

# SIEMENS

## SIMATIC

### SIMATIC IPC Remote Manager

#### Compact User Manual

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### 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.

|  |
|--|
|  <b>DANGER</b>        |
| indicates that death or severe personal injury <b>will</b> result if proper precautions are not taken. |
|  <b>WARNING</b>       |
| indicates that death or severe personal injury <b>may</b> result if proper precautions are not taken.  |
|  <b>CAUTION</b>       |
| indicates that minor personal injury can result if proper precautions are not taken.                   |
| <b>NOTICE</b>  |
| 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.

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Note the following:

|  |
|--|
|  <b>WARNING</b>   |
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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.

# Introduction

Intel® Active Management Technology (Intel® AMT) is an Intel technology for the remote maintenance of SIMATIC Industrial PCs (IPCs) with AMT technology using a management PC. It is not necessary to install an operating system on the SIMATIC IPC with Intel® AMT. Intel® AMT provides numerous functions, e.g.:

- **Keyboard Video Mouse (KVM) Redirection**

KVM connections are always possible using the KVM server that is integrated in the firmware. KVM enables access to IPCs with a corrupted or no operating system as the KVM server is integrated in the AMT hardware. KVM enables you to reboot a remote computer and make changes to its BIOS settings.

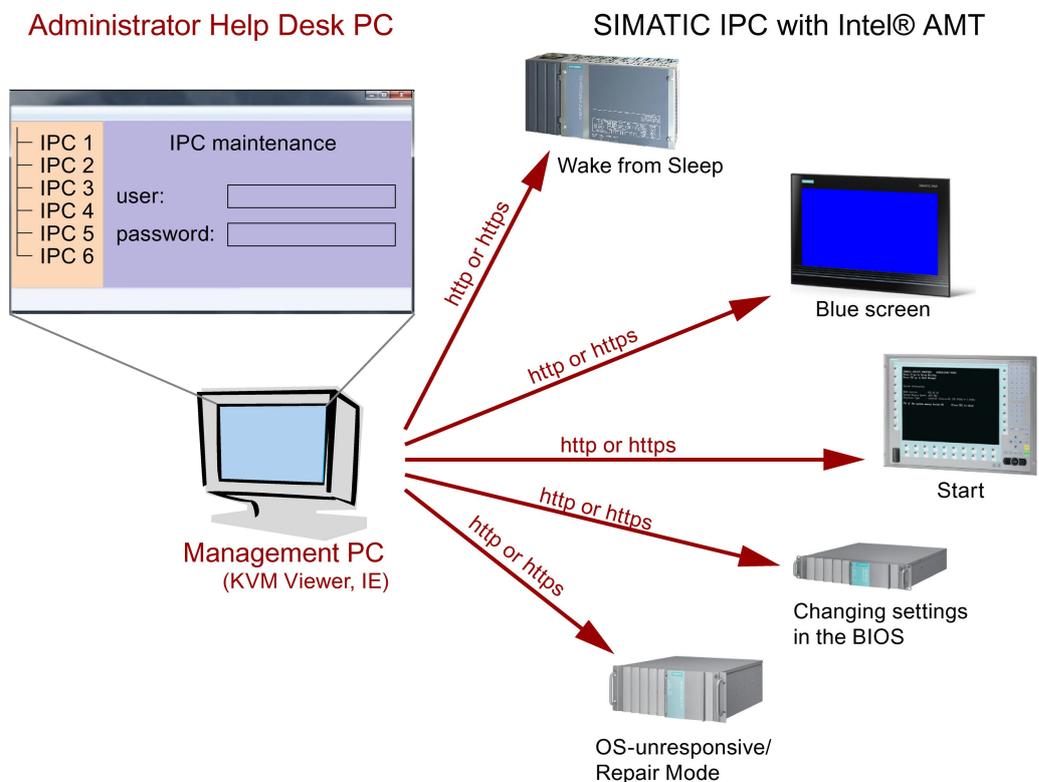
- **Remote power management**

SIMATIC IPC with Intel® AMT can be switched on and off or restarted using another PC.

- **IDE redirection**

An image on the management PC can be emulated on the SIMATIC IPC with Intel® AMT and integrated and used as a DVD drive or floppy drive . If the image is bootable, you can also boot the SIMATIC IPC with Intel® AMT from it.

The following figure shows remote maintenance of SIMATIC IPCs with Intel® AMT, e.g. for troubleshooting a corrupt operating system or incorrect BIOS settings:



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## Conditions

### 1.1 Hardware

Intel® AMT can be used only on SIMATIC IPCs with Core i5, Core i7 and Xeon processors. Other processors (such as Celeron, Core i3 or Core 2) are not supported.

Intel® AMT can only be used via the Ethernet interface 82577LM / 82579LM / WGI217LM / I217LM.

The following SIMATIC IPCs are Intel® AMT-capable when equipped with one of the listed CPUs:

| IPCs with Intel® AMT support | BIOS version, at least |
|------------------------------|------------------------|
| SIMATIC IPC627C              | V15.02.05              |
| SIMATIC IPC827C              | V15.02.05              |
| SIMATIC HMI IPC677C          | V15.02.05              |
| MC PC BOX V5 xxx             | V15.02.05              |
| SIMATIC IPC647C              | V15.01.05              |
| SIMATIC IPC847C              | V15.01.05              |
| SIMATIC IPC627D              | All                    |
| SIMATIC IPC827D              | All                    |
| SIMATIC IPC677D              | All                    |
| SIMATIC IPC647D              | All                    |
| SIMATIC IPC847D              | All                    |
| SIMATIC IPC427D              | All                    |
| SIMATIC IPC477D              | All                    |
| SIMATIC IPC547D              | All                    |
| SIMATIC IPC547E              | All                    |
| Field PG M4                  | All                    |

### 1.2 Software

At least the BIOS version specified in Table 1-1 must be installed to enable the use of Intel® AMT on the listed devices.

SIMATIC IPC Remote Manager on the management PC supports the following Windows operating systems:

- Windows XP SP3 (32-bit)
- Windows Vista SP2
- Windows 7 Ultimate / Windows 7 Ultimate SP1 (32-bit/64-bit)
- Windows Embedded Standard 7
- Windows Server 2003 R2
- Windows Server 2008 (32-bit)
- Windows Server 2008 R2 (64-bit)

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Sign up for our product-specific newsletter to receive the latest information on product updates. For more information, see under ([http://www.siemens.de/automation/csi\\_en\\_WW](http://www.siemens.de/automation/csi_en_WW)).

## Disclaimer for third-party software updates

This product includes third-party software. Siemens AG only provides a warranty for updates/patches of the third-party software, if these have been distributed as part of a Siemens software update service contract or officially released by Siemens AG. Otherwise, updates/patches are undertaken at your own risk. You can find more information about our Software Update Service offer on the Internet at Software Update Service (<http://www.automation.siemens.com/mcms/automation-software/en/software-update-service/Pages/Default.aspx>).

## Notes on protecting administrator accounts

A user with administrator privileges has extensive access and manipulation options in the system.

Therefore, ensure there are adequate safeguards for protecting the administrator accounts to prevent unauthorized changes. To do this, use secure passwords and a standard user account for normal operation. Other measures, such as the use of security policies, should be applied as needed.

## Configuring the system

### 2.1 Configuring the BIOS and Management Engine BIOS Extension (MEBx)

#### 2.1.1 Enabling Intel® AMT / basic configuration

For security reasons, Intel® AMT is not enabled on new devices. The Management Engine (ME) is always active.

#### Procedure

##### For IPCxxxD and Field PG M4 devices:

1. If necessary, first reset Intel® AMT to the default status.
2. To open the BIOS selection menu, press the <ESC> key while the device is booting.
3. Open the BIOS Setup using the "Setup Configuration Utility (SCU)".
4. Select the "Active Management Technology Support" command in the Advanced menu.  
For IPC547D and IPC547E devices only: Select "AMT Configuration".
5. Activate the option "Intel AMT Support".
6. For IPC547D and PC547E devices only: Select the "Normal" setting for "MEBx Mode".
7. Exit the BIOS Setup with <F10> key (Save and Exit).

For IPC547D and IPC547E devices only: Exit the BIOS Setup with <F4> key.

##### For IPCxxxC devices:

1. To open the BIOS selection menu, press the <F2> key while the device is booting.
2. Open the BIOS Setup using the "Setup Configuration Utility (SCU)".
3. Select the "Active Management Technology Support" command in the Advanced menu.
4. Activate the option "Intel AMT Support".
5. Activate the option "Intel AMT Setup Prompt".
6. Exit the BIOS Setup with <F10> key (Save and Exit).

## 2.1 Configuring the BIOS and Management Engine BIOS Extension (MEBx)

### Settings in the MEBx

1. Use the arrow keys to select "MEBx" and confirm with the <Enter> key.
2. Select "MEBx Login".
3. Enter the default password "admin".

Change the password. The new password must comprise:

- At least eight characters
- An upper case letter
- A lower case letter
- A number
- A special character (! @ # \$ % ^ & \*)
- The underscore "\_" and space characters are valid in the string but do not increase the complexity of the password.

---

#### Note

If the password is no longer available, you must reset the Intel® AMT to the default settings, see [Resetting the Intel® AMT to the default settings and disabling AMT \(Page 8\)](#).

Backup the password to protect it against loss.

---

4. Switch to the "Intel (R) AMT Configuration" submenu and enable "Manageability Feature Selection".
5. Switch to the "Intel(R) ME General Settings" submenu and enable access via the network with "Activate Network Access".
6. Confirm the dialogs that appear with "Y".

Drivers are automatically installed once as required in the subsequent restart.

### 2.1.2 Resetting the Intel® AMT to the default settings and disabling AMT

If Intel® AMT has already been configured, it is advisable to reset Intel® AMT to the default settings. One effect of resetting to the default settings is that Intel® AMT is disabled.

You can skip this point if you have a new IPC in the factory state.

#### Procedure

Proceed as follows to reset the Intel® AMT to the default values:

1. Press "F2" in the boot sequence to open the BIOS.
2. Select the "Active Management Technology Support" command in the Advanced menu, for an IPC547D/IPC547E select "AMT Configuration".

3. Set "Un-Configure ME" or "Un-Configure AMT/ME" to Enabled.
4. Exit the BIOS with "F10" (Save and Exit).  
You can exit the IPC547D/547E with "F4".

The following prompt will appear after an automatic restart:

```
Found unconfigure of Intel(R) ME
Continue with unconfiguration (Y/N)
```

5. Confirm this prompt with "Y" to discard all settings in the Management Engine (ME).
6. For IPC627C/827C/677C/647C/847C/427D/477D/Field PG M4, you now need to set the "Un-Configure ME" menu command in the BIOS back to Disabled.

### 2.1.3 Disabling Intel® AMT access to the BIOS

You can prevent Intel® AMT from accessing the BIOS in the following situations:

- When you are no longer using Intel® AMT.
- When you want to ensure that Intel® AMT is not used without authorization.

If you disable access Intel® AMT in the BIOS, note the following:

- The IPC can still be control from the outside the BIOS via AMT.
- To fully disable Intel® AMT, proceed as described in the section "Resetting the Intel® AMT to the default settings and disabling AMT (Page 8)".

#### Procedure

1. First reset Intel® AMT to the default settings.
2. Open the BIOS selection setup.
3. Select the "Active Management Technology Support" command in the Advanced menu.  
For IPC547D and IPC547E devices only: Select "AMT Configuration".
4. Clear the "Intel AMT Support" option.  
For IPC547D and IPC547E devices only: Select the "Normal" setting for "MEBx Mode".
5. Exit the BIOS Setup with <F10> key.  
For IPC547D and IPC547E devices only: Exit the BIOS Setup with <F4> key.

#### See also

Resetting the Intel® AMT to the default settings and disabling AMT (Page 8)

### 2.1.4 Configuring the IP address manually

The IP address and subnet mask must be assigned manually if no DHCP server is available.

#### Procedure

Proceed as follows for this:

1. Reboot the IPC. The following message appears briefly on the display at the end of the self-test:

`Press ESC for boot options`

2. Open the BIOS selection setup.
3. Use the arrow keys to select "MEBx" and confirm with the <Enter> key.
4. Alternatively, you can open the MEBX with the key combination <Ctrl+P>.
5. For IPCxxxC devices only: Switch to the "Intel(R) ME General Settings" submenu. Alternatively, you can switch to the "Intel(R) AMT Configuration" submenu.
6. Select "Network Setup > TCP/IP Settings > Wired LAN IPV4 Configuration".
7. Make the following settings in this submenu:

- DHCP Mode = Disabled
- IPV4 Address = desired IP address
- Subnet Mask Address = desired subnet mask

Optional settings:

- Default Gateway Address = address of the default gateway
- Preferred DNS Address = primary DNS server
- Alternate DNS Address = secondary DNS server

## 2.1.5 Configuring the host name

The host name and domain of Intel® AMT can be managed separately from the installed operating system. The host name must first be specified in order for Intel® AMT to be accessible via a host name even when the installed operating system is not running.

### Procedure

Proceed as follows to specify the host name and domain of Intel® AMT:

1. Reboot the IPC. The following message appears briefly on the display at the end of the self-test:

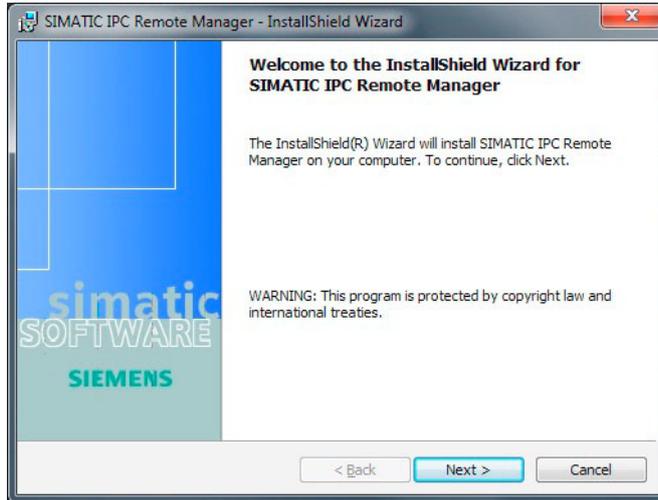
```
Press ESC for boot options
```

2. Press <ESC> to open the BIOS selection menu.
3. Use the arrow keys to select "MEBx" and confirm with the <Enter> key.
4. Alternatively, you can open the MEBX with the key combination <Ctrl+P>.
5. Switch to the "Intel(R) AMT Configuration" submenu  
For IPCxxxC devices only: Switch to the "Intel(R) ME General Settings" submenu.
6. Select "Network Setup > Intel(R) ME Network Name Settings".
7. Make the following settings in this submenu:
  - Host Name = desired host name
  - Domain Name = desired domain
  - Shared/Dedicated FQDN:
    - "Shared" when host name and domain match those of the operating system
    - "Dedicated" when AMT are to be given a different host name or domain
  - Dynamic DNS Update = Disabled

## 2.2 Installing the SIMATIC IPC Remote Manager

### Procedure

1. Start installation of the SIMATIC IPC Remote Manager via "Setup.exe".



2. Now follow the instructions in the installation wizard.

Once you have successfully completed this installation, you can open the VNC Viewer Plus of the SIMATIC IPC Remote Manager as follows:

- "Start > Programs > Siemens Automation > Remote Manager > VNC Viewer Plus"

You can find details about operating the VNC Viewer Plus in the section "AMT operation (Page 17)".

## 2.3 Configuring a modem router

### Port forwarding

When the SIMATIC IPC with Intel® AMT connects to the Internet via a DSL modem, you need to configure port forwarding in the DSL modem for the TCP ports 16992 to 16995 on the SIMATIC IPC with Intel® AMT if the SIMATIC IPC with Intel® AMT is going to be controlled remotely via the Internet:

- Port 16992 for HTTP,
- Port 16993 for HTTPS
- Port 16994 for redirection/TCP,
- Port 16995 for redirection/TLS

TCP ports 16992 and 16994 are only suitable for unencrypted connections. First configure Transport Layer Security (TLS) to avoid a security risk. Use a secure password.

## Dynamic DNS

DSL providers usually assign dynamic IP addresses to their subscribers. You can use Dynamic DNS (DDNS) to obtain a static address for the SIMATIC IPC with Intel® AMT. This always allows you to access the SIMATIC IPC with Intel® AMT regardless of the dynamic IP address by means of a fixed "Fully qualified domain name" (FQDN), e.g. PC1.TESTDomain.test.

Details for DDNS setup depend on the DSL modem and DDNS provider. Basically, you have to complete two steps in order to obtain a static FQDN by means of DDNS.

1. Set up an account with a DDNS provider.
2. On the DSL modem, enable DDNS and enter the access and configuration data of your DDNS provider.

## 2.4 Configuring Transport Layer Security (TLS)

Intel® AMT offers the possibility to encrypt communications via the common TLS methods (for example, with the SIMATIC IPC Remote Manager and the Web Interface).

The SIMATIC IPC with Intel® AMT must be configured accordingly. To do this, you need to store a certificate on the SIMATIC IPC with Intel® AMT and in the operating system certificate store of the Management PC. The host name and domain must be defined by the AMT. See "Configuring the host name (Page 11)" for a description.

TLS encrypts the connection between the SIMATIC IPC with Intel® AMT and the management PC. This is not a replacement for a secure password; it only serves to complement it.

The configuration of the SIMATIC IPC with Intel® AMT should only be made via a secure network connection.

### 2.4.1 Management Director Tool

Das Management Director Tool is a program of the Open Manageability Developer Tool Kit (Open MDTK). Open MDTK is available for download from the Internet at the following URL:

Open MDTK (<http://opentools.homeip.net/open-manageability>)

Proceed as follows to create a certificate, load it to the ME and configure the ME for TLS:

### Configuring a SIMATIC IPC with Intel® AMT for TLS

1. Download Open MDTK.
2. Install Open MDTK on the management PC.
3. Start the Management Director Tool.

#### Adding a SIMATIC IPC with Intel® AMT

1. Navigate to the "Network" node in the navigation window.
2. Click "Add Known Computer".  
The "Add Intel AMT Computer" dialog opens.
3. Enter the FQDN and the access information for the desired SIMATIC IPC with Intel® AMT.  
The desired SIMATIC IPC with Intel® AMT is added to the navigation.

#### Creating a root certificate

1. Select "Configuration Server > Certificate Manager" in the navigation.
2. Click "Create Root Certificate".  
The "Certificate Generator" dialog opens.
3. Under "common name", enter the desired name of the root certificates.  
Use your company name for the "Organization name" and the corresponding country for the "Country code".
4. Click "Generate".  
A security prompt appears. You are informed that the root certificate just generated has been added to the certificate store.
5. Confirm the procedure with "Yes".

#### Creating a security profile

1. Select "Configuration Server > Security Profiles" in the navigation.
2. Click "Add Security Profile...".
3. In the next dialog, enter a profile name and confirm with "OK".
4. Select the newly created profile in the navigation.
5. Click on the button behind "Intel® AMT Features".
6. Select the desired functionalities in the following dialog and confirm with "OK".
7. Click on the button behind "Intel® AMT Features".
8. In the next dialog, select "Use TLS Security", and confirm with "OK".
9. Click on the button behind "Intel® AMT Certificate".
10. In the next dialog, select the root certificate you have created from the "Issuer Certificate" drop-down list.

11. Fill in the "Organization name" and "Country Code" fields and set the "Key size" to 2048.
12. Confirm your selection with "OK".
13. By clicking the button next to "Accounts & Permissions", you can optionally add additional user accounts.

#### Assigning a security profile

1. Click on the "Set this profile on computers..." button at the bottom of the application.
2. In the next dialog, select the desired SIMATIC IPC with Intel® AMT and then click on the "Set Profile" button.

### Installing a root certificate on additional management PCs

#### Exporting a root certificate

1. Select the "Configuration Server > Certificate Manager" node in the Manageability Director Tool .
2. Select the root certificate you created.
3. Click "Export".
4. In the next dialog, save the certificate to a USB flash drive.

#### Importing a root certificate

1. On the management PC, double-click on the root certificate on the USB flash drive to open it
2. In the dialog that follows, click "Install Certificate".
3. In the dialog that follows, click "Next".
4. Select "Place all certificates in the following store" in the next dialog.
5. Click "Browse ..." and select "Trusted Root Certification Authorities".
6. Confirm by clicking "OK".
7. Click "Next".
8. Click "Finish".  
A security warning appears and informs you that the selected root certificate has been added to the certificate store.
9. Confirm the procedure with "Yes".

## 2.4.2 Setup and Configuration Software (SCS)

Intel® Setup and Configuration Software is another tool that can be used to configure the SIMATIC IPC with Intel® AMT for TLS and additionally managed in an Active Directory. SCS is available for download from the Internet at the following URL:

Intel® Setup and Configuration Service (<http://software.intel.com/en-us/articles/download-the-latest-version-of-intel-amt-setup-and-configuration-service-scs/>)

SCS requires Windows Server (with the following roles:

- Certificate Services
- Dynamic Host Configuration Protocol(DHCP) Server
- Domain Name System (DNS) Server
- Microsoft SQL Server Express

Setting up SCS and the necessary programs is extremely complex. SCS offers many additional functions for these tasks, e.g. PKI and PSK Provisioning. Using the Manageability Director is a faster and more efficient way to configure a SIMATIC IPC with Intel® AMT for TLS.

You can find detailed instructions on the setup in the Intel® Setup and Configuration Software User Guide at:

Intel® Setup and Configuration Service (<http://software.intel.com/en-us/articles/download-the-latest-version-of-intel-amt-setup-and-configuration-service-scs/>)

### See also

SCS User Guide (<http://www-ssl.intel.com/content/www/us/en/software/scs-user-guide.html>)

## Operating Intel® AMT

Encrypted and non-encrypted connections are established via the SIMATIC IPC Remote Manager/VNC Viewer Plus or the Web interface.

You must first enter the license key before you can use the VNC Viewer Plus of the SIMATIC IPC Remote Manager. If you do not enter a license key, a test version of the software will be available for 60 days. Enter the license key after you install the software with: "Start > Programs > Siemens Automation > Remote Manager > Advanced > Enter VNC Viewer Plus License Key".

### 3.1 Non-encrypted connections

#### 3.1.1 With the VNC Viewer Plus of the SIMATIC IPC Remote Manager

##### Procedure

Proceed as follows:

1. Start the VNC Viewer Plus of the SIMATIC IPC Remote Manager. The "New Connection" dialog appears.



2. In the "New Connection" dialog, enter the following data:
  - Address (FQDN or IP address) of the SIMATIC IPC with Intel® AMT
  - Encryption = None
  - Connection Mode = Intel® AMT KVM
3. Click "Connect".
4. In the next dialog, log on to the user account with the access information that is stored in the Management Engine; see point 8 in the section "Enabling AMT / Basic Configuration (Page 7)".

The required KVM connection to the SIMATIC IPC with Intel® AMT is established.

You can operate VNC Viewer Plus using the toolbar at the top of the window. You can use this toolbar to execute various AMT commands, such as Remote Power Management and IDE Redirection.

3.1 Non-encrypted connections

The figure below shows the toolbar of the VNC Viewer Plus:

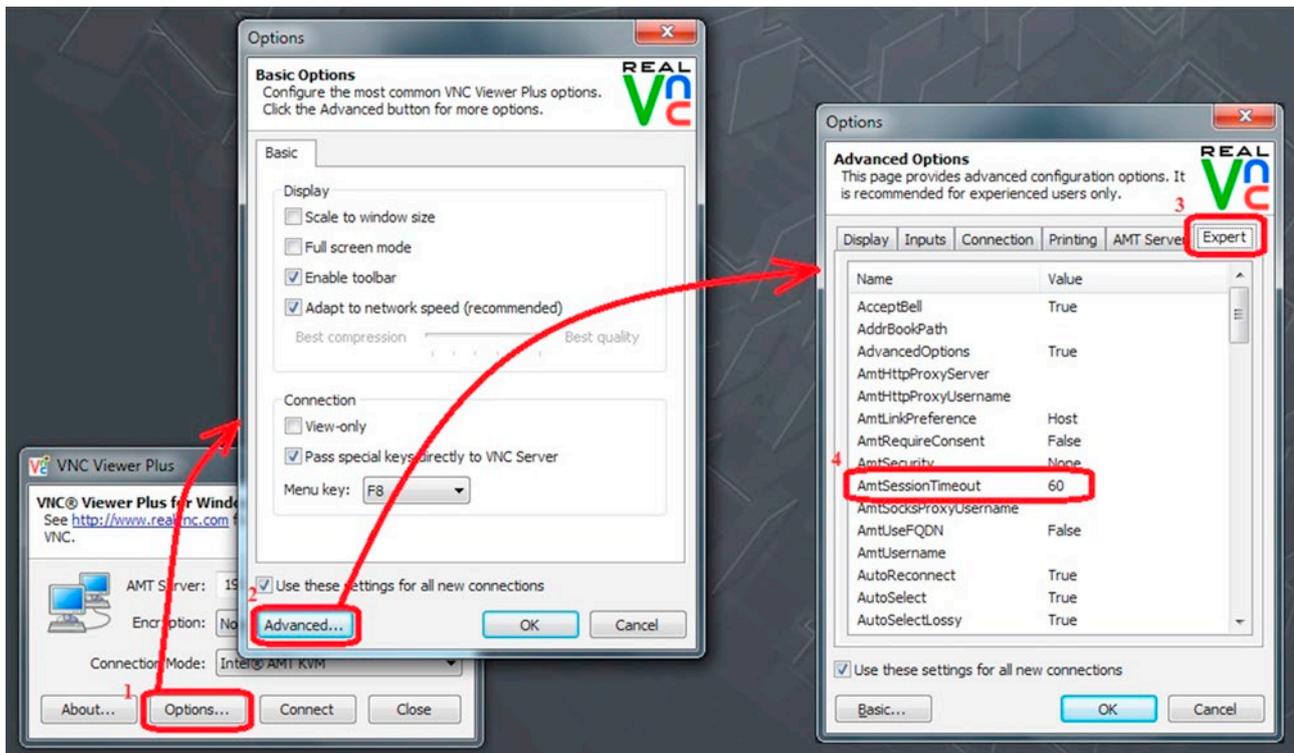


When a non-encrypted connection is opened, it is indicated in the VNC Viewer Plus toolbar by a crossed-out padlock icon and corresponding tool tip. The following figure shows a non-encrypted KVM connection:



Session timeout

The Management Engine will close the KVM connection after a certain time if it is not used (session timeout). This reaction can be adjusted as follows using the VNC Viewer Plus as of version 1.2:



Between 1 minute and 255 minutes can be set as a session timeout. 60 minutes are set in the example above. 0 disables session timeout; the KVM connection is never be automatically closed in this case. A value of -1 is used as the default for AMT.

| AmtSessionTimeout value | Reaction                        |
|-------------------------|---------------------------------|
| 1 to 255 minutes        | Timeout after a configured time |
| 0 minutes               | Timeout disabled                |
| -1 minute               | Timeout as AMT default value    |

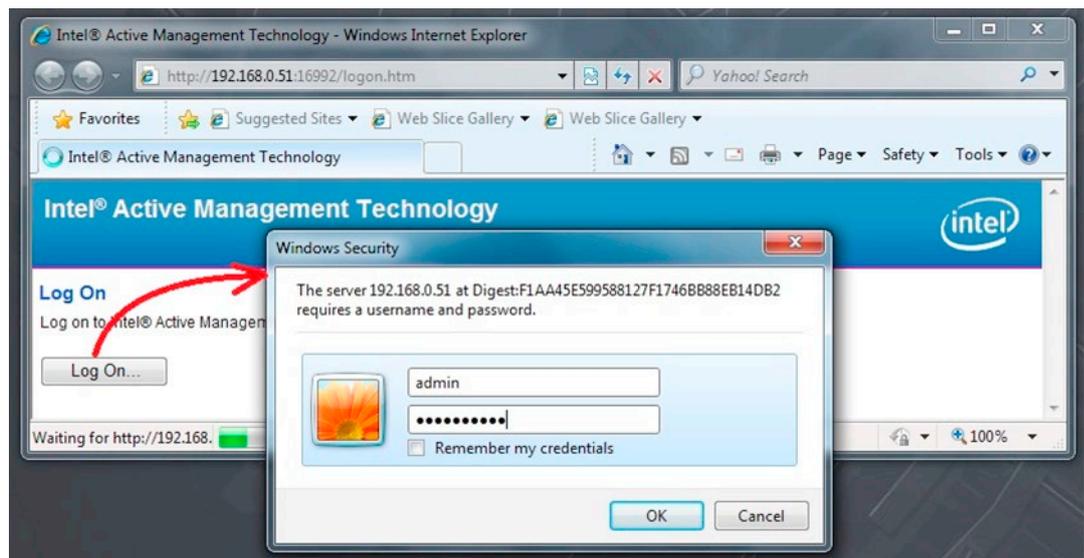
### 3.1.2 With the Web interface

You can also use a Web interface to operate Intel® AMT in addition to the KVM connection.

#### Procedure

Proceed as follows:

1. Enter the following URL in the WEB browser: "http://IP address:16992" or "http://IPC\_Name:16992". The following website is displayed:



2. Click the "Log On" button.
3. In the next dialog, log on to the access information that is stored in the Management Engine.

Once you are logged on, the Web interface provides detailed system information on the SIMATIC IPC with Intel® AMT, access to the event log of Intel® AMT, and the option for switching the SIMATIC IPC with Intel® AMT on and off.

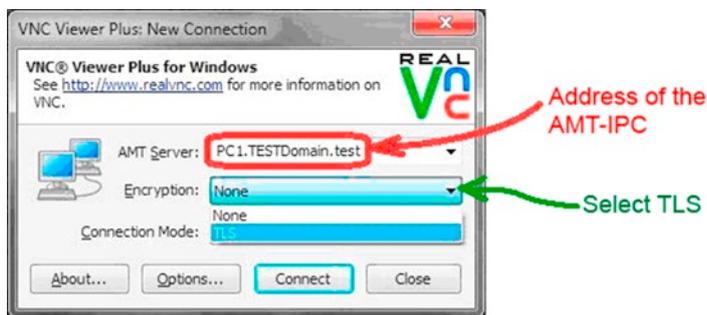
## 3.2 Encrypted connections

### 3.2.1 With the VNC Viewer Plus of the SIMATIC IPC Remote Manager

#### Procedure

Proceed as follows:

1. Start the VNC Viewer Plus of the SIMATIC IPC Remote Manager. The "New Connection" dialog appears.



2. In the "New Connection" dialog, enter the following data:
  - Address of the SIMATIC IPC with Intel® AMT, preferably FQDN or host name
  - Encryption = TLS
  - Connection Mode = Intel® AMT KVM

When an encrypted connection is opened, it is indicated in the VNC Viewer Plus toolbar by a padlock icon and corresponding tool tip. The following figure shows an encrypted KVM connection:

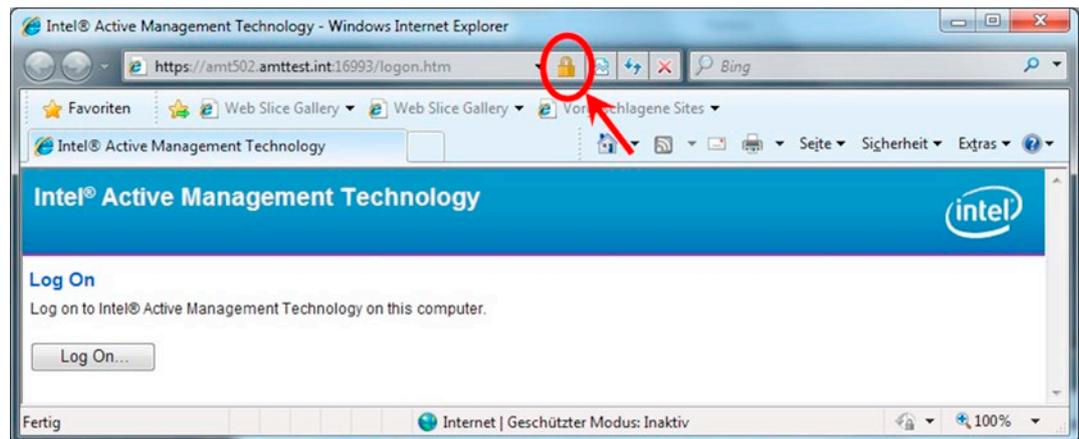


### 3.2.2 With the Web interface

You can also use a Web interface to operate Intel® AMT in addition to the KVM connection.

#### Procedure

1. Enter the following URL in the WEB browser: "https:// Fully qualified domain name:16993". The following website is displayed:



When an encrypted connection opened, it is indicated in the WEB browser by a padlock icon next to the URL. Clicking on the padlock icon display and analyze the certificate currently used for TLS encryption.

### 3.3 SIMATIC IPC DiagMonitor integration

If the SIMATIC IPC DiagMonitor software version 4.3 or later is installed on a SIMATIC IPC with SIMATIC IPC Remote Manager, the following applies:

- The VNC Viewer Plus of the SIMATIC IPC Remote Manager is integrated in SIMATIC IPC DiagMonitor.
- You can find the VNC Viewer Plus in the "Options" menu and in the shortcut menu.

## 4.1 Troubleshooting problems with KVM connections

If you cannot establish a KVM connection, refer to the troubleshooting checklist in the “Troubleshooting connection” section of the VNC Viewer Plus User Guide ([http://www.realvnc.com/products/viewerplus/1.2/docs/VNC\\_Viewer\\_Plus\\_User\\_Guide.pdf](http://www.realvnc.com/products/viewerplus/1.2/docs/VNC_Viewer_Plus_User_Guide.pdf)).

## 4.2 References and other manuals

You can find additional information about troubleshooting , configuration and use of Intel® AMT in the following manuals:

- IPC Operating Instructions
- VNC Viewer Plus User Guide  
[http://www.realvnc.com/products/viewerplus/1.1/docs/VNC\\_Viewer\\_Plus\\_User\\_Guide.pdf](http://www.realvnc.com/products/viewerplus/1.1/docs/VNC_Viewer_Plus_User_Guide.pdf)
- Intel AMT page: Manageability and Security  
<http://software.intel.com/en-us/manageability/>

## 4.3 Additional notes

### Teaming

The on-board Ethernet controller 82577LM / 82579LM / WGI217LM / I217LM does not support simultaneous operation of Intel® AMT and teaming. To be able to use Intel® AMT and teaming simultaneously, you need to plug in an additional Ethernet module with an Intel controller, for example, with an 82574L or another Intel® Gigabit Ethernet controller.

### Maximum resolution

The MEBx used supports a maximum resolution of 1920x1080.

### Admin passwords

You must assign the admin user a password when making the basic settings as detailed in "Enabling AMT/Basic configuration (Page 7)". You can then use this password to log on as admin user to the MEBx, Web interface and VNC Viewer Plus.

The admin user can assign two separate passwords in the MEBX and in the Web interface:

- One password for logging on to the MEBX.
- One password for the Web interface and the VNC Viewer Plus.

The MEBx password can be changed at "MEBx > Intel(R) ME General Settings > Change ME Password". The password for the Web interface can be changed in the "WEB Interface" under "User Accounts > Change Administrator Account".

If different passwords have been set, make sure you use the right one when logging on to the MEBx, Web Interface, and VNC Viewer Plus.

## Intel® AMT KVM

Intel® AMT KVM is only possible with the graphic adapter integrated in the basic module.

## ISO images for IDE R

The VNC Viewer Plus of the SIMATIC IPC Remote Manager up to and including version 1.1 supports ISO files up to 2GB in size. Versions 1.2 and later also support ISO files of more than 2 GB.

Nero Burning ROM or Ultra ISO, for example, can be used to create ISO files.

## KVM headless operation

### Behavior

You want to access a SIMATIC IPC with Intel® AMT with the following configuration from a management PC:

- Windows XP Professional SP3 is installed.
- Intel graphic driver is installed.
- No VGA monitor is connected.

The VNC Viewer Plus should now display the screen content of the SIMATIC IPC with Intel® AMT. However, it only displays a black screen.

### Remedy

Connect a monitor to the SIMATIC IPC with Intel® AMT or disable the Intel graphics driver using the device manager, or set the "Forced CRT" switch to Enabled (if available) in BIOS Setup under "Advanced > Video Configuration".

## 4.4 Service & Support

Additional support is available at: Technical Support  
([http://www.siemens.de/automation/csi\\_en\\_WW](http://www.siemens.de/automation/csi_en_WW))

# Abbreviations

# A

| Abbreviation | Term                                | Meaning   |
|--------------|-------------------------------------|---|
| AMT          | Active Management Technology        | Remote maintenance technology   |
| DDNS         | Dynamic DNS                         | Mechanism for assigning a static FQDN to an Internet connection with a dynamic IP address |
| DHCP         | Dynamic Host Configuration Protocol | Protocol for automatic configuration of IP networks                                       |
| DNS          | Domain Name System                  | Service for determining the IP address of an FQDN   |
| MDTK         | Manageability Developer Tool Kit    | Developer tools used, for example, to test and configure AMT                              |
| GUI          | Graphical User Interface            | Graphical user interface  |
| FQDN         | Fully qualified domain name         | Full name of a domain   |
| IDER         | IDE Redirection                     | Remote emulation of an ISO file as drive  |
| IE           | Internet Explorer                   |   |
| IPC          | Industrial PCs                      | Particularly rugged computer for use in the industrial environment                        |
| KVM          | Keyboard, Video, Mouse              |   |
| KVM Viewer   | Keyboard Video Mouse Viewer         | In the SIMATIC IPC Remote Manager, the RealVNC Viewer Plus is used for this purpose.      |
| ME           | Management engine                   | Firmware and hardware implemented by AMT  |
| MEBx         | Management Engine BIOS Extension    | User interface for basic configuration of AMT   |
| SCS          | Setup and Configuration Software    | Intel software for AMT configuration  |
| SOL          | Serial over LAN                     | Text-based remote control   |
| TLS          | Transport Layer Security            | Network protocol for encrypted transmission. Successor to SSL                             |