



LT4000

pcmcia smart card reader

User's Manual

Welcome to the Infineer LT4000 User's Manual. This manual provides easy to follow, step-by-step instructions for connecting the LT4000 reader and installing its associated software.

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Designed for

 Microsoft®
 Windows®2000
 Professional
 Windows®NT
 Workstation 4.0
 Windows®98

Designed for

 Microsoft®
 Windows®Me

The LT4000 has passed testing by Microsoft's Windows Hardware Quality Labs (WHQL) for Windows 2000 Professional, 98, ME, and NT Workstation 4.0 operating systems.

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Introduction

Infineer designs and markets a line of intelligent, microcontroller-based smart card reader/writers. Electronic commerce, financial services, access control, security, and identification are just a few of the smart card-based applications in which Infineer readers can be used.

Infineer's readers maintain full compliance with Microsoft PC/SC standards and with Windows 95/98, Me, 2000 and NT4 operating systems*. Additionally, they are compliant with most of today's accepted financial/banking (such as EMV) and regulatory standards.

Infineer currently offers three reader/writer models to accommodate most any system:

- LT4000 (PCMCIA)
- DT3000 (Serial)
- DT3500 (USB)

This CD, software, and documentation are specific to the LT4000 model.

LT4000 Description

The LT4000 is a fast, microcontroller based PCMCIA reader/writer that communicates with your system through a standard Type II PCMCIA port.

System Requirements

- Pentium® or faster processor
- Microsoft® Windows 9x, ME, NT4 or 2000
- CD-ROM drive
- Available Type II PCMCIA port
- Internet connection (recommended)

LT4000 Installation Software

The Infineer LT4000 installation software was designed to make the installation process seamless—requiring minimal user interaction. The installation software detects your computer's operating system and installs the appropriate drivers and files for that system. The entire LT4000 installation procedure (hardware and software) takes approximately five minutes to complete.

*Compliance with Microsoft PC/SC standards may vary by reader model.



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LT4000 Quick Installation Procedure

This Quick Installation Procedure offers an easy-to-follow path on how to install and connect the LT4000 PCMCIA smart card reader. For detailed instructions please see section "LT4000 Step-by-Step Installation Instructions" in this manual.

Installing the LT4000 Software

Before you connect the LT4000 to your PC, it is important that its software be installed on your system. Follow the 6 steps below to install the LT4000 software.

- 1** Start your computer and close all software applications that may be running. Insert the LT4000 Installation CD into your system's CD-ROM drive.
- 2** The CD should autorun and display the LT4000 Welcome Screen. If your CD runs automatically, skip ahead to Step 4. Otherwise, double-click on the My Computer icon on your Desktop.
- 3** Double-click the CD-ROM drive letter and double-click the autorun.exe file on the LT4000 Installation CD.
- 4** Select the "Software" option from the LT4000 Welcome Screen. The software installation process is started.
- 5** Select Finish
Note for Windows 9x, ME and NT4 Users: When you select Finish at this prompt the installer will automatically shutdown your machine in order to complete the software installation.
- 6** Attach the LT4000 to your system.
Note for Windows 9x, ME and NT4 Users: Connect the LT4000 to your computer before you reboot your machine.

See "Connecting the LT4000" on page 4 for instructions on attaching the LT4000 to your system.

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Connecting the LT4000

Now that you've installed the software you're ready to connect the LT4000 to your PC. The LT4000 is a PC Card device and may be connected to your computer when it is powered-down or while the system is up and running.

Note for Windows 9x, ME and NT4 Users: Connect the LT4000 to your computer before you reboot your machine. For more information on this practice, see the "LT4000 FAQ" on page 18.

- 1 Connect the LT4000 to your PC after the software installation has been completed.
- 2 Fully insert the LT4000 (A) into an available Type II PCMCIA slot (B) in your PC. See Figures 1 and 2 below. Be sure to insert the end of the LT4000 with "Insert This Side" printed on the label. Insert the LT4000 completely into the PCMCIA slot (C).

If your computer is running, you may hear a "two-tone" beep when the LT4000 is inserted. This beep signals that the LT4000 has been recognized and is ready to use.

Please see section "Disconnecting the LT4000" on page 6 for instructions on how to properly remove the LT4000 device from your system.

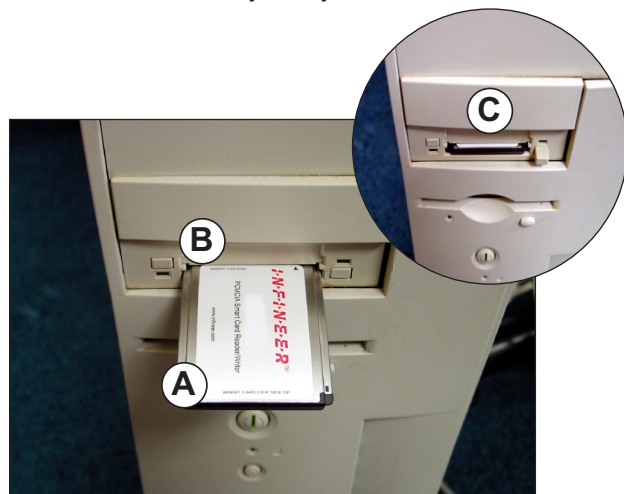


Figure 1 LT4000 in a Desktop Computer

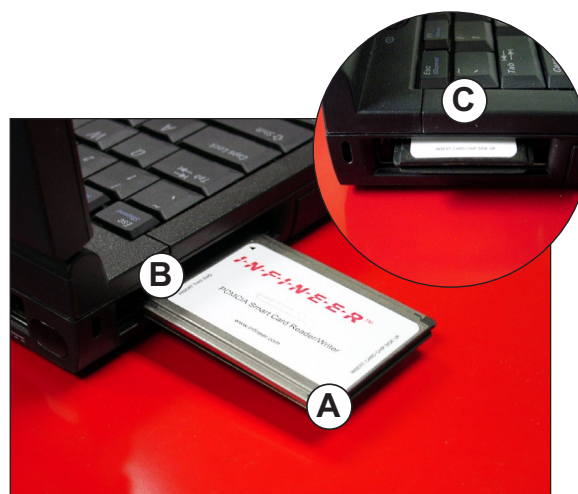


Figure 2 LT4000 in a Laptop Computer



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Inserting a Smart Card Into the LT4000

Insert a smart card between the two (top and bottom) flaps of the LT4000.

Be sure to insert the smart card chip face up. The chip must face up in order for the LT4000 to interact with the card. See Figure 3 below.



Figure 3 Insert Card "Chip Side Up"

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Disconnecting the LT4000

Although you may connect the LT4000 to your system at any time, you should follow a proper sequence when you disconnect the reader.

You may encounter unexpected errors and lose data if you improperly disconnect any PCMCIA device from your computer.

To properly disconnect the LT4000 from your computer follow the 3 steps below.

- 1 Double-click on the PC Card Status icon in your System Tray. The System Tray should be located on your desktop in your Toolbar. Figures 4 and 5 display a typical PC Card Status icon in Windows.



Figure 4 PC Card Status Icon in Windows 98



Figure 5 PC Card Status Icon in Windows 2000

- 2 The PC Card Properties box appears. In this box, select the Infineer LT4000 SmartCard Reader and click the Stop button. See Figure 6.

If the check box next to "Display warning if card is removed before it is stopped" is selected in the PC Card Properties box, Windows will warn you if a PC Card device has been improperly removed from your computer.

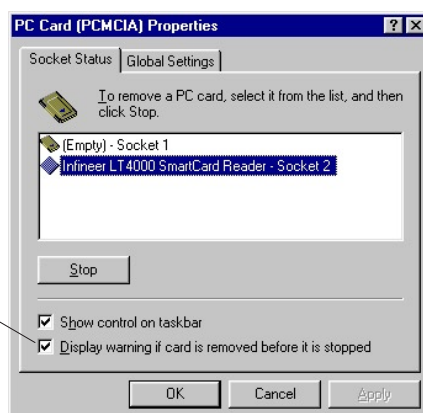


Figure 6 PC Card Properties

- 3 You may now safely disconnect the LT4000 from your computer.



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LT4000 Step-by-Step Installation Instructions

The Infineer LT4000 software installer MUST BE RUN before physically connecting the LT4000 to your system. Do not connect the LT4000 to your system prior to running the software installer.

- 1 Insert the Infineer LT4000 Installation Software CD into your system's CD-ROM drive. The CD will autorun and a welcome screen (similar to Figure 7) will be displayed on your monitor. Choose the "Software" option to begin the software installation.

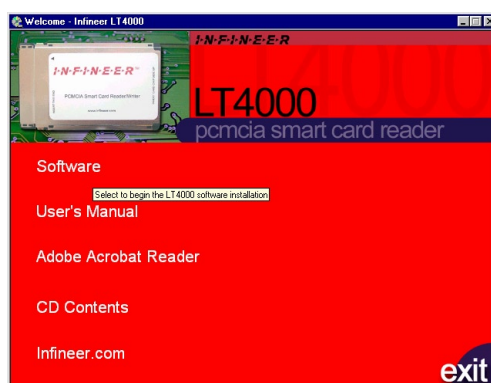


Figure 7 LT4000 CD Welcome Screen

- 2 A screen similar to Figure 8 will appear. This screen provides you with additional information about the LT4000 installation procedure. Choose the "Install the LT4000 Software" option to continue the LT4000 installation. To return to the Main Menu choose the "Return to the Main Menu" option.

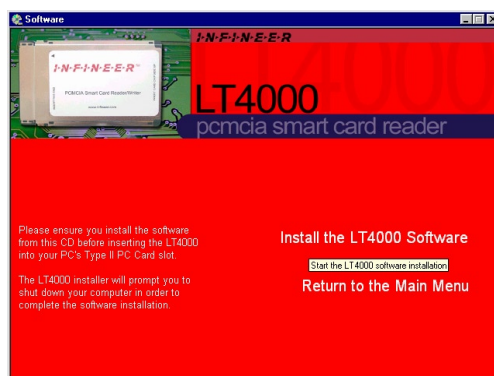


Figure 8 LT4000 Install Software

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- 3 If the “Install the LT4000 Software” option was selected in Step 2, the Windows Install Wizard begins. A screen similar to Figure 9 should appear.
- *Note - You may be prompted to reboot your system if the Windows Installer service has not already been installed. By doing so, the service will be installed on your system automatically. Do not physically attach the LT4000 to your system at this time.*
- Choose the Next button to continue.

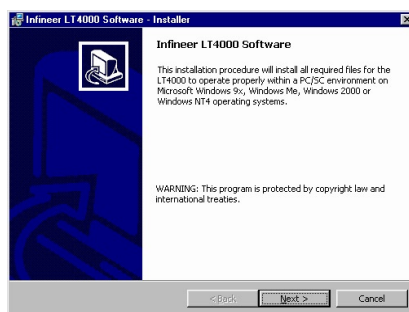


Figure 9 LT4000 Installer Wizard

- 4 The End User License Agreement (EULA) appears. See Figure 10. Click the Acept button to agree to the licensing terms.
- Choose the Next> button to continue.
- *Note - If you choose not to accept the terms of the license agreement the installation will not continue.*

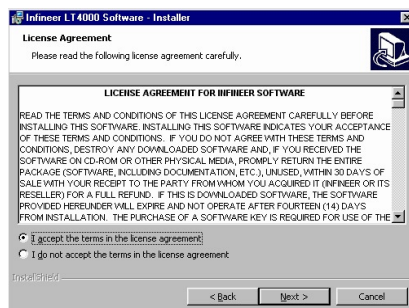


Figure 10 Infiner LT4000 End User License Agreement

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- 5 The installer is ready to install the LT4000 software as shown in Figure 11. Choose the Install button to continue.

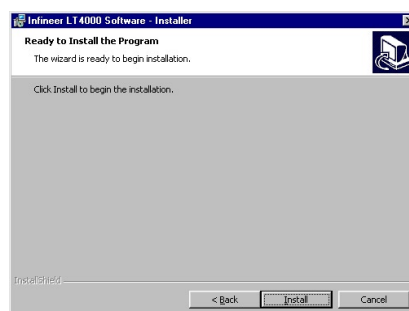


Figure 11 Ready to Install

The Windows Installer is now installing the drivers and components that the LT4000 needs to operate. This may take several seconds to complete.

The final box appears. Windows 9x, ME, and NT4 users should see a box similar to Figure 12. Windows 2000 users should see a box similar to Figure 13.

- 6 Choose the Finish button to complete the software installation.

Note for Windows 9x, ME, and NT4 Users: When you choose the *Finish* button, the LT4000 Installer will automatically shutdown your system in order to complete the software installation.



Figure 12 Windows 9x, ME, and NT4 - Finish Box



Figure 13 Windows 2000 - Finish Box

Now that you've installed the software you're ready to connect the LT4000 to your PC. Please see "Connecting the LT4000" on page 4 for instructions on how to make this connection.

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Uninstalling the LT4000 Software

The LT4000 software can be uninstalled from the LT4000 CD or from within the Windows Add/Remove Properties box. To uninstall from within Windows see page 12. To uninstall using the CD start with Step 1 below.

- 1 To uninstall the LT4000 software, choose the "Software" option from the LT4000 CD Welcome Screen (Figure 14).

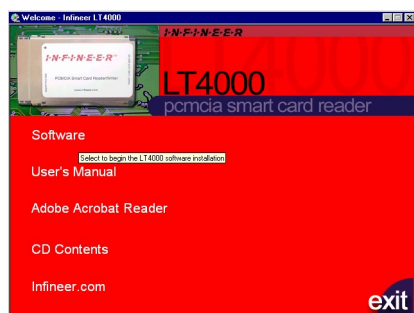


Figure 14 LT4000 Welcome Screen

- 2 If the installer detects that LT4000 software is installed on your computer, a screen similar to Figure 15 will appear. From this screen select the "Uninstall the LT4000 Software" option. The LT4000 Uninstallation process is started.

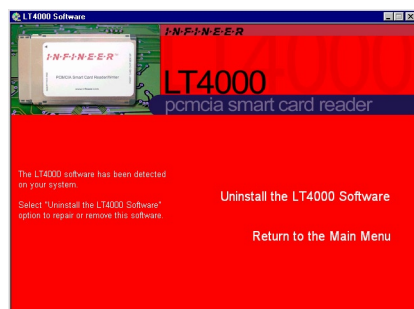


Figure 15 Uninstall the LT4000 Software



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- 3 After choosing the “Uninstall the LT4000 Software” option in Step 2, a box similar to Figure 16 appears.

To continue the uninstallation select the Next> button



Figure 16 LT4000 Uninstallation Wizard

- 4 The Program Maintenance box (Figure 17) appears.
Check the Remove option and select the Next> button.

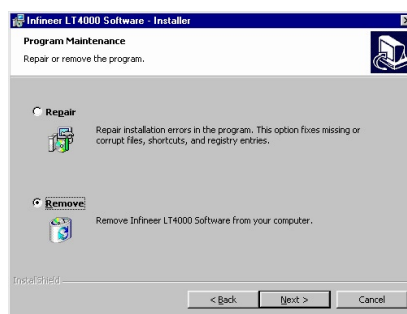


Figure 17 Program Maintenance Box



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- 5 A box similar to Figure 18 appears.
Select the Remove option to complete the uninstallation.
The LT4000 software components are now removed from your system.

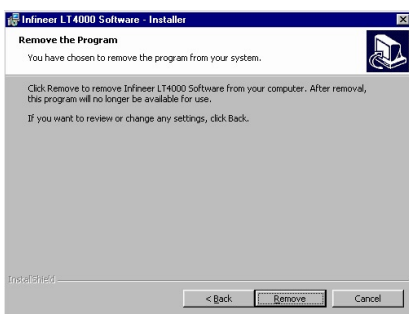


Figure 18 Confirm removal of the LT4000 Software

- 6 A box similar to Figure 19 appears.
Select the Finish button to complete the uninstallation and exit the installer.



Figure 19 LT4000 Software Uninstallation Complete

Uninstalling the LT4000 Software From Within Windows

The LT4000 Software can be uninstalled by choosing: Start> Settings> Control Panel from your Windows Toolbar.

In the Control Panel box that appears, double-click the Add/Remove Programs icon.

In the Add/Remove Programs Properties box, select "Infineer LT4000" displayed in the scroll-box.

Click the Add/Remove button to uninstall the LT4000 software.

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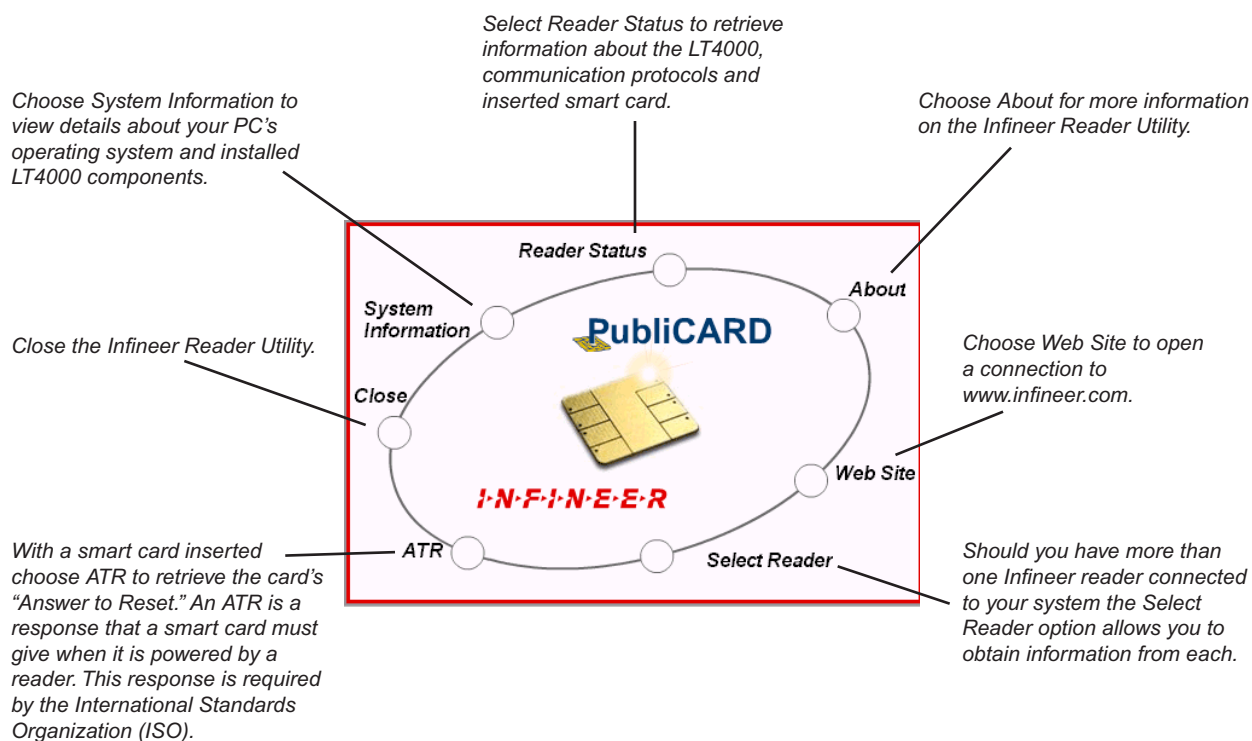
Infineer Reader Utility

The Infineer Reader Utility is automatically installed on your hard drive as part of the LT4000 installation process. This utility is an easy-to-use diagnostic tool for the LT4000. You can open the Infineer Reader Utility from your desktop at:

Start > Programs > Infineer, Inc. > Tools > Infineer Reader Utility

In the unlikely event you experience technical difficulty with the LT4000 reader, Infineer Technical Support may ask that you supply information about the reader from the utility. (See page 14 for Infineer Technical Support contact information.)

The LT4000 software must be installed and the LT4000 reader connected to your PC in order for the Infineer Reader Utility to perform certain functions.



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Technical Support

Infineer offers basic technical support to LT4000 owners. This support is included with your reader purchase at no additional charge. Support IS LIMITED to the installation, connection and functionality of the LT4000 only. Support is not offered for applications developed or sold by companies other than Infineer. To obtain support for these applications, please contact the developer of the software or your service provider.

Access to Infineer's Technical Support is available through:

	Contact Information	Availability
E-mail	readertechsupport@infineer.com	Submit reports 24-hours a day. A response will be provided within two business days.
Phone	727.943.8684	Phone support is available for the first 30 days. Support is provided Monday through Friday, 9am to 5pm EST.
FAX	FAX technical support requests to: Technical Support Team 727.934.5731	Submit reports 24-hours a day. A response will be provided within two business days.
Mail	Mail technical support requests to: Infineer, Inc. Attention: Technical Support Team 905 E. Martin Luther King Drive Ste. 400 Tarpon Springs, FL 34689	A response will be provided within two business days after receipt of your request.

Before contacting the Technical Support Team, please make sure that you have read and followed the instructions in this document.



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Adobe® Acrobat® Reader™

Adobe Acrobat Reader allows you to view and print files in Adobe Portable Document Format (PDF) on any major platform. Acrobat Reader (Version 5.0) is available on the Infiniteer LT4000 Installation CD and can be installed by selecting the "Acrobat Reader" option from the CD's main menu.

To download the most recent version of Acrobat Reader from Adobe's Web site, select the Get Acrobat Reader icon below. An active Internet connection is required.

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Infineer LIMITED HARDWARE WARRANTY

This Infineer, Inc. (hereinafter INFINEER) limited product warranty extends to the original purchaser only.

INFINEER warrants all electronic hardware products against defects in materials and workmanship for a period of one year from date of sale. If INFINEER receives notice of such defects during the warranty period, INFINEER will, at its option, either repair or replace products that prove to be defective.

Should INFINEER be unable to repair or replace the product within a reasonable amount of time, the customer's alternate remedy shall be a refund of the purchase price upon return of the product to INFINEER. This warranty gives the customer specific legal rights. Other rights, which vary from state to state or province to province, may be available; however, no rights or remedies other than those specifically set forth herein shall be available to the customer unless expressly provided for and required but such state or provincial law.

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Infineer LIMITED SOFTWARE WARRANTY

This Infineer, Inc. (hereinafter INFINEER) limited product warranty extends to the original purchaser only.

90-Day Limited SOFTWARE Warranty

Infineer warrants the following for a period of ninety (90) days from your purchase of the product:

- (1) The SOFTWARE will perform substantially the functions described in the documentation provided by INFINEER.
- (2) The media on which the SOFTWARE is furnished will be free from defects in materials and workmanship under normal use.

The warranty period ends and the end of the ninety (90) day period and all warranties by INFINEER regarding the product will at that time terminate. Your sole remedy under the warranty during this ninety (90) day period is that INFINEER will undertake to correct within a reasonable period of time any reported "SOFTWARE Error"



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(failure of the SOFTWARE to perform substantially the functions described in the documentation), correct errors in the documentation, and * replace any magnetic media which proves defective in materials or workmanship on an exchange basis without charge. In order to make a claim under this warranty you must return the defective item with your receipt to INFINEER, postage prepaid, within ten (10) days after the warranty period. If INFINEER is unable to replace defective media or if INFINEER is unable to provide corrected SOFTWARE or corrected documentation within a reasonable time, INFINEER will, at its sole and exclusive option, replace the SOFTWARE with a functionally equivalent program at no charge to you.

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LT4000 Frequently Asked Questions

The LT4000 is PC/SC certified. What does this mean?

The LT4000 has been tested and certified by Microsoft's Window Hardware Quality Labs for Windows 98, ME, 2000, and NT 4.0 operating systems.

The PC/SC compatible drivers provided for the LT4000 are based on Microsoft's implementation of the PC/SC Workgroup's specifications. The PC/SC Workgroup (Personal Computer/Smart Card) was created to address interoperability issues in personal computer/smart card applications. Infineer is an Associate Member of the PC/SC Workgroup.

What types of cards can the LT4000 support?

The LT4000 supports both asynchronous and selected synchronous cards.

Can I use the LT4000 with a desktop or laptop computer?

The LT4000 may be used with either laptop or desktop computer as long as the minimum system requirements (listed on page 2 of this manual) are met.

Can I connect and disconnect the LT4000 to my system at any time?

The LT4000 may be connected to your system at any time after its software is installed. However, Windows 9x, ME, and NT4 users should connect the LT4000 before rebooting their computer. This practice ensures that the system's Resource Manager (a utility that locates and manages the LT4000) is started each time the system is started.

Follow the procedures on page 6 of this manual to properly disconnect the LT4000 from your computer.

How do I know which Infineer device drivers to install on my system?

The software installer on the LT4000 Installation CD handles this for you. The software installer is launched when you choose the "Software" option on the CD's Welcome Screen and then "Install the LT4000 Software" option on the subsequent screen. The installer automatically detects your system's operating system and installs the appropriate drivers. The Infineer LT4000 software must be installed on your system before you connect the reader to your PC.

I've read this entire manual and I'm still experiencing difficulties with the LT4000. Who do I contact for assistance?

Please see page 14 in this User's Manual for a listing of technical support contacts.