OMRON

Programmable Terminal

NA-series

Soft-NA

User's Manual

NA-RTLD□□

SYSMAC
always in control

V126-E1-04

NOTE

Trademarks

Copyrights

Introduction

Thank you for purchasing a Soft-NA.

This manual contains information that is necessary to use the Soft-NA. Please read this manual and make sure you thoroughly understand the functionalities and performance of the NA-series Programmable Terminal before you attempt to use it for constructing the system.

Keep this manual in a safe place where it will be available for reference during operation.

This manual mainly describes the portions that are different from the NA5- □□□□□□□.

Intended Audience

This manual is intended for the following personnel, who must also have knowledge of electrical systems (an electrical engineer or the equivalent).

- Personnel in charge of introducing FA systems.
- Personnel in charge of designing FA systems.
- Personnel in charge of installing and maintaining FA systems.
- Personnel in charge of managing FA systems and facilities.

Applicable Products

This manual is applicable to the following products.

- Soft-NA

Relevant Manuals

The basic information required to use an NA-series PT is provided in the following four manuals.

- *NA-series Programmable Terminal Hardware(-V1) User's Manual* (Cat. No. V125)
- *NA-series Programmable Terminal Software User's Manual* (Cat. No. V118)
- *NA-series Programmable Terminal Device Connection User's Manual* (Cat. No. V119)
- *NA-series Programmable Terminal Soft-NA User's Manual* (Cat. No. V126)

Operations are performed from the Sysmac Studio Automation Software.

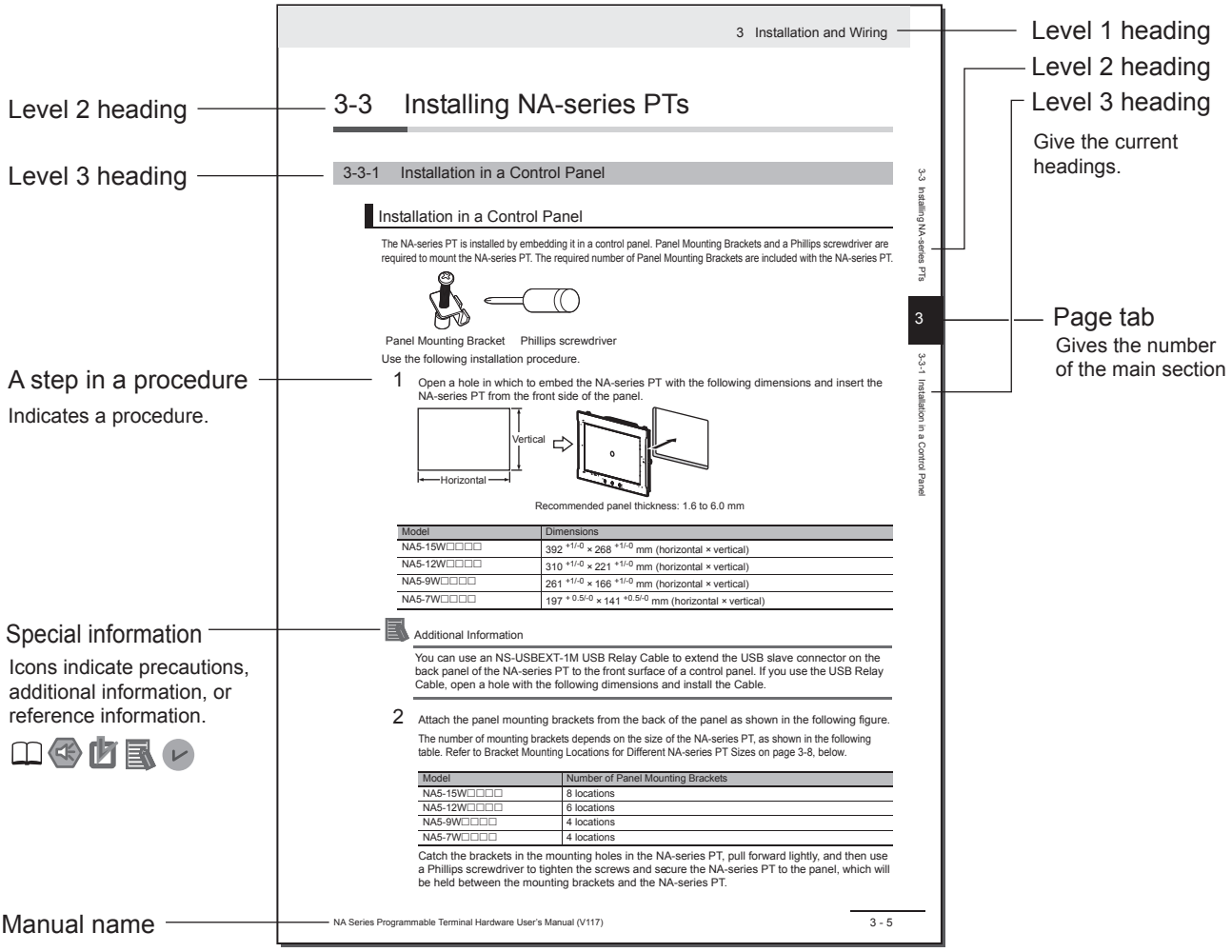
Refer to the *Sysmac Studio Version 1 Operation Manual* (Cat. No. W504) for information on the Sysmac Studio.

Other manuals may be referenced for specific system configurations and applications.

Manual Structure

Page Structure and Markings

The following page structure is used in this manual.



Note This illustration is provided only as a sample. It may not literally appear in this manual.

Icons

The icons used in this manual have the following meanings.

Precautions for Safe Use

Precautions on what to do and what not to do to ensure safe usage of the product.

Precautions for Correct Use

Indicates precautions on what to do and what not to do to ensure proper operation and performance.

Additional Information

Additional information to read as required.

This information is provided to increase understanding or make operation easier.

Version Information

Information on differences in specifications and functionality with different versions is given.

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Terms and Conditions Agreement

Warranty, Limitations of Liability

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NEVER USE THE PRODUCT FOR AN APPLICATION INVOLVING SERIOUS RISK TO LIFE OR PROPERTY OR IN LARGE QUANTITIES WITHOUT ENSURING THAT THE SYSTEM AS A WHOLE HAS BEEN DESIGNED TO ADDRESS THE RISKS, AND THAT THE OMRON PRODUCT(S) IS PROPERLY RATED AND INSTALLED FOR THE INTENDED USE WITHIN THE OVERALL EQUIPMENT OR SYSTEM.

Programmable Products

Omron Companies shall not be responsible for the user's programming of a programmable Product, or any consequence thereof.

Disclaimers

Performance Data

Data presented in Omron Company websites, catalogs and other materials is provided as a guide for the user in determining suitability and does not constitute a warranty. It may represent the result of Omron's test conditions, and the user must correlate it to actual application requirements. Actual performance is subject to the Omron's Warranty and Limitations of Liability.

Change in Specifications

Product specifications and accessories may be changed at any time based on improvements and other reasons. It is our practice to change part numbers when published ratings or features are changed, or when significant construction changes are made. However, some specifications of the Product may be changed without any notice. When in doubt, special part numbers may be assigned to fix or establish key specifications for your application. Please consult with your Omron's representative at any time to confirm actual specifications of purchased Product.

Errors and Omissions

Information presented by Omron Companies has been checked and is believed to be accurate; however, no responsibility is assumed for clerical, typographical or proofreading errors or omissions.

Safety Precautions

Definition of Precautionary Information

The following notation is used in this manual to provide precautions required to ensure safe usage of the Soft-NA. The safety precautions that are provided are extremely important to safety. Always read and heed the information provided in all safety precautions.

The following notations are used.

⚠ WARNING	Indicates a potentially hazardous situation which, if not avoided, may result in minor or moderate injury or at the worst, serious injury or death. Additionally, there may be severe property damage.
⚠ Caution	Indicates a potentially hazardous situation which, if not avoided, may result in minor or moderate injury, or property damage.

Precautions for Safe Use
Indicates precautions on what to do and what not to do to ensure safe usage of the product.

Precautions for Correct Use
Indicates precautions on what to do and what not to do to ensure proper operation and performance.

Symbols

	The circle and slash symbol indicates operations that you must not do. The specific operation is shown in the circle and explained in text. This example indicates prohibiting disassembly.
	The triangle symbol indicates precautions (including warnings). The specific operation is shown in the triangle and explained in text. This example indicates a general precaution.
	The filled circle symbol indicates operations that you must do. The specific operation is shown in the circle and explained in text. This example shows a general precaution for something that you must do.

WARNING

⚠ WARNING	
Always ensure that the person in charge confirms that installation, inspection, and maintenance were properly performed for the Soft-NA. "Person in charge" refers to individuals qualified and responsible for ensuring safety during machine design, installation, operation, maintenance, and disposal.	
Ensure that installation and post-installation checks of the Soft-NA are performed by persons in charge who possess a thorough understanding of the machinery to be installed.	
Do not use input functions such as the touch panel or function keys of the Soft-NA in applications that involve human life or that may result in serious injury, or for emergency stop switches.	
When you use the touch panel as the input device of the Soft-NA, do not press two points or more on the touch panel at the same time. Touching two points or more interrupts normal touch panel operations.	

Security Measures

Anti-virus protection

Install the latest commercial-quality antivirus software on the computer connected to the control system and maintain to keep the software up-to-date.

Security measures to prevent unauthorized access

Take the following measures to prevent unauthorized access to our products.

- Install physical controls so that only authorized personnel can access control systems and equipment.
- Reduce connections to control systems and equipment via networks to prevent access from untrusted devices.
- Install firewalls to shut down unused communications ports and limit communications hosts and isolate control systems and equipment from the IT network.
- Use a virtual private network (VPN) for remote access to control systems and equipment.
- Adopt multifactor authentication to devices with remote access to control systems and equipment.
- Set strong passwords and change them frequently.
- Scan virus to ensure safety of USB drives or other external storages before connecting them to control systems and equipment.

Data input and output protection

Validate backups and ranges to cope with unintentional modification of input/output data to control systems and equipment.

- Checking the scope of data
- Checking validity of backups and preparing data for restore in case of falsification and abnormalities
- Safety design, such as emergency shutdown and fail-soft operation in case of data tampering and abnormalities

Data recovery

Backup data and keep the data up-to-date periodically to prepare for data loss.

When using an intranet environment through a global address, connecting to an unauthorized terminal such as a SCADA, HMI or to an unauthorized server may result in network security issues such as spoofing and tampering. You must take sufficient measures such as restricting access to the terminal, using a terminal equipped with a secure function, and locking the installation area by yourself.

When constructing an intranet, communication failure may occur due to cable disconnection or the influence of unauthorized network equipment. Take adequate measures, such as restricting physical access to network devices, by means such as locking the installation area.

When using a device equipped with the SD Memory Card function, there is a security risk that a third party may acquire, alter, or replace the files and data in the removable media by removing the removable media or unmounting the removable media.

Please take sufficient measures, such as restricting physical access to the Controller or taking appropriate management measures for removable media, by means of locking the installation area, entrance management, etc., by yourself.

Precautions for Safe Use

Precaution

- When connecting to devices, or setting up the PC on which the Soft-NA is to be installed, thoroughly read the related manuals as well.
- Follow the general usage method of Windows.
- Do not install unnecessary applications on the PC on which the Soft-NA is to be installed.
- End all other applications that are not directly related to the use of the Soft-NA.
- If the hard disk or printer connected to the PC is being shared with another PC over the network, cancel the sharing.
- The whole system may stop depending on how the Soft-NA is started or exited. Start and exit the Soft-NA according to the specified procedure.
- To ensure the system's safety, before running the system, make sure to incorporate a program that periodically calls the operating signal at the host side and can confirm that the Soft-NA is operating normally.
- Do not perform any undesired operations on the input device when the backlight is not lit or when the display does not appear.
- When shutting down or restarting your PC, or switching the Windows user, be sure to first confirm the safety of the system.
- Initialize the project after confirming that the project being used is backed up at the Sysmac Studio side.
- Exit the Soft-NA according to the specified procedure. While the Soft-NA is running, do not forcibly exit it from the Task Manager or turn off the power supply of the PC without shutting down Windows. Information such as history and settings will not be saved correctly, which may result in an error when the Soft-NA is starting up next time and startup to become no longer possible.
- Configure the system so that Windows will shut down properly in the event of a power interruption occurring on the PC on which the Soft-NA is used.
- While uploading or downloading a project or a system program, do not perform the following operations. Such operations may corrupt the project or the system program.
  - Forcibly exiting the Soft-NA
  - Removing the USB Memory or SD memory card
  - Disconnecting the communication path between the support software and Soft-NA
- Start actual system application only after confirming normal operation of the system including storage medium such as USB memory and SD memory card.
- Do not perform the following operations when accessing USB devices or SD memory card.
  - Exiting the Soft-NA
  - Pulling out the USB devices or SD memory card
- Start actual system application only after sufficiently checking project, subroutine and the operation of the program at the connected device side.
- If you use multithread execution of subroutines, start the actual system application only after sufficiently checking the operation of the program for multithread execution.
- To safely use the numeric input function, be sure to use the function for upper and lower limit settings.
- Operate the objects on Soft-NA after confirming the safety of the system.
- If the objects on the Soft-NA are pressed consecutively at a high speed, the signals may not be entered. Make sure to go on the next input operation after confirming one input.
- Do not attempt to disassemble, repair, or modify the product.
- The local authorities may lay down rules and regulations for the dispose of the product. Dispose of the product according to local ordinances as they apply.
- Continuous 24-hour operation of the product is not guaranteed. Do not use this product in a system for which high availability is required.

Precautions for Correct Use

- **Do not install or store the Soft-NA in any of the following locations:**

  Locations subject to severe changes in temperature

  Locations subject to temperatures or humidity outside the range specified in the specifications

  Locations subject to condensation as a result of high humidity

  Locations subject to corrosive or flammable gases

  Locations subject to strong shock or vibration

  Locations that are outdoors and subject to direct wind and rain

  Locations subject to strong ultraviolet light

  Locations subject to dust

  Locations subject to direct sunlight

  Locations subject to splashing oil or chemicals

- **Take appropriate and sufficient countermeasures when installing systems in the following locations:**

  Locations subject to static electricity or other forms of noise

  Locations subject to strong electric field or magnetic field

  Locations close to power supply lines

  Locations subject to possible exposure to radioactivity

Regulations and Standards

Overseas Usage

As for the Soft-NA, when exporting (or supplying to non-residents) goods (or technologies) requiring an export license specified according to the Foreign Exchange and Foreign Trade Control Act, or an approval, it is necessary to obtain an export license based on the act, or an approval (or permission for service transactions).

Conformance to EMC Regulations

Concepts

NA-series PTs are industrial electrical devices that are incorporated into various types of machines and manufacturing equipment. The products conform to the relevant standards so that the machines and equipment incorporating the Omron products can comply with EMC Regulations more easily.

Refer to the OMRON website (www.ia.omron.com) or ask your OMRON representative for the most recent standards to which our products conform.

To ensure that your machine or equipment complies with EMC regulations, please observe the following precautions.

- The NA Unit is defined as an in-panel device and must be installed within a control panel.
- NA-series PTs complies with the emission standards. For the radiated emission requirements, in particular, please note that the actual emission varies depending on the configuration of the control panel to be used, the connected devices, and wiring methods. Therefore, customers themselves must confirm that the entire machine or equipment conforms to EMC regulations, even you are using a device that conforms to EMC regulations.
- You must use reinforced insulation or double insulation for the DC power supplies connected to the NA Unit.

Caution:

This equipment is not intended for use in residential environments and may not provide adequate protection to radio reception in such environments.

Conformance to KC Standards

When you use this product in South Korea, observe the following precautions.

사 용 자 안 내 문
이 기기는 업무용 환경에서 사용할 목적으로 적합성평가를 받은 기기로서 가정용 환경에서 사용하는 경우 전파간섭의 우려가 있습니다.

This product meets the electromagnetic compatibility requirements for business use. There is a risk of radio interference when this product is used in home.

Related Manuals

The following manuals are related to the Soft-NA. Use these manuals for reference.

Manual name	Cat. No.	Model	Application	Description
NA-series Programmable Terminal Hardware(-V1) User's Manual	V125	NA5-□W□□□□-V1	Learning the specifications and settings required to install an NA-series PT and connect peripheral devices.	Information is provided on NA-series PT specifications, part names, installation procedures, and procedures to connect an NA Unit to peripheral devices. Information is also provided on maintenance after operation and troubleshooting.
NA-series Programmable Terminal Software User's Manual	V118	NA5-□W□□□□ (-V1)	Learning about NA-series PT pages and object functions.	NA-series PT pages and object functions are described.
NA-series Programmable Terminal Device Connection User's Manual	V119	NA5-□W□□□□ (-V1)	Learning the specifications required to connect devices to an NA-series PT.	Information is provided on connection procedures and setting procedures to connect an NA-series PT to a Controller or other device.
NA-series Programmable Terminal Startup Guide	V120	NA5-□W□□□□	Learning in concrete terms information required to install and start the operation of an NA-series PT.	The part names and installation procedures are described followed by page creation and transfer procedures with the Sysmac Studio. Also operation, maintenance, and inspection procedures after the project is transferred are described. Sample screen captures are provided as examples.
NX-series CPU Unit Hardware User's Manual	W535	NX701-□□□□	Learning the basic specifications of the NX-series CPU Units, including introductory information, designing, installation, and maintenance. Mainly hardware information is provided.	An introduction to the entire NX-series system is provided along with the following information on the CPU Unit. • Features and system configuration • Introduction • Part names and functions • General specifications • Installation and wiring • Maintenance and inspection Use this manual together with the *NJ/NX-series CPU Unit Software User's Manual* (Cat. No.W501).

Manual name	Cat. No.	Model	Application	Description
NJ-series CPU Unit Hardware User's Manual	W500	NJ501-□□□□ NJ301-□□□□ NJ101-□□□□	Learning the basic specifications of the NJ-series CPU Units, including introductory information, designing, installation, and maintenance. Mainly hardware information is provided.	An introduction to the entire NJ-series system is provided along with the following information on a Controller built with a CPU Unit. • Features and system configuration • Introduction • Part names and functions • General specifications • Installation and wiring • Inspection and maintenance Use this manual together with the *NJ-series CPU Unit Software User's Manual* (Cat. No. W501).
NJ/NX-series CPU Unit Software User´s Manual	W501	NX701-□□□□ NX1P2-□□□□□□ NX102-□□□□ NJ501-□□□□ NJ301-□□□□ NJ101-□□□□	Learning how to program and set up an NJ/NX-series CPU Unit. Mainly software information is provided.	Provides the following information on a Controller built with an NJ/NX-series CPU Unit. • CPU Unit operation • CPU Unit features • Initial settings • Programming based on IEC 61131-3 language specifications
NJ/NX-series Instructions Reference Manual	W502	NX701-□□□□ NX102-□□□□ NX1P2-□□□□□□ NJ501-□□□□ NJ301-□□□□ NJ101-□□□□	Learning detailed specifications on the basic instructions of an NJ/NX-series CPU Unit.	The instructions in the instruction set (IEC 61131-3 specifications) are described.
NJ/NX-series Troubleshooting Manual	W503	NX701-□□□□ NX102-□□□□ NX1P2-□□□□□□ NJ501-□□□□ NJ301-□□□□ NJ101-□□□□	Learning about the errors that may be detected in an NJ/NX-series Controller.	Concepts on managing errors that may be detected in an NJ/NX-series Controller and information on individual errors are described.
Sysmac Studio Version 1 Operation Manual	W504	SYSMAC-SE2□□□	Learning about the operating procedures and functions of the Sysmac Studio.	The operating procedures of the Sysmac Studio are described.
NY-Series Industrial Box PC User's Manual	W553	NYB□□-□1□□□	Learning the basic specifications of the NY-series Industrial Box PCs, including introductory information, designing, installation, and maintenance.	An introduction to the entire NY-series system is provided along with the following information on the Industrial Box PC. • Features and system configuration • Introduction • Part names and functions • General specifications • Installation and wiring • Maintenance and inspection

Manual name	Cat. No.	Model	Application	Description
NY-Series Industrial Panel PC User's Manual	W555	NYP□□-□1□□□-□ □WC100□	Learning the basic specifications of the NY-series Industrial Panel PCs, including introductory information, designing, installation, and maintenance.	An introduction to the entire NY-series system is provided along with the following information on the Industrial Panel PC. • Features and system configuration • Introduction • Part names and functions • General specifications • Installation and wiring • Maintenance and inspection
NY-Series IPC Machine Controller Industrial Box PC Hardware User's Manual	W556	NY512-1□□□	Learning the basic specifications of the NY-series Industrial Box PCs, including introductory information, designing, installation, and maintenance. Mainly hardware information is provided.	An introduction to the entire NY-series system is provided along with the following information on the Industrial Box PC. • Features and system configuration • Introduction • Part names and functions • General specifications • Installation and wiring • Maintenance and inspection
NY-Series IPC Machine Controller Industrial Panel PC Hardware User's Manual	W557	NY532-1□□□	Learning the basic specifications of the NY-series Industrial Panel PCs, including introductory information, designing, installation, and maintenance. Mainly hardware information is provided.	An introduction to the entire NY-series system is provided along with the following information on the Industrial Panel PC. • Features and system configuration • Introduction • Part names and functions • General specifications • Installation and wiring • Maintenance and inspection
NY-Series IPC Machine Controller Industrial Panel PC / Industrial Box PC Software User's Manual	W558	NY532-1□□□ NY512-1□□□	Learning how to program and set up the Controller functions of an NY-series Industrial PC.	The following information is provided on the NY-series Controller functions. • Controller operation • Controller features • Controller settings • Programming based on IEC 61131-3 language specifications
NY-Series Instructions Reference Manual	W560	NY532-1□□□ NY512-1□□□	Learning detailed specifications on the basic instructions of an NY-series Industrial PC.	The instructions in the instruction set (IEC 61131-3 specifications) are described.
NY-Series Troubleshooting Manual	W564	NY532-1□□□ NY512-1□□□	Learning about the errors that may be detected in an NY-series Industrial PC.	Concepts on managing errors that may be detected in an NY-series Controller and information on individual errors are described.

Manual name	Cat. No.	Model	Application	Description
NX-series NX1P2 CPU Unit Hardware User's Manual	W578	NX1P2-□□□□	Learning the basic specifications of the NX-series NX1P2 CPU Units, including introductory information, designing, installation, and maintenance. Mainly hardware information is provided.	An introduction to the entire NX1P system is provided along with the following information on the NX1P2 CPU Unit. • Features and system configuration • Introduction • Part names and functions • General specifications • Installation and wiring • Maintenance and inspection
NX-series NX1P2 CPU Unit Built-in I/O and Option Board User's Manual	W579	NX1P2-□□□□	Learning about the details of functions only for an NX-series NX1P2 CPU Unit and an introduction of functions for an NJ/NX-series CPU Unit.	Of the functions for an NX1P2 CPU Unit, the following information is provided. • Built-in I/O • Serial Option Boards • Analog Option Boards An introduction of following functions for an NJ/NX-series CPU Unit is also provided. • Motion control functions • EtherNet/IP communications functions • EtherCAT communications functions
NX-series NX102 CPU Unit Hardware User's Manual	W593	NX102- □□□□	Learning the basic specifications of NX102 CPU Units, including introductory information, design, installation, and maintenance. Mainly hardware information is provided.	An introduction to the entire NX102 system is provided along with the following information on the CPU Unit. • Features and system configuration • Introduction • Part names and functions • General specifications • Installation and wiring • Maintenance and inspection
NX-series Safety Control Unit / Communication Control Unit User's Manual	Z395	NX-SL5 □□□ NX-SI□□□□ NX-SO□□□□ NX-CSG□□□	Learning how to use the NX-series Safety Control Units and Communications Control Units.	Describes the hardware, setup methods, and functions of the NX-series Safety Control Units and Communications Control Units.
NX-series Communication Control Unit Built-in Function User's Manual	Z396	NX-CSG□□□	Learning about the built-in functions of an NX-series Communications Control Unit.	Describes the software setup methods and communicantions functions of an NX-series Communications Control Unit.

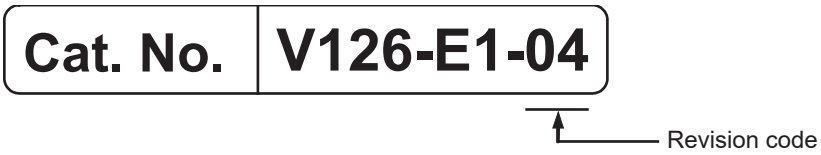
Manual name	Cat. No.	Model	Application	Description
NX-series NX502 CPU Unit Hardware User's Manual	W629	NX502- □□□□	Learning the basic specifications of NX502 CPU Units, including introductory information, design, installation, and maintenance. Mainly hardware information is provided.	An introduction to the entire NX502 system is provided along with the following information on the CPU Unit. • Features and system configuration • Introduction • Part names and functions • General specifications • Installation and wiring • Maintenance and inspection

Terminology

Term	Description
HMI	A general term for interface devices that indicates both hardware and software elements. In this manual, “HMI” refers to an OMRON Sysmac-brand product unless otherwise specified.
PT	The hardware elements of the HMI.
NA Series	The NA Series of Programmable Terminals and peripheral devices.
NA5-series PT	NA5-□W□□□□-V1 and NA5-□□□□□□.
NA Unit	An NA-series Programmable Terminal.
HMI Project	A Sysmac Studio project for an HMI.
Download	Transferring data from the Sysmac Studio to an HMI.
Upload	Transferring the project from an HMI to the Sysmac Studio.
IAG collection	When you provide IAGs, you provide them as IAG collections. IAGs are also imported as IAG collections. An IAG collection contains one or more IAGs.

Revision History

A manual revision code appears as a suffix to the catalog number on the front and back covers of the manual.



Revision code	Date	Revised content
01	April 2020	Original production
02	April 2021	Made revisions accompanying version upgrade.
03	October 2022	Revisions for adding safety precautions regarding security.
04	April 2023	Made revisions accompanying version upgrade.

1

Introduction to the Soft-NA

This section describes the features, basic system configuration, specifications, and operating procedure of the Soft-NA.

1-1 Soft-NA

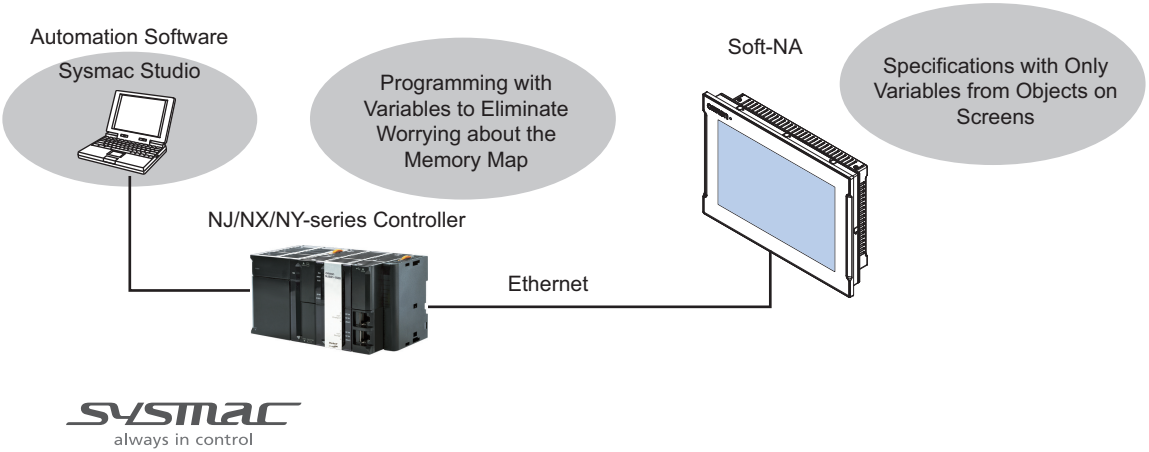
The Soft-NA is software that displays information on FA manufacturing sites while providing safety, reliability, and maintainability as an industrial display on which operations can be performed as necessary.

It includes the functionality of traditional programmable terminals, and provides a clearer, easy-to-use interface.

OMRON offers control devices designed with unified communications specifications and user interface specifications as Sysmac devices.

The Soft-NA is software designed to achieve optimum functionality and ease of operation through combination with the NJ/NX/NY-series Controllers and the Sysmac Studio Automation Software.

If you want to connect the Soft-NA to an NJ/NX/NY-series Controller, you can specify the Controller-side memory of the objects on the Program Terminal screens simply by variables. This allows you to create screens without being concerned with the memory map of the Controller.



1-1-1 Features

Software Features

- **Compatibility with NA-series Programmable Terminals**

  The projects of an NA-series Programmable Terminal can be used almost as is. It is possible to have flexible system configurations, such as simultaneous implementation with Windows applications, which cannot be achieved with the NA-series Programmable Terminals.

1-2 How Soft-NA Operates

This section describes how Soft-NA operates.

1-2-1 Software Configuration

Soft-NA consists of the following software.

- Soft-NA

  Soft-NA is software required to execute the runtime on a Windows platform. Install the software on a PC or industrial PC to use it.
- Runtime

  The runtime is the middleware that executes the project. The runtime is started by Soft-NA and it manages the execution of the project.
- Project

  You use the Sysmac Studio to create your applications. The applications are executed on the runtime.

1-3 System Requirements

To be able to use the Soft-NA, it is necessary that the following requirements are satisfied.

● When using a commercially-available PC

System requirements		Details
OS		Windows 10 Pro Version 1903 or later 64 bit
Processor		Intel Atom® x5-E3940 equivalent or higher processor
RAM		4 GB or more
Free space in the hard drive necessary for installation		1 GB or more
Optical disk drive		DVD-ROM drive
Communication port	**USB**	USB2.0 Type-A x 2*1
	LAN	Ethernet x 2*1

*1. Since one port is for project transfer, it is not required unless the corresponding path is used.

● When using the industrial PC platform NY-series

The supported models are shown below.

- NYB□□-□□3□□*1
- NYB□□-□□4□□*1
- NYP□□-□□3□□-□□□□□□□□*1
- NYP□□-□□4□□-□□□□□□□□*1
- NY5□□-1□00-□□□44□□□□*1

*1. Need to be supported only when used on the OS installed during factory dispatch.

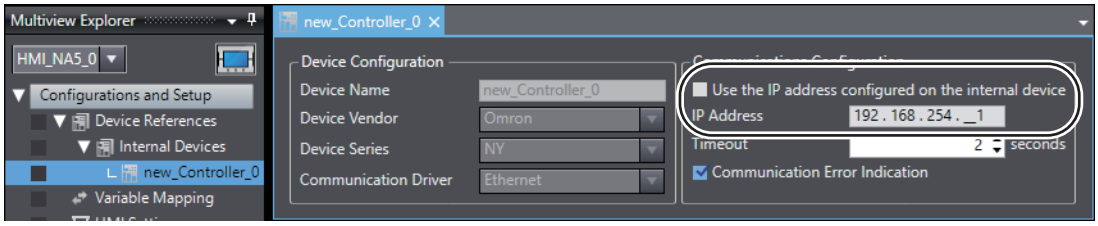
- If Soft-NA is installed on NY5□□-1□00-□□□44□□□□ for use, check the task design method and the cautions regarding the actual task processing time in *NY-Series IPC Machine Controller Industrial Panel PC / Industrial Box PC Software User's Manual (W558)* before use.
  Note that in this environment, if the load on the controller side is increased, the operation on the Soft-NA side may be affected. Likewise, if the load on the Soft-NA side is increased, the operation on the controller side may be affected. Include margin in the system design, and perform sufficient verification with the actual device.

Additional Information

- When viewing documents, it is necessary to install applications corresponding to the files to be viewed.
- To view movies, it is necessary to install the Windows Media Player.
- For communication between the controller and the HMI using the internal communication port of the NY5□□-1□00-□□□44□□□□, perform the HMI-side settings on Sysmac Studio as follows.

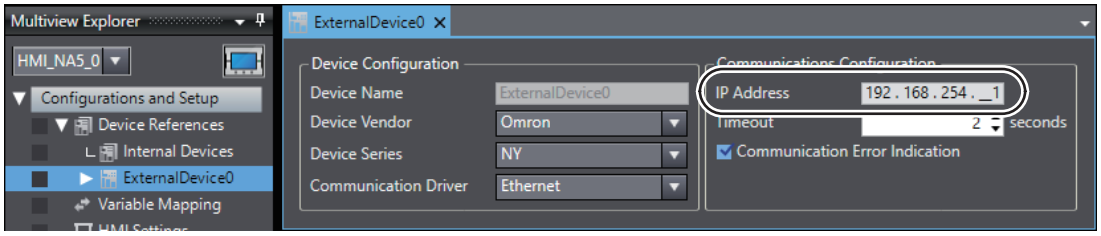
For an internal device

Open the device settings, clear the selection of the **Use the IP address configured on the internal device** check box, and set the IP address of the internal communication port within the controller in **IP Address**.



For an external device

Open the device settings, and set the IP address of the internal communication port within the controller in **IP Address**.



1-4 Differences from NA-series Programmable Terminals

The Soft-NA and NA-series Programmable Terminals have the following differences:

1-4-1 Differences Concerning System Specifications

Item	NA5-series PT	Soft-NA
Hardware	Dedicated hardware	Commercially-available PC
Resolution	Fixed as either of the following depending on the model • 1280 x 800 • 800 x 480	The following settings can be made on Sysmac Studio • 1920 x 1080 • 1280 x 800 • 800 x 480
Connectible controllers	• NX/NJ/NY-series Controllers • NX-CSG320 • CS/CJ/CP-series PLC • CK3-series Programmable Multi-Axis Motion Controllers	• NX/NJ/NY-series Controllers • NX-CSG320
Project data transfer method	• Media (USB memory, SD memory card) • Ethernet • USB	• Media (USB memory, SD memory card) • Ethernet
Supported Runtime	1.03 or later	1.11 or later
NTP client	Available	None*1
FINS communications	Supported	Not supported
VNC functionality	Available	None*1
Document viewing	Supported by an internal application	A separate corresponding application is required
Video playback	Supported by an internal application	A separate corresponding application is required
Japanese/Asian language input	Japanese/Chinese (simplified, traditional)/Korean are available for data input objects	To enter Japanese/Chinese (simplified, traditional)/Korean in data input objects, use an on-screen keyboard of Windows
External media	USB memory, SD memory card	SSD, USB memory or SD memory card and other media that can be used with a PC*2
Graph objects	One object per page	Two objects per page*3

*1. Equivalent functionalities can be implemented by using the Windows functions.

*2. A setting needs to be made in the System Menu before using the media. For details, refer to *6-2-11 Storage Settings*.

*3. Supported in Runtime version 1.16 or later.

1-4-2 Differences Concerning the Overall Runtime Operation

Item	NA5-series PT	Soft-NA
Startup	Power ON	Run Soft-NA
Exit	Power OFF	• Exit by the ✕ button on the title bar • Exit from the System Menu

1-4-3 Differences Concerning the Project System Menu

Item	NA5-series PT	Soft-NA
Display Settings	Used to set the screen saver and the screen brightness.	None*1
Buzzer Settings	Used to set the buzzer sound.	None

*1. Equivalent functionalities can be implemented by using the Windows functions.

1-4-4 Differences Concerning the Device System Menu

Item	NA5-series PT	Soft-NA
Date & Time Settings	Used to set the date and time, and also make settings for synchronization with the time server.	None. *1
Interface Settings	Used to make settings for the NA Unit interface.	Used to make settings for the Soft-NA interface.
Screen Brightness	Used to set the brightness of the screen.	None
Transfer Operations	Used to transfer the project and data.	Used to transfer the project.
Hardware Diagnostics	Used to calibrate the touch panel.	None
Production Information	Displays the lot number of the NA Unit and other information.	None
Display Settings	None	Used to set the display mode and make the operation panel settings.
Storage Settings	None	Used to make mapping settings such as the USB memory and SD card memory.
PC Shutdown	None	Used to exit the Soft-NA and shut down Windows.

*1. Equivalent functionalities can be implemented by using the Windows functions.

1-4-5 Differences Concerning Actions

The following actions cannot be used in the Soft-NA.

- BuzzerOff
- BuzzerOn
- BuzzerOn (One shot only)
- EjectSDMemory
- SetIMEType

1-4-6 Differences Concerning System Variables

The following system variables cannot be used in the Soft-NA.

- _HMI_Brightness
- _HMI_CanEjectSDCard
- _HMI_ConnectedVNCClientCount
- _HMI_IsBatteryLow
- _HMI_IsScreenSaverActive

1-4-7 Differences Concerning Functions

The following functions cannot be used in the Soft-NA.

Functionality	Function
IME	GetIMEType
	SetIMEType
VNC	GetConnectedVNCClients
	GetServiceState
	IsVNCClientRestrictionEnabled
	StartService
	StopService
External storage device	GetConnectedUSBDevices
	EjectSDMemory
	EjectUSBDevice
Date and time	SetDateTime
Buzzer	BuzzerOff
	BuzzerOn
	BuzzerOneShot

2

Installation

This section describes how to install the Soft-NA.

2-1 Installation Method

The method of installing the Soft-NA is described below. If Soft-NA is already installed, it will be upgraded.

Perform the following before starting installation.

- Log in as a user having administrator rights.
- Exit all applications.
- Remove the devices that are not required for installation.
- Remove the USB dongle dedicated to the Soft-NA.

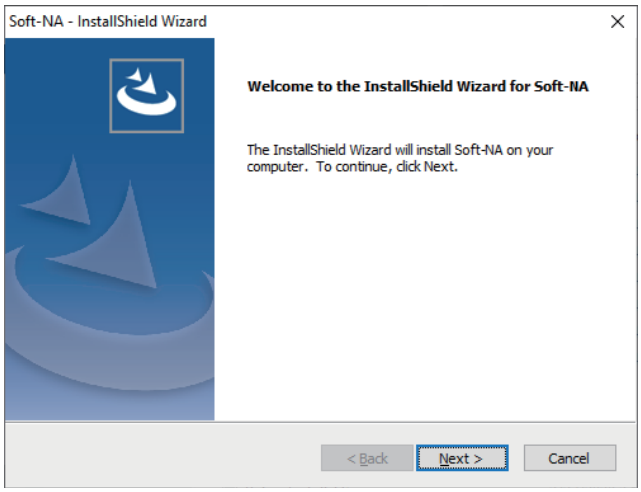
Observe the following precautions when performing an upgrade.

- Back up the project data and logs. All data will be deleted.
- Settings will be initialized. Configure again after the installation is complete.

1 Set the installation media of the Soft-NA in the DVD-ROM drive.

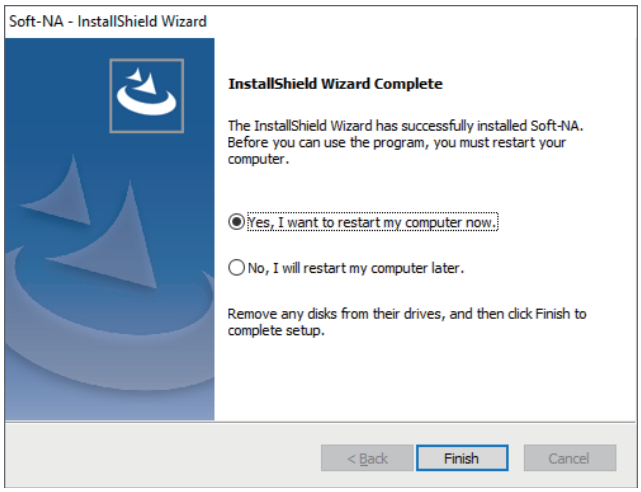
The setup program starts automatically.

2 The Soft-NA Setup Wizard is displayed.



3 When installation is complete, the following dialog box appears. Select whether you want to immediately restart your PC, and then click **Finish** Button to complete installation.

Be sure to restart the PC before using the Soft-NA.



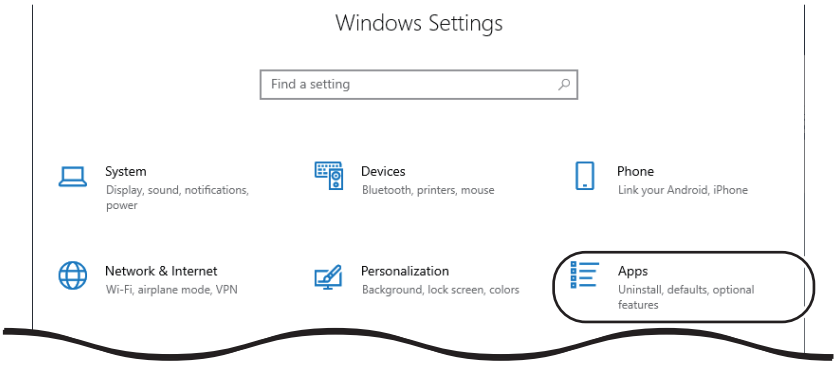
2-2 Uninstallation Method

The method of uninstalling the Soft-NA is described below.

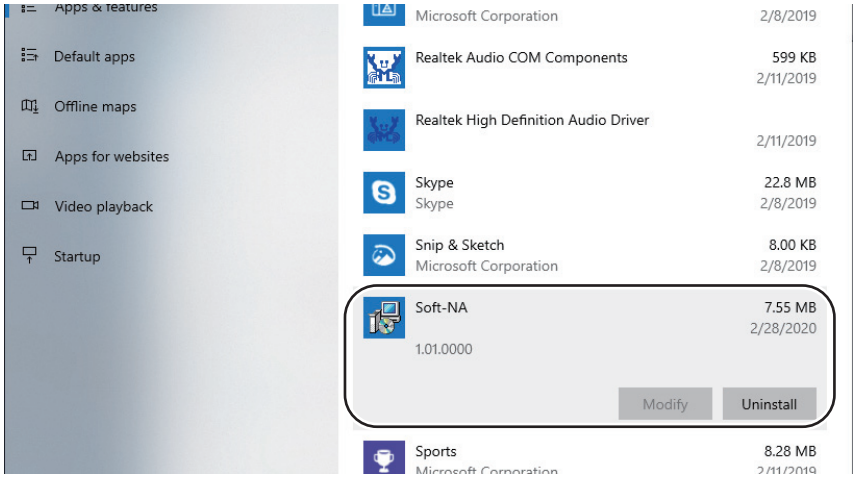
Perform the following before starting uninstallation.

- Log in as a user having administrator rights.
- Exit all applications.
- Remove the devices that are not required for uninstallation.
- Remove the USB dongle dedicated to the Soft-NA.
- Back up the project data and logs. All data will be deleted.
- Settings will be initialized. Take a note of the settings as needed.

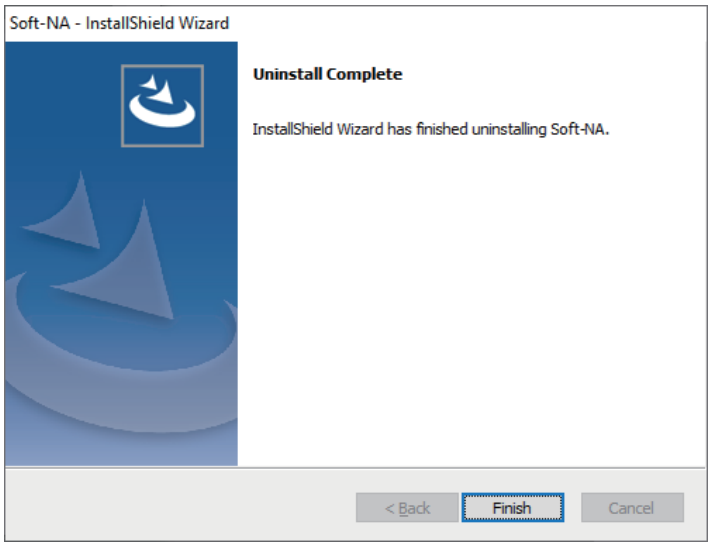
1 From the **Windows Settings**, click **Apps**.



2 From the list, click **Soft-NA**, and then click **Uninstall**.



3 When the uninstallation of the Soft-NA is complete, the following dialog box appears. Check the message and then click **Finish** Button.



3

Startup and Exit

This section describes how to start and exit the Soft-NA.

3-1 Starting the Soft-NA

The method of starting the Soft-NA is described below.

The Soft-NA can be started by the following two methods.

- Double-click the Soft-NA icon on the desktop.
- Select **OMRON** - **Soft-NA** from the Start menu, and then click the Soft-NA icon.

Additional Information

If settings have been made to automatically execute the Soft-NA when Windows is started, the Soft-NA may be executed before the startup of the service necessary for executing the Soft-NA, or before the completion of authentication of the USB dongle. In such a case, the Soft-NA startup results in a failure.

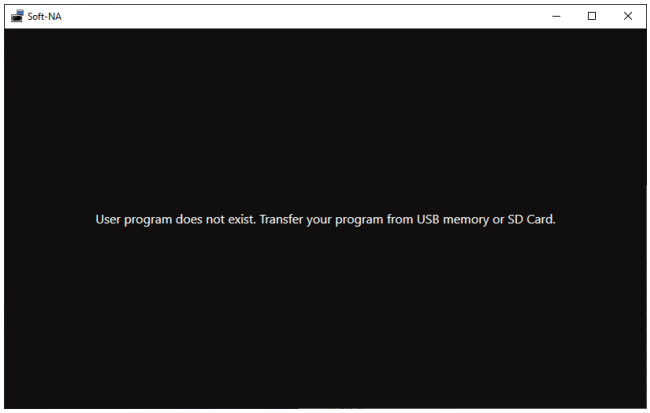
If you want to make the settings to automatically execute the Soft-NA when Windows is started, take measures such as delaying startup.

Starting the Soft-NA

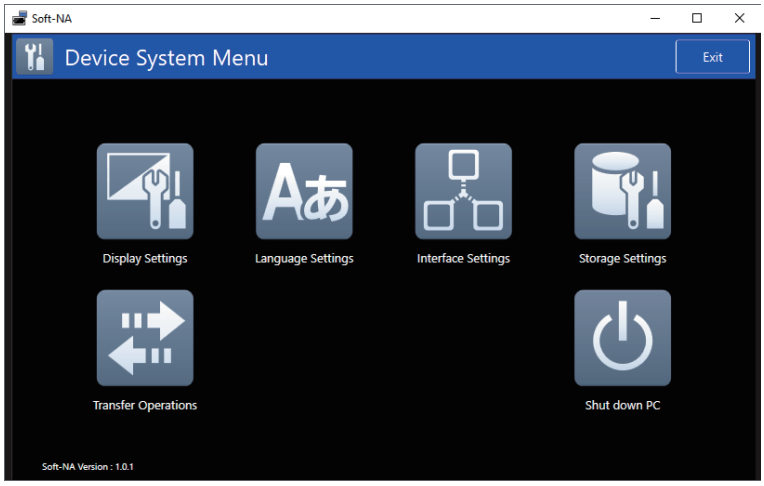
If a project is being transferred, the Soft-NA will start after the project being transferred has been loaded. Therefore, use the Soft-NA as is.

The procedure of starting the Soft-NA when a project is not being transferred is described below.

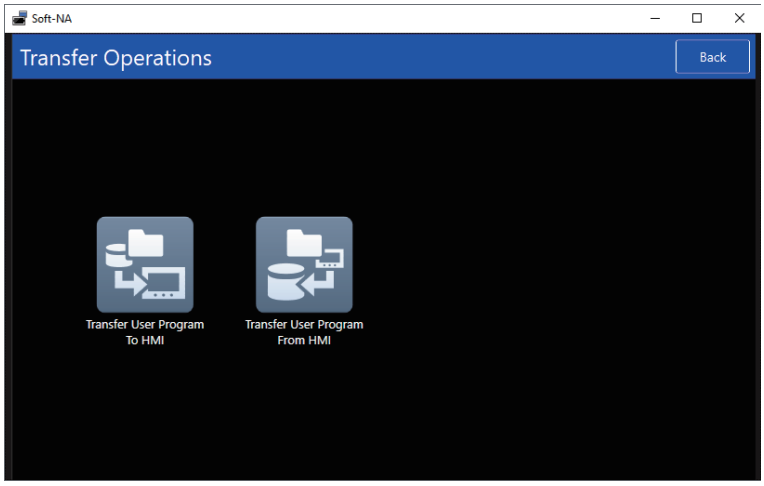
1. Double-click the Soft-NA icon.
2. Double-click any of the four corners of the window.



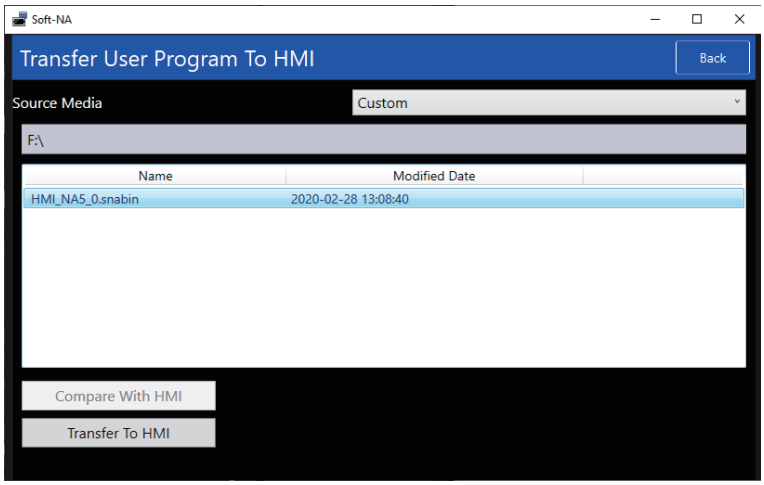
3 Click **Transfer Operations** Button.



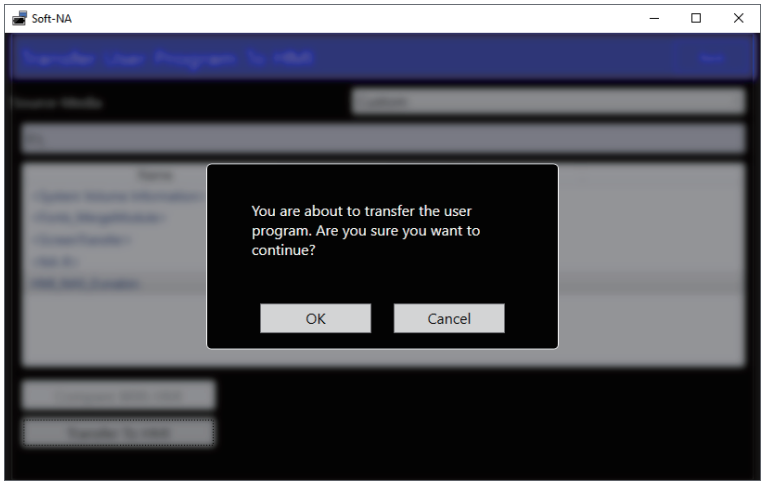
4 Click **Transfer User Program To HMI** Button.



5 Select the snabin file created in Sysmac Studio, and then click **Transfer To HMI**.



6 Click **OK** Button.



7 The project is loaded and the Soft-NA is restarted.

3-2 Exiting the Soft-NA

The method of exiting the Soft-NA is described below.

The Soft-NA can be exit by the following two methods.

- Click the ✕ button at the top right of the window.
- Click **Shut down PC** button on the **Device System Menu**.

Precautions for Correct Use

Exit the Soft-NA by the correct procedure.

If you forcibly exit the Soft-NA from the Task Manager, or shut down Windows without exiting the Soft-NA, information such as history, etc. may not be saved correctly.

When exiting with the ✕ button at the top right of the window

When you exit the Soft-NA with the ✕ button at the top right of the window, you will exit only the Soft-NA.

1 Click the ✕ button at the top right of the window.

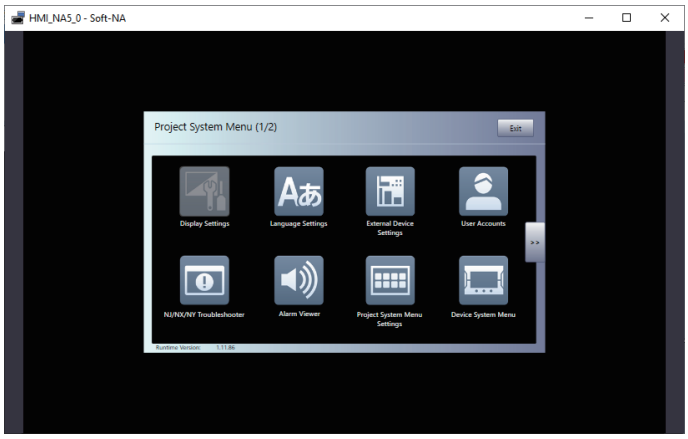
2 You will exit the Soft-NA.

When exiting from the System Menu

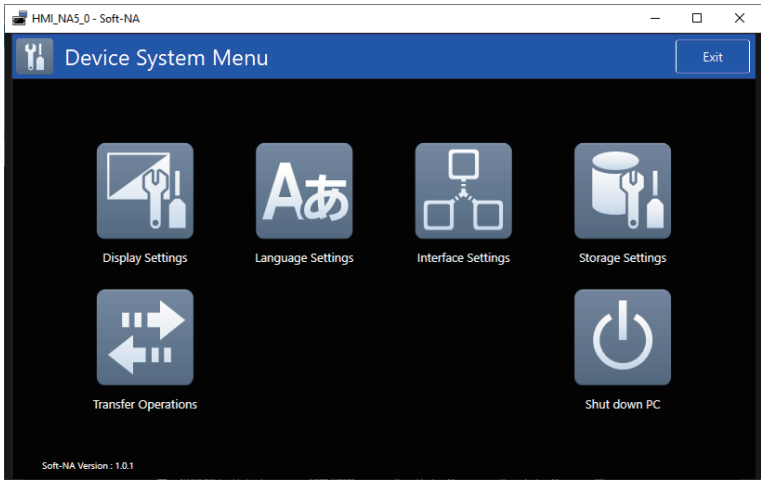
When you exit the Soft-NA from the system menu, shut down Windows after exiting the Soft-NA.

1 Double-click any of the four corners of the window.

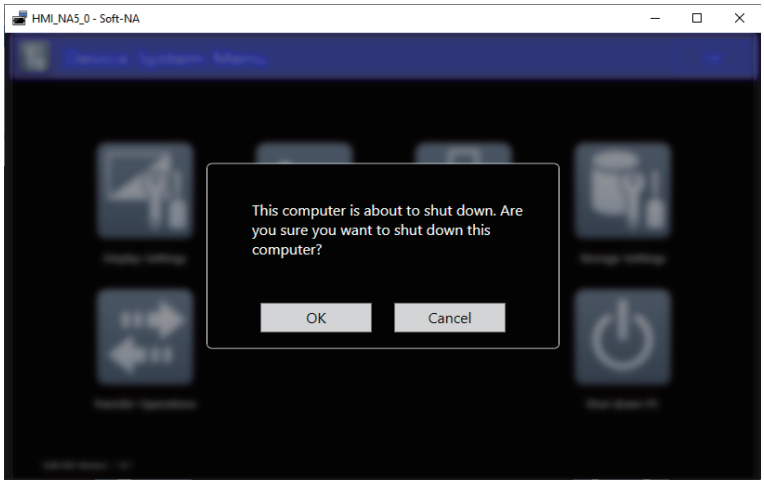
2 Click **Device System Menu**.



3 Click **Shut down PC** Button.



4 Click **OK** Button.



5 You will exit the Soft-NA, and Windows will be shut down.

4

Creating and Transferring a Project

This section describes how to create and transfer a project for the Soft-NA.

4-1 Creating a Project

The method of creating a project for the Soft-NA is described below.

The project for the Soft-NA can be created by the following two methods.

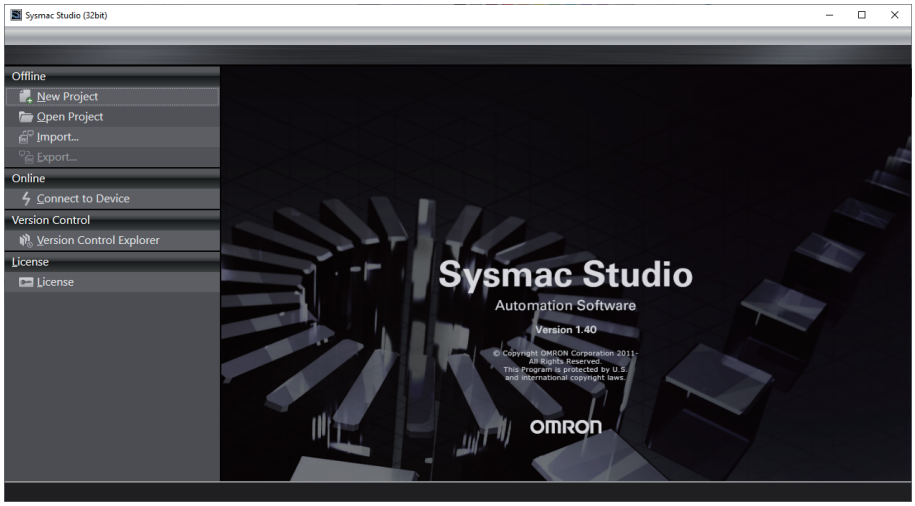
- Create a new project for the Soft-NA.
- Convert the project created for the NA5-series PT.

When creating a new project for the Soft-NA

The procedure for creating a new project is same as that for the NA5-series PT except that the model is different.

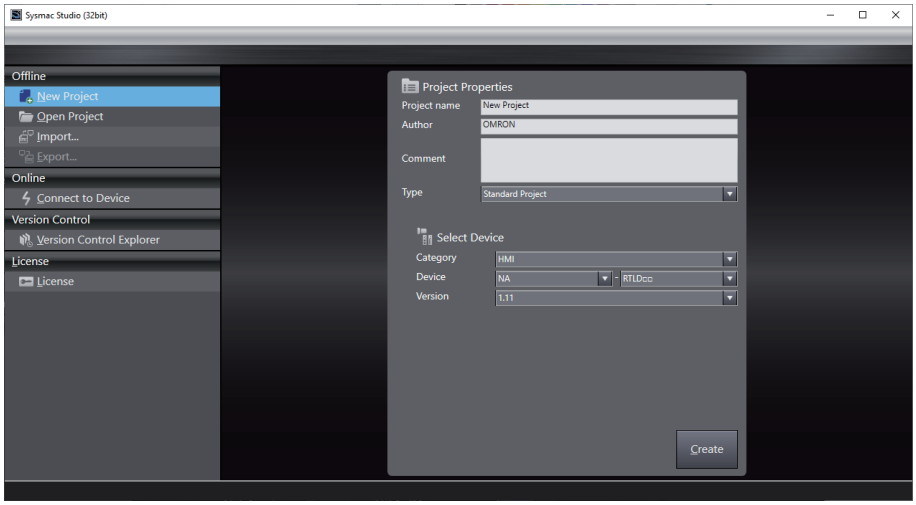
1 Start Sysmac Studio.

2 Click **New Project**.

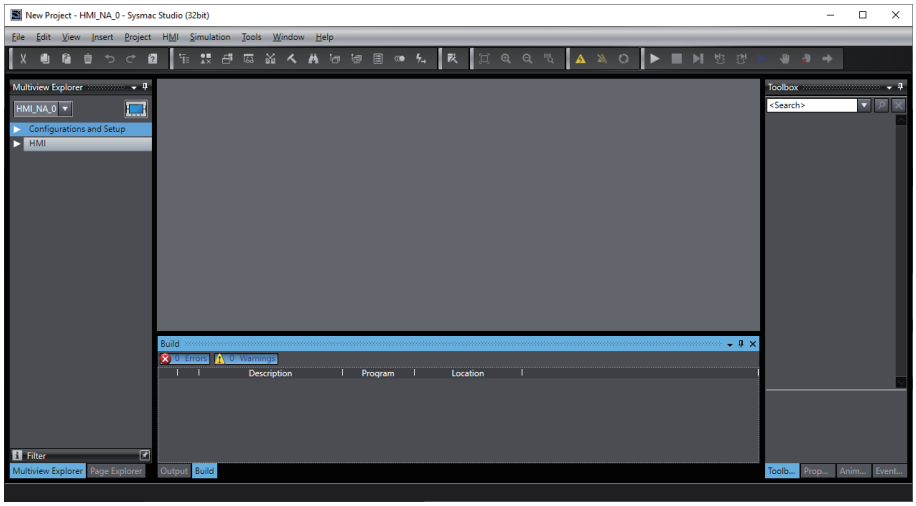


3 Make the settings as shown below, and then click **Create** Button.

Setting Item	Value
Project name	Set as required
Author	Set as required
Comment	Set as required
Type	Standard project
Category	HMI
Device	NA-RTLD□□
Version	1.11 or later



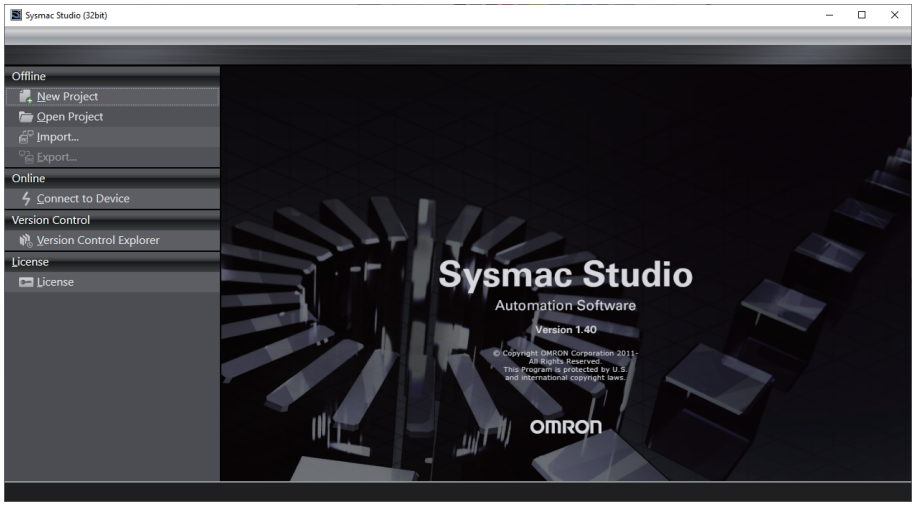
4 Hereafter, create the project according to the same procedure as the NA5-series PT.



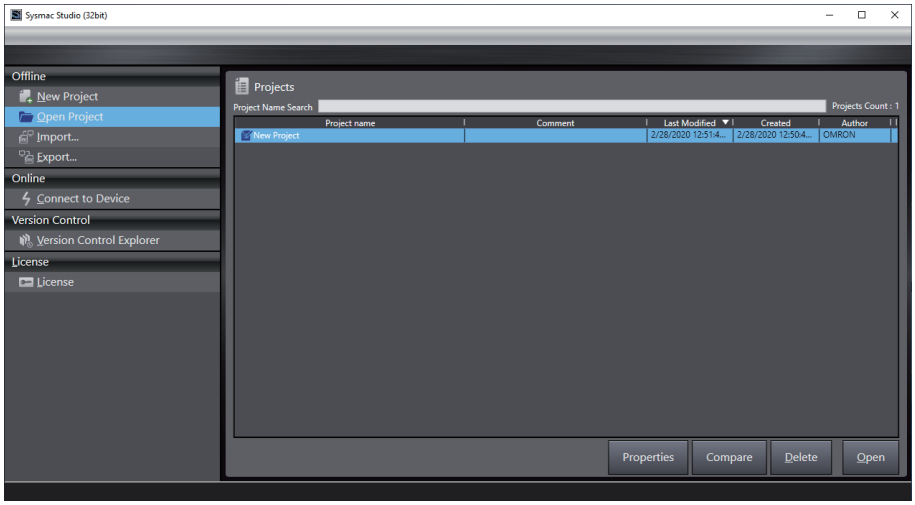
When converting a project created for the NA5-series PT

The procedure for converting a project created for the NA5-series PT is described below.

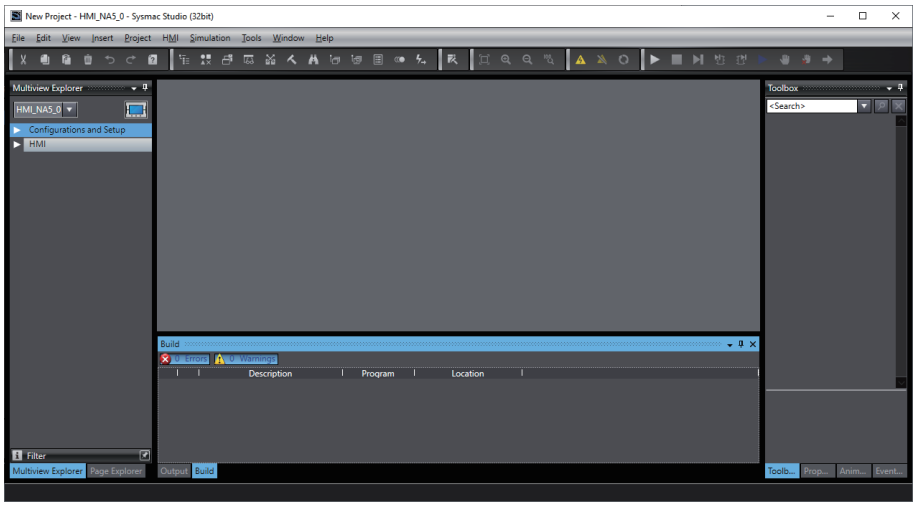
1. Start Sysmac Studio.
2. Click **Open Project**.



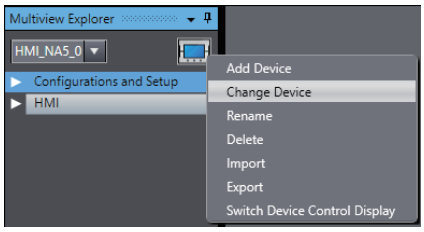
3. Select the project to be converted, and then click **Open** Button.



4 The project opens.

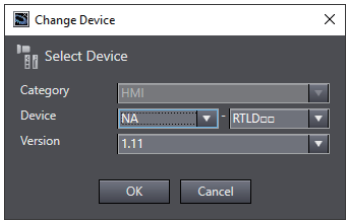


5 From the menu displayed by right-clicking **HMI** at the top left of the window, select **Change Device**.

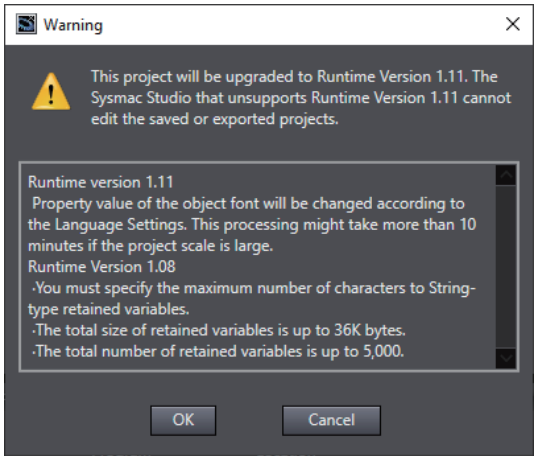


6 Make the settings as shown below, and then click **OK** Button.

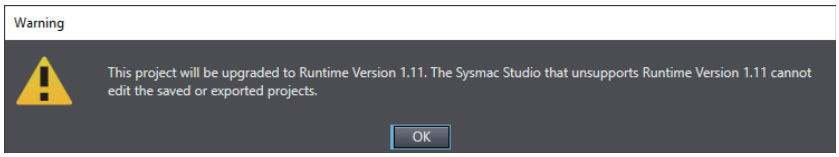
Setting Item	Value
Device	NA-RTLD□□
Version	Any version that can be specified



7 A caution is displayed. Check and then click **OK**.



8 A caution is displayed. Check and then click **OK**.



Additional Information

Depending on the size of the project, it may take 10 minutes or more for conversion.

9 The project is converted for use with the Soft-NA.

If you are using a function that is not supported by the Soft-NA, a validation error will be displayed. Correct the corresponding locations according to the specifications of the Soft-NA.

4-2 Transferring the Project

The method for transferring a project for the Soft-NA is described below.

The project for the Soft-NA can be transferred by the following two methods.

- Transferring via Ethernet.
- Transferring using media.

Note that the basic operation method is same as that for the NA5-series PT. For details, refer to *Section 8 Synchronizing Projects* in the *NA-series Programmable Terminal Software User's Manual* (Cat. No. V118).

Additional Information

The Soft-NA does not support transfer via the USB.

Differences Concerning System Programs

With the NA5 series, if the version of the system program at the transfer destination HMI and the version of the project to be transferred are not appropriate, Sysmac Studio can select the most suitable system program and transfer it.

With Soft-NA, if the combination of the Soft-NA version at the transfer destination and the version of the project to be transferred is not appropriate, transfer from Sysmac Studio is not possible. Transfer after updating the Soft-NA version.

The table below shows the combination of the project version and the supported Soft-NA version.

Project version	Supported Soft-NA version
1.11	1.00 or later
1.12 to 1.17	1.02 or later

Differences Concerning Transfer via Ethernet

The cautions to be taken during transfer via Ethernet are described below.

- The PC on which the Soft-NA is installed must be started beforehand.
  Since the transfer process is implemented in the background, the project can be transferred even without logging in to the system.
- Different projects cannot be transferred from each account.
  Use the same project from all accounts.
- If a project is transferred when the Soft-NA is not running, the Soft-NA needs to be manually started.
  If a project is transferred when the Soft-NA is not running, manually start the Soft-NA.
- The port number can be changed.
  The port number can be changed to avoid conflict with other applications running on the PC.

Additional Information

When a project is transferred via Ethernet, it may not be possible to perform communication normally because of the security function of the PC. In such a case, change the settings, such as opening the required port.

Also, with regard to installation, discuss beforehand with the system administrator that there is a possibility of occurrence of a security-related exception, such as opening of a required port for the PC on which the Soft-NA is to be installed.

Differences Concerning Transfer Using Media

The precautions to take during transfer using media are as described below.

- Transfer can be performed from any folder in the PC.
  When performing the transfer operation from the System Menu, it is possible to transfer the project from any folder by selecting "Custom" at the time of specifying the Destination Media or Source Media.

5

Functionalities of Sysmac Studio

This section describes the functionalities of Sysmac Studio related to the Soft-NA.

5-1 Functionalities of Sysmac Studio

The functionalities of Sysmac Studio that have been changed for use with the Soft-NA are described below.

5-1-1 HMI Settings

Functionalities that are not supported by the Soft-NA have been deleted. Also, the settings for functionalities specific to the Soft-NA have been added.

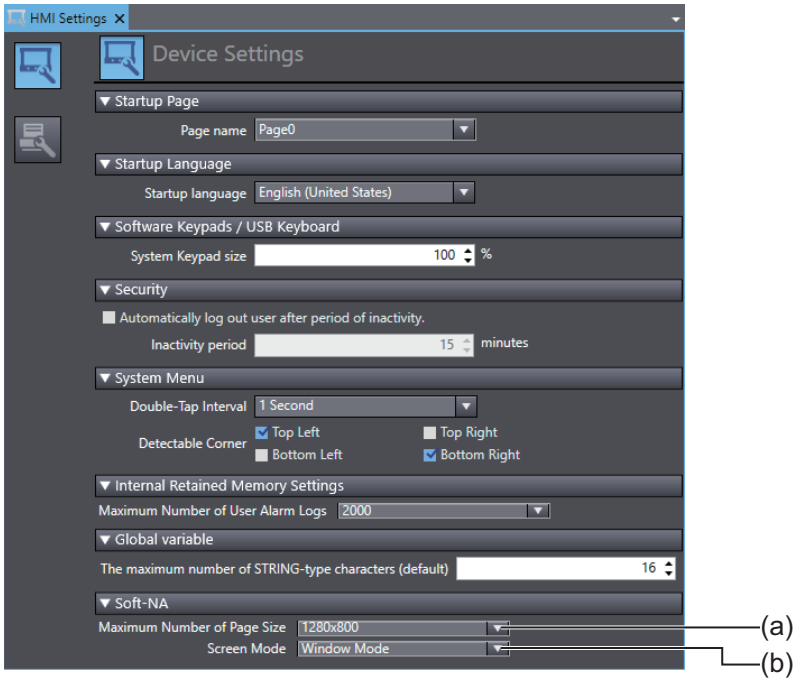
Functionality name	Change	Description
Device Settings	Changed	Changed according to the functionalities of the Soft-NA.
TCP/IP Settings	Deleted	In the case of the Soft-NA, the settings of the PC on which the Soft-NA is installed are used as network settings. Make the settings from **Network and Internet** under **Windows Settings**.
FTP Settings	Deleted	Not provided as a functionality of the Soft-NA because various FTP servers have been provided on Windows. The customer is requested to make arrangements for other applications such as IIS, etc.
NTP Settings	Deleted	Because the settings of the PC itself are used, make the settings from **Date Time** under **Windows Settings**.
FINS Settings	Deleted	Not supported because the Soft-NA does not support the connection with the CS/CJ/CP-series. If it is necessary to connect to the CS/CJ/CP-series, use the NA5 series PT.
VNC Settings	Deleted	Not provided as a functionality of the Soft-NA because functionalities such as VNC have been provided on Windows. Either use a Windows standard remote desktop, or a VNC server manufactured by a third party.
Print Settings	Not changed	There are no changes in the print settings.

Device Settings

The following functionalities have been deleted from the device settings.

Functionality name	Settings	Description
Software Keypad/ USB Keyboard	USB keyboard layout	Because the settings of the PC itself are used, make the settings from **Device** under **Windows Settings**.
Screen Saver	All	Because the settings of the PC itself are used, make the settings from **Screen saver settings** in Windows.
Screen Brightness	All	Because the settings of the PC itself are used, adjust the brightness of the display to the required amount.
Sound	All	Not supported.

Also, two items have been added as settings for the Soft-NA.



No.	Item	Description
(a)	Maximum Number of Page Size	The page type specifies the size of the main page. The default value is 1280x800. When the settings are changed, all pages in the device are expanded or contracted according to the settings.*1
(b)	Screen Mode	Specifies the screen mode when the Soft-NA is started. The default value is the Window Mode.

*1. When the Maximum Number of Page Size is changed, depending on the project size, it may take 10 minutes or more to execute the conversion process.

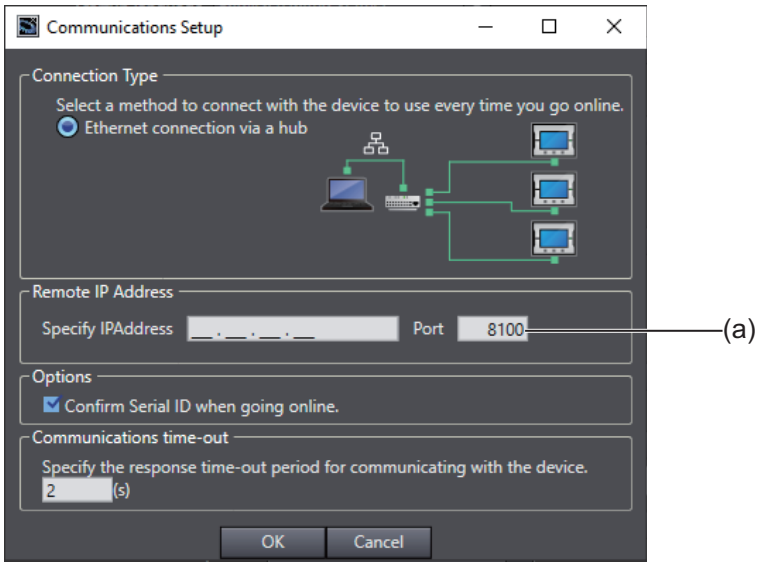
5-1-2 Communication Settings

Functionalities that are not supported by the Soft-NA have been deleted. Also, the settings for functionalities specific to the Soft-NA have been added.

In the case of the Soft-NA, the following communication paths are not supported.

- Direct connection via USB
- Direct connection via Ethernet

Also, one item has been added as the setting for the Soft-NA.



No.	Item	Description
(a)	Port	Specifies the port number used in synchronization.

Additional Information

The Soft-NA does not support the communication test. To check if communication has been established with the PC, change the settings of the Windows Firewall, and use a Ping to confirm.

5-1-3 HMI Clock

Not supported by the Soft-NA. Change the settings of the PC on which the Soft-NA is installed.

5-1-4 Reset HMI Device

Not supported by the Soft-NA.

5-1-5 IAGs

There are the following restrictions during the use of an IAG.

If an action, system variable, or function that cannot be used in the Soft-NA is used, an error occurs, but if it is used in an IAG, an error does not occur in Sysmac Studio. These functions result in an error when executed in the Soft-NA.

Before using an IAG in the Soft-NA, make sure the functionalities not supported in the Soft-NA are not used.

6

Functionalities of the Soft-NA

This section describes the functionalities of the Soft-NA.

6-1 Functionalities of the Soft-NA

The functional differences between the Soft-NA and the NA5-series PT are described below.

6-1-1 Function Keys

The function keys are displayed at the bottom of the window. It is not possible to assign physical buttons.

Whether to display them can be set in the System Menu.

6-1-2 Media Player Object

It is necessary to install the Windows Media Player to be able to use the Media Player Object. Media Player Object is not processed in an environment in which the Windows Media Player is not installed.

6-1-3 Document Viewer

The document viewer built into the Soft-NA supports the display of only Adobe Acrobat Documents. To view any other file, it is necessary to install an application that supports the file. If an attempt is made to view a document when the supported application is not installed, an error will occur.

Also, even if the Soft-NA is exited, the other applications are maintained in the state prior to the exit of the Soft-NA.

The operation has been confirmed with the following applications.

Format name	Extension	Application
Microsoft Excel Book	xlsx	Microsoft Excel 2016
Microsoft Excel 97-2003 Book	xls	Microsoft Excel 2016
Microsoft Word Document	docx	Microsoft Word 2016
Microsoft Word 97-2003 Document	doc	Microsoft Word 2016

6-1-4 Fonts

The displayed fonts are effected by the environment in which the Soft-NA is installed. If the characters to be displayed do not exist in the specified font, a different font may be displayed depending on the Windows environment. Be sure to check the display in the operating environment.

6-1-5 Operation Log

The following differences exist in the operation log due to functional differences between Soft-NA and the NA5 series.

Operation to be logged	Description
Synchronization	When the project set as the target of the operation log is downloaded to Soft-NA, Synchronization is recorded in the log even if Soft-NA is not running.
IME change	Not applicable
Screen saver	Not applicable
VNC	Not applicable
FTP Server	Not applicable

6-2 System Menu

The functional differences between the Soft-NA and the NA5-series PT are described below. For items undescribed in this manual, refer to *4-3 System Menu Overview* and *4-4 System Menu Details* in the *NA-series Programmable Terminal Hardware (-V1) User's Manual* (Cat. No. V125).

6-2-1 System Menu Display Methods

The System Menu can be started by the following three methods.

- Double-clicking one of the four corners of the window
- Executing the ShowSystemMenu action
- Executing the ShowSystemMenu function in a subroutine

The method of executing the action and subroutine is same as that in the NA5-series PT. For details, refer to *4-3-2 Using the System Menu* in the *NA-series Programmable Terminal Hardware (-V1) User's Manual* (Cat. No. V125).

● Double-clicking one of the four corners of the window

Double-click one of the four corners (orange portions in the figure below) on the Soft-NA window.

Additional Information

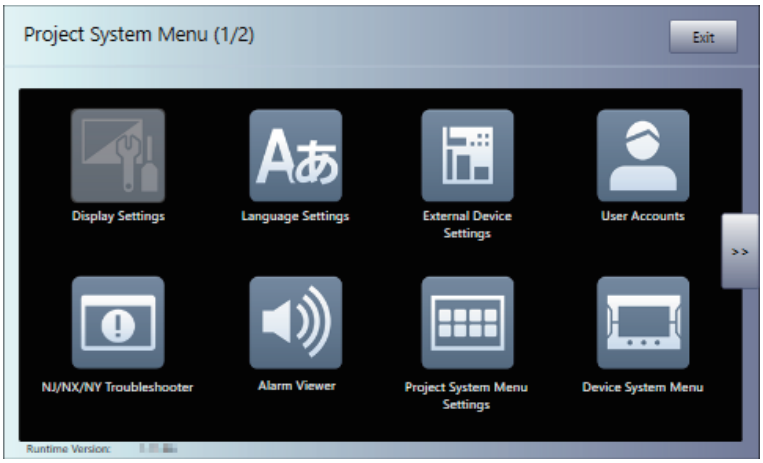
If you click a corner where an object is displayed, the function of the object is executed. You can also choose the active locations from the four corners.

6-2-2 System Menu Configuration

Same as the NA5-series PT, the System Menu consists of the Project System Menu and the Device System Menu.

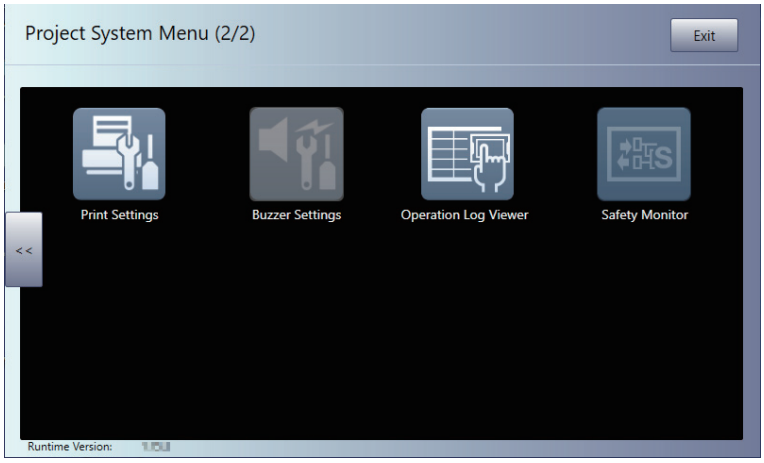
The following items and functions are displayed on each System Menu.

- Project System Menu (1/2)



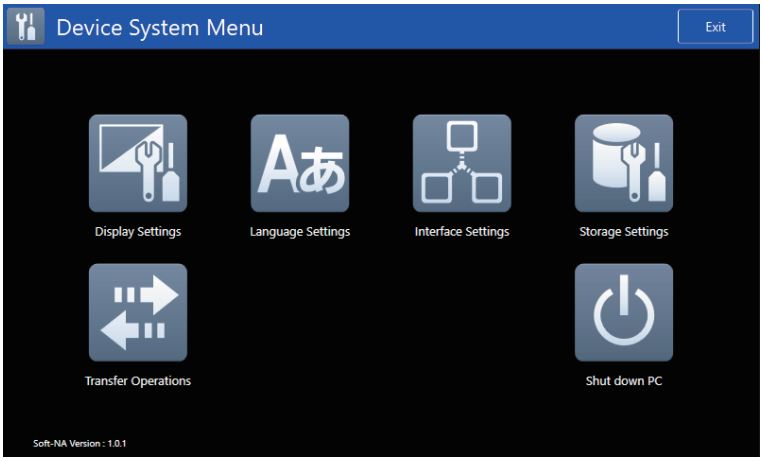
Item	Introduction	Reference
Display Settings	For future expansion.	-
Language Settings	Used to set the user language and the system language.	*6-2-3 Language Settings (Project System Menu)* on page 6-7
External Device Settings	Used to make the external device settings for connected devices.	*6-2-4 External Device Settings (Project System Menu)* on page 6-7
User Accounts	Used to make the user account settings.	*6-2-5 User Accounts (Project System Menu)* on page 6-8
NJ/NX/NY Troubleshooter	Displays the NJ/NX/NY Troubleshooter.	*4-4-5 NJ/NX/NY Troubleshooter (Project System Menu)* in the *NA-series Programmable Terminal Hardware (-V1) User's Manual* (Cat. No. V125)
Alarm Viewer	Displays user alarms.	*4-4-6 Alarm Viewer (Project System Menu)* in the *NA-series Programmable Terminal Hardware (-V1) User's Manual* (Cat. No. V125)
Project System Menu Settings	Used to set the method for starting the System Menu.	*6-2-6 System Menu Settings (Project System Menu)* on page 6-9
Device System Menu	Used to perform transfer, etc.	*Device System Menu* on page 6-6

- Project System Menu (2/2)



Item	Introduction	Reference
Print Settings	Used to make print/capture settings on the Soft-NA window.	*6-2-7 Print Settings (Project System Menu)* on page 6-9
Buzzer Settings	For future expansion.	-
Operation Log Viewer	Displays the Operation Log Viewer.	*4-4-10 Operation Log Viewer* in *NA-series Programmable Terminal Hardware(-V1) User's Manual (Cat. No. V125)*
Safety Monitor	Displays the Safety Monitor.	*4-4-11 Safety Monitor* in *NA-series Programmable Terminal Hardware(-V1) User's Manual (Cat. No. V125)*

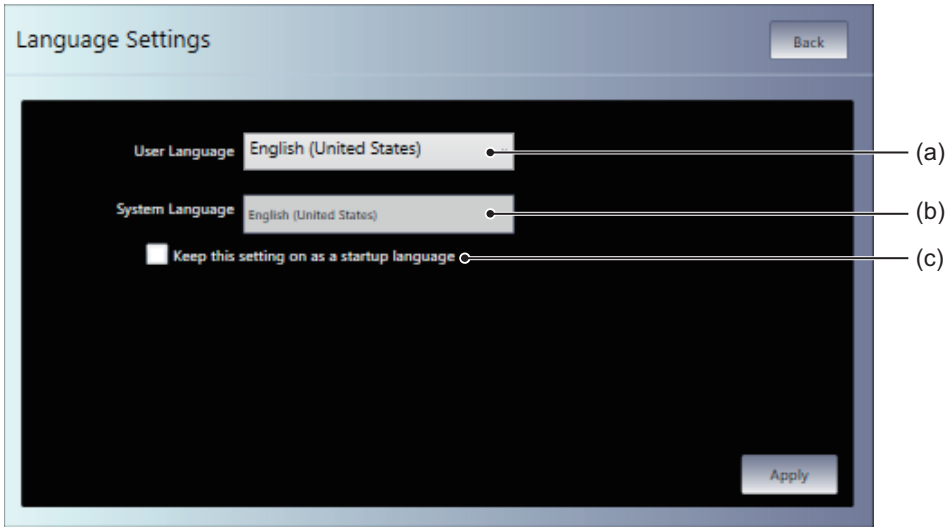
- Device System Menu



Item	Introduction	Reference
Display Settings	Used to set the screen mode, etc.	*6-2-8 Display Settings (Device System Menu)* on page 6-10
Language Settings	Used to make settings for the system language.	*6-2-9 Language Settings (Device System Menu)* on page 6-10
Interface Settings	Used to set the port number, etc.	*6-2-10 Interface Settings (Device System Menu)* on page 6-11
Storage Settings	Used to make the storage mapping settings.	*6-2-11 Storage Settings (Device System Menu)* on page 6-11
Transfer Operations	Used to transfer the project.	*6-2-12 Transfer Operations (Device System Menu)* on page 6-12
Shut down PC	Used to exit the Soft-NA and shut down the PC.	*When exiting from the System Menu* on page 3-6

6-2-3 Language Settings (Project System Menu)

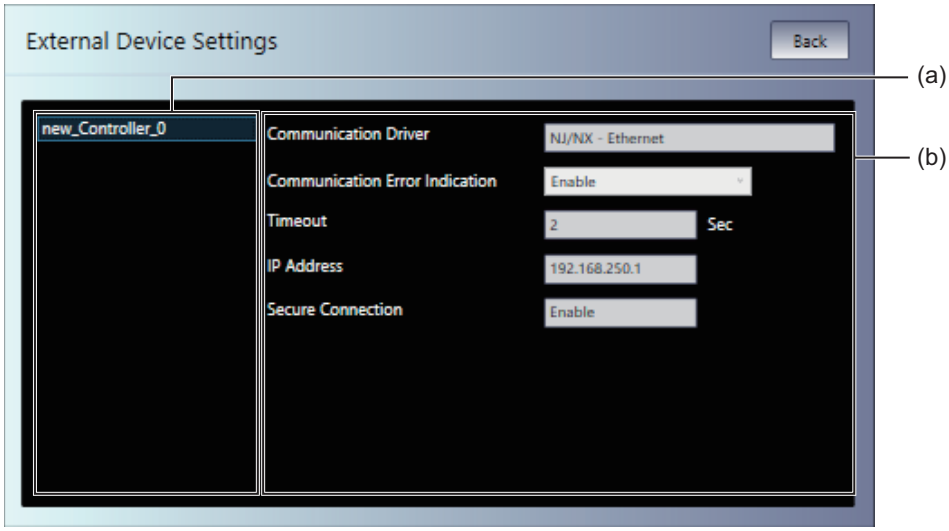
You can use the Language Settings to set the following items.



No.	Item	Functionality
(a)	User Language	Used to set the user language.
(b)	System Language	Displays the system language that is associated with the user language.
(c)	Keep this setting on a startup language	If you select this check box, the language that is set as the system language is used as the startup language.

6-2-4 External Device Settings (Project System Menu)

You can use the External Device Settings to set the following items.



No.	Item	Functionality
(a)	Connected Device List	Displays a list of the connected devices that are registered in the project.
(b)	Connected Device Communications Settings	Displays the communication settings of the connected device that is selected in the list. Refer to the *NA-series Programmable Terminal Device Connection User's Manual* (Cat. No. V119) for details.

6-2-5 User Accounts (Project System Menu)

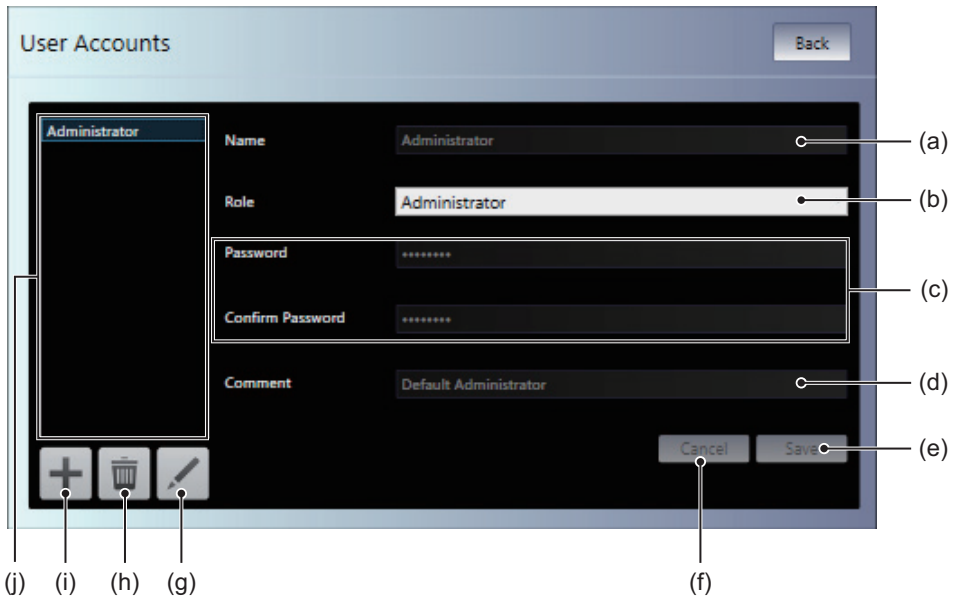
You can use the User Accounts to set the following items.

Precautions for Safe Use

When you change a password, do not reset the Soft-NA or turn OFF the power supply before writing the new password is completed. A failure to store the password may cause the project to fail to function.

Additional Information

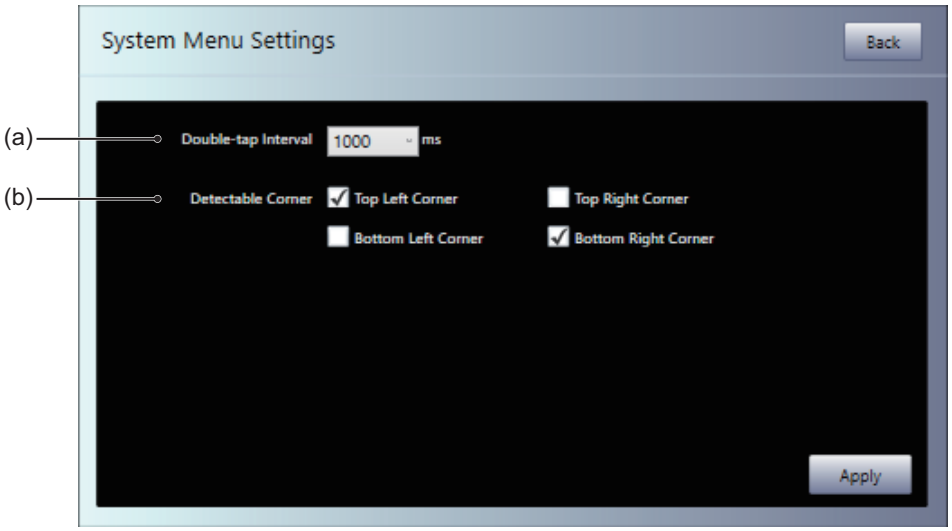
If you forget a password, there is no way to check for the password on the Soft-NA. Use the Sysmac Studio to check.



No.	Item	Functionality
(a)	Name	Used to set the name.
(b)	Role	Used to select a role.
(c)	Password	Used to set the password.
(d)	Comment	Used to set a comment.
(e)	Save	Used to save the changes.
(f)	Cancel	Used to discard the changes.
(g)		Used to edit the selected user account.
(h)		Used to delete the selected user account.
(i)		Used to add a new user account.
(j)	User account table	A list of the user accounts that are currently registered is displayed.

6-2-6 System Menu Settings (Project System Menu)

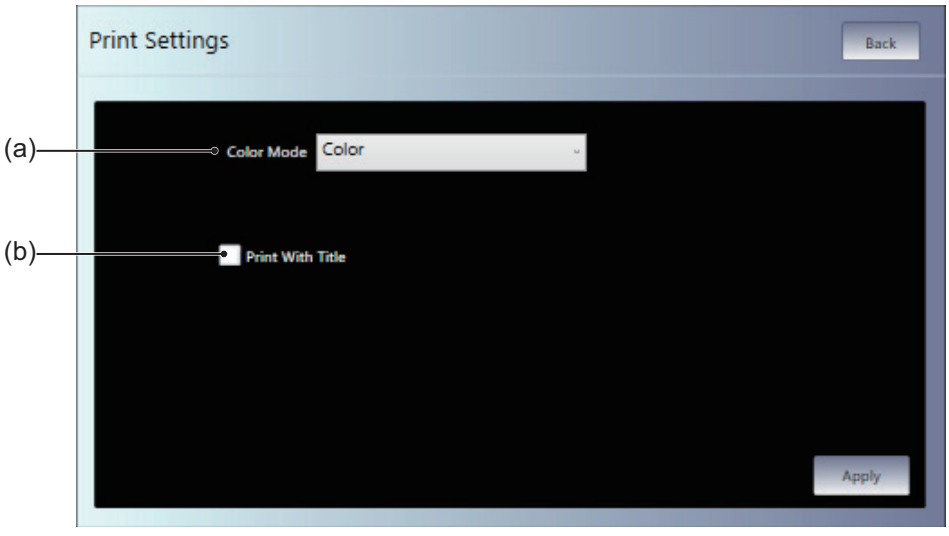
You can use the System Menu Settings to set the following items.



No.	Item	Functionality
(a)	Double-tap Interval	Set the double-tap interval for the operation to start the System Menu.
(b)	Detectable Corner	Used to set the double-tap detection positions for the operation to start the System Menu.

6-2-7 Print Settings (Project System Menu)

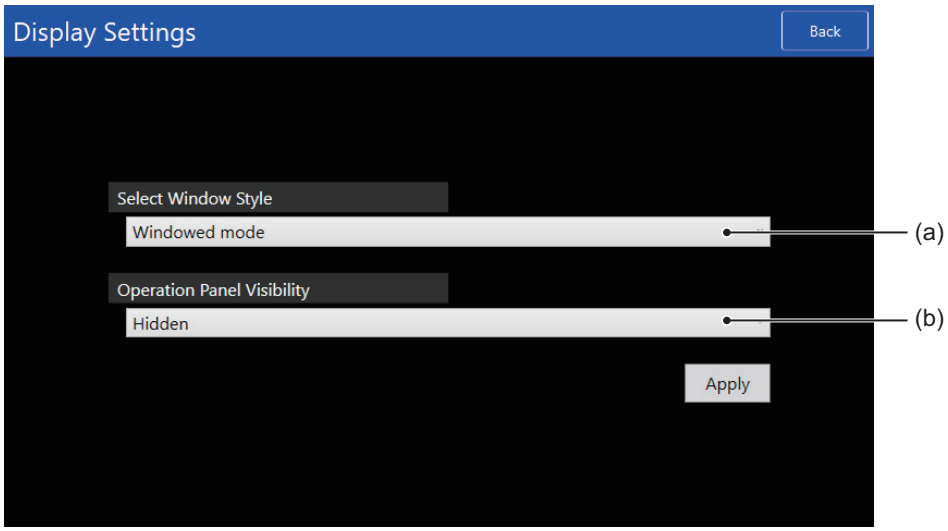
You can use the Print Settings to set the following items.



No.	Item	Functionality
(a)	Color Mode	Select from among the following options for colors and/or reverse display of printing or capturing screens: • Color • Grayscale • Reverse Grayscale
(b)	Print With Title	Select this check box to insert a screen title during printing/capturing of the screen.

6-2-8 Display Settings (Device System Menu)

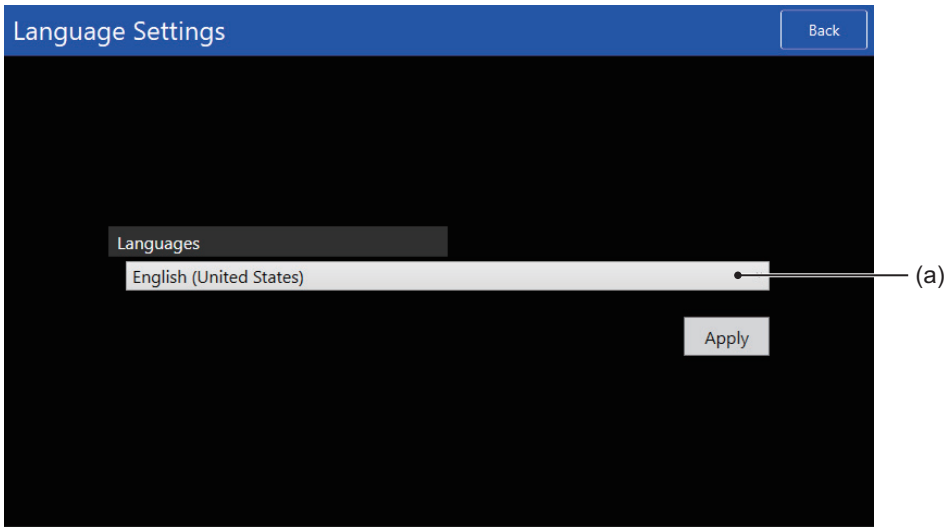
You can use the Display Settings to set the following items.



No.	Item	Functionality
(a)	Select Window Style	Used to set a window style.
(b)	Operation Panel Visibility	Used to set the display position of the operation panel.

6-2-9 Language Settings (Device System Menu)

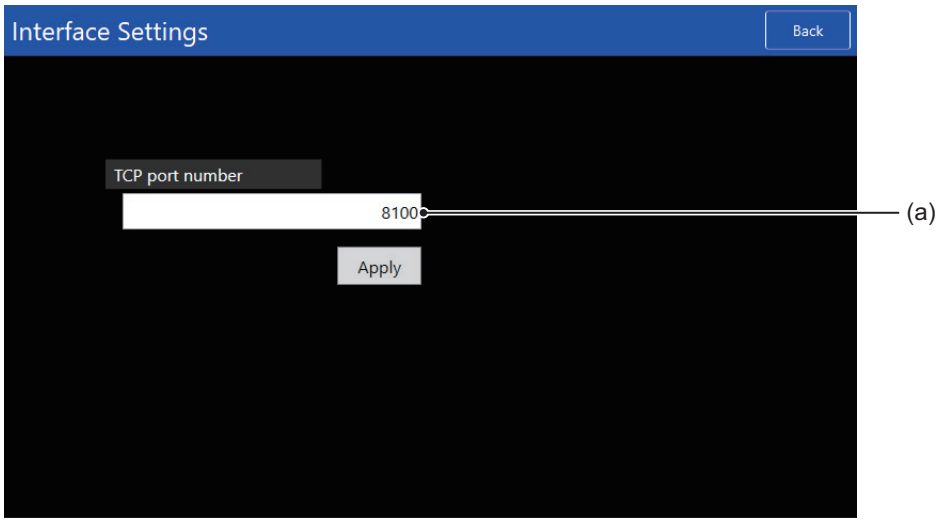
You can use the Language Settings to set the following items.



No.	Item	Functionality
(a)	Languages	Used to set the system language. Note that the Project System Menu Language Settings are given priority as the system language settings.

6-2-10 Interface Settings (Device System Menu)

You can use the Interface Settings to set the following items.



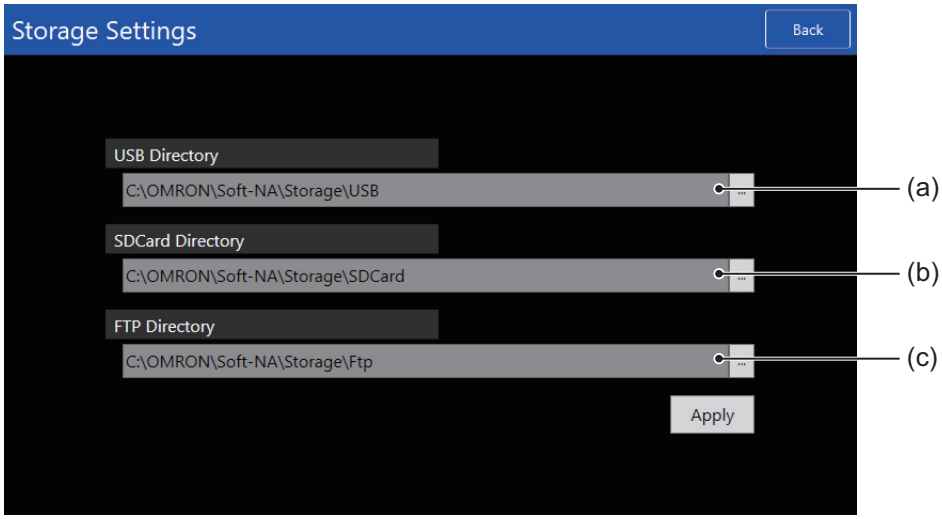
No.	Item	Functionality
(a)	TCP port number	Used to set the port number used for synchronization with Sysmac Studio.

6-2-11 Storage Settings (Device System Menu)

You can use the Storage Settings to set the folder to which the definition expressing the device is to be assigned. After changing these settings, Soft-NA needs to be restarted.

Additional Information

- The Soft-NA does not support "USBDisk2".
- The operation is not guaranteed if a folder on the network is assigned.
- Do not set the assigned folder to read-only.

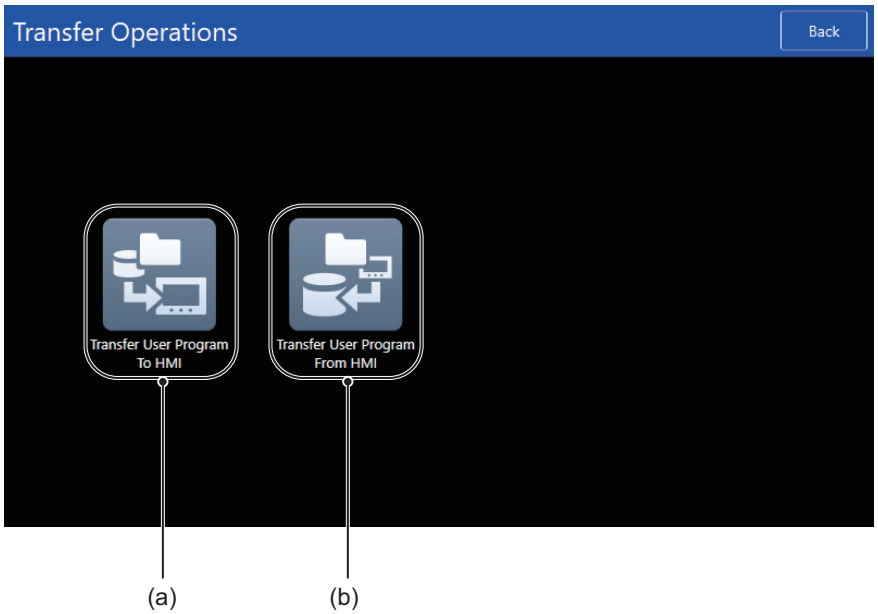


No.	Item	Functionality
(a)	USB Directory	Used to set the folder to which "USBDisk" is to be assigned.
(b)	SDCard Directory	Used to set the folder to which "SDCard" is to be assigned.
(c)	FTP directory	Used to set the folder to which "FTP" is to be assigned.

6-2-12 Transfer Operations (Device System Menu)

This screen is used to transfer the project and other data.

You can click any of the icons to display the individual transfer screens.



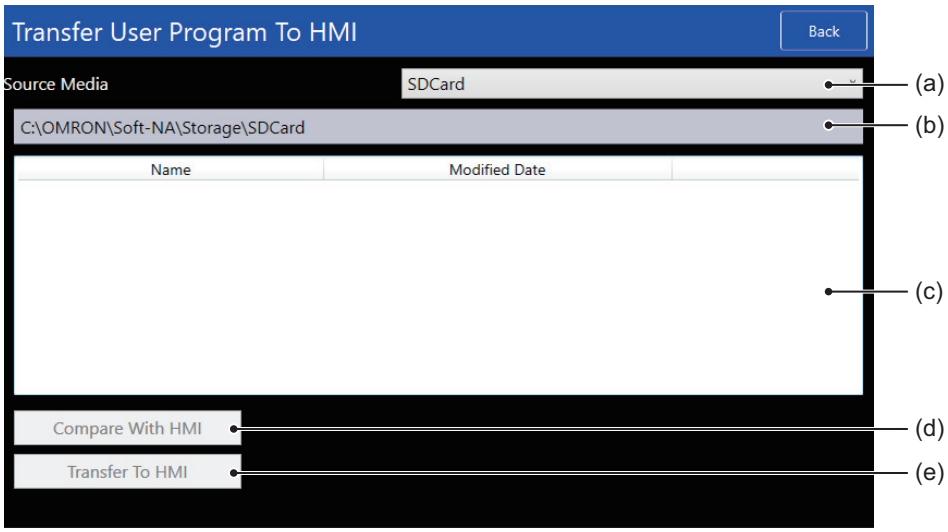
No.	Item	Functionality
(a)	Transfer User Program To HMI	Used to download the project.
(b)	Transfer User Program From HMI	Used to upload the project.

Additional Information

The Soft-NA does not support **Transfer Data To HMI** and **Transfer Data From HMI**. Directly acquire the data from the folder set in the Storage Settings.

Transfer User Program To HMI

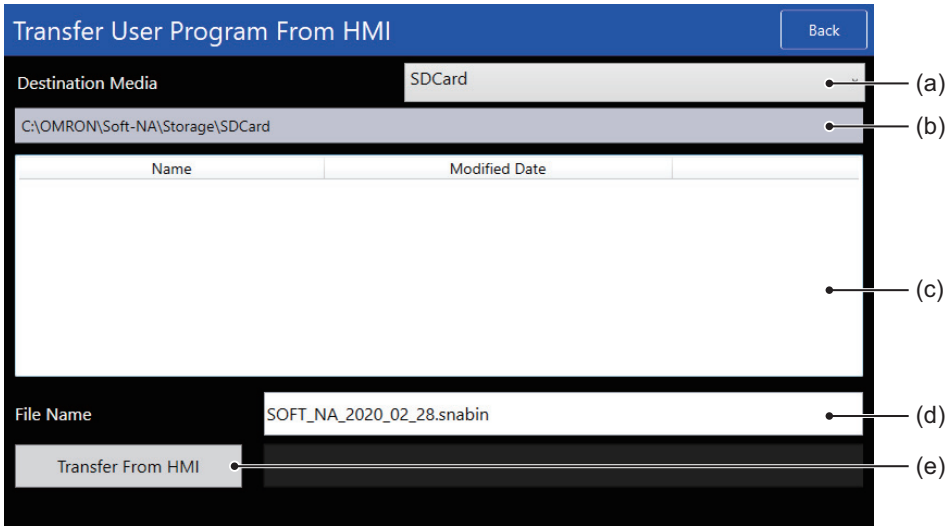
This screen is used to download the project from the specified location.



No.	Item	Functionality
(a)	Source Media	Specifies the media that contains the project to download. Select **Custom** to select any folder.
(b)	Path	Displays the path of the folder displayed in (c).
(c)	Folder Contents	Displays the files and folders in the currently open folder.
(d)	Compare With HMI	Used to compare the selected project and project in HMI.
(e)	Transfer To HMI	Used to download the selected project to HMI.

Transfer User Program From HMI

This screen is used to upload the project to the specified location.



No.	Item	Functionality
(a)	Destination Media	Specifies the media to which to upload the project. Select **Custom** to select any folder.
(b)	Path	Displays the path of the folder displayed in (c).
(c)	Folder Contents	Displays the files and folders in the currently open folder.
(d)	File Name	Specifies the file name.
(e)	Transfer From HMI	Used to upload the selected project to the destination media.

7

Handling Errors

This section describes how to troubleshoot errors in the Soft-NA.

7-1 Operation after an Error

Because the Soft-NA is a Windows application, the operation in the case of an error is same as a general Windows application.

Also, the error status is output in the Windows log - application.

Additional Information

To address problems due to updating Windows as well as security measures, always use the latest Soft-NA.

7-2 Troubleshooting

This section provides flowcharts for basic error identification and troubleshooting, and error corrections in the case of occurrence of an error in the Soft-NA.

7-2-1 When the Soft-NA does not start

The general actions to be taken when the Soft-NA does not start are described below.

Additional Information

If the Soft-NA is started immediately after starting Windows, it may not start normally.

This may be because the start of services necessary for the execution of the Soft-NA and identification of the USB dongle are not complete immediately after Windows is started. Wait for some time before starting the Soft-NA.

● When the Soft-NA window is not displayed at all

The following are possible causes.

- There is a problem with the installation status of the Soft-NA.
- There is a problem in Windows.
- The Soft-NA was not exited by the correct procedure last time.

Execute the following steps, and check if the problem does not occur any more.

1. Start the Soft-NA after restarting Windows.
2. Start the Soft-NA after stopping the anti-virus software.
3. Start the Soft-NA after reinstalling the latest version.
4. Execute Windows Update, and start the Soft-NA after setting Windows to the recent state.
5. Start the Soft-NA after reinstalling Windows.

● When the Soft-NA window is displayed

There could be a problem in the project data. Again transfer the project data from Sysmac Studio to check if the problem still occurs.

If there is no improvement even after transferring the project data again, also refer to the actions to be taken under *When the Soft-NA window is not displayed at all* on page 7-2.

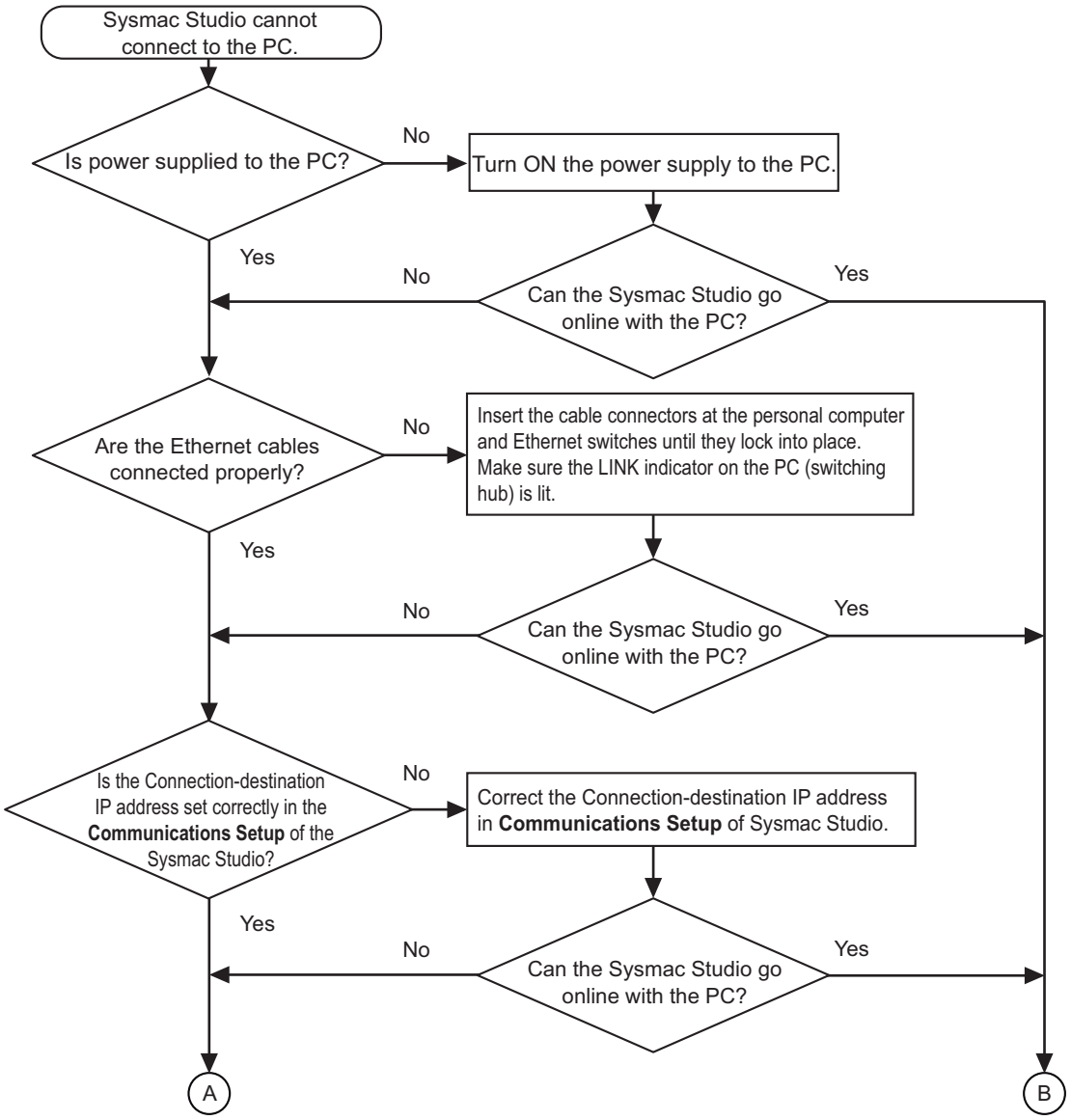
7-2-2 Causes and Correction When You Cannot Go Online from the Sysmac Studio

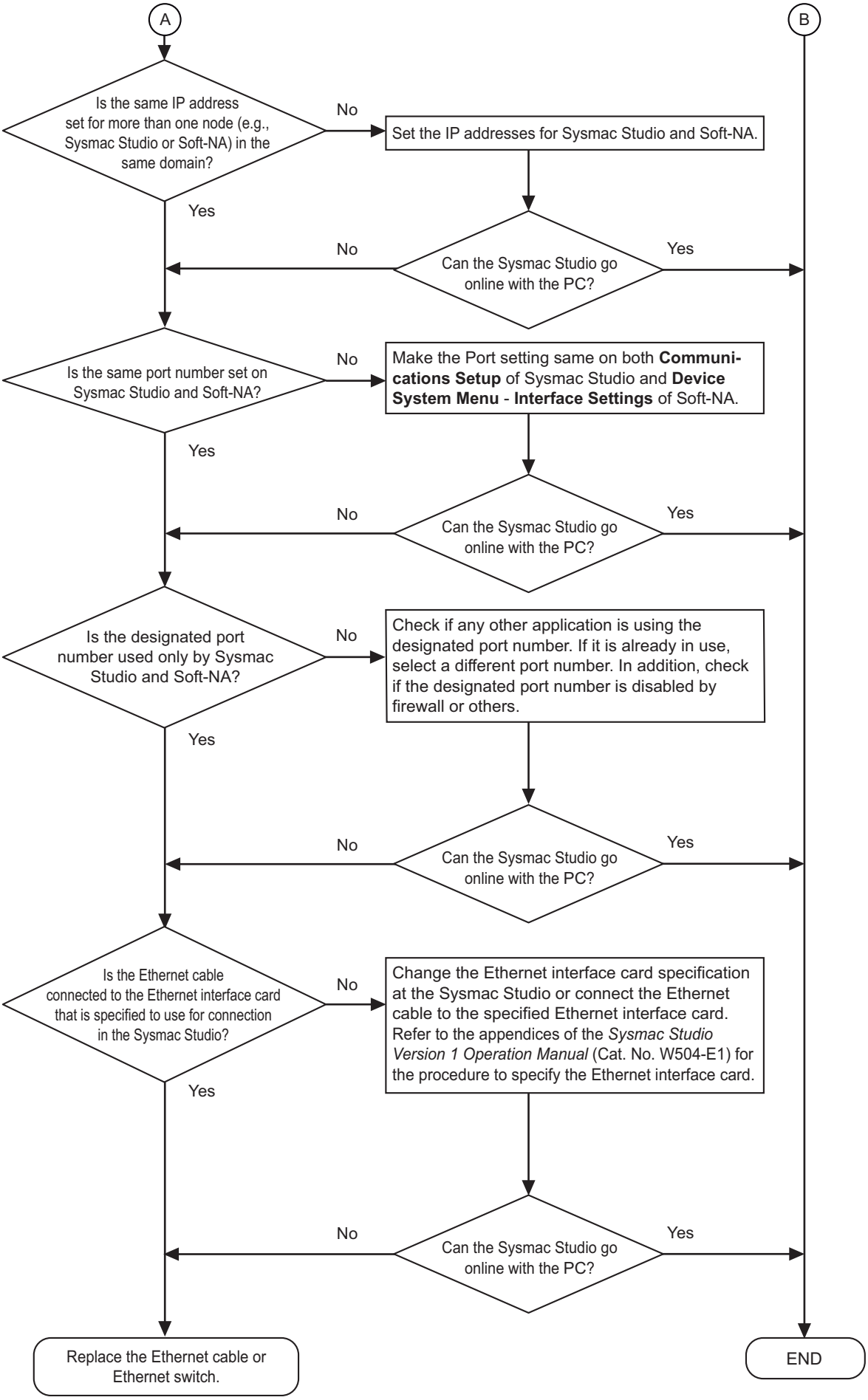
The following table lists the possible causes when you cannot go online with the Soft-NA from the Sysmac Studio.

Cause	Description	Correction
Incorrect settings or faulty communications path	There is a mistake in the settings that the Sysmac Studio uses to go online with the Soft-NA. Or, the communications path is faulty.	Refer to *Troubleshooting Incorrect Settings and Faulty Communications Path* on page 7-4.
Inability to operate the Soft-NA	An error according to which the operation of the Soft-NA stops has occurred.	Restart the Soft-NA or PC.
High load on the PC	The load on the PC is too high and there is not enough time to connect to Sysmac Studio.	Exit the other applications. Also, execute the operation after waiting for processes being executed in the background, such as a virus scan, etc. to end.

Troubleshooting Incorrect Settings and Faulty Communications Path

The actions to take for "Incorrect settings or faulty communications path" are described below.




A
B
Is the same IP address set for more than one node (e.g., Sysmac Studio or Soft-NA) in the same domain?
No
Set the IP addresses for Sysmac Studio and Soft-NA.
Yes
No
Can the Sysmac Studio go online with the PC?
Yes
Is the same port number set on Sysmac Studio and Soft-NA?
No
Make the Port setting same on both **Communications Setup** of Sysmac Studio and **Device System Menu** - **Interface Settings** of Soft-NA.
Yes
No
Can the Sysmac Studio go online with the PC?
Yes
Is the designated port number used only by Sysmac Studio and Soft-NA?
No
Check if any other application is using the designated port number. If it is already in use, select a different port number. In addition, check if the designated port number is disabled by firewall or others.
Yes
No
Can the Sysmac Studio go online with the PC?
Yes
Is the Ethernet cable connected to the Ethernet interface card that is specified to use for connection in the Sysmac Studio?
No
Change the Ethernet interface card specification at the Sysmac Studio or connect the Ethernet cable to the specified Ethernet interface card. Refer to the appendices of the *Sysmac Studio Version 1 Operation Manual* (Cat. No. W504-E1) for the procedure to specify the Ethernet interface card.
Yes
No
Can the Sysmac Studio go online with the PC?
Yes
Replace the Ethernet cable or Ethernet switch.
END

7-2-3 Troubleshooting Soft-NA Errors

The actions to take when an error occurs in the Soft-NA are described below.

Soft-NA is running

● Errors determined from Soft-NA symptoms

Soft-NA symptom	Cause	Correction
Nothing is displayed on the screen	The screen saver functionality has been activated.	This is not an error. Disable the screen saver by clicking the mouse or performing some other action.
There is no response to clicking.	External noise has caused a malfunction.	Shut down the PC and take measures against noise.
	A problem has occurred in an input device, such as the mouse.	Check if the input device is operating normally in an application other than the Soft-NA.
	The application response is delayed due to a high load.	Exit the other applications. Also, wait for processes executed temporarily in the background, such as Windows Update, etc. to end.
The display is dark	There is a problem in Windows or the display settings.	Check Windows and display settings.
Numbers or characters are refreshed too slowly	Communications are not stable due to external noise.	Separate the communications cables from power lines and perform other noise countermeasures.
	There are too many objects on the display screen.	Decrease the number of objects on the screens for which refreshing is slow.
	There is a heavy processing load on the connected device that is resulting in extended cycle times.	Reduce the cycle time of the connected device.
	The message communications interval is too long.	Shorten the refreshing interval of the variable that is allocated to the object.
Gauges are refreshed too slowly	Too many objects overlap the gauges.	If multiple images are stacked behind the gauges, put them together in a single image. Lay out the gauges so that they do not overlap with other objects.
Some of the objects on the screen are not displayed	The IsVisible Check Box is not selected in the object settings.	Select the **IsVisible** Check Box in the object properties on the Sysmac Studio. If you change the IsVisible property, e.g., from a subroutine, set it to True.
The trend graph display does not match the actual log timing	The communications address that is set as the event for the log timing is turning ON and OFF at a high speed.	Increase the ON/OFF interval for the communications address used as the event.
Numeric values cannot be input	The upper/lower limit check for numeric inputs is operating.	Check the minimum value and maximum value properties of the object on the Sysmac Studio and correct them as required.

Soft-NA symptom	Cause	Correction
When an object is touched, nothing is input or executed	A communications error occurred.	Check the connection between the Soft-NA and connected device.
	The **IsEnabled** Check Box is not selected in the object settings.	Select the **IsEnabled** Check Box in the object properties on the Sysmac Studio.
	Security is set.	If you change the IsEnabled property, e.g., from a subroutine, set it to True.
Operation is not possible for all objects	The Soft-NA is in Input Prohibited Mode.	Use the EnableInputOperation function or EnableInputOperation action to enable the inputs that are currently prohibited.
		Log in at a level where input is allowed.
It is not possible to move to the System Menu	The currently logged in user does not have permission.	Go to the System Menu and log in as a level that has permission to display the System Menu.

● Errors determined with messages

Output message	Cause	Correction
E_SNA_999 An unexpected error has occurred. Restart the Soft-NA.	An unexpected error occurred during Runtime execution.	Restart the Soft-NA.
E_SNA_001 The project data is corrupted. Transfer the project data again.	There is a problem in the project data.	Transfer the project data again from Sysmac Studio.
E_SNA_100 The Soft-NA is already running.	• The Soft-NA was started when it was already running. • Soft-NA was started after Soft-NA terminated incorrectly.	• Exit the running Soft-NA, and then execute it. • Restart the PC.
E_SNA_101 An unexpected error has occurred. Restart the Soft-NA.	An unexpected error occurred during Runtime execution.	Restart the Soft-NA.
E_SNA_102 The project data is corrupted. Transfer the project data again.	There is a problem in the project data.	Transfer the project data again from Sysmac Studio.
E_SNA_103 The project data is corrupted. Transfer the project data again.	There is a problem in the project data.	Transfer the project data again from Sysmac Studio.
E_SNA_104 Insert the USB dongle for Soft-NA.	The USB dongle cannot be accessed from the Soft-NA.	• Insert the USB dongle for the Soft-NA into the PC. • Restart the PC. • Try restarting the Soft-NA after waiting for around 30 seconds.
E_SNA_105 Insert the USB dongle for Soft-NA.	The USB dongle cannot be accessed from the Soft-NA.	• Insert the USB dongle for the Soft-NA into the PC. • Restart the PC. • Try restarting the Soft-NA after waiting for around 30 seconds.

Output message	Cause	Correction
"Transferring project data to HMI' failed. Transfer the project data again.	Failed to transfer the project data.	• Assign write permission for <Soft-NA Installation Drive>\OMRON. • Again create the project data for transfer in Sysmac Studio.
"Transferring project data from HMI' failed. Check the settings on the transfer destination.	Failed to transfer the project data.	• Check if the folder specified as the transfer destination can be accessed. • Assign write permission for the transfer destination.
Failed to display documention. Install the corresponding application.	The application for displaying the document is not installed.	Install the application corresponding to the document attempted to be viewed.
Failed to display documention. Please use PDF, WORD, Excel files.	A file with an unsupported format is set as the document.	Convert the file to a supported file format.
Unexpected error in media player.	• Windows Media Player is not installed. • An attempt is made to play back a file with an unsupported file format.	• Install the Windows Media Player. • Convert the file to a supported file format.

A

Appendices

The appendices provide the version upgrade history and other information.

A-1 Differences between the Soft-NA and the Simulator

The following major differences exist between the Soft-NA and the Simulator. In addition, the display by the Simulator is not guaranteed to be completely compatible with the Soft-NA. Always perform the final check with the Soft-NA on a PC which is going to be used.

- Trend Graph and Broken-line Graph Objects

  The Simulator does not update graphic displays. Fixed still images are displayed.
- ShowTroubleshooter Action and ShowTroubleshooter Function

  Not operated by the Simulator.
- Media Player Object

  There may be some differences in the behavior or timing when a video is replayed. Moreover, the action or function for operating the Media Player Object is not executed.
- System Menu

  Not operated by the Simulator.

A-2 Version Upgrade History

This section describes the functions that have been added or enhanced as a result of a version upgrade.

A-2-1 Common Version Upgrade History for Sysmac Studio and the Soft-NA

Sysmac Studio Ver.1.40, Soft-NA Ver.1.00

Item	Description
First release	Support for Soft-NA

Sysmac Studio Ver.1.45, Soft-NA Ver.1.02

Item	Description
Supported Runtime version	Support for Runtime Ver.1.12, 1.13, 1.14, 1.15

Sysmac Studio Ver.1.54, Soft-NA Ver.1.02

Item	Description
Supported Runtime version	Support for Runtime Ver.1.16, 1.17

A-2-2 Soft-NA Version Upgrade History

Soft-NA Ver.1.00

Item	Description
First release	First release

Soft-NA Ver.1.02

Item	Description
Supported Runtime version	Support for Runtime Ver.1.12 to 1.17

A-2-3 Sysmac Studio Corresponding Versions

The table below shows the latest Runtime and Soft-NA versions supported by each version of Sysmac Studio.

Sysmac Studio	Runtime	Soft-NA
1.40	1.11	1.00
1.45	1.12	1.02
	1.13	
	1.14	
	1.15	
1.54	1.16	
	1.17	

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