

EIP ET200 Configuration Tool

User Reference Guide

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This document applies to the EIP ET200 Configuration Tool.

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Preface

Preface Sections:

- Purpose of this Guide
- Conventions

Purpose of this Guide

This manual describes the use of the EIP ET200 Configuration Tool. The tool is used to configure ET200 adapter modules in both offline (no connection to the EtherNet/IP network) and online (connection to the EtherNet/IP network via an Ethernet Network Interface Card) modes. It can also be used in monitoring diagnostics on an ET200 adapter.



Note

For adapter technical details of ET200 modules, refer to the appropriate SiemensTM SIMATIC EIP-200S EtherNet/IP Adapter Distributed I/O System Manual (A5E03822408) and SiemensTM SIMATIC ET 200pro distributed I/O system Operating Instructions (A5E00335544-08).

Conventions

This guide uses stylistic conventions, special terms, and special notation to help enhance your understanding.

Style

The following stylistic conventions are used throughout this guide:

Bold	button names, tab names, and options or selections
Italics	indicates keywords (indexed) or instances of new terms and/or specialized words that need emphasis
CAPS	indicates a specific key selection, such as ENTER, TAB, CTRL, ALT, DELETE
Code Font	indicates command line entries or text that you would type into a field
<u>Underlining</u>	indicates a hyperlink

">" delimiter	indicates how to navigate through a hierarchy of menu selections/options
"0x"	indicates a hexadecimal value
NIC	indicates a network interface Card

Special Notation

The following special notation is used throughout this guide:



Note

A note provides additional information, emphasizes a point, or gives a tip for easier operation. Notes are accompanied by the symbol shown, and follow the text to which they refer.

Overview

Chapter Sections:

- Introduction
- Installing the Tool
- Creating a New Configuration
- Saving a Configuration
- Opening a Configuration
- Printing a Configuration

1.1 Introduction

This manual describes the use of the EIP ET200 Configuration Tool. The tool is used to configure ET200 adapter modules in both offline (no connection to the EtherNet/IP network) and online (connection to the EtherNet/IP network via an Ethernet Network Interface Card) modes. It can also be used in monitoring diagnostics on an ET200 adapter.

The tool has two modes of operation: offline, and online.

Offline Mode

When you do not have an immediate access to ET200 adapter module, configurations generated with the tool can be saved and later used in Online Mode to configure the device.

Online Mode

Online configuration mode is possible when you have:

- a) An Ethernet Network Interface Card in your system
- b) ET200 adapter device

The tool is able to communicate with the module(s) over an EtherNet/IP network directly through an Ethernet Network Interface Card, to upload or download configuration data.

In Online Mode, the tool can also display diagnostic information from the ET200 Adapter.

1.2 Installing the Tool

The EIP ET200 Configuration Tool supports 32-Bit Windows XP, Windows 7, Windows 8.1 and 64-Bit Windows 7, Windows 8.1. To install the EIP ET200 Configuration tool, run the setup program *ET200Setup.exe* and follow the instructions on the screen. The install program will guide you through the setup process.



Note

Custom Setup Type can be chosen to install the EIP ET200 Configuration Tool in a different directory.

1.3 Creating a New Configuration

Creating a configuration allows you to specify the expansion module configuration for an ET200 device and enables configuration of each module's extended parameters.

😨 ET200Pro_IP9.etc - EIP ET200 Configuration Tool		
File Adapter View Help		
🔄 🌶 🎽 🔜 😂 🏦 🚰 🔸 🔶 🔤		
Network View	Diagnostic Name	Status
×		
⊢		
EIP-ET200PRO [192.168.1.8]		
[1] Virtual Slot for PS	Properties	
[2] 6ES7 141-4BF00-0AA0 8DI	Modules	
[3] 6ES7 142-4BD00-0AB0 4DO DC24V	₽ Ż↓	
[4] 6ES7 144-4GF00-0AB0 4AI I	Adapter Config	juration
[[5] 6ES/ 145-4GF00-0AB0 4AO I	Product Name	EIP-ET200PRO
	Alias	
	Description	
	Type ID	570
	IP Address	192.168.1.8
	Slots	5
	Adapter Input	10
	Adapter Output	: 9
	Config Input	10
	Config Output	9
	Auto Config	disable
	I/O Status	enable
	Parameters	00.00.00.00.01.00.00.00.00.00.00.00.00.0
	Params	15
	Params Size	
< >	Parameters	
Ready		CAP NUM SCRL

To create a new configuration:

• Choose the File/New ET200S or File/New ET200PRO command or

click the **New ET200S** or **ET200PRO** button in the toolbar.

1.4 Saving a Configuration

To save a configuration: (the following graphic is based on Windows 7)

1. Click the **Save** button **a**, or choose the **File/Save or File/Save As** menu command. If the configuration was not previously saved, the Save As dialog box displays.

Save As				X
COO 🗢 📑 🕨 Librarie	es 🕨 Documents 🕨	✓ Search Doc	ruments	٩
Organize 🔻 New fo	lder			0
▲ ★ Favorites ■ Desktop	Documents library Includes: 2 locations	Arra	nge by: Folder	•
Downloads	E Name	Date modified	Туре	-
Recent Places	퉬 Downloaded Installations	06/11/2013 11:58	File folder	
4 🚍 Libraries	📄 My Music	03/10/2012 2:54 PM	File folder	=
Documents	🐴 My Music	14/07/2009 12:53	File folder	
▷ ▲ Music	My Pictures	03/10/2012 2:54 PM	File folder	
Pictures	My Pictures	14/07/2009 12:53	File folder	
Videos	My Videos	03/10/2012 2:54 PM	File folder	-
	• • [P.
File <u>n</u> ame:				•
Save as <u>t</u> ype: Eip2	200Cfg Files (*.etc)			•
Hide Folders		Save	Cance	el

2. Enter a file name, and click **Save**.



Note

Configuration files are saved with the .etc file extension.

1.5 Opening a Configuration

To open a configuration: (the following graphic is based on Windows 7)

1. Click the **Open** button $\stackrel{\frown}{\models}$, or select the **File/Open** menu command. The Open dialog box appears.

Open						x
G v 🗈 🕨 Libraries 🕨 🛛	ocument:	s > 	4	Search Documents		٩
Organize 🔻 New folder					- 🔳 (0
🖌 🖈 Favorites 📃 Desktop		Ocuments library		Arrange by:	Folder 🔻	
Downloads	E N	ame		Date modified	Туре	^
Necent Places		Downloaded Installations		06/11/2013 11:58	File folder	
4 🚍 Libraries	2	My Music		03/10/2012 2:54 PM	File folder	
Documents		My Music		14/07/2009 12:53	File folder	≡
A Music	2	My Pictures		03/10/2012 2:54 PM	File folder	
Pictures		My Pictures		14/07/2009 12:53	File folder	
Videos	2	My Videos		03/10/2012 2:54 PM	File folder	
H AL	4	My Videos		14/07/2009 12:53	File folder	-
4 📧 Computer	▼ ₹					*
File <u>n</u> ame:			•	Eip200Cfg Files (*.etc	:)	•
				Open	Cancel	

2. Select the desired ETC configuration file and click **Open**.

1.6 Printing a Configuration

To print a configuration:

1. Click the **Print** button , or select the menu **File/Print** command. The Print dialog box appears.

Print		×
Printer		
<u>N</u> ame:	Microsoft XPS Document Writer	✓ Properties
Status:	Ready	
Type:	Microsoft XPS Document Writer	
Where:	XPSPort:	
Comment:		Print to file
Print range		Copies
⊙ <u>A</u> ll		Number of <u>c</u> opies: 1
C Pages	from: 1 to:	
C <u>S</u> elect	ion	112233 Collate
		OK Cancel

2. Select the desired printer name and print range and click OK



Note

Select the menu **File/Print View** command to set the desired settings for the printed page.

Select the menu **File/Print Setup** command to set the desired printer, paper size and orientation.

2

Setting Online Connection Properties

Chapter Sections:

- Introduction
- Ethernet Network Interface Card Connection Configuration
- ET200 Configuration Objects
- Uploading a Configuration
- Downloading a Configuration

2.1 Introduction

This chapter describes the necessary steps to select an Ethernet network interface card for use as the communication channel to allow an ET200 adapter module to be configured online.

2.2 Ethernet Network Interface Card Connection Configuration

The Connection Setup defines the network configuration settings to use when communicating with the Adapter Module in Online Mode.

The ET200 module in factory default is only with DHCP enabled and no IP address. It will not work until the IP address is set with a DHCP server. Please refer to section 4.5 <u>Setting up the ET200 Module's IP Address</u>.

2.2.1 To Set the Connection Properties:

1. Choose the Adapter/Connection Setup command or click the Connection button *±*. The EtherNet/IP Connection dialog box appears.

EtherNet/IP Connection		×
Connection Device IP: 192 . 168 . Browse Identity TCP/IP	. 244 . 136 Network IP: 192.168.244.133 ▼ Ethernet Firmware	
IP Addresses 192.168.244.135 192.168.244.136 192.168.244.153	Browse Range Select Sub Network Sub Network Unicast Name Realtek RTL8139/810x Family Fast Description Office IP Address 192.168.244.133	OK Cancel

- 2. Select the **Network IP** address of the Network Interface Card that you want to communicate with the ET200 adapter.
- 3. Click **Browse** button to search for existing ET200 adapters on the network. A list of the available adapters is populated specifying each adapter's IP address. You can browse for the adapters either using a broadcast, sub network or unicast message.

- A **Broadcast** request message will be sent to all networks attached to the network interface card. If the Windows firewall is active, refer to section 2.2.2 <u>Firewall and Enable Broadcast</u>

- A **Sub Network** request message will be sent to a sub network devices that belong to a subnet addressed with 3 common, identical, most-significant bit groups. Subnet mask is 255.255.255.0.

- A **Unicast** request message will be sent only to a single adapter IP address specified by **Device IP** address.

- 4. Select the ET200 adapter that you want to communicate with.
- 5. Click **OK** to save the settings or **Cancel** if you do not want to save the new settings.

2.2.2 Firewall and Enable Broadcast

By default, most programs are blocked by Windows Firewall.

When Windows Firewall is active, if you use the **Broadcast** request to search for existing ET200 adapters, the EIP ET200 configuration tool needs to be added to the firewall exception list.

2.2.2.1 To Enable Broadcast on Windows XP

- 1. From Windows Start, click Settings > Control Panel > Security Center
- 2. In the Windows Security Center, under Manage security settings for, select Windows Firewall
- 3. In the Windows Firewall dialog box, on the Exceptions tab, click Add Program...
- 4. Click **Browse** and then locate the 'EIP ET200 Configuration Tool'. Click OK

2.2.2.2 To Enable Broadcast on Windows 7 and Windows 8.1

- 1. From Windows Start, click Control Panel > System and Security
- 2. Under Windows Firewall, click Allow a program through Windows Firewall
- 3. In the Allow programs to communicate through Windows Firewall dialog box, click **Change settings**
- 4. Click **Allow another program**, then locate the 'EIP ET200 Configuration Tool'. Click **Add**

2.3 ET200 Configuration Objects

The Connection Properties allow accessing/changing various properties of the ET200 adapter device. You can monitor/set the following device objects:

- Identity Object Parameters.
- TCP/IP Object Parameters.
- Ethernet Link Object Parameters.

2.3.1 Identity Object Parameters

The Identity tab allows you to view various adapter identity parameters and also allows setting factory defaults and/or resetting the adapter.

To retrieve current Identity parameters click **Read** button, a request is sent to the adapter and parameters are updated with their current values.

Vendor ID 8	Molex Incorporated
Device Type 12	Communication Device
Product Code 569/570	Unique Device Identifier (569: ET200S, 570: ET200PRO)
Revision 1.1	Firmware revision number
Status	Current status of the adapter
Serial Number	Device unique serial number
Product Name	EIP200S Adapter or EIP200PRO Adapter

To set the ET200 Adapter to its factory default settings, click the **Set Defaults** button. To keep the current IP address, check the **Retain IP Address** before clicking the **Set Default** button. The **Retain IP Address** feature is only supported by the ET200PRO module.



Note

Any user configuration and IP address will be lost (without checking **Retain IP Address**): Auto Configuration, I/O Status Byte Enabled will be set and DHCP mode will be enabled.

To reset the adapter click the **Reset** button, it will restart the adapter and place it in its initial state.



Note

User configuration data is not lost after this type of reset.

EtherNet/IP Connection	x
Connection Device IP: 192 168 1 8 Network IP: 192.168.1.88	
Browse Identity TCP/IP Ethernet Firmware	
Vendor ID 8 Factory Defaults	
Device Type 12 Set Defaults	
Product Code 570 Retain IP Address	
Revision 2.1	
Status No I/O Connection	
Serial Number 131036913	
Product Name EIP200PRO Adapter Read Reset	OK Cancel

2.3.2 TCP/IP Object Parameters

The TCP/IP tab allows you to view/set various adapter TCP/IP parameters of the adapter.

To retrieve current the TCP/IP parameters click the **Read** button. A request is sent to the adapter and the display is updated with the current values.

To set the TCP/IP parameters, make the changes you wish to incorporate, click the **Write** button. A request is sent to the adapter and the parameters are updated with the displayed values.

IP Address	Current IP address of the adapter
Network Mask	
Gateway Address	
Host Name	eip200s or eip200p + last 3 bytes of the ET200 MAC address.
Boot Options	
Quick Connect	

EtherNet/IP Connection		
Connection Device IP: 192 . 168 . 244 . 136	Network IP: 192.168.244.133	
Browse Identity TCP/IP Ethernet Firmw TCP/IP Paramters IP Address 192 . 168 . 244 . 136	Boot Options Static Address BOOTP	
255 . 255 . 255 . 0 Gateway Address 0 . 0 . 0 . 0	Ouick Connect	
, Host Name eip200p69f5d5	Read Write OK Cancel	

2.3.3 Ethernet Link Object Parameters

The Ethernet tab allows you to view various adapter Ethernet Link object parameters and also allows setting interface speed and duplex mode of the adapter. Two Ethernet Link objects exist on the adapter, select desired Port number 1 or 2.

To retrieve the current Ethernet Link object parameters, select the port number, and then click the **Read** button. A request is sent to the adapter and display is updated with the current values.

To set the Ethernet Link object parameters, select the port number, and then click the **Write** button. A request is sent to the adapter and the parameters are updated with displayed values.

Speed MAC Address Interface Label Interface Flags Duplex Mode

Setting Online Connection Properties

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EtherNet/IP Connection			×
Connection			
Device IP: 192 . 168 .	244 . 136 Network IF	192.168.244.133 💌	
Browse Identity TCP/IP	Ethernet Firmware		
Ethernet Parameters	•		
Port 1	MAC Address	00:1B:1B:69:F5:D5	
Speed Auto 💌	Mbps Interface Label	Port 1	
_Interface Flags			
Link Status	Active	🔲 Duplex Mode	
Half/Full Duplex	Full Duplex		
Settings	Require Reset		
Local Hardware Fault	No Fault	Read	
Negotiation Status	Successfully negotiated speed and duplex	Write	ОК
			Cancel

2.3.4 Firmware Update

The Firmware tab allows you to view the current firmware revision in the adapter and also allows downloading and updating the firmware in the adapter.

To retrieve the current firmware revision, click the **Read** button. A request is sent to the adapter and the current firmware revision is displayed.

EtherNet/IP Connection	×
Connection Device IP: 192 . 168 . 244 . 136 Network IP: 192.168.244.133	
Firmware	OK Cancel

To update the firmware in the adapter follow these steps:

- click the **Download Firmware** button,
- browse the firmware file (UPA extension) and select it.

A message appears displaying version of the firmware file and on the adapter and asks the user to confirm the firmware update request.

EIP ET200 (Configuration Tool
?	Do you want to update firmware file? from version R02.01.00_00.01.07.00 to R02.01.00_00.01.09.00
	<u>Y</u> es <u>N</u> o

Downloading the firmware takes several seconds, the adapter resets itself, the new firmware initializes and the adapter is ready for communication.

Setting Online Connection Properties



Note

User configuration remains valid after firmware download.



Note

The firmware updating uses an external application TFTP (Trivial File Transfer Protocol). Microsoft Windows provides such utility but it might be not installed by default. In case you see the message below please install the TFTP utility on your system.





Note

The TFTP Client feature is installed by default on Windows XP.

On Windows 7 and Windows 8.1, the TFTP Client feature has to be turned on manually. It resides in **Control Panel >Programs>Programs** and Features>Turn Windows features on Or off

2.4 Uploading a Configuration

Once the connection settings are established, start configuring the ET200 adapter device.

If the adapter device has been configured before, or you are not sure of its current configuration state, it is recommend that you try to upload the configuration information currently stored in the device before continuing.

To start the upload, choose the **Adapter/Upload Configuration** command or click the **Upload Configuration** button .

To open the Adapter Module Configuration dialog box, choose the Adapter/Select Modules command or click the Edit Adapter Configuration Parameters button in the toolbar. For detailed information about adapter configuration please refer to chapter 3 Adapter Configuration.

2.5 Downloading a Configuration

Once all settings in the configuration are completed, as described in Chapter 3 <u>Adapter</u> <u>Configuration</u>, download the configuration to the adapter module.

To download:

- Choose the Adapter/Download Configuration command or click the Download Configuration button
- 2. The progress bar displays current status of the downloading command and notifies you once completed.

3 Adapter Configuration

Chapter Sections:

- Overview
- Automatic Configuration vs. User Configuration Mode
- Enabling I/O Status
- Adding, Removing and Re-Ordering a Module
- Viewing and Changing Module Properties
- Viewing and Changing Adapter Properties
- Using Online Diagnostics

3.1 Overview

The ET200 adapter configuration consists of 2 stages:

- Selecting modules
- Configuring adapter and modules parameters

The Select Modules dialog box provides a list of the currently selected expansion modules to be downloaded to the ET200 adapter. You can add, remove, rearrange modules slots and monitor available I/O and parameters resources while configuring the adapter.

The Property Window within the main application window, allows you to view and modify adapter configuration options, to modify extended parameters of the adapter and parameters of the modules within the configuration itself.

3.2 Automatic Configuration vs. User Configuration Mode

In Automatic Configuration mode, the adapter module knows only the total input and output sizes and has no extended diagnostic capabilities: electronic module parameter data cannot be specified – the modules use default parameters.

User Configuration mode allows you to specify the module in each slot and configure each module's extended parameters (if supported). In User Configuration mode, extended diagnostic support is available for modules that support it.

	Mode			
Feature	Auto Configuration	User Configuration		
Add/Remove modules without updating configuration details (Hot swap works in both mode)	YES	NO		
Download configuration information	NO	YES		
Extended diagnostics	NO	YES		
I/O data compression	YES (always compressed)	YES/NO (User selectable)		

To enable/disable Auto Configuration Mode double click the **Auto Config** parameter in Adapter Configuration group of parameters or select a desired option from dropdown selection in Properties windows. Auto Configuration Mode is enabled by default.

3.3 Enabling I/O Status

The I/O Status Enable feature generates a single I/O status byte at the beginning of the input data packet. This status byte indicates if any faults have occurred in the device, which may result in invalid data (i.e., short circuit, blown fuse).

To determine whether I/O status is enabled for a device, upload the configuration. The **I/O Status** Adapter Configuration option indicates current state of the I/O Status feature.

To enable/disable the I/O Status feature double click the **I/O Status** parameter in Adapter Configuration group of parameters or select a desired option from dropdown selection in Properties windows. The I/O Status feature is enabled by default.



Note

I/O Status is enabled in auto configuration mode. When the I/O Status feature is enabled, the tool will automatically increment the number of Input bytes by one (1) to reflect the change in the input data packet size.

3.4 Adding, Removing and Re-ordering a Module

To view the current modules configuration, click the **Adapter/Select Modules** menu command or right click in the Network View window and click **Select Modules** command. The Select Modules dialog box is displayed where you can modify your modules configuration.

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Available Modules 46	Selected Modules	
3RK1 304-0HS00-6AA0 RSM 25A 3RK1 304-5KS40-2AA0 DSe HF 3RK1 304-5KS40-2AA3 DSe HF 1BO 3RK1 304-5KS40-3AA3 RSe HF 3RK1 304-5KS40-5AA0 RSe ST 3RK1 304-5KS40-5AA3 RSe ST 3RK1 304-5KS70-2AA3 RSE ST 3RK1 304-5KS70-2AA3 SDSte HF 3RK1 304-5KS70-3AA0 SSE HF 1B 3RK1 304-5KS70-3AA3 SRS HF 1B 3RK1 304-5LS40-2AA3 DSe HF 1B 3RK1 304-5LS40-2AA3 DSE HF 1B 3RK1 304-5LS40-2AA3 DSE HF 1BO 3RK1 304-5LS40-2AA3 DSE HF 1BO 3RK1 304-5LS40-2AA3 DSE HF 1BO 3RK1 304-5LS40-2AA3 DSE ST 1BO 3RK1 304-5LS40-2AA3 DSE ST 1BO 3RK1 304-5LS40-3AA3 SE ST 1BO 3RK1 304-5LS70-2AA3 SSE HF 1B 3RK1 304-5LS70-2AA3 SSE HF 1B 3RK1 304-5LS70-2AA3 SSE HF 1B 3RK1 304-5LS70-3AA3 SSE HF 1B	Slot Module Name 1 Virtual Slot for PS Up Down Resources Kodules: 1 of Imput: 1 of Imput:	0K Cancel

To add a module to the configuration:

- 1. Select desired module in **Available Modules** list. The Input, Output and Params data sizes are based on the modules within the Selected Modules window.
- 2. Click **Right Arrow Button** or double click a previously selected module.
- 3. The selected module is added to the **Selected Modules** list, if there are sufficient resources available on the adapter.
- 4. I/O and Parameters Resources are updated every time the Selected Modules window is changed.



Note

The maximum number of EIP 200S modules is 63. The maximum number of EIP 200Pro modules is 17 including the virtual slot, Input and Output data size to 255 and total parameter size to 237 including adapter parameters. If you exceed any of these limits, a message box is shown stating which limit has been reached. The current resource usage is updated upon any modification to the overall configuration.

5. Click **OK**. The current list of selected modules is updated into the adapter configuration of the Network View.

To remove a module:

- 1. Select desired module in Selected Modules list.
- 2. Click Left Arrow Button or double click a previously selected module.
- 3. The selected module is removed from the **Selected Modules** list. The resources usage is updated accordingly.
- 4. Clicking **Remove All** button, removes all modules from configuration.
- 5. Click **OK**. The current list of selected modules is updated into the adapter configuration.



Note

If you remove a module in the middle of the configuration list, the other modules move up to fill the empty slot.

To re-order an expansion module:

- 1. Click the desired module in the Selected Modules list.
- 2. Click the **Up/Down Button** to move the slot position of the currently selected module higher or lower.
- 3. Click **OK**. The current list of selected modules is updated into the adapter configuration.

3.5 Viewing and Changing Module Properties

To view a module's properties, select the desired module in the Network View. The Module Parameters are shown in the Properties Window. The Property Window consists of 2 groups of parameters, Module Configuration parameters and Extended Parameters.

3.5.1 Module Configuration Parameters

The Module Configuration Parameters display general module information.

		▼ # ∧					
Mod	dules	-					
	₽↓						
	Module Configuration						
	Name	3RK1 304-5LS40-5AA3 RSe ST 1BO					
	Alias						
	Description						
	Module ID	39					
	Config Data	31					
	Slot Number	8					
	Input Size	2					
	Output Size	2					
	Parameters						
	Params	E0 14 00 96 00 00 00 00 48 00 00 00 00					
	Group diagnosis	disable					
	Behavior at CPU-STOP	Switch substitute value 0					
	Rated operating curr. [x 10 mA]	150					
	Response to asymmetry	Turn off					
	Beh. supp. volt. swit. elem miss	Group error					
	Response to residual curr. det.	Turn off					
Par	ams						
Par	ameter of the module, shown in hexa	decimal format					
	,,						

Module Name shows the individual module part number and name. It is a read only parameter.

Alias is a name given by user to uniquely identify a module. This parameter is settable and optional. The length of the string is limited to 80 characters.

Description is a user short description of the module. This parameter is settable and optional. The length of the string is limited to 80 characters.

Module ID is a unique identifier of the module. It is a read only parameter.

Config Data is a configuration data of the module. It is a read only parameter.

Slot Number is the position of the module in reference to adapter slot. It is a read only parameter.

Input Size is the byte length of the Input data. It is a read only parameter.

Output Size is the byte length of the Output data. It is a read only parameter.



Note

In AutoConfig mode, editing parameters is disabled.

3.5.2 Extended Parameters Group

Parameter Group displays hexadecimal representation of the parameters and where available, a text representation of modifiable module parameters. Text and Hex parameters are specific to the expansion module being configured. The parameters specify data to be written to the expansion module to configure its behavior.

You can change the values of entries in the text parameters by double-clicking the desired field or selecting the dropdown field or clicking a spin control up or down arrow depending on parameter predefined range of values or manually enter the values within the range.

Any changes to the parameters are reflected in its hexadecimal format.

3.6 Viewing and Changing Adapter Properties

The Adapter Properties contains configuration options that affect the Adapter's global behavior.

To view an adapter's properties, select the adapter EIP200S device in the Network View. The Adapter Parameters are shown in the Properties Window. The Property Window consists of 2 groups of parameters, Adapter Configuration parameters and Extended Parameters.

3.6.1 Adapter Configuration Parameters

The Adapter Configuration Parameters display general adapter information.

Properties	
Modules	•
2∎ 2↓	
Adapter Configuration	
Product Name	EIP-ET200PRO
Alias	
Description	
Type ID	570
IP Address	192.168.1.8
Slots	5
Adapter Input	10
Adapter Output	9
Config Input	10
Config Output	9
Auto Config	disable
I/O Status	enable
Parameters	
Params	00 00 00 0C 21 00 00 00 00 20 00 00 00 00 00
Params Size	15
Operation for ref.<>actual conf.	disable
Identifier-related diagnostics	enable
Submodule status	enable
Channel-related diagnostics	enable
Option handling	disable
Parame	
Parameter of the adapter shown in beyade	cimal format
. and the adapter, shown in neader	

Product Name is the name of the adapter device. It is a read only parameter.

Alias is a name given by user to uniquely identify an adapter. This parameter is settable and optional. The length of the string is limited to 80 characters.

Description is a user short description of the adapter. This parameter is settable and optional. The length of the string is limited to 80 characters.

Type ID is a unique identifier of the adapter. It is a read only parameter.

IP Address is a unique IP address on the network. It is a read only parameter but it can be changed through the connection setup.

Slots is the number of currently configured modules. It is a read only parameter.

Adapter Input is the byte length of the Input data for all configured modules read from the adapter. It is a read only parameter

Adapter Output is the byte length of the Output data for all configured modules read from the adapter. It is a read only parameter

Input is the byte length of the Input data for all configured modules. It also includes I/O Status byte if it is enabled. It is a read only parameter.

Output is the byte length of the Output data for all configured modules. It is a read only parameter.

Auto Config refers to Section 3.2, <u>Automatic Configuration vs. User Configuration Mode</u>, for more information.

I/O Status refers to Section 3.3, Enabling I/O Status, for more information.

3.6.2 Extended Parameters Group

Parameter Group displays hexadecimal representation of the parameters and where are available, a text representation of modifiable module parameters. Text and hex parameters are specific to the adapter device being configured. The parameters specify data to be written to the adapter to configure its behavior.

You can only change the values of entries in the text parameters by double-clicking the desired field or selecting the dropdown field or clicking a spin control up or down arrow depending on parameter predefined range of values.

Any changes to the parameters are reflected in its hexadecimal format.

Adapter Configuration

3.7 Using Online Diagnostics

The EIP ET200 configuration tool can be used online to monitor the state of the adapter module and provide diagnostic information on configured slots. You can make sure all slots are functioning normally, or, if there are errors, monitor each slot's error state.

To use online diagnostics:

- 1. Click the **Monitor** button
- 2. Select the adapter or a slot in Network View to display respective diagnostic information.

🌀 Untitled - EIP ET200 Configuration Tool				
File Adapter View Help				
🛛 🖉 🛃 🤤 🏦 👘 🕹 🛧 💽 🥥	•			
Network View 🕑 🔀	Diagnostic Name	Status	Туре	
×	Module Status	Slot 1, 'Module Warning'		
	Channel 0	Sensor or load voltage missing (17)	N/A	
	Channel 1	No error (0)	N/A	
□···• NIC [192.168.1.88]	Channel 2	No error (0)	N/A	
EIP-ET200PRO [192.168.1.25]	Channel 3	No error (0)	N/A	
	Channel 4	No error (0)	N/A	
🧼 [2] 6ES7 141-4BH00-0AA0 16DI	Channel 5	No error (0)	N/A	
[3] 6ES7 142-4BD00-0AB0 4DO DC24V HF	Channel 6	No error (0)	N/A	
[4] 6ES7 142-4BD00-0AA0 4DO DC24V	Channel /	No error (0)	N/A	
	Properties		CX	
	Modules		-	
	2↓			
	Module Configuration			
	Name	Virtual Slot for PS		
	Alias			
	Description			
	Module ID	Virtual		
	Config Data	00 00 00		
	Slot Number	1		
	Input Size	0		
	Output Size	0		
	Parameters			
	Params	20 01 00	-	
Ready		CAP NU	M SCRL	

3. To turn the diagnostic function off, click the Monitor button again.



Note

When going into diagnostic mode, the current configuration is compared with the configuration stored in the adapter, in case a mismatch is found, there is an option to overwrite current configuration or not to go into diagnostic mode.



Note

Online diagnostics are not available in Auto Configuration mode.

For more information on the diagnostics of ET200 modules, refer to the appropriate Siemens[™] SIMATIC EIP-200S EtherNet/IP Adapter Distributed I/O System Manual (A5E03822408) and Siemens[™] SIMATIC ET 200pro distributed I/O system Operating Instructions (A5E00335544-08)

4

Configuring ET200 in RSLogix5000[™] and RSLinx[™]

Chapter Sections:

- Introduction
- Setting up ControlLogixTM
- Configuring ET200 adapter in RSLogix5000™
- Setting up RSLinx[™]
- Setting up ET200 module's IP address

4.1 Introduction

This chapter describes the steps for configuring ET200 adapter using RSLogix5000TM version 20.0 or higher with 1756-ENBT EtherNet/IP scanner.

The following sections describe how to set up the system with a ControlLogix[™] system using ET200 EDS file.



Note

Detailed instructions on setting up a ControlLogixTM Rack and using the RSLogix5000TM tool are not within the scope of this document. This document assumes you have a working knowledge of RSLogix5000TM, the ControlLogixTM system and the 1756-ENBT (EtherNet/IP module for the ControlLogixTM system).

4.2 Setting up ControlLogix™

Equipment:

- Allen-Bradley ControlLogixTM PLC, configured with a ControlLogixTM CPU module
- Allen-Bradley EtherNet Bridge Module (ENBT)

Setup:

- 1. Connect the 1756-ENBT module to an available computer Ethernet port via an Ethernet cable.
- 2. Connect the ET200 adapter to EtherNet/IP network.
- 3. Power up the PLC (if necessary, configure the PLC using the appropriate software applications as documented in the user's manual provided with the PLC).

4.3 Configuring ET200 adapter in RSLogix5000™

Before connecting with the ET200 adapter, The EIP200S.eds or EIP200Pro.eds file needs to be registered using Allen-Bradley **EDS Hardware Installation Tool**.

The EIP200S.eds and EIP200Pro.eds files are part of the EIP ET200 Configuration Tool installation. They can be found in where the EIP Configuration Tool is installed.

To use registered ET200 adapter in RSLogix5000TM:

- 1. Right click the **1756-ENBT** module and select the **New Module** command.
- 2. To easily locate ET200 Adapter, select only the Molex Incorporated check box.
- 3. Select the EIP200S or EIP200Pro Adapter and click the **Create** button.

Catalog	Module Discovery Favor	tes					
Ente	er Search Text for Module T,	уре	Clear	Filters		Hide Filters	*
	Module Typ Communication Communications Adapter Controller Digital	e Category Filters	* *	Mettler-Tole Molex Incor Parker Han Prosoft Tec	Module Type Vendor Filter do porated nifin Corporation hnology	2	4 III +
•	Catalog Number 0008_000C_0239 0008_000C_023A	Description EIP-200S Adapter EIP-200PRO Adapter	n N	/endor /lolex Incorporat /lolex Incorporat	Category Communications Adapter Communications Adapter		
2 of 2	211 Module Types Found					Add to Favo	rites
CI	ose on Create				Create	Close	Help

- 4. Specify the Name and IP Address in Module Properties.
- 5. Click on the **Change** button to setup connection type and I/O sizes.

Configuring ET200 in RSLogix5000[™] and RSLinx[™]

User Reference Guide

Mod	lule Pr	operti	es: EIP (1.	1)			
Gene	ral Con	nection	Module Info	Internet Protocol	Port Configuration	n	
Тур	e:	EIP	2005 Adapter				
Ver	dor:	Mole	x Incorporated	I			
Par	ent:	EIP					
Na <u>r</u>	ne:	eip	31			Ethernet Address	
Des	cription:				~	P <u>r</u> ivate Network	: 192.168.1. 31 📚
						O IP <u>A</u> ddress:	
						O Host Name:	
					~		
-M	odule De	finition -]	
B	evision:		1.1				
E	lectronic	Keying:	Compatible I	Module			
c	onnectior	ns:	Listen Onl	v			
			2.0.0.1	,			
				ſ	Change		
	0.07				_		
Status:	Uthine				L	UK Cance	Apply <u>H</u> elp

- 6. Select desired connection type between Exclusive Owner, Input Only and Listen Only connection.
- 7. Configure I/O sizes according to the downloaded ET200 configuration.

F

Note

The "Input Size" and "Output Size" are displayed in the Module Configuration Parameters in the EIP ET200 Configuration Tool.

Module Definition*		
<u>R</u> evision: 1	▶ 1≎	
Electronic <u>K</u> eying: Compa	tible Module	*
<u>C</u> onnections:		
Name	Size	
Exclusive Owner 🥊	Input: 21 SINT	
	Output: 3	
Exclusive Owner		
Listen Only		
ОК	Cancel H	elp

- 8. Click **OK** button to confirm your settings.
- 9. Download the configuration to the PLC and place it online.

4.4 Setting up RSLinx[™]

- 1. Install Rockwell Automation RSLinxTM software on the system, according to the instructions provided.
- 2. Open RSLinxTM via the **RSLinxTM** menu shortcut. The main screen is displayed.

🗞 RSLinx Classic Professional - [RSWho - 3]	
💑 Eile Edit View Communications Station DDE/OPC Security Window Help	- 8 ×
<u>≥</u> <u></u>	
Autobrowse Refresh 🖳 🎹 Browsing network	
● Supervised Sector Se	
For Help, press F1 SCRL	05/03/12

3. To browse the network, click on the **RSWho** button or menu item from the Communications menu.

4. To configure RSLinxTM, select the **Configure Drivers** option from the Communications menu. The Configure Drivers dialog box appears.

Configure Drivers		? 🔀
Available Driver Types:	Add New	<u>C</u> lose <u>H</u> elp
Configured Drivers:]
Name and Description	Status	Con <u>f</u> igure Star <u>t</u> up <u>S</u> tart Stop Delete

4.4.1 Configuring an EtherNet/IP Driver in RSLinx[™]

- 1. From the Available Driver Types dropdown box, choose EtherNet/IP Driver.
- 2. Click the **Add New...** button and specify the name of the new driver (for example: AB_ETHIP-1).

Add New RSLinx Classic Driver	
Choose a name for the new driver. (15 characters maximum)	(OK]
AB_ETHIP-1	Cancel

- 3. Click **OK**. The Configure driver: AB_ETHIP-1 dialog box appears.
- 4. Select the NIC card you want to communicate through.

Configure driver: AB_ETHIP-1	? 🔀
EtherNet/IP Settings	
Browse Local Subnet Browse Remote Subnet	
Description	P Address
Windows Default 3Com 3C905TX-based Ethernet Adapter (Generic) #3 - Teefer2 Miniport 1 Marvell Yukon 88E8053 PCI-E Gigabit Ethernet Controller - Teefer2 Mi 1	92.168.1.2 10.26.15.51
OK Cancel A	pply Help

Configuring ET200 in RSLogix5000[™] and RSLinx[™]

5. Click OK. The new entry appears in the Configured Drivers list.

Configure Drivers		? 🗙
Available Driver Types:		Close
EtherNet/IP Driver	▼ Add New	Help
Configured Drivers:		
Name and Description	Status	[
AB_ETHIP-1 A-B Ethernet RUNNING	Running	Configure
		Star <u>t</u> up
		<u>S</u> tart
		Stop
		Delete

6. Close the Configure Drivers window. The ET200 adapter is detected and displayed in the device list.

🗞 RSLinx Classic Professional - [RSWho - 5]				
📸 Eile Edit View Communications Station DDE/OPC Security	<u>W</u> indow <u>H</u> elp			- B X
🗃 🚠 🎜 🖻 🖻 🙋 😒				
Autobrowse Refresh	2.168.1.250 found			
E S Workstation, WAOJBOJANOWICZ2	Address	Device Type	Online Name	Status
田 器 Linx Gateways, Ethernet	192.168.1.250	EIP-2005 Adapter	EIP-2005 Adapter	ОК
192.168.1.250, EIP-2005 Adapter, EIP-2005 Adapter	192.168.1.250, EIP-200S Adapter, EIP-200S Adapter			
For Help, press F1			SCRL 05/03/12	12:03 F 🏿

Configuring ET200 in RSLogix5000[™] and RSLinx[™]

4.5 Setting up the ET200 Module's IP Address

The ET200 adapter comes from the factory without an IP address assigned, and it must be set with a DHCP server. This procedure describes how to set the IP address with the Allen Bradley BOOTP/DHCP Server and how to make the IP address static (permanent). The module would then keep the IP address through a power cycle, and a DCHP server would no longer be needed. The AB BOOTP/DHCP Server can be downloaded free from the Internet.

1. Open the BOOTP-DHCP Server, the BOOTP/DHCP Server dialog box appears

BOOTP/DHCP Server 2.3				
<u>F</u> ile <u>T</u> ools <u>H</u> elp				
Request History	1			
Clear History Add to	Relation List			
(hr:min:sec) Type	Ethernet Address (MAC)	IP Address	Hostname	
16:17:46 DHCP 16:17:40 DHCP	00:1B:1B:69:F1:AE 00:1B:1B:69:F1:AE			
16:17:36 DHCP	00:18:18:69:F1:AE			
16:16:34 DHCP	BC(AE)(C0)70(BA)6A			
Relation List				
New Delete Enable	BOOTP Enable DHCP Dis	able BOOTP/DHCP		
Ethernet Address (MAC)	Type IP Address	Hostname	Description	
Status Upable to service DHCP reg	lest from 00:18:18:69:E1:AE			Entries
	aeschon 00.10.10.00.FT.AE.			0.01.238

- 2. When the MAC address for the EIP200 module shows up in the AB BOOTP/DHCP Server "Request History" window, double-click the entry or select the entry and then select the "Add to Relation List" button.
- 3. In the pop-up dialog, enter the IP address and select OK. When the IP address is assigned, a new entry will appear with an address in the "IP Address" column. The Net Status LED on the module should change to blinking green, which indicates an IP address is assigned.

New Entry	x
Ethernet Address (MAC):	00:1B:1B:69:F1:AE
IP Address:	192.168.1.8
Hostname:	
Description:	
	OK Cancel

4. To make the IP address permanent, select the entry in the "Relation List" window and select the "Disable BOOTP/DHCP" button. If successful the Status window at the bottom will display "[Disable DHCP] Command successful".

A Technical Support

Appendix Sections:

• USA Technical Support

A.1 USA Technical Support

Please ensure that you have the following information readily available before calling for technical support:

Card type and serial number

- Computer's make, model and hardware configuration (cards installed)
- Operating system type and version
- Details of the problem you are experiencing: application module type and version, target network, and circumstances that may have caused the problem

A.1.1 Getting Help

Support issues for Siemens ET200 Expansion / Electronic Modules should be directed to the appropriate Siemens Technical Support facility in your area.

Or visit http://support.automation.siemens.com/

Also available as an app for both Android and Apple IOS platforms. See here for further information <u>http://support.automation.siemens.com/WW/view/en/56295795</u>

Please also utilize the following during normal business hour for obtaining Siemens technical support:

For "pre-sales" support, please contact <u>amps.automation@siemens.com</u>

For "post-sales" technical support, please contact tech support at: **SIEMENS Industry, Inc.** 1 Internet Plaza Johnson City, TN. 37604 423-262-5710 Phone 423-262-2289 Fax 800-333-7421 Hotline E-mail: support.automation@siemens.com