



# **Sentinel - PC Access Control**

# Installation & User Manual Version 2.0

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## PREAMBLES

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#### Trademarks

All trademarks are hereby acknowledged.

#### **Technical Prerequisites**

This Installation and User Guide for the Ringdale PC Access Control System assumes that the installer is familiar with the basic operation of the following:

- □ Microsoft<sup>®</sup> Windows<sup>®</sup> desktop operating systems (Windows 98/ME/NT/2000/2003/XP)
- □ Microsoft<sup>®</sup> Windows<sup>®</sup> Servers (Windows NT/2000/2003/XP)
- □ Ethernet topology, TCP/IP protocols
- Ethernet routers, switches and hubs

#### **Trademark Recognition**

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#### **Components Used**

The information in this document was created from the devices in a specific lab environment. All of the devices used in this document started with a cleared (default) configuration.



# **INTRODUCTION TO PC ACCESS CONTROL**

#### **Basic Components**

Welcome to the Ringdale<sup>®</sup> Sentinel PC Access Control system. There are three basic components to the system, as follows:

- 1. The Ringdale PC Access Control software that resides on the target PC or PC's.
- 2. A Human Interface Device (HID), such as a Ringdale Optical Fingerprint Reader, a Ringdale Swipe Reader, a Ringdale Proximity Card Reader or the Microsoft<sup>®</sup> Keyboard Fingerprint Reader.
- 3. The Ringdale Sentinel Server software that manages and authenticates the enrolled users.

This manual focuses on the installation and end-user functionality of PC Access Control as listed in items (1) and (2) above. Please note that the Sentinel Server portion of the system is covered in a separate Sentinel manual.

#### Overview

Ringdale's PC Access Control system raises the traditional Microsoft logon process (user name and password) to the highest level of security and privacy. PC access control and user authentication are now centrally managed using a more secure method of logon, such as fingerprint ID, proximity card or swipe card. And if an existing Facilities Access Control system is in place, these same ID cards can be integrated and used with Ringdale's PC Access Control system.

From the end-user's perspective the PC logon process is now an even simpler one-step process because the traditional PC logon method (user name and password) is replaced by Ringdale's PC Access Control user authentication method.

For example, with Ringdale's PC Access Control and if a fingerprint ID reader is the chosen method, users logon to their PC's simply with the touch of a finger.

This logon information is then processed by the Sentinel Access Control server database and if validated against the enrolled user's information, the user is automatically logged onto their PC or any PC that they have been given access to and are using; it's that quick and that simple. If an <u>unauthorized</u> user attempts to logon to the PC, access is always denied, in exactly the same way as if an incorrect password had been entered in the traditional Window's method.

#### System Requirements

Ringdale's PC Access Control software (Client and Server) run on most Microsoft Windows platforms and has been tested to successfully run under the following operating systems:

Client Platform:	Windows NT/2000/2003/XP
Server Platform:	Windows 98/ME/NT/2000/2003/XP
<b>Client Product Number:</b>	00-13-1484-xxxx (PC Access control - different extensions dependant upon quantity of client licenses required)



# **USING PC ACCESS CONTROL**

This section of the manual assumes that PC Access Control, Sentinel Server and the selected authentication method have all been correctly installed and configured. In this example, a Fingerprint Reader is the authentication method of choice.

**NOTE:** To ensure that users with PC Access Control can log onto their PCs at any time using fingerprint authentication, it is crucial to have the pertinent Sentinel Server running at all times.

When a PC with PC Access Control is first powered on, or after an existing user has logged out, the following panel will be displayed:



From this panel, logging onto the PC is a simple one-step process that requires scanning any enrolled finger at the fingerprint reader. If the scan is valid and successful, then the user is automatically logged on to the PC and the PC **Desktop** is displayed.

If the user wants to explore the full logon process, they can press *Ctrl-Alt-Del* at any time and the following panel will be displayed:

entinel - PC Ac	cess Control - Log On 1	lo Windows	
	Sentine		)AL
Face	Fingerprint	Card	
$\boldsymbol{\wedge}$			١
( )	J		
Status: Unavailable	s Status: Waiting	No Swipe Card Reade	r
User name:	User Name		
Password:			

This panel indicates that a Fingerprint Reader has been configured and the user can logon to the PC simply by using their fingerprint for authentication. It also indicates that the Face Recognition and Card Reader **have not** been configured for this PC. The higher level of security offered by Ringdale's PC Access Control system assumes that the individual user does not know their password and that access to the PC only requires the selected method of user verification (fingerprint or proximity reader, etc). In this example the user should not enter a User Name or Password as the system has been configured to recognize the user solely from a valid fingerprint scan.

However, if the Administrator needs to log onto the PC locally, or if there are network problems and the PC cannot communicate with the Sentinel server, it is at this panel that the Administrator can log onto the PC using the Administrator or user name and appropriate password.



## **Enhanced Windows Security via Sentinel PC Access Control**

If at any time users are logged onto their PC's and the key sequence *Ctrl-Alt-Del* is invoked, the following Sentinel PC Access Control version of the Windows Security panel is displayed:

🛄 Se	ntinel	⊠RINGDA
	LE WELESS	Untion
Jse the Task Manger to o	lose an application that is no	t responding, Shut Down

The function of each selection is self explanatory, or you can refer to the section **OVERVIEW: PC ACCESS CONTROL & "Ctrl-Alt-Del"** on page 30 for a more detailed description of each selection.



# **INSTALLATION METHODS – CD OR DOWNLOAD, READ FIRST**

There are two methods of installing Ringdale's PC Access Control software:

- 1. Installing via a software download from the Ringdale website, or
- 2. Installing from a Ringdale-supplied CD.

Since there are some subtle but important differences between these two installation methods, and to ensure a successful installation and configuration process, both methods are explained in detail in the following sections.

#### **Important Notes - Please Read**

- 1. <u>DO NOT</u> INSTALL THE RINGDALE PC ACCESS CONTROL CLIENT SOFTWARE ONTO THE CLIENT PC UNTIL ALL OF THE PREQUISITES LISTED BELOW HAVE BEEN COMPLETED, INCLUDING THE REGISTERING AND ENROLLING OF EACH USER ON THE RINGDALE SENTINEL SERVER.
- 2. Please note that the installation of PC Access Control from Version 1.0.2.12 and higher has been greatly simplified with the incorporation of an installation Wizard. All of the requisite Ringdale drivers for the supported Fingerprint Readers are now included with both the PC Access Control download version and CD version, so it does not matter if the Fingerprint Reader has been installed prior to PC Access Control, or not. The installation Wizard now takes care of managing and installing the drivers for you, just follow the installation panels.

#### **Prerequisites for Installation – CD or Download**

- a) A copy of Ringdale's Sentinel Server software must be installed, configured and running on a server that is accessible by the client PC over a LAN or WAN.
- b) A client PC with the appropriate Microsoft operating system (see list on previous page).
- c) The client PC must already be configured for the intended user or users of the PC (name and password), including each user having an assigned unique password. NOTE: for the obvious reason of ensuring the integrity and security of the PC Access Control system, the user passwords **must not** be divulged to the individual users.
- d) Each user must be registered on both the Sentinel Server and the PC with the same identical logon name and password.
- e) Each user must be enrolled at the Sentinel Server using the selected security method (fingerprint, proximity card, swipe card, etc).
- f) Temporarily disable or shutdown any antivirus or spyware protection software.
- g) If you are going to use a Microsoft Keyboard and Fingerprint Reader combination or a Ringdale standalone Fingerprint Reader for user authentication, ensure that the reader of choice is already plugged into an available USB port on the client PC.
- h) The ability to download the PC Access Control software from the Ringdale website.



# INSTALLING PC ACCESS CONTROL FROM A DOWNLOAD

#### **Installation Process**

To download software from the Ringdale web site (www.ringdale.com), you will first need to register as a user.

- 1. Go to the Ringdale home page.
- 2. Select the **Support** tab and then select **Download Software (1)** in the navigation bar.



3. If you have not previously registered on the Ringdale site, you will need to register. Select either *Create a New Account* (1a) in the navigation bar or *click here* (1b) in the main body of the window or to register and the Registration panel that is on the next page of this manual will appear.

Biometric Access Control Sys	stems, Network Products and FollowMe Printing, Output Management, To - Microsoft Internet Explorer
File Edit View Favorites Tool	s Help
🌀 Back 🝷 🚫 - 💌 🛃	🏠 🔎 Search 👷 Favorites 🚱 🔗 - 🎽 🔯 - 📃 🥸
Address 🕘 http://www.ringdale.com/	myaccount/
Connecting people and information	
Products Solutions Su	upport » My Account « Resellers News About Us Contact Us
Account Links » Create a New Account <b>(1</b> a	Account
» Login	Lugin
NOTE: You need to have an account to download trial software, register products or purchase products on this site.	Please enter your e-mail address and password to acce previously registered on the site then please <u>click here</u> . <b>(1b)</b> If you have forgotten your password then please enter ,
	E-mail address: Password:

<u>NOTE</u>: If you already have a registered Ringdale account, just enter your **E-mail address** and **Password (2)** and then click on *Login* at the bottom of the above panel.



4. As explained in the navigation panel of this form, you need to be registered with Ringdale (have an account) before you can download trial software, register products or purchase products on-line from the Ringdale web site.

Complete this registration form to create a new Ringdale account and then click on **Submit** at the bottom of the panel.

Products Solutions S	Support   » My Account «   Resellers   Ne	ws About Us Contact Us
ccount Links	My Account	
Create a New Account Login	Create New Account	
ITE: You need to have an count to download trial ftware, register products	E-mail Address:	
purchase products on this a.	Password:	
	Title:	
	First Name:	
	Last Name:	
	Position:	
	Company:	
	Telephone;	
	Fax:	
	Address 1:	
	Address 2:	
	Town:	
	State/County:	
	Post/ZIP Code:	
	Country:	United States of America 👻
	I would like to receive your Newsletter:	No 💌



 After you have successfully registered or logged onto the Ringdale resources as explained in the previous step, the Resources panel will reappear. Click on *Download Software* (1) to access the software selections.

200								
Products	Solutions	» Support «	My Account	Resellers	News	About Us	Contact Us	
Resources		Support						
» Download So » Product Manu	ftware <b>(1</b> ) Ials	We are con	nmitted to supp	lying leading	edge teo	:hnology at t	he lowest cost.	6
» Knowledge B Frequently Ask (FAQ)	ase and ed Questions	For Ringdal use our Teo	e products, we chnical Support	provide work Enquiry form	dwide te:	chnical suppo	ort 24/7 via our	r web site. Please
» Token Ring B	ridge FAQ	We have te	chnical support	personnel in	the Unit	ed Kingdom,	the United Sta	ites and
Enquiry Forms		Germany, a	anowing Us to co	over a multitu	IGE OF GE	ne zones and	i languages,	
» Support Enqu » Product Enqu	iiry Form iry Form	For support enquiry as	enquiries, plea soon as possibl	ise use the <u>Tr</u> e.	echnical	Enquiry Form	<u>ı,</u> and we will r	espond to your
Support Agreements		If your enq	If your enquiry encompasses a larger issue, which you feel you cannot address in our					

6. From the Downloads and Registrations panel select **Sentinel – Standard. (1)** 

At the Select Software drop-down panel to	the right (2), select <i>Client – PC Access</i>
Control (3).	

Froduces solutions .	Support   » My Account « Resellers   News	About Us Co	ntact Us		
View	Downloads and Registrations				
⊳ My Shopping Cart ⊳ My Details	Downloads				Hide
Reseller Application	Product Name	Released	Version	Please select version to do	vnload:
Becoming a Reseller, a Certified Reseller or a Partner gives you access to	FollowMe Q-Server - Education edition	23 Oct 06	4.6.1.3	Select Software	Go
the FollowMe product	FollowMe Q-Server - Enterprise edition	23 Oct 06	4.6.1.3	Select Software	<b>∨</b> 60
features.	FollowMe Q-Server - Professional edition	23 Oct 06	4.6.1.3	Select Software	▼ Go
My Interests	FollowMe Q-Server - Standard edition	23 Oct 06	4.6.1.3	Select Software	<b>v</b> 60
» My Saved Orders » My Order Progress » My RMAs	General	24 May 02	1.2.4	Select Software	🖌 Go
	Internet Printing System	29 Apr 02	2.0.0.0	Select Software	<b>∨</b> 60
» My Passwords	PeripheralVision	15 May 01	2.0.0	Select Software	▼ Go
Software	PlotPro	01 Aug 02	2.9.0	Select Software	<b>∨</b> 60
Downloads and Registration	PRINTSET	09 Jan 01	7.2.2.4	Select Software	🖌 Go
Support Contracts	Sentinel - Enterprise	12 Apr 07	2.5.8	Select Software	<b>∨</b> 60
Coming soon, this section	Sentinel - Professiona'	12 Apr 07	2.5.8	Select Software	▼ Go
will allow you to track and renew your support contracts.	Sentinel - Standard (1)	12 Apr 07	2.5.8	Select Software Select Software	<mark>♥</mark> 60
Help	Register Software		(3)	Client - PC Access Control (1.0	1.2.: <mark>de</mark>
» Knowledge Base and Frequently Asked Questions	Evaluation, Standard and Administration To	ol Only Edition	ns	( [36] /8[ (2,3;0)	Hide
(FAQ)	Select Product		Registration	Key	
» Product Manuals	Select	*	e comercial de la comercial de La comercial de la comercial de	Rec	ister

Click **Go** (4) to start the software download process.

**NOTE:** The downloadable file is approximately 1.5MB in size.



7. Depending upon what version of Windows<sup>®</sup> is installed on the target PC, the following **Security Warning** panel may or may not appear. Click **Run**.

Do you v	want to run or save this file?
	Name: Sentinel_Client_1_0_2_12.exe
	Type: Application, 1.58 MB
	From: www.ringdale.com
	Hun Save Lancel
~ 1	While files from the Internet can be useful, this file type can
	potentially harm your computer. If you do not trust the source, do not

8. While the Sentinel Client file is being downloaded, this status panel will be displayed.

39% of Sentin	el_Client_1_0_2_12.exe Comp 🔳 🗖	×
3	9	
Opening: ntinel_Client_:	_0_2_12.exe from www.ringdale.com	
Estimated time le Download to: Transfer rate:	ft 25 sec (554 KB of 1.58 MB copied) Temporary Folder 41.8 KB/Sec	_
Close this dia	og box when download completes	
	Open Open Folder Cancel	)

9. Depending upon what version of Windows<sup>®</sup> is installed on the target PC, the following Security Warning may or may not appear. Click *Run*.





10. The **Sentinel Client Setup** Installation Wizard will now appear. Carefully read the directions and warnings and then click on **Next** to continue the installation process.

🔀 Sentinel Client Setup	
	Welcome to the Sentinel Client Installation Wizard
	It is strongly recommended that you exit all Windows programs before running this setup program.
	Click Cancel to quit the setup program, then close any programs you have running. Click Next to continue the installation.
0	WARNING: This program is protected by copyright law and international treaties.
Hart.	Unauthorized reproduction or distribution of this program, or any portion of it, may result in severe civil and criminal penalties, and will be prosecuted to the maximum extent possible under law.
TR	
	< Back Next > Cancel

11. This is the **Sentinel Client Setup – User Information** panel. Enter your full name and organization details.

Decide whether to allow just the current user or anyone who wants to use the PC to have access to the PC and click the setting as appropriate (1).

🔀 Sentinel Client Se	etup 📃 🗖 🔀
User Information Enter the following in	formation to personalize your installation.
Full N <u>a</u> me:	Hostmaster
Organization:	Network Technology PLC
The settings for th share this comput users. Install this a	is application can be installed for the current user or for all users that er. You must have administrator rights to install the settings for all pplication for: O Anyone who uses this computer O Only for me (Hostmaster)
Wise Installation Wizard®	< Back Next> Cancel

Click *Next* and the Sentinel Client will continue the installation/setup process.



12. This is the **Sentinel Client Setup – Ready to Install the Application** panel and it gives you the option to either go back to the previous panel and reenter the installation information, or click **Next** to continue the installation process.

i Sentinel Client Setup	
Ready to Install the Application Click Next to begin installation.	Q
Click the Back button to reenter the installation information or click Cancel to exit the wizard.	
Wise Installation Wizard®	Cancel

13. The **Sentinel Client Setup – Updating System** panel will be displayed momentarily.

🕼 Sentinel Client Setup	
Updating System The features you selected are currently being installed.	
Registering type libraries	
LibID: Registering type libraries	
Wise Installation Wizard®	Cancel

14. If everything has proceeded correctly, the **Successfully Installed** pop-up panel appears.



Click on *Finish* to exit the PC Access Control installation process.



# INSTALLING PC ACCESS CONTROL FROM THE RINGDALE CD

**NOTE:** Before you begin the installation process, you must have the Ringdale Sentinel Server software installed and configured on your network prior to installing the PC Access Control software on any target PC.

## Prerequisites

- a) A copy of Ringdale's Sentinel Server software installed, configured and running on a server that is accessible by the client PC over a LAN or WAN.
- b) A client PC with the appropriate Microsoft operating system (see list on previous page).
- c) The client PC must already be configured for the intended user or users of the PC (name and password), including each user having an assigned unique password. NOTE: for the obvious reason of ensuring the integrity and security of the PC Access Control system, the user passwords **must not** be divulged to the individual users.
- d) Each user must be registered on both the Sentinel Server and the PC with the same identical logon name and password.
- e) Each user must be enrolled at the Sentinel Server using the selected security method (fingerprint, proximity card, swipe card, etc).
- f) Temporarily disable or shutdown any antivirus or spyware protection software.
- g) If you are going to use a Microsoft Keyboard and Fingerprint Reader combination or a Ringdale standalone Fingerprint Reader for user authentication, ensure that the reader of choice is already plugged into an available USB port on the client PC.

## **Contents – PC Access Control Media Kit**

The Ringdale PC Access Control Media Kit includes a Jewel case containing a CD with all of the requisite files to successfully install PC Access Control and the various optional readers.





#### **Installation Process**

You can install the PC Access Control software from the Ringdale CD onto any Windows 95/98/ME/NT4/2000/XP PC. The CD includes the following folders:

- a) Client Folder: includes the executable for installing PC Access Control Client.
- b) Drivers Folder: includes the required drivers for the Ringdale & Microsoft fingerprint readers.
- c) Manuals Folder: includes the installation, hardware and software manuals in PDF format.
- d) Prerequisites Folder: executables that are required during the installation process.
- e) Sentinel Folder: includes the Sentinel Standard Server executable.

The installation steps are as follows:

- 1) Load the "Sentinel PC Access Control" CD into the PC's CD drive.
- 2) From the PC Desktop, go to My Computer, and double-click on the PC Access CD.



- 3) In the Client folder double-click on the **Sentinel\_Client.exe** executable. The Sentinel Client Setup window appears.
- Click *Next* and the following **Sentinel Client Setup** screen appears. Enter your name and organization. Decide whether to allow anyone who uses the PC or just the current user to have access to the PC (1) and click the setting as appropriate. Click *Next.*

Jser Information	
Enter the following in	formation to personalize your installation.
Full N <u>a</u> me:	Hostmaster
Organization:	Network Technology PLC
The settings for th share this comput	is application can be installed for the current user or for all users that er. You must have administrator rights to install the settings for all
The settings for th share this comput users. Install this a (1	is application can be installed for the current user or for all users that er. You must have administrator rights to install the settings for all pplication for: O Anyone who uses this computer
The settings for th share this comput users. Install this a (1	is application can be installed for the current user or for all users that er. You must have administrator rights to install the settings for all pplication for: Anyone who uses this computer O Dnly for me (Hostmaster)



5) The **Sentinel Client Setup – Updating System** panel appears momentarily, indicating that the Sentinel Client install / setup process is in progress.

Cancel

6) If everything has proceeded correctly, the **Sentinel Client has been successfully installed** panel appears. Click *Finish* to complete the installation process.

🕞 Sentinel Client Setup		
	Sentinel Client has been successfully installed. Click the Finish button to exit this installation.	
	K Back Finish	Cancel

This completes the installation process for Ringdale's PC Access Control client.

You will now need to **power-cycle** the PC in order for PC Access Control to be initiated. A **Reset** will accomplish the same result.

**NOTE:** before you power-cycle the PC, check one more time that all of the Prerequisites mentioned earlier in this section are in place, including having the user configured on the Sentinel Server, otherwise the user may be locked-out from accessing their PC and, by definition, the network resources.



## INSTALLING A MICROSOFT KEYBOARD WITH FINGERPRINT READER

#### **Overview**

If you already have the Microsoft Keyboard with Fingerprint Reader attached and installed on the PC and you are in the process of installing PC Access Control (Sentinel Client), this section describes how to install the correct Ringdale drivers for the keyboard/reader combination.

Depending on the configuration of the PC and the installed version of Windows, the installation of the Microsoft Keyboard with Fingerprint Reader Combo will either follow-on automatically from the last step of the installation of the Sentinel client to the "**Found New Hardware Wizard**" panel shown below, or the PC will need to have the power cycled in order for this panel to appear. Whichever method is used to get to the **Found New Hardware Wizard** to appear, the following section takes you step-by-step through this specific installation process.

#### Installation Process, from a Download or a CD

 After you have clicked on *Finish* from the previous **Sentinel Client Installed** panel, or after power-cycling the PC, the following **Found New Hardware Wizard** will be displayed. Select *No, not this time* (1) and click *Next*.

Welcome to the Found New Hardware Wizard         Windows will search for current and updated software by looking on your computer, on the hardware installation CD, or on the Windows Update Web site (with your permission).         Read our privacy policy         Can Windows connect to Windows Update to search for software?         O Yes, this time only         O Yes, now and example: connect a device
No. not this time     L

When the following panel appears, select *Install the software automatically* (*Recommended*) (1) and click *Next*.

ound New Hardware W	lizard
1	This wizard helps you install software for:
	Microsoft® Keyboard with Fingerprint Reader
	If your hardware came with an installation CD or floppy disk, insert it now.
	What do you want the wizard to do?
	$\odot$ Install the software automatically (Recommended) $(1)$
	O Install from a list or specific location (Advanced)
	Click Next to continue.



3. The **Hardware Update Wizard** panel appears momentarily.

Hardware U	odate Wizard
Please wa	it while the wizard searches
Ŷ	Microsoft Keyboard Fingerprint Reader
	2
	Cancel

4. When the **Found New Hardware Wizard** panel appears, highlight the **Ringdale Keyboard Fingerprint Reader (1)** option and click **Next**.

Microsoft Keyboard Fingerprint Re	ader		
Description	Version	Manufacturer	Location
Microsoft Keyboard Fingerprint Reader Microsoft Keyboard Fingerprint Reader	1.0.0.3 1.0.0.3	Microsoft Microsoft	c:\windows\ c:\windows\
Ringdale Keyboard Fingerprint Reader	1003	Microsoft	c:\windows\
< ))		<u> </u>	)

5. Depending upon what version of Windows is installed on the target PC, this Security Warning may or may not appear. Click *Continue Anyway*.

1	The software you are installing for this hardware:
	Microsoft Keyboard Fingerprint Reader
	has not passed Windows Logo testing to verify its compatibility with Windows XP. ( <u>Tell me why this testing is important.</u> )
	Continuing your installation of this software may impair or destabilize the correct operation of your system either immediately or in the future. Microsoft strongly recommends that you stop this installation now and contact the hardware vendor for software that has



6. The **Found New Hardware Wizard** panel appears, reporting on the progress of the installation process, you do not need to take any action.

Found New Hardwar	e Wizard			
Please wait while t	he wizard installs the	software		
Ringdale	Keyboard Fingerprint Rea	der		
E	) <i>&gt;</i>		D	
Sett cas	ing a system restore point e your system needs to be	and backing up o restored in the fut	ld files in ure.	
		( <u>B</u> ack	<u>N</u> ext >	Cancel

7. The **Completing the Found New Hardware Wizard** panel appears, indicating that the installation of the Ringdale drivers for the Microsoft Keyboard with Fingerprint Reader combination has been successfully completed. Click *Finish*.

Found New Hardware Wiz	ard .
	Completing the Found New Hardware Wizard The wizard has finished installing the software for: Ringdale Keyboard Fingerprint Reader
	Click Finish to close the wizard.
	K Back Finish Cancel

This completes the installation process for Ringdale's PC Access Control client complete with the Microsoft Keyboard with Fingerprint Reader, you will now need to **power-cycle** the PC in order for PC Access Control to be initiated. A **Reset** will accomplish the same result.

**NOTE:** before you power-cycle the PC, check one more time that all of the Prerequisites mentioned earlier in this section are in place, including having the user configured on the Sentinel Server, otherwise the user may be locked-out from accessing their PC and, by definition, the network resources.



## **Ringdale Driver Verification**

You can always verify that the correct Ringdale driver for the Keyboard and Fingerprint Reader by checking the **Driver** panel from the **Windows Device Manager**, it should be displayed as per the example below (1).

Microsof	t Fingerprint I	Reader Properties 🛛 😨 🔀
General	Driver	
	Microsoft Finger	print Reader
	Driver Provider:	Ringdale (1)
	Driver Date:	8/10/2005
	Driver Version:	1.0.0.3
	Digital Signer:	Not digitally signed
<u>D</u> riv	er Details	To view details about the driver files.
Ugd	ate Driver	To update the driver for this device.
Boll	Back Driver	If the device fails after updating the driver, roll back to the previously installed driver.
	<u>I</u> ninstall	To uninstall the driver (Advanced).
		Close



# **INSTALLING A MICROSOFT KEYBOARD WITH FINGERPRINT READER** after PC Access Control has been installed

#### Overview

The drivers that are supplied by Microsoft or Digital Persona for the Microsoft Keyboard with Fingerprint Reader need to be replaced with the Ringdale supplied drivers in order for PC Access control to perform correctly. If for whatever reason the Ringdale drivers did not get correctly installed during the installation process, or you are installing the Microsoft Keyboard Fingerprint Reader after installing and configuring PC Access Control, then the URU or Digital Persona software drivers **MUST** be replaced by the equivalent Ringdale drivers. For your reference, the names of the drivers in question are listed below:

- USB\_FP.inf
- USB\_FP.sys
- USB\_KBFP.inf
- USB\_KBFP.sys

#### **Prerequisites**

You must have the Ringdale Sentinel Server software installed and configured on your network for the PC user prior to installing the Ringdale PC Access Control software, otherwise you will lock-out the user from logging onto the PC and they will not be able to authenticate.

## **Installation Process from a CD**

Please note that, depending upon what version of Microsoft Windows you are using, there may be some minor differences between your PC and its version of Windows and the panels in this section, but the installation process is virtually identical.

- 1) If the Microsoft "Combo" keyboard is not already attached to the PC, power off the PC, unplug the existing keyboard and plug the Combo keyboard into an available USB port.
- 2) Power the PC back on and log on as an Administrator. If or when the **Found New Hardware** wizard appears, select **No**.
- 3) Go to the Device Manager and:

#### Either:

- a. Right-click on **My Computer** and select **Manage**.
- b. When the **Computer Management** window comes up, select **Device Manager**.

Or:

- a. Right-click on My Computer and select Properties.
- b. When the **System Properties** window comes up, select the **Hardware** tab.
- c. Select **Device Manager**.



4) Within the Device Manager, locate the entry for Microsoft Keyboard Fingerprint Reader. Depending on what version of Microsoft Windows you are running, this entry could be under Keyboards, Universal Serial Bus controllers or Biometric Devices. Once you have found the entry for Microsoft Keyboard Fingerprint Reader (1) Double-click on it to bring up its Properties.

🖳 Device Manager	
File Action View Help	
⊕ 🧕 Computer ⊕ 🥪 Disk drives	^
<ul> <li>Isplay adapters</li> <li>UD/CD-ROM drives</li> </ul>	
😟 🗃 Floppy disk controllers 😟 🔛 Human Interface Devices	
🖶 😁 IDE ATA/ATAPI controllers 🕀 🦢 Keyboards	
<ul> <li>Mice and other pointing devices</li> <li>Monitors</li> </ul>	
<ul> <li>Image: Image: Processors</li> <li>Image: Image: Image:</li></ul>	

5) Click on the **Driver** tab and if the panel does not show **Driver Provider: Ringdale (1)**, click on **Update Driver (2)**.

Microsof	Fingerprint I	Reader Properties 🛛 😨 🔀
General	Driver	
	Microsoft Finger	print Reader
	Driver Provider:	Ringdale (1)
	Driver Date:	8/10/2005
	Driver Version:	1.0.0.3
	Digital Signer:	Not digitally signed
<u>D</u> riv	er Details	To view details about the driver files.
Ugd	ate Driver	To update the driver for this device. (2)
Boll	Back Driver	If the device fails after updating the driver, roll back to the previously installed driver.
	<u>I</u> ninstall	To uninstall the driver (Advanced).
		Close



6) At the Found New Hardware Wizard, select *Install from a list or specific location* (*Advanced*) (1) ad click *Next.* 

Found New Hardware Wizard	
This v Mi	vizard helps you install software for: crosoft® Fingerprint Reader If your hardware came with an installation CD or floppy disk, insert it now.
What O O Click I	do you want the wizard to do? Install the software automatically (Recommended) Install from a list or <u>specific location (Advanced</u> ) <b>(1)</b> Next to continue.
	< <u>B</u> ack <u>N</u> ext > Cancel

7) From the following panel select **Don't search**, **I will choose the driver to install (1)** and click **Next**.

Hardware Update Wizard		
Please choose your search and installation options.		(I)
OSearch for the best driver in these locations.		
Use the check boxes below to limit or expand the defaul paths and removable media. The best driver found will b	t search, w e installed.	hich includes local
Search removable media (floppy, CD-ROM)		
Include this location in the search:		
EX		Browse
(1) Opin't search. I will choose the driver to install.		
Choose this option to select the device driver from a list. the driver you choose will be the best match for your har	Windows dware,	does not guarantee that
< Back	Next	> Cancel



8) Highlight the Microsoft Fingerprint Reader (1) and click on Have Disk... (2)



9) Click on **Browse** and either go to your copy of the Ringdale PC Access Control CD or the folder where you saved the Ringdale PC Access Control download:

Install F	rom Disk	
1	Insert the manufacturer's installation disk, and then make sure that the correct drive is selected below.	OK Cancel
	Copy manufacturer's files from:	Browse

10)Select the Ringdale Usb\_KbFp.inf driver and click Open.

Locate File				? 🔀
Look in:	😂 KBD Drivers	~	] 🗿 🜶 📂 🖽	•
My Recent Documents	Usb_Fp.inf			
My Documents				
My Computer				
	File name:	Usb_KbFp.inf	<b>v</b>	Open
My Network	Files of type:	Setup Information (*.inf)		Cancel
Copyright <sup>©</sup> 19 <mark>95-2007 к</mark>	inguale.	User Manual, d	02-1404000	U



11)The **Install From Disk** window appears with the file location populated with your selection. Click **OK**.

Insert the manufacturer's installation disk and then	
make sure that the correct drive is selected below.	K ncel
Copy manufacturer's files from:	
C:\Documents and Settings\KBD Drivers	se

12) The Hardware Update Wizard panel appears with Microsoft Keyboard Fingerprint Reader highlighted, click *Next*.

roware Opoate wizaro	
Select the device driver you want to ins	stall for this hardware.
Select the manufacturer and model of you have a disk that contains the driver you	our hardware device and then click Next. If you want to install, click Have Disk.
Show compatible hardware	
Microsoft Keyboard Fingerprint Reader	
This driver is not digitally signed! Tell me why driver signing is important	Have Disk

13)You will get a message about Windows Logo testing; this is a normal part of the PC Access Control installation process. Click *Continue Anyway*.

Hardwa	re Installation
<u>.</u>	The software you are installing for this hardware: Microsoft Keyboard Fingerprint Reader
	has not passed Windows Logo testing to verify its compatibility with Windows XP. ( <u>Tell me why this testing is important.</u> )
	Continuing your installation of this software may impair or destabilize the correct operation of your system either immediately or in the future. Microsoft strongly recommends that you stop this installation now and contact the hardware vendor for software that has passed Windows Logo testing.
	Continue Anyway STOP Installation

14) The Upgrade Device Driver Wizard panel appears, confirming that the installation process has been completed. Click *Finish*.

Upgrade Device Driver Wizard			
	Completing the Upgrade Device Driver Wizard Microsoft Fingerprint Reader Windows has finished installing the software for this device.		
	< <u>B</u> ack Finish Cancel		

## **Ringdale Driver Verification**

If the installation process for the Keyboard Combo has been successful, the driver details should look like the following panel (1):

General	Driver	
	Microsoft Finger	rprint Reader
	Driver Provider:	Ringdale <mark>(1)</mark>
	Driver Date:	8/10/2005
	Driver Version:	1.0.0.3
	Digital Signer:	Not digitally signed
Upd	er Details	To view details about the driver files. To update the driver for this device.
<u>B</u> oll	Back Driver	If the device fails after updating the driver, roll back to the previously installed driver.
	<u>J</u> ninstall	To uninstall the driver (Advanced).
		<u> </u>

Now reboot the PC. If the installation process is successful, there will be no error messages and the sensor pad of the Fingerprint Reader will show red.



# INSTALLING THE RINGDALE FINGERPRINT READER

#### **Overview**

If you already have the Ringdale Fingerprint Reader attached and installed on the PC, this section describes how to install the correct Ringdale drivers for the Ringdale Fingerprint Reader during the PC Access Control (Sentinel Client) installation process.

Depending on the configuration of the PC and the installed version of Windows, the installation of the Ringdale Fingerprint Reader will either follow-on automatically from the last step of the PC Access Control software installation to the "**Found New Hardware Wizard**" panel shown below, or the PC will need to have the power cycled in order for this panel to appear. Whichever method is used to get to the **Found New Hardware Wizard** to appear, the following section takes you step-by-step through the installation process.

#### Installation process – continuation of the installation of PC Access Control

 After you have clicked on *Finish* from the previous **Sentinel Client Installed** panel, or after power-cycling the PC, the following **Found New Hardware Wizard** will be displayed. Select *No, not this time* (1) and click *Next*.

Welcome to the Found New Hardware Wizard Windows will search for current and updated software by looking on your computer, on the hardware installation CD, or on the Windows Update Web site (with your permission).
Can Windows connect to Windows Update to search for software? O Yes, this time only O Yes, now and every time I connect a device O No, not this time (1)
Click Next to continue.

When the following panel appears, select *Install the software automatically* (*Recommended*) (1) and click *Next*.

Found New Hardware Wiz	ard
	This wizard helps you install software for: Microsoft® Fingerprint Reader
A sec	If your hardware came with an installation CD or floppy disk, insert it now.
	What do you want the wizard to do? Install the software automatically (Recommended) (1) Install from a list or specific location (Advanced)
	Click Next to continue.
	< Back Next > Cancel



3. This Hardware Update Wizard panel appears momentarily.

Hardware Update Wizard			
Please wait while the wizard searche	35		
Microsoft Fingerprint Reader			
	B		
-	< <u>B</u> ack	<u>N</u> ext >	Cancel

4. Depending upon what version of Windows is installed on the target PC, the **Hardware Installation - Security Warning** may or may not appear. Click **Continue Anyway**.

Hardwa	re Installation
1	The software you are installing for this hardware: Microsoft Fingerprint Reader has not passed Windows Logo testing to verify its compatibility with Windows XP. (Tell me why this testing is important.) Continuing your installation of this software may impair or destabilize the correct operation of your system either immediately or in the future. Microsoft strongly recommends that you stop this installation now and contact the hardware vendor for software that has passed Windows Logo testing.
	Continue Anyway STOP Installation

5. The **Completing the Found New Hardware Wizard** panel indicates that the installation of the Ringdale Fingerprint Reader has been successfully completed. Click *Finish*.

Found New Hardware Wiz	ard
	Completing the Found New Hardware Wizard The wizard has finished installing the software for: Microsoft Fingerprint Reader
	Click Finish to close the wizard.



# **INSTALLING THE RINGDALE FINGERPRINT READER - after PC Access Control has already been installed**

#### **Important Information**

You must have the Ringdale Sentinel Server software installed and configured on your network prior to installing the PC Access Control software or it will lock your PC and you will not be able to authenticate.

#### **Installation process**

- 1. Log on to the PC as an Administrator or Power User.
- 2. Insert the Ringdale PC Access Control CD with the drivers for the Ringdale Fingerprint Reader into the PC's CD drive.
- 3. Plug the Ringdale Fingerprint Reader in any open USB slot, make a note of the slot that you are using.
- 4. The Found New Hardware wizard will come up. Click Next.
- 5. Select **Search for a suitable driver for my device** and click **Next**.
- 6. Remove any other checks and put a check in **CD-ROM drives** then click **Next**.
- 7. It will show you the Microsoft Fingerprint Reader 1.0.0.3. e:usb-fp.inf, click Next.
- 8. You will get a message about Windows Logo Testing. Click Continue Anyway.
- 9. Click *Finish*.

Your Ringdale Fingerprint Reader has been successfully installed.





# **CONFIGURING PC ACCESS CONTROL**

The following procedure needs to be completed on the first restart of the PC (powering off and back on) after installing the Sentinel PC Access Control software.

1) When the PC restarts, the following messages appear:

Sentinel - PC Access Control – Welcome To Windows – Processing, followed by the logon screen Sentinel - PC Access Control - Welcome To Windows.



- 2) This Sentinel panel is in place of the traditional Windows logon screen. As instructed, press the key sequence *Ctrl-Alt-Del*.
- 3) The message None of the listed servers are present. Unable to connect. Do you want to log on locally? appears. Click *Yes*.
- 4) You can now use valid Administrator logon credentials (user name and password) to logon. The PC will then power-cycle.
- 5) After Windows comes back up, complete the *Ctrl-Alt-Del* sequence once again and the **Sentinel PC Access Control Windows Security** panel appears:

Sentinel – PC Access Cor	ntrol - Windows Security	
💾 Se	ntinel	⊠ <i>RINGDALE</i>
Use the Task Manger to c	lose an application that is no	t responding,
Options	Task Manager	Cancel

- 6) Click on **Options** in the lower left of this screen.
- 7) At the next panel, click on **Add IP** and key in the IP Address of your Sentinel Access Server, and then click **OK**.
- 8) When you next logon, you will get to a screen that has three Human Interface Device (HID) options. If you do not have an HID device installed the panel will show the red circle with a slash through it (see next page). Your Fingerprint Reader should have a **Status: Waiting**. When you use your fingerprint to logon and authenticate, it will either log you on, or give a message that says: **No match found**. If you get the No Match Found, simply try again.



This is the **Sentinel - PC Access Denied** symbol that will be displayed if an invalid fingerprint or invalid User Name/Password combination is entered.

🖳 S	entine	
Face	Fingerprint	Card
Status: Unavailable	Status: Waiting	No Swipe Card Reader
User name:	User Name	
Password:		

**NOTE:** Only users that are registered in the Sentinel Server database with a name, password, and fingerprint will be able to use the Human Interface Devices that are installed on the PC.

# **OVERVIEW: PC ACCESS CONTROL & "CTRL-ALT-DEL"**

With PC Access Control installed and configured on a PC, when you process the key-sequence **Ctrl-Alt-Del**, the Sentinel PC Access Control version of the Microsoft Windows Security panel appears:



The following is a description of the functionality of each of the available selections:

- Lock Computer This option allows you to lock the screen / PC without having to shut-down or log-off.
- **Log Off** This option enables you to log-off the PC so that another user can log on. Or for security purposes when you are going to be away from the PC for an extended period of time.
- **Shut Down...** This is the normal Windows power-down option.
- **Options...** This option is only for Administrators. It allows you to configure the Sentinel Server IP Address(s) and port. It also allows you to configure the optional Card Swipe.
- **Task Manager** This brings up the Windows Task Manager, where you can view what applications are running and then manage the tasks accordingly.

**Cancel** – Takes you back to your Windows session.



# **INSTALLING & USING A RINGDALE PROXIMITY CARD READER**

The Ringdale HiTag USB Proximity Card Reader (part number 00-16-0541-0100) is ideal for use with PC Access Control where the preferred method of identification and verification is a Proximity Reader. For example, the same proximity cards that are used for physical access and/or security identification can also be used for PC Access Control, all managed from the same or a different database.

The Ringdale Proximity Reader has a standard USB interface and so is easy to install and configure. Simply plug it into any open USB connector on the target PC and PC Access Control will automatically recognize and interface with the reader, it is as simple as that! The only consideration is to ensure that the card details have been configured into the Sentinel server, along with the user's name and password details.

To use a Proximity card to log onto the target PC, simply pass the proximity card over the reader. This can be done either when the **Ctrl+Alt+Del** pop-up panel is displayed, or after you have processed the **Ctrl+Alt+Del** sequence and the following panel is displayed.



In the above example, PC Access Control has been configured to only accept a card (proximity) swipe as the method of logging on to the PC via PC Access Control.

If PC Access Control has been configured to accept Fingerprints and/or Card swipes, then the following panel will be displayed after you have processed the *Ctrl+Alt+Del* sequence.

Sentinel – PC Access Control – Log On To Windows			
Sentinel PC Access Control			
Face	Finger	Card	
	print		
User Name			
Password [			
	ОК	Cancel	



# FINGERPRINT READER - CARE AND MAINTENANCE

To assure the proper performance of any fingerprint reader (Ringdale or Microsoft), it is important to keep the aperture (window) of the fingerprint reader clean

## **Cleaning Procedures**

To remove dust, debris and smears from the aperture you can take a piece of cellophane / transparent / Scotch tape (NOT masking tape, NOT duct tape), apply the sticky side to the aperture of the fingerprint reader and then peel it away.



– OR –

- Carefully wipe the fingerprint reader aperture with a soft cloth that will not scratch the aperture coating. Do not use paper. The soft cloth can be moistened with a mild ammonia-based (not alcohol-based) glass cleaner.
- Under heavy usage, the coating of the aperture on some sensors may turn cloudy from the salt in perspiration. In this case, gently wipe the aperture with a soft cloth (not paper) dampened with a mild ammonia-based glass cleaner.

## Caution

- > If you are going to clean the fingerprint reader, unplug it first.
- > Do not rub the aperture with an abrasive material, even paper will scratch the surface.
- > Do not scratch the aperture coating with a fingernail or any hard object.
- > Do not use glass cleaner on the fingerprint reader.
- > Do not use alcohol or alcohol-based cleaners on the reader.
- > The unit is not waterproof. Do not immerse in water.



# TROUBLESHOOTING

## **Fingerprint Recognition Troubleshooting**

If the fingerprint sensor is having difficulty acquiring an image of your finger, refer to this list for a possible solution.

- □ The sensor aperture may need cleaning, as described in "Cleaning the Sensor" (previous page).
- □ You may not be touching the sensor correctly. For the sensor to acquire a good image of your finger, you must place the pad of your finger—not the tip—in the center of the oval aperture, and apply gentle, even pressure. Do not "roll" your finger.
- Pressing too hard will distort your fingerprint.
- □ Pressing too lightly will not expose a large enough area of your finger.
- Make sure to hold your finger on the sensor until you see the red sensor light blink; then lift your finger. This may take longer for dry fingers. Although you may use any finger with the sensor, typically your index finger of either hand works best.
- □ If the sensor is capturing your finger image (as indicated by the sensor blink) and you have tried all the above suggestions but are still experiencing problems, you may need to re-register (re-enroll) your fingerprint(s) at the Sentinel Server.

## **Fingerprint Sensor Troubleshooting**

There are just two known sensor-related issues:

- □ If you activate your PC power saver function but a third-party component installed in the PC does not support it the PC will not go into sleep mode but the sensor will. To reactivate the sensor, unplug it from the USB port and then plug it in again.
- □ If the sensor does not light up when you plug it in, try unplugging it and then plugging it in again. Also, make sure it is plugged in to a self-powered USB port.

#### **General Problems**

#### **PROBLEM 1:**

The Fingerprint Reader no longer functions. I cannot logon.

#### **SOLUTION 1:**

- **1)** Disconnect the LAN connection.
- 2) Reboot
- 3) When it comes up you will get a message "None of the listed servers are present. Unable to connect. Do you want to log on locally?" Select Yes.
- **4)** The administrator will then need to logon using Name and Password.

#### **PROBLEM 2:**

The PC Access Control menus did not come up when I restarted the PC.

#### **SOLUTION 2:**

Disable your virus and/or spyware protection software and reinstall. You can choose the Repair option to correct the installation.



#### **PROBLEM 3:**

I want to move PC Access Control to a different machine, how do I uninstall the software?

#### **SOLUTION 3:**

- **1)** Start / Settings / Control Panel.
- 2) Select Add/Remove Programs.
- **3)** Select the Sentinel Client and then Remove.

## **TECHNICAL SPECIFICATIONS**

#### **Ringdale USB Optical Fingerprint Reader**



Resolution: Grey-scales: Fingerprint Capture area: Connection: Dimensions:

Part Number:

3D, 500 dpi 256 15mm x 20 mm (0.6" x 0.8") USB Type A 65 x 58 x 21 mm (2.6" x 2.3" x 0.83") 00-16-0482-0024

## **Ringdale Proximity Card Reader**



Card Reader method:	Smart Card/RF Transponder		
Connection:	USB Type A		
Dimensions:	50 x 70 x 27mm		
Part Number:	00-16-0541-0100		
Reading Distance:	35mm (1½ inch)		
Part number:	00-16-0541-0100		
Very low power (less than 0.25 watts) - suitable for solar powered and battery back-up applications.			

For use with Ringdale's Access Controller & PC Access Control product range.



# **Microsoft Keyboard With Fingerprint Reader**

Microsoft part number BZ5-00002





# **TECHNICAL SUPPORT**

## **Ringdale Technical Support Overview**

Ringdale Technical Support services help to ensure that Ringdale products and pertinent networks operate efficiently and benefit from the most up-to-date system and application software. Ringdale offers a flexible suite of support services designed to meet individual business needs and assists in effectively installing and maintaining products and networks to maintain high-quality network performance.

Telephone Technical Support for Ringdale Access Control Systems is available for the Ringdale subject matter items covered in this installation guide and is provided free-of-charge for the duration of the original warranty period.

Technical Support from Ringdale is also available for all of the prerequisites listed at the beginning of this manual. The current terms, conditions and rates for Technical Support are available on request. The minimum Technical Support time is two hours.

## **Ringdale Inc.**

(8:00 a.m. to 5:00 p.m. CST, Monday to Friday) Phone: 512-288-9080 Fax: 512-288-7210 Toll-free: 888-288-9080 support@ringdale.com

# Ringdale (UK) Ltd

(0900 to 1700 GMT, Monday to Friday) Phone: +44 (0) 1444 871349 Fax: +44 (0) 1444 870228 support@ringdale.com

## **Ringdale GmbH (Germany)**

Phone: +49 (0) 621 7186-0 Fax: +49 (0) 621 7186-20 support@ringdale.com

## Before you call Technical Support

#### Please have the following information ready

- ✓ Product Model type.
- $\checkmark$  Serial number of the unit.
- ✓ Pertinent network Information.
- ✓ If relevant, IP addresses of unit, Server and Default Gateway.
- ✓ What options are installed, if any?
- $\checkmark$  The symptoms of the problem.
- ✓ History of the Problem;
  - \* Did the device work for a period of time or fail immediately after installation?
  - \* Was any PC option changed (hardware / software) prior to the problem occurring?

#### Where to address any comments about this manual

Ringdale Inc.	Phone:	(512) 288-9080
Technical Support	URL:	www.ringdale.com
101 Halmar Cove	Contact:	support@ringdale.com
Georgetown		
Texas 78628, USA		