User Manual

RieCom iB2600, iL3000series

Microsoft Windows xp Embedded

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Lead-Content Warning

Many PC products and accessories contain cords, cables or wires, such as power cords or cords to connect the accessory to a PC. If this product has such a cord, cable or wire, then the following warning applies:

WARNING: Handling the cord on this product will expose you to lead, a chemical known to the State of California to cause cancer, and birth defects or other reproductive harm. Wash hands after handling.

Safety Instructions

Please read these safety instruction carefully and keep this user's manual for later reference.

1. Before removing the outer case from the iB2630 or iL3630 (TC) always disconnect the AC power cord to prevent the possibility of dangerous electrical shock.
   Opening the TC will make the warranty void.
2. Before cleaning, disconnect the TC from AC power. Do not use liquid or sprayed cleaning products to clean the unit. Instead, use a moistened sheet or cloth for cleaning.
3. Be sure not to expose the TC from excessive humidity.
4. Be sure to install the TC on a secure and flat surface. A falling TC could cause injury.
5. Place the power cord in such a way to avoid people stepping on it. Do not place anything over the power cord. Be sure the cable is rolled out.
6. Be sure to note all cautions and warnings on the TC and in this manual.
7. If the TC is not used for a long period of time, disconnect the AC power to avoid damage caused by voltage transients.
8. Never pour any liquid into any TC openings: This could cause fire or electrical shock and could cause malfunctioning**. This will make the warranty void.**
9. If one of the following situation occurs, be sure to get the TC checked by a qualified service technician:
   a. The power cord or plug is damaged.
   b. Liquid penetrates the TC case
   c. The TC is exposed to moisture
   d. The TC does not work well or you cannot get it to work according to the user's manual.
   e. The TC has been dropped or damaged.
   f. If the TC has obvious signs of breakage.
10. The TC should be stored and used only in temperature and humidity controlled environments. Storing Eons below -10°C (-14°F) or above 60°C (140°F) may cause damage.
11. The sound pressure level at the operators position according to IEC 704-1:1982 is equal or less to 70dB(A).
12. The input power cord shall be minimum H05VV-F, 3G, 0.75mm², rate minimum 6A.
13. The TC should be used only where ambient air temperatures are maintained below 40°C.

Introduction

Overview

This introduction describes the purpose and structure of this manual, as well as other sources of information.

Purpose & Intended Readers

This manual explains how to use RieCom thin clients that are powered by RieCom software, incorporating the Microsoft® Windows® XP Embedded (XPe) operating system. The intended audience is system administrators and end users.

Organisation

RieCom recommends that you read the chapters of this manual in order. The main topics covered are:

- Unpacking and setting up your thin client.
- Logging on to your thin client and configuring Logon accounts.
- Details of the pre-installed software applications on your thin client.
- Technical notes

What is a RieCom Thin Client ?

This manual does not explain how to use the Windows desktop or Windows-based applications. For information concerning Windows, read the documentation provided with the applications.

The RieCom thin client harnesses the power of Windows XP embedded in an intelligent, customizable, and easily manageable computing device without hard drive, fan, or other moving parts for completely silent, long-lasting operation.

RieCom's XPe thin clients run Microsoft's industry-standard XPe operating system

RieCom XPe thin clients can connect to servers running Microsoft® Windows® Server 2003, Microsoft Windows 2000 Server (as well as Advanced Server and Datacenter Server versions), Microsoft Windows NT 4.0 Server, Terminal Server Edition (TSE), and to servers that are running Citrix MetaFrame® and WinFrame®. (optional)
RieCom XPe thin clients can also connect to XP Professional desktops. Your XPe thin client also comes fully configured to communicate with USB, serial, and parallel devices.

Getting More Information

The Internet

Current and archival information about RieCom products, including the latest software updates, is available at: http://www.RieCom.eu

In addition, this user manual and other RieCom documentation are available at the RieCom website for browsing or downloading.

Technical Support

For technical support regarding RieCom products, go to the RieCom website and click on the HELP!! -button.

CHAPTER 1 Setting Up Your Thin Client

This chapter describes how to set up your thin client.

Unpacking Your Thin Client

Your RieCom thin client typically is shipped in cartons containing the items listed below:

Thin Client

- Thin Client.
- A Power supply.
- A power cable.
- Stabilizing feet or stand for using the thin client in a vertical orientation. (iL3000 series only)

To unpack your RieCom thin client, open the cartons and remove the components carefully. Save the packing materials in case you need to repack them.

Connecting The Components

Back Panel Connectors

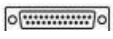
The following is an explanation of the different connections that can be found on RieCom thin clients. Not all hardware platforms have the same number or type of back panel connectors. This listing is provided for general information
about potential uses of these connectors. Note that the serial and parallel ports can be used with ICA, RDP (Windows Server 2003), and terminal emulation connections.

- MOUSE is a PS/2-type mouse port (green-colored connector marked with the word “MOUSE” or with the icon displayed here).

- KEYBOARD is a PS/2-type keyboard port (purple-colored connector marked with the word “KEYBOARD” or with the icon displayed here).

- LAN is an RJ-45 jack. The thin client automatically detects and connects to either 10BaseT or 100BaseT (twisted-pair) Ethernet.

- PARALLEL is a standard DB-25 parallel port for local printers.



- COM 1 and COM 2 are DB-9, RS-232 serial ports. Depending on which software version is loaded in the

thin client, serial ports may be used for peripheral devices such as modems, personal digital assistants (PDAs), and bar code scanners.

- USB ports (two Type A USB ports).

- MIC is a 3.5 mm microphone jack.

- LINE IN is a 3.5 mm line audio input jack.

- LINE OUT is a 3.5 mm audio output jack.

- MONITOR is a standard DB-15, high-density, VGA-type monitor connector. (only for iB2630)

- The power supply connects through the supplied power cable. It automatically detects and accepts either 120 VAC or 240 VAC line voltage.

Connecting the Cables

Power must not be applied until all connections have been made. Power cables should be connected last.

1 Arrange the thin client and monitor in your work area.
2 Connect the monitor video cable to the MONITOR port. Do not overtighten the screws. The video cable connection to the monitor varies. Some monitors have attached video cables.
3 Connect the keyboard cable to the KEYBOARD (purple) port.
4 Connect the mouse cable to the MOUSE (green) port.
5 Connect a twisted-pair, 10BaseT or 100BaseT Ethernet cable to the LAN jack.
6 Connect any other peripheral devices that you require, such as a printer (see the following section for details).
7 Connect the monitor power cable to a power outlet.
8 Connect the power cable from the thin client to a power outlet.
9 Turn on your thin client and the monitor, then any peripheral devices.

Connecting Parallel & Serial Peripheral Devices

You can connect a modem, printer, bar code scanner, and other peripheral devices to your thin client.

1 If your thin client is turned on, log off all its open connections, and then turn off the thin client.
2 If you have a local printer, connect its cable to the parallel port You can also attach local serial printers to the serial port: COM1.
3 If you have an external modem, bar code scanner, or other serial device, connect its cable to the serial port COM1.
Which serial port devices will work with your thin client depends on the software version installed in it. Not all software versions support all serial devices.
4 Turn on your thin client and then the peripheral device.

Shutting Down Your Thin Client

Pressing and releasing the power button will shut down the Windows operating system then power-off the unit.

Arranging Your Work Area **(only for the iL3000-series)**

The following tips will help reduce eye strain and body fatigue when using your RieCom thin client:

- Adjust your chair seat level so that your feet are flat on the floor, your legs form a right angle with the floor, your knees are free of the chair seat and your lower back is fully supported.
- Adjust the chair height so that the keyboard and mouse are at elbow height, so your wrists are straight and supported.
- Maintain a neutral neck posture with the top of the monitor no higher than your eye level.
- Position the monitor at the correct distance for your vision, and adjust lighting to reduce glare on the screen.
- Take periodic breaks to stretch your arms and wrists and rest your eyes.

CHAPTER 2 Logging ON

This chapter describes how to initially log on to your thin client, and how to set up user accounts.

Preconfigured Logon Accounts

Default Logon Accounts

RieCom ships XPe thin clients with two preconfigured logon accounts: Administrator and Guest.

Logging on using the default Administrator logon account allows the user to configure every aspect of the XPe thin client.

Logging on using the default Guest logon account allows the user to use the pre-installed software but not to make configuration changes to the XPe thin client. The Guest account is also configured with constraints designed to improve overall security. These User account limitations lock down the operating system so as to prevent unauthorized changes that could impair the function of the thin client and reduce the exposure to viruses and other unintentional software installations.

Logging On Using Default Logon

After powering up your XPe thin client for the first time the client will automatically login to the administrator account.

Domain Logon

Enabling domain logon allows the user to logon to their XPe thin client using their network credentials. If you do not have network administrator rights, then have your administrator create a machine account in the domain before proceeding with the following instructions.

Enabling Domain Logon

1 Logon to the thin client as Administrator.
2 Click on the icon My Computer on the desktop
3 Select Properties from the drop-down menu
4 In the System Properties dialog, click the Computer Name tab.
5 Click the Change button
6 Enter the information in the Computer Name Changes dialog box. Also, when the domain membership changes, you can change the primary Domain Name System (DNS) suffix by clicking More.

Note: If you are unfamiliar or uncertain about performing these tasks, you can use the Network Identification (ID) Wizard to help you.

7 Click OK.

8 When the Domain Welcome dialog appears, click OK.

9 Click Yes when asked to reboot your thin client.

CHAPTER 3 Applications

This chapter introduces the software applications that are (optional) preinstalled and configured on your thin client.

Overview

Pre-installed Applications

RieCom ships Windows XPe thin clients with a host of software applications. These applications expand the functionality of your thin client and allow users to access software on servers. Depending on the model you have, the following applications are preinstalled:

Microsoft RDP
Internet Explorer v7
Windows Firewall

Microsoft Remote Desktop Connection

Microsoft's Remote Desktop Connection software enables you to access applications or data stored on a remote computer over a network connection using Microsoft's Remote Desktop Protocol (RDP).

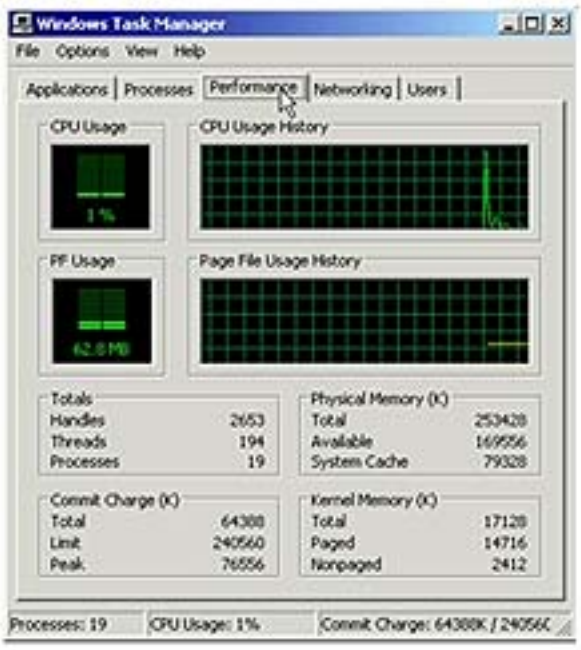
RieCom's XPe thin clients contain version 5.2 of the Microsoft RDP client.

To access the Remote Desktop Connection software, click on the Start taskbar button and select All Programs | Accessories | Communications | Remote Desktop Connection. The default dialog contains a field for entering the name of the Windows server to which you wish to connect.

Click on Options for an extended choice of settings.

Task Manager

To access and use the Task Manager, it is necessary to be logged in using the Administrator account or any account with Administrator privileges. For greater detail concerning the Task Manager and its use, please consult the Microsoft Windows XP documentation.



CHAPTER 4 The File Based Write Filter

This chapter describes how to use the File Based Write Filter security features to protect your thin clients.

FBWF API

Overview

The File Based Write Filter (FBWF) application programming interface (API) exposes a set of functions that allow an application to interact with the FBWF.

FBWF, like EWF, can be used to protect entire physical media volumes. FBWF, however, also supports write-through for individual files or directories. Write-through permits the application to specify specific files and directories that the FBWF should not protect, thus giving applications more flexibility. When an application tries to write to a protected file, a copy of that file is created in cache memory and all writes modify only the cached file.

The FBWF API functions enable applications to specify and query system wide settings as well as cache settings for individually protected volumes and files. The following list shows the typical usage scenarios for these functions:

- Disabling/enabling File Based Write Filtering
- Setting/querying cache memory usage
- Setting/querying compression usage
- Enable/disable write filtering for an entire volume
- Excluding a file or directory from write filtering.
- Committing/restoring cache contents to or from the actual file

Volume Names in the File Based Write Filter

The File Based Write Filter implements volume level write-protection. Therefore, many of the File Based Write Filter API functions take a volume name as an input parameter.

The volume name can be either a drive letter (e.g., "*C:*"), or a device name (e.g., "\\device\harddiskvolume").

File Based Write Filter Sessions

Since the File Based Write Filter can't be enabled while the system is running, the FBWF makes a distinction between the current session (meaning since the last system boot) and the next session (meaning after the next system boot).
Applications call FBWF API functions during the current session to enable and configure the FBWF for the next session.

Some FBWF API functions allow configuration information to be queried for either the current FBWF session, or the next (following the next system boot).
Applications must call FbwfEnableFilter before calling other FBWF configuration functions.

FBWF API Considerations

The following list shows information that is important to consider before you use the API:

- Many of the FBWF functions do not take effect until the system restarts. Review the function documentation to ensure that you understand the expected behavior.
- Exceeding the cache threshold will cause some disk operations to fail. It is important that applications manage their available cache. Win32 API calls will generally return ERROR_HANDLE_DISK_FULL in this case.

FBWF Manager Command Line Syntax

The FBWF Manager command line syntax follows:

```
fbwfmgr [/? | /help /[switch] | /displayconfig | /overlaydetail |
/enable | /disable | /addvolume [volumename] | /removevolume
[volumename] [1|0] |
/addexclusion [path] | /removeexclusion [path] |
/setthreshold [threshold] | /setcompression [1|0] |
/setpreallocation [1|0] /commit [volumename] [filepath]
/restore [volumename] [filepath] ]
```

The following table describes the command line switches.

Switch	Description
displayconfig	Displays all configuration information for the write filter including protected volumes list, overlay configuration and write through paths. The command returns: State—Indicating current filter state (enable or disable) and state for next boot. Protected Volumes—List of protected volumes including the current and next boot state. Compression—Current and next boot state for cache compression. Threshold—Current and next boot values for the overlay cache threshold. Write Through Paths—Displays a complete list of active and next boot write through paths. Pre-allocation Status—Displays current and next boot status for cache pre-allocation.
overlaydetail	Displays detail on the current overlay contents for all protected volumes. The command returns: Contents—Files and folders currently in the overlay for all protected volumes including sizes (size of data in overlay) and open file handles. Memory Usage—Total amount of memory being consumed by the overlay.

overlaydetail	Displays detail on the current overlay contents for all protected volumes. The command returns: Contents—Files and folders currently in the overlay for all protected volumes including sizes (size of data in overlay) and open file handles. Memory Usage—Total amount of memory being consumed by the overlay.
enable	Enables the write filter on the next restart.
disable	Disables the write filter on the next restart.
Add-volume	Adds a volume to the protected volume list for next boot.
Remove-volume	Removes a volume from the protected volume list for next boot.
Add-exclusion	Adds a write through path to the exclusion list for next boot.
Remove-exclusion	Removes a write through path from the exclusion list for next boot.
Set-threshold	Sets the overlay threshold value for next boot.
Set-compression	Sets overlay compression as enabled (1) or disabled (0) for next boot.
Set-preallocation	Sets cache pre-allocation as enabled (1) or disabled (0) for next boot.
commit	Commits the changes made to the file to the underlying media. The volume name can either be a case-insensitive volume device name (for example, "\\Device\\HarddiskVolume1"), or a drive letter (for example, "C:" or "D:"). Note that the name is not the volume label that Windows Explorer displays before the drive letter. The file path must be an absolute path starting with "\". Note that the volume must currently be protected. Otherwise, the error message "The system cannot find the drive specified" is displayed.
restore	Discards the changes made to the file, that is, restores the files to its original contents from the underlying media. The volume name can either be a case-insensitive volume device name (for example, "\\Device\\HarddiskVolume1"), or a drive letter (for example, "C:" or "D:"). Note that the name is not the volume label that Windows Explorer displays before the drive letter. The file path must be an absolute path starting with "\". It must be a file. It is acceptable that the file was deleted, in which case it is recovered. Note that the volume must currently be protected. Otherwise, the error message "The system cannot find the drive specified" is displayed.

?	Displays usage and help.
help / [switch]	Displays help information for a specific FBWF Manager switch.

If no switch is provided the FBWF Manager displays all the configuration information, just like the *DisplayConfig* switch.

The following table describes the input parameters:

Input field	Meaning
Volume-name	Full path to a volume
1	Remove exclusion list
0	Preserve exclusion list
path	Full file or directory path, including the drive letter. Please note that file names are passed to fbwfmgr as a command line argument, which means backslashes and double quotes are interpreted differently. For example, `\`**”file name”** becomes simply **”file name”** because the first backslash acts as an escape character. To get **\”file name”**, specify `\\`**”file name”** on the command line.
threshold	Overlay threshold in MB

For comprehensive management and configuration of devices in the field, FBWF APIs are provided.

FBWF does not resolve substituted paths, use complete file names instead.