivative Works a copy of this License; and
 - (b) You must cause any modified files to carry prominent notices stating that You changed the files; and
 - (c) You must retain, in the Source form of any Derivative Works that You distribute, all copyright, patent, trademark, and attribution notices from the Source form of the Work, excluding those notices that do not pertain to any part of the Derivative Works; and
 - (d) If the Work includes a "NOTICE" text file as part of its distribution, then any Derivative Works that You distribute must include a readable copy of the attribution notices contained within such NOTICE file, excluding those notices that do not pertain to any part of the Derivative Works, in at least one of the following places: within a NOTICE text file distributed as part of the Derivative Works; within the Source form or documentation, if provided along with the Derivative Works; or, within a display generated by the Derivative Works, if and wherever such third-party notices normally appear. The contents of the NOTICE file are for informational purposes only and do not modify the License. You may add Your own attribution notices within Derivative Works that You distribute, alongside or as an addendum to the NOTICE text from the Work, provided that such additional attribution notices cannot be construed as modifying the License.

You may add Your own copyright statement to Your modifications and may provide additional or different license terms and conditions for use, reproduction, or distribution of Your modifications, or for any such Derivative Works as a whole, provided Your use, reproduction, and distribution of the Work otherwise complies with the conditions stated in this License.

5. **Submission of Contributions.** Unless You explicitly state otherwise, any Contribution intentionally submitted for inclusion in the Work by You to the Licensor shall be under the terms and conditions of this License, without any additional terms or conditions.
Notwithstanding the above, nothing herein shall supersede or modify the terms of any separate license agreement you may have executed with Licensor regarding such Contributions.
6. **Trademarks.** This License does not grant permission to use the trade names, trademarks, service marks, or product names of the Licensor, except as required for reasonable and customary use in describing the origin of the Work and reproducing the content of the NOTICE file.
7. **Disclaimer of Warranty.** Unless required by applicable law or agreed to in writing, Licensor provides the Work (and each Contributor provides its Contributions) on an "AS IS" BASIS, WITHOUT WARRANTIES OR CONDITIONS OF ANY KIND, either express or implied, including, without limitation, any warranties or conditions of TITLE, NON-INFRINGEMENT, MERCHANTABILITY, or FITNESS FOR A PARTICULAR PURPOSE. You are solely responsible for determining the appropriateness of using or redistributing the Work and assume any risks associated with Your exercise of permissions under this License.
8. **Limitation of Liability.** In no event and under no legal theory, whether in tort (including negligence), contract, or otherwise, unless required by applicable law (such as deliberate and grossly negligent acts) or agreed to in writing, shall any Contributor be liable to You for damages, including any direct, indirect, special, incidental, or consequential damages of any character arising as a result of this License or out of the use or inability to use the Work (including but not limited to damages for loss of goodwill, work stoppage, computer failure or malfunction, or any and all other commercial damages or losses), even if such Contributor has been advised of the possibility of such damages.
9. **Accepting Warranty or Additional Liability.** While redistributing the Work or Derivative Works thereof, You may choose to offer, and charge a fee for, acceptance of support, warranty, indemnity, or other liability obligations and/or rights consistent with this License. However, in accepting such obligations, You may act only on Your own behalf and on Your sole responsibility, not on behalf of any other Contributor, and only if You agree to indemnify, defend, and hold each Contributor harmless for any liability incurred by, or claims asserted against, such Contributor by reason of your accepting any such warranty or additional liability.

END OF TERMS AND CONDITIONS

APPENDIX: How to apply the Apache License to your work.

To apply the Apache License to your work, attach the following boilerplate notice, with the fields enclosed by brackets "[]" replaced with your own identifying information. (Don't include the brackets!) The text should be enclosed in the appropriate comment syntax for the file format. We also recommend that a file or class name and description of purpose be included on the same "printed page" as the copyright notice for easier identification within third-party archives.

Copyright [yyyy] [name of copyright owner]

Licensed under the Apache License, Version 2.0 (the "License"); you may not use this file except in compliance with the License. You may obtain a copy of the License at

<http://www.apache.org/licenses/LICENSE-2.0>

Unless required by applicable law or agreed to in writing, software distributed under the License is distributed on an "AS IS" BASIS, WITHOUT WARRANTIES OR CONDITIONS OF ANY KIND, either express or implied. See the License for the specific language governing permissions and limitations under the License.

■ 2-clause BSD License

- Dom4j
- PostgreSQL JDBC Driver JDBC 4.2
- PostgreSQL JDBC Driver

Copyright <YEAR> <COPYRIGHT HOLDER>

Redistribution and use in source and binary forms, with or without modification, are permitted provided that the following conditions are met:

1. Redistributions of source code must retain the above copyright notice, this list of conditions and the following disclaimer.
2. Redistributions in binary form must reproduce the above copyright notice, this list of conditions and the following disclaimer in the documentation and/or other materials provided with the distribution.

THIS SOFTWARE IS PROVIDED BY THE COPYRIGHT HOLDERS AND CONTRIBUTORS "AS IS" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL THE COPYRIGHT HOLDER OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.

■ BSD License

- antlr
- hmac

=====
 Copyright (c) 2012 Terence Parr and Sam Harwell All
 rights reserved.

Redistribution and use in source and binary forms, with or without modification, are permitted provided that the following conditions are met:

- Redistributions of source code must retain the above copyright notice, this list of conditions and the following disclaimer.
- Redistributions in binary form must reproduce the above copyright notice, this list of conditions and the following disclaimer in the documentation and/or other materials provided with the distribution.
- Neither the name of the author nor the names of its contributors may be used to endorse or promote products derived from this software without specific prior written permission.

THIS SOFTWARE IS PROVIDED BY THE COPYRIGHT HOLDERS AND CONTRIBUTORS "AS IS" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL THE COPYRIGHT OWNER OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.

=====

■ Creative Commons Zero (CC0)

- Java Transaction API

=====
 Creative Commons Legal Code

CC0 1.0 Universal

CREATIVE COMMONS CORPORATION IS NOT A LAW FIRM AND DOES NOT PROVIDE LEGAL SERVICES. DISTRIBUTION OF THIS DOCUMENT DOES NOT CREATE AN ATTORNEY-CLIENT RELATIONSHIP. CREATIVE COMMONS PROVIDES THIS INFORMATION ON AN "AS-IS" BASIS. CREATIVE COMMONS MAKES NO WARRANTIES REGARDING THE USE OF THIS DOCUMENT OR THE INFORMATION OR WORKS PROVIDED HEREUNDER, AND DISCLAIMS LIABILITY FOR DAMAGES RESULTING FROM THE USE OF THIS DOCUMENT OR THE INFORMATION OR WORKS PROVIDED HEREUNDER.

Statement of Purpose

The laws of most jurisdictions throughout the world automatically confer exclusive Copyright and Related Rights (defined below) upon the creator and subsequent owner(s) (each and all, an "owner") of an original work of authorship and/or a database (each, a "Work").

Certain owners wish to permanently relinquish those rights to a Work for the purpose of contributing to a commons of creative, cultural and scientific works ("Commons") that the public can reliably and without fear of later claims of infringement build upon, modify, incorporate in other works, reuse and redistribute as freely as possible in any form whatsoever and for any purposes, including without limitation commercial purposes.

These owners may contribute to the Commons to promote the ideal of a free culture and the further production of creative, cultural and scientific works, or to gain reputation or greater distribution for their Work in part through the use and efforts of others.

For these and/or other purposes and motivations, and without any expectation of additional consideration or compensation, the person associating CC0 with a Work (the "Affirmer"), to the extent that he or she is an owner of Copyright and Related Rights in the Work, voluntarily elects to apply CC0 to the Work and publicly distribute the Work under its terms, with knowledge of his or her Copyright and Related Rights in the

Work and the meaning and intended legal effect of CC0 on those rights.

1. Copyright and Related Rights. A Work made available under CC0 may be protected by copyright and related or neighboring rights ("Copyright and Related Rights"). Copyright and Related Rights include, but are not limited to, the following:
 - i. the right to reproduce, adapt, distribute, perform, display, communicate, and translate a Work;
 - ii. moral rights retained by the original author(s) and/or performer(s);
 - iii. publicity and privacy rights pertaining to a person's image or likeness depicted in a Work;
 - iv. rights protecting against unfair competition in regards to a Work, subject to the limitations in paragraph 4(a), below;
 - v. rights protecting the extraction, dissemination, use and reuse of data in a Work;
 - vi. database rights (such as those arising under Directive 96/9/EC of the European Parliament and of the Council of 11 March 1996 on the legal protection of databases, and under any national implementation thereof, including any amended or successor version of such directive); and
 - vii. other similar, equivalent or corresponding rights throughout the world based on applicable law or treaty, and any national implementations thereof.

2. Waiver. To the greatest extent permitted by, but not in contravention of, applicable law, Affirmer hereby overtly, fully, permanently, irrevocably and unconditionally waives, abandons, and surrenders all of Affirmer's Copyright and Related Rights and associated claims and causes of action, whether now known or unknown (including existing as well as future claims and causes of action), in the Work (i) in all territories worldwide, (ii) for the maximum duration provided by applicable law or treaty (including future time extensions), (iii) in any current or future medium and for any number of copies, and (iv) for any purpose whatsoever, including without limitation commercial, advertising or promotional purposes (the "Waiver"). Affirmer makes the Waiver for the benefit of each member of the public at large and to the detriment of Affirmer's heirs and successors, fully intending that such Waiver shall not be subject to revocation, rescission, cancellation, termination, or any other legal or equitable action to disrupt the quiet enjoyment of the Work by the public as contemplated by Affirmer's express Statement of Purpose.

3. Public License Fallback. Should any part of the Waiver for any reason be judged legally invalid or ineffective under applicable law, then the Waiver shall be preserved to the maximum extent permitted taking into account Affirmer's express Statement of Purpose. In addition, to the extent the Waiver is so judged Affirmer hereby grants to each affected person a royalty-free, non transferable, non sublicensable, non exclusive, irrevocable and unconditional license to exercise Affirmer's Copyright and Related Rights in the Work (i) in all territories worldwide, (ii) for the maximum duration provided by applicable law or treaty (including future time extensions), (iii) in any current or future medium and for any number of copies, and (iv) for any purpose whatsoever, including without limitation commercial, advertising or promotional purposes (the "License"). The License shall be deemed effective as of the date CC0 was applied by Affirmer to the Work. Should any part of the License for any reason be judged legally invalid or ineffective under applicable law, such partial invalidity or ineffectiveness shall not invalidate the remainder of the License, and in such case Affirmer hereby affirms that he or she will not (i) exercise any of his or her remaining Copyright and Related Rights in the Work or (ii) assert any associated claims and causes of action with respect to the Work, in either case contrary to Affirmer's express Statement of Purpose.

4. Limitations and Disclaimers.
 - a. No trademark or patent rights held by Affirmer are waived, abandoned, surrendered, licensed or otherwise affected by this document.
 - b. Affirmer offers the Work as-is and makes no representations or warranties of any kind concerning the Work, express, implied, statutory or otherwise, including without limitation warranties of title, merchantability, fitness for a particular purpose, non infringement, or the absence of latent or other defects, accuracy, or

the present or absence of errors, whether or not discoverable, all to the greatest extent permissible under applicable law.

- c. Affirmer disclaims responsibility for clearing rights of other persons that may apply to the Work or any use thereof, including without limitation any person's Copyright and Related Rights in the Work. Further, Affirmer disclaims responsibility for obtaining any necessary consents, permissions or other rights required for any use of the Work.
- d. Affirmer understands and acknowledges that Creative Commons is not a party to this document and has no duty or obligation with respect to this CC0 or use of the Work.

■ MIT License

- JQuery
- JQueryUI

Copyright <YEAR> <COPYRIGHT HOLDER>

Permission is hereby granted, free of charge, to any person obtaining a copy of this software and associated documentation files (the "Software"), to deal in the Software without restriction, including without limitation the rights to use, copy, modify, merge, publish, distribute, sublicense, and/or sell copies of the Software, and to permit persons to whom the Software is furnished to do so, subject to the following conditions:

The above copyright notice and this permission notice shall be included in all copies or substantial portions of the Software.

THE SOFTWARE IS PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND NONINFRINGEMENT. IN NO EVENT SHALL THE AUTHORS OR COPYRIGHT HOLDERS BE LIABLE FOR ANY CLAIM, DAMAGES OR OTHER LIABILITY, WHETHER IN AN ACTION OF CONTRACT, TORT OR OTHERWISE, ARISING FROM, OUT OF OR IN CONNECTION WITH THE SOFTWARE OR THE USE OR OTHER DEALINGS IN THE SOFTWARE.

■ PostgreSQL License

- PostgreSQL

Copyright (c) \$YEAR, \$ORGANIZATION

Permission to use, copy, modify, and distribute this software and its documentation for any purpose, without fee, and without a written agreement is hereby granted, provided that the above copyright notice and this paragraph and the following two paragraphs appear in all copies.

IN NO EVENT SHALL \$ORGANISATION BE LIABLE TO ANY PARTY FOR DIRECT, INDIRECT, SPECIAL, INCIDENTAL, OR CONSEQUENTIAL DAMAGES, INCLUDING LOST PROFITS, ARISING OUT OF THE USE OF THIS SOFTWARE AND ITS DOCUMENTATION, EVEN IF \$ORGANISATION HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.

\$ORGANISATION SPECIFICALLY DISCLAIMS ANY WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. THE SOFTWARE PROVIDED HEREUNDER IS ON AN "AS IS" BASIS, AND \$ORGANISATION HAS NO OBLIGATIONS TO PROVIDE MAINTENANCE, SUPPORT, UPDATES, ENHANCEMENTS, OR MODIFICATIONS.

- GNU Lesser General Public License
 - Hibernate Commons Annotations
 - Core Hibernate O/RM Functionality
 - Hibernate JPA Support

GNU LESSER GENERAL PUBLIC LICENSE

Version 3, 29 June 2007

Copyright © 2007 Free Software Foundation, Inc. <<https://fsf.org/>>

Everyone is permitted to copy and distribute verbatim copies of this license document, but changing it is not allowed.

This version of the GNU Lesser General Public License incorporates the terms and conditions of version 3 of the GNU General Public License, supplemented by the additional permissions listed below.

0. Additional Definitions.

As used herein, "this License" refers to version 3 of the GNU Lesser General Public License, and the "GNU GPL" refers to version 3 of the GNU General Public License.

"The Library" refers to a covered work governed by this License, other than an Application or a Combined Work as defined below.

An "Application" is any work that makes use of an interface provided by the Library, but which is not otherwise based on the Library. Defining a subclass of a class defined by the Library is deemed a mode of using an interface provided by the Library. A "Combined Work" is a work produced by combining or linking an Application with the Library. The particular version of the Library with which the Combined Work was made is also called the "Linked Version".

The "Minimal Corresponding Source" for a Combined Work means the Corresponding Source for the Combined Work, excluding any source code for portions of the Combined Work that, considered in isolation, are based on the Application, and not on the Linked Version.

The "Corresponding Application Code" for a Combined Work means the object code and/or source code for the Application, including any data and utility programs needed for reproducing the Combined Work from the Application, but excluding the System Libraries of the Combined Work.

1. Exception to Section 3 of the GNU GPL.

You may convey a covered work under sections 3 and 4 of this License without being bound by section 3 of the GNU GPL.

2. Conveying Modified Versions.

If you modify a copy of the Library, and, in your modifications, a facility refers to a function or data to be supplied by an Application that uses the facility (other than as an argument passed when the facility is invoked), then you may convey a copy of the modified version:

- a) under this License, provided that you make a good faith effort to ensure that, in the event an Application does not supply the function or data, the facility still operates, and performs whatever part of its purpose remains meaningful, or
- b) under the GNU GPL, with none of the additional permissions of this License applicable to that copy.

3. Object Code Incorporating Material from Library Header Files.

The object code form of an Application may incorporate material from a header file that is part of the Library. You may convey such object code under terms of your choice, provided that, if the incorporated material is not limited to numerical parameters, data structure layouts and accessors, or small macros, inline functions and templates (ten or fewer lines in length), you do both of the following:

- a) Give prominent notice with each copy of the object code that the Library is used in it and that the Library and its use are covered by this License.
- b) Accompany the object code with a copy of the GNU GPL and this license document.

4. Combined Works.

You may convey a Combined Work under terms of your choice that, taken together, effectively do not restrict modification of the portions of the Library contained in the Combined Work and reverse engineering for debugging such modifications, if you also do each of the following:

- a) Give prominent notice with each copy of the Combined Work that the Library is used in it and that the Library and its use are covered by this License.
- b) Accompany the Combined Work with a copy of the GNU GPL and this license document.

- c) For a Combined Work that displays copyright notices during execution, include the copyright notice for the Library among these notices, as well as a reference directing the user to the copies of the GNU GPL and this license document.
- d) Do one of the following:
 - °0) Convey the Minimal Corresponding Source under the terms of this License, and the Corresponding Application Code in a form suitable for, and under terms that permit, the user to recombine or relink the Application with a modified version of the Linked Version to produce a modified Combined Work, in the manner specified by section 6 of the GNU GPL for conveying Corresponding Source.
- 1) Use a suitable shared library mechanism for linking with the Library. A suitable mechanism is one that (a) uses at run time a copy of the Library already present on the user's computer system, and (b) will operate properly with a modified version of the Library that is interface-compatible with the Linked Version.
 - e) Provide Installation Information, but only if you would otherwise be required to provide such information under section 6 of the GNU GPL, and only to the extent that such information is necessary to install and execute a modified version of the Combined Work produced by recombining or relinking the Application with a modified version of the Linked Version. (If you use option 4d0, the Installation Information must accompany the Minimal Corresponding Source and Corresponding Application Code. If you use option 4d1, you must provide the Installation Information in the manner specified by section 6 of the GNU GPL for conveying Corresponding Source.)

5. Combined Libraries.

You may place library facilities that are a work based on the Library side by side in a single library together with other library facilities that are not Applications and are not covered by this License, and convey such a combined library under terms of your choice, if you do both of the following:

- a) Accompany the combined library with a copy of the same work based on the Library, uncombined with any other library facilities, conveyed under the terms of this License.
- b) Give prominent notice with the combined library that part of it is a work based on the Library, and explaining where to find the accompanying uncombined form of the same work.

6. Revised Versions of the GNU Lesser General Public License.

The Free Software Foundation may publish revised and/or new versions of the GNU Lesser General Public License from time to time. Such new versions will be similar in spirit to the present version, but may differ in detail to address new problems or concerns.

Each version is given a distinguishing version number. If the Library as you received it specifies that a certain numbered version of the GNU Lesser General Public License "or any later version" applies to it, you have the option of following the terms and conditions either of that published version or of any later version published by the Free Software Foundation. If the Library as you received it does not specify a version number of the GNU Lesser General Public License, you may choose any version of the GNU Lesser General Public License ever published by the Free Software Foundation.

If the Library as you received it specifies that a proxy can decide whether future versions of the GNU Lesser General Public License shall apply, that proxy's public statement of acceptance of any version is permanent authorization for you to choose that version for the Library.

=====

■ COMMON DEVELOPMENT AND DISTRIBUTION LICENSE

- JavaMail

=====

Common Development and Distribution License 1.0

SPDX short identifier: CDDL-1.0

Further resources on CDDL-1.0

COMMON DEVELOPMENT AND DISTRIBUTION LICENSE Version 1.0 (CDDL-1.0) (text)

1. Definitions.

- 1.1. Contributor means each individual or entity that creates or contributes to the creation of Modifications.
- 1.2. Contributor Version means the combination of the Original Software, prior Modifications used by a Contributor (if any), and the Modifications made by that particular Contributor.
- 1.3. Covered Software means (a) the Original Software, or (b) Modifications, or (c) the combination of files containing Original Software with files containing Modifications, in each case including portions thereof.
- 1.4. Executable means the Covered Software in any form other than Source Code.
- 1.5. Initial Developer means the individual or entity that first makes Original Software available under this License.
- 1.6. Larger Work means a work which combines Covered Software or portions thereof with code not governed by the terms of this License.
- 1.7. License means this document.
- 1.8. Licensable means having the right to grant, to the maximum extent possible, whether at the time of the initial grant or subsequently acquired, any and all of the rights conveyed herein.
- 1.9. Modifications means the Source Code and Executable form of any of the following:
 - A. Any file that results from an addition to, deletion from or modification of the contents of a file containing Original Software or previous Modifications;
 - B. Any new file that contains any part of the Original Software or previous Modification; or
 - C. Any new file that is contributed or otherwise made available under the terms of this License.
- 1.10. Original Software means the Source Code and Executable form of computer software code that is originally released under this License.
- 1.11. Patent Claims means any patent claim(s), now owned or hereafter acquired, including without limitation, method, process, and apparatus claims, in any patent Licensable by grantor.
- 1.12. Source Code means (a) the common form of computer software code in which modifications are made and (b) associated documentation included in or with such code.
- 1.13. You (or Your) means an individual or a legal entity exercising rights under, and complying with all of the terms of, this License. For legal entities, You includes any entity which controls, is controlled by, or is under common control with You. For purposes of this definition, control means (a) the power, direct or indirect, to cause the direction or management of such entity, whether by contract or otherwise, or (b) ownership of more than fifty percent (50%) of the outstanding shares or beneficial ownership of such entity.

2. License Grants.

2.1. The Initial Developer Grant.

Conditioned upon Your compliance with Section 3.1 below and subject to third party intellectual property claims, the Initial Developer hereby grants You a world-wide, royalty-free, non-exclusive license:

- (a) under intellectual property rights (other than patent or trademark) Licensable by Initial Developer, to use, reproduce, modify, display, perform, sublicense and distribute the Original Software (or portions thereof), with or without Modifications, and/or as part of a Larger Work; and
- (b) under Patent Claims infringed by the making, using or selling of Original Software, to make, have made, use, practice, sell, and offer for sale, and/or otherwise dispose of the Original Software (or portions thereof).
- (c) The licenses granted in Sections 2.1(a) and (b) are effective on the date Initial Developer first distributes or otherwise makes the Original Software available to a third party under the terms of this License.

- (d) Notwithstanding Section 2.1(b) above, no patent license is granted: (1) for code that You delete from the Original Software, or (2) for infringements caused by: (i) the modification of the Original Software, or (ii) the combination of the Original Software with other software or devices.

2.2. Contributor Grant.

Conditioned upon Your compliance with Section 3.1 below and subject to third party intellectual property claims, each Contributor hereby grants You a world-wide, royalty-free, non-exclusive license:

- (a) under intellectual property rights (other than patent or trademark) Licensable by Contributor to use, reproduce, modify, display, perform, sublicense and distribute the Modifications created by such Contributor (or portions thereof), either on an unmodified basis, with other Modifications, as Covered Software and/or as part of a Larger Work; and
- (b) under Patent Claims infringed by the making, using, or selling of Modifications made by that Contributor either alone and/or in combination with its Contributor Version (or portions of such combination), to make, use, sell, offer for sale, have made, and/or otherwise dispose of: (1) Modifications made by that Contributor (or portions thereof); and (2) the combination of Modifications made by that Contributor with its Contributor Version (or portions of such combination).
- (c) The licenses granted in Sections 2.2(a) and 2.2(b) are effective on the date Contributor first distributes or otherwise makes the Modifications available to a third party.
- (d) Notwithstanding Section 2.2(b) above, no patent license is granted: (1) for any code that Contributor has deleted from the Contributor Version; (2) for infringements caused by: (i) third party modifications of Contributor Version, or (ii) the combination of Modifications made by that Contributor with other software (except as part of the Contributor Version) or other devices; or (3) under Patent Claims infringed by Covered Software in the absence of Modifications made by that Contributor.

3. Distribution Obligations.

3.1. Availability of Source Code.

Any Covered Software that You distribute or otherwise make available in Executable form must also be made available in Source Code form and that Source Code form must be distributed only under the terms of this License. You must include a copy of this License with every copy of the Source Code form of the Covered Software You distribute or otherwise make available. You must inform recipients of any such Covered Software in Executable form as to how they can obtain such Covered Software in Source Code form in a reasonable manner on or through a medium customarily used for software exchange.

3.2. Modifications.

The Modifications that You create or to which You contribute are governed by the terms of this License. You represent that You believe Your Modifications are Your original creation(s) and/or You have sufficient rights to grant the rights conveyed by this License.

3.3. Required Notices.

You must include a notice in each of Your Modifications that identifies You as the Contributor of the Modification. You may not remove or alter any copyright, patent or trademark notices contained within the Covered Software, or any notices of licensing or any descriptive text giving attribution to any Contributor or the Initial Developer.

3.4. Application of Additional Terms.

You may not offer or impose any terms on any Covered Software in Source Code form that alters or restricts the applicable version of this License or the recipients rights hereunder. You may choose to offer, and to charge a fee for, warranty, support, indemnity or liability obligations to one or more recipients of Covered Software. However, you may do so only on Your own behalf, and not on behalf of the Initial Developer or any Contributor. You must make it absolutely clear that any such warranty, support, indemnity or liability obligation is offered by You alone, and You hereby agree to indemnify the Initial Developer and every Contributor for any liability incurred by the Initial Developer or such Contributor as a result of warranty, support, indemnity or liability terms You offer.

3.5. Distribution of Executable Versions.

You may distribute the Executable form of the Covered Software under the terms of this License or under the terms of a license of Your choice, which may contain terms different from this License, provided that You are in compliance with the terms of this License and that the license for the Executable form does not attempt to limit or alter the recipients rights in the Source Code form from the rights set forth in this License. If You distribute the Covered Software in Executable form under a different license, You must make it absolutely clear that any terms which differ from this License are offered by You alone, not by the Initial Developer or Contributor. You hereby agree to indemnify the Initial Developer and every Contributor for any liability incurred by the Initial Developer or such Contributor as a result of any such terms You offer.

3.6. Larger Works.

You may create a Larger Work by combining Covered Software with other code not governed by the terms of this License and distribute the Larger Work as a single product. In such a case, You must make sure the requirements of this License are fulfilled for the Covered Software.

4. Versions of the License.

4.1. New Versions.

Sun Microsystems, Inc. is the initial license steward and may publish revised and/or new versions of this License from time to time. Each version will be given a distinguishing version number. Except as provided in Section 4.3, no one other than the license steward has the right to modify this License.

4.2. Effect of New Versions.

You may always continue to use, distribute or otherwise make the Covered Software available under the terms of the version of the License under which You originally received the Covered Software. If the Initial Developer includes a notice in the Original Software prohibiting it from being distributed or otherwise made available under any subsequent version of the License, You must distribute and make the Covered Software available under the terms of the version of the License under which You originally received the Covered Software. Otherwise, You may also choose to use, distribute or otherwise make the Covered Software available under the terms of any subsequent version of the License published by the license steward.

4.3. Modified Versions.

When You are an Initial Developer and You want to create a new license for Your Original Software, You may create and use a modified version of this License if You: (a) rename the license and remove any references to the name of the license steward (except to note that the license differs from this License); and (b) otherwise make it clear that the license contains terms which differ from this License.

5. DISCLAIMER OF WARRANTY.

COVERED SOFTWARE IS PROVIDED UNDER THIS LICENSE ON AN AS IS BASIS, WITHOUT WARRANTY OF ANY KIND, EITHER EXPRESSED OR IMPLIED, INCLUDING, WITHOUT LIMITATION, WARRANTIES THAT THE COVERED SOFTWARE IS FREE OF DEFECTS, MERCHANTABILITY, FIT FOR A PARTICULAR PURPOSE OR NON-INFRINGEMENT. THE ENTIRE RISK AS TO THE QUALITY AND PERFORMANCE OF THE COVERED SOFTWARE IS WITH YOU. SHOULD ANY COVERED SOFTWARE PROVE DEFECTIVE IN ANY RESPECT, YOU (NOT THE INITIAL DEVELOPER OR ANY OTHER CONTRIBUTOR) ASSUME THE COST OF ANY NECESSARY SERVICING, REPAIR OR CORRECTION. THIS DISCLAIMER OF WARRANTY CONSTITUTES AN ESSENTIAL PART OF THIS LICENSE. NO USE OF ANY COVERED SOFTWARE IS AUTHORIZED HEREUNDER EXCEPT UNDER THIS DISCLAIMER.

6. TERMINATION.

- 6.1. This License and the rights granted hereunder will terminate automatically if You fail to comply with terms herein and fail to cure such breach within 30 days of becoming aware of the breach. Provisions which, by their nature, must remain in effect beyond the termination of this License shall survive.
- 6.2. If You assert a patent infringement claim (excluding declaratory judgment actions) against Initial Developer or a Contributor (the Initial Developer or Contributor against whom You assert such claim is referred to as Participant) alleging that the Participant Software (meaning the Contributor Version where the Participant is a Contributor or the Original Software where the Participant is the Initial Developer) directly or indirectly infringes any patent, then any and all rights granted directly or indirectly to You by such Participant, the Initial Developer (if the Initial Developer is not the Participant) and all Contributors under Sections 2.1 and/or 2.2 of this License shall, upon 60 days notice from Participant terminate prospectively and automatically at the expiration of such 60 day notice period, unless if within such 60 day period You withdraw Your claim with respect to the Participant Software against such Participant either unilaterally or pursuant to a written agreement with Participant.
- 6.3. In the event of termination under Sections 6.1 or 6.2 above, all end user licenses that have been validly granted by You or any distributor hereunder prior to termination (excluding licenses granted to You by any distributor) shall survive termination.

7. LIMITATION OF LIABILITY.

UNDER NO CIRCUMSTANCES AND UNDER NO LEGAL THEORY, WHETHER TORT (INCLUDING NEGLIGENCE), CONTRACT, OR OTHERWISE, SHALL YOU, THE INITIAL DEVELOPER, ANY OTHER CONTRIBUTOR, OR ANY DISTRIBUTOR OF COVERED SOFTWARE, OR ANY SUPPLIER OF ANY OF SUCH PARTIES, BE LIABLE TO ANY PERSON FOR ANY INDIRECT, SPECIAL, INCIDENTAL, OR CONSEQUENTIAL DAMAGES OF ANY CHARACTER INCLUDING, WITHOUT LIMITATION, DAMAGES FOR LOST PROFITS, LOSS OF GOODWILL, WORK STOPPAGE, COMPUTER FAILURE OR MALFUNCTION, OR ANY AND ALL OTHER COMMERCIAL DAMAGES OR LOSSES, EVEN IF SUCH PARTY SHALL HAVE BEEN INFORMED OF THE POSSIBILITY OF SUCH DAMAGES. THIS LIMITATION OF LIABILITY SHALL NOT APPLY TO LIABILITY FOR DEATH OR PERSONAL INJURY RESULTING FROM SUCH PARTY'S NEGLIGENCE TO THE EXTENT APPLICABLE LAW PROHIBITS SUCH LIMITATION. SOME JURISDICTIONS DO NOT ALLOW THE EXCLUSION OR LIMITATION OF INCIDENTAL OR CONSEQUENTIAL DAMAGES, SO THIS EXCLUSION AND LIMITATION MAY NOT APPLY TO YOU.

8. U.S. GOVERNMENT END USERS.

The Covered Software is a commercial item, as that term is defined in 48 C.F.R. 2.101 (Oct. 1995), consisting of commercial computer software (as that term is defined at 48 C.F.R. 252.227-7014(a)(1)) and commercial computer software documentation as such terms are used in 48 C.F.R. 12.212 (Sept. 1995). Consistent with 48 C.F.R. 12.212 and 48 C.F.R. 227.7202-1 through 227.7202-4 (June 1995), all U.S. Government End Users acquire Covered Software with only those rights set forth herein. This U.S. Government Rights clause is in lieu of, and supersedes, any other FAR, DFAR, or other clause or provision that addresses Government rights in computer software under this License.

9. MISCELLANEOUS.

This License represents the complete agreement concerning subject matter hereof. If any provision of this License is held to be unenforceable, such provision shall be reformed only to the extent necessary to make it enforceable. This License shall be governed by the law of the jurisdiction specified in a notice contained within the Original Software (except to the extent applicable law, if any, provides otherwise), excluding such jurisdictions conflict-of-law provisions. Any litigation relating to this License shall be subject to the jurisdiction of the courts located in the jurisdiction and venue specified in a notice contained within the Original Software, with the losing party responsible for costs, including, without limitation, court costs and reasonable attorneys fees and expenses. The application of the United Nations Convention on Contracts for the International Sale of Goods is expressly excluded. Any law or regulation which provides that the language of a contract shall be construed against the drafter shall not apply to this License. You agree that You alone are responsible for compliance with the United States export administration regulations (and the export control laws and regulation of any other countries) when You use, distribute or otherwise make available any Covered Software.

10. RESPONSIBILITY FOR CLAIMS.

As between Initial Developer and the Contributors, each party is responsible for claims and damages arising, directly or indirectly, out of its utilization of rights under this License and You agree to work with Initial Developer and Contributors to distribute such responsibility on an equitable basis. Nothing herein is intended or shall be deemed to constitute any admission of liability.

=====

- Eclipse Public License
 - Java Persistence API, Version 2.1

=====

Eclipse Public License, Version 1.0 (EPL-1.0)

THE ACCOMPANYING PROGRAM IS PROVIDED UNDER THE TERMS OF THIS ECLIPSE PUBLIC LICENSE ("AGREEMENT"). ANY USE, REPRODUCTION OR DISTRIBUTION OF THE PROGRAM CONSTITUTES RECIPIENT'S ACCEPTANCE OF THIS AGREEMENT.

1. DEFINITIONS

"Contribution" means:

- a) in the case of the initial Contributor, the initial code and documentation distributed under this Agreement, and
- b) in the case of each subsequent Contributor:
 - i) changes to the Program, and
 - ii) additions to the Program;

where such changes and/or additions to the Program originate from and are distributed by that particular Contributor. A Contribution 'originates' from a Contributor if it was added to the Program by such Contributor itself or anyone acting on such Contributor's behalf. Contributions do not include additions to the Program which: (i) are separate modules of software distributed in conjunction with the Program under their own license agreement, and (ii) are not derivative works of the Program.

"Contributor" means any person or entity that distributes the Program.

"Licensed Patents" mean patent claims licensable by a Contributor which are necessarily infringed by the use or sale of its Contribution alone or when combined with the Program.

"Program" means the Contributions distributed in accordance with this Agreement.

"Recipient" means anyone who receives the Program under this Agreement, including all Contributors.

2. GRANT OF RIGHTS

- a) Subject to the terms of this Agreement, each Contributor hereby grants Recipient a non-exclusive, worldwide, royalty-free copyright license to reproduce, prepare derivative works of, publicly display, publicly perform, distribute and sublicense the Contribution of such Contributor, if any, and such derivative works, in source code and object code form.
- b) Subject to the terms of this Agreement, each Contributor hereby grants Recipient a non-exclusive, worldwide, royalty-free patent license under Licensed Patents to make, use, sell, offer to sell, import and otherwise transfer the Contribution of such Contributor, if any, in source code and object code form. This patent license shall apply to the combination of the Contribution and the Program if, at the time the Contribution is added by the Contributor, such addition of the Contribution causes such combination to be covered by the Licensed Patents. The patent license shall not apply to any other combinations which include the Contribution. No hardware per se is licensed hereunder.
- c) Recipient understands that although each Contributor grants the licenses to its Contributions set forth herein, no assurances are provided by any Contributor that the Program does not infringe the patent or other intellectual property rights of any other entity. Each Contributor disclaims any liability to Recipient for claims brought by any other entity based on infringement of intellectual property rights or otherwise. As a condition to exercising the rights and licenses granted hereunder, each Recipient hereby assumes sole responsibility to secure any other intellectual property rights needed, if any. For example, if a third party patent license is required to allow Recipient to distribute the Program, it is Recipient's responsibility to acquire that license before distributing the Program.
- d) Each Contributor represents that to its knowledge it has sufficient copyright rights in its Contribution, if any, to grant the copyright license set forth in this Agreement.

3. REQUIREMENTS

A Contributor may choose to distribute the Program in object code form under its own license agreement, provided that:

- a) it complies with the terms and conditions of this Agreement; and
- b) its license agreement:
 - i) effectively disclaims on behalf of all Contributors all warranties and conditions, express and implied, including warranties or conditions of title and non-infringement, and implied warranties or conditions of merchantability and fitness for a particular purpose;
 - ii) effectively excludes on behalf of all Contributors all liability for damages, including direct, indirect, special, incidental and consequential damages, such as lost profits;
 - iii) states that any provisions which differ from this Agreement are offered by that Contributor alone and not by any other party; and
 - iv) states that source code for the Program is available from such Contributor, and informs licensees how to obtain it in a reasonable manner on or through a medium customarily used for software exchange.

When the Program is made available in source code form:

- a) it must be made available under this Agreement; and
- b) a copy of this Agreement must be included with each copy of the Program.

Contributors may not remove or alter any copyright notices contained within the Program.

Each Contributor must identify itself as the originator of its Contribution, if any, in a manner that reasonably allows subsequent Recipients to identify the originator of the Contribution.

4. COMMERCIAL DISTRIBUTION

Commercial distributors of software may accept certain responsibilities with respect to end users, business partners and the like. While this license is intended to facilitate the commercial use of the Program, the Contributor who includes the Program in a commercial product offering should do so in a manner which does not create potential liability for other Contributors. Therefore, if a Contributor includes the Program in a commercial product offering, such Contributor ("Commercial Contributor") hereby agrees to defend and indemnify every other Contributor ("Indemnified Contributor") against any losses, damages and costs (collectively "Losses") arising from claims, lawsuits and other legal actions brought by a third party against the Indemnified Contributor to the extent caused by the acts or omissions of such Commercial Contributor in connection with its distribution of the Program in a commercial product offering. The obligations in this section do not apply to any claims or Losses relating to any actual or alleged intellectual property infringement. In order to qualify, an Indemnified Contributor must: a) promptly notify the Commercial Contributor in writing of such claim, and b) allow the Commercial Contributor to control, and cooperate with the Commercial Contributor in, the defense and any related settlement negotiations. The Indemnified Contributor may participate in any such claim at its own expense.

For example, a Contributor might include the Program in a commercial product offering, Product X. That Contributor is then a Commercial Contributor. If that Commercial Contributor then makes performance claims, or offers warranties related to Product X, those performance claims and warranties are such Commercial Contributor's responsibility alone. Under this section, the Commercial Contributor would have to defend claims against the other Contributors related to those performance claims and warranties, and if a court requires any other Contributor to pay any damages as a result, the Commercial Contributor must pay those damages.

5. NO WARRANTY

EXCEPT AS EXPRESSLY SET FORTH IN THIS AGREEMENT, THE PROGRAM IS PROVIDED ON AN "AS IS" BASIS, WITHOUT WARRANTIES OR CONDITIONS OF ANY KIND, EITHER EXPRESS OR IMPLIED INCLUDING, WITHOUT LIMITATION, ANY WARRANTIES OR CONDITIONS OF TITLE, NON-INFRINGEMENT, MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. Each Recipient is solely responsible for determining the appropriateness of using and distributing the Program and assumes all risks associated with its exercise of rights under this Agreement, including but not limited to the risks and costs of program errors, compliance with applicable laws, damage to or loss of data, programs or equipment, and unavailability or interruption of operations.

6. DISCLAIMER OF LIABILITY

EXCEPT AS EXPRESSLY SET FORTH IN THIS AGREEMENT, NEITHER RECIPIENT NOR ANY CONTRIBUTORS SHALL HAVE ANY LIABILITY FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING WITHOUT LIMITATION LOST PROFITS), HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OR DISTRIBUTION OF THE PROGRAM OR THE EXERCISE OF ANY RIGHTS GRANTED HEREUNDER, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGES.

7. GENERAL

If any provision of this Agreement is invalid or unenforceable under applicable law, it shall not affect the validity or enforceability of the remainder of the terms of this Agreement, and without further action by the parties hereto, such provision shall be reformed to the minimum extent necessary to make such provision valid and enforceable.

If Recipient institutes patent litigation against any entity (including a cross-claim or counterclaim in a lawsuit) alleging that the Program itself (excluding combinations of the Program with other software or hardware) infringes such Recipient's patent(s), then such Recipient's rights granted under Section 2(b) shall terminate as of the date such litigation is filed.

All Recipient's rights under this Agreement shall terminate if it fails to comply with any of the material terms or conditions of this Agreement and does not cure such failure in a reasonable period of time after becoming aware of such noncompliance. If all Recipient's rights under this Agreement terminate, Recipient agrees to cease use and distribution of the Program as soon as reasonably practicable. However, Recipient's obligations under this Agreement and any licenses granted by Recipient relating to the Program shall continue and survive.

Everyone is permitted to copy and distribute copies of this Agreement, but in order to avoid inconsistency the Agreement is copyrighted and may only be modified in the following manner. The Agreement Steward reserves the right to publish new versions (including revisions) of this Agreement from time to time. No one other than the Agreement Steward has the right to modify this Agreement. The Eclipse Foundation is the initial Agreement Steward. The Eclipse Foundation may assign the responsibility to serve as the Agreement Steward to a suitable separate entity. Each new version of the Agreement will be given a distinguishing version number. The Program (including Contributions) may always be distributed subject to the version of the Agreement under which it was received. In addition, after a new version of the Agreement is published, Contributor may elect to distribute the Program (including its Contributions) under the new version. Except as expressly stated in Sections 2(a) and 2(b) above, Recipient receives no rights or licenses to the intellectual property of any Contributor under this Agreement, whether expressly, by implication, estoppel or otherwise. All rights in the Program not expressly granted under this Agreement are reserved.

This Agreement is governed by the laws of the State of New York and the intellectual property laws of the United States of America. No party to this Agreement will bring a legal action under this Agreement more than one year after the cause of action arose. Each party waives its rights to a jury trial in any resulting litigation.

■ Oracle Binary Code License

- Java SE 8

Oracle Binary Code License Agreement for the Java SE Platform Products and JavaFX

ORACLE AMERICA, INC. ("ORACLE"), FOR AND ON BEHALF OF ITSELF AND ITS SUBSIDIARIES AND AFFILIATES UNDER COMMON CONTROL, IS WILLING TO LICENSE THE SOFTWARE TO YOU ONLY UPON THE CONDITION THAT YOU ACCEPT ALL OF THE TERMS CONTAINED IN THIS BINARY CODE LICENSE AGREEMENT AND SUPPLEMENTAL LICENSE TERMS (COLLECTIVELY "AGREEMENT"). PLEASE READ THE AGREEMENT CAREFULLY. BY SELECTING THE "ACCEPT LICENSE AGREEMENT" (OR THE EQUIVALENT) BUTTON AND/OR BY USING THE SOFTWARE YOU ACKNOWLEDGE THAT YOU HAVE READ THE TERMS AND AGREE TO THEM. IF YOU ARE AGREEING TO THESE TERMS ON BEHALF OF A COMPANY OR OTHER LEGAL ENTITY, YOU REPRESENT THAT YOU HAVE THE LEGAL AUTHORITY TO BIND THE LEGAL ENTITY TO THESE TERMS. IF YOU DO NOT HAVE SUCH AUTHORITY, OR IF YOU DO NOT WISH TO BE BOUND BY THE TERMS, THEN SELECT THE "DECLINE LICENSE AGREEMENT" (OR THE EQUIVALENT) BUTTON AND YOU MUST NOT USE THE SOFTWARE ON THIS SITE OR ANY OTHER MEDIA ON WHICH THE SOFTWARE IS CONTAINED.

1. **DEFINITIONS.** "Software" means the software identified above in binary form that you selected for download, install or use (in the version You selected for download, install or use) from Oracle or its authorized licensees and/or those portions of such software produced by jlink as output using a Program's code, when such output is in unmodified form in combination, and for sole use with, that Program, as well as any other machine readable materials (including, but not limited to, libraries, source files, header files, and data files), any updates or error corrections provided by Oracle, and any user manuals, programming guides and other documentation provided to you by Oracle under this Agreement. The Java Linker (jlink) is available with Java 9 and later versions. "General Purpose Desktop Computers and Servers" means computers, including desktop and laptop computers, or servers, used for general computing functions under end user control (such as but not specifically limited to email, general purpose Internet browsing, and office suite productivity tools). The use of Software in systems and solutions that provide dedicated functionality (other than as mentioned above) or designed for use in embedded or function-specific software applications, for example but not limited to: Software embedded in or bundled with industrial control systems, wireless mobile telephones, wireless handheld devices, kiosks, TV/STB, Blu-ray Disc devices, telematics and network control switching equipment, printers and storage management systems, and other related systems are excluded from this definition and not licensed under this Agreement. "Programs" means (a) Java technology applets and applications intended to run on the Java Platform, Standard Edition platform on Java-enabled General Purpose Desktop Computers and Servers; and (b) JavaFX technology applications intended to run on the JavaFX Runtime on JavaFX-enabled General Purpose Desktop Computers and Servers. "Java SE LIUM" means the Licensing Information User Manual – Oracle Java SE and Oracle Java Embedded Products Document accessible at <http://www.oracle.com/technetwork/java/javase/documentation/index.html>. "Commercial Features" means those features that are identified as such in the Java SE LIUM under the "Description of Product Editions and Permitted Features" section.
2. **LICENSE TO USE.** Subject to the terms and conditions of this Agreement including, but not limited to, the Java Technology Restrictions of the Supplemental License Terms, Oracle grants you a non-exclusive, non-transferable, limited license without license fees to reproduce and use internally the Software complete and unmodified for the sole purpose of running Programs. **THE LICENSE SET FORTH IN THIS SECTION 2 DOES NOT EXTEND TO THE COMMERCIAL FEATURES. YOUR RIGHTS AND OBLIGATIONS RELATED TO THE COMMERCIAL FEATURES ARE AS SET FORTH IN THE SUPPLEMENTAL TERMS ALONG WITH ADDITIONAL LICENSES FOR DEVELOPERS AND PUBLISHERS.**

3. **RESTRICTIONS.** Software is copyrighted. Title to Software and all associated intellectual property rights is retained by Oracle and/or its licensors. Unless enforcement is prohibited by applicable law, you may not modify, decompile, or reverse engineer Software. You acknowledge that the Software is developed for general use in a variety of information management applications; it is not developed or intended for use in any inherently dangerous applications, including applications that may create a risk of personal injury. If you use the Software in dangerous applications, then you shall be responsible to take all appropriate fail-safe, backup, redundancy, and other measures to ensure its safe use. Oracle disclaims any express or implied warranty of fitness for such uses. No right, title or interest in or to any trademark, service mark, logo or trade name of Oracle or its licensors is granted under this Agreement. Additional restrictions for developers and/or publishers licenses are set forth in the Supplemental License Terms.
4. **DISCLAIMER OF WARRANTY.** THE SOFTWARE IS PROVIDED "AS IS" WITHOUT WARRANTY OF ANY KIND. ORACLE FURTHER DISCLAIMS ALL WARRANTIES, EXPRESS AND IMPLIED, INCLUDING WITHOUT LIMITATION, ANY IMPLIED WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE OR NONINFRINGEMENT.
5. **LIMITATION OF LIABILITY.** IN NO EVENT SHALL ORACLE BE LIABLE FOR ANY INDIRECT, INCIDENTAL, SPECIAL, PUNITIVE OR CONSEQUENTIAL DAMAGES, OR DAMAGES FOR LOSS OF PROFITS, REVENUE, DATA OR DATA USE, INCURRED BY YOU OR ANY THIRD PARTY, WHETHER IN AN ACTION IN CONTRACT OR TORT, EVEN IF ORACLE HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES. ORACLE'S ENTIRE LIABILITY FOR DAMAGES HEREUNDER SHALL IN NO EVENT EXCEED ONE THOUSAND DOLLARS (U.S. \$1,000).
6. **TERMINATION.** This Agreement is effective until terminated. You may terminate this Agreement at any time by destroying all copies of Software. This Agreement will terminate immediately without notice from Oracle if you fail to comply with any provision of this Agreement. Either party may terminate this Agreement immediately should any Software become, or in either party's opinion be likely to become, the subject of a claim of infringement of any intellectual property right. Upon termination, you must destroy all copies of Software.
7. **EXPORT REGULATIONS.** You agree that U.S. export control laws and other applicable export and import laws govern your use of the Software, including technical data; additional information can be found on Oracle's Global Trade Compliance web site (<http://www.oracle.com/us/products/export>). You agree that neither the Software nor any direct product thereof will be exported, directly, or indirectly, in violation of these laws, or will be used for any purpose prohibited by these laws including, without limitation, nuclear, chemical, or biological weapons proliferation.
8. **TRADEMARKS AND LOGOS.** You acknowledge and agree as between you and Oracle that Oracle owns the ORACLE and JAVA trademarks and all ORACLE- and JAVA-related trademarks, service marks, logos and other brand designations ("Oracle Marks"), and you agree to comply with the Third Party Usage Guidelines for Oracle Trademarks currently located at <http://www.oracle.com/us/legal/third-party-trademarks/index.html>. Any use you make of the Oracle Marks inures to Oracle's benefit.
9. **U.S. GOVERNMENT LICENSE RIGHTS.** If Software is being acquired by or on behalf of the U.S. Government or by a U.S. Government prime contractor or subcontractor (at any tier), then the Government's rights in Software and accompanying documentation shall be only those set forth in this Agreement.
10. **GOVERNING LAW.** This agreement is governed by the substantive and procedural laws of California. You and Oracle agree to submit to the exclusive jurisdiction of, and venue in, the courts of San Francisco, or Santa Clara counties in California in any dispute arising out of or relating to this agreement.
11. **SEVERABILITY.** If any provision of this Agreement is held to be unenforceable, this Agreement will remain in effect with the provision omitted, unless omission would frustrate the intent of the parties, in which case this Agreement will immediately terminate.
12. **INTEGRATION.** This Agreement is the entire agreement between you and Oracle relating to its subject matter. It supersedes all prior or contemporaneous oral or written communications, proposals, representations and warranties and prevails over any conflicting or additional terms of any quote, order, acknowledgment, or other communication between the parties relating to its subject matter during the term of this Agreement. No modification of this Agreement will be binding, unless in writing and signed by an authorized representative of each party.

SUPPLEMENTAL LICENSE TERMS

These Supplemental License Terms add to or modify the terms of the Binary Code License Agreement. Capitalized terms not defined in these Supplemental Terms shall have the same meanings ascribed to them in the Binary Code License Agreement. These Supplemental Terms shall supersede any inconsistent or conflicting terms in the Binary Code License Agreement, or in any license contained within the Software.

- A. **COMMERCIAL FEATURES.** You may not use the Commercial Features for running Programs, Java applets or applications in your internal business operations or for any commercial or production purpose, or for any purpose other than as set forth in Sections B, C, D and E of these Supplemental Terms. If You want to use the Commercial Features for any purpose other than as permitted in this Agreement, You must obtain a separate license from Oracle.
- B. **SOFTWARE INTERNAL USE FOR DEVELOPMENT LICENSE GRANT.** Subject to the terms and conditions of this Agreement and restrictions and exceptions set forth in the Java SE LIUM incorporated herein by reference, including, but not limited to the Java Technology Restrictions of these Supplemental Terms, Oracle grants you a non-exclusive, non-transferable, limited license without fees to reproduce internally and use internally the Software complete and unmodified for the purpose of designing, developing, and testing your Programs.
- C. **LICENSE TO DISTRIBUTE SOFTWARE.** Subject to the terms and conditions of this Agreement and restrictions and exceptions set forth in the Java SE LIUM, including, but not limited to the Java Technology Restrictions and Limitations on Redistribution of these Supplemental Terms, Oracle grants you a non-exclusive, non-transferable, limited license without fees to reproduce and distribute the Software, provided that (i) you distribute the Software complete and unmodified and only bundled as part of, and for the sole purpose of running, your Programs, (ii) the Programs add significant and primary functionality to the Software, (iii) you do not distribute additional software intended to replace any component(s) of the Software, (iv) you do not remove or alter any proprietary legends or notices contained in the Software, (v) you only distribute the Software subject to a license agreement that: (a) is a complete, unmodified reproduction of this Agreement; or (b) protects Oracle's interests consistent with the terms contained in this Agreement and that includes the notice set forth in Section H, and (vi) you agree to defend and indemnify Oracle and its licensors from and against any damages, costs, liabilities, settlement amounts and/or expenses (including attorneys' fees) incurred in connection with any claim, lawsuit or action by any third party that arises or results from the use or distribution of any and all Programs and/or Software. The license set forth in this Section C does not extend to the Software identified in Section G.
- D. **LICENSE TO DISTRIBUTE REDISTRIBUTABLES.** Subject to the terms and conditions of this Agreement and restrictions and exceptions set forth in the Java SE LIUM, including but not limited to the Java Technology Restrictions and Limitations on Redistribution of these Supplemental Terms, Oracle grants you a non-exclusive, non-transferable, limited license without fees to reproduce and distribute those files specifically identified as redistributable in the Java SE LIUM ("Redistributables") provided that: (i) you distribute the Redistributables complete and unmodified, and only bundled as part of Programs, (ii) the Programs add significant and primary functionality to the Redistributables, (iii) you do not distribute additional software intended to supersede any component(s) of the Redistributables (unless otherwise specified in the applicable Java SE LIUM), (iv) you do not remove or alter any proprietary legends or notices contained in or on the Redistributables, (v) you only distribute the Redistributables pursuant to a license agreement that: (a) is a complete, unmodified reproduction of this Agreement; or (b) protects Oracle's interests consistent with the terms contained in the Agreement and includes the notice set forth in Section H, (vi) you agree to defend and indemnify Oracle and its licensors from and against any damages, costs, liabilities, settlement amounts and/or expenses (including attorneys' fees) incurred in connection with any claim, lawsuit or action by any third party that arises or results from the use or distribution of any and all Programs and/or Software. The license set forth in this Section D does not extend to the Software identified in Section G.
- E. **DISTRIBUTION BY PUBLISHERS.** This section pertains to your distribution of the Java™ SE Development Kit Software ("JDK") with your printed book or magazine (as those terms are commonly used in the industry) relating to Java technology ("Publication"). Subject to and conditioned upon your compliance with the restrictions and obligations contained in the Agreement, Oracle hereby grants to you a non-exclusive, nontransferable limited right to reproduce complete and unmodified copies of the JDK on electronic media (the "Media") for the sole purpose of inclusion and distribution with your Publication(s), subject to the following terms: (i) You may not distribute the JDK on a stand-alone basis; it must be distributed with your Publication(s); (ii) You are responsible for downloading the JDK from the applicable Oracle web site; (iii) You must refer to the JDK as Java™ SE Development Kit; (iv) The JDK must be reproduced in its entirety and without any modification whatsoever (including with respect to all proprietary notices) and distributed with your Publication subject to a license agreement that is a complete, unmodified reproduction of this Agreement; (v) The Media label shall include the following information: "Copyright [YEAR], Oracle America, Inc. All rights reserved. Use is subject to license terms. ORACLE and JAVA trademarks and all ORACLE- and JAVA-related trademarks, service marks, logos and other brand designations are trademarks or registered trademarks of Oracle in the U.S. and other countries." [YEAR] is the year of Oracle's release of the Software; the year information can typically be found in the Software's "About" box or screen. This information must be placed on the Media label in such a manner as to only apply to the JDK; (vi) You must clearly identify the JDK as Oracle's product on the Media holder or Media label, and you may not state or imply that Oracle is responsible for any third-party software contained on the Media; (vii) You may not include any third party software on the Media which is intended to be a replacement or substitute for the JDK; (viii) You agree to defend and indemnify Oracle and its licensors from and against any damages, costs, liabilities, settlement amounts and/or expenses (including attorneys' fees) incurred in connection with any claim, lawsuit or action by any third party that arises or results from the use or distribution of the JDK and/or the Publication; ; and (ix) You shall provide Oracle with a written notice for each Publication; such notice shall include the following information: (1) title of Publication, (2)

author(s), (3) date of Publication, and (4) ISBN or ISSN numbers. Such notice shall be sent to Oracle America, Inc., 500 Oracle Parkway, Redwood Shores, California 94065 U.S.A , Attention: General Counsel.

- F. **JAVA TECHNOLOGY RESTRICTIONS.** You may not create, modify, or change the behavior of, or authorize your licensees to create, modify, or change the behavior of, classes, interfaces, or subpackages that are in any way identified as "java", "javax", "sun", "oracle" or similar convention as specified by Oracle in any naming convention designation.
- G. **LIMITATIONS ON REDISTRIBUTION.** You may not redistribute or otherwise transfer patches, bug fixes or updates made available by Oracle through Oracle Premier Support, including those made available under Oracle's Java SE Support program.
- H. **COMMERCIAL FEATURES NOTICE.** For purpose of complying with Supplemental Term Section C.(v)(b) and D.(v)(b), your license agreement shall include the following notice, where the notice is displayed in a manner that anyone using the Software will see the notice:
Use of the Commercial Features for any commercial or production purpose requires a separate license from Oracle. "Commercial Features" means those features that are identified as such in the Licensing Information User Manual – Oracle Java SE and Oracle Java Embedded Products Document, accessible at <http://www.oracle.com/technetwork/java/javase/documentation/index.html>, under the "Description of Product Editions and Permitted Features" section.
- I. **SOURCE CODE.** Software may contain source code that, unless expressly licensed for other purposes, is provided solely for reference purposes pursuant to the terms of this Agreement. Source code may not be redistributed unless expressly provided for in this Agreement.
- J. **THIRD PARTY CODE.** Additional copyright notices and license terms applicable to portions of the Software are set forth in the Java SE LIUM accessible at <http://www.oracle.com/technetwork/java/javase/documentation/index.html>. In addition to any terms and conditions of any third party opensource/freeware license identified in the Java SE LIUM, the disclaimer of warranty and limitation of liability provisions in paragraphs 4 and 5 of the Binary Code License Agreement shall apply to all Software in this distribution.
- K. **TERMINATION FOR INFRINGEMENT.** Either party may terminate this Agreement immediately should any Software become, or in either party's opinion be likely to become, the subject of a claim of infringement of any intellectual property right.
- L. **INSTALLATION AND AUTO-UPDATE.** The Software's installation and auto-update processes transmit a limited amount of data to Oracle (or its service provider) about those specific processes to help Oracle understand and optimize them. Oracle does not associate the data with personally identifiable information. You can find more information about the data Oracle collects as a result of your Software download at <http://www.oracle.com/technetwork/java/javase/documentation/index.html>.

For inquiries please contact: Oracle America, Inc., 500 Oracle Parkway,

Redwood Shores, California 94065, USA.

Last updated 21 September 2017

- zlib license
• base64

Copyright © 2004-2017 by René Nyffenegger

This source code is provided 'as-is', without any express or implied warranty. In no event will the author be held liable for any damages arising from the use of this software.

Permission is granted to anyone to use this software for any purpose, including commercial applications, and to alter it and redistribute it freely, subject to the following restrictions:

1. The origin of this source code must not be misrepresented; you must not claim that you wrote the original source code. If you use this source code in a product, an acknowledgment in the product documentation would be appreciated but is not required.
2. Altered source versions must be plainly marked as such, and must not be misrepresented as being the original source code.
3. This notice may not be removed or altered from any source distribution.

Precautions and Supplements for This Guide

- 1 If you find any mistakes in this guide, missing descriptions, please contact your sales representative.
- 2 Regarding the impact based on the results of the operations, NEC shall not be held liable irrespective of item 1 given above.
- 3 The sample values used in the description of this guide are all fictitious.
- 4 Unauthorized reproduction of a part or all the contents of this guide without permission is prohibited.
- 5 The contents of this User's Guide are subject to change without prior notice.
- 6 The diagrams used in this document are from products that are under development and may differ from actual products.

Please read this guide thoroughly before using and fully understand the handling of NeoFace. Please keep this guide handy to be referred when needed.

User's Guide

This User's Guide is based on information as on the date of preparation, and the screen images, messages, and procedures may differ from the ones used.

The latest version of the User's Guide will be uploaded to the following website when the User's Guide is updated and can be downloaded from this site.

<http://jpn.nec.com/iot/platform/nfaccess/index.html>

NeoFace Access Control

1

Introduction

This section describes the information required when introducing NeoFace.

1. Component

This section describes the components of NeoFace.

2. Options

This section describes the options of NeoFace.

3. Main Unit Description

This section describes the outline, buttons, and lamps of NeoFace.

4. Basic Operations

This section describes the operations methods (key board and card reader) of NeoFace.

5. Maintenance

This section describes the cleaning, maintenance and replacement method for NeoFace.

1. Components

The components of NeoFace are as follows.

Please store these components in a safe place as they are necessary for setup and maintenance. If there are any defective or missing components, please contact your sales representative.

| Product name | Quantity |
|--|----------|
| NeoFace Access Control (This product) | 1 |
| Warranty card | 1 |
| Startup Guide | 1 |
| Backup media | 1 |
| Recovery Disc | 1 |
| OS License Agreement (Windows10 IoT Enterprise2016 LTSB) | 1 |
| OS License Agreement (WindowsPE for Windows10) | 1 |
| Tie wrap | 2 |
| Setting value check sheet | 1 |
| Default password notice | 1 |
| Application media | 1 |
| Application procedure guide | 1 |

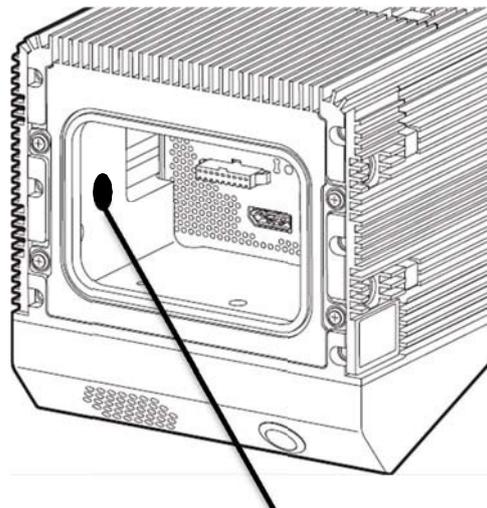


Name plate label stating the product serial number is affixed on the product.

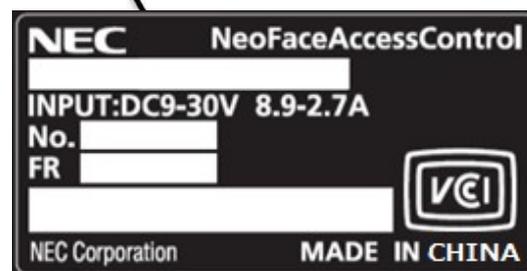
Please check if the serial number on the nameplate label matches with the number on the warranty card.

If the numbers do not match, there is a possibility that you may not be able to claim guarantee even the product fails within the warranty period.

If the numbers do not match, contact your sales representative.



Name plate label



The 7 digits after the No. is the serial number

2. Options

The options of NeoFace are as follows.

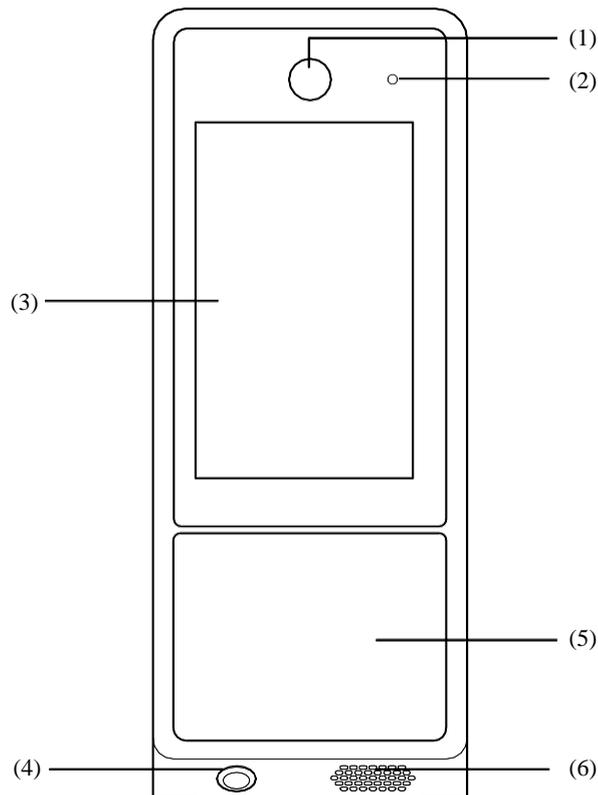
This data is as of January 2018. Please check with your sales representative at the time of purchase

| Model name | Product name | Notes |
|------------|----------------------------------|--|
| N8775-0301 | AC adapter | AC adapter to connect to NeoFace 150 W AC adapter Input voltage AC 100-240V \pm 10%、50/60Hz \pm 3Hz Output voltage DC 12V, 12.5A(MAX) External dimension W 170mm, D 85mm, H 40mm; Weight 800g Accessory 100 V AC power cord (2m), clip to hold the power cord |
| N8775-0302 | LCD anti-reflection film | Anti-reflection film to be affixed to LCD of NeoFace |
| N8775-0303 | Dust proof and drip-proof filter | Filter that prevents dust and water from entering NeoFace |
| UL1589-001 | NeoFace Access Control Manager | The manager is used when using six or more units of NeoFace. Software for centralized management of face information and user management databases of the terminal from the management server. Support target OS Windows Server 2016 |

3. Main Unit Description

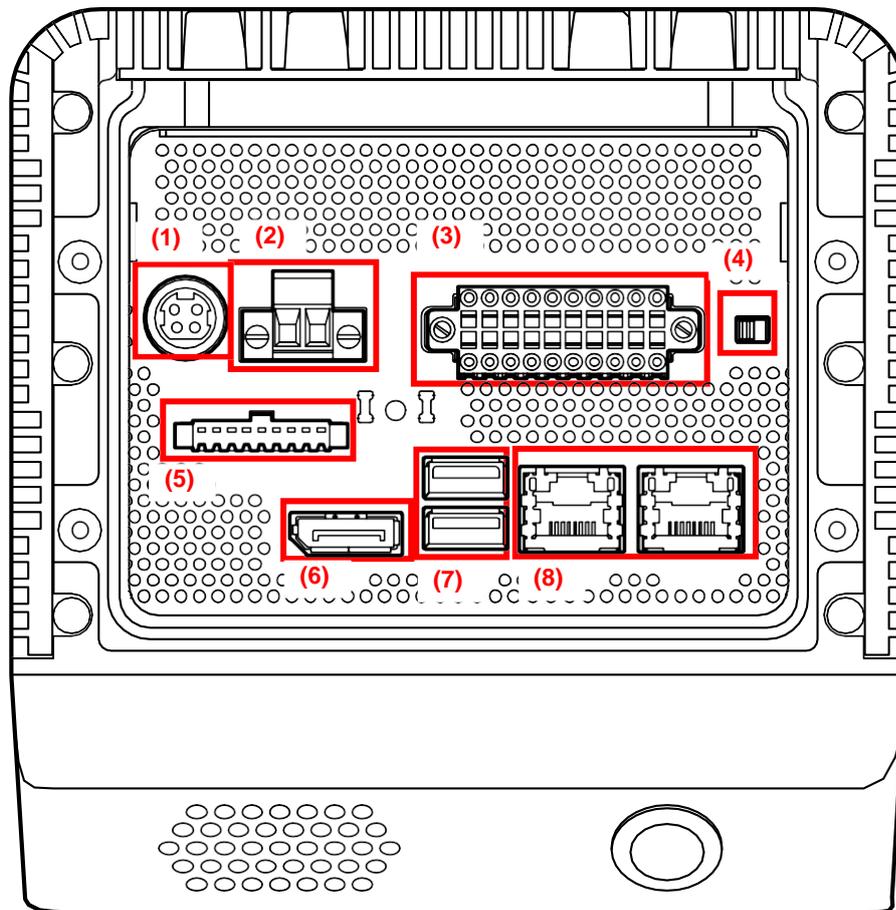
This section describes the component names.

3.1 Front of the Unit



- | | |
|---|---|
| <p>(1) Camera Takes pictures for facial recognition.</p> | <p>(5) Card Reader Wireless communication of the device is possible with NFC Type A/F compliant devices.</p> |
| <p>(2) POWER Lamp Lights up in green when the power is turned ON.</p> | <p>(6) Speaker Outputs sounds such as start, operation, and beep.</p> |
| <p>(3) LCD Display with Touch Panel You can operate by touching the screen.</p> | |
| <p>(4) POWER Switch Switch to turn the power ON/OFF. When pressed once the POWER lamp lights up in green and NeoFace is now in the POWER ON state. (After turning OFF the power supply, please wait for 5 seconds or more before turning ON the power supply again.)</p> | |

3.2 Back of the Unit

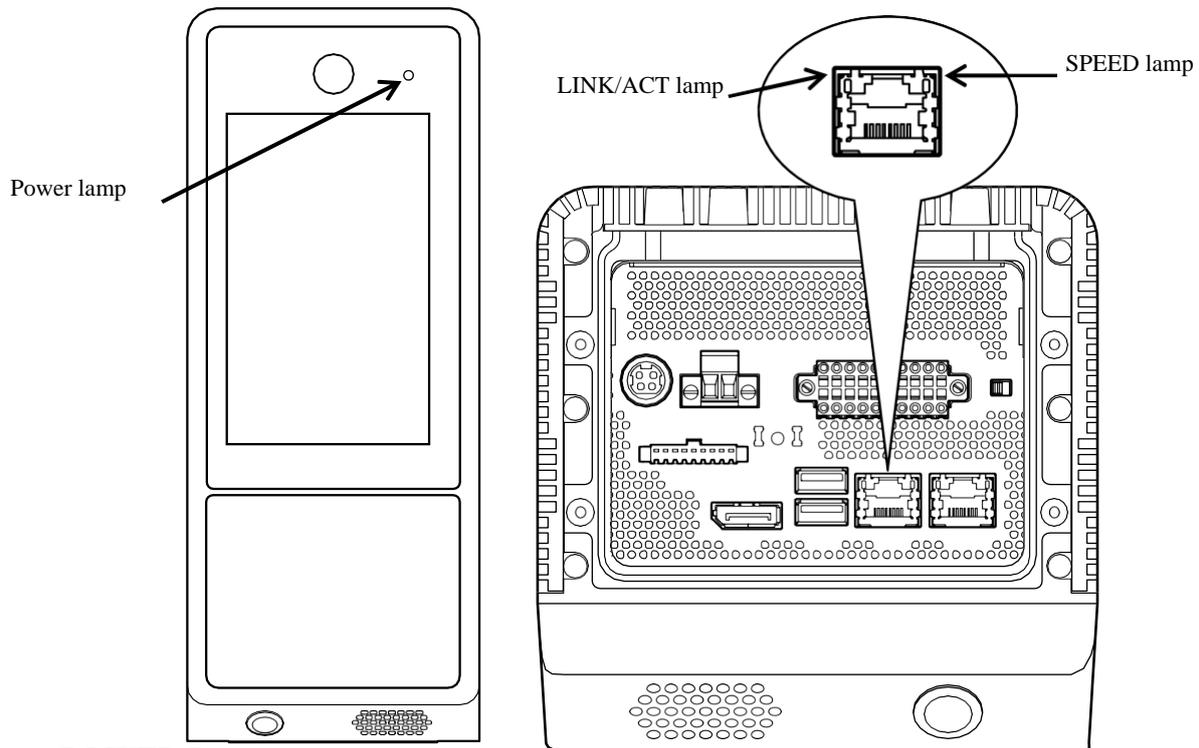


- | | |
|---|---|
| <p>(1) Connector for AC adapter (1 No) *1 Power supply connector for AC adapter. Connected to the optional AC adapter of NeoFace.</p> | <p>(5) Unused connector (1 No) Cannot be used with NeoFace. Do not connect anything.</p> |
| <p>(2) Power source connector (1 No) *1 Power supply connector for Terminal 2 Pin. Can be connected to the power supply equipment.</p> | <p>(6) Display connector (DP) (1 No) Connector compatible with display port standards. Connecting to display compliant to display port standard is possible.</p> |
| <p>(3) DI/DO connector (1 No) Connector compatible with Digital INPUT(DI) x4 / Digital OUTPUT(DO) x4 Can be connected to the devices compatible with contact connection.</p> | <p>(7) USB connector (2 Nos) Connector compatible with USB 3.0. Can be connected to a USB device. Lower side is USB 1 and upper side is USB 2.</p> |
| <p>(4) DI/DO switching switch (1 No) Switch that switches between the internal power supply (INT_VCC) or external power supply (EXT_VCC) of the digital input. Set with internal power supply (INT_VCC) on the right and external power supply (EXT_VCC) on the left.</p> | <p>(8) LAN connector (2 Nos) LAN connector compatible with 1000BASE-T/100BASE-TX/10BASE-T. Right side is LAN1 and left side is LAN2.</p> |

*1 Only one out of two the connectors of (1) and (2) can be used. Both cannot be used at the same time.

3.3 Lamp Indication

The lamp indication of NeoFace and meaning are as follows.



3.3.1 POWER Lamp

Lights up in green when the power is turned ON.

If "System Hardware" - "Power LED Control" in the BIOS setup menu is changed to "Disabled", the lamp will always be lit in green when the power is connected.

3.3.2 LINK/ACT Lamp

This lamp represents the state of the standard LAN port. When power is supplied to NeoFace and hub, and they are connected correctly, the LINK lamp lights in orange color. ACT lamp flashes in orange color when the port is transmitting or receiving.

If the lamp is not turned ON even in the LINK state, check the status of the network cable and connection with the hub.

3.3.3 SPEED Lamp

Indicates at which standard the LAN port communication mode is operating.

The LAN port supports 1000BASE-T (1Gbps), 100BASE-TX (100Mbps) and 10BASE-T (10Mbps) and the display changes according to the mode as follows.

- Orange light: Operates at 1000BASE-T
- Green light: Operates at 100BASE-TX
- Light off: Operates at 10BASE-T

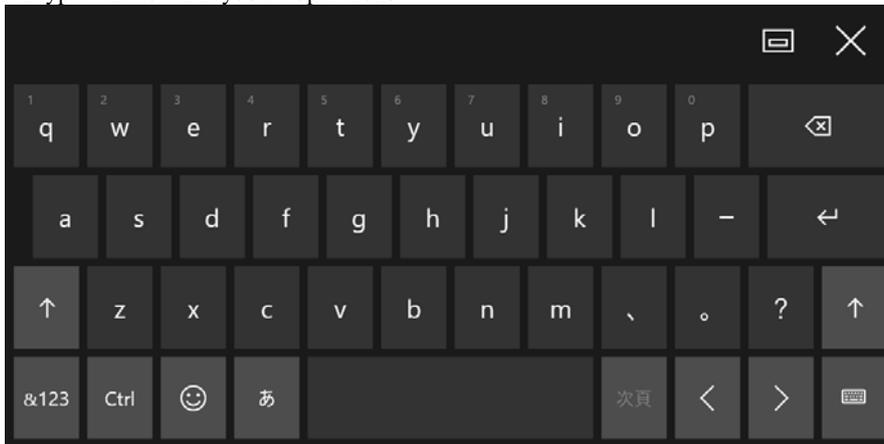
4. Basic Operations

Operation is performed using the touch panel at the front of NeoFace.

By directly touching the operation screen displayed on the monitor with your finger etc., you can click the buttons or enter characters using the touch keyboard.

Touch the keyboard icon at the bottom right of the screen to display the touch keyboard.

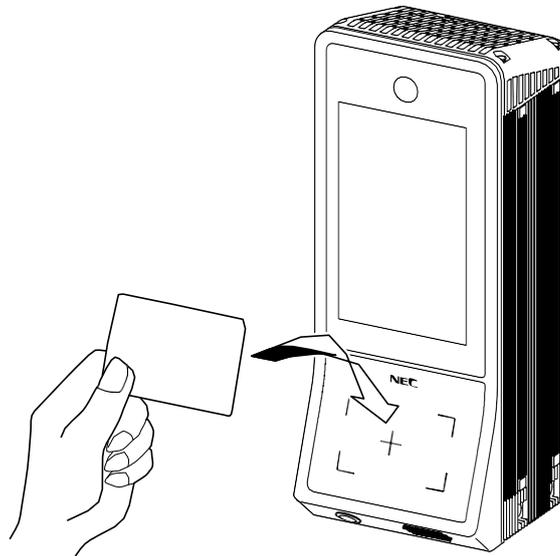
● Numeric keypad and touch keyboard operations



Touch the field you want to input on the screen and enter numbers and characters.

● Card Reader

A card that is compatible with the built-in card-reader will be read if you hold the card at the front of NeoFace. NeoFace supports NFC Type-A and NFC Type-B.



5. Maintenance

(1) Instructions for Cleaning

Except for the interface, AC adapter, power cord and labels, NeoFace can be cleaned with the following alcohol and detergents.

- Ethyl alcohol
- Isopropyl alcohol
- Neutral detergents

Please dilute and use.

After cleaning with neutral detergent, please wipe with water.

Do not use the following agents as damage such as cracks, deformation, discoloration, fading of print, and paint peeling of the case may be caused.

- Acidic detergents
- Alkaline detergents
- Organic solvents such as thinner and benzine
- Detergent with abrasives (including neutral detergents)
- Commercially available wet tissues

(2) Maintenance and Cleaning Method of Touch Panel

Turn OFF the power to NeoFace and wipe gently with a dry cloth or a cloth soaked in ethyl alcohol, isopropyl alcohol or a neutral detergent that does not contain abrasives.

After cleaning with neutral detergent, please wipe with water.

Once NeoFace is clean, wipe again gently with a dry and clean cloth. Rubbing strongly may cause scratches on the surface.

Clean diagonally across the touch panel. Wiping along the sides may damage the touch panel.

(3) Replacement of Dust Proof and Drip-proof Filters

When high-temperature alarm notification is displayed frequently, dust proof and drip-proof filter must be replaced.

Replacing the filter once in 12 months is recommended.

To replace the filter, contact your sales representative.

NeoFace Access Control

2

Installation and Connection

This section describes the installation method and precautions for using NeoFace safely.

1. Flow Up to the Start of Operations

This section describes the necessary steps to start the operations of NeoFace.

2. Items Necessary for Installation

This section describes the gate and pole recommended for NeoFace and the parts necessary for installation.

3. Installation Method

The section describes the installation method and environment for NeoFace.

4. Connections

The section describes how to connect the peripheral devices necessary to start the operations of NeoFace.

5. Setup

The section describes how to start NeoFace after the installation is complete.



Be sure to read the startup guide provided with the device and the "Precautions for use" section of this guide. This "Precautions for use" section describes precautions required to use NeoFace safely and properly.

1. Flow Up to the Start of Operations

When using for the first time, complete the following preparatory steps.

Work sharing depends on the agreement between the customer and installing agency.

- (1) Connect the necessary cables.
- (2) Install NeoFace
- (3) Turn ON NeoFace
- (4) Default settings
- (5) Register face information
- (6) Start the operations

2. Items Necessary for Installation

Before installing Neoface, make sure that the following items are kept ready as required. Except for the supplied accessories, the following commercially available items must be arranged by the customer or installing agency.

Parts shall be arranged by either the customer or installing agency depending on the agreement between them.

- External PC
- External display
- USB keyboard
- USB mouse
- USB DVD-ROM
 - Router
- Hub (STP compatible)
- LAN cable Cat5e STP
- Connection cable for DIDO connector *1
- Connection cable for power supply connector (Terminal 2 Pin) *1

*1 For cables to be used, please contact the installing agency, wiring contractor, or vendor of the gate to be connected.

3. Installation Method

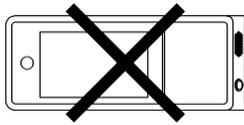
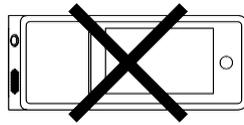
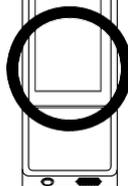
3.1 Installation Conditions

Please pay attention to the following points, especially to use NeoFace safely.

(1) Installation Direction Conditions

Installation direction should be as shown in the following diagram.

* Please be sure to read "Precautions for use" before using NeoFace.

| Horizontal installation | | Vertical installation | |
|---|---|---|---|
|  |  |  |  |
| Prohibited | Prohibited | Possible | Prohibited |



If installed in a prohibited direction, then NeoFace may fail.

(2) Ventilation

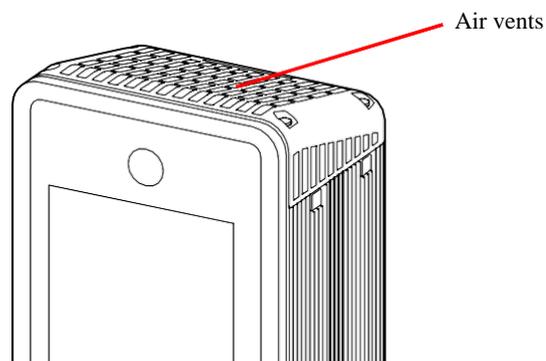
There are air vents at the top of NeoFace. Do not place any objects on NeoFace. If objects are placed, then NeoFace may fail.

Caution



Do not place any object on top of NeoFace.

Placing objects may block the vents causing fire or failure of NeoFace.



(3) Installation Environmental Conditions

Places suitable for the installation of NeoFace is as follows.

NeoFace can be used under the following installation environment conditions.

NeoFace is recommended to be installed such that there is no reflection on the camera image due to sunlight, sunset, and ceiling lamps.

| Items | Installation Environmental Conditions |
|-----------------------------------|---|
| Ambient temperature | 5 to 45°C |
| Storage temperature | -20 to 60°C |
| Ambient humidity (non-condensing) | 20 to 85% |
| Storage temperature range | 5 to 95% |
| Air borne dust | Should not be too dusty [0.3mg/m ³] JEITA IT-1004 A class B Conductive and hygroscopic dust should not be present IP54 compatible *1 |
| Corrosive gas | Should be an environment gas is not detected JEITA IT-1004 A class A |
| Earthquake resistance | Continuous 2.0m/s ² Short time 4.9m/s ² JEITA IT-1004 A classB |
| Impact resistance (XYZ) | Electricity ON 19.6 m/s ² Electricity OFF 98 m/s ² |
| Power supply voltage | AC100 to 240V ±10% (AC90 to 264V) ※2 |
| Power supply frequency | 50 / 60 Hz ± 3Hz |
| Power supply noise | 1kVP-P 50ns to 1μs pulse |
| Insulation resistance | 30MΩ (DC500V) |
| Insulation withstand voltage | 3.0 kV AC 1 minute |
| Leak current | Less than or equal to 1mA |
| Electrostatic yield strength | ±6 kV (Contact discharge), ±8 kV (Air discharge) |
| Momentary power failure | Less than or equal to 30ms (at rated voltage) |
| Grounding | Class D |
| Others | IP54 compatible *1 |

*1 Do not use the optional AC adapter outdoors without dust and water proof measures.

When using the AC adapter outdoors, take adequate measures such as placing in a dust proof/waterproof cabinet avoiding exposure to direct sunlight and rainwater.

*2 The power cord that is connected to the optional AC adapter cannot be plugged into the 200 V AC electric outlet.

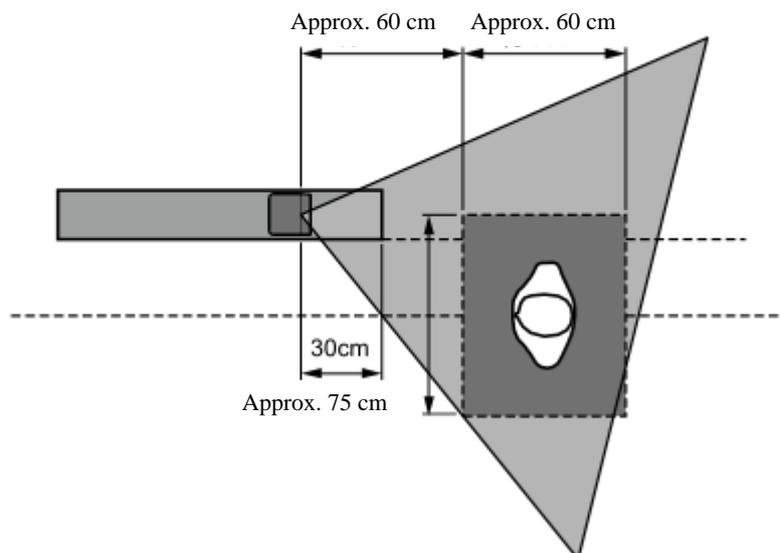
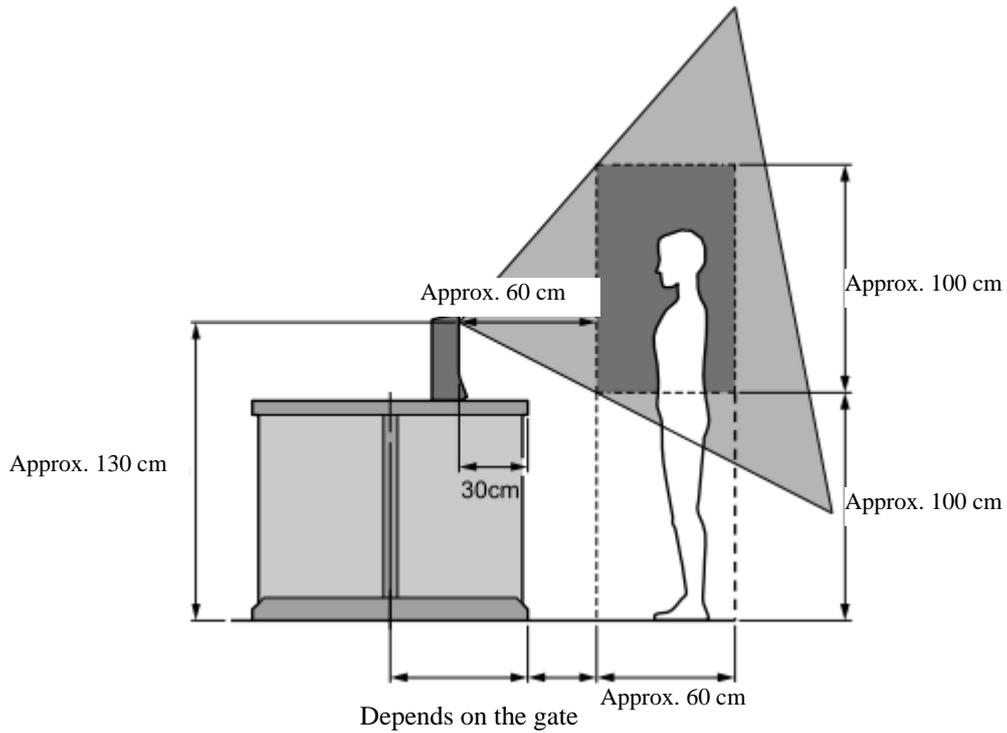
Connect to a 100 V AC outlet.

3.2 Recommended Installation Location

NeoFace is provided with recommended authentication area because of its use as a facial recognition terminal. Facial recognition can be performed smoothly by installing NeoFace with reference to the figure below.



If installed in a prohibited direction, then NeoFace may fail.



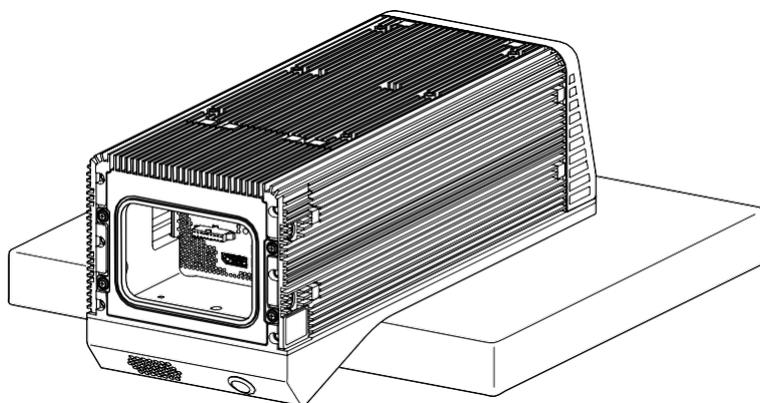
4. Connections

Connecting the peripheral equipment to NeoFace. Connectors to which various peripheral devices can be attached are provided in NeoFace.

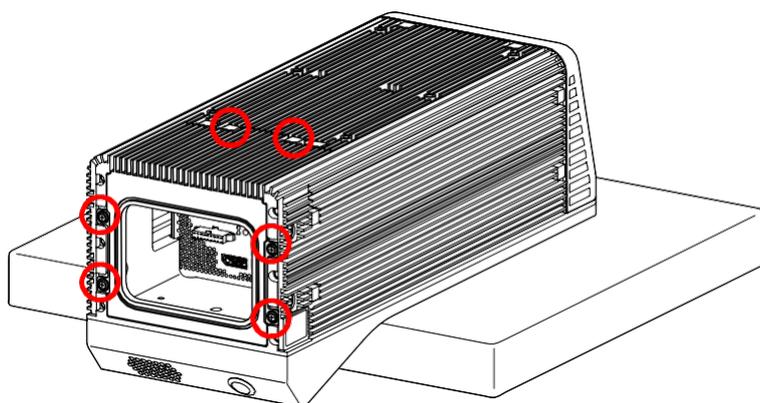
4.1 Bottom Panel

When connecting cables and connectors, remove the bottom panel with the following procedure. Wiring of the cables connected to the bottom of the main unit should be done after passing through the holes of the body panel removed beforehand.

1. To prevent damage to NeoFace or LCD, place the body with the front side down on a flat soft object



2. Remove the six screws that secure the bottom panel and remove the bottom panel
* The screws at the back side are covered with rubber covers. Remove the rubber covers and then loosen the screws.
Hex driver is required to remove the screws on the back panel, and plastic screwdriver is required to remove the screws at the bottom.

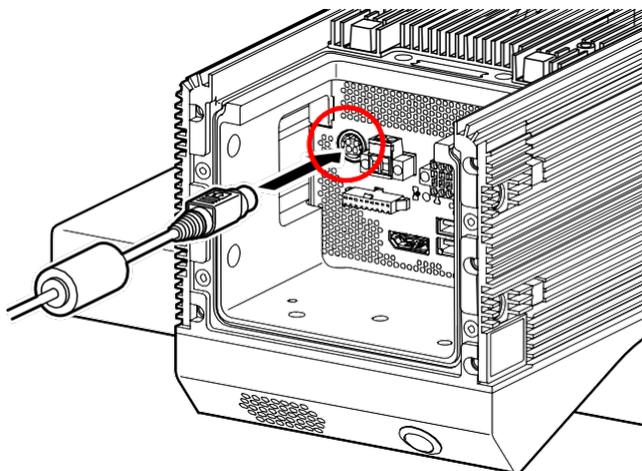


3. After connecting the peripheral devices, attach the bottom panel in the reverse order of removal.

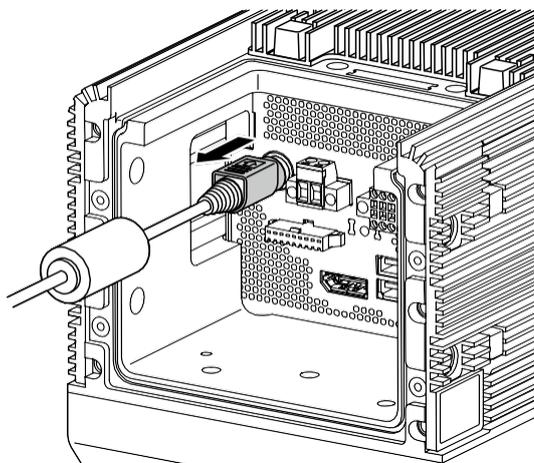
4.2 AC Adapter

Connect the AC adapter to NeoFace.

Pay attention to the plug orientation and connect the AC adapter

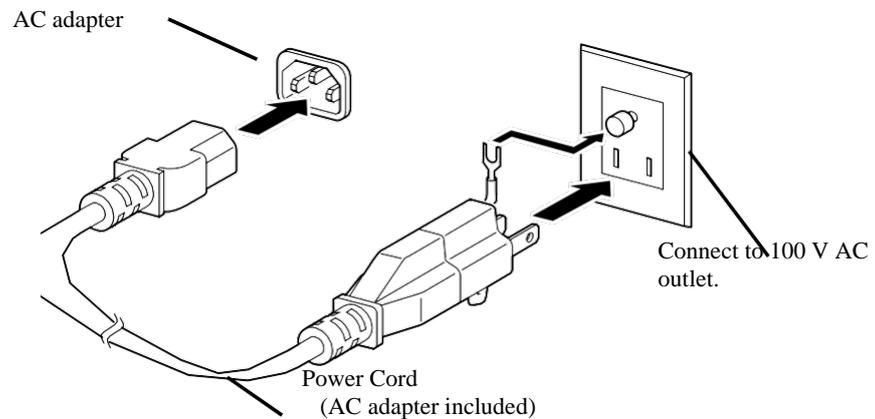


* When removing the plug of the AC adapter from the main unit, pull the plug of the connector towards you as shown in the following figure, and before pulling, ensure that the lock has been released.



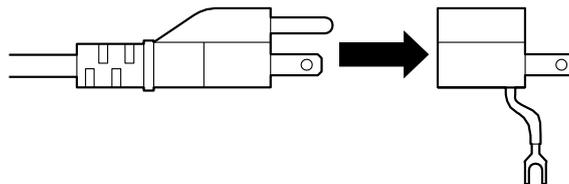
4.3 Power Cord

Connect the supplied power cord to the AC adapter.



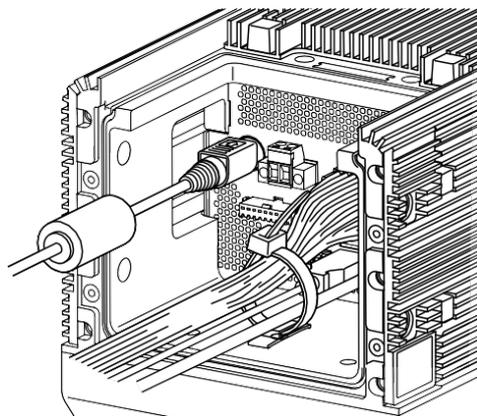
The power turns on automatically immediately ON connecting the power cord and then automatically turns OFF after a few seconds.

* Remove the conversion adapter when plugging into an outlet of 3-pin power plugs.



4.4 Tie Wrap

After connecting the tie wrap, connect the interface cables.



4.5 Interface Cable

After connecting the interface cable, connect the power cord.

Take the following precautions while connecting.

- Use shielded cable for LAN and USB cable,
- Please ensure that the plugs of the power cord are not pressed.

4.6 DIDO Connector

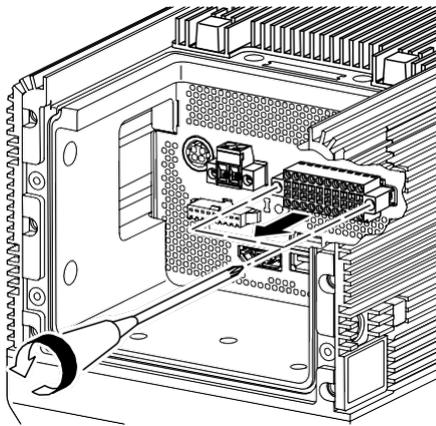
When using digital input and output, connect the cables following the procedure given below.



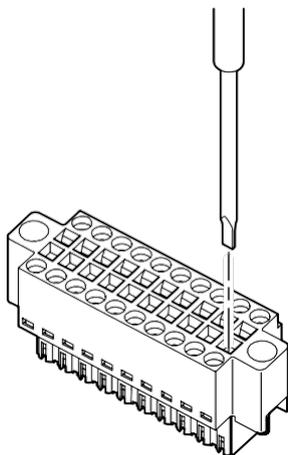
Tip

When connecting to the gate, connect to the D 02 pin.

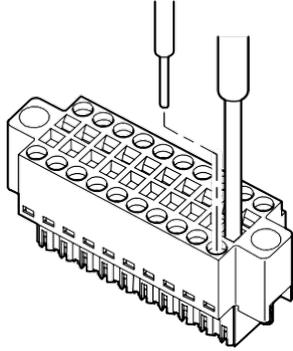
1. Remove the DIDO connector from the main unit



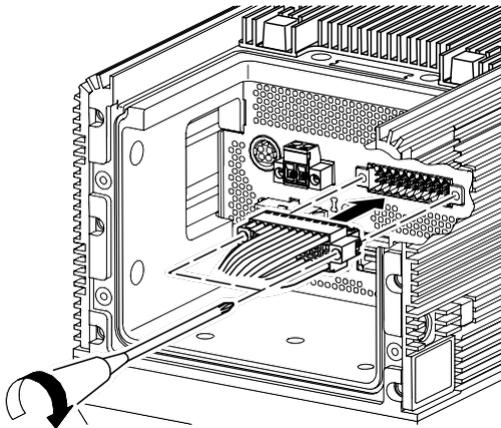
2. When a minus precision screwdriver is inserted into the hole of the square □ opening adjacent to the terminal to which must be attached, then the connection terminal opens.



3. Keeping the minus precision screwdriver inserted, insert the cable into the open connection terminal all the way to the bottom end of the connection terminal.



4. Remove the minus precision screwdriver
The connection terminal is closed and the cable is fixed.
5. Attach the connector to which the cable is connected to NeoFace.

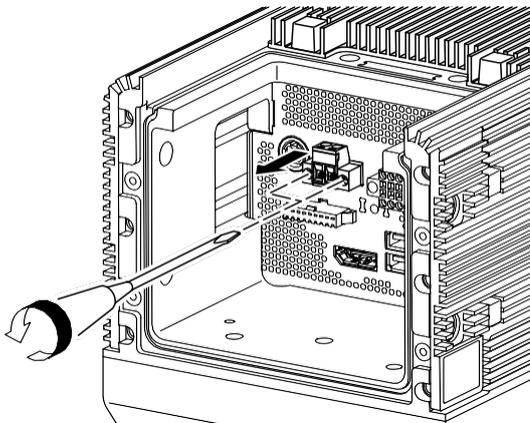


4.7 Power Supply Connector

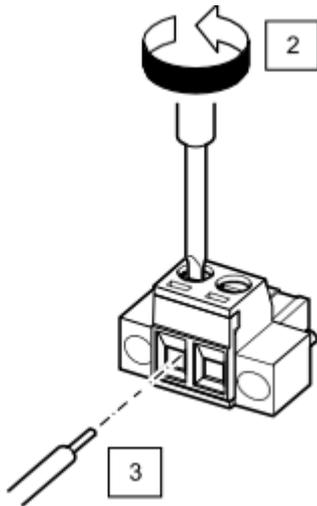
Follow the procedure given below to connect the cables when using the power supply connector (Terminal 2 Pin).

* The DC power source should have double/reinforce insulation before connecting to EUT.

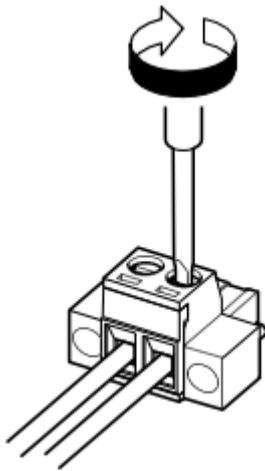
1. Loosen the left and right screws and remove the power supply connector (Terminal 2 Pin) from the main unit.



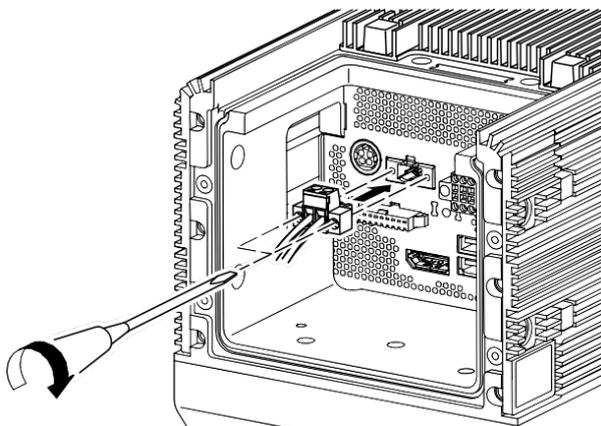
- The connection terminal whose screw at the top has been loosened will open.



- Insert the cable into the connection terminal
Insert the cable all the way into the bottom end of the connection terminal.



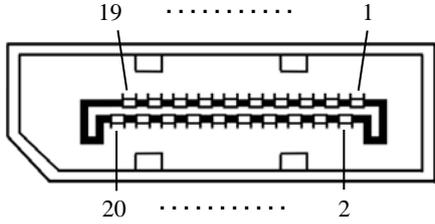
- Tighten the screw located at the top of the connection terminal
The connection terminal is closed and the cable is fixed.
- Attach the connector to which the cable is connected to NeoFace.



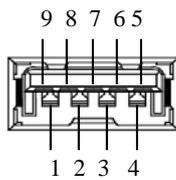
4.8 I/O Interface

USB and LAN can be disabled from the BIOS setup menu. For details and inquiries, please contact your sales representative.

(1) DisplayPort

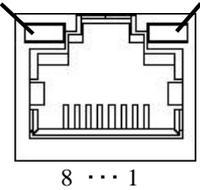
| Terminal number | Signal name | Pin connection |
|-----------------|-------------|--|
| 1 | Lane0+ |  |
| 2 | GND | |
| 3 | Lane0- | |
| 4 | Lane1+ | |
| 5 | GND | |
| 6 | Lane1- | |
| 7 | Lane2+ | |
| 8 | GND | |
| 9 | Lane2- | |
| 10 | Lane3+ | |
| 11 | GND | |
| 12 | Lane3- | |
| 13 | GND | |
| 14 | GND | |
| 15 | Aux+ | |
| 16 | GND | |
| 17 | Aux- | |
| 18 | HPD | |
| 19 | GND | |
| 20 | 3.3V | |

(2) USB 3.0 interface

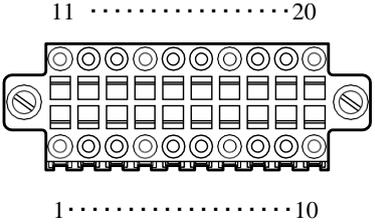
| Terminal number | Signal name | Pin connection |
|-----------------|-------------|--|
| 1 | +5V |  |
| 2 | D- | |
| 3 | D+ | |
| 4 | GND | |
| 5 | StdA_SSRX- | |
| 6 | StdA_SSRX+ | |
| 7 | GND | |
| 8 | StdA_SSTX- | |
| 9 | StdA_SSTX+ | |

(3) LAN interface (1000BASE-T)

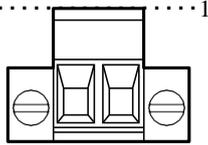
Connector: RJ45

| Terminal number | Signal name | Pin connection |
|-----------------|-------------|---|
| 1 | MDI0+ | <div style="display: flex; justify-content: space-between;"> LINK / ACT LED 1000 / 100 / 10 LED </div>  |
| 2 | MDI0- | |
| 3 | MDI1+ | |
| 4 | MDI1- | |
| 5 | MDI2+ | |
| 6 | MDI2- | |
| 7 | MDI3+ | |
| 8 | MDI3- | |

(4) DIDO Interface

| Terminal number | Signal name | Pin connection |
|-----------------|-------------|---|
| 1 | Reserve |  |
| 2 | Reserve | |
| 3 | DO2+ | |
| 4 | D_GPO2 | |
| 5 | Reserve | |
| 6 | Reserve | |
| 7 | Reserve | |
| 8 | Reserve | |
| 9 | Reserve | |
| 10 | GND | |
| 11 | Reserve | |
| 12 | GND | |
| 13 | Reserve | |
| 14 | GND | |
| 15 | Reserve | |
| 16 | GND | |
| 17 | EXT_PWR | |
| 18 | GND | |
| 19 | None | |
| 20 | None | |

(5) Power connector (Terminal 2 Pin) interface

| Terminal number | Signal name | Pin connection |
|-----------------|-------------|--|
| 1 | GND |  |
| 2 | DC_IN | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |

5. Setup

Three system configurations are possible with NeoFace Access Control.

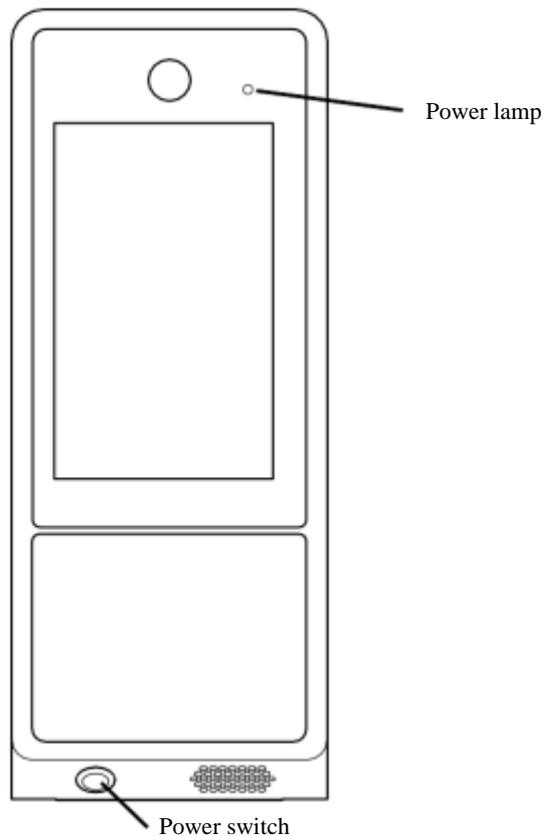
The maximum number of registrants for each configuration and terminals used for registration of persons entering and exiting are as shown in the table below.

| | Maximum number of registrants *Default user (Including NFAC administrators) | Terminals that registers persons entering and exiting |
|--|---|--|
| (1) NeoFace Access Control 1 unit operated | 5000 people | NeoFace Access Control (master) |
| (2) NeoFace Access Control 2 to 5 units operated (Master / slave configuration) | 5000 people | NeoFace Access Control (master) |
| (3) NeoFace Access Control Manager – NeoFace Access Control (to 100-unit configuration) | 10000 people | NeoFace Access Control Manager * Batch registration is possible |

The following method is used to turn ON the power supply.

Check that the AC adapter is properly connected and then press the power switch at the lower front side of NeoFace.

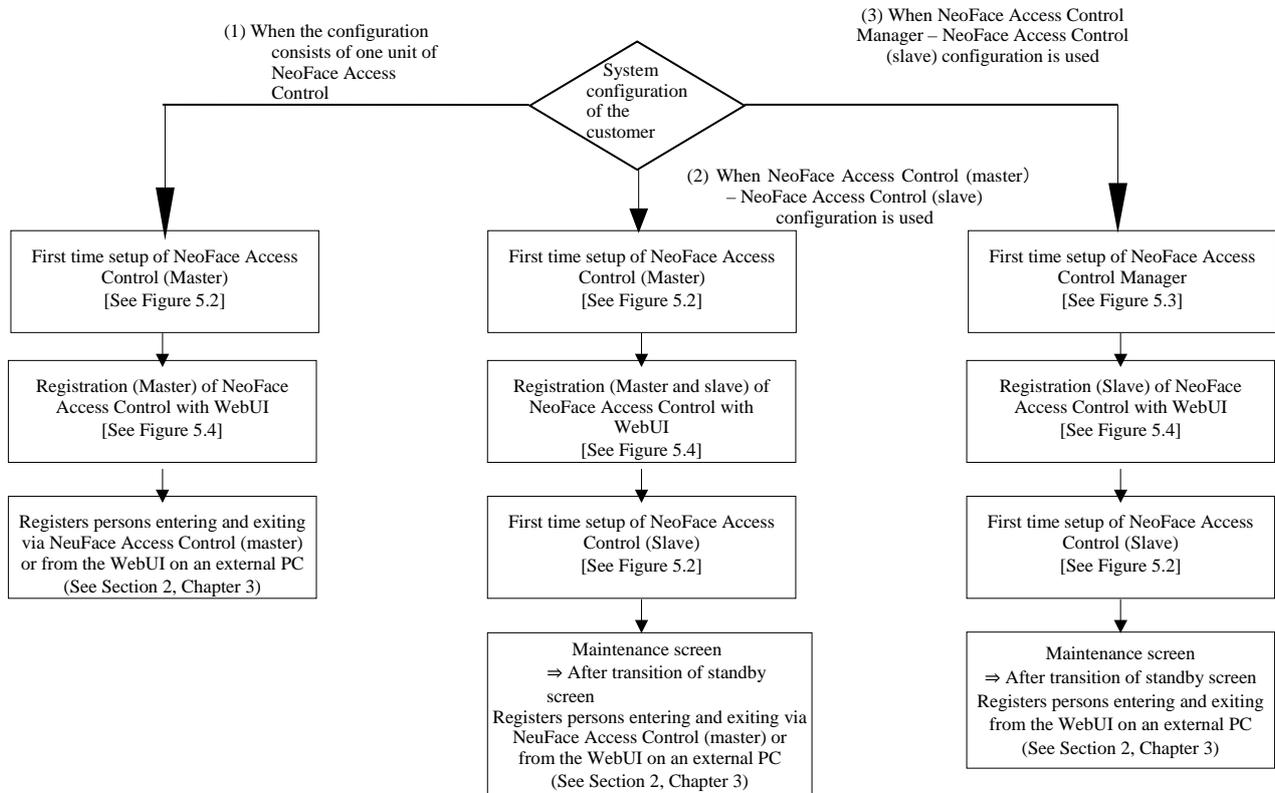
When the power supply is ON, power indicator lights up in green.



5.1 Setup Flow

Describes the setup flow for each configuration.

Please perform the setup according to the system configuration used by the customer.



5.2 Initial Setup

During factory shipment and when the recovery disc is used, the following screen is displayed after OS start-up and then the initial setup screen will be displayed.

Initial setup must be done with the network (LAN cable) connected.

Connect the LAN cable to the LAN 1 port of NeoFace Access Control.

* If the customers want to change the system configuration after completion of initial setup, NeoFace must be returned to the factory shipment state using the recovery disc and this procedure must be performed again.

5.2.1 Computer Name Setting

Setting the computer name.

Please enter the computer name.

By default, "NFAC - <part of MAC address>" is entered.

* The computer name can be up to 15 characters, "-" (cannot be set at the end or beginning)". Touch the "Next" button after completing the input.

5.2.2 Time Setting

Setting the time.

- To synchronize with Internet time server

Select "Synchronize with Internet time server" and then enter the server name.

* The server name can be input up to 64 characters, "-" (cannot be set at the beginning)".

- When not synchronizing with Internet time server

Select "Do not synchronize with Internet time server".

The current time is automatically input, please correct only if necessary. Touch the

"Next" button after completing the selection and input.

5.2.3 Network Settings

Setting the network.

- To acquire the IP address automatically, select "Obtain IP address automatically".
- To set the IP address manually, select "Use the following IP address", and enter the IP address, Subnet mask, and Default gateway.
- To acquire the DNS server address automatically, select "Obtain DNS server address automatically".
- To specify the DNS server address, select "Use the following DNS server address", and enter IP address of primary DNS server and secondary DNS server.

Touch the "Next" button after completing the selection and input.

NeoFace Access Control

ネットワーク設定を行い、「次へ」ボタンを押してください。

IPアドレスを自動的に取得する

次のIPアドレスを使う

*IPアドレス . . .

*サブネットマスク . . .

*ゲートウェイ . . .

DNSサーバのアドレスを自動的に取得する

次のDNSサーバのアドレスを使う

*優先DNSサーバ . . .

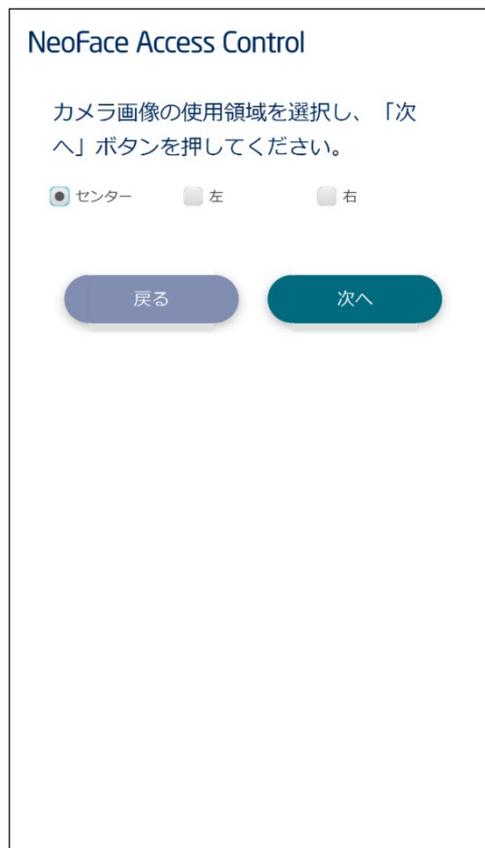
*代替DNSサーバ . . .

5.2.4 Usage Area Setting for Camera Image

Setting the camera image usage area.

- When the camera is facing the front towards the terminal, select "Center".
- When the camera is facing left towards the terminal, select "Right".
- * "Left" setting is not used and should not be selected.

Touch the "Next" button after completing the selection.



5.2.5 Linked System Setting

Settings for the linked system.

- If you do not want to link any system linkage, select the option "No".
- To link with Safeware / SecureFrontia system, select "Yes" and select the system to be linked.

Enter the IP address of the system to be linked and select the "Safeware / SecureFrontia" terminal that is connected as "parent machine" or "Child machine".

Touch the "Next" button after completing the selection and input.

The screenshot shows the 'NeoFace Access Control' settings interface. At the top, it says 'システム連携設定を行い、「次へ」ボタンを押してください。' (Perform system linkage settings and press the 'Next' button). Below this, there are three rows of settings:

- 'システム連携' (System Linkage) with two radio buttons: 'しない' (No) which is selected, and 'する' (Yes).
- '連携システム' (Linkage System) with a dropdown menu.
- '連携システムIP' (Linkage System IP) with a text input field.
- '親機/子機' (Parent/Child Machine) with a dropdown menu.

At the bottom, there are two buttons: '戻る' (Back) and '次へ' (Next).

5.2.6 Settings of Connected Gate and Door

Setting of gate and door to be connected.

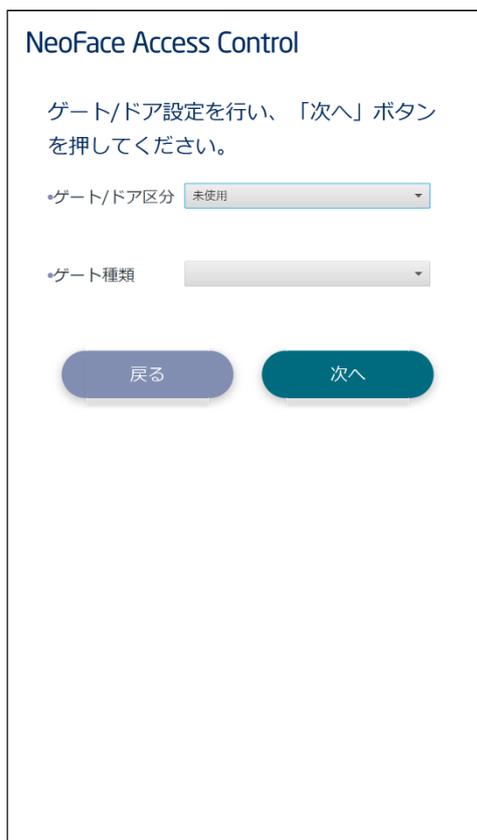
Set the gate and door classification.

- In the case of not connecting anything, select "Not used".
- When connecting to the gate, select "Gate".

Setting the gate type (gate manufacturer).

Please select the gate manufacturer to connect with the gate type.

Touch the "Next" button after completing the selection.



The screenshot shows a mobile application interface titled "NeoFace Access Control". Below the title, there is a Japanese instruction: "ゲート/ドア設定を行い、「次へ」ボタンを押してください。" (Perform gate/door settings and press the "Next" button). There are two dropdown menus: the first is labeled "ゲート/ドア区分" (Gate/Door Classification) and is currently set to "未使用" (Not used); the second is labeled "ゲート種類" (Gate Type) and is currently empty. At the bottom of the screen, there are two buttons: a grey "戻る" (Back) button and a teal "次へ" (Next) button.

5.2.7 Card Reader Settings

Setting the card reader.

Setting the type of card reader.

- In the case of not using the card reader, select "Not used".
- To use the internal card reader, select "Internal".
- To use an external card reader, select "External".
 - * When using an external card reader other than Safeware / SecureFrontia, please contact your sales representative as separate response is required.
 - * When using the following authentication mode (refer to 5.4.2, Chapter 2), do not set card reader type as "Not used".
 - Face and card linked authentication (walk-through)
 - Face and card authentication
 - Card authentication

Select the ID (NFC / FelicaD / FelicaS / QR / SAFEWARE / SECURE_FRONTIA) of the card reader to be used.

Touch the "Next" button after completing the selection and input.

The screenshot shows the 'NeoFace Access Control' settings screen. At the top, it says 'カードリーダー設定を行い、「次へ」ボタンを押してください。' (Set the card reader and press the 'Next' button). Below this, there are two dropdown menus: 'カードリーダーのタイプ' (Card reader type) set to '内蔵' (Built-in) and 'カードリーダーのID' (Card reader ID) set to 'NFC'. At the bottom, there are two buttons: '戻る' (Back) and '次へ' (Next).

5.2.8 Master and Slave Settings

Setting the master and slave settings for Neoface Access Control

- Select the "Master" option to use as a master terminal (used for registering user information).
- If a different master machine (or NeoFace Access Control Manager) is used for registration of end-users, then please select the "Slave" option.

Please enter the network address for connecting NeoFace.

Touch the "Next" button after completing the selection and input.

NeoFace Access Control

マスタ/スレーブ設定を行い、「次へ」ボタンを押してください。

マスタ
本機を利用者情報登録で使う場合に選択します

スレーブ
利用者を登録するマスタ機 (またはNeoFace Access Control Manager) がある場合に選択します

*ネットワーク
例: 192.168.0.0/24

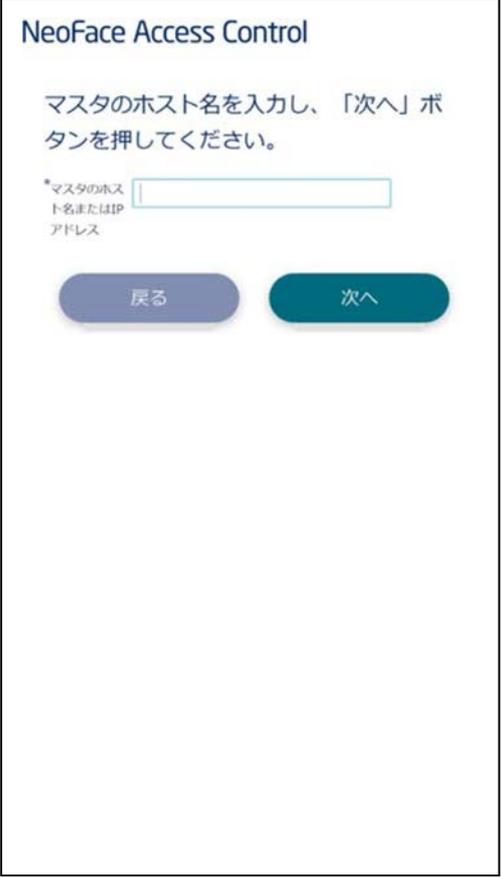
5.2.9 Database Synchronization Settings

Setting for synchronization of the Database.

* This screen will be displayed only if "Slave" is selected in section 5.2.8 of Chapter 2 Master and Slave.

Please enter the host name or the IP address of the Master.

Touch the "Next" button after completing the input.



The screenshot shows a mobile application interface titled "NeoFace Access Control". The main heading is "NeoFace Access Control". Below it, the instruction reads: "マスタのホスト名を入力し、「次へ」ボタンを押してください。" (Enter the master's host name and press the "Next" button). There is a text input field with a light blue border. To the left of the input field, the label reads: "*マスタのホスト名またはIPアドレス" (Master's host name or IP address). At the bottom of the screen, there are two buttons: a grey button labeled "戻る" (Back) and a teal button labeled "次へ" (Next).

5.2.10 Verifying Settings Content

Checking the setting contents.

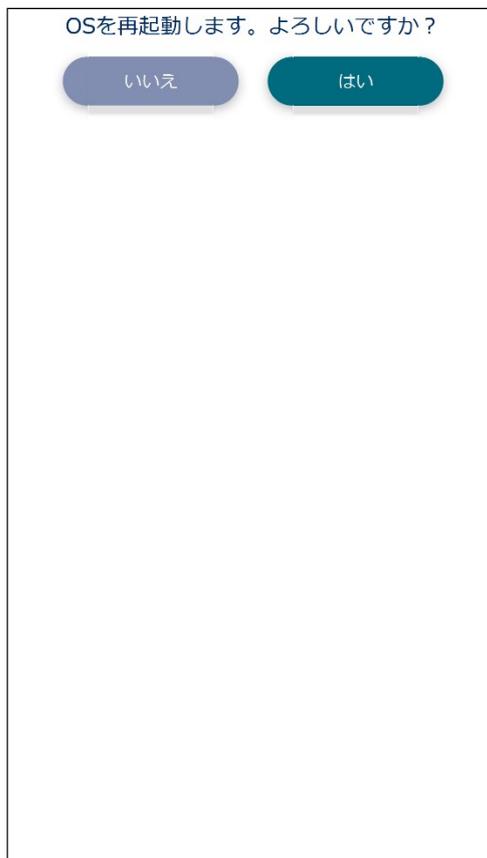
Check the displayed settings, if there is no discrepancy, please touch the "OK" button.



5.2.11 OS Restart

Reboot the OS so that the settings are incorporated.

Please touch the "Yes" button once this screen is displayed.



* Only when the slave is set in Section 5.2.8. of Chapter 2, touch the "Yes" button and reboot the OS, and since the same confirmation screen will be displayed, touch the "Yes" button.

5.3 Installation and Setup of NeoFace Access Control Manager

This procedure is necessary only if you are using the optional NeoFace Access Control Manager.

[Installation Preparation]

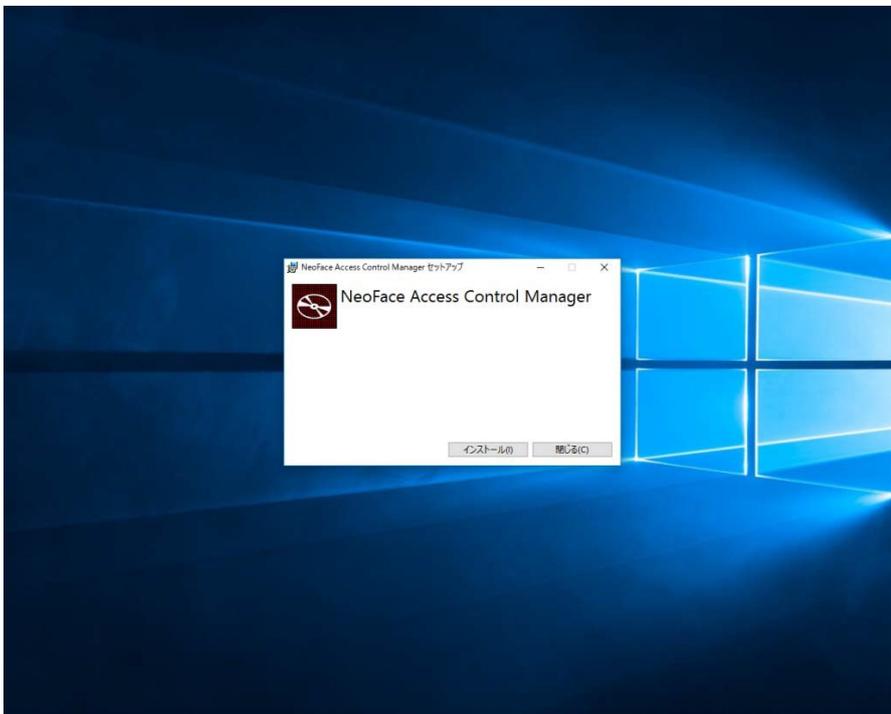
NeoFace Access Control Manager supports only Windows Server 2016.

Please ensure that JRE and PostgreSQL have not been installed in the computer on which you are planning to install.

* If JRE and PostgreSQL have already been installed, they must be uninstalled.

[Installation of NeoFace Access Control Manager] * Please ensure that this procedure is carried out by personnel with administrator privilege.

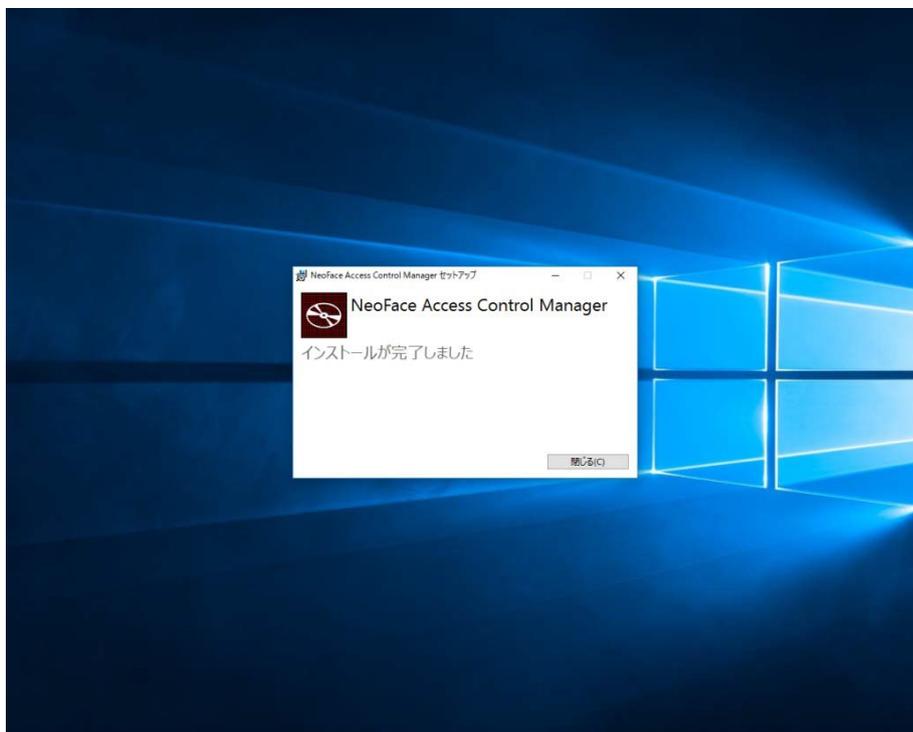
- 1 Insert the installation disk in the DVD drive.
- 2 Copy the installation file "NFACManagerInstaller.exe" of NeoFace Access Control Manager to any arbitrary folder.
- 3 Execute "NFACManagerInstaller.exe".
- 4 When the installation screen is displayed, press the "Installation (I)" button.



- 5 When the "Cancel (C)" button on the lower right-hand side of the installation display screen changes to "Closed (C)" means that the installation has been completed.

Please press "Close (C)" button.

* Even if the progress bar indicates 100%, installation has not yet been completed Please wait until the "Cancel (C)" button changes to "Close (C)".



- 6 Please restart the computer.

- 7 Next, perform the initial setup of NeoFace Access Control Manager. Please launch the command prompt and execute the following command.

```
cd C:\NEC\NFA\bin
```

```
FaceServerInitialSetup.vbs <The path of the shared folder used for maintaining logs> <DB synchronization setting network>
```

(Example) FaceServerInitialSetup.vbs \\xxxx.xxx\share\log 192.168.10.0/24

* The following log can be used to confirm if the initial setup of the installation process has been completed.

```
C:\NEC\NFA\log\NFA_FaceServerInitialSetupApp_log.csv
```

Installation is completed if "NeoFace Access Control Manager initial setup done." is displayed at during installation.

5.4 NeoFace Access Control Information Registration

In this section, register the information of NeoFace Access Control.

5.4.1 Login in With WebUI From an External PC

After connecting the external PC to a network that can access NeoFace Access Control, go to the following URL using a browser.

http://<Corresponding IP address of NeoFace Access control>/NFAC

compatible browser: Internet Explorer 11 or Chrome

Enter the user ID and password in the following login screen, and press the "Login" button.

* Login from WebUI is possible only for user ID with administrator privileges.

Since the following account is registered as an administrator in the initial state, please log in with this ID and password.

| Person entry/exit item | Settings information |
|------------------------|---|
| Person entry/exit ID | systemuser |
| Person entry/exit name | NFAC terminal administrator |
| Password | * Please refer to the initial password notification provided with NeoFace |
| Authority | Manager |
| Facial image | None |
| Entry and exit area | None |

* Modify the initial password from WebUI. (Section 3.2.1(a), Chapter 3 Updated Reference information on Persons Entering/Exiting)



5.4.2 NeoFace Access Control Registration

Registering new NeoFace Access Control information.

Press the "System menu" button at the top right-hand side of the screen, and select "NeoFace Access Control" from the menu displayed at the top of the screen.

From the menu displayed on the left side of the screen, select "NeoFace Access Control registration".

Input the NeoFace Access Control information.

| | Input contents | Description |
|--|---|--|
| Computer name * Mandatory | Computer name of terminal | Please enter the computer name set during the initial setup. |
| NeoFace Access Control name * Mandatory | Device name | Please enter a unique name to distinguish between the terminals. (Such 1F front gate 1) |
| IP address | Device IP address | Enter the IP address set with Initial setup, NeoFace Access Control product. * Note: Even if you change the IP address of this item, the IP address of the computer terminal will not change. Device IP address Change must be done from the network setting of the main unit. |
| Area * Mandatory | Area 1 to area 20 - In the case of initial setting In the event that you edited the area name, select from the edited area name | Select the area that has to be authenticated. Note: If area is not selected, authentication will not be done. |
| Master and slave settings | - Master - Slave | Please select whether the relevant terminal is master or slave. * Please select the one that matches the master and slave set during the initial setup. |
| Authentication mode *1 | Face and card authentication (Walk through) | Person who uses brings the card in contact with NeoFace will be authenticated with the face image photographed beforehand. |
| | Face and card authentication | After the card comes into contact with NeoFace, the facial image is captured and authenticated. |
| | Face only authentication (Walk through) | Authentication is performed as the person entering or exiting come near the camera. |
| | Face only authentication | Authentication is performed when the person entering or exiting touches the display screen. |
| | Card authentication | Authentication is performed when the card touches NeoFace. |
| Authentication accuracy | - Strict - Medium - Loose | Authentication can be set to three levels of strict, medium, or loose. * If you select "Card authentication" in the authentication mode, this item will not be valid. |
| Detection of mask and sunglasses | - ON - OFF | When this feature is in the ON mode, on detecting a person wearing masks or sunglasses, authentication can be set to failed. * If you select "Card authentication" in the authentication mode, this item will not be valid. |

*1 During initial setup of the card reader, if the "Card reader type" is set to unused, then the following authentication mode cannot be used.

- Face and card linked authentication (walk-through)
- Face and card authentication
- Card authentication

After completing the data entry, press the "Registration" button.

NeoFace Access Control

ログアウト ユーザーメニュー

NeoFace Access Control エリア・属性管理 メール管理 システム情報管理

NeoFace Access Control 更新
NeoFace Access Control 削除
NeoFace Access Control 登録

このNeoFace Access Control情報の編集が終わったら、「登録」ボタンを押してください。

• コンピューター名※必須

• NeoFace Access Control名※必須

• IPアドレス
※空白の場合はDHCPと判断します

• エリア※必須 **エリア選択**

• NeoFace Access Control マスタ スレーブ

• 認証モード

• 認証精度 厳密 真ん中 緩め

• マスク・サングラス検知 On Off

キャンセル 登録

If you select the "Area selection" button, the following screen will be displayed, select at least one target area to be

NeoFace Access Control

ログアウト ユーザーメニュー

NeoFace Access Control エリア・属性管理 メール管理 システム情報管理

NeoFace Access Control 更新
NeoFace Access Control 削除
NeoFace Access Control 登録

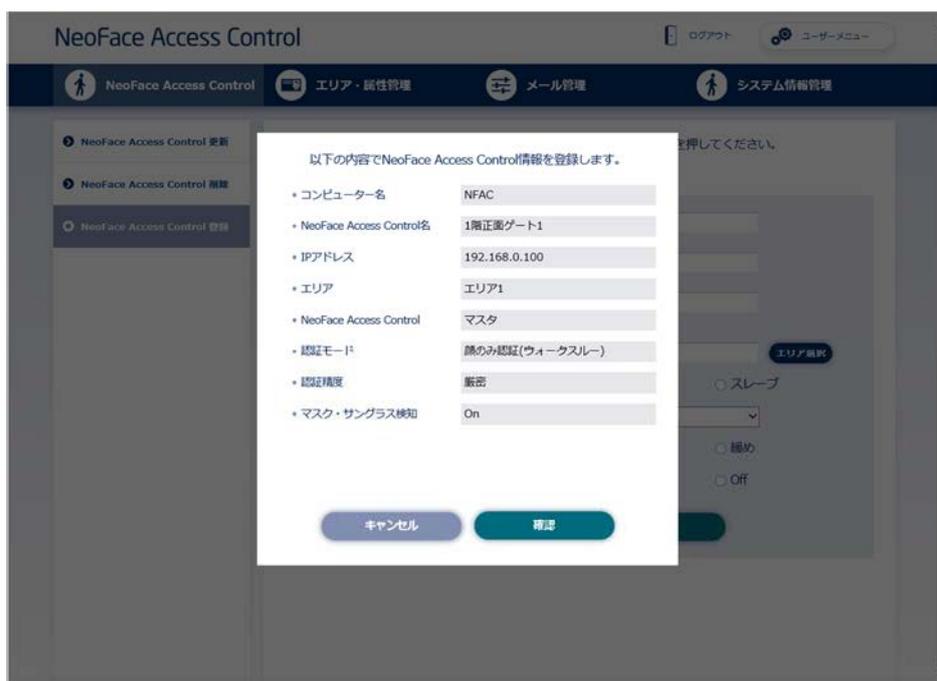
NeoFace Access Controlを設置するエリアを選択し、「決定」ボタンを押してください。

| エリアID | エリア名 |
|-----------------------------|-------|
| <input type="radio"/> 00010 | エリア1 |
| <input type="radio"/> 00020 | エリア2 |
| <input type="radio"/> 00030 | エリア3 |
| <input type="radio"/> 00040 | エリア4 |
| <input type="radio"/> 00050 | エリア5 |
| <input type="radio"/> 00060 | エリア6 |
| <input type="radio"/> 00070 | エリア7 |
| <input type="radio"/> 00080 | エリア8 |
| <input type="radio"/> 00090 | エリア9 |
| <input type="radio"/> 00100 | エリア10 |
| <input type="radio"/> 00110 | エリア11 |
| <input type="radio"/> 00120 | エリア12 |
| <input type="radio"/> 00130 | エリア13 |
| <input type="radio"/> 00140 | エリア14 |
| <input type="radio"/> 00150 | エリア15 |
| <input type="radio"/> 00160 | エリア16 |
| <input type="radio"/> 00170 | エリア17 |
| <input type="radio"/> 00180 | エリア18 |
| <input type="radio"/> 00190 | エリア19 |
| <input type="radio"/> 00200 | エリア20 |

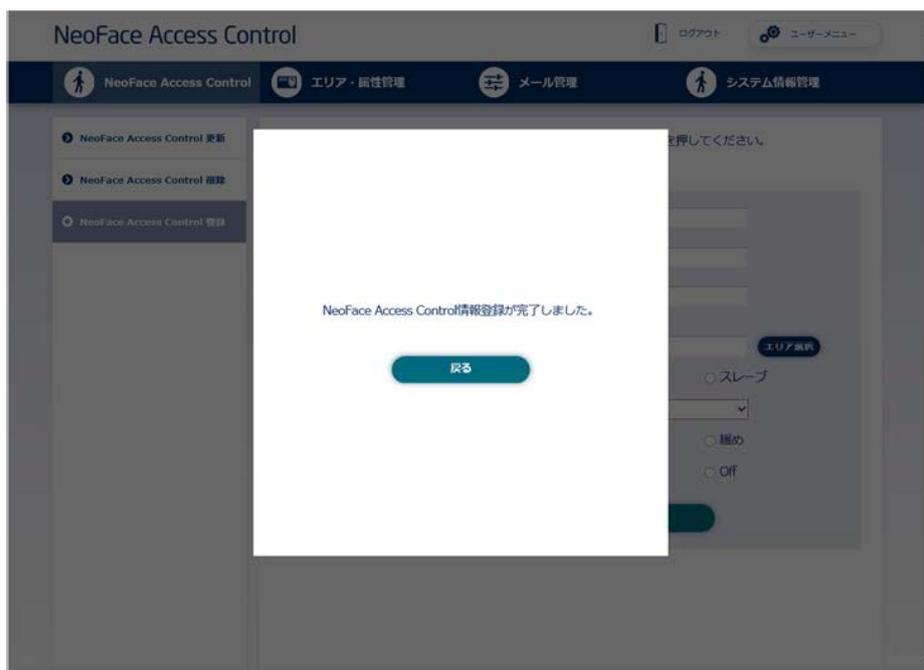
キャンセル 決定

authenticated, and then press the "Confirm" button.

Since the contents of the data are displayed for confirmation, press the "Confirm" button if the contents to be registered are correct.



The following screen will be displayed on completion of registration.



NeoFace Access Control
EGW101

User's Guide

First edition, January 2018
NEC Corporation, 5-7-1 Shiba,
Minato-ku, Tokyo
TEL: 044-455-8706 (board number)

You can obtain a new copy of the User's Guide if pages are missing or not in order

© NEC Corporation 2018

This guide should not be copied or modified without the permission of NEC Corporation. Unauthorized reproduction of a part or all the contents of this guide without permission is prohibited. The contents of this User's Guide are subject to change without prior notice.