SIEMENS

DIGSI 4

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DIGSI 4.6 **7XS54**

Product Information

Siemens Aktiengesellschaft

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This Product Information contains **important information about DIGSI 4.6**. It is part of the product supplied, and the information in it should be considered more up-to-date if uncertainties arise.

Registered Trademarks

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Disclaimer of Liability

We have checked the contents of this document for agreement with the hardware and software described. Since deviations cannot be precluded entirely, we cannot guarantee full agreement. However, the data in this document are reviewed regularly and any necessary corrections are included in subsequent editions. Suggestions for improvement are welcome.

Technical data are subject to change.

Subject to Changes

Contents

1 Contents of the Consignment

This CD-ROM contains DIGSI 4, the PC program for configuring, parameterizing, starting and operating all digital SIPROTEC protection, combination and bay devices, in its current version 4.60. With a PC or a notebook you can parameterise the devices via the interfaces and export and visualise the fault data.

If ordered, additional optional packages are also available to you:

- With the SIGRA evaluation program you can visualise and conveniently evaluate fault recordings.
- The graphic display on the larger displays can be designed and edited with the Display Editor as with a graphics program: Templates are provided on the CD-ROM for further processing.
- You configure additional functions of the devices graphically with the CFC Editor.
- You can conveniently set remote communication with DIGSI Remote. An electronic telephone book is available, for example for communication via a modem line.
- The completely new IEC61850 System Configurator allows you to configure and parameterize IEC61850 stations. This tool allows you to manage subnets, network communicators and their IP addresses and to connect the information items of different communicators.

All components are contained on this CD-ROM in German, English, Spanish, Italian and French.

To install them you must enter the serial number provided on the product card: Then you can initialise the ordered components. Please keep the product card with the serial number in a safe place.

2 Hardware Requirements

The program requires at least:

- Pentium with 800 MHz processor (1,6 GHz recommended)
- 400 MB of free hard disk space (for all devices)
- 128 MB RAM (256 MB recommended)
- CD ROM Drive
- Serial port

3 Software Requirements

Windows XP Professional Edition (with Service Pack 1), 2000, ME, 98, NT 4.0 (with Service Pack 5 or higher, 6a recommended) as operating system. Depending on the configuration, full administrator rights are required for installation.

In many of its components DIGSI 4.6 operates with XML files. XML operations use Microsoft functions which are part of the Internet Explorer 6.0. Therefore, installation of MS Internet Explorer 6.0 is required.

Depending on the configuration, full administrator rights are required for installation.

If the automation software STEP7 or SICAM plusTOOLS is used on same computer, then the following must apply to the installed versions for compatibility reasons:

Current:

DIGSI 4.60, SICAM PAS 5.00 / 5.10, SICAM SAS 5.01 / 5.10
STEP7 5.20 (with SP1 + Hotfix 3, incl. CFC 6.0 + Hotfix 4, SIMATIC NET V6.1)

Previously:

DIGSI 4.50, SICAM 5.00, STEP7 5.20 incl. SP2 (incl. CFC 6.0)

DIGSI 4.40, SICAM 4.01, STEP7 5.10 incl. SP3 (incl. CFC 5.2)

DIGSI 4.30, SICAM 4.00, STEP7 5.10 (incl. CFC 5.20)

DIGSI 4.20/4.21, SICAM 3.10, STEP7 5.00 (incl. CFC 5.10)

DIGSI 4.00/4.10/412, SICAM 2.00/2.10, STEP7 4.20 (incl. CFC 4.20)

Note:

1. You have to use DIGSI 4.5 to operate SIPROTEC devices with version V4.5 and higher, DIGSI 4.6 to operate SIPROTEC devices with version 4.6.

2. DIGSI 4 is downward compatible: This allows you to work with device files from older DIGSI versions. DIGSI 4 is not upward compatible: It is not possible to edit CFC charts opened with DIGSI 4.5 with an older DIGSI version. It is not possible to convert CFC charts to an older version; even if the chart was originally created with that version.

3. DIGSI 4.60 is compatible to SICAM plusTOOLS V5 but not to older plusTOOLS versions (V3/V4): It is not allowed to install DIGSI 4.60 and SICAM plusTOOLS V3/V4 on the same PC. If you want to add devices to an older SICAM project, there are several possibilities:

a) For the devices the firmware version must be smaller than V4.5 (e.g. V4.4). These devices can be operated with DIGSI 4.40 (compatible to SICAM plus TOOLS V3/V4). You can order the devices with firmware version V4.4. For devices already in use, it is possible to install V4.4 instead of V4.5.

b) If you require a V4.5 device or a V4.6 device (due to new functions of the device), which requires DIGSI V4.60, proceed as follows:
- Install DIGSI V4.60 on another PC (PC 2) together with the new device driver.
- Archive the project and copy the archive from PC 1 to PC 2.
- Add the new device to the project.

- Parameterize and commission the device.
- Configure the system interface of this device.
- Export the settings of the system interface and copy this export to PC 1.

Otherwise, you have to import all devices into plusTOOLS V5 and check the station afterwards.

4 What's New Compared with Version 4.50

- New communication norm IEC61850:
  The IEC61850 System Configurator and devices compatible to IEC16850 allow you to configure and parameterize IEC61850 stations. This tool allows you to manage subnets, network communicators and their IP addresses and to connect the information items of different communicators.
- Localization of DIGSI 4.60 for the languages English, Spanish, Italian and French:
  All components of DIGSI 4.60 can be operated in German, English, Spanish, Italian and French.
  It is possible to change the DIGSI operating language at any time (menu item „Options -> Customize„). This operating language does not concern the device specific texts on the PC; use the "Property" pages of the device to change the language of these texts.
- Transferring data generated for analog protection devices to new digital SIPROTEC devices:
  An EXCEL sheet allows you to enter the settings of analog protection devices. One button click generates an XML file to be imported into a SIPROTEC 4 device.
  The EXCEL security level ("options > Macros > Security") must not be set to high.
  Please accept the security warning when opening the sheet - this warning only applies to the macros converting the data into XML format.
- Improved CFC plausibility check: During the compilation of a CFC chart a new check is implemented: CFC blocks in not suitable priority classes (e.g. Timer in MW_BEARB) will be detected and an error message will be generated.
- Testing CFC plans via tracing in the device:
  For devices accessible with the "Web-Monitor" it is possible to test your CFC charts. This requires only to load a specific file created by the CFC Editor from the device or the PC. You can now use the Web Monitor to trace the relevant signals. Use the SIGRA plugin to view the signals in a binary tracking diagram.
- XML import:
  It is now possible to import protection parameters generated with other programs or an XML editor into an existing parameter set (when the device is selected in the DIGSI manager).
- Taggings treated like indications:
  From now on, taggings (internal indications) provide the same properties as known from indications for switching objects (e.g. interlocking conditions).

5 Contents and Structure of the CD-ROM

- CD "Program":
  - DIGSI 4 (incl. optional components) in German and English.
  - Readme.txt files with important additional information in English.
  - Acrobat Reader for reading the *.PDF files.
  - WinZIP, program for archiving of projects.

  Note: this Version is distributed as shareware and has to be licensed by the customer.
  - Templates in the *.DOC format for labelling strips of the LEDs and functions keys on the device.
  - Program for retrieving archives created with DIGSI 3.
  - EXCEL sheet “Parameter sheet for replacing old analog devices” (German, English) to transfer data generated for analog protection device to new digital SIPROTEC devices.
  - Program to install “Web Monitor”. This tool allows you to access SIPROTEC 4– devices via MS Internet Explorer (i.e. without DIGSI), incl. online help and SIGRA plugin.
- CD "Documentation":
  - DIGSI manuals in the *.PDF format (usually in English).
  - SIPROTEC manuals in the *.PDF format (usually in English) on the 2nd CD-ROM "Manuals".
- CD "Device Drivers":
  - All released device drivers.

Note:
This product includes software developed by the Apache Software Foundation (<http://www.apache.org/>).

6 Installation

Note:

Depending on the configuration of your operating system you require full administrator rights for installation.

If an older version of DIGSI 4 is already installed, it must first be de-installed using the deinstallation program of MS Windows (see below).

Caution:
Following de-installation the computer must always be rebooted!

If you want to use STEP7 or SICAM on the target PC, you have to install these software packages before installing DIGSI.

Installation

- Insert the CD-ROM “Program” into the CD-ROM drive of your operating PC. Normally, the DIGSI Setup menu is now automatically opened. Click on the "DIGSI 4.6" button.

If this is not the case:

- Click the Windows Start menu and select the "Run..." item.
- Enter the following text in the text box:
  x:\Setup.exe
  (x stands for the drive letter of your CD-ROM drive).
- Click on OK.
- Follow the on-screen instructions of the setup program:
  In a selection menu you can now select whether you want to carry out a full installation (initial installation) or only a partial installation (option packages, later installation of device drivers). You always require the serial number indicated on the product card provided.

  Caution:
  Avoid special characters in the path like blanks, hyphens and others.

7 Uninstalling the Program

With the de-installation program of Windows you remove DIGSI 4 with all optional components from your PC. During the de-installation you remove all data installed by the installation program of DIGSI 4 (user-specific data remain unchanged):

- Select "Settings > Control Panel" in the Windows Start menu and then "Software" (in Windows 2000 "Add/Remove").
- Select "DIGSI Devices" from the list.
- Click on "Remove". This starts the deinstallation program. Follow the instructions.
- Repeat steps 2. and 3. for the item "DIGSI 4".

8 Additional Orders

If you have not ordered components of DIGSI 4 that you now do want to install, then order these with specification of the serial number. Then you will receive a new serial number with which these components are made available.

9 Other Information

- Please observe that you are not permitted to install the DIGSI copy from this CD-ROM on more than 10 computers.

Internet:

To also always be up to date in the future, please use the offer at our download website in the Internet at the address:

http://www.siprotec.de (in German)
http://www.siprotec.com (in English)

DIGSI Courses:

If you are interested in taking a DIGSI course, please contact your sales partner or our course office by calling:

+49 - 911 - 433 7005

DIGSI support:

If you have problems with DIGSI, contact our Customer Care Center.

Phone: +49 - 180 - 524 7000
Fax: +49 - 180 - 524 2471
eMail: support@ptd.siemens.de

We are sure that you will continue to work successfully with DIGSI 4.

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10 Known Problems

- Changing the PC device language: No Effect on the CFC Border

  Situation:
  You can change the PC device language of the DIGSI 4 Manager any time. English and German are offered.

  Caution:
  If the PC device language is changed, the standard device texts in the edge bars of a CFC chart remain in the language originally set.
  You can only obtain these texts in the desired language when you delete and then restore every connection to the edge bar.

- Operation by several DISGI users at the same time (No. 911)

  Situation:
  It is possible to operate a device via the front or the rear interface. Even for bus users (PROFIBUS FMS, ETHERNET), concurrent access by several users is possible.

  Caution:
  A prioritisation of the interfaces is currently missing so that access via the one interface can influence the simultaneous communication via the other (changes in the baud rate, transfer of parameters).

- Inserting a Device: "Server is Overloaded"

  Situation:
  Devices are managed in the DIGSI 4 Manager. They can be selected from the device catalogue and inserted in a project.

  Caution:
  When inserting a device with a large range of functions (e.g. 7SJ63...), the message "Server is at full capacity" may appear. This message is meaningless: The device will still be inserted correctly.

- Hierarchical CFC Charts Cannot Be Used

  Situation:
  With the new version, the ability to save modules and their circuitry in a new macro module (hierarchical charts) is offered in the CFC option package.

  Caution:
  At present, such blocks cannot be used in different charts.

- Supposedly Missing Projects (No. 13232)

  Situation:
  You have installed and started the new version, and now you want to open a project edited previously.

  Caution:
  Projects which have just been created, are initially not visible. Select "Open" and then the button "Search...". In the next dialogue you mark the desired projects and confirm them with "OK".

- Compatibility key will not be updated (No. 12531)

  Situation:
  A PROFIBUS-FMS device is imported to DIGSI as a SIPROTEC device, edited offline and then saved.

  Caution:
  During an export for SICAM plusTOOLS (COMIED, V2.10.09), the compatibility key is not also transferred, i.e. is not updated. Therefore, "Reorganise" ("File" menu in Manager) and save the device before you then export it again for SICAM plusTOOLS.

- DIGSI 4 Manager does not react

  Situation:
  An existing modem connection is interrupted (e.g. by disconnecting the cable from the PC modem).

  Caution:
  The DIGSI 4 Manager then no longer reacts, as the modem connection is not re-established. Close the so-called ComTask (icon in system area of the Windows task-bar).

- No Comments During Export/Import

  Situation:
  A device is exported and then re-imported.

  Caution:
  All comments get lost during this procedure.

- No PROFIBUS FMS connections

  Situation:
  In the COM PROFIBUS configuration, a connection for SICAM RECPRO is configured.

  Caution:
  The DIGSI-PROFIBUS-FMS connections then no longer work.
  In the COM-PROFIBUS configuration for the CP, VFD 2 must be used for RECPRO. For connections from SIPROTEC devices, the VFD 1 is to be used when available (otherwise 3).

- Unexpected result for Offline/Offline comparison

  Situation:
  The Offline/Offline comparison will find up to 1,000 differences for devices that were only copied from the original device or created as variants.

  Caution:
  The copy/variant must be opened once with DIGSI. Not until then does the comparison reliably provide the correct result.

- Comparison of devices with user-defined information

  Situation:
  Although it appears to the user that configurations are identical, differences may be displayed when configuring user-defined information during the comparison.

  Caution:
  The reason for this is that this information has been inserted in the matrix in a different order.

- Icons of the busbar protection system editor can be copied

  Situation:
  The user-defined icon libraries of the system configuration cannot be exported within the editor from one computer to another computer.

  Caution:
  Copy the user-defined libraries directly in the file system using the MS Explorer. User-defined dynamic icons are located in the directory
  ..\Digsi4\SSLib\SSData\dyndin
  User-defined static icons are located in the directory
  ..\Digsi4\SSLib\SSData\stauser.

- Object properties for Offline/Offline comparison

  Situation:
  With Offline/Offline comparison object properties of the matrix information are not compared.

- Crash of the V2-device operation (DOS-DIGSI) (No 52915)

  Situation:
  The V2-device operation (DOS-DIGSI) crashes in Windows XP. This is due to an incorrect setting of the compatibility mode.

  Caution:
  Open Explorer and select the file "dosdigsi.exe" in the path x:\...\Digsi4\Digsi2
  (x stands for the drive on which DIGSI is installed). Open the properties and select “Windows 95” in the tab “compatibility”. Settings on the tab "Options" may also have to be adapted.

- No network printer for V2 operation (No. 53005)

  Situation:
  During V2 operation (DOS-DIGSI) it is not possible to route to network printers.

  Caution:
  Printers available in a network must be made accessible by means of the DOS command "NET USE LPT1 = <driver incl. path>".

- Incomprehensible error messages for modem communication (No. 438)

  Situation:
  Working with a modem communication, incomprehensible error messages (and numbers) may occur. These messages are generated by a windows component (TAPI) used in DIGSI.

  The following error codes are known:

  0x80000005
  The call could not be executed due to a busy line or a missing dialling tone, for example.

  0x80000048
  Local modem not found due to a busy interface, for example.

  0x8000004B
  If this error occurs while initializing a modem, you have to send a reset command (AT&F or ATZ, depending on the modem type) to the modem. This error may also occur if the interface is busy while attempting to initialize a modem.

  0x80000022
  An invalid character was entered in the phone book: For example, a letter or an invalid country code.

- Baud rate incorrect (No. 359)

  Situation:
  When a modem connection has been established, in rare cases an incorrect baud rate may be displayed in the status line. The used baud rate is correct, only the displayed value is incorrect.

- Modem settings are changed by DIGSI (No. 285)

  Situation:
  In a project, several modems are used based on the same modem driver. In rare cases, the settings of one modem may change the settings of another modem. The same behavior applies for connections.
  This Problem only occurs in the operating systems MS Windows 2000 and XP Professional Edition. More Information at our down-load web site (see above).

- No measured value update for PROFIBUS FMS (No. 391, 10566, 10614, 13052))

  Situation:
  If windows for measured values are open for a longer time (1 hour) the values may not be updated. DIGSI device editor may crash.
  This error applies for PROFIBUS FMS connections only.

  Caution:
  If DIGSI crashes, you have to close the task in the task line.

- Working with DIGSI requires administrator rights (No. 666)

  Situation:
  For a user without administrator rights (MS Windows 2000 and MS Windows XP), it is possible to start DIGSI; working with DIGSI causes error messages.

  Caution:
  DIGSI PC users must have administrator rights.

- Editing of several devices with protocol mappings not possible
  (No. 381, 384, 982, 988)

  Situation:
  If you edit several devices with protocol mappings (PROFIBUS DP, MODBUS, DNP3) at the same time on a PC, the following errors may occur:
  - If you configure an information to the system interface and cancel the dialog, DIGSI device editor may crash.
  - If you change a mapping, the changes will not be transferred to the device.
  - It is not possible to configure an information to the system interface (source or target).

  Caution:
  Only one device with protocol mappings may be opened for editing at the same time.

- Upgrading a SIPTROTEC device to IEC61850 (No. 1877)

  Situation:
  Devices with firmware version 4.50 may be upgraded for IEC61850 communication via the installation of a communication module. This requires a firmware and a parameter set upgrade.

  Caution:
  When the firmware is upgraded and the communication module is installed, proceed as follows:
  - Upgrade the parameter set (use the function provided in (use the function provided in DIGSI manager)
  - Register the communication module via the property pages of the device (tab "Communication modules").
  Now, you can use the device as IEC61850 communicator.

- "Display after fault" not in the Upgrade mechanism (No. 2296)

  Situation:
  While upgrading a parameter set from version V4.5 to V4.6 the settings for "Display after fault" are lost.

  Caution:
  You have to configure the indications parameterized before the upgrade again to be used for "Display after fault".

- DIGSI Device Editor crashes when deleting an information still configured to CFC (No. 2193)

  Situation:
  If you delete an information in the Configuration Matrix that has already been inserted and interconnected in a CFC chart, the DIGSI Device Editor crashes while saving the parameter set. You have to exit and restart DIGSI. All changes in the parameter set since your last save will be deleted or replaced with default values.

  Caution:
  Before deleting an information in the Configuration Matrix, please check if this information is already interconnected in a CFC chart. In this case, please delete the information in the CFC chart first and afterwards in the Configuration Matrix.