

# S7-200 OPC Server V1.0 SP1

The following Readme file contains important information for the installation and use of the S7-200 OPC Server software. You should read this information before you install and operate the software.

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## 1 Description

The OPC (OLE for Process Control) Server for SIMATIC MicroComputing provides open access (using an OPC interface) to the process data in the S7-200 controller.

## 2 Hardware Requirements

To run the S7-200 OPC Server, the following configuration is recommended for your computer (PC):

- Pentium processor, 166 MHz (or faster)

**Note:** Using the PC/PPI Cable communication option under multi-master mode on a Windows ME or a Windows 2000 operating system, requires at least a Pentium II 400 MHz class computer.

If you use the PC/PPI Cable communication option on a Windows 95 or a Windows 98 operating system, we recommend a Pentium II 400 Mhz class computer or faster.

- 64 Mbytes RAM

- VGA monitor, keyboard, and mouse which are supported by Microsoft Windows NT/2000 or Windows 95/98/ME
- Approximately 20 Mbytes of additional memory on your hard disk (plus an additional 20 Mbytes for temporary use during the installation process)
- At least 1 Mbyte free memory capacity on drive C for the Setup program. (Setup files are deleted when the installation is complete.)

### 3 Software Requirements

The S7-200 OPC Server is a 32-bit application that requires either of the following operating systems:

- Microsoft Windows NT 4.0 with Service Pack 6 (or higher)  
Service Pack 6 is available as a free download from Microsoft ([www.microsoft.com](http://www.microsoft.com))
- Microsoft Windows 2000 with Service Pack 1 (or higher)  
Service Pack 1 is available as a free download from Microsoft ([www.microsoft.com](http://www.microsoft.com))
- Microsoft Windows 95 with Service Pack 1 (or higher) and Microsoft Internet Explorer 5 (or higher), Windows 98 or Windows ME  
Microsoft Windows 95 Service Pack 1 is available as a free download from Microsoft ([www.microsoft.com](http://www.microsoft.com))

**Note:** The S7-200 OPC Server has been tested successfully on the following systems:  
Windows NT 4.0 SP6, Windows 2000 SP1, Windows 95c, Windows 98 SE, Windows ME.

Shifting to hibernation mode under **Microsoft Windows 2000 and Microsoft Windows Millennium** is not supported by the S7-200 OPC Server if connections to the control engine are open.

### 4 Addendum to the Software Product Certificate

The Software Product Certificate is part of the Agreement concerning the use of software products acquired against one-time payment which is included in the consignment. It lists, among other things, the licensed software components and their guarantee class.

The customer is not authorized to make modifications to the software during the period of contract.

In any correspondence, refer to the identification number shown on the Software Product Certificate.

### 5 Documentation for the S7-200 OPC Server

The *OPC Server Interface for SIMATIC MicroComputing User Manual* provides you with an overview of interfaces of the OPC server and should be read before working with this product. An electronic version of the *OPC Server Interface for SIMATIC MicroComputing User Manual* is installed on your computer when you install this software.

## 6 Installing the Software

### 6.1 Installing the S7-200 OPC Server

**Note:** In addition to the 20 Mbytes on your hard drive for the S7-200 OPC Server software, the installation procedure requires an additional 20 Mbytes of temporary space for copying files. This additional temporary space is used only during the installation procedure.

Use the following procedure to install the software:

1. Insert the CD-ROM.
2. Use the Windows Start menu (**Start > Run**) to open the Run dialog box.
3. Click the Browse button in the Run dialog box and select the Setup.exe icon on the CD-ROM.
4. Double-click the SETUP.EXE icon to enter it into the Run dialog box, then click **OK** to start the Setup program. Follow the instructions displayed by the Setup program.

### 6.2 If a Version of S7-200 OPC Server Is Already Installed...

If the Setup program finds another version of the S7-200 OPC Server on the computer, the program reports this and asks you which of the following you want to do:

- Abort the installation so that you can uninstall the old version of the S7-200 OPC Server and then start the installation again.
- Continue the installation and overwrite the old version with the new version.

Your software will be better organized if you uninstall any older versions before installing the new version. Overwriting an old version with a new version has the disadvantage that if you then uninstall, any remaining components of the old version are not removed. If you uninstall the older version of the S7-200 OPC Server, you must reboot your computer before installing the new version.

### 6.3 Uninstalling (Removing) the S7-200 OPC Server

Use the Windows Add/Remove Programs procedure to remove the S7-200 OPC Server:

1. Select the **Start > Settings > Control Panel** menu command to display the Windows NT control panel.
2. Double-click the Add/Remove Programs icon to display the Add/Remove Programs Properties dialog box.
3. Select the entry for "SIMATIC S7-200 OPC Server" and click the Add/Remove button.
4. Follow the instructions of the dialogs to remove the S7-200 OPC Server. (If the Remove Enable File dialog box appears, click the No button if you are unsure how to respond.)

### 6.4 Authorization

During installation, the Setup program checks to see whether an authorization is installed on the hard disk. If no authorization is found, a message appears that the software can be used only with an authorization. If you wish, you can run the authorization program immediately or continue the installation and execute the authorization at a later date.

**Note:** You must always install the authorization on drive C.

## 7 DCOM configuration for Windows 95/98/ME

Windows 95/98/ME does not provide the **dcomcnfg** utility. Running the **dcomcnfg** utility on the above operating systems may require additional installation of **dcom95.exe** and **dcm95cfg.exe** (for Windows95) or **dcom98.exe** and **dcm95cfg.exe** (for Windows98/ME). These files are available as a free download from MicroSoft ([www.microsoft.com](http://www.microsoft.com)). To configure your computer as a client or as a server for Windows 95/98/ME perform the following steps:

1. Use the Windows Start menu (**Start > Run**) to open the Run dialog box.
2. In the Run dialog box, enter **dcomcnfg** and click on the OK button.
3. In the "Default Properties" tab of the "Distributed COM Configuration Properties" dialog box
  - Check the "Enable Distributed COM on this computer" option
  - Set The Default Authentication Level to "Connect".
  - Set the Impersonation Level to "Identify".
4. Click "OK" to enter these changes and to close the Distributed COM Configuration Properties dialog box.

## 8 Licensing Information

Siemens grants a license to use the enclosed software to the original purchaser. Copies may be made for back-up purposes only. Copies made for any other purpose are expressly prohibited, and adherence to this requirement is the sole responsibility of the purchaser.

Siemens makes no warranty, expressed or implied, with regard to this software. All implied warranties, including the warranties of merchantability and fitness for a particular use, are hereby excluded.

Siemens' liability is limited to the purchase price. Under no circumstances shall Siemens, or the authors of this product, be liable for any incidental or consequential damages, nor for any damages in excess of the original purchase price.

## 9 Known Problems

### 9.1 Handling of OPC Errors in Visual Basic

OPC methods return error codes in a HRESULT (a Long variable, in hexadecimal format). For Visual C, error conditions are handled with the HRESULT. For Visual Basic, error handling is written to the VB error object (ERR). You must add code to your VB program to access the error codes from the OPC interface.

### 9.2 Connections to the Control Engine

The S7-200 CPUs 221, 222, 224, and 226 support a maximum of 6 connections (refer to

the documentation of your control engine for detailed information). One of these 6 connections is reserved for OP. Using MPI/Profibus on a DP interface (e.g. EM277), the remaining 5 connections are available. Using the Port interface (Port 0/1) over MPI (e.g. CP5611), only 3 connections can be opened at a time. The PPI protocol supports only one connection to the control engine at a time. Therefore, you cannot use more than one OPC client or more than one Data control over the PPI network at a time.

**Note:** The connection supported by the PPI protocol includes the connection made by STEP 7-Micro/WIN. If the PPI protocol is used, remember to close STEP 7-Micro/WIN before opening the connection to the control engine.

### **9.3 Troubleshooting: Delayed Responses of Software Using COM**

Your DCOM configuration can affect local COM operations. For example, setting the "Default Authentication Level" to "None" (instead of to "Connect") can delay the connections to software applications for up to 6 minutes as the Windows operating system performs its security checking. This affects not only the S7-200 OPC Server and WinAC products (such as Computing or WinLC), but other software applications that use COM (such as Microsoft Word).

### **9.4 Correct Declaration of the Qualities and TimeStamps Parameters of the SyncRead Method of the Automation Interface of the OPC Server**

The Automation interface of the MicroComputing OPC server contains an error that can generate a memory leak. The correct declaration for the Qualities and TimeStamps parameters of the SyncRead (synchronous read) method is:

```
Dim Qualities As Variant  
Dim TimeStamps As Variant
```

The documentation for the OPC server incorrectly identifies these parameters as "Qualities() as Variant" and "TimeStamps() as Variant".

### **9.5 Using a PC/PPI Cable (Windows 95/98/ME)**

In order to use a PC/PPI cable with S7-200 OPC Server running on Windows 95/98/ME, you must decrease the size of the receive buffer for the COM port. Use the following procedure:

1. From the Windows desktop, right click the My Computer icon and choose the Properties menu item.
2. From the System Properties dialog box, select the Device Manager tab.
3. From the Device Manager tab, locate and double-click the Ports icon.
4. From the expanded Ports branch, locate and double-click the Communication Port icon for the specific COM port.
5. From the Communication Port Properties dialog box, choose the Port Settings tab.
6. From the Port Settings tab, click the Advanced button.
7. Examine the slider for Receive Buffer. If it is not at the lowest possible setting (1), move it to the lowest setting.
8. Choose OK to confirm your selections and close the open dialog boxes.

## **9.6 Modem connections**

Modem connections are currently not supported by the S7-200 OPC Server.

## **9.7 Addressing the S7-200 memory area "Counter"**

Only the data type "WORD" (default setting) can be used to address the memory area "Counter" on a S7-200 PLC.

## **9.8 Modification of the properties of the access point using the "Set PG/PC interface" dialog**

The properties of the access point in the "Set PG/PC interface" dialog should not be modified if a connection to the control engine is open.

# **10 Contacting Customer Support**

## **10.1 North America**

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- [http://www.ad.siemens.de/support/html\\_76/index.shtml](http://www.ad.siemens.de/support/html_76/index.shtml)

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