

**Schlumberger**

# *Reflex 30*

## *Reader Installation Guide*



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You will find the Reader Driver License Agreement (*License.txt*) in the following directory: *\Program Files\Schlumberger\Smart Cards and Terminals\Smart Card Readers\Reflex 30\Docs*.

The Reader Driver License Agreement is also available from the Reflex Reader Technical Support website: *www.reflexreaders.com/Support/support.html*.

Your feedback about this manual is welcome! Comments, questions, and suggestions about any part of the Cyberflex® Access™ documentation library can be posted to the Docs & Samples Conference of the User Discussion Forums: *www.flexforum.com/cgi-bin/dcforum/dcboard.cgi*.

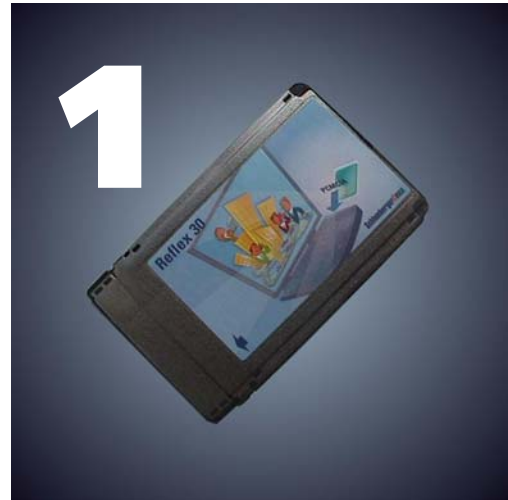
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# Introduction

The Schlumberger Reflex 30 is a Type II PCMCIA smart card reader designed for use in laptop and notebook portable personal computers.

The Reflex 30 smart card reader plugs into the PCMCIA slot in a portable PC without the need for separate cables or power supply.



## Operating System Requirements

The Reflex 30 drivers were tested on the following platform versions:

- Microsoft Windows 98 (Second Edition)
- Windows Me
- Windows NT 4.0 (Service Pack 6)
- Windows 2000 (Service Pack 4)
- Windows XP Professional (Service Pack 1)
- Windows Server 2003 (Enterprise Edition)

We recommend that you install the specified versions.

## Other System Requirements

- **Minimum processing capability** — Pentium class processor with 32 MB RAM
- **Connector** — PCMCIA Type II port

## Smart Card Compatibility

All ISO 7816 microprocessors T=0, T=1 protocols;  
memory cards: Infineon SLE44XX family

## Electrical Specifications

- **PC Interface** — PCMCIA Type II
- **Power supply** — 5V from PCMCIA interface
- **Power consumption** — Operating mode: 60mA; Idle mode: 5mA
- **Communication speed with PC** — 16MBps
- **Communication speed with card** — 9600-115200 bps

## Physical Specifications

- **Dimensions** — 84.5mm x 4.8 mm x 54 mm (3.32" x 0.18" x 2.13")
- **Color** — Metallic light gray - alloy steel

## Other Features

- Live card insertion/removal support
- 128KB of flash memory
- PPS support

## Certifications and Standards Compliance

- Microsoft PC/SC
- Microsoft Hardware Compatibility List

## Regulatory Approvals

- CE
- UL

# Installation

This section contains instructions for installing the Schlumberger Reflex 30 smart card reader. The computer must have an available Type II PCMCIA slot.



## Installation Notes

The table presents the following information about installing the Reflex 30 smart card reader on each supported operating system:

- Overview of the installation sequence on each operating system. For detailed instructions, see the sections that follow.
- Summary of each operating system's plug-and-play or hot pluggable capability.

Operating System	Installation Notes
Windows NT 4.0	<ul style="list-style-type: none"><li>• <i>Installation sequence:</i> Install the Reflex 30 smart card reader software (the installation program also automatically installs the Microsoft Smart Card Base Components if they are not already installed), insert the Reflex 30 smart card reader, and reboot.</li><li>• <i>not plug-and-play compliant:</i> Operating system and Smart Card Resource Manager detect Reflex 30 smart card reader status only at boot-time (mid-session connect/disconnect detected only at reboot).</li></ul>

### Operating System Installation Notes

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#### Windows 98 / Windows Me

- *Installation sequence:* Install the Reflex 30 smart card reader software (the installation program also automatically installs the Microsoft Smart Card Base Components if they are not already installed), insert the Reflex 30 smart card reader, and reboot.
  - *Plug-and-play compliant:* Operating system detects Reflex 30 smart card reader at connect/disconnect; Smart Card Resource Manager detects Reflex 30 smart card reader at boot-time (mid-session connect/disconnect detected only at reboot).
- 

#### Windows 2000 / Windows XP / Windows Server 2003

- *Installation sequence:* Insert the Reflex 30 smart card reader, and then install the Reflex 30 smart card reader software.
  - *Hot pluggable:* Operating system and Smart Card Resource Manager automatically detect Reflex 30 smart card reader status at connect/disconnect.
- 



*Refer to the release notes for driver version numbers and information about potential installation issues.*

## **Unsigned Driver Warning Messages**

A driver is “unsigned” if certification of the driver by Microsoft was pending but not yet complete at the time of release. Depending on driver signing options established by local system security policy (Control Panel > System Properties > Hardware > Driver Signing...), driver installation on Windows 2000, Windows XP, and Windows Server 2003 might either silently allow, display a warning message, or block the installation of unsigned drivers. If a warning message is displayed, click **Yes** or **Continue Anyway** to complete the driver installation.



## Installing on Windows NT 4.0

To install the Schlumberger Reflex 30 smart card reader on a Windows NT 4.0 computer, complete these tasks:



*Be sure to install the smart card reader software before you insert the reader. If the proper software is not present when the computer detects the reader, a partial configuration may result. A partial configuration can interfere with future attempts to configure the reader properly.*

### **Step 1: Install the Reflex 30 smart card reader software**

*If the Reflex 30 smart card reader software was installed on your computer during installation of the Cyberflex Access Software Development Kit or the Cyberflex Access Integration Kit, you do not need to install additional driver software. The installation program also automatically installed the Microsoft Smart Card Base Components. If you want to be certain that you have the latest driver, check the Reflex Readers Download website ([www.reflexreaders.com/Support/Downloads/downloads.html](http://www.reflexreaders.com/Support/Downloads/downloads.html)).*

*If the Reflex 30 smart card reader software is not installed on your computer, go to the Reflex Readers Download website ([www.reflexreaders.com/Support/Downloads/downloads.html](http://www.reflexreaders.com/Support/Downloads/downloads.html)) to download the Reflex 30 driver package for Win NT. See the package's Install Notes for installation instructions.*

### **Step 2: Insert the Reflex 30 smart card reader**

Plug the Reflex 30 smart card reader into a PCMCIA slot on the computer, sliding the device into the slot until you feel a soft click.

### **Step 3: Reboot the computer**

On a Windows NT 4.0 computer, both the operating system and the Smart Card Resource Manager detect the presence of the Reflex 30 smart card reader during reboot only. The Reflex 30 smart card reader is not usable until you reboot.

These are other situations that require you to reboot your computer:

- If you connect the Reflex 30 smart card reader in mid-session, the Smart Card Resource Manager is unaware of the change until you reboot.
- If you remove the Reflex 30 smart card reader and then reconnect it, the Reflex 30 smart card reader does not function until you reboot.

At this point you are ready to start using the Reflex 30 smart card reader. You can test the reader setup using the Smart Card Reader Tools. From the Start menu on the Windows taskbar, select **Programs** → **Schlumberger Smart Cards and Terminals** → **Smart Card Readers** → **Tools**.



*Refer to the release notes for driver version numbers and information about potential installation issues.*

## Updating on Windows NT 4.0

If you are updating the Reflex 30 smart card reader software (not installing the hardware and software for the first time), complete these tasks:

### **Step 1: Install the new Reflex 30 smart card reader software**

*If the new Reflex 30 smart card reader software was installed on your computer during installation of the Cyberflex Access Software Development Kit or the Cyberflex Access Integration Kit, you do not need to install additional driver software. If you want to be certain that you have the latest driver, check the Reflex Readers Download website ([www.reflexreaders.com/Support/Downloads/downloads.html](http://www.reflexreaders.com/Support/Downloads/downloads.html)).*

*To manually update the driver and any related Reflex 30 smart card reader software on your computer, go to the Reflex Readers Download website ([www.reflexreaders.com/Support/Downloads/downloads.html](http://www.reflexreaders.com/Support/Downloads/downloads.html)) to download the Reflex 30 driver package for Win NT. See the package's Install Notes for installation instructions.*

### **Step 2: Reboot the computer**

After you finish installing the new Reflex 30 smart card reader software, reboot the computer.



*Refer to the release notes for driver version numbers and information about potential update issues.*

If your computer previously used a Reflex 30 driver with a different name from the new driver, the registry entry for the earlier driver is not overwritten when the new driver is installed. In this case, you might see the following warning message each time you reboot your computer:

At least one service or driver failed during system startup.  
Use Event Viewer to examine the event log for details.

This message is not significant and can be ignored, but if you want to prevent the message from displaying during system startup, use either of these methods:

- Disable the old device using the Devices Control Panel option. To access this option, select **Start** → **Settings** → **Control Panel**. Double-click **Devices**, select the device, click **Startup**, and set the startup type to either Manual or Disabled.

*or*

- Use the Registry Editor to remove the registry entries associated with the old Reflex 30 driver. (Open the old *.reg* file in a text editor to identify which entries must be removed.) If you need more information about editing the registry to complete this task, refer to the operating system's Help.



*Using the Registry Editor incorrectly can cause serious problems that might require you to reinstall your operating system.*

## Installing on Windows 98 or Windows Me

To install the Schlumberger Reflex 30 smart card reader on a Windows 98 or Windows Me computer, complete these tasks:



*Be sure to install the smart card reader software before you insert the reader. If the proper software is not present when the computer detects the reader, a partial configuration may result. A partial configuration can interfere with future attempts to configure the reader properly.*

### **Step 1: Install the Reflex 30 smart card reader software**

*If the Reflex 30 smart card reader software was installed on your computer during installation of the Cyberflex Access Software Development Kit or the Cyberflex Access Integration Kit, you do not need to install additional driver software. The installation program also automatically installed the Microsoft Smart Card Base Components. If you want to be certain that you have the latest driver, check the Reflex Readers Download website ([www.reflexreaders.com/Support/Downloads/downloads.html](http://www.reflexreaders.com/Support/Downloads/downloads.html)).*

*If the Reflex 30 smart card reader software is not installed on your computer, go to the Reflex Readers Download website ([www.reflexreaders.com/Support/Downloads/downloads.html](http://www.reflexreaders.com/Support/Downloads/downloads.html)) to download the Reflex 30 driver package for Win98/Me. See the package's Install Notes for installation instructions.*

### **Step 2: Insert the Reflex 30 smart card reader**

Plug the Reflex 30 smart card reader into a PCMCIA slot on the computer, sliding the device into the slot until you feel a soft click.

The computer automatically begins to scan for plug-and-play-compliant hardware. Displayed messages report that the computer has found the new hardware, and has located and installed the software for it.

### **Step 3: Reboot the computer**

The Windows 98 and Windows Me operating systems detect the Reflex 30 smart card reader as soon as it is inserted, but the Smart Card Resource Manager detects it only during reboot. Therefore, although you will see the

Reflex 30 smart card reader listed in the Device Manager as an installed device after you complete step 2, the Reflex 30 smart card reader is not usable until you reboot.

These are other situations that require you to reboot your computer:

- If you connect the Reflex 30 smart card reader in mid-session, the Smart Card Resource Manager is unaware of the change until you reboot.
- If you remove the Reflex 30 smart card reader and then reconnect to it, the Reflex 30 smart card reader does not function until you reboot.
- If you remove the Reflex 30 smart card reader without first stopping the device, these errors display:

```
Reader removal monitor error retry threshold
reached. The parameter is incorrect.
```

```
Reader monitor 'Schlumberger Reflex 30 0' received
uncaught error code: The parameter is incorrect.
```

To make the Reflex 30 reader functional, reconnect it and reboot.

At this point you are ready to start using the Reflex 30 smart card reader. You can test the reader setup using the Smart Card Reader Tools. From the Start menu on the Windows taskbar, select **Programs** → **Schlumberger Smart Cards and Terminals** → **Smart Card Readers** → **Tools**.



*Refer to the release notes for driver version numbers and information about potential installation issues.*

## **Updating on Windows 98 or Windows Me**

If you are updating the Reflex 30 smart card reader software (not installing the hardware and software for the first time), complete these tasks:

### **Step 1: Install the new Reflex 30 smart card reader software**

*If the new Reflex 30 smart card reader software was installed on your computer during installation of the Cyberflex Access Software Development Kit or the Cyberflex Access Integration Kit, you do not need to install*

additional driver software. If you want to be certain that you have the latest driver, check the Reflex Readers Download website ([www.reflexreaders.com/Support/Downloads/downloads.html](http://www.reflexreaders.com/Support/Downloads/downloads.html)).

To manually update the driver and any related Reflex 30 smart card reader software on your computer, go to the Reflex Readers Download website ([www.reflexreaders.com/Support/Downloads/downloads.html](http://www.reflexreaders.com/Support/Downloads/downloads.html)) to download the Reflex 30 driver package for Win98/Me. See the package's Install Notes for installation instructions.

### **Step 2: Step through the Update Device Driver wizard**

Use the Upgrade Device Driver wizard to configure the Reflex 30 smart card reader to use the new driver:

- 1** To start the Device Manager, select **Start** → **Settings** → **Control Panel**. Double-click **System**, and then click the **Device Manager** tab.
- 2** In the Device Manager, expand the Smart card readers device type, and then double-click the name of the device to open its Properties.
- 3** In the device's Properties, click the **Driver** tab, and then click the **Update Driver** button.

The Update Device Manager wizard is launched. Select the option to let the wizard search for suitable drivers for the device. If you need more information about using the wizard to complete this task, see the operating system's Help.

### **Step 3: Reboot the computer**

After the wizard has finished updating the Reflex 30 driver, reboot the computer.



*Refer to the release notes for driver version numbers and information about potential update issues.*

## Installing or Updating on Windows 2000, Windows XP, or Windows Server 2003

To install or update the Schlumberger Reflex 30 smart card reader on a Windows 2000, Windows XP, or Windows Server 2003 computer, complete these tasks:

### **Step 1: Insert the Reflex 30 smart card reader**

Plug the Reflex 30 smart card reader into a PCMCIA slot on the computer, sliding the device into the slot until you feel a soft click.

### **Step 2: Install the Reflex 30 smart card reader software**

*If the Reflex 30 smart card reader software was installed on your computer during installation of the Cyberflex Access Software Development Kit or the Cyberflex Access Integration Kit, you do not need to install additional driver software. If you want to be certain that you have the latest driver, check the Reflex Readers Download website ([www.reflexreaders.com/Support/Downloads/downloads.html](http://www.reflexreaders.com/Support/Downloads/downloads.html)).*

*To manually install or upgrade the Reflex 30 smart card reader software, go to the Reflex Readers Download website ([www.reflexreaders.com/Support/Downloads/downloads.html](http://www.reflexreaders.com/Support/Downloads/downloads.html)) to download the Reflex 30 driver package for Windows 2000, Windows XP, or Windows Server 2003. See the package's Install Notes for installation instructions. Note that the Microsoft Smart Card Base Components are pre-installed on Windows 2000, Windows XP, and Windows Server 2003 computers; do *not* reinstall the Microsoft Smart Card Base Components.*

After the Reflex 30 smart card reader software is installed, messages will report that the system has found the new hardware and has located and installed the software for it.

**NOTE** *On Windows 2000, Windows XP, and Windows Server 2003 systems, the operating system sometimes automatically configures the smart card reader to use a different driver from the one that is installed with the Cyberflex Access SDK or Cyberflex Access IK. See the Troubleshooting chapter for information about checking the driver version and manually updating the driver if necessary.*

The Reflex 30 smart card reader is ready to use without rebooting the computer. The Smart Card Resource Manager automatically detects the Reflex 30 smart card reader's change in status whenever you disconnect or reconnect it.

At this point you are ready to start using the Reflex 30 smart card reader. You can test the reader setup using the Smart Card Reader Tools. From the Start menu on the Windows taskbar, select **Programs** → **Schlumberger Smart Cards and Terminals** → **Smart Card Readers** → **Tools**.



*Refer to the release notes for driver version numbers and information about potential installation and update issues.*



# Troubleshooting

This section describes some problems you might encounter when you set up, use, and test the Schlumberger Reflex 30 smart card reader, along with possible causes and solutions. If you need additional help, use the smart card reader support forum or contact the Schlumberger smart card reader support team through the Reflex Reader Technical Support website ([www.reflexreaders.com/Support/support.html](http://www.reflexreaders.com/Support/support.html)).



*Refer to the release notes for information about other known product issues.*

## ***The Reflex 30 is getting extremely hot in the PCMCIA slot***

### ***PCMCIA slot too close to the CPU***

**Cause Description:** On some notebook computers, the PC card slots are located over the CPU of the PC; the CPU generates a lot of heat, so this area becomes very hot.

**Solution:** If you have another PCMCIA slot available, move the reader to the other slot. Working with a very hot Reflex 30 smart card reader can harm both the reader and the card.

## **The Reflex 30 is not using the driver installed with the SDK or IK**

### **The operating system chose the wrong reader driver**

**Cause Description:** On Windows 2000, Windows XP, and Windows Server 2003 systems, the operating system sometimes automatically configures the smart card reader to use a different driver from the one that is installed with the Cyberflex Access SDK or Cyberflex Access IK. A detailed discussion follows.

**Solution:** Reconfigure the smart card reader to use the correct driver. Detailed instructions follow.

When the operating system detects that a smart card reader has been added (during installation) or changed (during update), the operating system tries to find the best driver for the device.

On *Windows 2000 and Windows XP (pre-SP1)* systems, depending on characteristics of both the new driver and drivers already installed on a system, the operating system sometimes automatically configures the smart card reader to use a driver that is not the one that is installed with the Cyberflex Access SDK or Cyberflex Access IK.

On *Windows XP SP1 and Windows Server 2003* systems, at the time of release, if the smart card reader is plugged in before the driver software is installed, the correct driver is automatically selected by the operating system. If the reader is not plugged in before the driver software is installed, the operating system sometimes automatically configures the smart card reader to use a driver that is not the one that is installed with the Cyberflex Access SDK or Cyberflex Access IK.

You can confirm whether your smart card reader is using the correct driver by checking the driver version number, as outlined in “Checking a Driver Version” in this section.

If you discover that your smart card reader is configured to use an older driver and you want to use the driver that was installed with the Cyberflex Access SDK or Cyberflex Access IK, you can manually update the driver using the instructions outlined in “Manually Updating a Driver” in this section.

### **Checking a Driver Version**

To confirm whether your smart card reader is configured to use the driver that was installed with the Cyberflex Access SDK or Cyberflex Access IK, you can check the version number using the Device Manager.

- 1 In the Device Manager, expand the Smart card readers device type, and then double-click the name of the device to open its Properties. In the device's Properties, click the **Driver** tab. Click **Driver Details....** to display driver information, including driver file name and version number.
- 2 Compare the version number displayed in the Driver File Details screen to information in the Driver Versions table in the release notes to confirm whether the operating system has configured the smart card reader to use the driver included in the installation package.

**NOTE** *You can also check version numbers of the latest available reader drivers on the Reflex Readers Download website ([www.reflexreaders.com/Support/Downloads/downloads.html](http://www.reflexreaders.com/Support/Downloads/downloads.html)). In some cases, drivers posted to the website are newer than drivers installed with the Cyberflex Access SDK and Cyberflex Access IK.*

If the smart card reader is currently configured to use an older driver, you can manually update the driver using the instructions that follow.

### **Manually Updating a Driver**

Use the Upgrade Device Driver wizard (on Windows 2000) or Hardware Update wizard (on Windows XP and Windows Server 2003) to update the smart card reader driver:

- 1 In the Device Manager, expand the Smart card readers device type, and then double-click the reader device to open its Properties.
- 2 In the device's Properties, click the **Driver** tab, and then click the **Update Driver...** button. The Upgrade Device Driver wizard (on Windows 2000) or Hardware Update (on Windows XP and Windows Server 2003) wizard is launched.

- 3 On Windows 2000, in the Upgrade Device Driver wizard, select “Display a list of the known drivers for this device so that I can choose a specific driver.” On Windows XP and Windows Server 2003, in the Hardware Update wizard, select “Install from list or specific location (Advanced),” click **Next**, and then click “Don't search. I will choose the driver to install.”
- 4 In the Select a device driver screen, click **Have Disk ...**
- 5 In the Install from Disk screen, type in or browse to the *\Program Files\Schlumberger\Smart Card Readers\reader\_name* directory, and click **OK**.
- 6 In the Select a Device Driver window, select the new device driver from the list, and click **Next**.  
You might see warnings that you are about to install an unsigned driver or that you are about to install an unsigned driver over a signed driver. Click **Yes** or **Continue Anyway**.
- 7 Follow screen instructions to complete updating the driver. If you need more information about using the wizard to complete this task, refer to the operating system's Help.

The smart card reader is ready to use without rebooting the system.

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