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Linux Transfertool

Operating Manual

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

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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.

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Overview

1.1 Overview

satdcptool

This is a tool for identifying/configuring Profinet devices via the DCP-protocol.

Transfer_sat

This is a tool for downloading the projects, which depends on the target type.

Security information

2.1 Security information

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.

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2.2 Industrial Security

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>).

2.3 Product-specific Security-information

The software requires root-privileges for any function that operates on the automation-network. Customers are responsible for restricting appropriate privileges to authorized personnel only.

satdcptool documentation, V1.2

With this tool it is possible to change IP settings on SIMATIC S7-1200 and S7-1500 CPUs without the TIA Portal, it is also possible to identify devices through blinking LEDs and reset communication parameters.

3.1 Installation

The tool is provided as installation-packages for the supported Linux distributions. To install the satdcptool glibc version 2.12 or higher needs to be installed. Installation is done via the default installation-tools:

Debian:

```
#> dpkg -i satdcptool_1.2-b001_amd64.deb
```

CentOS:

```
#> rpm -hiv satdcptool-1.2-b001.x86_64.rpm
```

After Installation, the binary reside under `/usr/sbin`:

→ `satdcptool`

Security-Notice

Before installation it is recommended to verify the integrity of the package. This is done by generating the hash-value for the package and comparing it to the hash-value provided by Siemens:

```
#> sha256sum satdcptool*
```

3.2 Deinstallation

The installed package can be removed using the default installation-tools of your distribution:

Debian:

```
#> dpkg -r satdcptool
```

CentOS:

```
#> rpm -e satdcptool
```

3.3 Operation

3.3 Operation

3.3.1 Parameters

Global

```
usage: satdcptool [-h] [-i DEVNAME] [-t TIMEOUT] [--novlan]
{identifyReq,blinkReq,setNameReq,setIpSuiteReq,setDhcpReq,resetToFactoryReq
}
```

...

Tool for sending DCP-requests

positional arguments:

```
{identifyReq,blinkReq,setNameReq,setIpSuiteReq,setDhcpReq,resetToFactoryReq
}
```

	command
identifyReq	send a DCP identify request
blinkReq	send a DCP blink request
setNameReq	send a "set name" request
setIpSuiteReq	send a "set IP suite" request
setDhcpReq	send a "set DHCP" request
resetToFactoryReq	send a "Reset-to-Factory settings" request

optional arguments:

-h, --help	show this help message and exit
-i DEVNAME	name of network-device (default "eth0")
-t TIMEOUT	timeout for requests in seconds (default 5)
--novlan	set to disable VLAN-tags on created requests

Operation "identifyReq"

The identifyReq command scans the network and prints a list of all reachable devices

```
usage: satdcptool identifyReq [-h] [destmac]
```

positional arguments:

destmac	destination MAC-address in format XX:XX:XX:XX:XX:XX (defaults to DCP MC-address if omitted)
---------	---

optional arguments:

-h, --help	show this help message and exit
------------	---------------------------------

Operation "blinkReq"

This operation send an identify-request to the given device, causing it to give visual feedback for identification. S7-PLCs will flash their LEDs.

```
usage: satdcptool blinkReq [-h] destmac
positional arguments:
  destmac                destination MAC-address in format XX:XX:XX:XX:XX:XX

optional arguments:
  -h, --help            show this help message and exit
```

Operation "setNameReq"

The setNameReq command sets a new profinet name for the given device.

```
usage: satdcptool setNameReq [-h] [-p] destmac name
positional arguments:
  destmac                destination MAC-address in format XX:XX:XX:XX:XX:XX
  name                  new name to set

optional arguments:
  -h, --help            show this help message and exit
  -p                    send as "persistant"
```

Operation "setIpSuiteReq"

The setIpSuiteReq command sets a new IP config on the given device.

```
usage: satdcptool setIpSuiteReq [-h] [-p] destmac ipaddr ipmask [gateway]
positional arguments:
  destmac                destination MAC-address in format XX:XX:XX:XX:XX:XX
  ipaddr                ip-address in dotted format
  ipmask                ip-mask in dotted format
  gateway               default gateway address in dotted format

optional arguments:
  -h, --help            show this help message and exit
  -p                    send as "persistant"
```

3.3 Operation

Operation "setDhcpReq"

The setDhcpReq sets the IP config of a Device to DHCP. This operation is currently not supported by SIMATIC S7-1200 and S7-1500 CPUs.

usage: satdcptool setDhcpReq [-h] [-p] destmac variant [clientid]

positional arguments:

destmac	destination MAC-address in format XX:XX:XX:XX:XX:XX
variant	DHCP variant. one of "clientid", "mac" or "devname"
clientid	client id to use (only when variant = "clientid")

optional arguments:

-h, --help	show this help message and exit
-p	send as "persistent"

3.3.2 Return Codes

Return Codes

On success, 0 is returned by the tool. Returncodes != 0 indicate an error:

-1: system error, e.g. insufficient privileges or missing network interface

1: tool called with no operation

2: error parsing commandline parameters

3.3.3 Examples

Examples

list all Profinet-devices on network and print to stdout

```
#> satdcptool identifyReq
```

set name "hello" for a device (temporary). Use network interface "eth2"

```
#> satdcptool -i eth2 setNameReq 08:00:06:00:CA:FE hello
```

set ip configuration for a device (permanent)

```
#> satdcptool setIpSuiteReq -p 08:00:06:00:CA:FE 192.168.0.1  
255.255.255.0 0.0.0.0
```

Transfer_sat documentation, V3.01

The transfer_sat tool allows for loading existing PLC-projects and firmware updates onto S7-1200 and S7-1500 PLCs without requiring TIA-portal.

4.1 Dependencies

The following packages need to be installed to install the transfer-tool package

- glibc >= 2.12
- unzip
- bash

4.2 Installation

The transfer-tool is provided as installation-packages for the supported Linux distributions. Installation is done via the default installation-tools:

Debian:

```
#> dpkg -i transfer-sat_03.00.00.07-b001_amd64.deb
```

CentOS:

```
#> rpm -hiv transfer-sat-03.00.00.07-b001.x86_64.rpm
```

After Installation, the binaries are available under /usr/sbin:

→ transfer_sat

Security-Notice

Before installation it is recommended to verify the integrity of the package. This is done by generating the hash-value for the package and comparing it to the hash-value provided by Siemens:

```
#> sha256sum transfer-sat*
```

4.3 Deinstallation

The installed package can be removed using the default installation-tools of your distribution:

Debian:

```
#> dpkg -r transfer-sat
```

CentOS:

```
#> rpm -e transeer-sat
```

Security-Notice

Deinstallation will not remove any additional user-generated files. The user is responsible for removing any additional project- or password-files that may reside on the Linux-system.

4.4 Input Parameters

Long	Short	Usage
Required		
--ip	-i	IP-Address of the remote target e.g. PLC
--file	-f	The zipped TIA project (file-name.zip)
Optional		
--check	-c	Start CRC check on zip file only. No transferring
--firmware	-F	The zipped firmware update file
--version	-v	Print version of tool and exit
--password	-p	Path of file with password for PLC
--password_new	-P	Path of file with password of the new project (if password changes)
--safety	-s	Allow safety operation. This parameter needs to be explicitly set in order for the tool to perform any safety-relevant operation.

4.5 Return of error codes

Each return code can be checked by using "echo \$?"

0	On success / successful check of zip-file
100	Host unavailable / connection lost
101	Invalid IP-Address
102	Unsupported hardware / FW
103	Download failed (project too big, change of IP while downloading, etc...)
104	Corrupted zip-file / failed to unzip
105	Invalid input-file
106	Missing or wrong parameter or value of parameter for ip/file/type
107	Tool was not started as Root-User
200	Wrong MLFB or FW-Version
201	CPU restart failed
202	Could not create h1_0.dat correctly
203	Invalid / no file with password
204	Missing or wrong password
205	Failsave not supported

4.6 Program Update

Use the program update to download a new program to SIMATIC S7-1200 and S7-1500 CPUs.

4.6.1 Requirements

The device of which you want to update the program has to be in the catalog of supported hardware in chapter 4.16 (Page 43) and program update has to be marked as supported. You cannot update a program through a CM or CP interface, the CPU must be connected directly to the network.

4.6.2 Examples

Program update of a standard CPU

To update the program of a standard CPU, the application needs the following parameters.

- `--file` to select the zip that contains the new program to be downloaded to the CPU
- `--ip` to define the IP address of the CPU you want to update
- `--type` to define the family type of the CPU (S7-1200 or S7-1500)
- `--password` if the CPU is protected to select a file containing the password that provides write access
- `--password_new` if the new program has a CPU protection level set, to select a file containing the password that provides write access after the download

```
#> transfer_sat --file /home/PLC_Project.zip --ip 123.45.67.89 --  
type S7-1500 --password /tmp/password --password_new  
/tmp/password_new
```

```
Initializing connection
```

```
Establishing connection
```

```
Downloading to PLC
```

```
Restart CPU
```

```
The operation completed successfully.
```

```
#> echo $?
```

```
0
```

Program update of an F-CPU

To update the program of an F-CPU, the application needs the following parameters.

- --file to select the zip that contains the new program to be downloaded to the CPU--ip to define the IP address of the CPU you want to update
- --type to define the family type of the CPU (S7-1200 or S7-1500)
- --password if the CPU is protected to select a file containing the password that provides write access
- --password_new if the new program has a CPU protection level set, to select a file containing the password that provides write access after the download
- --safety to confirm you want to update an F-CPU

```
#> transfer_sat --file /home/PLC_Project.zip --ip 123.45.67.89 --
type S7-1500 --password /tmp/password --password_new
/tmp/password_new --safety

Initializing connection
Establishing connection
Downloading to PLC

You have selected Program Update for the following device. Safety
relevant functions require confirmation before proceeding:

plc_1 192.168.2.149 An existing safety program is about to be
updated with another safety program.

To confirm, please enter "yes" and press return:

Yes

Restart CPU

Result of CRC comparison of online and offline collective F-
signatures match.

The operation completed successfully.

#> echo $?

0
```

Check program update file

To perform a CRC check the zipped program update file of a CPU, the application needs the following parameters.

- --file to select the zip that contains the program to be checked.
- --check to check the file

```
#> transfer_sat --file /home/PLC_Project.zip --check

Check successful

#> echo $?

0
```

4.7 Firmware Update

Use the firmware update to download a new firmware to SIMATIC S7-1200 and S7-1500 CPUs.

4.7.1 Requirements

The device of which you want to update the firmware has to be in the catalog of supported Hardware in chapter 4.16 (Page 43) and firmware update has to be marked as supported. You cannot update a firmware through a CM or CP interface, the CPU must be connected directly to the network. For more information read the Readme to the firmware file in SIOS.

4.7.2 Examples

Firmware update of a CPU

To update the firmware of a CPU, the application needs the following parameters.

- --firmware to select the zip that contains the new firmware to be downloaded to the CPU
- --ip to define the IP address of the CPU you want to update
- --type to define the family type of the CPU (S7-1200 or S7-1500)
- --password if the CPU is protected to select a file containing the password that provides write access

```
#> transfer_sat --firmware /home/PLC_Firmware.zip --ip 123.45.67.89  
--type S7-1500 --password /tmp/password
```

```
Initializing connection
```

```
Establishing connection
```

```
Downloading to PLC
```

```
Restart CPU
```

```
The operation completed successfully.
```

```
#> echo $?
```

```
0
```

Check firmware update file

To perform a CRC check the zipped firmware update file of a CPU, the application needs the following parameters.

- --firmware to select the zip that contains the firmware to be checked
- --check to check the file

```
#> transfer_sat --firmware /home/PLC_Firmware.zip --check
Check successful
#> echo $?
0
```

4.8 Safety

Global

When performing a safety-relevant operation, the user will be required to input a confirmation. The software will display the following message:

You have selected Program Update for the following device. Safety relevant functions require confirmation before proceeding:

PLC_1215F 192.168.2.2

An existing safety program is about to be updated with another safety program To confirm, please enter "yes" and press return.

For more information on safety, please read the manual SIMATIC Safety - Configuring and Programming (<https://support.industry.siemens.com/cs/de/en/view/54110126>).

4.8.1 Classification

Product

Software Tool for Safety Related Development

Model

Linux Transfertool

Parameters

The tool provides safety relevant operations to maintain a Product Service variety of Siemens S7 Plus series products including S7 -1200 and S7 -1500 fail-safe CPUs in a common network.

Tool Classification

T3

Tested according to

- IEC 61508-3:2010
- ISO 13849-1:2015
- IEC 62061:2005
- IEC 62061:2005/AMD1:2012
- IEC 62061:2005/AMD2:2015

4.9 OMS-Store

4.9.1 transfer_sat

The transfer_sat tool is a command-line tool that performs downloads of PLC-programs from a 64-bit Linux to a PLC via TCP/IP.

OMS-Store

An OMS-Store is a folder in which a project can be stored.

4.9.2 Create an OMS-Store

Create an OMS-Store

The transfer_sat tool can only download programs that were previously converted to OMS Stores using the TIA Portal software.

This conversion is illustrated in the following steps:

1. Open your existing project in TIA Portal and go to the project view.
2. Under "Card Reader/USB memory" double-click "Add user-defined Card Reader",

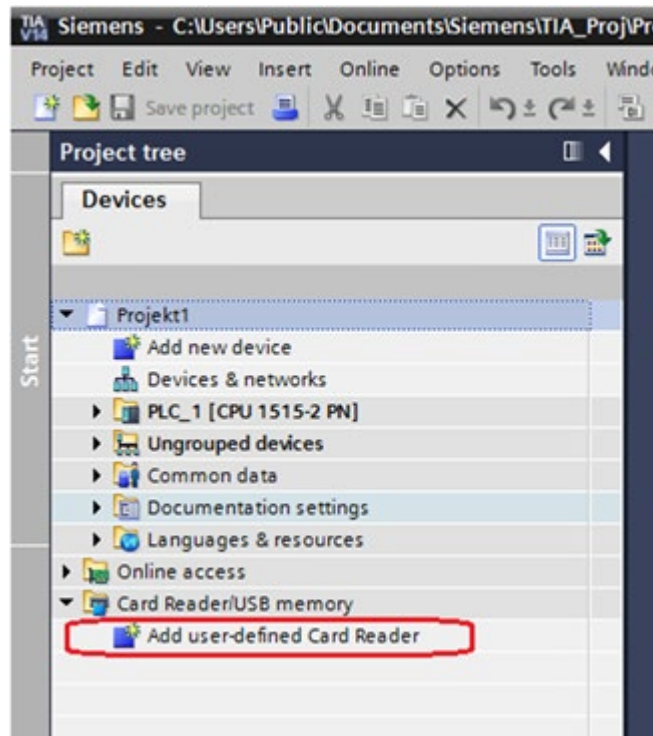


Figure 4-1 Create an OMS-Store

Then choose a path where you would like the OMS-Store to be created and click "OK". After this the store will appear in the "Project tree" as a new card reader.

4.9.3 Load Project to OMS-Store

Load Project to OMS-Store

To load a project to the created OMS-Store, pull the PLC of the Project per drag and drop to the OMS-Store.

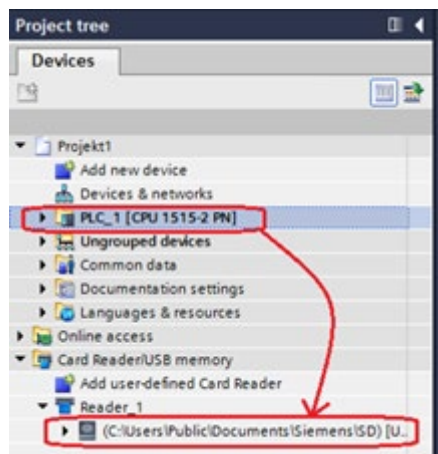
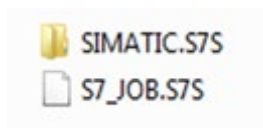


Figure 4-2 Load Project to OMS-Store

Then click "Load".

After this the OMS-Store needs to be zipped. Just zip the two created files of the store.



Now the OMS-Store is ready for download.

4.10 Firmware Update File

The Firmware Update file can be downloaded from Industry Support (<https://support.industry.siemens.com/cs/ww/en/ps>) site of Siemens.

Search the MLFB of the CPU, which should be updated in Product type e.g. 6ES7 215-1AG40 OXB0. To get a shorter list of results, choose Download as Entry type.

Filter criteria for entries

☒ All Products ☐ My Products

Product tree: All

Product: 6ES7215-1AG40-0XB0 Entry type: Download (4)

6ES7215-1AG40-0XB0
CPU 1215C, DC/DC/DC, 14DI/10DO/2AI/2AO
SIMATIC S7-1200, CPU 1215C, COMPACT CPU, DC/DC/DC, 2 PROFINET PORT, ONBOARD I/O: 14 DI 24V DC, 10 DO 24V DC 0.5A 2 AI 0-10V DC, 2 AO 0-20mA DC, POWER SUPPLY: DC 20.4 - 28.8 V DC, PROGRAM/DATA MEMORY: 125 KB
[Product details](#) [Technical data](#) [CAx data](#) [Add to mySupport products](#)

4 Entries Filtered by '6ES7215-1AG40-0XB0' and 'Download'

Entries per page: 20 | 50 | 100 | << < 1 > >>

☐	Actions	Date descending
☐	Download SIMARIS therm 2.0 Power loss calculation for the right design of system cabinets For products: 3RK1315-6NS71-0AA3, 3RT2026-1BG40,... All products	03/02/2017 ID: 109482729 ★★★★☆ (14)
☐	Download SIMATIC Automation Tool - the commissioning and service operation tool for S7-1200, S7-1500 including ET 200SP CPU and decentralized IO modules Hereby it takes place the deployment of the SIMATIC Automation Tool. For products: 6AG1214-1AG40-4XB0, 6ES7513-1AL00-0AB0,... All products	11/28/2016 ID: 98161300 ★★★☆☆ (88)
☐	Download Firmware update for CPU 1215C, DC/DC/DC, 14DI/10DO/2AI/2AO DESCRIPTION: When updating the operating system, always update to the latest version available for the product and its respective article number. The previous versions of the operating system are only intended as backup to allow a downgrade to the original version. Until now this is not known to have been necessary in any case. ... For products: 6ES7215-1AG40-0XB0, 6AG1215-1AG40-4XB0,... All products	09/30/2016 ID: 107539980 ★★★☆☆ (10)
☐	Download Power loss data for control panel devices This is a list with power loss data for many components for a control panel For products: 3RK1315-6NS71-0AA3, 3RT2026-1BG40,... All products	04/27/2016 ID: 109480404 ★★★★☆ (12)

Entries per page: 20 | 50 | 100 | << < 1 > >>

Figure 4-3 Industry Support

Download the Firmware with the version, to which should be updated. The file given to the transfer tool needs to be a zip-file. The zip-file has to contain exactly one file with the ending ".upd".

4.11 sat_passwd

Password

To load a password protected CPU a password is needed. The transfer_sat tool will read the password from the file given to the password or password_new parameter. Insert only the password into the file. Don't use any blanks, tabs or comments.

Starting with Version 3.01 it is possible to use encrypted passwords. See "sat_passwd (Page 22)" for more details.

Timeouts

If the target is not reachable after unzip for about 5 seconds the return value "host unavailable" is returned. If the target is not reachable during transferring data for about 50 seconds the return value "host unavailable" is set.

4.11 sat_passwd

With the sat_passwd tool, you can store passwords encrypted on your system. These passwords can be used with the transfer_sat tool. See "Parameters (Page 12)" for more details.

```
sat_passwd -o <path/filename>
```

Security-Notice

It is strongly recommended to only use transfer_sat with password-files that have been generated with sat_passwd, so that no cleartext-passwords are stored on the filesystem.

4.12 Restrictions

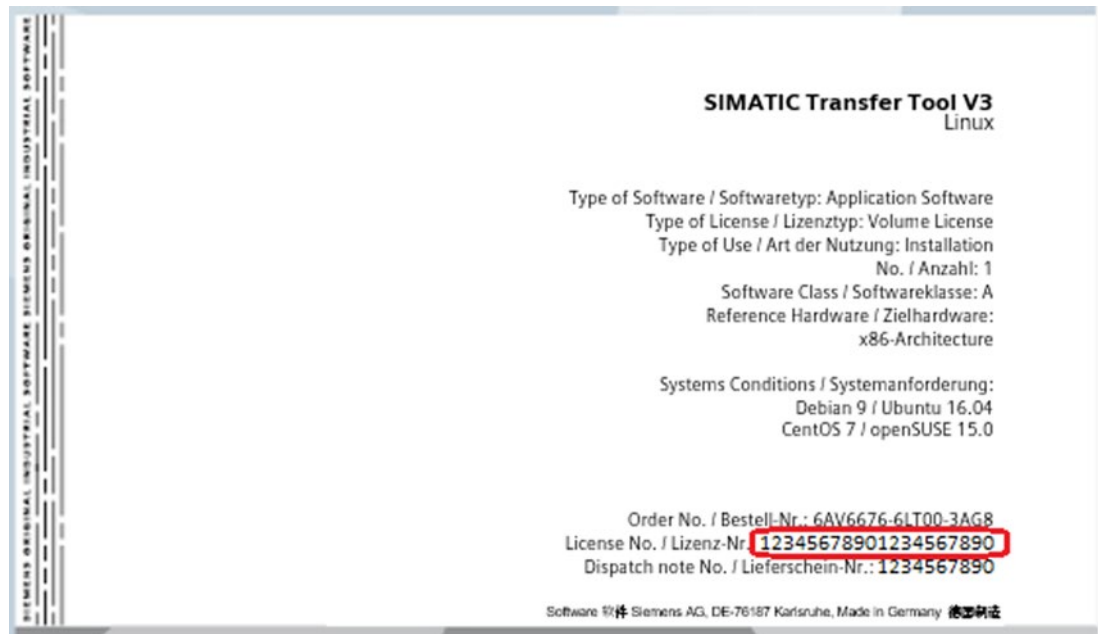
Only the Hardware listed in chapter 4.16 (Page 43) is supported by the tool.

4.13 Registration

Customers are required to activate the purchased license by registering the product. The necessary steps are described below.

4.13.1 Requesting your registration key (REG_KEY)

After the installation of our products you have to write your license number into the file `"/usr/share/siemens/vendor.dat"`.



Afterwards, you can use the tool `"/usr/bin/get_address"` to retrieve the identification code.

To get the registration key you have to create a Support Request and provide the order number, the identification code (IDENT_CODE) and the license number there.

4.13.2 Installing the registration key

When you got your registration key, you have to insert it into the designated file `"/usr/share/siemens/.license.dat"`.

Note

Insert only the registration key into the file. Don't use any blanks, tabs or comments. If you have more than one registration keys separate them only with a carriage return.

4.14 Supported OS

The following Operating Systems are supported.

- CentOS 6 and higher
- Ubuntu 16.04 and higher
- Debian 9 and higher
- openSUSE 15.0 and higher

4.15 Troubleshooting Event Log Messages

The following table provides additional information for Event Log messages.

Event Log message	Probable cause and corrective action
safety flag (-s) not set	You need to provide -s option to perform a safety operation.
Firmware update failed	The firmware update failed because of an internal error
Invalid File	The firmware update file you provided is not valid for the device.
Setting CPU in RUN failed	The CPU failed to enter RUN mode. Please check diagnostics buffer for more information.
Missing password_new	You need to provide a password for the project you want to download to your device.
Input file not valid	The project you provided is not valid for your device
Missing Password	You need to provide a password for the protected CPU.
Unsupported hardware	The device you connected to is not supported.
Establishing connection failed!	Connecting to the device failed. Check if device is reachable.
Initilizing failed	System doesn't have have a network interface
Invalid IP-Address	The IP address you provided had the wrong format
Need to be root to run the tool	Try to run the tool again as root.
Missing or wrong parameter or value of parameter	The parameters you are using are not sufficient or used in the wrong way to run the tool.
No valid password file	You do have the correct rights to open the file provided for password or file does not exist.
Corrupted zip-file / failed to unzip	The zip file you provided could not be unzipped.
Could not create temporary folder	A temporary folder for the unzip could not be created
No valid file	The zip file you provided contained not exactly one .upd file, the project in the zip file does not have the right format or the zip file does not exist.
The CPU password entered is not valid to perform this operation.	You entered an invalid CPU password for the operation. Enter a valid CPU password with sufficient privileges for the operation.
The CPU failed to enter RUN mode. Possible reasons: TIA Portal project downloaded might not be valid for this CPU type or a program has never been downloaded to the CPU. See the diagnostics buffer for more details.	The CPU could not go to RUN mode. The CPU might not have a valid user program. Check the CPU diagnostics for more details.
The CPU failed to enter STOP mode.	The CPU could not go to STOP mode. Check the CPU diagnostics for more details.

Event Log message	Probable cause and corrective action
The device is not accepting the new configuration.	The device rejected a DCP command to set the IP address or PROFINET name. Check network communication connections. Verify the IP address or the PROFINET name that you entered.
Failed to connect to the device. Verify the MAC address is correct.	The Transfer_sat tool could not identify the device on the network with that MAC address. Verify the MAC address you entered and the MAC address of the device.
The connection to the device was lost prematurely.	The Transfer_sat tool is no longer connected to the device. Verify network communication connections.
The operation failed and returned error: ID#	Internal error within the Transfer_sat tool. Contact your Siemens representative.
Failed to disconnect	The Transfer_sat tool was unable to disconnect from the device. Reattempt the operation.
The specified firmware update file is not compatible with the device.	The firmware update file that you selected is not compatible with this device. Select a firmware update version that corresponds to the specific device.
The specified firmware update file is not compatible with the device because the hardware requires a firmware version that must be different.	The device hardware requires that the firmware update file differ from the existing version. Select a firmware update version that is different from the existing version.
The specified firmware update file is not compatible with the device because the hardware requires a firmware version that must be the same.	The device hardware requires that the firmware update file be the same as the existing version. Select a firmware update version that is the same version.
The specified firmware update file is not compatible with the device because the hardware requires a firmware version that is newer.	The device hardware requires that the firmware update file must have a newer version than the version in the device. Select a newer firmware update version.
The specified firmware update file is not compatible with the device because the hardware requires a firmware version that is older.	The device hardware requires that the firmware update file must have an older version than the version in the device. Select an older firmware update version.
The module ID is not valid.	The API FirmwareUpdate method received a value for the hardwareID parameter that does not correspond to a module. When calling the FirmwareUpdate update method, provide the correct ID for the module.
The firmware update file was not accepted by the module.	Select a firmware update file that is compatible with the module you are updating.
The module is not reachable. Download a valid hardware configuration to the CPU or connect directly to the device.	The Transfer_sat tool cannot communicate with the device. Download a valid device configuration from the TIA Portal to the device. Alternatively use the Transfer_sat tool to update the CPU program.
Firmware update of this module is not supported by this tool.	The Transfer_sat tool does not support firmware update for this type of module. You cannot update the firmware for this module with the Transfer_sat tool.
The firmware update file has the same firmware version as the device.	The firmware update file has the same firmware version as the device. No firmware update performed and no further action required.
Format memory card is not supported on this device.	You cannot format the memory card for this device.
The gateway address is not valid.	The gateway address is not valid with the subnet mask and IP address. Verify that your IP address, subnet mask, and gateway are correct for your device and network.
An internal error has occurred.	Internal error within the Transfer_sat tool. Contact your Siemens representative.
Target server address is invalid.	The Transfer_sat tool could not connect to the CPU or HMI device. Verify the MAC address or IP address of the device.

4.15 Troubleshooting Event Log Messages

Event Log message	Probable cause and corrective action
The project cannot be opened with this version of the Transfer_sat tool.	The project is from an older release of the Transfer_sat tool. The Transfer_sat tool cannot open a project from this release. See the topic "Saving and opening .sat project files".
Invalid signature detected. Repair the installation.	The Transfer_sat tool installation is incomplete or corrupted. Reinstall the Transfer_sat tool.
The IP address is not valid.	The IP address does not follow requirements for IP addresses. Enter a valid IP address.
The MAC address is not valid.	The MAC address does not follow requirements for MAC addresses. Enter a valid MAC address.
This operation is not permitted because another configuration tool such as the TIA Portal is connected.	Only one software tool can connect to a device. Close the other connection to the device, for example, by going offline in the TIA Portal. Then reattempt the operation from the Transfer_sat tool.
An already active ES instance does not support MultiES.	This device does not support more than one online connection from the Transfer_sat tool, the TIA Portal, or another tool at the same time. Go offline in the TIA Portal or other tool and then reattempt the Transfer_sat tool operation.
The maximum number of CPU connections has been exceeded.	This device supports a limited number of online connections from the Transfer_sat tool, the TIA Portal, or another tool at the same time. The limit has been exceeded. Go offline in the TIA Portal or other tool and then reattempt the Transfer_sat tool operation.
Connections to this CPU from multiple tools is not supported.	This device supports a limited number of online connections from the Transfer_sat tool, the TIA Portal, or another tool at the same time. Connections from multiple tools is not supported. Go offline in the TIA Portal or other tool and then reattempt the Transfer_sat tool operation.
Client wants to make write operation on object variable or link which cannot be changed in CPU RUN Mode.	The CPU cannot perform this operation in RUN mode. Change the CPU to STOP mode.
The operation completed successfully.	Information only
The operation was canceled by the user.	Information only
The device does not support the requested operation.	The Event column shows the operation that did not succeed for the device in the Device column. Check the Device catalog for the operations that the device supports for the current firmware version.
Parameter is out of range.	An application called the API method SetOperatingState with an invalid value. You must call this method with either "Stop" or "Run" for the operating mode state.
The PROFINET name is not valid.	The PROFINET name is not valid. Enter a valid PROFINET name that is unique from all other devices.
Could not establish a connection to the device	The Transfer_sat tool could not connect to the device. Check your network connections. Verify that another software tool, such as the TIA Portal, does not have an online connection to the device. If so, go offline from the other tool. Verify that the device is on the subnet you specified. Check your routing if applicable. Set your network interface to the "Auto" selection if you haven't already.
The operation has timed out.	The CPU did not complete the operation. Reattempt the operation. If the operation continues to time out, check your device and network communications.
Connection is de-legitimated because CPU password timeout.	The CPU password has timed out due to inactivity. Enter the CPU password and try the operation again.

4.15 Troubleshooting Event Log Messages

Event Log message	Probable cause and corrective action
Failed to set IP address	The Transfer_sat tool could not set the IP address. Check that the IP address is valid and that it is unique. Verify that the device configuration in the STEP 7 project permits setting the IP address directly at the device.
Failed to set PROFINET name	The Transfer_sat tool could not set the PROFINET name. Check that the PROFINET name is valid and that it is unique. Verify that the device configuration in the STEP 7 project permits setting the IP address directly at the device.
The subnet mask is not valid.	The subnet mask does not follow requirements for a valid subnet mask. Enter a valid subnet mask.
The device is not supported or could not be initialized.	The Transfer_sat tool does not support this device, or could not initialize the device. Check the Device catalog for supported devices and versions.
The device did not accept the firmware update file.	The device rejected the firmware update. Verify that the firmware update file is valid for your device. If updating from the old format, ensure that you select the header .upd file for the "New Firmware Version" field. Some modules require external power sources. If the module has dual processors, verify that power is applied to both processors. If the module has a power LED indicator, verify that the LED is green. Test that the device is functioning properly.
Failed to zip contents of folder	The Transfer_sat tool could not zip the contents of the folder. Check for sufficient file system space for the zip file. Also, check for file folder permissions. Either condition could be the source of the problem.
Error writing to file	The Transfer_sat tool could not save the file to the programming device. Check your file space and file permissions.
Error creating file	The Transfer_sat tool could not create the file on the programming device. Check your file space and file permissions.
Error deleting file	The Transfer_sat tool could not delete the file from the programming device. Check your file permissions.
Error deleting folder	The Transfer_sat tool could not delete the folder from the programming device. Check the folder permissions on your programming device. Be sure the folder is not open.
Error creating folder	The Transfer_sat tool could not create a temporary folder for saving service data. Check file space on your programming device.
You must purchase a license to use the API.	You do not have a valid license to use the API. You can use the 21-day free trial license for 21 days. Otherwise, purchase a license for the Transfer_sat tool or purchase the Software Developers Kit (SDK) to use the API.
Invalid timeout value. Valid values are 180-999 seconds.	In the Communications options, the timeout value for communications operations is out of range. Set the value to a number from 180 to 999 seconds.
No data in device to backup	The Transfer_sat tool cannot create a backup if the device does not have a user program. Download your project from STEP 7 to the device, or update the program from the Transfer_sat tool. If you have a previous backup file for this device, you can restore it from the Transfer_sat tool.
Error reading from stream	The Transfer_sat tool could not read from a previously-saved project file. Verify that the project file is from a compatible version of the Transfer_sat tool. Open a valid project if one is available.

4.15 Troubleshooting Event Log Messages

Event Log message	Probable cause and corrective action
Error writing to stream	The Transfer_sat tool could not write and save a project file for the current project. Check file space on your programming device.
The HMI project file is invalid or incomplete.	You are attempting to perform an HMI program update. The program update file is corrupt. You cannot restore this file.
The HMI project is not compatible with the device.	You are attempting perform a program update to an HMI device that is not compatible with the HMI device. You can only perform a program update that corresponds to your HMI device hardware.
A file operation could not be completed because of write protection.	The location for the file operation is writeprotected. Choose a folder location on your programming device that is not write-protected.
Failed to change the IP address of this device	The Transfer_sat tool could not set the IP address. Enter a valid IP address. Check your network communication connections.
Failed to change the PROFINET name of this device	The Transfer_sat tool could not set the PROFINET name. Enter a valid PROFINET name. Check your network communication connections.
Request aborted	Information only
The device does not yet support device addon transfer.	The program update file includes addons. The HMI device you are trying to update does not support addons. You can only update this HMI device with a program that does not have addons.
Attribute not found	An HMI operation is attempting to read or write to a location that does not exist. Verify that the program update file or backup file is valid for the HMI.
Buffer too small for all data requested	The HMI device reported that an internal buffer was too small. Contact customer support for your HMI device.
HMI certificate has expired.	The HMI certificate is no longer valid. Update the certificate in the HMI device.
General failure on checking certificate signature	Internal error in the HMI device. Contact customer support for your HMI device.
File certificate is invalid.	Internal error in the HMI device. Contact customer support for your HMI device.
Certificate not yet valid	Internal error in the HMI device. Contact customer support for your HMI device.
Certificate has been revoked.	Internal error in the HMI device. Contact customer support for your HMI device.
Established client connection required for action	Internal error in the HMI device. Contact customer support for your HMI device.
A file read operation failed.	Internal error in the HMI device. Contact customer support for your HMI device.
A file write operation failed.	Internal error in the HMI device. Contact customer support for your HMI device.
Firmware of type not installed	Internal error in the HMI device. Contact customer support for your HMI device.
Firmware of type not supported	Internal error in the HMI device. Contact customer support for your HMI device.
The firmware file is not valid for this device.	You selected a firmware update file that is not valid for the device. Choose a firmware update file that corresponds to your device and version.

Event Log message	Probable cause and corrective action
This addon is not compatible with this device/firmware	The program update file includes addons. The addon in the project update file is not compatible with the HMI device that you are trying to update. You can only update a program that has no addons or has compatible addons.
Invalid arguments passed to method	Internal error in the HMI device. Contact customer support for your HMI device.
Invalid file path	The file path does not exist or is invalid. Provide a valid file path.
License control failed.	Internal error in the HMI device. Contact customer support for your HMI device.
A logical volume is missing.	Internal error in the HMI device. Contact customer support for your HMI device.
A logical volume is out of space.	Internal error in the HMI device. Contact customer support for your HMI device.
Object not found	Internal error in the HMI device. Contact customer support for your HMI device.
Not enough resources to run requested operation	The requested operation requires more system resources than are available. Close some applications on your programming device and try again.
Insufficient space in file system	The file system does not have enough space for the requested operation. Delete files to create some space on the file system or choose a different file system that has more space.
Remote transfer disabled	Internal error in the HMI device. Contact customer support for your HMI device.
Rescue backup not possible, for example due to wrong device state or wrong firmware file	Internal error in the HMI device. Contact customer support for your HMI device.
Rescue restore not possible, for example due to wrong device state	Internal error in the HMI device. Contact customer support for your HMI device.
Runtime installation is broken.	Internal error in the HMI device. Contact customer support for your HMI device.
Runtime is not installed.	Internal error in the HMI device. Contact customer support for your HMI device.
General problem with security library handling	Internal error in the HMI device. Contact customer support for your HMI device.
Another service is already active.	Internal error in the HMI device. Contact customer support for your HMI device.
General failure on checking file signature	Internal error in the HMI device. Contact customer support for your HMI device.
File signature is invalid.	Internal error in the HMI device. Contact customer support for your HMI device.
File is not signed.	Internal error in the HMI device. Contact customer support for your HMI device.
A store read operation failed.	Internal error in the HMI device. Contact customer support for your HMI device.
A store write operation failed.	Internal error in the HMI device. Contact customer support for your HMI device.
Type conversion failed	Internal error in the HMI device. Contact customer support for your HMI device.
An unexpected operating system error occurred.	Internal error in the HMI device. Contact customer support for your HMI device.
An addon with the given name is not installed.	Internal error in the HMI device. Contact customer support for your HMI device.

4.15 Troubleshooting Event Log Messages

Event Log message	Probable cause and corrective action
An application with the given id is not installed.	Internal error in the HMI device. Contact customer support for your HMI device.
An application addon with the given id is not installed.	Internal error in the HMI device. Contact customer support for your HMI device.
An application addon references an application that is not installed.	Internal error in the HMI device. Contact customer support for your HMI device.
The recipe filename is not valid.	Check the file name. Provide a valid file name.
Not enough storage space to perform this operation	The SIMATIC memory card in the CPU does not have enough space to store the file. Delete extraneous content from the memory card or use a memory card with a higher capacity.
A more recent incompatible firmware image exists on the target device. If you update the operating system, then recipe data, user data, and some system settings could be permanently deleted.	The firmware on the device is more recent than the firmware update you have chosen. If you proceed with this firmware update, you risk deleting recipe data, user data, and some system settings. Verify that you want to update to this firmware before proceeding.
An older incompatible firmware image exists on the target device. If you update the operating system update recipe data user data and some system settings could be deleted permanently.	Internal error in the HMI device. Contact customer support for your HMI device.
A more recent incompatible Runtime exists on the target device.	Internal error in the HMI device. Contact customer support for your HMI device.
An older incompatible Runtime exists on the target device.	Internal error in the HMI device. Contact customer support for your HMI device.
No Runtime is installed on the target device.	Internal error in the HMI device. Contact customer support for your HMI device.
Not enough memory on the target device.	Internal error in the HMI device. Contact customer support for your HMI device.
Incorrect display orientation (Portrait configured Landscape on the HMI device).	Internal error in the HMI device. Contact customer support for your HMI device.
Incorrect display orientation (Landscape configured Portrait on the HMI device).	Internal error in the HMI device. Contact customer support for your HMI device.
General error. Compile the project again and repeat the download.	Internal error in the HMI device. Contact customer support for your HMI device.
General error. Repeat the download.	Internal error in the HMI device. Contact customer support for your HMI device.
No Runtime is installed on the target device.	Internal error in the HMI device. Contact customer support for your HMI device.
The configured device does not match the target device.	Internal error in the HMI device. Contact customer support for your HMI device.
A non-compatible Runtime is installed on the target device.	Internal error in the HMI device. Contact customer support for your HMI device.
An incorrect runtime version is installed. The installed runtime cannot process the project. Install the runtime manually on the target device.	Internal error in the HMI device. Contact customer support for your HMI device.
An error occurred and the device identity could not be determined.	The Transfer_sat tool could not determine the identify of this CPU.
The device identity was changed. Scan the network again.	The CPU device identity has changed from when the Transfer_sat tool connected to the CPU. Rescan the network to establish the actual device identity for the Transfer_sat tool.
The connected interface was not found.	The selected Network Interface no longer exists. Check the connections of your network interface and test that it is working. When you know that the network interface is valid, select this network interface from the Transfer_sat tool.

Event Log message	Probable cause and corrective action
Device is not selected.	No device is selected. You must select a device from the Device table.
Safety-relevant operations require the safety password.	You must provide the safety password to perform the safety-relevant operation.
Internal application error	An internal error occurred when setting a CPU password. Set a valid CPU password and check whether the device is protected.
The CPU password entered is invalid.	Enter a valid CPU password.
The IP address of the device is a duplicate on the network.	The Transfer_sat tool found a duplicate IP address on the network, perhaps from an external change. Sort your Device table by the IP address to find the duplicate. Correct one of the addresses to eliminate the duplicate.
The IP address entered is a duplicate on the network.	You entered an IP address that is a duplicate of another IP address. Enter an IP address that is unique on the network. Sort your Device table by the IP address to find the duplicate.
Duplicate PROFINET name	Enter a PROFINET name that is unique on the network.
Safety-relevant operations must be confirmed.	To perform any of the following operations for an F-CPU, you must confirm the operation: • Reset to factory defaults • Restore • Program update • Format memory card If you reached this message from an application using the API, you must set the SelectedConfirmed property for the CPU.
There is no SD card present or the SD card is already empty.	Formatting a memory card requires the presence of a SIMATIC memory card. Insert a SIMATIC memory card in the CPU. If the card is present, but has no file contents, you can ignore this message.
The program file is invalid or cannot be opened by this version of the Transfer_sat tool.	The Transfer_sat tool cannot access the program update file at the path specified in the Options dialog. Verify the path name in the Program Update settings of the Options dialog.
Result of CRC comparison online and offline collective F-signatures do not match.	The program update failed. The program update file does not match the program in the CPU after the program update operation. Try these steps: 1. Reset the CPU to factory defaults 2. Format the memory card if you are using one. 3. Reattempt the program update. If the error persists, you cannot use this program update file.
The program file cannot be downloaded to an older device.	The device version of the target device is older than the version in the program file. Upgrade the device to a newer version or choose a program update file that is compatible for the older device.
Projects IP suite is not reachable	Verify the IP address, subnet mask, and gateway. Correct any values that are incorrect for your network.
IP suite is not reachable.	Verify the IP address, subnet mask, and gateway. Correct any values that are incorrect for your network.

4.15 Troubleshooting Event Log Messages

Event Log message	Probable cause and corrective action
The backup file contained an IP suite that is not reachable via PROFINET communications.	After the restore operation, the Transfer_sat tool cannot access the device. The IP suite in the restored project (IP address, subnet mask, gateway) does not correspond to the actual device and subnet. Correct and set the IP suite values for the device. Set the Network Interface Card to the "Auto" selection if you haven't already.
The IP address in the new program file is not unique to the network.	Resolve the conflict in IP addresses. Set one of the devices to a different IP address.
A safety program cannot be loaded to a standard CPU.	You cannot download a safety program to a standard CPU. You can download only a standard program to a standard CPU.
The diversity check on the CPU password entered failed.	The Transfer_sat tool cannot connect to the CPU. Device identification data such as the MAC address or serial number is different between the Transfer_sat tool Device table and the actual device. Scan the network.
The backup file is not valid for this device.	The backup file you selected is not valid for this CPU. Select a backup file that corresponds to your CPU device type.
The backup file extension is not valid for this device.	The file extension of the file is invalid. Select a backup file with the .s7pbkp file extension.
The operation failed.	One of the following operations failed: - Reset to factory defaults - Memory reset - Format memory card As applicable, set the device to STOP mode or ensure that a SIMATIC memory card is in the CPU. Reattempt the operation.
The firmware file is not valid for this device.	Select a firmware update file that corresponds to the device.
The program file password could not be validated.	The "Password in Program File" that you entered for a program update file does not correspond to any of the passwords in the program file. To update a program, you must enter a valid program file password.
The program file contains an IP address that already exists on the network.	The Transfer_sat tool does not allow you to restore a program file that causes a duplicate IP address. Change the IP address of the device that is the same or restore a different program file.
Missing program file password	You must enter a valid password for the program.
Invalid program file password	You must enter a valid password for the program.
The program file is not valid for this device.	Select a program update file that corresponds to the device.
The program file password entered is invalid or not sufficient to complete the operation.	Enter a password for the program file that has a sufficient access level for the operation.
The requested device was not found on the network.	The Transfer_sat tool could not find the device on the network. Check network interface, network connection, and IP address. Close S7-PLCSIM or other simulation software if running.
You cannot insert a device that already exists.	You attempted to insert a device that is already in the Device table. You can only insert a device that is not yet in the Device table.
The IP address cannot be changed because it is already on the network.	You attempted to set an IP address to an IP address that is already in use. Set the device IP address to a unique address.
The PROFINET name cannot be changed because it is already on the network	You attempted to set the PROFINET name to a PROFINET name that is already in use. Select a unique PROFINET name.

Event Log message	Probable cause and corrective action
Could not establish a connection to the device	The Transfer_sat tool could not establish a connection to the device. Check network interface, network connection, and IP address.
The device could not be fully initialized.	The Transfer_sat tool could not initialize the device. Ensure that the device is on the same network as your programming device.
The Transfer_sat tool does not support CPU with newer programs.	You are attempting to use a program that has a newer version than The Transfer_sat tool supports. Check the Device catalog to determine the version support for your device.
IP suite is not valid.	The IP address, gateway, and subnet combination is not valid. Enter a valid IP suite.
The selected backup file is not compatible with this device	The backup file that you chose is not compatible for your device. Check that the backup file is for the correct device, and that it is for the correct version of the device.
The IP address changed or there is a duplicate IP address on the network.	The IP address for this device has been changed since the last network scan, or another device has the same IP address. Scan the network and resolve any IP address conflicts.
No devices were found on the scan.	The Transfer_sat tool did not find any devices on the network scan. Check network interface and network connections. Check the subnet for the devices. Close S7-PLCSIM or other simulation software if running.
Result of CRC comparison of online and offline collective F-signatures match.	Information only: Your operation with an F-CPU was successful. You do not need to perform any additional action.
The device could not be inserted.	The Transfer_sat tool could not insert the device you entered into the Device table . Check that the IP address is unique and that the data you entered corresponds to a device on your network.
You cannot insert a device that has an IP address that is already on the network.	You attempted to insert a device with an IP address that belongs to another device. You must enter a unique IP address when you enter a device.
The new gateway address is not valid.	You entered an invalid gateway address. Enter a gateway address that is valid for your network.
The new IP address is not valid.	You entered an invalid new IP address. Enter a valid IP address that.
The new PROFINET name is not valid.	You entered an invalid new PROFINET name. Enter a valid PROFINET name.
The new subnet mask is not valid.	You entered an invalid subnet mask. Enter a subnet mask that is valid for your device and network.
Could not read the F-signatures	F-CPU's include a fail-safe signature. The Transfer_sat tool could not read the fail-safe signature from the device. Your operation cannot proceed with this error. Format the memory card if you are using one. Reset the device to factory settings. Then repeat the operation.
Invalid or not specified network interface	Select a valid network interface from the dropdown list for your communication setup.
The CPU password entered is not sufficient to complete the operation.	You need a higher access level to perform the operation. Enter a CPU password with a sufficient access level for the operation you want to perform.
There are no passwords in the program file.	The program file contains no passwords. This message is informational and requires no action.
The project contains a file format that is no longer supported.	The project is from an older release of the Transfer_sat tool. The Transfer_sat tool cannot open a project from this release. See the topic "Saving and opening .sat project files".

4.15 Troubleshooting Event Log Messages

Event Log message	Probable cause and corrective action
Project open has been canceled.	You started to open a project and canceled the action. No further action is necessary.
A program file password is needed	You must enter the password for the program file.
Could not open, read, or process the backup file.	The Transfer_sat tool could not open, read, or process the backup file. Use a backup file that corresponds to your device and version.
Incompatible program file for this device.	The program file is not compatible for your device. Use a program file that corresponds to your device and version.
The Transfer_sat tool does not support the project file.	The Transfer_sat tool does not support the project file in the device. Check the device configuration in the STEP 7 project and check the device support in the Device catalog.
The program's hardware configuration is not valid for the attached device.	The hardware configuration of the STEP 7 program is not valid for the actual device on the network. Check the device configuration in the STEP 7 project and check the device support in the Device catalog.
The file system cannot be loaded. Try power cycling the CPU.	The Transfer_sat tool could not load the files from the CPU. CPU files are possibly corrupt. Power cycle the CPU. If the problem persists, reset the CPU to factory defaults.
SNMP: An invalid password was entered.	You entered an invalid password in the SNMP Version 3 profile. Enter a valid password for the device.
SNMP: The value does not exist	An SNMP value is invalid. Verify your SNMP profile settings.
SNMP: The value cannot be changed	In an SNMP profile, you attempted to change a value to an invalid value. Enter a valid value.
SNMP: The value is read only and cannot be changed.	You attempted to change a read-only value in an SNMP profile. You cannot change this value.
Invalid authentication algorithm	The authentication algorithm in the SNMP Version 3 profile is invalid. Select a valid authentication algorithm from the dropdown list on the SNMP profile "Add" dialog.
Invalid authentication password	The authentication password in the SNMP Version 3 profile is invalid. Enter a valid authentication password on the SNMP profile "Add" dialog.
Invalid context name	The context name in the SNMP Version 3 profile is invalid. Enter a valid context name on the SNMP profile "Add" dialog.
Invalid privacy algorithm	The privacy algorithm in the SNMP Version 3 profile is invalid. Enter a valid privacy algorithm on the SNMP profile "Add" dialog.
Invalid privacy password	The privacy password in the SNMP Version 3 profile is invalid. Enter a valid privacy password on the SNMP profile "Add" dialog.
Invalid profile name	The profile name in the SNMP Version 1, 2, or 3 profile is invalid. Enter a valid profile name on the SNMP profile "Add" dialog.
Invalid read community	The read community in the SNMP Version 1 or 2 profile is invalid. Enter a valid read community on the SNMP profile "Add" dialog.
Invalid security level	The security level in the SNMP Version 3 profile is invalid. Enter a valid security level on the SNMP profile "Add" dialog.
Invalid server IP address	The server IP address in the SNMP Version 1, 2, or 3 profile is invalid. Enter a valid server IP address on the SNMP profile "Add" dialog.
Invalid server port	The server port in the SNMP Version 1, 2, or 3 profile is invalid. Enter a valid server port on the SNMP profile "Add" dialog.

Event Log message	Probable cause and corrective action
Invalid SNMP version	The SNMP version is invalid. Select 1, 2, or 3 for the SNMP version number on the SNMP profile "Add" dialog.
Invalid user name	The user name in the SNMP Version 3 profile is invalid. Enter a valid user name on the SNMP profile "Add" dialog.
Invalid write community	The write community in the SNMP Version 1 or 2 profile is invalid. Enter a valid write community on the SNMP profile "Add" dialog.
The profile name already exists.	The profile name in the SNMP Version 1, 2, or 3 profile belongs to another profile. Enter a unique profile name on the SNMP profile "Add" dialog.
This method is obsolete. Use the newer method with the same name.	Not applicable.
Invalid profile	The SNMP profile is invalid for the device. Verify the configuration on the "Add" dialog and make necessary changes.
Failed to initiate firmware transfer	The firmware update operation failed. Check all network connections. Check that the firmware update file is valid for the device. Reattempt the firmware update.
An SNMP error has occurred	An error occurred in SNMP communications to the device. Verify your SNMP profile settings. If the problem persists, contact customer support for the device.
Invalid transfer channel	The selection for the HMI transfer channel is invalid. Set either PN_IE or Ethernet for the HMITransferChannel type for the API SetTransferChannel method.
The device returned an invalid MAC address	The Transfer_sat tool could not determine the MAC address for the IP address that you provided. This error can only occur when you insert a device by IP address. Verify that you are inserting a device that is available on your network. Verify that the IP address is correct for the device. Alternatively, insert the device by its MAC address.
Failed to update duplicate IPs and PROFINET names	The Transfer_sat tool has an internal error. Rescan the network. If the problem persists, contact your Siemens representative.
The PROFINET name entered is a duplicate on the network.	Another device uses this PROFINET name. Enter a unique PROFINET name.
Error occurred while performing a backup	The CPU did not provide valid backup data to the Transfer_sat tool. Power cycle the CPU and try again. If the problem persists, contact your Siemens representative.
The Failsafe Control object on the CPU does not have the correct type.	The current program in the F-CPU does not exist as a safety program or is corrupt. Download the safety program from the TIA Portal or update the program from the Transfer_sat tool.
The specified IP address is invalid or already used by the NIC	You entered an invalid address or one that another device uses. Enter a valid, unique IP address.
The firmware update failed due to integrity checks.	The .upd file for the firmware update is corrupt. Use a valid .upd file for the firmware update.
Invalid backup type	The HMI backup type is invalid. Valid backup types for an HMI are full, recipe, or user administration data. Provide a valid backup type.
One or more device diagnostic buffers could not be accessed	When exporting device diagnostics, the Transfer_sat tool could not access one or more diagnostic buffers. Check that the devices in the Device table are connected to the communications network. Check the Event Log for additional messages about inaccessible devices. If necessary, correct network connections and scan the network.

4.15 Troubleshooting Event Log Messages

Event Log message	Probable cause and corrective action
Automation License Manager error - connection failed, check network access to ALM server	The Automation License Manager had an error as described. Follow the advice in the message.
Automation License Manager error - internal error, task has been aborted, contact Siemens support	The Automation License Manager had an error as described. Follow the advice in the message.
Automation License Manager error - internal error, Wrong function arguments, contact Siemens support	The Automation License Manager had an error as described. Follow the advice in the message.
Automation License Manager error - internal error, bad result, contact Siemens support	The Automation License Manager had an error as described. Follow the advice in the message.
Automation License Manager error - Check user access privileges to folder	The Automation License Manager had an error as described. Follow the advice in the message.
Automation License Manager error - internal error, Batch API, contact Siemens support	The Automation License Manager had an error as described. Follow the advice in the message.
Automation License Manager error - internal error, Batch API Output file couldn't be created, contact Siemens support	The Automation License Manager had an error as described. Follow the advice in the message.
Automation License Manager error - internal error, Batch API output file already exists, contact Siemens support	The Automation License Manager had an error as described. Follow the advice in the message.
Automation License Manager error - internal error, Batch API wrong argument, contact Siemens support	The Automation License Manager had an error as described. Follow the advice in the message.
Automation License Manager error - internal error, Batch API wrong argument number, contact Siemens support	The Automation License Manager had an error as described. Follow the advice in the message.
Automation License Manager error - internal error, Batch API wrong input file, contact Siemens support	The Automation License Manager had an error as described. Follow the advice in the message.
Automation License Manager error - internal error, Batch API wrong input xml stream, contact Siemens support	The Automation License Manager had an error as described. Follow the advice in the message.
Automation License Manager error - internal error, Batch API wrong output parameter, contact Siemens support	The Automation License Manager had an error as described. Follow the advice in the message.
Automation License Manager error - connection failed, check network access to ALM server	The Automation License Manager had an error as described. Follow the advice in the message.
Automation License Manager error - internal error, cryptography failed, contact Siemens support	The Automation License Manager had an error as described. Follow the advice in the message.
Automation License Manager error - internal error, global cleanup failed, attempt ALM restart	The Automation License Manager had an error as described. Follow the advice in the message.
Automation License Manager error - Initialization Error, attempt ALM restart	The Automation License Manager had an error as described. Follow the advice in the message.
Automation License Manager error - internal error, session cleanup failed, attempt ALM restart	The Automation License Manager had an error as described. Follow the advice in the message.
Automation License Manager error - internal error, session initialization failed, attempt ALM restart	The Automation License Manager had an error as described. Follow the advice in the message.
Automation License Manager error - internal error, function not found, contact Siemens support	The Automation License Manager had an error as described. Follow the advice in the message.
Automation License Manager error - internal error, bad pointer, contact Siemens support	The Automation License Manager had an error as described. Follow the advice in the message.
Automation License Manager error - No connection available, check the network connection	The Automation License Manager had an error as described. Follow the advice in the message.
Automation License Manager error - internal error, open session failed, contact Siemens support	The Automation License Manager had an error as described. Follow the advice in the message.
Automation License Manager error - the timeout time was reached, restart the system or contact Siemens support	The Automation License Manager had an error as described. Follow the advice in the message.
Automation License Manager error - internal error, not enough memory, restart the system or contact Siemens support	The Automation License Manager had an error as described. Follow the advice in the message.
Automation License Manager error - Failure in receiving network data, check the network connection	The Automation License Manager had an error as described. Follow the advice in the message.

4.15 Troubleshooting Event Log Messages

Event Log message	Probable cause and corrective action
Automation License Manager error - internal error, resources missing, contact Siemens support	The Automation License Manager had an error as described. Follow the advice in the message.
Automation License Manager error - internal error, result mismatch, contact Siemens support	The Automation License Manager had an error as described. Follow the advice in the message.
Automation License Manager error - Failed sending network data, check the network connection	The Automation License Manager had an error as described. Follow the advice in the message.
Automation License Manager error - service not running, restart the ALM service	The Automation License Manager had an error as described. Follow the advice in the message.
Automation License Manager error - internal error, session ID missing, contact Siemens support	The Automation License Manager had an error as described. Follow the advice in the message.
Automation License Manager error - internal error, session ID doesn't exist, contact Siemens support	The Automation License Manager had an error as described. Follow the advice in the message.
Automation License Manager error - internal error, task is already running, contact Siemens support	The Automation License Manager had an error as described. Follow the advice in the message.
Automation License Manager error - internal error, unknown error, contact Siemens support	The Automation License Manager had an error as described. Follow the advice in the message.
Automation License Manager error - internal error, User specified an unknown option, contact Siemens support	The Automation License Manager had an error as described. Follow the advice in the message.
The maximum number of PC connections has been exceeded	The Automation License Manager had an error as described. Follow the advice in the message.
The filename is not valid	The Automation License Manager had an error as described. Follow the advice in the message.
The running service request has been aborted by the client	The Automation License Manager had an error as described. Follow the advice in the message.
SNMP version is invalid	The SNMP version is invalid. Select 1, 2, or 3 for the SNMP version number.
You must power cycle the CPU before performing this operation.	This operation requires a power cycle of the CPU. Power cycle the CPU and try the operation again.
Duplicate folder names with a different folder path is not allowed.	When you create an archive file, you cannot use a duplicate folder name in a different folder path. Use a unique folder name or use the same path.
Duplicate file names with a different folder path is not allowed.	When you create an archive file, you cannot use a duplicate file name in a different folder path. Use a unique file name or use the same path.
Feature not supported under current licensing model. Upgrade your license to perform this operation.	The Transfer_sat tool supports a Basic and Advanced license. Purchase the license you need for your operations.
This feature is not supported for third party API users.	The Transfer_sat tool user interface requires this feature but it is not available for developers using the API to create custom applications.
The advanced parameter is not supported for third party API users.	A parameter in an API method call is reserved for the Transfer_sat tool. The parameter is not for use in application development using the API.
The CPU now contains a protection level that is weaker than what previously existed.	After a program update or restore from backup, the CPU password is at an access level that is at a lower protection level than before the operation. For example, a CPU with full access (write) protection might have only read access protection after the operation.
Could not read protection level to check access level.	The CPU password is not sufficient to check the access level to the CPU. Enter a password with at least read access.
Changing the IP address is not allowed in NAT router configurations.	You cannot change the IP address for a device in a network with a NAT router configuration.
IP address and Router IP address cannot be the same	The IP address of the device and the IP address of the router must be unique.

4.15 Troubleshooting Event Log Messages

Event Log message	Probable cause and corrective action
The operation is not allowed through a CM / CP	You can only perform this operation through the CPU Ethernet interface. You cannot perform this operation through a CM/CP interface.
Requested item does not exist on memory card.	The requested file does not exist on the SIMATIC memory card of the device.
DCP operations are not possible to devices behind routers.	Devices behind routers do not support DCP operations. You can only perform operations through the IP address.
The operation is not supported through a CM/CP communication module.	The Transfer_sat tool cannot perform the named operation through a CM or CP. Check the specific device operation for restrictions.
No firmware to activate.	The API called the FirmwareActivate method without first calling the FirmwareUpdate method. From the API, you must call FirmwareUpdate without activation prior to calling FirmwareActivate. From the Transfer_sat tool, you must select "Download Firmware" before you select "Activate Firmware".
Failed to activate downloaded firmware.	The device could not activate the downloaded firmware update. Download a valid firmware update file to the device before you activate it.
The operation is not supported by the device or not supported through a CM/CP.	The Transfer_sat tool could not perform the named operation for one of the following reasons: - The device does not support the operation. - You cannot perform the operation on a device through a CM or CP. Check the Device Catalog for device support and the specific device operation for any CM or CP restrictions.
Error reading memory card	When refreshing the CPU, the Transfer_sat tool could not read the memory card. Verify that a memory card is properly inserted in the CPU.
Cannot rename file because the name already exists.	The filename already exists. Choose a unique filename.
File cannot be replaced because it is write protected.	You cannot replace a write-protected file. Save to another filename.
Folder cannot be replaced because it is write protected.	You cannot replace a write-protected folder. Save to another folder.
Memory card is not present.	The CPU does not have a memory card. The CPU must have a memory card for the selected operation.
Operation requires the CPU to be in STOP mode	You cannot perform this operation when the CPU is in RUN mode. Place the CPU in STOP mode.
Error writing file on memory card.	The Transfer_sat tool could not write the file to the memory card. Check for adequate space and write privileges.
Error creating folder on memory card.	The Transfer_sat tool could not create the folder on the memory card. Check for adequate space and write privileges.
Error reading service data	The Transfer_sat tool could not read the service data from the device. Check the Device Catalog for support for reading service data. Check the connection to the device.
No files in list to download	Internal error from API. This error does not occur when you use the Transfer_sat tool.
The CPU password entered is not sufficient for Transfer_sat tool operations.	After a refresh operation, the CPU password does not have sufficient privileges for Transfer_sat tool operations. Enter a CPU password that provides an access level for the operation you want to perform.

4.15 Troubleshooting Event Log Messages

Event Log message	Probable cause and corrective action
An unknown communication error occurred or the operation is not supported by the HMI.	The API could not communicate with the HMI or the HMI did not support the attempted operation. Check the connection to the device. Check the operations that the device supports.
Project file was not opened because the Cancel button was clicked.	Information only: You canceled the browser for opening a project file.
Project file <filename> was opened successfully.	Information only: The Transfer_sat tool opened the named project file.
Project file <filename> failed to open. <exception error>	The Transfer_sat tool could not open the named project file. Verify that the file is a valid .sat project and that is compatible with your version.
The password entered is incorrect.	You entered an invalid project file password. You must enter the correct password for this project file.
Project file was not saved because the Cancel button was clicked.	Information only: You canceled the browser for saving a project file.
Export of PC Data failed.	The export PC data operation could not create the export file. Check for adequate disk space and permissions for the Export folder.
Project file <filename> failed to save. <exception error>	The Transfer_sat tool could not save the project file. Check folder permissions and disk space on your programming device.
Export was not performed because the Cancel button was clicked.	Information only: You started an export and canceled the export.
Insert device was not performed because the Cancel button was clicked.	Information only: You started to insert a device and canceled the device insert.
A valid product license was not found; some product features are disabled.	You do not have a valid product license. You can only perform tasks that the Transfer_sat tool supports for an unlicensed version. To access all features, purchase a license as described in the Installation Notes.
A valid product license was found. All product features are enabled.	Information only: With a valid product license, you can perform all Transfer_sat tool tasks.
Windows Administrative privileges are required to access some PC Export data. Restart the Transfer_sat tool using "Run as Administrator" to export this data.	Run the export PC data operation with Windows Administrative privileges to access some of the data. Restart the Transfer_sat tool using "Run as Administrator" to export this data.
The export acquired all of the requested data. The log file contains a detailed list of the exported data.	Information only: The export PC data operation was successful. The log file in the export .zip file lists the exported data.
The export could not acquire all of the data. The log file contains details about the data that the export successfully acquired and the reasons why it could not obtain the other data.	The export PC data operation did not export all of the data. Check the log file for the reason. The log file in the export .zip file contains the following information: - Information about the data that the export operation successfully acquired and exported - Reasons why the export operation could not acquire the other data
Project file <filename> was saved successfully.	Information only: The Transfer_sat tool successfully saved the named project file.
The operation was canceled because the Cancel button was selected.	Information only
Changes to the project file were not saved because the No button was selected.	Information only
The project password was changed.	Information only
Project password was not changed because the Cancel button was selected.	Information only
Caps Lock is on	Information only

4.15 Troubleshooting Event Log Messages

Event Log message	Probable cause and corrective action
The project is already opened.	Information only
Archive file <filename> was opened successfully.	Information only
Archive file <filename> failed to open. <exception error>	The Transfer_sat tool could not open this archive file and returned the listed error.
Archive file was not opened because the operation was canceled.	Information only
Archive file <filename> was created successfully.	Information only
Archive file <filename> was not created due to errors. <exception error>	The Transfer_sat tool could not create this archive file and returned the listed error.
The archive file was not created because there are data input errors within the device table.	The Transfer_sat tool could not create the archive file. Correct all invalid user data fields in the Device table and try again.
Archive file was not created because the Cancel button was selected.	Information only
Failed to delete the Scheduler configuration file.	The Transfer_sat tool could not delete the scheduler configuration file. Perhaps it is in use. Wait until no scheduled operations are running and try again.
The Scheduler configuration file was successfully created.	Information only
At least one operation must be configured before the configuration file can be created.	You must schedule at least one operation for one device to create a Scheduler configuration file.
Scheduler file was not created because the Cancel button was selected.	Information only
An error occurred creating the Scheduler configuration file. The operation has been canceled.	The Transfer_sat tool could not create the scheduler configuration file. Perhaps it is in use. Wait until no scheduled operations are running and try again.
The date or time is not valid because it is in the past.	You can only schedule operations based on a time in the future.
No devices were selected for Device Diagnostics. The operation will not be scheduled.	You must select one or more devices for the scheduled operation.
No devices were selected for Firmware Update. The operation will not be scheduled.	You must select one or more devices for the scheduled operation.
No devices were selected for Full Backup. The operation will not be scheduled.	You must select one or more devices for the scheduled operation.
No devices were selected for Read Data Logs. The operation will not be scheduled.	You must select one or more devices for the scheduled operation.
No devices were selected for Read Service Data. The operation will not be scheduled.	You must select one or more devices for the scheduled operation.
No devices were selected for Set Time. The operation will not be scheduled.	You must select one or more devices for the scheduled operation.
The CPU password entered is not sufficient to read Device Diagnostics. The operation will not be scheduled.	You must enter a CPU password with read access or higher to schedule an operation to read device diagnostics.
The CPU password entered is not sufficient to perform a Firmware Update. The operation will not be scheduled.	You must enter a CPU password that is sufficient for a firmware update operation. The CPU password access level depends on your device model and firmware version.
The CPU password entered is not sufficient to perform a Full Backup. The operation will not be scheduled.	You must enter a CPU with at least read access to schedule this operation.
The CPU password entered is not sufficient to Read Data Logs. The operation will not be scheduled.	You must enter a CPU with at least read access to schedule this operation.
The CPU password entered is not sufficient to Read Service Data. The operation will not be scheduled.	You must enter a CPU with at least read access to schedule this operation.
The CPU password entered is not sufficient to Set Time. The operation will not be scheduled.	You must enter a CPU with at least read access to schedule this operation.

Event Log message	Probable cause and corrective action
The firmware version file is not valid for the device. The operation will not be scheduled.	You cannot use this firmware version for this device. Select a firmware update files that is compatible with the device to schedule this operation.
The SNMP profile name is either not valid or not specified for device: <device name>	The SNMP profile name you selected In the scheduler tab is invalid for this device. The red X indicates an invalid profile.
Enter the password in the Scheduler application to open the configuration file.	Enter the password in the Scheduler application to open the configuration file.
Use the Scheduler application to open the configuration file.	Use the Scheduler application to open the configuration file.
The start date and time is invalid for Device Diagnostics. The operation will not be scheduled.	Enter a start date and time that is in the future. Then schedule the operation.
A start date and time was not specified for Device Diagnostics. The operation will not be scheduled.	Enter a start date and time that is in the future. Then schedule the operation.
The start date and time is invalid for Firmware Update. The operation will not be scheduled.	Enter a start date and time that is in the future. Then schedule the operation.
A start date and time was not specified for Firmware Update. The operation will not be scheduled.	Enter a start date and time that is in the future. Then schedule the operation.
The start date and time is invalid for Full Backup. The operation will not be scheduled.	Enter a start date and time that is in the future. Then schedule the operation.
A start date and time was not specified for Full Backup. The operation will not be scheduled.	Enter a start date and time that is in the future. Then schedule the operation.
The start date and time is invalid for Read Data Logs. The operation will not be scheduled.	Enter a start date and time that is in the future. Then schedule the operation.
A start date and time was not specified for Read Data Logs. The operation will not be scheduled.	Enter a start date and time that is in the future. Then schedule the operation.
The start date and time is invalid for Read Service Data. The operation will not be scheduled.	Enter a start date and time that is in the future. Then schedule the operation.
A start date and time was not specified for Read Service Data. The operation will not be scheduled.	Enter a start date and time that is in the future. Then schedule the operation.
The start date and time is invalid for Set Time. The operation will not be scheduled.	Enter a start date and time that is in the future. Then schedule the operation.
A start date and time was not specified for Set Time. The operation will not be scheduled.	Enter a start date and time that is in the future. Then schedule the operation.
The project file contained within the archive is already opened.	You cannot open this archive file because it is already open.
The recurrence setting is not valid for the start date specified for Device Diagnostics. The operation will not be scheduled.	The frequency setting must be a valid calendar date for every recurrence. For example, the 31st of the month does not occur every month. Enter a valid start date and frequency setting for every scheduled operation. Then save the scheduler configuration file.
The recurrence setting is not valid for the start date specified for Firmware Update. The operation will not be scheduled.	The frequency setting must be a valid calendar date for every recurrence. For example, the 31st of the month does not occur every month. Enter a valid start date and frequency setting for every scheduled operation. Then save the scheduler configuration file.
The recurrence setting is not valid for the start date specified for Full Backup. The operation will not be scheduled.	The frequency setting must be a valid calendar date for every recurrence. For example, the 31st of the month does not occur every month. Enter a valid start date and frequency setting for every scheduled operation. Then save the scheduler configuration file.

4.15 Troubleshooting Event Log Messages

Event Log message	Probable cause and corrective action
The recurrence setting is not valid for the start date specified for Read Data Logs. The operation will not be scheduled.	The frequency setting must be a valid calendar date for every recurrence. For example, the 31st of the month does not occur every month. Enter a valid start date and frequency setting for every scheduled operation. Then save the scheduler configuration file.
The recurrence setting is not valid for the start date specified for Read Service Data. The operation will not be scheduled.	The frequency setting must be a valid calendar date for every recurrence. For example, the 31st of the month does not occur every month. Enter a valid start date and frequency setting for every scheduled operation. Then save the scheduler configuration file.
The recurrence setting is not valid for the start date specified for Set Time. The operation will not be scheduled.	The frequency setting must be a valid calendar date for every recurrence. For example, the 31st of the month does not occur every month. Enter a valid start date and frequency setting for every scheduled operation. Then save the scheduler configuration file.
This device has a duplicate IP address on the network and Device Diagnostics cannot be performed. The operation will not be scheduled.	The Transfer_sat tool cannot schedule operations for devices with duplicate IP addresses. Set unique IP addresses for the devices. Then schedule the operation and save the scheduler configuration file.
This device has a duplicate IP address on the network and Firmware Update cannot be performed. The operation will not be scheduled.	The Transfer_sat tool cannot schedule operations for devices with duplicate IP addresses. Set unique IP addresses for the devices. Then schedule the operation and save the scheduler configuration file.
This device has a duplicate IP address on the network and Full Backup cannot be performed. The operation will not be scheduled.	The Transfer_sat tool cannot schedule operations for devices with duplicate IP addresses. Set unique IP addresses for the devices. Then schedule the operation and save the scheduler configuration file.
This device has a duplicate IP address on the network and Read Data Logs cannot be performed. The operation will not be scheduled.	The Transfer_sat tool cannot schedule operations for devices with duplicate IP addresses. Set unique IP addresses for the devices. Then schedule the operation and save the scheduler configuration file.
This device has a duplicate IP address on the network and Read Service Data cannot be performed. The operation will not be scheduled.	The Transfer_sat tool cannot schedule operations for devices with duplicate IP addresses. Set unique IP addresses for the devices. Then schedule the operation and save the scheduler configuration file.
This device has a duplicate IP address on the network and Set Time cannot be performed. The operation will not be scheduled.	The Transfer_sat tool cannot schedule operations for devices with duplicate IP addresses. Set unique IP addresses for the devices. Then schedule the operation and save the scheduler configuration file.
The Scheduler application did not launch. Close other instances or restart the computer.	The Scheduler application did not launch. Check for a running instance of the Scheduler application and close it if running. If the error persists, reboot your programming device.
New Scheduler configuration was not created because the Cancel button was selected.	Information only
The file <filename> was not replaced because it was skipped by the user.	Information only
The file <filename> was not replaced because it is write protected.	The Transfer_sat tool cannot replace a write-protected file. Select a different filename or change the permissions.
The folder <folder name> was not replaced because it is write protected.	The Transfer_sat tool cannot replace a write-protected folder. Select a different folder name or change the permissions.
Opening a project archive requires an advanced license.	Purchase an advanced license to open a project archive.

Device-specific messages

Devices can also return device-specific messages. These messages are not in the list above. If a device-specific message is not self-explanatory, contact your device manufacturer.

4.16 Supported Hardware

Article Number	Device Name	Version	Firm-ware Update	Program Update
6AG1 212-1AE40-2XB0	CPU 1212C DC/DC/DC SIPLUS	V4.0	✓	✓
6AG1 212-1AE40-2XB0	CPU 1212C DC/DC/DC SIPLUS	V4.1	✓	✓
6AG1 212-1AE40-2XB0	CPU 1212C DC/DC/DC SIPLUS	V4.2	✓	✓
6AG1 212-1AE40-2XB0	CPU 1212C DC/DC/DC SIPLUS	V4.3	✓	✓
6AG1 212-1AE40-2XB0	CPU 1212C DC/DC/DC SIPLUS	V4.4	✓	✓
6AG1 212-1AE40-4XB0	CPU 1212C DC/DC/DC SIPLUS	V4.0	✓	✓
6AG1 212-1AE40-4XB0	CPU 1212C DC/DC/DC SIPLUS	V4.1	✓	✓
6AG1 212-1AE40-4XB0	CPU 1212C DC/DC/DC SIPLUS	V4.2	✓	✓
6AG1 212-1AE40-4XB0	CPU 1212C DC/DC/DC SIPLUS	V4.3	✓	✓
6AG1 212-1AE40-4XB0	CPU 1212C DC/DC/DC SIPLUS	V4.4	✓	✓
6AG1 212-1BE40-2XB0	CPU 1212C AC/DC/Rly SIPLUS	V4.0	✓	✓
6AG1 212-1BE40-2XB0	CPU 1212C AC/DC/Rly SIPLUS	V4.1	✓	✓
6AG1 212-1BE40-2XB0	CPU 1212C AC/DC/Rly SIPLUS	V4.2	✓	✓
6AG1 212-1BE40-2XB0	CPU 1212C AC/DC/Rly SIPLUS	V4.3	✓	✓
6AG1 212-1BE40-2XB0	CPU 1212C AC/DC/Rly SIPLUS	V4.4	✓	✓
6AG1 212-1BE40-4XB0	CPU 1212C AC/DC/Rly SIPLUS	V4.0	✓	✓
6AG1 212-1BE40-4XB0	CPU 1212C AC/DC/Rly SIPLUS	V4.1	✓	✓
6AG1 212-1BE40-4XB0	CPU 1212C AC/DC/Rly SIPLUS	V4.2	✓	✓
6AG1 212-1BE40-4XB0	CPU 1212C AC/DC/Rly SIPLUS	V4.3	✓	✓
6AG1 212-1BE40-4XB0	CPU 1212C AC/DC/Rly SIPLUS	V4.4	✓	✓
6AG1 212-1HE40-2XB0	CPU 1212C DC/DC/Rly SIPLUS	V4.0	✓	✓
6AG1 212-1HE40-2XB0	CPU 1212C DC/DC/Rly SIPLUS	V4.1	✓	✓
6AG1 212-1HE40-2XB0	CPU 1212C DC/DC/Rly SIPLUS	V4.2	✓	✓
6AG1 212-1HE40-2XB0	CPU 1212C DC/DC/Rly SIPLUS	V4.3	✓	✓
6AG1 212-1HE40-2XB0	CPU 1212C DC/DC/Rly SIPLUS	V4.4	✓	✓
6AG1 212-1HE40-4XB0	CPU 1212C DC/DC/Rly SIPLUS	V4.0	✓	✓
6AG1 212-1HE40-4XB0	CPU 1212C DC/DC/Rly SIPLUS	V4.1	✓	✓
6AG1 212-1HE40-4XB0	CPU 1212C DC/DC/Rly SIPLUS	V4.2	✓	✓
6AG1 212-1HE40-4XB0	CPU 1212C DC/DC/Rly SIPLUS	V4.3	✓	✓
6AG1 212-1HE40-4XB0	CPU 1212C DC/DC/Rly SIPLUS	V4.4	✓	✓
6AG1 214-1AG40-2XB0	CPU 1214C DC/DC/DC SIPLUS	V4.0	✓	✓
6AG1 214-1AG40-2XB0	CPU 1214C DC/DC/DC SIPLUS	V4.1	✓	✓
6AG1 214-1AG40-2XB0	CPU 1214C DC/DC/DC SIPLUS	V4.2	✓	✓
6AG1 214-1AG40-2XB0	CPU 1214C DC/DC/DC SIPLUS	V4.3	✓	✓
6AG1 214-1AG40-2XB0	CPU 1214C DC/DC/DC SIPLUS	V4.4	✓	✓

4.16 Supported Hardware

Article Number	Device Name	Version	Firm-ware Update	Program Update
6AG1 214-1AG40-4XB0	CPU 1214C DC/DC/DC SIPLUS	V4.0	✓	✓
6AG1 214-1AG40-4XB0	CPU 1214C DC/DC/DC SIPLUS	V4.1	✓	✓
6AG1 214-1AG40-4XB0	CPU 1214C DC/DC/DC SIPLUS	V4.2	✓	✓
6AG1 214-1AG40-4XB0	CPU 1214C DC/DC/DC SIPLUS	V4.3	✓	✓
6AG1 214-1AG40-4XB0	CPU 1214C DC/DC/DC SIPLUS	V4.4	✓	✓
6AG1 214-1AG40-5XB0	CPU 1214C DC/DC/DC SIPLUS	V4.0	✓	✓
6AG1 214-1AG40-5XB0	CPU 1214C DC/DC/DC SIPLUS	V4.1	✓	✓
6AG1 214-1AG40-5XB0	CPU 1214C DC/DC/DC SIPLUS	V4.2	✓	✓
6AG1 214-1AG40-5XB0	CPU 1214C DC/DC/DC SIPLUS	V4.3	✓	✓
6AG1 214-1AG40-5XB0	CPU 1214C DC/DC/DC SIPLUS	V4.4	✓	✓
6AG1 214-1BG40-2XB0	CPU 1214C AC/DC/Rly SIPLUS	V4.0	✓	✓
6AG1 214-1BG40-2XB0	CPU 1214C AC/DC/Rly SIPLUS	V4.1	✓	✓
6AG1 214-1BG40-2XB0	CPU 1214C AC/DC/Rly SIPLUS	V4.2	✓	✓
6AG1 214-1BG40-2XB0	CPU 1214C AC/DC/Rly SIPLUS	V4.3	✓	✓
6AG1 214-1BG40-2XB0	CPU 1214C AC/DC/Rly SIPLUS	V4.4	✓	✓
6AG1 214-1BG40-4XB0	CPU 1214C AC/DC/Rly SIPLUS	V4.0	✓	✓
6AG1 214-1BG40-4XB0	CPU 1214C AC/DC/Rly SIPLUS	V4.1	✓	✓
6AG1 214-1BG40-4XB0	CPU 1214C AC/DC/Rly SIPLUS	V4.2	✓	✓
6AG1 214-1BG40-4XB0	CPU 1214C AC/DC/Rly SIPLUS	V4.3	✓	✓
6AG1 214-1BG40-4XB0	CPU 1214C AC/DC/Rly SIPLUS	V4.4	✓	✓
6AG1 214-1BG40-5XB0	CPU 1214C AC/DC/Rly SIPLUS	V4.0	✓	✓
6AG1 214-1BG40-5XB0	CPU 1214C AC/DC/Rly SIPLUS	V4.1	✓	✓
6AG1 214-1BG40-5XB0	CPU 1214C AC/DC/Rly SIPLUS	V4.2	✓	✓
6AG1 214-1BG40-5XB0	CPU 1214C AC/DC/Rly SIPLUS	V4.3	✓	✓
6AG1 214-1BG40-5XB0	CPU 1214C AC/DC/Rly SIPLUS	V4.4	✓	✓
6AG1 214-1HG40-2XB0	CPU 1214C DC/DC/Rly SIPLUS	V4.0	✓	✓
6AG1 214-1HG40-2XB0	CPU 1214C DC/DC/Rly SIPLUS	V4.1	✓	✓
6AG1 214-1HG40-2XB0	CPU 1214C DC/DC/Rly SIPLUS	V4.2	✓	✓
6AG1 214-1HG40-2XB0	CPU 1214C DC/DC/Rly SIPLUS	V4.3	✓	✓
6AG1 214-1HG40-2XB0	CPU 1214C DC/DC/Rly SIPLUS	V4.4	✓	✓
6AG1 214-1HG40-4XB0	CPU 1214C DC/DC/Rly SIPLUS	V4.0	✓	✓
6AG1 214-1HG40-4XB0	CPU 1214C DC/DC/Rly SIPLUS	V4.1	✓	✓
6AG1 214-1HG40-4XB0	CPU 1214C DC/DC/Rly SIPLUS	V4.2	✓	✓
6AG1 214-1HG40-4XB0	CPU 1214C DC/DC/Rly SIPLUS	V4.3	✓	✓
6AG1 214-1HG40-4XB0	CPU 1214C DC/DC/Rly SIPLUS	V4.4	✓	✓
6AG1 214-1HG40-5XB0	CPU 1214C DC/DC/Rly SIPLUS	V4.0	✓	✓
6AG1 214-1HG40-5XB0	CPU 1214C DC/DC/Rly SIPLUS	V4.1	✓	✓
6AG1 214-1HG40-5XB0	CPU 1214C DC/DC/Rly SIPLUS	V4.2	✓	✓
6AG1 214-1HG40-5XB0	CPU 1214C DC/DC/Rly SIPLUS	V4.3	✓	✓
6AG1 214-1HG40-5XB0	CPU 1214C DC/DC/Rly SIPLUS	V4.4	✓	✓
6AG1 215-1AG40-2XB0	CPU 1215C DC/DC/DC SIPLUS	V4.0	✓	✓
6AG1 215-1AG40-2XB0	CPU 1215C DC/DC/DC SIPLUS	V4.1	✓	✓
6AG1 215-1AG40-2XB0	CPU 1215C DC/DC/DC SIPLUS	V4.2	✓	✓
6AG1 215-1AG40-2XB0	CPU 1215C DC/DC/DC SIPLUS	V4.3	✓	✓

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6AG1 215-1AG40-2XB0	CPU 1215C DC/DC/DC SIPLUS	V4.4	✓	✓
6AG1 215-1AG40-4XB0	CPU 1215C DC/DC/DC SIPLUS	V4.0	✓	✓
6AG1 215-1AG40-4XB0	CPU 1215C DC/DC/DC SIPLUS	V4.1	✓	✓
6AG1 215-1AG40-4XB0	CPU 1215C DC/DC/DC SIPLUS	V4.2	✓	✓
6AG1 215-1AG40-4XB0	CPU 1215C DC/DC/DC SIPLUS	V4.3	✓	✓
6AG1 215-1AG40-4XB0	CPU 1215C DC/DC/DC SIPLUS	V4.4	✓	✓
6AG1 215-1AG40-5XB0	CPU 1215C DC/DC/DC SIPLUS	V4.0	✓	✓
6AG1 215-1AG40-5XB0	CPU 1215C DC/DC/DC SIPLUS	V4.1	✓	✓
6AG1 215-1AG40-5XB0	CPU 1215C DC/DC/DC SIPLUS	V4.2	✓	✓
6AG1 215-1AG40-5XB0	CPU 1215C DC/DC/DC SIPLUS	V4.3	✓	✓
6AG1 215-1AG40-5XB0	CPU 1215C DC/DC/DC SIPLUS	V4.4	✓	✓
6AG1 215-1BG40-2XB0	CPU 1215C AC/DC/Rly SIPLUS	V4.0	✓	✓
6AG1 215-1BG40-2XB0	CPU 1215C AC/DC/Rly SIPLUS	V4.1	✓	✓
6AG1 215-1BG40-2XB0	CPU 1215C AC/DC/Rly SIPLUS	V4.2	✓	✓
6AG1 215-1BG40-2XB0	CPU 1215C AC/DC/Rly SIPLUS	V4.3	✓	✓
6AG1 215-1BG40-2XB0	CPU 1215C AC/DC/Rly SIPLUS	V4.4	✓	✓
6AG1 215-1BG40-4XB0	CPU 1215C AC/DC/Rly SIPLUS	V4.0	✓	✓
6AG1 215-1BG40-4XB0	CPU 1215C AC/DC/Rly SIPLUS	V4.1	✓	✓
6AG1 215-1BG40-4XB0	CPU 1215C AC/DC/Rly SIPLUS	V4.2	✓	✓
6AG1 215-1BG40-4XB0	CPU 1215C AC/DC/Rly SIPLUS	V4.3	✓	✓
6AG1 215-1BG40-4XB0	CPU 1215C AC/DC/Rly SIPLUS	V4.4	✓	✓
6AG1 215-1BG40-5XB0	CPU 1215C AC/DC/Rly SIPLUS	V4.0	✓	✓
6AG1 215-1BG40-5XB0	CPU 1215C AC/DC/Rly SIPLUS	V4.1	✓	✓
6AG1 215-1BG40-5XB0	CPU 1215C AC/DC/Rly SIPLUS	V4.2	✓	✓
6AG1 215-1BG40-5XB0	CPU 1215C AC/DC/Rly SIPLUS	V4.3	✓	✓
6AG1 215-1BG40-5XB0	CPU 1215C AC/DC/Rly SIPLUS	V4.4	✓	✓
6AG1 215-1HG40-2XB0	CPU 1215C DC/DC/Rly SIPLUS	V4.0	✓	✓
6AG1 215-1HG40-2XB0	CPU 1215C DC/DC/Rly SIPLUS	V4.1	✓	✓
6AG1 215-1HG40-2XB0	CPU 1215C DC/DC/Rly SIPLUS	V4.2	✓	✓
6AG1 215-1HG40-2XB0	CPU 1215C DC/DC/Rly SIPLUS	V4.3	✓	✓
6AG1 215-1HG40-2XB0	CPU 1215C DC/DC/Rly SIPLUS	V4.4	✓	✓
6AG1 215-1HG40-4XB0	CPU 1215C DC/DC/Rly SIPLUS	V4.0	✓	✓
6AG1 215-1HG40-4XB0	CPU 1215C DC/DC/Rly SIPLUS	V4.1	✓	✓
6AG1 215-1HG40-4XB0	CPU 1215C DC/DC/Rly SIPLUS	V4.2	✓	✓
6AG1 215-1HG40-4XB0	CPU 1215C DC/DC/Rly SIPLUS	V4.3	✓	✓
6AG1 215-1HG40-4XB0	CPU 1215C DC/DC/Rly SIPLUS	V4.4	✓	✓
6AG1 215-1HG40-5XB0	CPU 1215C DC/DC/Rly SIPLUS	V4.0	✓	✓
6AG1 215-1HG40-5XB0	CPU 1215C DC/DC/Rly SIPLUS	V4.1	✓	✓
6AG1 215-1HG40-5XB0	CPU 1215C DC/DC/Rly SIPLUS	V4.2	✓	✓
6AG1 215-1HG40-5XB0	CPU 1215C DC/DC/Rly SIPLUS	V4.3	✓	✓
6AG1 215-1HG40-5XB0	CPU 1215C DC/DC/Rly SIPLUS	V4.4	✓	✓
6AG1 510-1DJ01-2AB0	CPU 1510SP-1 PN SIPLUS	V1.8	✓	✓
6AG1 510-1DJ01-2AB0	CPU 1510SP-1 PN SIPLUS	V2.0	✓	✓
6AG1 510-1DJ01-2AB0	CPU 1510SP-1 PN SIPLUS	V2.1	✓	✓

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6AG1 510-1DJ01-2AB0	CPU 1510SP-1 PN SIPLUS	V2.5	✓	✓
6AG1 510-1DJ01-2AB0	CPU 1510SP-1 PN SIPLUS	V2.6	✓	✓
6AG1 510-1DJ01-2AB0	CPU 1510SP-1 PN SIPLUS	V2.8	✓	✓
6AG1 510-1DJ01-7AB0	CPU 1510SP-1 PN SIPLUS	V2.8	✓	✓
6AG1 511-1AK00-2AB0	CPU 1511-1 PN SIPLUS	V1.0	✓	✓
6AG1 511-1AK00-2AB0	CPU 1511-1 PN SIPLUS	V1.1	✓	✓
6AG1 511-1AK00-2AB0	CPU 1511-1 PN SIPLUS	V1.5	✓	✓
6AG1 511-1AK00-2AB0	CPU 1511-1 PN SIPLUS	V1.6	✓	✓
6AG1 511-1AK00-2AB0	CPU 1511-1 PN SIPLUS	V1.7	✓	✓
6AG1 511-1AK00-2AB0	CPU 1511-1 PN SIPLUS	V1.8	✓	✓
6AG1 511-1AK00-7AB0	CPU 1511-1 PN SIPLUS	V1.6	✓	✓
6AG1 511-1AK00-7AB0	CPU 1511-1 PN SIPLUS	V1.7	✓	✓
6AG1 511-1AK00-7AB0	CPU 1511-1 PN SIPLUS	V1.8	✓	✓
6AG1 511-1AK01-2AB0	CPU 1511-1 PN SIPLUS	V1.8	✓	✓
6AG1 511-1AK01-2AB0	CPU 1511-1 PN SIPLUS	V2.0	✓	✓
6AG1 511-1AK01-2AB0	CPU 1511-1 PN SIPLUS	V2.1	✓	✓
6AG1 511-1AK01-2AB0	CPU 1511-1 PN SIPLUS	V2.5	✓	✓
6AG1 511-1AK01-2AB0	CPU 1511-1 PN SIPLUS	V2.6	✓	✓
6AG1 511-1AK01-2AB0	CPU 1511-1 PN SIPLUS	V2.8	✓	✓
6AG1 511-1AK01-7AB0	CPU 1511-1 PN SIPLUS	V1.8	✓	✓
6AG1 511-1AK01-7AB0	CPU 1511-1 PN SIPLUS	V2.0	✓	✓
6AG1 511-1AK01-7AB0	CPU 1511-1 PN SIPLUS	V2.1	✓	✓
6AG1 511-1AK01-7AB0	CPU 1511-1 PN SIPLUS	V2.5	✓	✓
6AG1 511-1AK01-7AB0	CPU 1511-1 PN SIPLUS	V2.6	✓	✓
6AG1 511-1AK01-7AB0	CPU 1511-1 PN SIPLUS	V2.8	✓	✓
6AG1 511-1AK02-2AB0	CPU 1511-1 PN SIPLUS	V2.6	✓	✓
6AG1 511-1AK02-2AB0	CPU 1511-1 PN SIPLUS	V2.8	✓	✓
6AG1 511-1AK02-7AB0	CPU 1511-1 PN SIPLUS	V2.6	✓	✓
6AG1 511-1AK02-7AB0	CPU 1511-1 PN SIPLUS	V2.8	✓	✓
6AG1 512-1DK01-2AB0	CPU 1512SP-1 PN SIPLUS	V1.8	✓	✓
6AG1 512-1DK01-2AB0	CPU 1512SP-1 PN SIPLUS	V2.0	✓	✓
6AG1 512-1DK01-2AB0	CPU 1512SP-1 PN SIPLUS	V2.1	✓	✓
6AG1 512-1DK01-2AB0	CPU 1512SP-1 PN SIPLUS	V2.5	✓	✓
6AG1 512-1DK01-2AB0	CPU 1512SP-1 PN SIPLUS	V2.6	✓	✓
6AG1 512-1DK01-2AB0	CPU 1512SP-1 PN SIPLUS	V2.8	✓	✓
6AG1 512-1DK01-7AB0	CPU 1512SP-1 PN SIPLUS	V2.8	✓	✓
6AG1 513-1AL00-2AB0	CPU 1513-1 PN SIPLUS	V1.0	✓	✓
6AG1 513-1AL00-2AB0	CPU 1513-1 PN SIPLUS	V1.1	✓	✓
6AG1 513-1AL00-2AB0	CPU 1513-1 PN SIPLUS	V1.5	✓	✓
6AG1 513-1AL00-2AB0	CPU 1513-1 PN SIPLUS	V1.6	✓	✓
6AG1 513-1AL00-2AB0	CPU 1513-1 PN SIPLUS	V1.7	✓	✓
6AG1 513-1AL00-2AB0	CPU 1513-1 PN SIPLUS	V1.8	✓	✓
6AG1 513-1AL00-7AB0	CPU 1513-1 PN SIPLUS	V1.6	✓	✓
6AG1 513-1AL00-7AB0	CPU 1513-1 PN SIPLUS	V1.7	✓	✓

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6AG1 513-1AL00-7AB0	CPU 1513-1 PN SIPLUS	V1.8	✓	✓
6AG1 513-1AL01-2AB0	CPU 1513-1 PN SIPLUS	V1.8	✓	✓
6AG1 513-1AL01-2AB0	CPU 1513-1 PN SIPLUS	V2.0	✓	✓
6AG1 513-1AL01-2AB0	CPU 1513-1 PN SIPLUS	V2.1	✓	✓
6AG1 513-1AL01-2AB0	CPU 1513-1 PN SIPLUS	V2.5	✓	✓
6AG1 513-1AL01-2AB0	CPU 1513-1 PN SIPLUS	V2.6	✓	✓
6AG1 513-1AL01-2AB0	CPU 1513-1 PN SIPLUS	V2.8	✓	✓
6AG1 513-1AL01-7AB0	CPU 1513-1 PN SIPLUS	V1.8	✓	✓
6AG1 513-1AL01-7AB0	CPU 1513-1 PN SIPLUS	V2.0	✓	✓
6AG1 513-1AL01-7AB0	CPU 1513-1 PN SIPLUS	V2.1	✓	✓
6AG1 513-1AL01-7AB0	CPU 1513-1 PN SIPLUS	V2.5	✓	✓
6AG1 513-1AL01-7AB0	CPU 1513-1 PN SIPLUS	V2.6	✓	✓
6AG1 513-1AL01-7AB0	CPU 1513-1 PN SIPLUS	V2.8	✓	✓
6AG1 513-1AL02-2AB0	CPU 1513-1 PN SIPLUS	V2.6	✓	✓
6AG1 513-1AL02-2AB0	CPU 1513-1 PN SIPLUS	V2.8	✓	✓
6AG1 513-1AL02-7AB0	CPU 1513-1 PN SIPLUS	V2.6	✓	✓
6AG1 513-1AL02-7AB0	CPU 1513-1 PN SIPLUS	V2.8	✓	✓
6AG1 516-3AN00-2AB0	CPU 1516-3 PN/DP SIPLUS	V1.0	✓	✓
6AG1 516-3AN00-2AB0	CPU 1516-3 PN/DP SIPLUS	V1.1	✓	✓
6AG1 516-3AN00-2AB0	CPU 1516-3 PN/DP SIPLUS	V1.5	✓	✓
6AG1 516-3AN00-2AB0	CPU 1516-3 PN/DP SIPLUS	V1.6	✓	✓
6AG1 516-3AN00-2AB0	CPU 1516-3 PN/DP SIPLUS	V1.7	✓	✓
6AG1 516-3AN00-2AB0	CPU 1516-3 PN/DP SIPLUS	V1.8	✓	✓
6AG1 516-3AN00-7AB0	CPU 1516-3 PN/DP SIPLUS	V1.6	✓	✓
6AG1 516-3AN00-7AB0	CPU 1516-3 PN/DP SIPLUS	V1.7	✓	✓
6AG1 516-3AN00-7AB0	CPU 1516-3 PN/DP SIPLUS	V1.8	✓	✓
6AG1 516-3AN01-2AB0	CPU 1516-3 PN/DP SIPLUS	V1.8	✓	✓
6AG1 516-3AN01-2AB0	CPU 1516-3 PN/DP SIPLUS	V2.0	✓	✓
6AG1 516-3AN01-2AB0	CPU 1516-3 PN/DP SIPLUS	V2.1	✓	✓
6AG1 516-3AN01-2AB0	CPU 1516-3 PN/DP SIPLUS	V2.5	✓	✓
6AG1 516-3AN01-2AB0	CPU 1516-3 PN/DP SIPLUS	V2.6	✓	✓
6AG1 516-3AN01-2AB0	CPU 1516-3 PN/DP SIPLUS	V2.8	✓	✓
6AG1 516-3AN01-7AB0	CPU 1516-3 PN/DP SIPLUS	V1.8	✓	✓
6AG1 516-3AN01-7AB0	CPU 1516-3 PN/DP SIPLUS	V2.0	✓	✓
6AG1 516-3AN01-7AB0	CPU 1516-3 PN/DP SIPLUS	V2.1	✓	✓
6AG1 516-3AN01-7AB0	CPU 1516-3 PN/DP SIPLUS	V2.5	✓	✓
6AG1 516-3AN01-7AB0	CPU 1516-3 PN/DP SIPLUS	V2.6	✓	✓
6AG1 516-3AN01-7AB0	CPU 1516-3 PN/DP SIPLUS	V2.8	✓	✓
6AG1 516-3AN02-2AB0	CPU 1516-3 PN/DP SIPLUS	V2.8	✓	✓
6AG1 516-3AN02-7AB0	CPU 1516-3 PN/DP SIPLUS	V2.8	✓	✓
6AG1 518-4AP00-4AB0	CPU 1518-4 PN/DP SIPLUS	V1.8	✓	✓
6AG1 518-4AP00-4AB0	CPU 1518-4 PN/DP SIPLUS	V2.0	✓	✓
6AG1 518-4AP00-4AB0	CPU 1518-4 PN/DP SIPLUS	V2.1	✓	✓
6AG1 518-4AP00-4AB0	CPU 1518-4 PN/DP SIPLUS	V2.5	✓	✓

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6AG1 518-4AP00-4AB0	CPU 1518-4 PN/DP SIPLUS	V2.6	✓	✓
6AG1 518-4AP00-4AB0	CPU 1518-4 PN/DP SIPLUS	V2.8	✓	✓
6AG1 518-4AX00-4AB0	CPU 1518-4 PN/DP MFP SIPLUS	V2.6	✓	✓
6AG1 518-4AX00-4AB0	CPU 1518-4 PN/DP MFP SIPLUS	V2.8	✓	✓
6ES7 211-1AD30-0XB0	CPU 1211C DC/DC/DC	V2.0		✓
6ES7 211-1AD30-0XB0	CPU 1211C DC/DC/DC	V2.1		✓
6ES7 211-1AD30-0XB0	CPU 1211C DC/DC/DC	V2.2		✓
6ES7 211-1AE31-0XB0	CPU 1211C DC/DC/DC	V3.0		✓
6ES7 211-1AE40-0XB0	CPU 1211C DC/DC/DC	V4.0	✓	✓
6ES7 211-1AE40-0XB0	CPU 1211C DC/DC/DC	V4.1	✓	✓
6ES7 211-1AE40-0XB0	CPU 1211C DC/DC/DC	V4.2	✓	✓
6ES7 211-1AE40-0XB0	CPU 1211C DC/DC/DC	V4.3	✓	✓
6ES7 211-1AE40-0XB0	CPU 1211C DC/DC/DC	V4.4	✓	✓
6ES7 211-1BD30-0XB0	CPU 1211C AC/DC/Rly	V2.0		✓
6ES7 211-1BD30-0XB0	CPU 1211C AC/DC/Rly	V2.1		✓
6ES7 211-1BD30-0XB0	CPU 1211C AC/DC/Rly	V2.2		✓
6ES7 211-1BE31-0XB0	CPU 1211C AC/DC/Rly	V3.0		✓
6ES7 211-1BE40-0XB0	CPU 1211C AC/DC/Rly	V4.0	✓	✓
6ES7 211-1BE40-0XB0	CPU 1211C AC/DC/Rly	V4.1	✓	✓
6ES7 211-1BE40-0XB0	CPU 1211C AC/DC/Rly	V4.2	✓	✓
6ES7 211-1BE40-0XB0	CPU 1211C AC/DC/Rly	V4.3	✓	✓
6ES7 211-1BE40-0XB0	CPU 1211C AC/DC/Rly	V4.4	✓	✓
6ES7 211-1HD30-0XB0	CPU 1211C DC/DC/Rly	V2.0		✓
6ES7 211-1HD30-0XB0	CPU 1211C DC/DC/Rly	V2.1		✓
6ES7 211-1HD30-0XB0	CPU 1211C DC/DC/Rly	V2.2		✓
6ES7 211-1HE31-0XB0	CPU 1211C DC/DC/Rly	V3.0		✓
6ES7 211-1HE40-0XB0	CPU 1211C DC/DC/Rly	V4.0	✓	✓
6ES7 211-1HE40-0XB0	CPU 1211C DC/DC/Rly	V4.1	✓	✓
6ES7 211-1HE40-0XB0	CPU 1211C DC/DC/Rly	V4.2	✓	✓
6ES7 211-1HE40-0XB0	CPU 1211C DC/DC/Rly	V4.3	✓	✓
6ES7 211-1HE40-0XB0	CPU 1211C DC/DC/Rly	V4.4	✓	✓
6ES7 212-1AD30-0XB0	CPU 1212C DC/DC/DC	V2.0		✓
6ES7 212-1AD30-0XB0	CPU 1212C DC/DC/DC	V2.1		✓
6ES7 212-1AD30-0XB0	CPU 1212C DC/DC/DC	V2.2		✓
6ES7 212-1AE31-0XB0	CPU 1212C DC/DC/DC	V3.0		✓
6ES7 212-1AE40-0XB0	CPU 1212C DC/DC/DC	V4.0	✓	✓
6ES7 212-1AE40-0XB0	CPU 1212C DC/DC/DC	V4.1	✓	✓
6ES7 212-1AE40-0XB0	CPU 1212C DC/DC/DC	V4.2	✓	✓
6ES7 212-1AE40-0XB0	CPU 1212C DC/DC/DC	V4.3	✓	✓
6ES7 212-1AE40-0XB0	CPU 1212C DC/DC/DC	V4.4	✓	✓
6ES7 212-1AF40-0XB0	CPU 1212FC DC/DC/DC	V4.2	✓	✓
6ES7 212-1AF40-0XB0	CPU 1212FC DC/DC/DC	V4.3	✓	✓
6ES7 212-1AF40-0XB0	CPU 1212FC DC/DC/DC	V4.4	✓	✓
6ES7 212-1BD30-0XB0	CPU 1212C AC/DC/Rly	V2.0		✓

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6ES7 212-1BD30-0XB0	CPU 1212C AC/DC/Rly	V2.1		✓
6ES7 212-1BD30-0XB0	CPU 1212C AC/DC/Rly	V2.2		✓
6ES7 212-1BE31-0XB0	CPU 1212C AC/DC/Rly	V3.0		✓
6ES7 212-1BE40-0XB0	CPU 1212C AC/DC/Rly	V4.0	✓	✓
6ES7 212-1BE40-0XB0	CPU 1212C AC/DC/Rly	V4.1	✓	✓
6ES7 212-1BE40-0XB0	CPU 1212C AC/DC/Rly	V4.2	✓	✓
6ES7 212-1BE40-0XB0	CPU 1212C AC/DC/Rly	V4.3	✓	✓
6ES7 212-1BE40-0XB0	CPU 1212C AC/DC/Rly	V4.4	✓	✓
6ES7 212-1HD30-0XB0	CPU 1212C DC/DC/Rly	V2.0		✓
6ES7 212-1HD30-0XB0	CPU 1212C DC/DC/Rly	V2.1		✓
6ES7 212-1HD30-0XB0	CPU 1212C DC/DC/Rly	V2.2		✓
6ES7 212-1HE31-0XB0	CPU 1212C DC/DC/Rly	V3.0		✓
6ES7 212-1HE40-0XB0	CPU 1212C DC/DC/Rly	V4.0	✓	✓
6ES7 212-1HE40-0XB0	CPU 1212C DC/DC/Rly	V4.1	✓	✓
6ES7 212-1HE40-0XB0	CPU 1212C DC/DC/Rly	V4.2	✓	✓
6ES7 212-1HE40-0XB0	CPU 1212C DC/DC/Rly	V4.3	✓	✓
6ES7 212-1HE40-0XB0	CPU 1212C DC/DC/Rly	V4.4	✓	✓
6ES7 212-1HF40-0XB0	CPU 1212FC DC/DC/Rly	V4.2	✓	✓
6ES7 212-1HF40-0XB0	CPU 1212FC DC/DC/Rly	V4.3	✓	✓
6ES7 212-1HF40-0XB0	CPU 1212FC DC/DC/Rly	V4.4	✓	✓
6ES7 214-1AE30-0XB0	CPU 1214C DC/DC/DC	V2.0		✓
6ES7 214-1AE30-0XB0	CPU 1214C DC/DC/DC	V2.1		✓
6ES7 214-1AE30-0XB0	CPU 1214C DC/DC/DC	V2.2		✓
6ES7 214-1AF40-0XB0	CPU 1214FC DC/DC/DC	V4.1	✓	✓
6ES7 214-1AF40-0XB0	CPU 1214FC DC/DC/DC	V4.2	✓	✓
6ES7 214-1AF40-0XB0	CPU 1214FC DC/DC/DC	V4.3	✓	✓
6ES7 214-1AF40-0XB0	CPU 1214FC DC/DC/DC	V4.4	✓	✓
6ES7 214-1AG31-0XB0	CPU 1214C DC/DC/DC	V3.0		✓
6ES7 214-1AG40-0XB0	CPU 1214C DC/DC/DC	V4.0	✓	✓
6ES7 214-1AG40-0XB0	CPU 1214C DC/DC/DC	V4.1	✓	✓
6ES7 214-1AG40-0XB0	CPU 1214C DC/DC/DC	V4.2	✓	✓
6ES7 214-1AG40-0XB0	CPU 1214C DC/DC/DC	V4.3	✓	✓
6ES7 214-1AG40-0XB0	CPU 1214C DC/DC/DC	V4.4	✓	✓
6ES7 214-1BE30-0XB0	CPU 1214C AC/DC/Rly	V2.0		✓
6ES7 214-1BE30-0XB0	CPU 1214C AC/DC/Rly	V2.1		✓
6ES7 214-1BE30-0XB0	CPU 1214C AC/DC/Rly	V2.2		✓
6ES7 214-1BG31-0XB0	CPU 1214C AC/DC/Rly	V3.0		✓
6ES7 214-1BG40-0XB0	CPU 1214C AC/DC/Rly	V4.0	✓	✓
6ES7 214-1BG40-0XB0	CPU 1214C AC/DC/Rly	V4.1	✓	✓
6ES7 214-1BG40-0XB0	CPU 1214C AC/DC/Rly	V4.2	✓	✓
6ES7 214-1BG40-0XB0	CPU 1214C AC/DC/Rly	V4.3	✓	✓
6ES7 214-1BG40-0XB0	CPU 1214C AC/DC/Rly	V4.4	✓	✓
6ES7 214-1HE30-0XB0	CPU 1214C DC/DC/Rly	V2.0		✓
6ES7 214-1HE30-0XB0	CPU 1214C DC/DC/Rly	V2.1		✓

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6ES7 214-1HE30-0XB0	CPU 1214C DC/DC/Rly	V2.2		✓
6ES7 214-1HF40-0XB0	CPU 1214FC DC/DC/Rly	V4.1	✓	✓
6ES7 214-1HF40-0XB0	CPU 1214FC DC/DC/Rly	V4.2	✓	✓
6ES7 214-1HF40-0XB0	CPU 1214FC DC/DC/Rly	V4.3	✓	✓
6ES7 214-1HF40-0XB0	CPU 1214FC DC/DC/Rly	V4.4	✓	✓
6ES7 214-1HG31-0XB0	CPU 1214C DC/DC/Rly	V3.0		✓
6ES7 214-1HG40-0XB0	CPU 1214C DC/DC/Rly	V4.0	✓	✓
6ES7 214-1HG40-0XB0	CPU 1214C DC/DC/Rly	V4.1	✓	✓
6ES7 214-1HG40-0XB0	CPU 1214C DC/DC/Rly	V4.2	✓	✓
6ES7 214-1HG40-0XB0	CPU 1214C DC/DC/Rly	V4.3	✓	✓
6ES7 214-1HG40-0XB0	CPU 1214C DC/DC/Rly	V4.4	✓	✓
6ES7 215-1AF40-0XB0	CPU 1215FC DC/DC/DC	V4.1	✓	✓
6ES7 215-1AF40-0XB0	CPU 1215FC DC/DC/DC	V4.2	✓	✓
6ES7 215-1AF40-0XB0	CPU 1215FC DC/DC/DC	V4.3	✓	✓
6ES7 215-1AF40-0XB0	CPU 1215FC DC/DC/DC	V4.4	✓	✓
6ES7 215-1AG31-0XB0	CPU 1215C DC/DC/DC	V3.0		✓
6ES7 215-1AG40-0XB0	CPU 1215C DC/DC/DC	V4.0	✓	✓
6ES7 215-1AG40-0XB0	CPU 1215C DC/DC/DC	V4.1	✓	✓
6ES7 215-1AG40-0XB0	CPU 1215C DC/DC/DC	V4.2	✓	✓
6ES7 215-1AG40-0XB0	CPU 1215C DC/DC/DC	V4.3	✓	✓
6ES7 215-1AG40-0XB0	CPU 1215C DC/DC/DC	V4.4	✓	✓
6ES7 215-1AL31-0XB0	CPU 1215C DC/DC/DC	V3.0		✓
6ES7 215-1AL40-0XB0	CPU 1215C DC/DC/DC	V4.0	✓	✓
6ES7 215-1AL40-0XB0	CPU 1215C DC/DC/DC	V4.1	✓	✓
6ES7 215-1AL40-0XB0	CPU 1215C DC/DC/DC	V4.2	✓	✓
6ES7 215-1AL40-0XB0	CPU 1215C DC/DC/DC	V4.3	✓	✓
6ES7 215-1AM31-0XB0	CPU 1215C DC/DC/DC	V3.0		✓
6ES7 215-1AM40-0XB0	CPU 1215C DC/DC/DC	V4.0	✓	✓
6ES7 215-1AM40-0XB0	CPU 1215C DC/DC/DC	V4.1	✓	✓
6ES7 215-1AM40-0XB0	CPU 1215C DC/DC/DC	V4.2	✓	✓
6ES7 215-1BG31-0XB0	CPU 1215C AC/DC/Rly	V3.0		✓
6ES7 215-1BG40-0XB0	CPU 1215C AC/DC/Rly	V4.0	✓	✓
6ES7 215-1BG40-0XB0	CPU 1215C AC/DC/Rly	V4.1	✓	✓
6ES7 215-1AM40-0XB0	CPU 1215C DC/DC/DC	V4.3	✓	✓
6ES7 215-1BG40-0XB0	CPU 1215C AC/DC/Rly	V4.2	✓	✓
6ES7 215-1BG40-0XB0	CPU 1215C AC/DC/Rly	V4.3	✓	✓
6ES7 215-1BG40-0XB0	CPU 1215C AC/DC/Rly	V4.4	✓	✓
6ES7 215-1HF40-0XB0	CPU 1215FC DC/DC/Rly	V4.1	✓	✓
6ES7 215-1HF40-0XB0	CPU 1215FC DC/DC/Rly	V4.2	✓	✓
6ES7 215-1HF40-0XB0	CPU 1215FC DC/DC/Rly	V4.3	✓	✓
6ES7 215-1HF40-0XB0	CPU 1215FC DC/DC/Rly	V4.4	✓	✓
6ES7 215-1HG31-0XB0	CPU 1215C DC/DC/Rly	V3.0		✓
6ES7 215-1HG40-0XB0	CPU 1215C DC/DC/Rly	V4.0	✓	✓
6ES7 215-1HG40-0XB0	CPU 1215C DC/DC/Rly	V4.1	✓	✓

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6ES7 215-1HG40-0XB0	CPU 1215C DC/DC/Rly	V4.2	✓	✓
6ES7 215-1HG40-0XB0	CPU 1215C DC/DC/Rly	V4.3	✓	✓
6ES7 215-1HG40-0XB0	CPU 1215C DC/DC/Rly	V4.4	✓	✓
6ES7 217-1AG40-0XB0	CPU 1217C DC/DC/DC	V4.0	✓	✓
6ES7 217-1AG40-0XB0	CPU 1217C DC/DC/DC	V4.1	✓	✓
6ES7 217-1AG40-0XB0	CPU 1217C DC/DC/DC	V4.2	✓	✓
6ES7 217-1AG40-0XB0	CPU 1217C DC/DC/DC	V4.3	✓	✓
6ES7 217-1AG40-0XB0	CPU 1217C DC/DC/DC	V4.4	✓	✓
6ES7 510-1DJ00-0AB0	CPU 1510SP-1 PN	V1.6	✓	✓
6ES7 510-1DJ00-0AB0	CPU 1510SP-1 PN	V1.7	✓	✓
6ES7 510-1DJ00-0AB0	CPU 1510SP-1 PN	V1.8	✓	✓
6ES7 510-1DJ01-0AB0	CPU 1510SP-1 PN	V1.8	✓	✓
6ES7 510-1DJ01-0AB0	CPU 1510SP-1 PN	V2.0	✓	✓
6ES7 510-1DJ01-0AB0	CPU 1510SP-1 PN	V2.1	✓	✓
6ES7 510-1DJ01-0AB0	CPU 1510SP-1 PN	V2.5	✓	✓
6ES7 510-1DJ01-0AB0	CPU 1510SP-1 PN	V2.6	✓	✓
6ES7 510-1DJ01-0AB0	CPU 1510SP-1 PN	V2.8	✓	✓
6ES7 510-1SJ00-0AB0	CPU 1510SP F-1 PN	V1.7	✓	✓
6ES7 510-1SJ00-0AB0	CPU 1510SP F-1 PN	V1.8	✓	✓
6ES7 510-1SJ01-0AB0	CPU 1510SP F-1 PN	V1.8	✓	✓
6ES7 510-1SJ01-0AB0	CPU 1510SP F-1 PN	V2.0	✓	✓
6ES7 510-1SJ01-0AB0	CPU 1510SP F-1 PN	V2.1	✓	✓
6ES7 510-1SJ01-0AB0	CPU 1510SP F-1 PN	V2.5	✓	✓
6ES7 510-1SJ01-0AB0	CPU 1510SP F-1 PN	V2.6	✓	✓
6ES7 510-1SJ01-0AB0	CPU 1510SP F-1 PN	V2.8	✓	✓
6ES7 511-1AK00-0AB0	CPU 1511-1 PN	V1.0	✓	✓
6ES7 511-1AK00-0AB0	CPU 1511-1 PN	V1.1	✓	✓
6ES7 511-1AK00-0AB0	CPU 1511-1 PN	V1.5	✓	✓
6ES7 511-1AK00-0AB0	CPU 1511-1 PN	V1.6	✓	✓
6ES7 511-1AK00-0AB0	CPU 1511-1 PN	V1.7	✓	✓
6ES7 511-1AK00-0AB0	CPU 1511-1 PN	V1.8	✓	✓
6ES7 511-1AK01-0AB0	CPU 1511-1 PN	V1.8	✓	✓
6ES7 511-1AK01-0AB0	CPU 1511-1 PN	V2.0	✓	✓
6ES7 511-1AK01-0AB0	CPU 1511-1 PN	V2.1	✓	✓
6ES7 511-1AK01-0AB0	CPU 1511-1 PN	V2.5	✓	✓
6ES7 511-1AK01-0AB0	CPU 1511-1 PN	V2.6	✓	✓
6ES7 511-1AK01-0AB0	CPU 1511-1 PN	V2.8	✓	✓
6ES7 511-1AK02-0AB0	CPU 1511-1 PN	V2.5	✓	✓
6ES7 511-1AK02-0AB0	CPU 1511-1 PN	V2.6	✓	✓
6ES7 511-1AK02-0AB0	CPU 1511-1 PN	V2.8	✓	✓
6ES7 511-1CK00-0AB0	CPU 1511C-1 PN	V1.8	✓	✓
6ES7 511-1CK00-0AB0	CPU 1511C-1 PN	V2.0	✓	✓
6ES7 511-1CK00-0AB0	CPU 1511C-1 PN	V2.1	✓	✓
6ES7 511-1CK00-0AB0	CPU 1511C-1 PN	V2.5	✓	✓

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6ES7 511-1CK00-0AB0	CPU 1511C-1 PN	V2.6	✓	✓
6ES7 511-1CK00-0AB0	CPU 1511C-1 PN	V2.8	✓	✓
6ES7 511-1CK01-0AB0	CPU 1511C-1 PN	V2.5	✓	✓
6ES7 511-1CK01-0AB0	CPU 1511C-1 PN	V2.6	✓	✓
6ES7 511-1CK01-0AB0	CPU 1511C-1 PN	V2.8	✓	✓
6ES7 511-1FK00-0AB0	CPU 1511F-1 PN	V1.7	✓	✓
6ES7 511-1FK00-0AB0	CPU 1511F-1 PN	V1.8	✓	✓
6ES7 511-1FK01-0AB0	CPU 1511F-1 PN	V1.8	✓	✓
6ES7 511-1FK01-0AB0	CPU 1511F-1 PN	V2.0	✓	✓
6ES7 511-1FK01-0AB0	CPU 1511F-1 PN	V2.1	✓	✓
6ES7 511-1FK01-0AB0	CPU 1511F-1 PN	V2.5	✓	✓
6ES7 511-1FK01-0AB0	CPU 1511F-1 PN	V2.6	✓	✓
6ES7 511-1FK01-0AB0	CPU 1511F-1 PN	V2.8	✓	✓
6ES7 511-1FK02-0AB0	CPU 1511F-1 PN	V2.5	✓	✓
6ES7 511-1FK02-0AB0	CPU 1511F-1 PN	V2.6	✓	✓
6ES7 511-1FK02-0AB0	CPU 1511F-1 PN	V2.8	✓	✓
6ES7 511-1TK01-0AB0	CPU 1511T-1 PN	V2.0	✓	✓
6ES7 511-1TK01-0AB0	CPU 1511T-1 PN	V2.1	✓	✓
6ES7 511-1TK01-0AB0	CPU 1511T-1 PN	V2.5	✓	✓
6ES7 511-1TK01-0AB0	CPU 1511T-1 PN	V2.6	✓	✓
6ES7 511-1TK01-0AB0	CPU 1511T-1 PN	V2.8	✓	✓
6ES7 511-1UK01-0AB0	CPU 1511TF-1 PN	V2.1	✓	✓
6ES7 511-1UK01-0AB0	CPU 1511TF-1 PN	V2.5	✓	✓
6ES7 511-1UK01-0AB0	CPU 1511TF-1 PN	V2.6	✓	✓
6ES7 511-1UK01-0AB0	CPU 1511TF-1 PN	V2.8	✓	✓
6ES7 512-1CK00-0AB0	CPU 1512C-1 PN	V1.8	✓	✓
6ES7 512-1CK00-0AB0	CPU 1512C-1 PN	V2.0	✓	✓
6ES7 512-1CK00-0AB0	CPU 1512C-1 PN	V2.1	✓	✓
6ES7 512-1CK00-0AB0	CPU 1512C-1 PN	V2.5	✓	✓
6ES7 512-1CK00-0AB0	CPU 1512C-1 PN	V2.6	✓	✓
6ES7 512-1CK00-0AB0	CPU 1512C-1 PN	V2.8	✓	✓
6ES7 512-1CK01-0AB0	CPU 1512C-1 PN	V2.5	✓	✓
6ES7 512-1CK01-0AB0	CPU 1512C-1 PN	V2.6	✓	✓
6ES7 512-1CK01-0AB0	CPU 1512C-1 PN	V2.8	✓	✓
6ES7 512-1DK00-0AB0	CPU 1512SP-1 PN	V1.6	✓	✓
6ES7 512-1DK00-0AB0	CPU 1512SP-1 PN	V1.7	✓	✓
6ES7 512-1DK00-0AB0	CPU 1512SP-1 PN	V1.8	✓	✓
6ES7 512-1DK01-0AB0	CPU 1512SP-1 PN	V1.8	✓	✓
6ES7 512-1DK01-0AB0	CPU 1512SP-1 PN	V2.0	✓	✓
6ES7 512-1DK01-0AB0	CPU 1512SP-1 PN	V2.1	✓	✓
6ES7 512-1DK01-0AB0	CPU 1512SP-1 PN	V2.5	✓	✓
6ES7 512-1DK01-0AB0	CPU 1512SP-1 PN	V2.6	✓	✓
6ES7 512-1DK01-0AB0	CPU 1512SP-1 PN	V2.8	✓	✓
6ES7 512-1SK00-0AB0	CPU 1512SP F-1 PN	V1.7	✓	✓

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6ES7 512-1SK00-0AB0	CPU 1512SP F-1 PN	V1.8	✓	✓
6ES7 512-1SK01-0AB0	CPU 1512SP F-1 PN	V1.8	✓	✓
6ES7 512-1SK01-0AB0	CPU 1512SP F-1 PN	V2.0	✓	✓
6ES7 512-1SK01-0AB0	CPU 1512SP F-1 PN	V2.1	✓	✓
6ES7 512-1SK01-0AB0	CPU 1512SP F-1 PN	V2.5	✓	✓
6ES7 512-1SK01-0AB0	CPU 1512SP F-1 PN	V2.6	✓	✓
6ES7 512-1SK01-0AB0	CPU 1512SP F-1 PN	V2.8	✓	✓
6ES7 513-1AL00-0AB0	CPU 1513-1 PN	V1.0	✓	✓
6ES7 513-1AL00-0AB0	CPU 1513-1 PN	V1.1	✓	✓
6ES7 513-1AL00-0AB0	CPU 1513-1 PN	V1.5	✓	✓
6ES7 513-1AL00-0AB0	CPU 1513-1 PN	V1.6	✓	✓
6ES7 513-1AL00-0AB0	CPU 1513-1 PN	V1.7	✓	✓
6ES7 513-1AL00-0AB0	CPU 1513-1 PN	V1.8	✓	✓
6ES7 513-1AL01-0AB0	CPU 1513-1 PN	V1.8	✓	✓
6ES7 513-1AL01-0AB0	CPU 1513-1 PN	V2.0	✓	✓
6ES7 513-1AL01-0AB0	CPU 1513-1 PN	V2.1	✓	✓
6ES7 513-1AL01-0AB0	CPU 1513-1 PN	V2.5	✓	✓
6ES7 513-1AL01-0AB0	CPU 1513-1 PN	V2.6	✓	✓
6ES7 513-1AL01-0AB0	CPU 1513-1 PN	V2.8	✓	✓
6ES7 513-1AL02-0AB0	CPU 1513-1 PN	V2.5	✓	✓
6ES7 513-1AL02-0AB0	CPU 1513-1 PN	V2.6	✓	✓
6ES7 513-1AL02-0AB0	CPU 1513-1 PN	V2.8	✓	✓
6ES7 513-1FL00-0AB0	CPU 1513F-1 PN	V1.7	✓	✓
6ES7 513-1FL00-0AB0	CPU 1513F-1 PN	V1.8	✓	✓
6ES7 513-1FL01-0AB0	CPU 1513F-1 PN	V1.8	✓	✓
6ES7 513-1FL01-0AB0	CPU 1513F-1 PN	V2.0	✓	✓
6ES7 513-1FL01-0AB0	CPU 1513F-1 PN	V2.1	✓	✓
6ES7 513-1FL01-0AB0	CPU 1513F-1 PN	V2.5	✓	✓
6ES7 513-1FL01-0AB0	CPU 1513F-1 PN	V2.6	✓	✓
6ES7 513-1FL01-0AB0	CPU 1513F-1 PN	V2.8	✓	✓
6ES7 513-1FL02-0AB0	CPU 1513F-1 PN	V2.5	✓	✓
6ES7 513-1FL02-0AB0	CPU 1513F-1 PN	V2.6	✓	✓
6ES7 513-1FL02-0AB0	CPU 1513F-1 PN	V2.8	✓	✓
6ES7 513-2GL00-0AB0	CPU 1513pro F-2 PN	V2.8	✓	✓
6ES7 513-2PL00-0AB0	CPU 1513pro-2 PN	V2.8	✓	✓
6ES7 515-2AM00-0AB0	CPU 1515-2 PN	V1.5	✓	✓
6ES7 515-2AM00-0AB0	CPU 1515-2 PN	V1.6	✓	✓
6ES7 515-2AM00-0AB0	CPU 1515-2 PN	V1.7	✓	✓
6ES7 515-2AM00-0AB0	CPU 1515-2 PN	V1.8	✓	✓
6ES7 515-2AM01-0AB0	CPU 1515-2 PN	V1.8	✓	✓
6ES7 515-2AM01-0AB0	CPU 1515-2 PN	V2.0	✓	✓
6ES7 515-2AM01-0AB0	CPU 1515-2 PN	V2.1	✓	✓
6ES7 515-2AM01-0AB0	CPU 1515-2 PN	V2.5	✓	✓
6ES7 515-2AM01-0AB0	CPU 1515-2 PN	V2.6	✓	✓

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6ES7 515-2AM01-0AB0	CPU 1515-2 PN	V2.8	✓	✓
6ES7 515-2AM02-0AB0	CPU 1515-2 PN	V2.8	✓	✓
6ES7 515-2FM00-0AB0	CPU 1515F-2 PN	V1.6	✓	✓
6ES7 515-2FM00-0AB0	CPU 1515F-2 PN	V1.7	✓	✓
6ES7 515-2FM00-0AB0	CPU 1515F-2 PN	V1.8	✓	✓
6ES7 515-2FM01-0AB0	CPU 1515F-2 PN	V1.8	✓	✓
6ES7 515-2FM01-0AB0	CPU 1515F-2 PN	V2.0	✓	✓
6ES7 515-2FM01-0AB0	CPU 1515F-2 PN	V2.1	✓	✓
6ES7 515-2FM01-0AB0	CPU 1515F-2 PN	V2.5	✓	✓
6ES7 515-2FM01-0AB0	CPU 1515F-2 PN	V2.6	✓	✓
6ES7 515-2FM01-0AB0	CPU 1515F-2 PN	V2.8	✓	✓
6ES7 515-2FM02-0AB0	CPU 1515F-2 PN	V2.8	✓	✓
6ES7 515-2TM01-0AB0	CPU 1515T-2 PN	V2.0	✓	✓
6ES7 515-2TM01-0AB0	CPU 1515T-2 PN	V2.1	✓	✓
6ES7 515-2TM01-0AB0	CPU 1515T-2 PN	V2.5	✓	✓
6ES7 515-2TM01-0AB0	CPU 1515T-2 PN	V2.6	✓	✓
6ES7 515-2TM01-0AB0	CPU 1515T-2 PN	V2.8	✓	✓
6ES7 515-2UM01-0AB0	CPU 1515TF-2 PN	V2.1	✓	✓
6ES7 515-2UM01-0AB0	CPU 1515TF-2 PN	V2.5	✓	✓
6ES7 515-2UM01-0AB0	CPU 1515TF-2 PN	V2.6	✓	✓
6ES7 515-2UM01-0AB0	CPU 1515TF-2 PN	V2.8	✓	✓
6ES7 516-2GN00-0AB0	CPU 1516pro F-2 PN	V2.0	✓	✓
6ES7 516-2GN00-0AB0	CPU 1516pro F-2 PN	V2.1	✓	✓
6ES7 516-2GN00-0AB0	CPU 1516pro F-2 PN	V2.5	✓	✓
6ES7 516-2GN00-0AB0	CPU 1516pro F-2 PN	V2.6	✓	✓
6ES7 516-2GN00-0AB0	CPU 1516pro F-2 PN	V2.8	✓	✓
6ES7 516-2PN00-0AB0	CPU 1516pro-2 PN	V2.0	✓	✓
6ES7 516-2PN00-0AB0	CPU 1516pro-2 PN	V2.1	✓	✓
6ES7 516-2PN00-0AB0	CPU 1516pro-2 PN	V2.5	✓	✓
6ES7 516-2PN00-0AB0	CPU 1516pro-2 PN	V2.6	✓	✓
6ES7 516-2PN00-0AB0	CPU 1516pro-2 PN	V2.8	✓	✓
6ES7 516-3AN00-0AB0	CPU 1516-3 PN/DP	V1.0	✓	✓
6ES7 516-3AN00-0AB0	CPU 1516-3 PN/DP	V1.1	✓	✓
6ES7 516-3AN00-0AB0	CPU 1516-3 PN/DP	V1.5	✓	✓
6ES7 516-3AN00-0AB0	CPU 1516-3 PN/DP	V1.6	✓	✓
6ES7 516-3AN00-0AB0	CPU 1516-3 PN/DP	V1.7	✓	✓
6ES7 516-3AN00-0AB0	CPU 1516-3 PN/DP	V1.8	✓	✓
6ES7 516-3AN01-0AB0	CPU 1516-3 PN/DP	V1.8	✓	✓
6ES7 516-3AN01-0AB0	CPU 1516-3 PN/DP	V2.0	✓	✓
6ES7 516-3AN01-0AB0	CPU 1516-3 PN/DP	V2.1	✓	✓
6ES7 516-3AN01-0AB0	CPU 1516-3 PN/DP	V2.5	✓	✓
6ES7 516-3AN01-0AB0	CPU 1516-3 PN/DP	V2.6	✓	✓
6ES7 516-3AN01-0AB0	CPU 1516-3 PN/DP	V2.8	✓	✓
6ES7 516-3AN02-0AB0	CPU 1516-3 PN/DP	V2.8	✓	✓

Article Number	Device Name	Version	Firm-ware Update	Program Update
6ES7 516-3FN00-0AB0	CPU 1516F-3 PN/DP	V1.5	✓	✓
6ES7 516-3FN00-0AB0	CPU 1516F-3 PN/DP	V1.6	✓	✓
6ES7 516-3FN00-0AB0	CPU 1516F-3 PN/DP	V1.7	✓	✓
6ES7 516-3FN00-0AB0	CPU 1516F-3 PN/DP	V1.8	✓	✓
6ES7 516-3FN01-0AB0	CPU 1516F-3 PN/DP	V1.8	✓	✓
6ES7 516-3FN01-0AB0	CPU 1516F-3 PN/DP	V2.0	✓	✓
6ES7 516-3FN01-0AB0	CPU 1516F-3 PN/DP	V2.1	✓	✓
6ES7 516-3FN01-0AB0	CPU 1516F-3 PN/DP	V2.5	✓	✓
6ES7 516-3FN01-0AB0	CPU 1516F-3 PN/DP	V2.6	✓	✓
6ES7 516-3FN01-0AB0	CPU 1516F-3 PN/DP	V2.8	✓	✓
6ES7 516-3FN02-0AB0	CPU 1516F-3 PN/DP	V2.8	✓	✓
6ES7 516-3TN00-0AB0	CPU 1516T-3 PN/DP	V2.5	✓	✓
6ES7 516-3TN00-0AB0	CPU 1516T-3 PN/DP	V2.6	✓	✓
6ES7 516-3TN00-0AB0	CPU 1516T-3 PN/DP	V2.8	✓	✓
6ES7 516-3UN00-0AB0	CPU 1516TF-3 PN/DP	V2.5	✓	✓
6ES7 516-3UN00-0AB0	CPU 1516TF-3 PN/DP	V2.6	✓	✓
6ES7 516-3UN00-0AB0	CPU 1516TF-3 PN/DP	V2.8	✓	✓
6ES7 517-3AP00-0AB0	CPU 1517-3 PN/DP	V1.6	✓	✓
6ES7 517-3AP00-0AB0	CPU 1517-3 PN/DP	V1.7	✓	✓
6ES7 517-3AP00-0AB0	CPU 1517-3 PN/DP	V1.8	✓	✓
6ES7 517-3AP00-0AB0	CPU 1517-3 PN/DP	V2.0	✓	✓
6ES7 517-3AP00-0AB0	CPU 1517-3 PN/DP	V2.1	✓	✓
6ES7 517-3AP00-0AB0	CPU 1517-3 PN/DP	V2.5	✓	✓
6ES7 517-3AP00-0AB0	CPU 1517-3 PN/DP	V2.6	✓	✓
6ES7 517-3AP00-0AB0	CPU 1517-3 PN/DP	V2.8	✓	✓
6ES7 517-3FP00-0AB0	CPU 1517F-3 PN/DP	V1.6	✓	✓
6ES7 517-3FP00-0AB0	CPU 1517F-3 PN/DP	V1.7	✓	✓
6ES7 517-3FP00-0AB0	CPU 1517F-3 PN/DP	V1.8	✓	✓
6ES7 517-3FP00-0AB0	CPU 1517F-3 PN/DP	V2.0	✓	✓
6ES7 517-3FP00-0AB0	CPU 1517F-3 PN/DP	V2.1	✓	✓
6ES7 517-3FP00-0AB0	CPU 1517F-3 PN/DP	V2.5	✓	✓
6ES7 517-3FP00-0AB0	CPU 1517F-3 PN/DP	V2.6	✓	✓
6ES7 517-3FP00-0AB0	CPU 1517F-3 PN/DP	V2.8	✓	✓
6ES7 517-3TP00-0AB0	CPU 1517T-3 PN/DP	V2.0	✓	✓
6ES7 517-3TP00-0AB0	CPU 1517T-3 PN/DP	V2.1	✓	✓
6ES7 517-3TP00-0AB0	CPU 1517T-3 PN/DP	V2.5	✓	✓
6ES7 517-3TP00-0AB0	CPU 1517T-3 PN/DP	V2.6	✓	✓
6ES7 517-3TP00-0AB0	CPU 1517T-3 PN/DP	V2.8	✓	✓
6ES7 517-3UP00-0AB0	CPU 1517TF-3 PN/DP	V2.0	✓	✓
6ES7 517-3UP00-0AB0	CPU 1517TF-3 PN/DP	V2.1	✓	✓
6ES7 517-3UP00-0AB0	CPU 1517TF-3 PN/DP	V2.5	✓	✓
6ES7 517-3UP00-0AB0	CPU 1517TF-3 PN/DP	V2.6	✓	✓
6ES7 517-3UP00-0AB0	CPU 1517TF-3 PN/DP	V2.8	✓	✓
6ES7 518-4AP00-0AB0	CPU 1518-4 PN/DP	V1.5	✓	✓

4.16 Supported Hardware

Article Number	Device Name	Version	Firm-ware Update	Program Update
6ES7 518-4AP00-0AB0	CPU 1518-4 PN/DP	V1.6	✓	✓
6ES7 518-4AP00-0AB0	CPU 1518-4 PN/DP	V1.7	✓	✓
6ES7 518-4AP00-0AB0	CPU 1518-4 PN/DP	V1.8	✓	✓
6ES7 518-4AP00-0AB0	CPU 1518-4 PN/DP	V2.0	✓	✓
6ES7 518-4AP00-0AB0	CPU 1518-4 PN/DP	V2.1	✓	✓
6ES7 518-4AP00-0AB0	CPU 1518-4 PN/DP	V2.5	✓	✓
6ES7 518-4AP00-0AB0	CPU 1518-4 PN/DP	V2.6	✓	✓
6ES7 518-4AP00-0AB0	CPU 1518-4 PN/DP	V2.8	✓	✓
6ES7 518-4AP00-3AB0	CPU 1518-4 PN/DP ODK	V2.0	✓	✓
6ES7 518-4AP00-3AB0	CPU 1518-4 PN/DP ODK	V2.1	✓	✓
6ES7 518-4AP00-3AB0	CPU 1518-4 PN/DP ODK	V2.5	✓	✓
6ES7 518-4AP00-3AB0	CPU 1518-4 PN/DP ODK	V2.6	✓	✓
6ES7 518-4AP00-3AB0	CPU 1518-4 PN/DP ODK	V2.8	✓	✓
6ES7 518-4AX00-1AB0	CPU 1518-4 PN/DP MFP	V2.5	✓	✓
6ES7 518-4AX00-1AB0	CPU 1518-4 PN/DP MFP	V2.6	✓	✓
6ES7 518-4AX00-1AB0	CPU 1518-4 PN/DP MFP	V2.8	✓	✓
6ES7 518-4FP00-0AB0	CPU 1518F-4 PN/DP	V1.5	✓	✓
6ES7 518-4FP00-0AB0	CPU 1518F-4 PN/DP	V1.6	✓	✓
6ES7 518-4FP00-0AB0	CPU 1518F-4 PN/DP	V1.7	✓	✓
6ES7 518-4FP00-0AB0	CPU 1518F-4 PN/DP	V1.8	✓	✓
6ES7 518-4FP00-0AB0	CPU 1518F-4 PN/DP	V2.0	✓	✓
6ES7 518-4FP00-0AB0	CPU 1518F-4 PN/DP	V2.1	✓	✓
6ES7 518-4FP00-0AB0	CPU 1518F-4 PN/DP	V2.5	✓	✓
6ES7 518-4FP00-0AB0	CPU 1518F-4 PN/DP	V2.6	✓	✓
6ES7 518-4FP00-0AB0	CPU 1518F-4 PN/DP	V2.8	✓	✓
6ES7 518-4FP00-3AB0	CPU 1518F-4 PN/DP ODK	V2.0	✓	✓
6ES7 518-4FP00-3AB0	CPU 1518F-4 PN/DP ODK	V2.1	✓	✓
6ES7 518-4FP00-3AB0	CPU 1518F-4 PN/DP ODK	V2.5	✓	✓
6ES7 518-4FP00-3AB0	CPU 1518F-4 PN/DP ODK	V2.6	✓	✓
6ES7 518-4FP00-3AB0	CPU 1518F-4 PN/DP ODK	V2.8	✓	✓
6ES7 518-4FX00-1AB0	CPU 1518F-4 PN/DP MFP	V2.5	✓	✓
6ES7 518-4FX00-1AB0	CPU 1518F-4 PN/DP MFP	V2.6	✓	✓
6ES7 518-4FX00-1AB0	CPU 1518F-4 PN/DP MFP	V2.8	✓	✓
6ES7 615-4DT10-0AB0	CPU 1504D T	V2.8	✓	✓
6ES7 615-5DT10-0AB0	CPU 1505D T	V2.8	✓	✓
6ES7 615-6DT10-0AB0	CPU 1506D T	V2.8	✓	✓
6ES7 615-7DT10-0AB0	CPU 1507D T	V2.8	✓	✓
6ES7 672-5DC01-0YA0	CPU 1505SP	V2.0		✓
6ES7 672-5DC01-0YA0	CPU 1505SP	V2.1		✓
6ES7 672-5SC01-0YA0	CPU 1505SP F	V2.0		✓
6ES7 672-5DC11-0YA0	CPU 1505SP	V2.5		✓
6ES7 672-5DC11-0YA0	CPU 1505SP	V2.6		✓
6ES7 672-5DC11-0YA0	CPU 1505SP	V2.7		✓
6ES7 672-5DC11-0YA0	CPU 1505SP	V20.8		✓

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6ES7 672-5SC01-0YA0	CPU 1505SP F	V2.1		✓
6ES7 672-5SC11-0YA0	CPU 1505SP F	V2.5		✓
6ES7 672-5SC11-0YA0	CPU 1505SP F	V2.6		✓
6ES7 672-5SC11-0YA0	CPU 1505SP F	V2.7		✓
6ES7 672-5VC11-0YA0	CPU 1505SP T	V2.5		✓
6ES7 672-5VC11-0YA0	CPU 1505SP T	V2.6		✓
6ES7 672-5VC11-0YA0	CPU 1505SP T	V2.7		✓
6ES7 672-5VC11-0YA0	CPU 1505SP T	V20.8		✓
6ES7 672-5WC11-0YA0	CPU 1505SP TF	V2.5		✓
6ES7 672-5WC11-0YA0	CPU 1505SP TF	V2.6		✓
6ES7 672-5WC11-0YA0	CPU 1505SP TF	V2.7		✓
6ES7 672-7AC01-0YA0	CPU 1507S	V2.0		✓
6ES7 672-7AC01-0YA0	CPU 1507S	V2.1		✓
6ES7 672-7AC01-0YA0	CPU 1507S	V2.5		✓
6ES7 672-7AC01-0YA0	CPU 1507S	V2.6		✓
6ES7 672-7AC01-0YA0	CPU 1507S	V2.7		✓
6ES7 672-7AC01-0YA0	CPU 1507S	V20.8		✓
6ES7 672-7FC01-0YA0	CPU 1507S F	V2.0		✓
6ES7 672-7FC01-0YA0	CPU 1507S F	V2.1		✓
6ES7 672-7FC01-0YA0	CPU 1507S F	V2.5		✓
6ES7 672-7FC01-0YA0	CPU 1507S F	V2.6		✓
6ES7 672-7FC01-0YA0	CPU 1507S F	V2.7		✓
6ES7 672-7TC02-0YA0	CPU 1507S T	V20.8		✓
6ES7 672-8AC01-0YA0	CPU 1508S	V2.6		✓
6ES7 672-8AC01-0YA0	CPU 1508S	V2.7		✓
6ES7 672-8AC01-0YA0	CPU 1508S	V20.8		✓
6ES7 672-8FC01-0YA0	CPU 1508S F	V2.6		✓
6ES7 672-8FC01-0YA0	CPU 1508S F	V2.7		✓

