

Modicon Edge I/O

Software Integration and Compatibility

User Guide

Original instructions

EIO0000004818.01
02/2025

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Safety Information

Important Information

Read these instructions carefully, and look at the equipment to become familiar with the device before trying to install, operate, service, or maintain it. The following special messages may appear throughout this documentation or on the equipment to warn of potential hazards or to call attention to information that clarifies or simplifies a procedure.



The addition of this symbol to a “Danger” or “Warning” safety label indicates that an electrical hazard exists which will result in personal injury if the instructions are not followed.



This is the safety alert symbol. It is used to alert you to potential personal injury hazards. Obey all safety messages that follow this symbol to avoid possible injury or death.

 DANGER
DANGER indicates a hazardous situation which, if not avoided, will result in death or serious injury.
 WARNING
WARNING indicates a hazardous situation which, if not avoided, could result in death or serious injury.
 CAUTION
CAUTION indicates a hazardous situation which, if not avoided, could result in minor or moderate injury.
NOTICE
NOTICE is used to address practices not related to physical injury.

Please Note

Electrical equipment should be installed, operated, serviced, and maintained only by qualified personnel. No responsibility is assumed by Schneider Electric for any consequences arising out of the use of this material.

A qualified person is one who has skills and knowledge related to the construction and operation of electrical equipment and its installation, and has received safety training to recognize and avoid the hazards involved.

Before You Begin

Do not use this product on machinery lacking effective point-of-operation guarding. Lack of effective point-of-operation guarding on a machine can result in serious injury to the operator of that machine.

⚠ WARNING**UNGUARDED EQUIPMENT**

- Do not use this software and related automation equipment on equipment which does not have point-of-operation protection.
- Do not reach into machinery during operation.

Failure to follow these instructions can result in death, serious injury, or equipment damage.

This automation equipment and related software is used to control a variety of industrial processes. The type or model of automation equipment suitable for each application will vary depending on factors such as the control function required, degree of protection required, production methods, unusual conditions, government regulations, etc. In some applications, more than one processor may be required, as when backup redundancy is needed.

Only you, the user, machine builder or system integrator can be aware of all the conditions and factors present during setup, operation, and maintenance of the machine and, therefore, can determine the automation equipment and the related safeties and interlocks which can be properly used. When selecting automation and control equipment and related software for a particular application, you should refer to the applicable local and national standards and regulations. The National Safety Council's Accident Prevention Manual (nationally recognized in the United States of America) also provides much useful information.

In some applications, such as packaging machinery, additional operator protection such as point-of-operation guarding must be provided. This is necessary if the operator's hands and other parts of the body are free to enter the pinch points or other hazardous areas and serious injury can occur. Software products alone cannot protect an operator from injury. For this reason the software cannot be substituted for or take the place of point-of-operation protection.

Ensure that appropriate safeties and mechanical/electrical interlocks related to point-of-operation protection have been installed and are operational before placing the equipment into service. All interlocks and safeties related to point-of-operation protection must be coordinated with the related automation equipment and software programming.

NOTE: Coordination of safeties and mechanical/electrical interlocks for point-of-operation protection is outside the scope of the Function Block Library, System User Guide, or other implementation referenced in this documentation.

Start-up and Test

Before using electrical control and automation equipment for regular operation after installation, the system should be given a start-up test by qualified personnel to verify correct operation of the equipment. It is important that arrangements for such a check are made and that enough time is allowed to perform complete and satisfactory testing.

⚠ WARNING**EQUIPMENT OPERATION HAZARD**

- Verify that all installation and set up procedures have been completed.
- Before operational tests are performed, remove all blocks or other temporary holding means used for shipment from all component devices.
- Remove tools, meters, and debris from equipment.

Failure to follow these instructions can result in death, serious injury, or equipment damage.

Follow all start-up tests recommended in the equipment documentation. Store all equipment documentation for future references.

Software testing must be done in both simulated and real environments.

Verify that the completed system is free from all short circuits and temporary grounds that are not installed according to local regulations (according to the National Electrical Code in the U.S.A, for instance). If high-potential voltage testing is necessary, follow recommendations in equipment documentation to prevent accidental equipment damage.

Before energizing equipment:

- Remove tools, meters, and debris from equipment.
- Close the equipment enclosure door.
- Remove all temporary grounds from incoming power lines.
- Perform all start-up tests recommended by the manufacturer.

Operation and Adjustments

The following precautions are from the NEMA Standards Publication ICS 7.1-1995:

(In case of divergence or contradiction between any translation and the English original, the original text in the English language will prevail.)

- Regardless of the care exercised in the design and manufacture of equipment or in the selection and ratings of components, there are hazards that can be encountered if such equipment is improperly operated.
- It is sometimes possible to misadjust the equipment and thus produce unsatisfactory or unsafe operation. Always use the manufacturer's instructions as a guide for functional adjustments. Personnel who have access to these adjustments should be familiar with the equipment manufacturer's instructions and the machinery used with the electrical equipment.
- Only those operational adjustments required by the operator should be accessible to the operator. Access to other controls should be restricted to prevent unauthorized changes in operating characteristics.

About the Book

Document Scope

This guide describes the software integration and compatibility of Modicon Edge I/O NTS. It provides the information and identification of software and describes the integration of Modicon Edge I/O NTS in Schneider Electric Environments.

Validity Note

This document has been updated for the release of Modicon Edge I/O NTS firmware V1.0.0.

For product compliance and environmental information (RoHS, REACH, PEP, EOL, etc.), go to www.se.com/ww/en/work/support/green-premium/.

The characteristics of the products described in this document are intended to match the characteristics that are available on www.se.com. As part of our corporate strategy for constant improvement, we may revise the content over time to enhance clarity and accuracy. If you see a difference between the characteristics in this document and the characteristics on www.se.com, consider www.se.com to contain the latest information.

Related Documents

Title of documentation	Reference number
Modicon Edge I/O - System Planning and Installation Guide	EIO0000004786 (ENG)
Modicon Edge I/O - Configurator and Web Interface - User Guide	EIO0000004810 (ENG)
Modicon Edge I/O - Diagnostic Data - User Guide	EIO0000004826 (ENG)
Modicon Edge I/O NTS - Network Interface Modules - User Guide	EIO0000004794 (ENG)
Modicon Edge I/O NTS - Analog Modules - User Guide	EIO0000005246 (ENG)
Modicon Edge I/O NTS - Discrete Modules - User Guide	EIO0000005238 (ENG)
Modicon Edge I/O NTS - Counting Modules - User Guide	EIO0000005262 (ENG)
Modicon Edge I/O NTS - Field Device Master Modules - User Guide	EIO0000005270 (ENG)
EcoStruxure Automation Device Maintenance	EIO0000004033 (ENG) EIO0000004048 (FRE) EIO0000004046 (GER) EIO0000004047 (SPA) EIO0000004049 (ITA) EIO0000004050 (CHS) EIO0000005090 (POR) EIO0000005089 (TUR)
Modicon Edge I/O NTS Range - Standards and Certifications	EIO0000005518 (ENG)

To find documents online, visit the Schneider Electric download center (www.se.com/ww/en/download/).

Product Related Information

⚠ WARNING

LOSS OF CONTROL

- Perform a Failure Mode and Effects Analysis (FMEA), or equivalent risk analysis, of your application, and apply preventive and detective controls before implementation.
- Provide a fallback state for undesired control events or sequences.
- Provide separate or redundant control paths wherever required.
- Supply appropriate parameters, particularly for limits.
- Review the implications of transmission delays and take actions to mitigate them.
- Review the implications of communication link interruptions and take actions to mitigate them.
- Provide independent paths for control functions (for example, emergency stop, over-limit conditions, and error conditions) according to your risk assessment, and applicable codes and regulations.
- Apply local accident prevention and safety regulations and guidelines.¹
- Test each implementation of a system for proper operation before placing it into service.

Failure to follow these instructions can result in death, serious injury, or equipment damage.

¹ For additional information, refer to NEMA ICS 1.1 (latest edition), *Safety Guidelines for the Application, Installation, and Maintenance of Solid State Control* and to NEMA ICS 7.1 (latest edition), *Safety Standards for Construction and Guide for Selection, Installation and Operation of Adjustable-Speed Drive Systems* or their equivalent governing your particular location.

⚠ WARNING

UNINTENDED EQUIPMENT OPERATION

- Only use software approved by Schneider Electric for use with this equipment.
- Update your application program every time you change the physical hardware configuration.

Failure to follow these instructions can result in death, serious injury, or equipment damage.

Information on Non-Inclusive or Insensitive Terminology

As a responsible, inclusive company, Schneider Electric is constantly updating its communications and products that contain non-inclusive or insensitive terminology. However, despite these efforts, our content may still contain terms that are deemed inappropriate by some customers.

Terminology Derived from Standards

The technical terms, terminology, symbols and the corresponding descriptions in the information contained herein, or that appear in or on the products themselves, are generally derived from the terms or definitions of international standards.

In the area of functional safety systems, drives and general automation, this may include, but is not limited to, terms such as *safety*, *safety function*, *safe state*, *fault*, *fault reset*, *malfunction*, *failure*, *error*, *error message*, *dangerous*, etc.

Among others, these standards include:

Standard	Description
IEC 61131-2:2007	Programmable controllers, part 2: Equipment requirements and tests.
ISO 13849-1:2023	Safety of machinery: Safety related parts of control systems. General principles for design.
EN 61496-1:2020	Safety of machinery: Electro-sensitive protective equipment. Part 1: General requirements and tests.
ISO 12100:2010	Safety of machinery - General principles for design - Risk assessment and risk reduction
EN 60204-1:2006	Safety of machinery - Electrical equipment of machines - Part 1: General requirements
ISO 14119:2013	Safety of machinery - Interlocking devices associated with guards - Principles for design and selection
ISO 13850:2015	Safety of machinery - Emergency stop - Principles for design
IEC 62061:2021	Safety of machinery - Functional safety of safety-related electrical, electronic, and electronic programmable control systems
IEC 61508-1:2010	Functional safety of electrical/electronic/programmable electronic safety-related systems: General requirements.
IEC 61508-2:2010	Functional safety of electrical/electronic/programmable electronic safety-related systems: Requirements for electrical/electronic/programmable electronic safety-related systems.
IEC 61508-3:2010	Functional safety of electrical/electronic/programmable electronic safety-related systems: Software requirements.
IEC 61784-3:2021	Industrial communication networks - Profiles - Part 3: Functional safety fieldbuses - General rules and profile definitions.
2006/42/EC	Machinery Directive
2014/30/EU	Electromagnetic Compatibility Directive
2014/35/EU	Low Voltage Directive

In addition, terms used in the present document may tangentially be used as they are derived from other standards such as:

Standard	Description
IEC 60034 series	Rotating electrical machines
IEC 61800 series	Adjustable speed electrical power drive systems
IEC 61158 series	Digital data communications for measurement and control – Fieldbus for use in industrial control systems

Finally, the term *zone of operation* may be used in conjunction with the description of specific hazards, and is defined as it is for a *hazard zone* or *danger zone* in the *Machinery Directive (2006/42/EC)* and *ISO 12100:2010*.

NOTE: The aforementioned standards may or may not apply to the specific products cited in the present documentation. For more information concerning the individual standards applicable to the products described herein, see the characteristics tables for those product references.

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Product Information and Identification

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Overview

The Modicon Edge I/O Configurator and Modicon Edge I/O NTS Web Interface software allow you to generate configuration files for Modicon Edge I/O. This can be done:

- Offline: the Modicon Edge I/O Configurator tool does not need to be connected to the Network Interface Module (NIM).
- Online: the Modicon Edge I/O Configurator tool is connected to the Network Interface Module, or you are using the embedded Web Interface.

The EcoStruxure Automation Device Maintenance software allows you to upgrade the firmware on multiple devices simultaneously.

Modicon Edge I/O Configurator Software Information and Identification

Reference	Description	From Version
Modicon Edge I/O Configurator	Configurator software	1.0.0

Modicon Edge I/O NTS Web Interface Information and Identification

Reference	Description	From Version
Modicon Edge I/O NTS Web Interface	Embedded Web Interface	1.0.0

EcoStruxure Automation Device Maintenance Information and Identification

Reference	Description	From Version
EcoStruxure Automation Device Maintenance (EADM)	EcoStruxure Automation Device Maintenance tool	3.3.140

Modicon Edge I/O NTS Hardware Information and Identification

Modicon Edge I/O NTS Network Interface Modules

Modicon Edge I/O NTS Network Interface Modules firmware identification table:

Reference	Description	From Version
NTSNEC1200	Network Interface Module, EtherNet/IP, Modbus TCP, 100 Mbps, 2 RJ45	1.0.0
NTSNEC1200H	Network Interface Module, EtherNet/IP, Modbus TCP, 100 Mbps, 2 RJ45, Hardened	1.0.0

Modicon Edge I/O NTS Discrete Modules

Modicon Edge I/O NTS Discrete modules firmware identification table:

Reference	Description	From Version
NTSDDI0602	Discrete Input Module, 6 Inputs, 24 Vdc, Sink, 1-/2-/3-wire	1.0.0
NTSDDI0802X	Discrete Input Module, 8 Inputs, 24 Vdc, Sink, 1-/2-wire	1.0.0
NTSDDI1602	Discrete Input Module, 16 Inputs, 24 Vdc, Sink, 1-wire	1.0.0
NTSDDI1602X	Discrete Input Module, 16 Inputs, 24 Vdc, Sink, 1-/2-/3-wire	1.0.0
NTSDDI1602XH	Discrete Input Module, 16 Inputs, 24 Vdc, Sink, 1-/2-/3-wire, Hardened	1.0.0
NTSDDO0212H	Discrete Output Module, 2 Isolated Outputs, 24 Vdc, 2 A, Source, Protected, 1-/2-/3-wire, Hardened	1.0.0
NTSDDO0802	Discrete Output Module, 8 Outputs, 24 Vdc, 2 A, Source, Protected, External Supply, 1-wire	1.0.0
NTSDDO0802X	Discrete Output Module, 8 Outputs, 24 Vdc, 500 mA, Source, Protected, 1-/2-wire	1.0.0
NTSDRA0615	Relay Output Module, 6 Isolated Outputs, NO, 2 A, 5...125 Vdc, 24...240 Vac	1.0.0

Modicon Edge I/O NTS Analog Modules

Modicon Edge I/O NTS Analog modules firmware identification table:

Reference	Description	From Version
NTSAMI0210	Analog Input Module, 2 Isolated Inputs, Current, Voltage, 2-/3-/4 wire, Loop Power	1.0.0
NTSAMI0210H	Analog Input Module, 2 Isolated Inputs, Current, Voltage, 2-/3-/4 wire, Loop Power, Hardened	1.0.0
NTSAMI0400	Analog Input Module, 4 Inputs, Current, Voltage, 2-wire	1.0.0
NTSACI0802X	Analog Input Module, 8 Inputs, Current, 1-/2-wire, Loop Power	1.0.0
NTSACI0802XH	Analog Input Module, 8 Inputs, Current, 1-/2-wire, Loop Power, Hardened	1.0.0
NTSAMO0400	Analog Output Module, 4 Outputs, Current, Voltage	1.0.0
NTSAMO0400H	Analog Output Module, 4 Outputs, Current, Voltage, Hardened	1.0.0

Modicon Edge I/O NTS Counting Modules

Modicon Edge I/O NTS Counting modules firmware identification table:

Reference	Description	From Version
NTSEHC0100	High Speed Counter Module, 1 Incremental Input, 24 Vdc, 250 kHz, 2 Inputs	1.0.0
NTSEHC0120H	High Speed Counter Module, 1 Incremental Input, 24 Vdc, 250 kHz, 2 Inputs, 4 Outputs, Hardened	1.0.0
NTSEHC0220	High Speed Counter Module, 2 Incremental Inputs, 24 Vdc, 250 kHz, 4 Inputs, 8 Outputs	1.0.0

Modicon Edge I/O NTS Field Device Master Modules

Modicon Edge I/O NTS Field Device Master modules firmware identification table:

Reference	Description	From Version
NTSFIO0400	Field Device Master Module, IO-Link Master, 4 Channels	1.0.0

Modicon Edge I/O NTS Power Supply Modules

Modicon Edge I/O NTS Power Supply modules firmware identification table:

Reference	Description	From Version
NTSPFB1002H	Power Supply Module, 24 Vdc, Field and Bus, Hardened	1.0.0
NTSPFD1002H	Power Supply Module, 24 Vdc, Field, Hardened	1.0.0

Modicon Edge I/O NTS Common Distribution Modules

Modicon Edge I/O NTS Common Distribution modules firmware identification table:

Reference	Description	From Version
NTSPCM0016H	Common Distribution Module, 0 Vdc, 16 Points, Hardened	1.0.0
NTSPCM0808H	Common Distribution Module, 0 Vdc, 8 Points, 24 Vdc, 8 points, eFuse, Hardened	1.0.0
NTSPCM1600H	Common Distribution Module, 24 Vdc, 16 Points, eFuse, Hardened	1.0.0

Modicon Edge I/O NTS Dummy Modules

Modicon Edge I/O NTS Dummy modules firmware identification table:

Reference	Description	From Version
NTSDMY0100H	Dummy Module, Single Slot, Hardened	1.0.0
NTSDMY0200H	Dummy Module, Double Slot, Hardened	1.0.0

Product Integration

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Overview

The Modicon Edge I/O NTS is integrated into the following Schneider Electric environments:

- Machine Environment
- Control Environment
- Automation Environment

The Modicon Edge I/O NTS is also integrated into EcoStruxure Cybersecurity Admin Expert.

Modicon Edge I/O NTS Integration into Machine Environment

Reference	Description	From Version
EcoStruxure Automation Expert - Motion	EcoStruxure Automation Expert - Motion Software	24.1
M262	M262 EtherNet/IP Modbus TCP Controller	5.3.9.9

Modicon Edge I/O NTS Integration into Control Environment

Reference	Description	From Version
EcoStruxure Control Expert	EcoStruxure Control Expert Software	16.1
M580	M580 Controller	4.30

Modicon Edge I/O NTS Integration into Automation Environment

Reference	Description	From Version
EcoStruxure Automation Expert	EcoStruxure Automation Expert Software	24.1
SoftdPAC	SoftdPAC nonHA (non-high-availability) Controller	24.1

Modicon Edge I/O NTS Integration into EcoStruxure Cybersecurity Admin Expert

Reference	Description	From Version
EcoStruxure Cybersecurity Admin Expert	EcoStruxure Cybersecurity Admin Expert software	4.0

Installation Instructions

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Modicon Edge I/O NTS Firmware Update

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Introduction

The Modicon Edge I/O firmware update procedure consists of:

1. Connecting the Modicon Edge I/O NTS Network Interface Module to a PC, page 19
2. Selecting the Firmware Data Package, page 22
3. Updating the Firmware, page 23

When using EcoStruxure Automation Device Maintenance for the firmware update, the following elements are retained in the modules:

- Cybersecurity configuration (user login and password)
- IP settings
- Modicon Edge I/O runtime configuration

If the firmware update is interrupted, you must restart the update process.

For more information about EcoStruxure Automation Device Maintenance, refer to EcoStruxure Automation Device Maintenance User Manual.

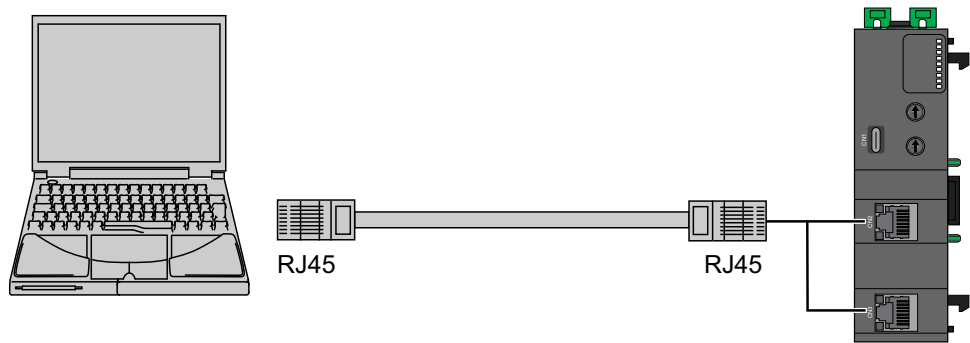
Connecting the Modicon Edge I/O NTS Network Interface Module to a PC

Modicon Edge I/O NTS Network Interface Module connects to a PC using:

- Ethernet Port Connection
- USB Port Connection

Ethernet Port Connection

The following illustration shows the network interface module connection to a PC using the Ethernet ports:



To connect the network interface module to the PC, do the following:

Step	Action
1	Connect the Ethernet cable to the PC.
2	Connect the Ethernet cable to one of the Ethernet ports on the network interface module. NOTE: Your PC and your network interface module must be on the same network and use the same subnet mask.

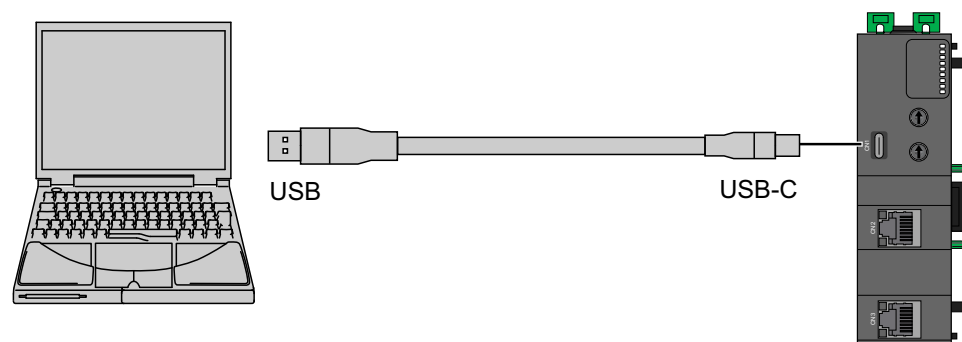
The default IP address is 10.10.MAC5.MAC6. The last two fields (MAC5 and MAC6) in the default IP address are the last two hexadecimal bytes of the MAC address of the port.

The default subnet mask is 255.255.0.0.

USB Port CN1 Connection

The USB Port connection is suitable for short duration connections for the express purposes of configuration, maintenance, and trouble-shooting. It is not intended as a long-standing connection for other purposes. Further, the network interface module may only be connected to a PC.

The following illustration shows the USB connection to a PC:



The communication cable should be connected to the PC first to minimize the possibility of electrostatic discharge affecting the network interface module.

NOTICE

INOPERABLE EQUIPMENT

Always connect the communication cable to the PC before connecting it to the network interface module.

Failure to follow these instructions can result in equipment damage.

To connect the network interface module to the PC, do the following:

Step	Action
1	Connect your USB cable to the PC.
2	Connect the connector of your USB cable to the network interface module USB Type-C connector (CN1). NOTE: A USB Virtual Ethernet Link must be configured on your PC to connect to the network interface module.

NOTICE

INOPERABLE EQUIPMENT

- Always connect directly a PC to the USB port of the network interface module without any intervening device such as a USB port concentrator or hub.
- The USB connection is only compatible with a maximum nominal voltage of 5 V between connected devices.
- The connection time must not exceed the time necessary to perform configuration, maintenance, and trouble-shooting.

Failure to follow these instructions can result in equipment damage.

You must configure a virtual Ethernet Link on your USB port, before you can access the network interface module through USB.

To configure a virtual Ethernet Link, configure an Ethernet interface of the USB-RNDIS by following these steps:

Step	Action
1	Remove power from the network interface module.
2	Connect the USB cable to the PC and then to the network interface module.
3	Apply power to the network interface module.
4	Open Network and sharing center on your PC.
5	Click Change adapter settings > Remote NDIS Compatible Device > Properties .
6	Select Internet Protocol version 4 (TCP/IPv4) .
7	Click Properties .
8	Select Use the following IP address to set the USB IP address of your PC. For example: IP address: 192.168.200.2 Subnet mask: 255.255.255.0
9	Click OK .
10	Close the Properties .
11	In a web browser, enter the USB IP address of your network interface module, by default 192.168.200.1. Result: The Modicon Edge I/O NTS Web Interface is displayed.

Selecting the Firmware Data Package

The following table provides the steps for installing EcoStruxure Automation Device Maintenance and selecting the firmware data package with the EcoStruxure Automation Device Maintenance software:

Step	Action
1	Before updating your firmware, verify that the EcoStruxure Automation Device Maintenance version supports the firmware version you want to install.
2	If upgrading the Modicon Edge I/O NTS firmware, download and install the latest version of EcoStruxure Automation Device Maintenance.
3	Go to www.se.com and then select your Schneider Electric country web site. In the search bar, enter "Device Maintenance". You can filter the search results by selecting the Software tab. Select your version of EcoStruxure Automation Device Maintenance, then download and install it.
4	Download the Modicon Edge I/O NTS firmware packages (.sedps file). Copy and paste the Modicon Edge I/O NTS firmware packages to the default EcoStruxure Automation Device Maintenance Data Packages folder (C:\Users\Public\Documents\Schneider Electric\Data Packages). The firmware packages are displayed in the EcoStruxure Automation Device Maintenance window in the DATA PACKAGE tab.
5	Before updating the Modicon Edge I/O NTS Network Interface Module firmware, implicit communication should be stopped. In any case, once the firmware has been download and validated by the device, implicit will be stopped and the firmware activated, and the Network Interface Module will be rebooted. The Modicon Edge I/O NTS I/O modules firmware can be updated while implicit communication is ongoing. However, when the firmware is validated by the device, the device will reboot. This triggers a diagnostic message if implicit communication had not first been stopped.

Updating the Firmware

Updating the Modicon Edge I/O NTS Network Interface Module Firmware

EcoStruxure Automation Device Maintenance allows you to update the firmware of devices displayed in the **Device/Loading** tab.

The following table provides the steps for updating the firmware:

Step	Action
1	In EcoStruxure Automation Device Maintenance, access the Device/Loading tab.
2	To add a Modicon Edge I/O NTS Network Interface Module follow these steps: 1. Click the  Add button; this will open the Add Device dialog box. 2. Click the Catalog button. 3. Use the search function to find and select the desired Modicon Edge I/O NTS Network Interface Module by its commercial reference. 4. Enter the IP address of the NIM in the IP Address field and the port number 4840 in the port field. 5. Click the Add Device button.
3	If the certificate icon on the Actions column is red, click it and trust the certificate. NOTE: This step must be completed once for every Modicon Edge I/O NTS Network Interface Module.
4	1. Click the  icon in the Actions column to open the Set credentials dialog box. 2. Enter the device username in the Device User Name field. 3. Enter the device password in the Device password field. 4. Click Save and Connect. NOTE: An Installer role is mandatory to connect and update the Modicon Edge I/O NTS Network Interface Module.
5	5a. To update a single device, click the Update Center  icon in the Actions column of that device row. 5b. To update several devices simultaneously, select the checkboxes for the devices you want to update, or select the checkbox for the entire Group, and click the  Update button from the button bar.
6	In the Update Center dialog box, click the Firmware button.
7	7a. To update a single device from the Firmware dialog box, select the device and the target firmware data package(s). 7b. To update several devices from the Firmware dialog box, select the devices and the target firmware data package(s).
8	Click Save to save the firmware update configuration and close the Firmware dialog box. Result: In the Update Info cell(s) of the device(s) of the Device/Loading tab, the  icon is displayed indicating the selected firmware version in the Target Version column.
9	Click the Update button at the bottom of the Device/Loading tab to start the update process. Result: The Update Confirmation dialog box is displayed with the phase 1 Select a Category.
10	Select Firmware and click Next. Result: The phase 2 Prerequisite dialog box opens.

Step	Action
11	11a. If the selected firmware is available locally, the phase 2 Prerequisite dialog box displays the message "All required fields are available locally". 11b. If any package(s) are only available in the remote repository, they are displayed in a list. Select the package(s) you need and click the Download button to download the package(s) to your local PC. After successful download, or if the list is empty, click Next to open phase 3 Review the Selection.
12	In the phase 3 Review the Selection dialog box, carefully review the list of devices selected for firmware update and verify the settings you chose. Then click Next. Result: The phase 4 Confirmation dialog box opens.
13	- Carefully read each message displayed in the dialog box and assess the associated risks before making a decision to confirm or cancel. - After evaluating the messages and confirming your readiness to proceed, click the Confirm button if you agree to proceed. You are then redirected to the Device/Loading tab, where you can initiate the update process.
14	After the update process is completed, the result is displayed next to the firmware version cell of each device that has been updated. For further information: - Refer to the Logs window. - Click the Summary button from the bottom of the EcoStruxure Automation Device Maintenance to display the Update Summary dialog box. It provides information on the status of the update for each device indicating the previous and the target firmware or security configuration file version, as well as the data package(s).

Before using electrical control and automation equipment for regular operation after a firmware update, the system should be given a start-up test by qualified personnel to verify correct operation of the equipment. It is important that arrangements for such a check are made and that enough time is allowed to perform complete and satisfactory testing.

 WARNING
EQUIPMENT OPERATION HAZARD - Verify that all firmware update procedures have been completed. - Before operational tests are performed, remove all blocks or other temporary holding means from all component devices. - Remove tools, meters, and debris from equipment. Failure to follow these instructions can result in death, serious injury, or equipment damage.

Updating the Modicon Edge I/O NTS I/O Modules Firmware

EcoStruxure Automation Device Maintenance allows you to update the firmware of modules displayed in the **EXTENSIONS** tab.

The following table provides the steps for updating the firmware:

Step	Action
1	In EcoStruxure Automation Device Maintenance, access the Device/Loading tab.
2	To add a Modicon Edge I/O NTS Network Interface Module follow these steps: 1. Click the  Add button; this will open the Add Device dialog box. 2. Click the Catalog button. 3. Use the search function to find and select the desired Modicon Edge I/O NTS Network Interface Module by its commercial reference. 4. Enter the IP address of the NIM in the IP Address field and the port number 4840 in the port field. 5. Click the Add Device button.
3	If the certificate icon on the Actions column is red, click it and trust the certificate. NOTE: This step must be completed once for every Modicon Edge I/O NTS Network Interface Module.
4	1. Click the  icon in the Actions column to open the Set credentials dialog box. 2. Enter the device username in the Device User Name field. 3. Enter the device password in the Device password field. 4. Click Save and Connect. NOTE: An Installer role is mandatory to connect and update the Modicon Edge I/O NTS NIM and the Modicon Edge I/O NTS I/O modules.
5	To update Modicon Edge I/O NTS I/O modules, follow these steps: 1. Click Extensions button in the row of the Network Interface Module and the Extensions column. Result: an EXTENSIONS tab is created. 2. If you open the EXTENSIONS tab for the first time, the view is empty. Click the Add button and then click the Scan Modules. Result: Modicon Edge I/O NTS I/O modules are shown in the EXTENSIONS tab. 3. 3a. To update a single module, select the checkbox for the module and click the Update Center  icon in the row of the device and the Actions column. 3b. To update several modules, select the checkboxes for the devices and click the  Update button from the button bar. NOTE: The selected I/O modules are updated one at a time in sequence.
6	In the Update Center dialog box, click the Firmware button.
7	7a. To update a single device from the Firmware dialog box, select the device and the target firmware data package(s). 7b. To update several devices from the Firmware dialog box, select the devices and the target firmware data package(s).
8	Click Save to save the firmware update configuration and close the Firmware dialog box. Result: In the Update Info cell(s) of the device(s) of the Device/Loading tab, the  icon is displayed indicating the selected firmware version in the Target Version column.
9	Click the Update button at the bottom of the Device/Loading tab to start the update process. Result: The Update Confirmation dialog box is displayed with the phase 1 Select a Category.
10	Select Firmware and click Next. Result: The phase 2 Prerequisite dialog box opens.

Step	Action
11	11a. If the selected firmware is available locally, the phase 2 Prerequisite dialog box displays the message "All required fields are available locally". 11b. If any package(s) are only available in the remote repository, they are displayed in a list. Select the package(s) you need and click the Download button to download the package(s) to your local PC. After successful download, or if the list is empty, click Next to open phase 3 Review the Selection.
12	In the phase 3 Review the Selection dialog box, carefully review the list of devices selected for firmware update and verify the settings you chose. Then click Next. Result: The phase 4 Confirmation dialog box opens.
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Before using electrical control and automation equipment for regular operation after a firmware update, the system should be given a start-up test by qualified personnel to verify correct operation of the equipment. It is important that arrangements for such a check are made and that enough time is allowed to perform complete and satisfactory testing.

 WARNING
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Modicon Edge I/O Configurator

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Introduction

The Modicon Edge I/O Configurator is a software used to configure the Modicon Edge I/O island. The software allows you to:

- Create and modify configuration files of your Modicon Edge I/O island, refer to File Page in the Modicon Edge I/O - Configurator and Web Interface - User Guide.
- Manage your islands, refer to Island Management Page in the Modicon Edge I/O - Configurator and Web Interface - User Guide.
- Manage your user rights, refer to Island Setup Page in the Modicon Edge I/O - Configurator and Web Interface - User Guide.
- Perform diagnostics operations, refer to Diagnostics Page in the Modicon Edge I/O - Configurator and Web Interface - User Guide.
- Reboot your island, refer to Maintenance Page in the Modicon Edge I/O - Configurator and Web Interface - User Guide.

System Requirements

For Modicon Edge I/O Configurator system requirements, refer to System Requirements in the Modicon Edge I/O - Configurator and Web Interface - User Guide.

Installation Instructions

For Modicon Edge I/O Configurator installation instructions, refer to Installing the Modicon Edge I/O Configurator (NTSCSW1000) in the Modicon Edge I/O - Configurator and Web Interface - User Guide.

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As standards, specifications, and design change from time to time, please ask for confirmation of the information given in this publication.

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