

**Schlumberger**

# *Reflex 20*

## *Reader Installation Guide*



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<b>Document</b>	<b>Date</b>
C300479_rev3	October 2003

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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 20\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 20 is a Type II PCMCIA smart card reader designed for use in laptop and notebook portable personal computers.

The Reflex 20 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 20 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

## Cards Supported

All ISO 7816 microprocessors T=0, T=1, T=14 protocols;  
memory cards: Infineon SLE44XX family;  
class A and class AB cards

## Electrical Specifications

- **PC Interface** — PCMCIA Type II
- **Power supply** — 5V from PCMCIA interface
- **Power consumption** — Operating mode: 35mA; Idle mode: 5mA
- **Communication speed with PC** — 3MBps
- **Communication speed with card** — 9600-38400 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

- Microsoft PC/SC
- CE
- UL
- C-UL

# Installation

This section contains instructions for installing the Schlumberger Reflex 20 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 20 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 20 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 20 smart card reader, and reboot.<sup>1</sup></li><li>• <i>Not plug-and-play compliant:</i> Operating system and Smart Card Resource Manager detect Reflex 20 smart card reader status only at boot-time (mid-session connect/disconnect detected only at reboot).</li></ul>
Windows 98 / Windows Me	<ul style="list-style-type: none"><li>• <i>Installation sequence:</i> Install the Reflex 20 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 20 smart card reader, and reboot.<sup>1</sup></li><li>• <i>Plug-and-play compliant:</i> Operating system detects Reflex 20 smart card reader at connect/disconnect; Smart Card Resource Manager detects Reflex 20 smart card reader at boot-time (mid-session connect/disconnect detected only at reboot).</li></ul>

### Operating System Installation Notes

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- |  |  |
|--|--|
| <b>Windows 2000 /<br/>Windows XP /<br/>Windows Server<br/>2003</b> | <ul style="list-style-type: none"><li>• <i>Installation sequence:</i> Insert the Reflex 20 smart card reader, and then install the Reflex 20 smart card reader software.<sup>1</sup></li><li>• <i>Hot pluggable:</i> Operating system and Smart Card Resource Manager automatically detect Reflex 20 smart card reader status at connect/disconnect.</li></ul> |
|--|--|
- 

<sup>1</sup> It might also be necessary to update the firmware after installing the driver; see “Firmware Upgrade,” on page 4 for information.



*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.

## Firmware Upgrade

Installation or update of a Reflex 20 driver might also require an update to the firmware controller software for some older Reflex 20 readers. The Firmware Upgrade Utility is installed as part of the Cyberflex Access Software Development Kit if you select to install the Reflex 20 software. See “Firmware Upgrade,” on page 13 for instructions about using the utility.

The Firmware Upgrade Utility is also available from the Reflex Reader Technical Support website, [www.reflexreaders.com/Support/support.html](http://www.reflexreaders.com/Support/support.html). Instructions about using the utility are contained in the Firmware Upgrade Utility download package’s README.



## Installing on Windows NT 4.0

To install the Schlumberger Reflex 20 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 20 smart card reader software**

*If the Reflex 20 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 20 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 20 driver package for Win NT. See the package's Install Notes for installation instructions.*

### **Step 2: Insert the Reflex 20 smart card reader**

Plug the Reflex 20 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 20 smart card reader during reboot only. The Reflex 20 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 20 smart card reader in mid-session, the Smart Card Resource Manager is unaware of the change until you reboot.

- If you remove the Reflex 20 smart card reader and then reconnect it, the Reflex 20 smart card reader does not function until you reboot.

**Step 4: *If necessary, update the firmware***

Installation of a Reflex 20 driver might also require an update to the firmware. See “Firmware Upgrade,” on page 4 for details.

At this point you are ready to start using the Reflex 20 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 20 smart card reader software (not installing the hardware and software for the first time), complete these tasks:

**Step 1: *Install the new Reflex 20 smart card reader software***

*If the new Reflex 20 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 Reflex 20 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 20 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 20 smart card reader software, reboot the computer.

**Step 3: If necessary, update the firmware**

Installation or update of a Reflex 20 driver might also require an update to the firmware. See “Firmware Upgrade,” on page 4 for details.



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

If your computer previously used a Reflex 20 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 20 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 20 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 20 smart card reader software**

*If the Reflex 20 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 20 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 20 driver package for Win98/Me. See the package's Install Notes for installation instructions.*

### **Step 2: Insert the Reflex 20 smart card reader**

Plug the Reflex 20 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 20 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 20 smart card reader listed in the Device Manager as an installed device after you complete step 2, the Reflex 20 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 20 smart card reader in mid-session, the Smart Card Resource Manager is unaware of the change until you reboot.
- If you remove the Reflex 20 smart card reader and then reconnect to it, the Reflex 20 smart card reader does not function until you reboot.
- If you remove the Reflex 20 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 20 0' received
uncaught error code: The parameter is incorrect.
```

To make the Reflex 20 reader functional, reconnect it and reboot.

#### **Step 4: *If necessary, update the firmware***

Installation or update of a Reflex 20 driver might also require an update to the firmware. See “Firmware Upgrade,” on page 4 for details.

At this point you are ready to start using the Reflex 20 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 20 smart card reader software (not installing the hardware and software for the first time), complete these tasks:

#### **Step 1: *Install the new Reflex 20 smart card reader software***

*If the new Reflex 20 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 Reflex 20 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 20 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 20 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 20 driver, reboot the computer.

### **Step 4: If necessary, update the firmware**

Installation or update of a Reflex 20 driver might also require an update to the firmware. See "Firmware Upgrade," on page 4 for details.



*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 20 smart card reader on a Windows 2000, Windows XP, or Windows Server 2003 computer, complete these tasks:

### **Step 1: Insert the Reflex 20 smart card reader**

Plug the Reflex 20 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 20 smart card reader software**

*If the Reflex 20 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 update the Reflex 20 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 20 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 systems; do *not* reinstall the Microsoft Smart Card Base Components.*

After the Reflex 20 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 computers, the operating system sometimes automatically configures the Reflex 20 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 20 smart card reader is ready to use without rebooting the computer. The Smart Card Resource Manager automatically detects the Reflex 20 smart card reader's change in status whenever you disconnect or reconnect it.

**Step 3: *If necessary, update the firmware***

Installation or update of a Reflex 20 driver might also require an update to the firmware. See “Firmware Upgrade,” on page 4 for details.

At this point you are ready to start using the Reflex 20 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.*



# 3

## Firmware Upgrade

This section contains instructions for updating the firmware that enables a Schlumberger Reflex 20 smart card reader to work successfully with installed software drivers.

The upgrade uses the Schlumberger Reflex 20 Firmware Upgrade utility, which is provided at installation time if you select to install the Reflex 20 software, or by download from the Reflex Reader Technical Support website ([www.reflexreaders.com/Support/support.html](http://www.reflexreaders.com/Support/support.html)).



## Firmware Upgrade Files

The version 1.0.0.3 Firmware Upgrade utility includes these files:

- *SlbSemaFWUpgrade.exe* v1.0.0.3 (executable upgrade utility)
- *b1r241bk1.des* (DES encrypted firmware upgrade file)
- *b1r241bk2.des* (DES encrypted firmware upgrade file)
- *b1r241bk3.des* (DES encrypted firmware upgrade file)
- *b1r241bk5.des* (DES encrypted firmware upgrade file)
- *b1r241bk6.des* (DES encrypted firmware upgrade file)

If the upgrade utility is installed as part of the Cyberflex Access Software Development Kit, the files are automatically installed in the *Schlumberger\Smart Cards and Terminals\Smart Card Readers\Reflex 20\Firmware Upgrade* directory. If the upgrade utility is downloaded from the Reflex Reader Technical Support website, all the files are included in the download zip (*SlbSemaFWUpgradeV1003.zip*) and may be installed anywhere; however, the *.des* files must be unzipped or extracted in the same directory as the executable.

## Firmware Upgrade Pre-requisites

The following software must be installed on the system for the upgrade to be successful:

- WinZip (if the upgrade utility is downloaded from the Reflex Reader Technical Support website)
- Microsoft Smart Card Base Components (available in the Cyberflex Access Software Development Kit installation or from the Reflex Reader Technical Support website)
- Schlumberger Reflex 20 smart card reader drivers with the following versions:
  - Windows 98 (Second Edition)/Windows Me: v1.27s or later
  - Windows NT 4.0 (Service Pack 6): v1.31.0.0 or later
  - Windows 2000 (Service Pack 2)/Windows XP Professional/Windows Server 2003: v2.0.1 or later

**NOTE** *Microsoft default drivers are not valid to update Schlumberger smart card reader firmware. The driver must be issued by Schlumberger.*

- The DES encrypted firmware upgrade file provided with the Update utility

## Upgrading the Firmware

The upgrade utility can be executed either of these ways:

- In Windows Explorer, by double-clicking the name of the executable, *SlbSemaFWUpgrade.exe*. This method automatically runs the utility with no parameters.
- From the command line. Using this method, the parameters listed in the table below are available.

Parameter	Description
<b>-s</b>	If invoked, forces the user to upgrade if the upgrade utility detects that a Reflex 20 smart card reader with old firmware is attached to the machine.
<b>-v</b>	Runs the utility to detect and display the current firmware version of all attached Reflex 20 smart card readers, but does not attempt to update the firmware.
<b>-o</b>	Runs the utility without writing to the <i>FWUpgrade.log</i> output file.
<b>-f</b>	To designate which firmware upgrade ( <i>.des</i> ) file to use during the upgrade. Takes <i>path\filename</i> as an argument. Note that the <i>path\filename</i> must not exceed 256 characters. (If no file is specified, the utility automatically chooses the newest version.)

This is the syntax to run the upgrade utility from the command line (from the directory in which the executable is installed):

```
SlbSemaFWUpgrade.exe [-s|-v|-o|-f] path\filename
```

for example:

```
SlbSemaFWUpgrade.exe -s
```

```
SlbSemaFWUpgrade.exe -f \temp\blr241bk2.des
```

The parameters may be used together in any order.

### Informational and Warning Messages

Informational and warning messages are displayed while the utility is running. Unless logging is turned off, the messages are also written to an ASCII log file, *FWUpgrade.log*, which is located in the same directory as the executable.

The informational messages confirm that the utility is searching the system for Reflex 20 smart card readers and drivers. If the system detects that a Reflex 20 smart card reader is attached to the system, that the system has outdated firmware, and that the system has the necessary drivers installed to support the new firmware, and then upgrade is appropriate.

If the utility is being run without the **-s** flag, you are asked to confirm that the upgrade for the first Reflex 20 smart card reader detected should proceed. If user interaction has been turned off (by running the utility with the **-s** flag), upgrade begins automatically.

While the upgrade is running, a progress bar is displayed. Each upgrade can take several minutes to finish and *must* be allowed to complete.



During installation, the utility displays these warnings:

- DO NOT power off the machine
- DO NOT remove the smart card reader from the machine
- DO NOT close the firmware upgrade tool

**If one of these actions is taken during the upgrade (the progress bar is displayed while the upgrade is running and a message confirms when the upgrade is complete), the Reflex 20 smart card reader will be left in an unusable, unrecoverable state.**

When the utility has finished the firmware upgrade, a message confirming that the upgrade is complete appears. If additional Reflex 20 smart card readers are installed, after the utility has finished upgrading the firmware for the first Reflex 20 smart card reader, it asks for confirmation that it should install the upgrade for the next Reflex 20 smart card reader detected, as well.

After the update utility has completed, the following actions complete the upgrade task:

- If the operating system is Microsoft Windows 98, Windows Me, or Windows NT 4.0, reboot the machine to restart the resource manager and for the Reflex 20 smart card reader's upgraded firmware to be recognized.
- For Windows 2000 and XP systems, eject the Reflex 20 smart card reader, and then re-insert it so that the new firmware can be recognized.

## Firmware Upgrade Problems

- If the update (.des) files are not located in the same directory as the *SlbSemaFWUpgrade.exe* file, the upgrade fails and an informational message warns that the utility cannot find the upgrade file. Copy the upgrade file to the directory in which the executable will run.
- If an application that uses the smart card service is running when you try to run *SlbSemaFWUpgrade.exe*, the upgrade fails. Stop all such services before starting the upgrade.
- Error 6a80 (similar to the following):

```
Control word error! Please check if your file is correct!
```

appears if the utility was run successfully, but the upgrade task was not completed. For Windows 98, Windows Me, or Windows NT 4.0 systems, complete the task by rebooting. For Windows 2000 or Windows XP systems, eject and then re-insert the Reflex 20 smart card reader.

- DO NOT interrupt the upgrade while it is in progress. Do not power off the machine or remove the Reflex 20 smart card reader from the machine or close the firmware upgrade utility for any reason during the upgrade (the progress bar is displayed while the upgrade is running and a message confirms when the upgrade is complete). If you interrupt the upgrade, the Reflex 20 smart card reader will be left in an unusable, unrecoverable state.



# 4

## Troubleshooting

This chapter describes problems you might encounter when you set up and use the Schlumberger Reflex 20 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)).

Problems associated with upgrading the Reflex 20 firmware are described in “Firmware Upgrade Problems,” on page 17.



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

### ***The Reflex 20 cannot slide fully into the PCMCIA slot***

#### ***Design limitation of PCMCIA slot in some notebook computers***

**Cause Description:** On a few models of notebook computers, the design of the PCMCIA slot can inhibit the full insertion of the long version (ID. 301017) of the Reflex 20 smart card reader. In this case, the Reflex 20 smart card reader cannot make good connection with the pins.

**Solution:** Remove the plastic holders around the insertion slot of the Reflex 20 smart card reader.



## **The Reflex 20 is getting extremely hot in the PCMCIA slot**

### ***PC MCIA 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 20 smart card reader can harm both the reader and the card.

## **The Reflex 20 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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