

## e-gate USB Smart Card

### *Driver Install Notes (Windows 98/Me)*

By downloading software from the Reflex Readers Download web site, you agree to the terms and conditions of the e-gate Smart Card Driver License Agreement. Please read the agreement before downloading.

The following information is available in this document:

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## Supported Platforms

The e-gate USB 2.4 drivers were tested on the following platform versions:

- Windows 98 (Second Edition)
- Windows Me

We recommend that you install the specified versions.

## Package Contents

File	Description	Version
egate.sys	System file	2.4.0.0
egate.inf	Setup information	
egate.cat	Security catalog	
egatebus.sys	Setup information	2.4.0.0
egatebus.inf	System file	
egaterdr.sys	System file	2.4.0.0
egaterdr.inf	Setup information	
egaterdr.cat	Security catalog	
drvins16.exe	16-bit driver installer	
slbmjpg98.dll	Virtual Reader Enumerator property page	
killScardSvr.dll	Application extension	
wdmstub.sys	WDM emulation functions	5.0.0.4
setup.exe	Installation launcher	2.4.0.0
egate_W98_READ ME.pdf	<i>e-gate USB Smart Card Driver Install Notes (Windows 98/Me)</i>	
egate2_4_RelNotes.pdf	e-gate 2.4 Release Notes	
egate_License.txt	License Agreement	

## About e-gate USB Connectors

The e-gate technology embeds the USB interface electronics normally found in a smart card reader within the card itself. Therefore, an e-gate USB Smart Card does not require a smart card reader. The e-gate USB Smart Card simply plugs into a USB port on the computer using one of these two connector types:

- A token form factor connector if the card is used in its cut-down token format.
- A desktop form factor connector if the card is used in standard smart card format. (An e-gate USB Smart Card in standard smart card format also works with ISO 7816-3 compliant terminals and readers; that scenario falls outside the scope of this document.)

For more information about the e-gate USB connectors, including how to plug them in, see the *e-gate USB Smart Card Installation Guide*, available from the Reflex Reader Technical Support website, [www.reflexreaders.com/Support/support.html](http://www.reflexreaders.com/Support/support.html).

## About e-gate USB Drivers

The e-gate USB Smart Cards use a system of interdependent drivers, and each driver corresponds to a different type of device in the Device Manager.

- **egatebus.sys**, which corresponds to the “e-gate Virtual Reader Enumerator” device under the “e-gate Virtual Reader Enumerators” device type.
- **egate.sys**, which corresponds to one or more “e-gate USB Smart card reader” devices under the “e-gate Smart card readers” device type.
- **egaterdr.sys**, which corresponds to one or more “e-gate USB Smart Card” devices under the “e-gate USB Smart Cards” device type.

For more information about the interdependent e-gate USB drivers, see the *e-gate USB Smart Card Installation Guide*, available from the Reflex Reader Technical Support website, [www.reflexreaders.com/Support/support.html](http://www.reflexreaders.com/Support/support.html).

## Installation Instructions

**NOTE** *The Microsoft Smart Card Base Components must be installed on the computer for the smart card reader to function properly. The Smart Card Base Components are available from the Reflex Readers Downloads website, [www.reflexreaders.com/Support/Downloads/downloads.html](http://www.reflexreaders.com/Support/Downloads/downloads.html).*



*Complete installation of the e-gate USB driver software (including required reboot) before you attach an e-gate USB Smart Card to the computer.*

- 1** Download and extract the driver package in any available space on your computer (for example, in a `\temp` directory). This is a temporary location for the software; during installation, the driver software will be copied to appropriate directories on your computer.
- 2** Navigate to the directory into which you extracted the driver files and double-click *setup.exe*. The installation program starts automatically.
- 3** After installation of the new drivers is complete, reboot the computer.  
When you reboot, one virtual e-gate USB Smart Card Reader device is created on the computer, and displayed messages confirm that the operating system has found the e-gate USB Smart Card Reader device and the driver software that supports it.
- 4** Attach an e-gate USB Smart Card to the computer. If you are using a desktop form factor connector, plug the connector into an available USB port, and then insert an e-gate USB Smart Card into the connector. If you are using a cut-down token form factor connector, insert an e-gate token into the connector, and then plug the connector into an available USB port. Displayed messages confirm that the operating system has found the e-gate USB Smart Card device and the driver software that supports it.

You can verify that installation of the drivers and the card was successful by looking in the Device Manager:

- a** To open the Device Manager, select **Start** → **Settings** → **Control Panel**. Double-click **System**, and then click the **Device Manager** tab.
- b** The following device type/device in the display confirms that installation of the drivers and connection to the card were successful:

e-gate USB Smart Cards  
e-gate USB Smart Card

- 5 If you want to connect to more than one e-gate USB Smart Card concurrently, you can simply attach one or more additional e-gate USB Smart Cards to the computer, and then reboot. The driver system automatically creates a new e-gate USB Smart Card Reader device each time you attach an additional e-gate USB Smart Card to the computer and reboot.

You also have the option to set the Virtual Reader Enumerator maximum count number to a value greater than 1, so that when the computer is booted, some number of e-gate USB Smart Card Reader devices (to a maximum of ten) is created. See “Configuring the e-gate Virtual Reader Enumerator,” on page 6 for more information.

If you reset the Virtual Reader Enumerator maximum count value, you must reboot the computer twice. The second reboot is necessary to work around a limitation of the Microsoft Smart Card Resource Manager.

**NOTE**

*As long as the total number of concurrently connected e-gate USB Smart Cards does not exceed the number of e-gate USB Smart Card Reader devices on the system, a newly-connected e-gate USB Smart Card will be detected and automatically associated with an existing e-gate USB Smart Card Reader device. If, however, the number of concurrently connected e-gate USB Smart Cards exceeds the number of e-gate USB Smart Card Reader devices on the system, the newly-connected card will be detected, but you must reboot the computer in order for the Smart Card Resource Manager to recognize an additional e-gate USB Smart Card Reader device.*

## Update Instructions

- 1 Detach all e-gate connectors before beginning the e-gate USB driver software update.
- 2 Download and extract the driver package in any available space on your computer (for example, in a *Vemp* directory). This is a temporary location for the software; during installation, the driver software will be copied to appropriate directories on your computer.
- 3 Navigate to the directory into which you extracted the driver files and double-click *setup.exe*. The installation program starts automatically.
- 4 After installation of the new drivers is complete, reboot the computer. When you reboot, one virtual e-gate USB Smart Card Reader is created on the computer.

## 5 Re-attach your e-gate USB Smart Card.

# Configuring the e-gate Virtual Reader Enumerator

In the current e-gate USB driver architecture, if you will be connecting multiple e-gate USB Smart Cards to the computer, you have the option to simply plug in the additional cards and let the system automatically add them as devices and associate them with virtual e-gate USB Smart Card Reader devices, a feature called *automatic enumeration*. In this scenario, the system goes through a plug-and-play discovery sequence when you plug in an e-gate USB smart card; if there is no available e-gate USB Smart Card Reader device, the system adds a e-gate USB Smart Card Reader device to be associated with the new card. On Windows 98 and Windows Me systems, automatic enumeration requires a reboot. This option offers the advantage of not requiring you to perform any manual configuration tasks associated with adding additional e-gate USB Smart Cards to the system.

Alternatively, you have the option to configure the system to automatically create some number (to a maximum of ten) of e-gate USB Smart Card Reader devices each time you boot the computer, even if those devices are not attached to the computer at boot time. The advantage of this scenario is that the plug-and-play discovery sequence for the preset number of e-gate USB Smart Card Reader devices happens at boot time, so when you attach the e-gate connector and plug in the card, there is no post-insertion delay before the card becomes active.

Here are instructions about preconfiguring the number of virtual e-gate USB Smart Card Reader devices to create each time the computer is rebooted.

## Setting the Virtual Reader Enumerator Count

The e-gate Virtual Reader Enumerator device's property sheet defines the number of e-gate USB Smart Card Readers to create when the computer is booted.

**NOTE** *Because each e-gate USB Smart Card requires a separate e-gate connector at the time it is in use, the e-gate Virtual Reader Enumerator maximum count number is usually set to the maximum number of e-gate connectors expected to be attached to the computer at one time.*

These are the steps to configure the number of virtual e-gate USB Smart Card Readers:

- 1 To open 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 e-gate Virtual Reader Enumerators device type, and then double-click the **e-gate Virtual Reader Enumerator** device to open its Properties.
- 3 In the device's Properties, click the **e-gate Readers** tab.
- 4 Use the size arrows to change the maximum count value from the default, which is 1. The maximum allowable value is 10. After you have selected a value, click **OK**. Close the property sheet and the Device Manager.
- 5 Reboot the computer twice. The second reboot is necessary to work around a limitation of the Microsoft Smart Card Resource Manager.

**NOTE** *Each e-gate USB Smart Card Reader device uses system resources; therefore, we recommend that you configure the maximum count to the number of concurrently active e-gate USB smart cards you anticipate you will need, and no more.*

## Installation and Update Tips

### e-gate Drivers Installation Does Not Complete

On Windows 98 and Windows Me systems, installation of the e-gate drivers does not complete automatically. These are the steps to complete installation of the e-gate drivers on Windows 98 and Windows Me systems:

- 1 Installation stops, and a message similar to the following is displayed:  
Please insert the disk labeled 'e-gate Installation Disk',  
and then click OK.
- 2 Click **OK** to continue.
- 3 If the file requested is a \*.sys file (for example, *egatebus.sys*), point to the Windows\System32\Drivers directory.  
If the file requested is a \*.cat file (for example, *egaterdr.cat*), point to the directory into which the download package was extracted.
- 4 Continue installation of the drivers as instructed on page 4.

### Driver Version Identification Following Update

After updating the e-gate drivers, follow these steps to accurately identify driver version number information:

- 1 To open 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 device type that includes the e-gate driver whose driver version number you want to check, and then double-click the name of the device to open its Properties. For example, to check the version number of the e-gate USB Smart Card Reader driver, expand the Smart Card Reader device type, and then double-click **e-gate USB Smart Card Reader**.
- 3 In the device's Properties, click the **Driver** tab, and then click the **Driver Details...** button.
- 4 The File version number displayed in the Driver File Details dialog correctly describes the current driver.



## **Do Not Install e-gate Drivers from Cyberflex Access Kits after Installing from Downloads Site**

If you install e-gate software drivers from the Reflex Readers Downloads site and subsequently install the Cyberflex Access Software Development Kit or Integration Kit, deselect the **e-gate Smart Card Drivers** option in the Custom Setup panel when you specify which components of the Kit to install. The drivers on the Downloads site are always the latest available drivers, so this practice avoids issues that can result from inadvertently overwriting newer drivers with older drivers.

## **Known Issues and Limitations**

### **Virtual Reader Enumerator Property Page Sometimes Missing**

The Virtual Reader Enumerator device property page file sometimes is not copied to the expected directory during installation on Windows 98 and Me systems. This is a known, intermittent problem.

If the Virtual Reader Enumerator property page is not visible (see “Configuring the e-gate Virtual Reader Enumerator,” on page 6 for information about opening the property page), copy the *slbmgp98.dll* file in the installation package to the \$WINDOWS\System directory, and then reboot the computer.

### **Device State Might Not be Maintained on Older BIOS Systems**

On systems on which the BIOS does not correctly support integrated power management through an Advanced Configuration and Power Interface (ACPI) BIOS, device state might not be correct when returning from standby mode. Depending on how your application interacts with the SCRM, communication with the card might not be possible following resume from standby mode. In this case, you might need to remove and then reattach the e-gate USB Smart Card.

### **Standby/Resume Behavior Anomalies**

If your e-gate USB Smart card is inserted when the system goes into hibernate or standby mode, and the card is still inserted when the system resumes, the card inserted state might not be correct. In this case, you might need to remove and then reattach e-gate USB Smart Card.

## **e-gateUSB: Desktop Form Factor Power Light**

The e-gate desktop form factor connector's power light glows steadily at two different points while a card is in the process of being inserted into the connector. (In addition, the power light glows steadily at the same points when the card is being removed from the connector.) This behavior should not be taken as a signal that the card is completely inserted; in fact, the card must be fully inserted and seated in the desktop form factor connector to communicate with the host system. When the card is fully inserted, the power light flickers briefly as the system detects the card.

## **Additional Reader Documentation Resources**

For information about installing the reader hardware, understanding the interconnected e-gate drivers, and troubleshooting installation or operation problems, see the *e-gate USB Smart Card Installation Guide*, available from the Reflex Reader Technical Support website, [www.reflexreaders.com/Support/support.html](http://www.reflexreaders.com/Support/support.html).

Changes in the e-gate USB Smart Card drivers since release of the version 1.10 drivers for Windows 98/Me are listed in the *e-gate USB 2.4 Release Notes* document found in the driver package (file name *egate\_2\_4\_RelNotes.pdf*).

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