ALTUSEN

KVM over WIRELESS™



USER MANUAL



FCC Information



This is an FCC Class A product. In a domestic environment this product may cause radio interference in which case the user may be required to take adequate measures.

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.



© Copyright 2004 ALTUSEN[®] PAPE-0237-1AX All brand names and trademarks are the registered property of their respective owners.

Package Contents

The complete KW1000 package contains the following components:

- ◆ 1 KW1000 KVM over WIRELESS[™] Control Unit
- 1 Custom KVM Cable Set
- 1 Power Adapter
- 1 Software Disk
- 1 User Manual
- 1 Quick Start Guide
- 1 Warranty Registration Card

Check to make sure that all the components are present and in good order. If anything is missing, or was damaged in shipping, contact your dealer.

Read this manual thoroughly and follow the installation and operation procedures carefully to prevent damage to the switch or any of the devices that connect to it.

iii

2004-10-22

iv

Contents

Chapter 1. Introduction
Overview
Features
System Requirements
<i>Chapter 2.</i> Hardware Setup
Front View
Rear View
Installation
Chapter 3. Getting Started
Wireless Connection
Logging In
Screen Elements
Chapter 4. Administration
Introduction
General
Network
Access Port
IP Address
Log Server:
Security
Filtering
User Manager
Customization
Firmware

v

Chapter 5. The Windows Client

Starting Up	25
Operation	27
OSD Control Panel	27
Keystrokes	28
Mouse Synchronization	28
Hotkeys	30
Configuring the Hotkeys	32
Video Adjustment	32

Chapter 6. The Java Client

ne cara en		
Introduction		 35
Operation .		 36
The Tool	ur	 37

Chapter 7. The Log File

Appendix

Specifications
Rack Mounting
Troubleshooting
General Operation
Sun Systems
The Windows Client
The Java Client
Administrator Login Failure
Limited Warranty

vi

About This Manual

This User Manual provides information concerning the installation, configuration, and operation of the KW1000 KVM over Wireless[™] module.

Overview

Chapter 1, Introduction, introduces you to the KW1000 System. Its purpose, features and benefits are described.

Chapter 2, Hardware Setup, presents the front and back panel components, and explains how to install a local console and how to connect the KW1000 to your server or KVM switch.

Chapter 3, Getting Started, describes how to log into the KW1000, and the screen elements that appear.

Chapter 4, The Administrator Utility, explains how to connect to the KW1000 as an administrator; and how to configure the KW1000 for operation.

Chapter 5, The Windows Client, explains how to run the Windows Client Software; how to connect to the KW1000 and how to remotely control the connected server (or servers via a KVM switch).

Chapter 6, The Java Client, explains how to run the Java Client Software; how to connect to the KW1000 and how to remotely control the connected server (or servers via a KVM switch).

Chapter 7, The Log File, describes how to use the log file utility to view all the events that take place on the KW1000.

An Appendix provides technical specifications and other helpful information.

vii

Conventions

This manual uses the following conventions:

Courier Indicates text that you should key in.

- [] Indicates keys you should press. For example, [Enter] means to press the **Enter** key. If keys need to be *chorded*, they appear together in the same bracket with a plus sign between them: [Ctrl+Alt].
- 1. Numbered lists represent procedures with sequential steps.
- Bullet lists provide information
- > Indicates selecting an option on a menu. For example, Start > Run means to open the *Start* menu, and then select *Run*.
- **A** Indicates critical information.

Getting Help

For additional help, advice, and information, ALTUSEN provides several support options. If you need to contact ALTUSEN technical support with a problem, please have the following information ready beforehand:

- Product model number, serial number, and date of purchase.
- Your computer configuration, including operating system, revision level, expansion cards, and software.
- Any error messages displayed at the time the error occurred.
- The sequence of operations that led up to the error.
- Any other information you feel may be of help.

viii

ALTUSEN Technical Support

North America Technical Phone Support	Registered ALTUSEN product owners are entitled to telephone technical support. Call the ALTUSEN Technical Support Center: 949-453-8885.
International Technical Phone Support	 Contact your local dealer. Call the ALTUSEN Technical Support Center: 886-2-8692-6959.
Email Support	Email your questions and concerns to: support@altusen.com
Online Troubleshooting	The ALTUSEN support website: http://www.altusen.com/support provides online troubleshooting that describes the most commonly encountered problems and offers possible solutions to them.
Online Documentation	User Manuals are available electronically at the ALTUSEN support website: http://www.altusen.com/support
Software Updates	Download the latest drivers and firmware for your product from the ALTUSEN support website: http://www.altusen.com/support

Product Information

For information about all of ALTUSEN's products and how they can help you connect without limits, visit ALTUSEN on the web at http://www.altusen.com

ALTUSEN Authorized Resellers

ALTUSEN provides the following ways to find an authorized reseller in your area:

- In the United States of America, call: 866-ALTUSEN
- In Canada and South America, call: 949-453-8885
- In all other locations, call: 886-2-8692-6789
- Visit ALTUSEN on the web at http://www.altusen.com for a list of locations and telephone numbers

ix

Notes:

2004-10-22

х

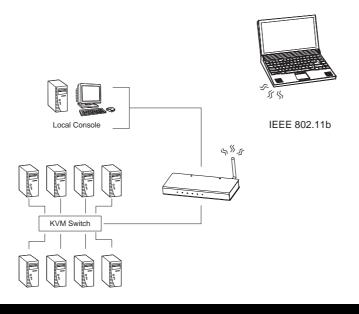
Chapter 1. Introduction

Overview

The KW1000 is a control unit that uses the TCP/IP and IEEE 802.11b protocols to allow administrators to remotely monitor and access their computer/server installations wirelessly. Wireless connectivity eliminates the infrastructure expense and inconvenience of wired networks at the same time that it provides the administrator with the freedom to move around the workplace to suit his demands.

Utilizing advanced security features, operators connect to the KW1000 via its IP address. After a connection has been established and authorization granted, the remote computer can exchange keyboard, video and mouse signals with the attached server or KVM switch just as if they were physically present and working on the equipment directly.

Now, instead of having to drop what you're doing and going to a workstation to administer your server center, you can bring your administrative workstation with you.



2004-10-22

1

The *Administrator* and *Client* utilities provided with the KW1000 package make the KW1000 easy to install, maintain, and operate. System administrators can handle a multitude of tasks with ease - from installing and running GUI applications, to BIOS level troubleshooting, routine monitoring, concurrent maintenance, system administration, rebooting and even pre-booting functions.

The *Administrator Utility* is used to configure the system; limit access from remote computers; manage users; and maintain the system with firmware and software module updates.

The *Log Server* records all the events that take place on selected KW1000 units for the administrator to analyze.

On the client side, both a *Windows GUI Client* and a *Java Client* are provided for IP connection and login to the KW1000 unit from anywhere on the net. The client software allows the user to view and control the servers connected to the KW1000. Inclusion of a Java-based client ensures that the KW1000 is platform independent, and is able to work with all operating systems.

Once an operator successfully connects and logs in, his screen displays what is running on the remote unit attached to the KW1000 (a KVM OSD display, a server's desktop, or a running program, for example) and he can control it from his console just as if he were there.

Note: If you use more than one KW1000, the units must be at least 300m apart.

2

Features

- Wireless remote access of KVM switches or servers (IEEE 802.11b WLAN)
- Advanced security features: password protection; advanced encryption technologies
- High video resolution: up to 1600 x 1200 DDC2B
- Windows GUI and Java based Client software; Java client works with all operating systems.
- Firmware upgradeable via WLAN Ethernet connection.
- Multiple user accounts

System Requirements

- For best results we recommend that the computers used to access the KW1000 control unit have at least a P III 1 GHz processor, and that the screen resolution is set to 1024 x 768.
- For the Windows Client, you must have DirectX 7.0 or higher installed.
- For the Java Client, you must have Sun's Java 2 JRE 1.4 or higher.
- Only **non-interlaced** video signals at the following resolutions and refresh rates are supported:

Resolution	Refresh Rates		
640 x 480	60, 70, 75, 85, 90, 100, 120		
720 x 400	70, 75		
800 x 600	56, 60, 70, 75, 85, 90, 100, 120		
1024 x 768	60, 70, 75, 85, 90, 100		
1152 x 864	60, 70, 75, 85		
1280 x 1024	60, 70, 75		
1600 x 1200	60		

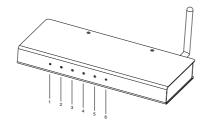
3

Notes:

2004-10-22

4

Chapter 2. Hardware Setup



Front View

1. Reset / FW

Pressing and holding this switch in while powering ON the KW1000 returns it to the factory default firmware level. After the KW1000 has been powered ON, pressing and holding this switch in for more than two seconds performs a system reset.*

1. Tx / Rx

Lights ORANGE to indicate the KW1000 is connected to a wired LAN (via the computer or KVM switch it is connected to).

2. Link LED

Flashes GREEN to indicate that a Client program has accessed the device.

3. Power LED

Lights when the KW1000 is powered up and ready to operate.

4. WLAN

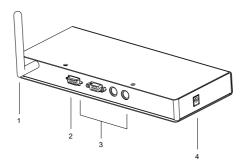
Blinks ORANGE to indicate that a wireless station is connected to the KW1000 and is transmitting/receiving data.

5. WLAN Reset

Press and release this switch to perform a KW1000 reset. Press and hold for 10 seconds to reset the KW1000 to its WLAN factory default settings.*

5

* This switch is recessed and must be pushed with a thin object - such as



the end of a paper clip, or a ballpoint pen.

Rear View

1. Antenna

2. KVM Port

The KVM cable that links the KW1000 to the server or KVM switch plugs in here.

3. Local Console Port Section

The local administrator's keyboard, monitor, and mouse plug in here. Each port is indicated by an appropriate icon. The administrator can use this console to access the server (or KVM switch) connected to the KW1000.

4. Power Jack

The power adapter cable plugs in here.

6

Installation

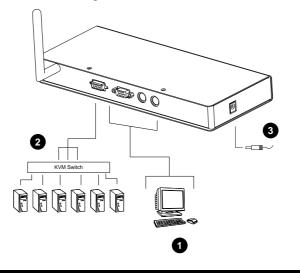


1. Make sure that power to all the devices you will be connecting up have been turned off. You must unplug the power cords of any computers that have the *Keyboard Power On* function.

2. Make sure that all devices on the installation are properly grounded.

To install the KW1000, refer to the diagram below (the numbers correspond to the numbered steps), and do the following:

- 1. Plug the local administrator's keyboard, mouse, and monitor into the unit's Console Ports.
- 2. Use the KVM cable provided with this package to connect the KW1000's KVM Port to the Keyboard, Video and Mouse ports of the server or KVM switch that you are installing.
- 3. Plug the power cord into the Power Socket and into an AC power source.
- 4. Power up your server or KVM installation.
 - **Note:** If you are connecting to a KVM switch, power up your KVM installation according to the instructions that came with its User Manual.



7

Notes:

8

Chapter 3. Getting Started

Wireless Connection

The KW1000 has a default IP address of 192.168.1.101 with a subnet mask of 255.255.255.0. Be sure to configure your computer's wireless card for a corresponding IP address. The valid address ranges are:

192.168.1.1 ~ 192.168.1.89; and 192.168.102 ~ 192.168.1.255

Note: Addresses 192.168.1.90 to 192.168.1.100 cannot be used. They are reserved for system diagnostics.

Logging In

Operation of the KW1000 is browser based. To begin, open your browser and specify the KW1000's IP address and web page name in the browser's URL location bar. For example:

```
192.168.1.101/test.htm
```

Note: 1. You must include a forward slash and the KW1000's web page name (in the example above, the web page name is *test.htm*). If you don't know the page name, get it from the KW1000 administrator.

The KW1000 login page appears:

KW1000 Login				
Username:				
Password:				
Login Reset				



9

Provide a valid Username and Password, then Click **Login** to continue. When you have successfully logged in, the Main Screen appears:

ALTUSCN	General	Network	Security	User Manager	Customization	Firmware	Logout
Apply Windows Client			Device Name:				
Java Client			MAC Address: 00-10-74-35-00-02 Firmware Version 1.0.083	:			

- **Note:** 1. All screen displays are for example purposes. The actual screens that you see may vary slightly as to appearance and wording.
 - 2. If you are the administrator logging in for first time, use the default Username: *administrator*; and the default Password: *password*. For security purposes, we strongly recommend you remove these and give yourself a unique Username and Password with the appropriate permissions (see *User Management*, p. 20).
 - 3. If you supplied an invalid login, the authentication routine will return this message: *Invalid Username or Password. Please try again.* If you see this message, log in again being careful with the Username and Password.

10

Screen Elements

Except for the *Logout* icon, the icons arranged horizontally across the top of the page are the administration utilities. They are used to configure the KW1000 for operation. Your ability to make configuration changes depends on the permissions associated with your login information (see *User Management*, p. 20).

Note: Be sure to click the *Logout* icon when you end your session.

The functions of each of the buttons in the bar along the left side of the page are described in the table below:

lcon	Purpose
Apply	Saves the changes you make in the administration dialog boxes (see the <i>Administration</i> chapter), but does not implement the changes. The changes only go into effect when you enable <i>Reset on exit</i> (see p. 22 for details) and log out.
Windows Client	Allows users to connect to the KW1000 using Windows software, and to remotely control the connected server (or servers via a KVM switch).
Java Client	For platform independence, the Java client allows users that have Java installed to connect to the KW1000 and to remotely control the connected server (or servers via a KVM switch).
Log	All the events that take place on the KW1000 are recorded in a log file (see <i>Network</i> p. 15 for details). Clicking this icon displays the contents of the log file.

11

Notes:

12

Chapter 4. Administration

Introduction

The administration utilities, represented by the icons located across the top of the KW1000 web page, are used to configure the KW1000 for operation. This chapter discusses each of them in turn.



As you make your configuration changes, Click the **Apply** button at the left of the web page to save the changes in the KW1000's configuration file. To have the changes actually take effect, you have to put a check in the *Reset on Exit* box (see *Customization*, p. 22), and log out.

- Note: 1. If you don't have Configuration privileges (see *User Management*, p. 20) the Administration configuration dialogs are available for viewing, but the input fields are disabled, and cannot be changed.
 - 2. All screen displays in this chapter are for example purposes. The actual screens that you see may vary slightly as to appearance and wording.

13

General

The General panel displays three items of information about the KW1000's status. This is the same information that appears after you successfully log in from a browser:

Device Name:	
pmKW1000	
MAC Address:	
00-10-74-35-00-02	
Firmware Version:	
1.0.083	

An explanation of each of the fields is given in the table below:

Device Name:	To make it easier to manage installations that have more than one KW1000, each one can be given a name. To assign a name for the KW1000, key in one of your choosing here (15 characters max.).
MAC Address:	The KW1000's MAC Address displays here.
Firmware Version:	Indicates the KW1000's current firmware version level.

Note: New versions of the KW1000's firmware can be downloaded from our website as they become available, (see p. 23 for details).

14

Network

The Network dialog is used to specify the KW1000's network environment.

Access Port		
Program: 900)	
Java: 900	2	
TCP/IP Inform	nation	
Default IP addre	ess 192.168.1.101	
IP address:	192.168.1.101	
Log Server		
MAC Address:	00000000000	
Port:	9001	

The page is divided into three panels: Access Port; IP Address; and Log Server.

Access Port

As a security measure, if a firewall is being used, the Administrator can specify the port numbers that the firewall will allow (and set the firewall accordingly). Users must specify the port number as part of the IP address when they log in to the KW1000. If an invalid port number (or no port number) is specified, the KW1000 will not be found.

Note: If there is no firewall (on an Intranet, for example), it doesn't matter what these numbers are set to, since they have no effect.

An explanation of the fields is given in the table below:

Program:	This is the port number that must be specified when connecting from the Administrator and Windows Client software programs. Valid entries are from 1024 - 60,000. The default is 9000.
Java:	This is the port number used for Java Client connections. Valid entries are from 0 - 65535. The default is 9002.

15

IP Address

The KW1000 uses a fixed IP Address. The default address is 192.168.1.101. If you choose, you can assign it a different one by keying the new address into the *IP address* field. The valid address ranges are:

192.168.1.1 ~ 192.168.1.89; and 192.168.102 ~ 192.168.1.255

Note: Addresses 192.168.1.90 to 192.168.1.100 cannot be used. They are reserved for system diagnostics.

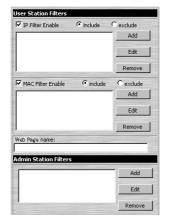
Log Server:

Important transactions that occur on the KW1000, such as logins and internal status messages, are kept in an automatically generated log file.

Specify the MAC address and a Port number for the server you want the log server software to reside on.

16

Security



The Security page is used to control access to the KW1000.

- *IP* and *MAC Filters* permit or deny access to the KW1000 for specific IP and MAC addresses attempting to access the system with KW1000 Client software.
- The Web Page name lets the Administrator specify the web page that the user connects to when he accesses the KW1000 with his browser. The user must include the name of this page in the IP address, or he will not be granted access. For security purposes, we recommend that you change the name of this page from time to time.

Note: If no page is specified here, anyone will be able to access the KW1000 with the IP address alone. This is a very insecure situation.

 The Admin Station Filters panel only works with the AP version of the KW1000 program. It is disabled in the browser version.

Filtering

- There are a maximum of 100 filters allowed for each category (User IPs, User MACs, and Administrator MACs).
- To enable IP filtering for User Stations, **Click** to put a check mark in the IP and/or MAC *Filter enable*checkbox.
- To add a filter, Click **Add**. Dialog boxes similar to the ones below appear (the top example is for IP address filters; the bottom is for MAC address filters):

Explorer User Prompt	×
Script Prompt: Enter the start IP address (for example, 192.168.0.1):	OK Cancel
Explorer User Prompt	×
Explorer User Prompt Script Prompt: Enter the MAC address (for example, 004854655511):	Cancel

- Specify the filter address in the dialog box, then Click **OK**.
- Each IP filter can consist of a single address, or a range of addresses. For IP filtering, a second dialog box similar to the one below appears:



To filter a single IP address, key in the same address as the start IP. To filter a continuous range of addresses, key in the end number of the range.

18

- Click **OK** when done.
- To delete a filter, select it and Click **Remove**; To modify a filter, select it and Click **Edit**. The *Edit* dialog box is similar to the *Add* dialog box. When it comes up, simply delete the old address and replace it with the new one.
- User Station filtered items can be specified as included or excluded by highlighting the item and clicking the *include* or *exclude* radio button.
 - If the include button is checked, all the addresses within the filter range are allowed access to the KW1000; all other addresses are denied access.
 - If the exclude button is checked, all the addresses within the filter range are denied access to the KW1000; all other addresses are allowed access.
- The Administrator station filter dialog boxes are similar to the MAC filter dialog boxes for user stations.

19

User Manager

The User Manager dialog is used to manage user profiles.

User List		
administ	rator	
User Info User Name:		
Password:	[
Confirm:		
Description:		
Permissions:	┌─ Configure ┌─ Java Client	
		Reset
Add	Update	Remove

- A maximum of 64 user profiles can be created.
- To add a user, fill in the information asked for in the *User Info* dialog box and Click **Add**.
- To delete a user profile, select it and Click **Remove**.
- To modify a user profile, select it; change the information shown in the *User Info* dialog box; and Click **Update**.
- The **Reset** button clears all the information shown in the *User Info* dialog box.

20

An explanation of the profile items is given in the table below:

Username	A minimum of 6 and a maximum of 15 characters is allowed.	
Password	A minimum of 8 and a maximum of 15 characters is allowed.	
Confirm	To be sure there is no mistake in the password you are asked to enter it again. The two entries must match.	
Description	Additional information about the user that you may wish to include.	
Permissions	By default, all users may access the KW1000 via the Windows Client software.	
	1. Checking <i>Configure</i> gives a User administrator privileges, allowing him to set up and modify the KW1000's operating environment.	
	2. Checking <i>Java client</i> allows a User to access the KW1000 via the Java Client software.	

21

Customization

This configuration dialog allows the Administrator to set *Timeout*, *Login failure*, and *Working mode* parameters.

Time out control		
Time out: 30	minutes	
Login failure		
Login failures allowed: 5		
Login failure time out: 3		minutes
Working mode		
Enable stealth mode		
🔽 Enable echo mode		
Reset Config		
Reset on exit		

An explanation of the Customization parameters is given in the table below:

Time out Control	If the KW1000 doesn't receive any input from the computer that currently has access to it for the amount of time specified here, it ends the connection so it can be available for other users.
Login failure	Login failures allowed, sets the number of consecutive failed login attempts that are permitted from a remote computer. Login failure timeout, sets the amount of time a remote computer must wait before attempting to login again after it has exceeded the number of allowed failures.
Working Mode	If <i>Stealth Mode</i> is enabled , the KW1000 cannot be pinged. If <i>Echo Mode</i> is enabled the KW1000 will show up in the list of local KW1000 units when the AP version of the Administrator Utility is run. The KW1000 AP version is located on the CD that came with this package.
Reset on exit	Placing a check here causes the KW1000 to reset itself and implement all the administration changes that you have made when you log out. Wait approximately 30 to 60 seconds before logging back in following the reset.

22

Firmware

New versions of the KW1000 firmware can be downloaded from our website at *http://altusen.com.tw* as they become available. To upgrade the firmware, do the following:

1. After downloading the new firmware file to your computer, open the

Firmware File:		
		Browse
	Upload	

Firmware configuration dialog.

- 2. Click the Browse button; navigate to the directory that the new firmware file is in and select it.
- 3. Click Upload.
- 4. After the upload completes, enable the Reset on exit checkbox (see p. 22).
- 5. Click the **Logout** icon to exit and reset the KW1000.

23

Notes:

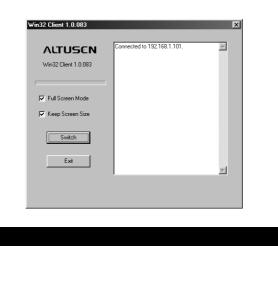
24

Chapter 5. The Windows Client

Starting Up

To access the KW1000 with the Windows Client software:

- 1. After you log in, Click the *Windows Client* icon at the left of the web page (see p. 9).
 - **Note:** You must have DirectX 7.0 or higher installed on your computer. If not, the Client program will not load.
- 2. In the dialog box that comes up, click **Open**.
 - **Note:** 1. If the browser cannot run the program, save it to disk, instead. Then, with your browser still open to the KW1000 web page, run the file from your disk.
 - 2. If you use the *save to disk* method, for security purposes, you cannot simply run a previously downloaded version of the program. Each time you want to access the KW1000, you must log in to the web page with a valid username and password to download a fresh copy of the program.
- 3. When a connection to the KW1000 has been established, the following screen appears:



2004-10-22

25

- **Note:** 1. If *Full Screen Mode* is enabled (there is a checkmark in the box), the remote display fills the entire screen of your local monitor.
 - 2. If *Full Screen Mode* is not enabled (there is no checkmark in the box), the remote display appears as a window on your desktop. If the remote screen is larger than what is able to fit in the window, move the mouse pointer to the screen border that is closest to the area you want to view and the screen will scroll.
 - 3. If *Keep Screen Size* is not enabled (there is no checkmark in the box), the remote screen is resized to fit the resolution of your local monitor.
 - 4. If *Keep Screen Size* is enabled (there is a checkmark in the box), the remote screen is not resized.
 - If the remote resolution is smaller, its display appears like a window centered on your screen.
 - If the remote resolution is larger, its display is centered on your screen. To access the areas that are off screen, move the mouse to the corner of the screen that is closest to the area you want to view and the screen will scroll.
- 4. Click **Switch** to take over console control of the unit that the KW1000 is connected to.

26

Operation

Once the Switch to the KW1000 has been accomplished, the remote system's video output is captured and displayed on your monitor. At the same time, your local keystroke and mouse input is captured and sent to the remote system.

OSD Control Panel

A small OSD control panel showing the remote unit's video resolution and the



KW1000's IP address opens at the lower right hand corner of the screen:

The panel consists of an icon bar at the top, with two text bars below it. Initially, the text bars display the video resolution and IP address of the device at the remote location. As the mouse pointer moves over the icons, the information in the text bars changes to describe the icon's function. The functions that the icons perform is described in the table below.

lcon	Function				
1	Drag the OSD display to another position on the screen by clicking and holding on the hand while you move the mouse.				
2 11	Click to bring up the Hotkey Setup dialog box (see p. 30 for details).				
ブ	Click to bring up the Video Adjustment dialog box (see p. 32 for details).				
2	Click to exit the Windows Client control of the remote unit.				
(Space)	Hover over the space to see the video resolution and IP address of the device at the remote location.				
000	These LEDs show the Num Lock, Caps Lock, and Scroll Lock state of the remote computer. Click on the icon to toggle the status.				
	Note: When you first connect, the LED display may not be accurate. To be sure, click on the LEDs to set them.				

27

Keystrokes

Keyboard input has no effect on the local computer except for [Alt + Tab] and [Ctrl + Alt + Del]. ([Alt + Tab] and [Ctrl + Alt + Del] are retained on the local system to switch among applications and to recover from disaster.)

In order to provide the [Alt + Tab] and [Ctrl + Alt + Del] functions on the remote system, one of the Function Keys is used as a *Substitute* for the [Alt] key.

For example, the **F12** key could substitute for the **Alt** key, in which case [F12 + Tab] substitutes for [Alt + Tab]; and [Ctrl + F12 + Del] substitutes for [Ctrl + Alt + Del]. See *Configuring the Hotkeys* on p. 32 for details on setting up a substitute key.

Note: While any Function Key can be used for the Substitute key, you *must not* use one that is being used for another action.

Mouse Synchronization

Until you close the KW1000 connection, mouse movements have no effect on your local system, but are captured and sent to the remote system, instead.

From time to time, especially if you change video resolution, the local mouse movement may no longer be synchronized with the remote system's mouse pointer. There are three quick methods that can be used to bring the two pointers back into sync: 1) Moving the mouse pointer over the Arrow in the OSD panel and right clicking; 2) Moving the mouse pointer into the OSD panel and then moving it back out again; and 3) Performing an *Auto Sync* with the Video Adjustment function (see *Video Adjustment*, p. 32 for details).

If performing these actions doesn't resolve the problem, do the following:

- 1. Invoke the *Adjust Mouse* action with the *Adjust Mouse* hotkeys (see p. 31 for details).
- 2. Move the local mouse pointer exactly on top of the remote mouse pointer and **Click**.

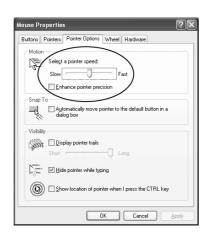
28

If these procedures still do not help, set the mouse speed and acceleration for the computer (or computers via KVM switch) connected to the KW1000 as follows:

Mouse Properties
Buttons Pointers Motion Hardware
Speed
Adjust how fast your pointer moves
Slow Fast
Acceleration
Adjust how much your pointer accelerates as you move it faster
© None C Low C Medium C High
Snap to default
Move pointer to the default button in dialog boxes
-7
OK Cancel Apply

Windows 2000:

Set the mouse speed to the middle position; set the mouse acceleration to *None* (Control Panel \rightarrow Mouse \rightarrow Mouse Properties \rightarrow Motion):



_	-
ົ	\mathbf{n}
/	ч

Windows XP/Server 2003:

Set the mouse speed to the middle position; disable *Enhance Pointer Precision* (Control Panel \rightarrow Printers and Other Hardware \rightarrow Mouse \rightarrow Pointer Options):

WinMe:

Set the mouse speed to the middle position; disable mouse acceleration (click Advanced to get the dialog box for this).

WinNT / Win98 / Win95:

Set the mouse speed to the slowest position.

Hotkeys

The Hotkey Setup Screen:

Actions:	Hotkeys:	
Exit remote location Adjust video. Toggle OSD Toggle mouse display Adjust mouse. Substitute alt key	F2,83E4 F5,667 F3,F10,F11. F11,F10,F3 F8,F7,F6. F12.	
Keys:		

Various configuration actions related to the keyboard, video, and mouse can be performed via hotkey combinations. The Hotkey setup utility is accessed by clicking the *Keyboard* icon on the OSD Control Panel. The actions performed by the Hotkeys are listed in the left column; the currently defined keys that invoke the actions are shown in the column to the right.

າ	٢
	L

An explanation of the actions is given in the table, below:

Action	Explanation			
Exit remote location	Break the connection to the KW1000 and return to local operation.			
Adjust Video	Bring up the video adjustment utility.			
Toggle OSD	Toggles the OSD display Off and On.			
Toggle mouse display	If you find the display of the two mouse pointers (local and remote) to be confusing or annoying, you can use this function to shrink the non-functioning pointer down to a barely-noticeable tiny circle - which can be ignored. Since this function is a toggle - use the hotkeys again to bring the mouse display back to its original configuration.			
Adjust mouse	This utility synchronizes the local and remote mouse movements following a video resolution change. After invoking this utility, simply click the local mouse pointer on top of the remote mouse pointer.			
Substitute Alt key	Although all other keyboard input is captured and sent to the KW1000, [Alt + Tab] and [Ctrl + Alt + Del] work on your local computer. In order to implement their effects on the remote system, a function key is be substituted for the Alt key. If you substitute the F12 key, for example, you would use [F12 + Tab] and [Ctrl + F12 + Del].			

Note: To invoke an action, you must press and release the keys one key at a time - do not *chord* the keys.

31

Configuring the Hotkeys

If you find the default Hotkey combinations inconvenient, you can configure them to whatever suits your taste, as follows:

- 1. Highlight the Action, then Click Start
- 2. Key in the Function keys (one at a time). The key names appear in the *Key* field as you press them.
- 3. When you have finished keying in your sequence, Click Stop
- 4. Click Set
- 5. Repeat for any other actions you wish to set up
- Note: You can use the same function keys for more than one action, as long as the first key is not the same. For example, you can use F1 F2 F3 for one action; F2 F1 F3 for another; F3 F2 F1 for a third, etc.

Video Adjustment

You can adjust the placement and the picture quality of the remote screen (as displayed on your local monitor) with the Video Options function. To do so, either click on the Hammer icon on the OSD Control Panel, or use the *Adjust Video* hotkeys (see p. 31). The following screen appears:

Video Options:					
Screen position:	RGB				
1	Red Gain:				
ج_ €	Green Gain:				
Ŧ	Blue Gain:				
Auto-Sync	Dide diam.				
Video Quality: Min Max					
Bandwidth Control					
Enabled		J			
	High	Low			
OK Cancel					

32

The meanings of the adjustment options are given in the table below:

Option	Usage			
Screen Position	Adjust the horizontal and vertical position of the remote computer window by Clicking the Arrow buttons.			
Auto-Sync	Click Auto-Sync to have the function detect the vertical and horizontal offset values of the remote screen and automatically synchronize it with the local screen.			
	If the local and remote mouse pointers are out of sync, in most cases, performing this function will bring them back into sync.			
	Note: This function works best with a bright screen.			
	If you are not satisfied with the results, use the Screen Position arrows to position the remote display manually.			
RGB	Drag the slider bars to adjust the RGB (Red, Green, Blue) values. When an RGB value is increased, the RGB component of the image is correspondingly increased.			
Video Quality	Drag the slider bar to adjust the overall Video Quality. Values can be from 20 to 100. The larger the value, the clearer the picture and the more video data goes through the network. Depending on the network bandwidth, a high value may adversely effect response time.			
Bandwidth Control	This setting adjusts the ratio between picture quality and network speed. For slow data connections, drag the slider bar to a lower setting to decrease the amount of video data transferred. This ensures screen refresh at workable speeds.			

33

Notes:

34

Chapter 6. The Java Client

Introduction

The Java Client makes the KW1000 accessible to all platforms. that have Java 2 installed. Java 2 is available for free download from Sun's Java web site (http://java.sun.com). To access the KW1000 with the Java Client software:

- 1. After you log in (see p. 9), Click the Java Client icon.
- 2. In the dialog box that appears, select Open.
 - **Note:** If the browser won't open the Java Client program, save the program to disk and, with your browser still open, *Launch* it after the save.

After a second or two, an Authentication progress window appears:

X

Once the authentication procedure completes successfully, the remote system displays on your monitor:



35

Operation

You can work on the remote system via the screen display on your monitor just as if it were your local system.

The Java Client's toolbar is hidden in the blank area at the bottom center of the



screen.When you move the mouse pointer over this area, the toolbar appears:

- **Note:** 1. You can switch between your local and remote programs with [Alt + Tab].
 - 2. Due to *net lag*, there might be a slight delay before your keystrokes show up. You may also have to wait a bit for the remote mouse to catch up to your local mouse before you click.
 - 3. Due to *net lag*, or insufficient computing power on the local machine, some images, especially motion images, may display poorly.
 - 4. If the local and remote mouse pointers get out of sync, you can use the *Mouse Synchronization Button* to bring them back into sync (see p. 38 for details).

36

The Toolbar

The *Toolbar* at the bottom of the screen is a Java applet that gives you control over the KVM operations. Going from left to right on the toolbar, its functions are as follows:

Video:

Clicking the first button brings up the Video Settings dialog box:

義 Video Settings				×
 ← →	Red:	Min		Max
Ţ.	Green:	Min	1001	Max
Auto-Sync	Blue:	Min		Max
Quality:	Min	1 1 1 1		Max
Bandwidth:	🗌 Enabled	High	1 1 1 1	Low
[ок		Cancel	

This is similar to the *Adjust Video* feature of the Windows Client. See p. 32 for details about its use.

Note: We recommend that you perform an Autosync right after you connect for improved mouse synchronization.

Keypad:

Clicking the second button, brings up the Keypad. Since some locally input keyboard combinations can not be captured and sent to the KW1000, the Keypad provides a one-click implementation of their actions on the remote system.



37

Mouse:

At times the local mouse movement may lose sync with the remote mouse movement. If performing an Autosync doesn't resolve the problem The Mouse Synchronization function gets them back into sync. This is similar to the Mouse Synchronization feature of the Windows Client (see p. 28 for details).

1. Click the Mouse Synchronization button.

The remote mouse pointer moves to the upper left area of the screen.

2. Move your local mouse pointer directly over the remote mouse pointer and Click.

Lock LEDs:

These LEDs show the Num Lock, Caps Lock, and Scroll Lock status of the remote computer. Click on the icon to toggle the status.

Note: When you first connect, the LED display may not be accurate. To be sure, click on the LEDs to set them.

The i Button:

Clicking this button provides information about the Java Client.

The ? Button:

Clicking this button brings up the Java Client Help pages.

Exit:

Click this button to exit the Java Client program and return to local operation.

38

Chapter 7. The Log File

The KW1000 logs all the events that take place on it, and writes them to a log file, which is a searchable database.and stores them in a searchable database. To view the contents of the log file, click the *Log* icon at the left of the web page. A screen similar to the one below appears:

ALTUSEN	General	Network	Security	User Manager	Customization	Firmware	Logout
Apply			KW	1000 Log Informatio	n	and the second	
and the second se	2004-10-21						
Windows Client	11:45:48	Loading system set	ting				
	11:45:48	Accept new IP : 192	2.168.1.101				
Java Client	11:59:50	User from 00-0D-88	-F8-84-80 192.168.1	1.11 attemping to login			
·			h 192.168.1.11 (00-				
Log				.168.1.11 MAC = 00-0D	-88-F8-84-80).		
			leo mode: 800x600@	075.			
		Video: Start.					
		Video: Stop.					
		Video: Start.					
		Video: Stop.					
		Video: Receive auto	sync command.				
		Video: Start.					
		Video: Stop.	with 192.168.1.11 (0	0.00.00.00.00.00)			
	12:11:23	Sys: Disconnecced (with 192.168.1.11 (U	0-00-88-1-8-84-80)			
							Clear Log

To clear the log file, click on the Clear Log icon at the lower right of the file..

2004-10-22	

39

Notes:

40

Appendix

Specifications

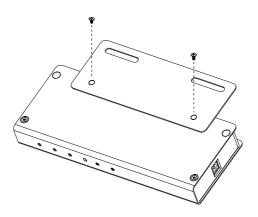
Func	tion	Specification
Connectors	Console Ports	1 x 6 pin mini-DIN F - Keyboard 1 x 6 pin mini-DIN F - Mouse 1 x HDB-15 F - Video
	KVM Port	1 x SPHD-15 F
	Power	1 x DC Jack (DC 5V; 2.6A max)
LEDs	Tx/Rx	1 (Amber)
	Link	1 (Green)
	Power	1 (Blue)
_	WLAN	1 (Amber)
Video		Up to 1600 x 1200 @ 60 Hz
Power Consumpti	ion	1800 mA
Protocols		IEEE 802.11b
Environment		Operating Temperature: 0 - 40° C Storage Temperature: 0 - 60° C Humidity: 0 - 80% RH
Housing		Metal
Weight		0.51kg
Dimensions (L x V	V x H)	43.24 x 25.42 x 4.42 cm

41

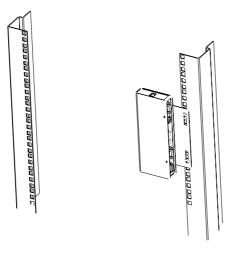
Rack Mounting

For convenience and flexibility, the KW1000 can be mounted on a system rack. To rack mount the unit do the following:

1. Screw the mounting bracket into the top or bottom of the unit as shown in the example diagram below.



2. Screw the bracket into any convenient location on the rack.



42

Troubleshooting

General Operation

Problem	Resolution					
Erratic Operation	If the KW1000 is connected to a KVM switch, make sure to power on the switch before powering on the KW1000.					
	Press and hold the WLAN Reset button (see p. 5), for 10 seconds.					

Sun Systems

Problem	Resolution							
Video display problems with HDB15 interface systems (e.g., Sun Blade 1000 servers).	The display resolution should be set to 1024 x 768: Under Text Mode: 1. Go to OK mode and issue the following commands: setenv output-device screen:r1024x768x60 reset-all							
	 Under XWindow: 1. Open a console and issue the following command: m64config -res 1024x768x60 2. Log out 3. Log in 							
Video display problems with 13W3 interface systems (e.g., Sun Ultra servers).	The display resolution should be set to 1024 x 768: Under Text Mode: 1. Go to OK mode and issue the following commands: setenv output-device screen:r1024x768x60 reset-all							
	Under XWindow: 1. Open a console and issue the following command: ffbconfig -res 1024x768x60 2. Log out 3. Log in							

43

The Windows Client

Problem	Resolution						
Remote mouse pointer is out of step.	1. Use the <i>AutoSync</i> feature (see <i>Video Adjustment</i> , p. 32), to synch the local and remote monitors.						
	 If that doesn't resolve the problem, use the <i>Adjust Mouse</i> feature (see <i>Mouse</i> <i>Movement</i>, p. 28) to bring them back in step. 						
Part of remote window is off my monitor.	If <i>Keep Screen Size</i> (see p. 26) is not enabled, use the <i>AutoSync</i> feature (see <i>Video Adjustment</i> , p. 32), to synch the local and remote monitors. If it is enabled, see the discussion under <i>Note</i> on p. 26.						
The remote screen display is rotated 90°	Enable Keep Screen Size. See the discussion under Note on p. 26 for details.						
I can't run Net Meeting when the Windows Client is running.	Enable <i>Keep Screen Size</i> . See the discussion under <i>Note</i> on p. 26 for details.						

The Java Client

For mouse synchronization problems, refer to the discussion on page 38. For connection and operation problems, see the table below:

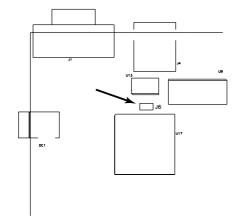
Symptom	Action
Java Client won't connect to the KW1000	1. Make sure to include the correct name of the web page when you specify the KW1000's IP address.
	2. Close the Java Client, reopen it, and try again.
Java Client performance deteriorates.	Exit the program and start again.

44

Administrator Login Failure

If you are unable to perform an Administrator login (because the Username and Password information has become corrupted, or you have forgotten it, for example), you can clear the login information with the following procedure:

- 1. Power off the KW1000 and remove its housing.
- 2. Short the jumper on the mainboard labeled J6.



- 3. Power on the switch.
- 4. When the front panel LEDs flash, power off the switch.
- 5. Remove the jumper cap from J6.
- 6. Close the housing and start the KW1000 back up.

After you start back up, you can use the default Username and Password (see p. 10) to log in.

45

Limited Warranty

IN NO EVENT SHALL THE DIRECT VENDOR'S LIABILITY EXCEED THE PRICE PAID FOR THE PRODUCT FROM THE DIRECT, INDIRECT, SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES RESULTING FROM THE USE OF THE PRODUCT, DISK OR ITS DOCUMENTATION.

The direct vendor makes no warranty or representation, expressed, implied, or statutory with respect to the contents or use of this documentation, and specially disclaims its quality, performance, merchantability, or fitness for any particular purpose.

The direct vendor also reserves the right to revise or update the device or documentation without obligation to notify any individual or entity of such revisions, or update. For further inquires please contact your direct vendor.

46

Index

Α

С

Components
Rear panel 6
OSD 27
Corrupt Password 45

F

Features. 3 Filtering 17
Firmware
Upgrading 22, 23
Forgotten Password 45

G

Η

Hardware Setup 5	
Hotkey Setup Screen	
Hotkeys	
Windows Client	

I

Installation .		•											7
Invalid login	•	•		•			•		•		•	1	0

J Ja

Java Client 2, 35
Keypad
Operation
Toolbar
Troubleshooting

L

Log File
Main Screen
Log Server 2
Login
Failure
Invalid login 10
Login page 9

Μ

MAC Address 1	4
Main screen 19	0
Mouse Synchronization 28, 3	8

Ν

Network environr	nent	•	•			•	•	•	•		15	5
	nent	•	٠	٠	٠	٠	٠	•	٠	٠	1.	'

0

Overview											1	

R

Rack Mounting 42
Rear panel components 6
Reset on exit

47

S

Т

Time out control	2
Troubleshooting	
Java Client 44	ł
Windows Client 44	ł

U

Upgrading firmware	22
Upgrading the Firmware	23
User manager	20

V

Video Adjustment	
Java Client	37
Windows Client	32

W

Windows Client	2, 25
Hotkeys	. 30
Starting up	. 25
Troubleshooting	. 44

48