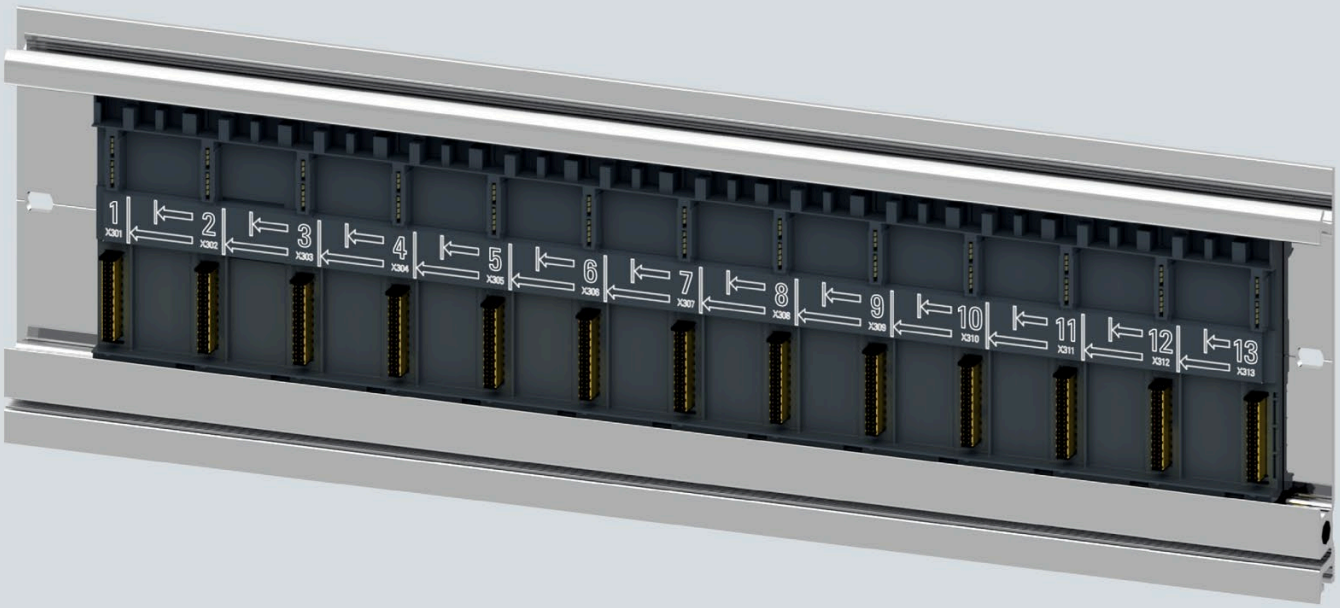
SIEMENS



Manual

SIMATIC

S7-1500 / ET 200MP

Active backplane bus ST 1+12 Slot
Active backplane bus ST 1+8 Slot
Active backplane bus ST 1+4 Slot

Edition 07/2020

support.industry.siemens.com

SIEMENS

SIMATIC

S7-1500, ET 200MP
Active backplane bus ST 1+12 slot, active backplane bus ST 1+8 slot, active backplane bus ST 1+4 slot

Equipment Manual

07/2020
A5E46240468-AB

Legal information

Warning notice system

This manual contains notices you have to observe in order to ensure your personal safety, as well as to prevent damage to property. The notices referring to your personal safety are highlighted in the manual by a safety alert symbol, notices referring only to property damage have no safety alert symbol. These notices shown below are graded according to the degree of danger.

⚠ DANGER

indicates that death or severe personal injury **will** result if proper precautions are not taken.

⚠ WARNING

indicates that death or severe personal injury **may** result if proper precautions are not taken.

⚠ CAUTION

indicates that minor personal injury can result if proper precautions are not taken.

NOTICE

indicates that property damage can result if proper precautions are not taken.

If more than one degree of danger is present, the warning notice representing the highest degree of danger will be used. A notice warning of injury to persons with a safety alert symbol may also include a warning relating to property damage.

Qualified Personnel

The product/system described in this documentation may be operated only by **personnel qualified** for the specific task in accordance with the relevant documentation, in particular its warning notices and safety instructions. Qualified personnel are those who, based on their training and experience, are capable of identifying risks and avoiding potential hazards when working with these products/systems.

Proper use of Siemens products

Note the following:

⚠ WARNING

Siemens products may only be used for the applications described in the catalog and in the relevant technical documentation. If products and components from other manufacturers are used, these must be recommended or approved by Siemens. Proper transport, storage, installation, assembly, commissioning, operation and maintenance are required to ensure that the products operate safely and without any problems. The permissible ambient conditions must be complied with. The information in the relevant documentation must be observed.

Trademarks

All names identified by ® are registered trademarks of Siemens AG. The remaining trademarks in this publication may be trademarks whose use by third parties for their own purposes could violate the rights of the owner.

Disclaimer of Liability

We have reviewed the contents of this publication to ensure consistency with the hardware and software described. Since variance cannot be precluded entirely, we cannot guarantee full consistency. However, the information in this publication is reviewed regularly and any necessary corrections are included in subsequent editions.

Siemens AG
Digital Industries
Postfach 48 48
90026 NÜRNBERG
GERMANY

A5E46240468-AB
Ⓟ 07/2020 Subject to change

Preface

Purpose of the documentation

This documentation provides important information on the active backplane bus for the ET 200MP distributed I/O system.

Basic knowledge required

A basic knowledge of automation engineering is required to understand the documentation.

Scope of the documentation

This documentation applies to all products from the SIMATIC ET 200MP product family.

Conventions

STEP 7: In this documentation, "STEP 7" is used as a synonym for all versions of the configuration and programming software "STEP 7 (TIA Portal)".

The figures in this manual show the active backplane bus ST 1+12 slot. The figures also apply accordingly for the active backplane bus ST 1+8 slot and the active backplane bus ST 1+4 slot.

Recycling and disposal

The products are low in pollutants and can be recycled. For ecologically compatible recycling and disposal of your old device, contact a certificated waste disposal service for electronic scrap.

Security information

Siemens provides products and solutions with industrial security functions that support the secure operation of plants, systems, machines and networks.

In order to protect plants, systems, machines and networks against cyber threats, it is necessary to implement – and continuously maintain – a holistic, state-of-the-art industrial security concept. Siemens' products and solutions constitute one element of such a concept.

Customers are responsible for preventing unauthorized access to their plants, systems, machines and networks. Such systems, machines and components should only be connected to an enterprise network or the internet if and to the extent such a connection is necessary and only when appropriate security measures (e.g. firewalls and/or network segmentation) are in place.

For additional information on industrial security measures that may be implemented, please visit (https://www.siemens.com/industrialsecurity).

Siemens' products and solutions undergo continuous development to make them more secure. Siemens strongly recommends that product updates are applied as soon as they are

available and that the latest product versions are used. Use of product versions that are no longer supported, and failure to apply the latest updates may increase customers' exposure to cyber threats.

To stay informed about product updates, subscribe to the Siemens Industrial Security RSS Feed visit (https://www.siemens.com/industrialsecurity).

Open Source Software

Open-source software is used in the firmware of the I/O modules. Open Source Software is provided free of charge. We are liable for the product described, including the open-source software contained in it, pursuant to the conditions applicable to the product. Siemens accepts no liability for the use of the open source software over and above the intended program sequence, or for any faults caused by modifications to the software.

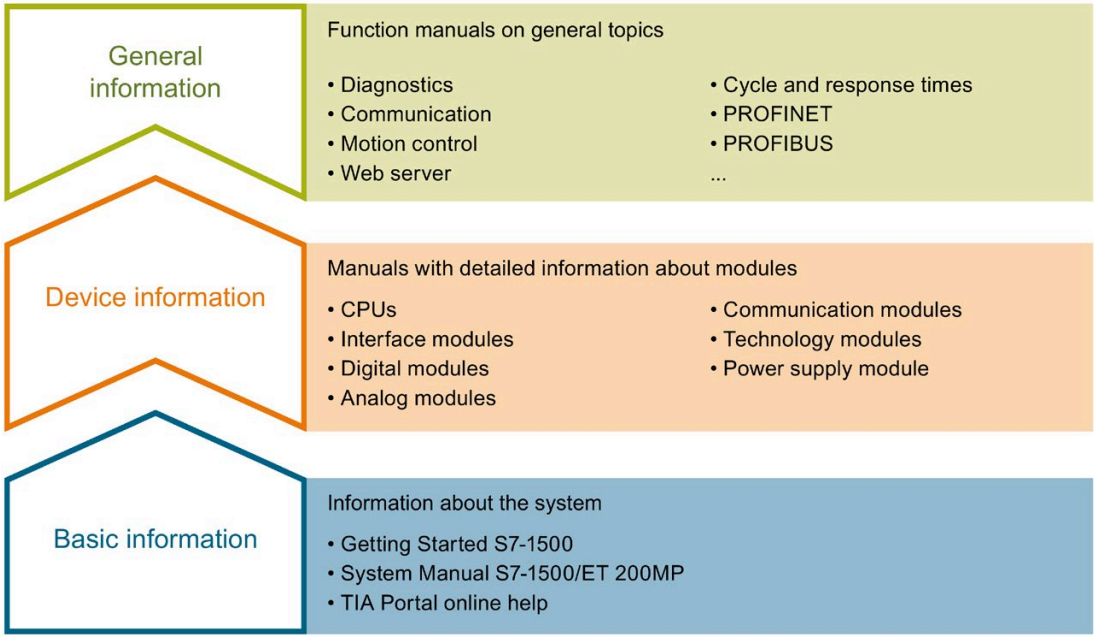
For legal reasons, we are obliged to publish the original text of the license conditions and copyright notices. Please read the information relating to this on the Internet (https://support.industry.siemens.com/cs/ww/en/view/109739516).

Table of contents

Documentation guide

1

The documentation for the SIMATIC S7-1500 automation system and the SIMATIC ET 200MP distributed I/O system is arranged into three areas.
This arrangement enables you to access the specific content you require.



Basic information

The System Manual and Getting Started describe in detail the configuration, installation, wiring and commissioning of the SIMATIC S7-1500 and ET 200MP systems. The STEP 7 online help supports you in the configuration and programming.

Device information

Product manuals contain a compact description of the module-specific information, such as properties, wiring diagrams, characteristics and technical specifications.

General information

The function manuals contain detailed descriptions on general topics regarding the SIMATIC S7-1500 and ET 200MP systems, e.g. diagnostics, communication, motion control, Web server, OPC UA.

You can download the documentation free of charge from the Internet (https://support.industry.siemens.com/cs/ww/en/view/109742691).

Changes and supplements to the manuals are documented in a Product Information.

You can download the product information free of charge from the Internet (https://support.industry.siemens.com/cs/us/en/view/68052815).

Manual Collection S7-1500/ET 200MP

The Manual Collection contains the complete documentation on the SIMATIC S7-1500 automation system and the ET 200MP distributed I/O system gathered together in one file.

You can find the Manual Collection on the Internet (https://support.industry.siemens.com/cs/ww/en/view/86140384).

SIMATIC S7-1500 comparison list for programming languages

The comparison list contains an overview of which instructions and functions you can use for which controller families.

You can find the comparison list on the Internet (https://support.industry.siemens.com/cs/ww/en/view/86630375).

"mySupport"

With "mySupport", your personal workspace, you make the best out of your Industry Online Support.

In "mySupport", you can save filters, favorites and tags, request CAx data and compile your personal library in the Documentation area. In addition, your data is already filled out in support requests and you can get an overview of your current requests at any time.

You must register once to use the full functionality of "mySupport".

You can find "mySupport" on the Internet (https://support.industry.siemens.com/My/ww/en).

Application examples

The application examples support you with various tools and examples for solving your automation tasks. Solutions are shown in interplay with multiple components in the system - separated from the focus on individual products.

You will find the application examples on the Internet (https://support.industry.siemens.com/sc/ww/en/sc/2054).

Description

2

2.1 Application area and function

Benefits

The benefits of the active backplane bus are:

- Reaction-free replacement of a defective module:
  - Without the CPU reporting a station failure
  - Without disturbing modules in the station
- Startup with one or more module gaps. You have the option of plugging in additional modules later.
- Startup with configuration control is possible. You have the possibility to re-configure your plant.

Application

The area of application is everywhere where plant downtimes are not desired. The availability of the plant has the highest priority.

The areas of application are, for example:

- Logistics
  - High-bay storage facilities
  - Baggage conveyors at airports
  - Letter and paper sorting systems in postal logistics
- Infrastructure
  - Water/waste water
  - Tunnels
- Continuous processes that must not be interrupted due to the technical process management
  - Semiconductor industry
  - Chemical
  - Pharmaceutical
  - Battery manufacturing

- Applications in which plant operation must be maintained as long as possible, for example, when a service technician is not immediately available.
  - Offshore installations (oil platforms)
  - Compressors along gas pipelines that maintain the working pressure
- Other applications
  - Signal boxes in railway engineering
  - Shipbuilding

2.2 Properties

Article numbers

- 6ES7590-0BL00-0AA0 (Active backplane bus ST 1+12)
- 6ES7590-0BH00-0AA0 (Active backplane bus ST 1+8)
- 6ES7590-0BD00-0AA0 (Active backplane bus ST 1+4)

View of the active backplane bus

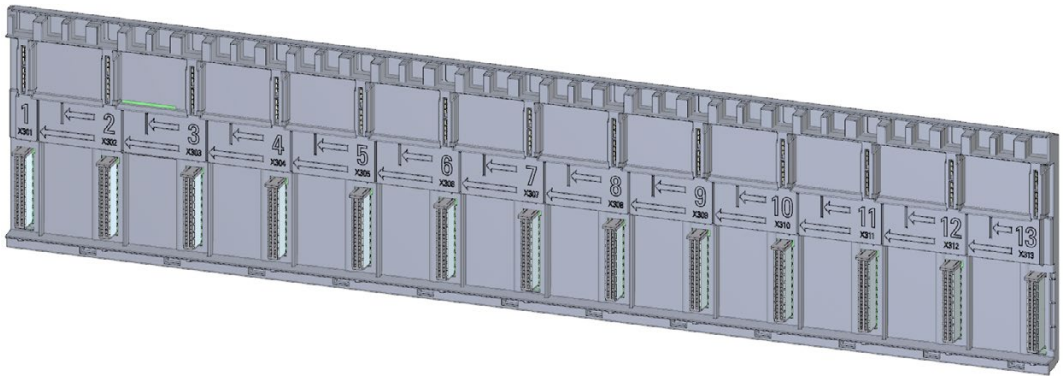


Figure 2-1 Active backplane bus ST 1+12

The active backplane bus is placed in an S7-1500 mounting rail. The mounting rail must be longer than the active backplane bus. There must be enough space for the fixing screws of the mounting rail. Information on the length of the active backplane bus can be found in the section "Mounting (Page 11)".

Properties

The active backplane bus can be used with:

Designation	Article number	As of hardware functional status	as of firmware version
IM 155-5 PN HF	6ES7155-5AA00-0AC0	FS01	V4.4
Digital input modules DI and F-DI	See List of I/O modules (Page 26)		
Digital output modules DQ and F-DQ			
Analog input modules AI			
Analog output modules AQ			
System power supply			
Technology modules			
Communications modules			

The active backplane bus supports:

- Identification data I&M0 to 3
- Firmware update
- Prioritized startup

The following restriction applies for operating with the active backplane bus

Pulling and plugging during operation (hotswap) cannot be performed in isochronous mode.

If any I/O module is plugged or unplugged in a station configured for isochronous mode, the connection to the controller is re-established and the I/O modules are temporarily inaccessible.

Maximum configuration

In addition to the interface module, the active backplane bus can be equipped with a maximum of:

- 12 modules for the active backplane bus ST 1+12
- 8 modules for the active backplane bus ST 1+8
- 4 modules for the active backplane bus ST 1+4

Accessories

You order the following accessories separately:

- Slot protection
- Mounting rail

See also Spare parts/accessories (Page 25)

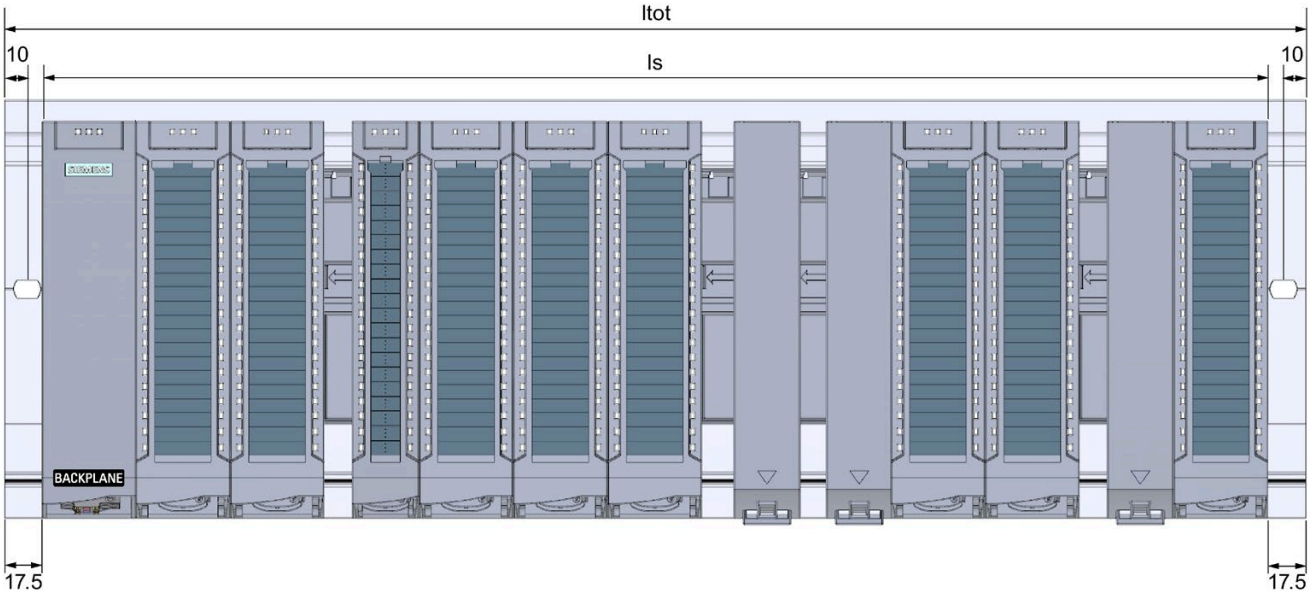
Mounting

3

Required mounting rail

The following table and diagram help you to select the matching mounting rails for the active backplane bus used.

Active backplane bus	Length of station l_S	Minimum length of mounting rail l_{tot} (2 m rail for cutting to length)	Pre-assembled mounting rail
Active backplane bus ST 1+4 slot	175 mm	210 mm for pre-mounted modules 192.5 mm with left-alignment	245 mm 6ES7590-1AC40-0AA0
Active backplane bus ST 1+8 slot	315 mm	350 mm for pre-mounted modules 332.5 mm with left-alignment	482 mm (19") 6ES7590-1AE80-0AA0
Active backplane bus ST 1+12 slot	455 mm	490 mm for pre-mounted modules 472.5 mm with left-alignment	



Mounting the mounting rail

Note

No screws behind the active backplane bus

Note that behind the active backplane bus, no screws are available for mounting the mounting rail. Otherwise, the active backplane bus cannot be mounted.

System power supply

With active backplane bus, a system power supply supplies power to the entire station. Which means also to the I/O modules plugged in to the left of the bus. You can plug the system power supply into any slot to the right of the interface module.

Note

System power supply

You must not plug any system power supply to the left of the interface module.

Place the active backplane bus in the mounting rail and mount the modules

Below we will show you how to mount the active backplane bus.

1. Tilt the active backplane bus forward and insert it diagonally into the mounting rail.
2. Push the active backplane bus backwards.

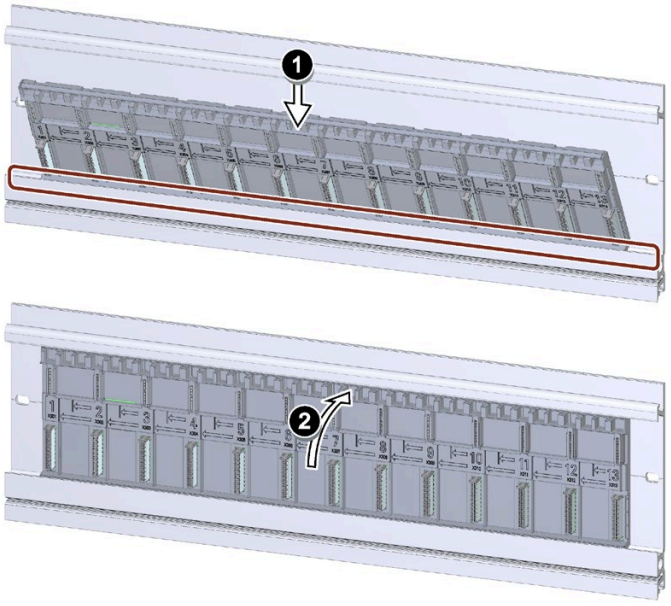


Figure 3-1 Insert the active backplane bus into the mounting rail

3. Hook the interface module on the rail.

   You may only plug in one interface module. The interface module must be plugged into the first slot.

4. Swivel the interface module downwards so that the contacts are connected to the active backplane bus.
5. Align the active backplane bus with the interface module.
6. Tighten the screws for the interface module (tightening torque 1.5 Nm).

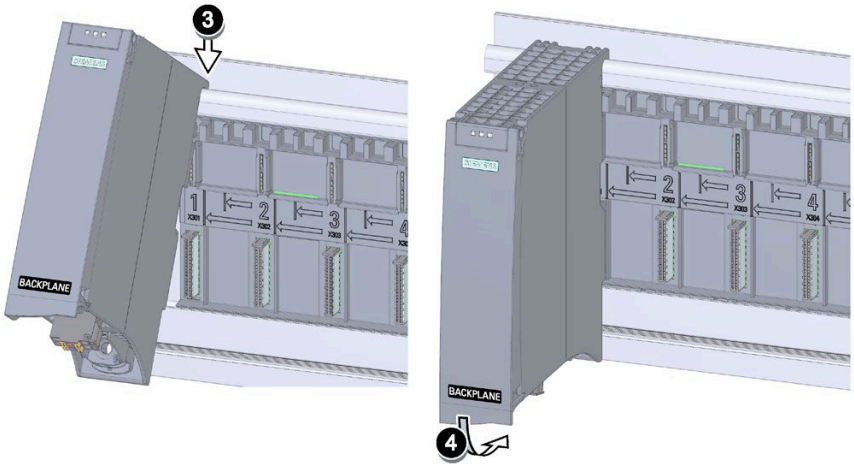


Figure 3-2 Mounting the interface module on the active backplane bus

7. Install the I/O module on the mounting rail. Align a 25 mm or 35 mm wide I/O module with the arrows. A 70 mm wide I/O module covers 2 slots.
8. Swing the I/O module downwards so that the contacts are connected to the active backplane bus.
9. Tighten the screw for the I/O module (tightening torque 1.5 Nm).
10. Repeat the process for all I/O modules that you want to mount.

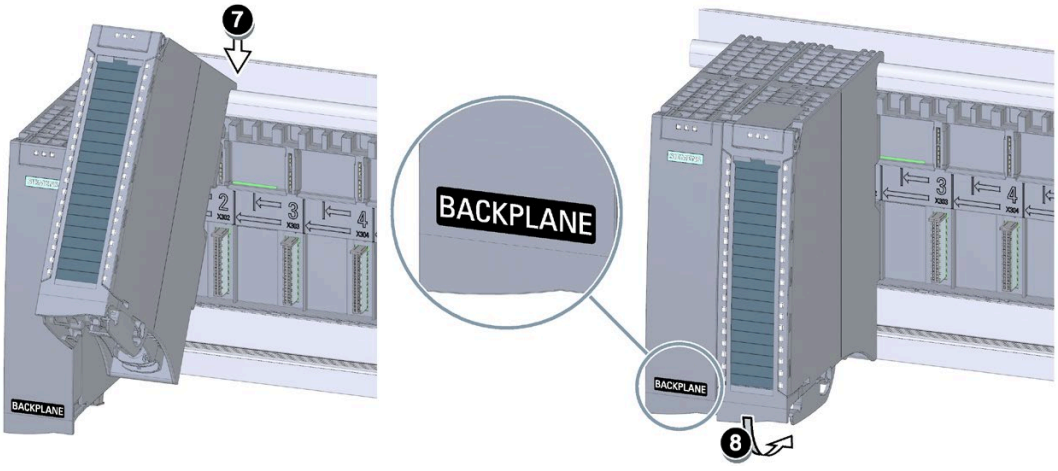


Figure 3-3 Mounting the I/O module on the active backplane bus

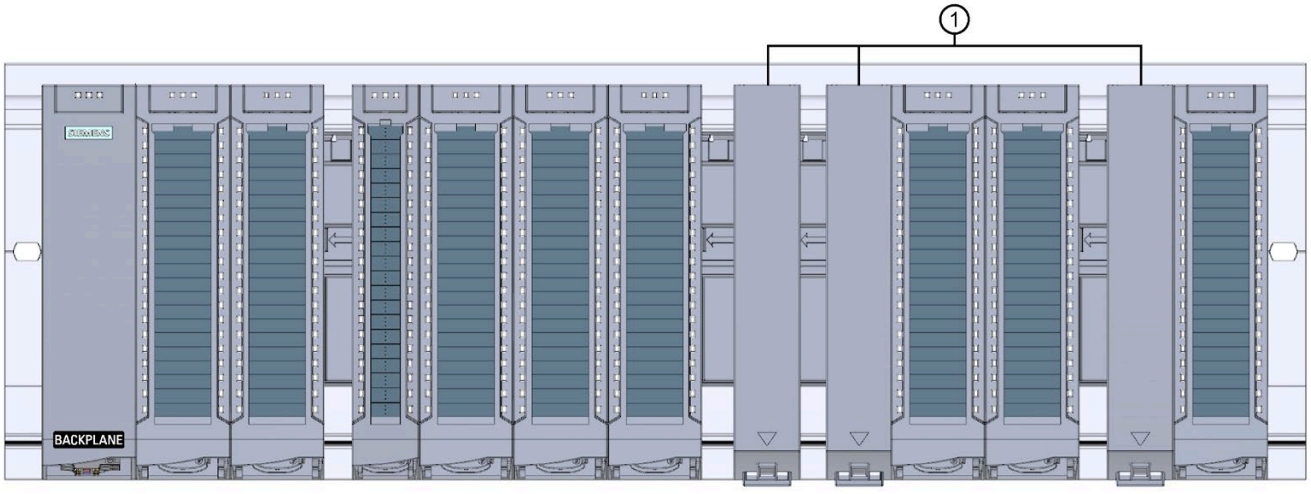
11. If you have empty slots on the active backplane bus, then you must provide these slots with a slot protection (see Operation (Page 15)).
12. A "BACKPLANE" sticker is enclosed for the active backplane bus. Use this sticker to identify the interface module. So you can see even with a fully equipped active backplane bus that the I/O modules can be pulled without any reaction.

Slots of I/O modules

Note

Slots

The empty slots need to be provided with a slot protection. The slot protection is used to secure mechanically and to protect the contacts.



① Slot protection

Figure 3-4 Active backplane bus equipped with modules and slot protection

Operation

4

With the active backplane bus, you can remove and insert

- Plugging and unplugging I/O modules without reaction on the station or the CPU goes into STOP,
- Plugging I/O modules into slots previously left free without the CPU going into STOP.

Pulling and plugging interface modules

The interface module cannot be pulled and plugged reaction-free.

The interface module must not be pulled or plugged under load.

Removing and inserting I/O modules

I/O modules can be pulled and inserted reaction-free.

1. The front connector of the I/O modules may only be disconnected and plugged when de-energized.
2. For the I/O modules, pull the front connector out of the I/O module using the unlocking strap. Swivel the front connector downward and remove it from the groves.
3. Then you may pull the I/O module.
4. When plugging in, proceed in reverse order (see also S7-1500 Automation System system manual (https://support.industry.siemens.com/cs/ww/en/view/59191792)).

Pulling and plugging power supply module

A power supply module cannot be pulled and plugged without reaction.

A power supply module can only be pulled and plugged when de-energized.

Use in explosive area Zone 2

⚠ WARNING

Pulling or plugging a module is prohibited in a potentially explosive atmosphere.

If you pull or plug a module or connector during operation, there is a risk of sparking. Sparks can cause an explosion in the hazardous area. Death or serious bodily injury as well as damage to property can be the result.

Do not pull or plug the module or the connectors until one of the following two conditions is met: The area is no longer hazardous or the device and its plug connectors are de-energized.

See product information Deployment of the modules in zone 2 hazardous atmospheres (https://support.industry.siemens.com/cs/ww/de/view/19692172).

Slots of I/O modules

They have an installation with empty slots.

You can plug in additional I/O modules during operation.

Configure

5

5.1 Configure

Configure

You configure the IM 155-5 PN HF interface module with STEP 7 or the configuration software of another manufacturer.

Configuration software	
STEP 7 (TIA Portal)	**GSD file**
• TIA Portal V16 with HSP0318 for the active backplane bus ST 1+12 • TIA Portal V16 with HSP0334 for the active backplane bus ST 1+8 and the active backplane bus ST 1+4	• GSDML V2.34 for the active backplane bus ST 1+12 • GSDML V2.35 for the active backplane bus ST 1+8 and the active backplane bus ST 1+4
-	"Insert" the active backplane bus on slot 0.
Insert the interface module IM 155-5 PN HF in slot 1.	
Insert the I/O modules on slots 2 to 13.	

Note

GSD file

When configuring using a GSD file, more I/O modules can be configured than can be physically inserted. If you configure more I/O modules than can be inserted, the IM 155-5 PN HF sends the message "Module cannot be reached".

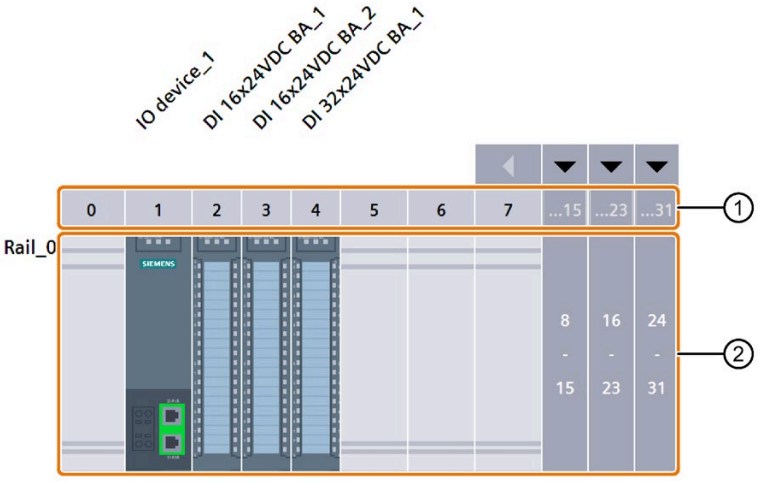
Note

GSD file and 70 mm wide system power supply

When you are plugging a 70 mm wide system power supply, note that this system power supply physically occupies two slots. When configuring using the GSD file, you must then leave an empty slot after the system power supply in the configuration. Otherwise, the IM 155-5 PN HF interface module reports the setpoint/actual difference as a "Configuration error".

5.2 Configuration of the active backplane bus in the TIA Portal

The representation of a station in the graphics area of the device view consists of 2 main areas:



① Rack area
② Module area (slots)

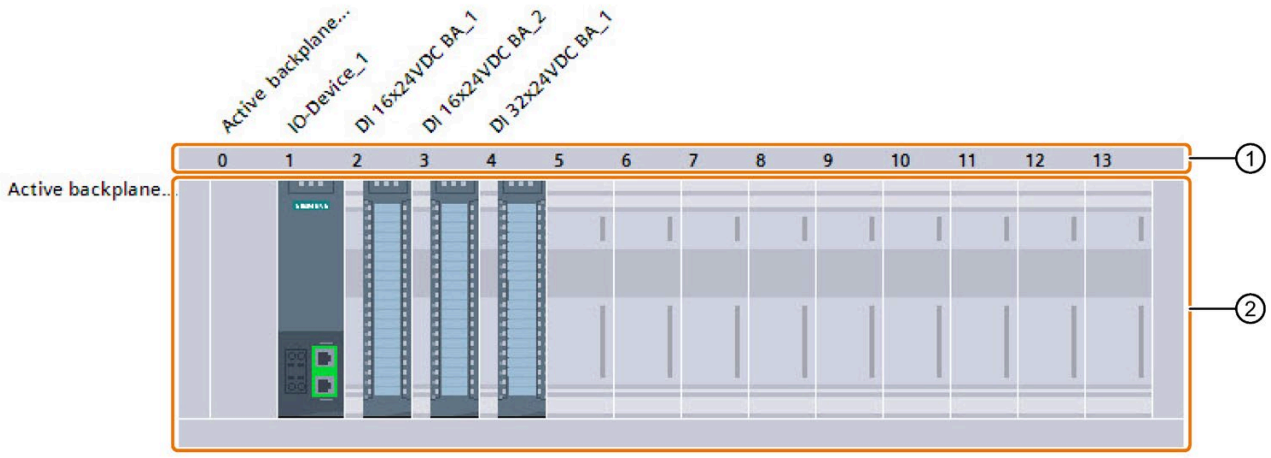
Replacing a rack

To replace the U-connector rack for an active backplane bus, you can use the "Change device" function.

Switch to the device view.

Then there are 2 options for starting the "Change device" function:

- Via the shortcut menu
  - Right-click in the rack area (1) or on the name of the rack (in the figure above e.g. "Rail_0").
  - Select "Change device" from the shortcut menu. A dialog window opens.
  - Select another rack and click "OK". The replacement of the rack starts.
- Via drag-and-drop
  - The hardware catalog is open. Select the "Rack" folder and navigate through the subfolders to the desired rack.
  - Select the desired rack.
  - Drag the rack into the rack area (1) and place it there.



① Rack area

② Module area (slots)

Note

Contrary to plugging modules, the replacement of a rack cannot be started by double-clicking on the catalog entry. The reason for this is that a double-click only works if there is slot free and permitted available. However, only one permissible area is available for a rack, which is always automatically occupied by the standard rack type when a device is plugged in the network view.

With ET 200MP, a representative module is automatically created in slot 0 when replacing into the active backplane rack. This module reflects the diagnostics and parameters of the active backplane bus according to the characteristics of the selected rack.

Additional information

You can find more information in the STEP 7.

Maintenance and service

6

Cycle for pulling and plugging

The active backplane bus serves to increase the system availability. It is designed for occasional pulling and plugging of I/O modules for expansion or in case of faults.

Alarm and system messages

7

Pull/plug interrupt

Each pulling and plugging action of a configured module results in a pull/plug interrupt.

OB 83 is started when a configured module is pulled in RUN mode. If OB 83 is not programmed, the CPU switches to STOP.

When plugging a module into a configured slot in the RUN state, OB 83 is started and the parameter assignment is made if the module matches.

You can find additional information in the STEP 7 online help.

Firmware update

The firmware update is possible:

- Firmware update of the IM 155-5 PN HF or the active backplane bus leads to a restart of the station.

  Pull/plug interrupts of the plugged modules can be reported during a firmware update of the active backplane bus.
- Firmware update of a I/O module leads to a restart of this I/O module only. Other I/O modules are not affected.
- Firmware update of a I/O module in isochronous mode results in a restart of the station.

Technical specifications

8

Technical specifications of the active backplane bus

The following table shows the technical specifications as of 07/2020. On the Internet, you will find a data sheet with technical specifications that are updated daily for the active backplane bus ST 1+12 (https://support.industry.siemens.com/cs/de/en/pv/6ES7590-0BL00-0AA0/td?dl=en), active backplane bus ST 1+8 (https://support.industry.siemens.com/cs/de/en/pv/6ES7590-0BH00-0AA0/td?dl=en) and active backplane bus ST 1+4 (https://support.industry.siemens.com/cs/de/en/pv/6ES7590-0BD00-0AA0/td?dl=en).

Article number	6ES7590-0BL00-0AA0	6ES7590-0BH00-0AA0	6ES7590-0BD00-0AA0
General information			
Product type designation	Active backplane ST 1+12 slot	Active Backplane ST 1+8 Slot	Active Backplane ST 1+4 Slot
HW functional status	FS01	From FS01	
Firmware version	V1.0.0		
• FW update possible	Yes		
Product function			
• I&M data	Yes; I&M0 to I&M3		
• Isochronous mode	Yes		
• Prioritized startup	Yes		
Engineering with			
• STEP 7 TIA Portal configurable/integrated from version	V16		
• STEP 7 configurable/integrated from version	V5.6 and higher		
• PROFINET from GSD version/GSD revision	V2.34 / -		
Power			
Power available from the backplane bus	2 W		
Power loss			
Power loss, typ.	2 W		
Hardware configuration			
Slots			
• Grid size	35 mm; Utilization of 25 mm-wide modules possible		
• Number of slots	13	9	5

Article number	6ES7590-0BL00-0AA0	6ES7590-0BH00-0AA0	6ES7590-0BD00-0AA0
– of which for CPU, max.	0		
– of which for IM, max.	1		
– of which for PS, max.	12; Max. 2 PS per station	2; Max. 2 PS per station	
– of which for IO/CM/CP/TM, max.	12	8	4
– of which for F-IO, max.	12	8	4
• Number of single-width slots, max.	12	8	4
Ambient conditions			
Ambient temperature during operation			
• horizontal installation, min.	-30 °C		
• horizontal installation, max.	60 °C		
• vertical installation, min.	-30 °C		
• vertical installation, max.	40 °C		
Ambient temperature during storage/transportation			
• min.	-40 °C		
• max.	70 °C		
Altitude during operation relating to sea level			
• Installation altitude above sea level, max.	5 000 m; Restrictions for installation altitudes > 2 000 m, see manual		
Dimensions			
Width	434 mm	294 mm	154 mm
Height	99 mm		
Depth	14 mm		
Weights			
Weight, approx.	352 g	245 g	127 g

Use up to 5000 m

When using the active backplane bus up to 5000 m, see S7-1500/ET 200MP Automation System system manual (https://support.industry.siemens.com/cs/ww/en/view/59191792).

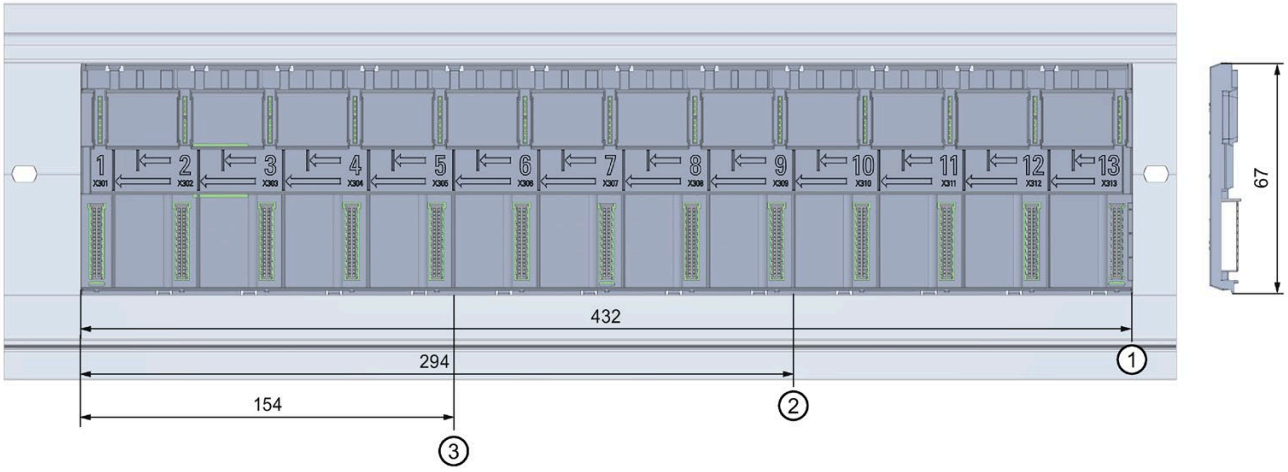
A current list of S7-1500 I/O modules that can be operated at elevations above 2,000 m can be found in the product information SIMATIC S7-1500/ET200 MP product information "Using the S7-1500 automation system / ET 200MP distributed I/O system over 2000 m above sea level" (https://support.industry.siemens.com/cs/ww/en/view/109763260).

Dimension drawings

9

Dimension drawing of active backplane bus

This section contains a dimension drawing of the active backplane bus mounted on a mounting rail.



① Length of active backplane bus ST 1+12

② Length of active backplane bus ST 1+8

③ Length of active backplane bus ST 1+4

Figure 9-1 Dimension drawing of active backplane bus front and side view

Spare parts/accessories

10

Spare part compatibility

If spare parts are required, you can replace the active backplane bus ST 1+8 slot with:

- Active backplane bus ST 1+12 slot

If spare parts are required, you can replace the active backplane bus ST 1+4 slot with:

- Active backplane bus ST 1+8 slot
- Active backplane bus ST 1+12 slot

Accessories for the active backplane bus

Table 10- 1 Accessories

Designation	Article number
Slot protection, 5 units	6ES7590-0CA00-0AA0
Mounting rail	
• Mounting rail, 245 mm (with drill holes)	6ES7590-1AC40-0AA0
• Mounting rail, 482 mm (with drill holes)	6ES7590-1AE80-0AA0
• Mounting rail, 530 mm (with drill holes)	6ES7590-1AF30-0AA0
• Mounting rail, 830 mm (with drill holes)	6ES7590-1AJ30-0AA0
• Mounting rail, 2000 mm (without drill holes) for cutting to length	6ES7590-1BC00-0AA0

The active backplane bus is placed in an S7-1500 mounting rail. The mounting rail must be longer than the active backplane bus to provide enough space for the IM 155-5 PN HF and the fixing screws.

List of I/O modules

A

List of interface modules

The following table contains the IM 155-5 PN and the HW and FW versions starting at which it can be used.

Designation	Article number	as of hardware functional status	as of firmware version
IM 155-5 PN HF	6ES7155-5AA00-0AC0	FS01	V4.4

List of the modules

The following table contains the modules of the S7-1500 for the active backplane bus and as of which HW and FW version they can be used.

The I/O modules as of delivery date 03/2020 can be used without restrictions.

Designation	Article number	as of hardware functional status	as of firmware version
DI 16x24VDC HF	6ES7521-1BH00-0AB0	FS02	V2.0.1
DI 16x24VDC BA	6ES7521-1BH10-0AA0	FS01	V1.0.0
DI 32x24VDC HF	6ES7521-1BL00-0AB0	FS02	V2.0.1
DI 32x24VDC BA	6ES7521-1BL10-0AA0	FS01	V1.0.0
DI 16x24...125VUC HF	6ES7521-7EH00-0AB0	FS01	V1.0.0
DI 16x24VDC SRC BA	6ES7521-1BH50-0AA0	FS02	V2.0.0
DI 16x230VAC BA	6ES7521-1FH00-0AA0	FS02	V2.0.0
DQ 16x24VDC/0.5A ST	6ES7522-1BH00-0AB0	FS02	V2.0.2
DQ 16x24VDC/0.5A HF	6ES7522-1BH01-0AB0	FS01	V1.0.0
DQ 16x24VDC/0.5A BA	6ES7522-1BH10-0AA0	FS01	V1.0.0
DQ 32x24VDC/0.5A ST	6ES7522-1BL00-0AB0	FS02	V2.0.2
DQ 32x24VDC/0.5A HF	6ES7522-1BL01-0AB0	FS01	V1.0.0
DQ 32x24VDC/0.5A BA	6ES7522-1BL10-0AA0	FS01	V1.0.0
DQ 8x24VDC/2A HF	6ES7522-1BF00-0AB0	FS02	V2.0.0
DQ 16x24...48VUC/125VDV/0.5A ST	6ES7522-5EH00-0AB0	FS01	V1.0.0
DQ 8x230V/5A ST Relay	6ES7522-5HF00-0AB0	FS02	V2.0.0
DQ 8x230VAC/2A ST Triac	6ES7522-5FF00-0AB0	FS02	V2.0.0
DQ 16x230VAC/2A ST relay	6ES7522-5HH00-0AB0	FS01	V1.0.0
DQ 16Vx230VAC/1A ST Triac	6ES7522-5FH00-0AB0	FS01	V1.0.0
DI 16x24VDC/ DQ 16xDC24VDC/0.5A BA	6ES7523-1BL00-0AA0	FS01	V1.0.0
F-DI 16x24VDC	6ES7526-1BH00-0AB0	FS01	V1.0.2
F-DQ 8x24VDC/2A PPM	6ES7526-2BF00-0AB0	FS03	V1.0.2
AI 8xU/I/RTD/TC ST	6ES7531-7KF00-0AB0	FS02	V2.0.1

Designation	Article number	as of hardware functional status	as of firmware version
AI 8xU/I/R/RTD BA	6ES7531-7QF00-0AB0	FS01	V1.0.0
AI 8xU/I/R/RTD/TC HF	6ES7531-7PF00-0AB0	FS01	V1.0.0
AI 4xU/I/RTD/TC ST	6ES7531-7QD00-0AB0	FS01	V1.0.0
AI 8xU/I HS	6ES7531-7NF10-0AB0	FS01	V1.0.1
AI 8xU/I HF	6ES7531-7NF00-0AB0	FS01	V1.0.0
AQ 2xU/I ST	6ES7532-5NB00-0AB0	FS01	V1.0.0
AQ 4xU/I ST	6ES7532-5HD00-0AB0	FS02	V2.0.0
AQ 4xU/I HF	6ES7532-5ND00-0AB0	FS01	V1.0.0
AQ 8xU/I HS	6ES7532-5HF00-0AB0	FS01	V1.0.0
AI 4xU/I/RTD/TC/AQ 2xU/I ST	6ES7534-7QE00-0AB0	FS01	V1.0.0
PS 25W 24VDC	6ES7505-0KA00-0AB0	FS02	V1.0.1
PS 60W 24/48/60VDC	6ES7505-0RA00-0AB0	FS03	V1.0.1
PS 60 W 120/230V AC/DC	6ES7507-0RA00-0AB0	FS03	V1.0.1
TM Count 2x24V	6ES7550-1AA00-0AB0	FS01	V1.0.0
TM PosInput 2	6ES7551-1AB00-0AB0	FS01	V1.0.0
TM Timer DIDQ 16x24V	6ES7552-1AA00-0AB0	FS01	V1.0.0
TM PTO 4	6ES7553-1AA00-0AB0	FS01	V1.0.0
TM SIWAREX WP521 ST	7MH4980-1AA01	FS01	V1.1.0
TM SIWAREX WP522 ST	7MH4980-2AA01	FS01	V1.1.0
TM NPU	6ES7556-1AA00-0AB0	FS01	V1.0.0
CM PtP RS232 BA	6ES7540-1AD00-0AA0	FS01	V1.0.3
CM PtP RS232 HF	6ES7541-1AD00-0AB0	FS01	V1.0.3
CM PtP RS422/485 BA	6ES7540-1AB00-0AA0	FS01	V1.0.3
CM PtP RS422/485 HF	6ES7541-1AB00-0AB0	FS01	V1.0.3
CM 8xIO-Link	6ES7547-1JF00-0AB0	FS01	V1.0.0

Index