American
Megatrends

# MegaRAC™ K1
# for Linux®-based
# Operating Systems
# User's Guide

## Revision History

| | |
|---|---|
| 04/29/05 | Initial Release. |

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# Chapter 1        MegaRAC™ K1 for Linux®-based Operating Systems

## Installation

1.) Insert the MegaRAC K1 CD into the Linux host machine.
2.) Mount the CD (Most Linux builds mount the CD automatically).
3.) Go into the `/mnt/cdrom/Remote Tools/linux` directory.
4.) There are two RPMs. gtkRConsole-K1-(version number).i386.rpm and lincuri-k1-(version number).i386.rpm.

| rpm | Description |
|---|---|
| gtkRConsole-K1-(version number).i386.rpm | This is the remote console redirection tool. |
| lincuri-k1-(version number).i386.rpm | This is the command line configuration tool. |

## Remote Console Redirection Tool

To install gtkRConsole-K1-(version number).i386.rpm, type the following command:
**`rpm –Uvh gtkRConsole-K1-(version number).i386.rpm`** <ENTER>

**Note:**        This is command is case sensitive. There is a space after RPM and –Uvh. There is a space between –Uvh and gtkRConsole-K1-(version number).i386.rpm.

The application is installed in **`usr/local/bin/gtkRConsole-k1`**. Make sure that the execution path is set to **`usr/local/bin`** to run the application from anywhere in the command line. If not, you will have to go to the installed directory to run the application.

To run, type the following into the command line:
**`gtkRConsole-k1 <K1's IP ADDRESS>`** <ENTER>

**Note:**        The K1's IP address is usually formatted as: 192.168.0.1.

**Note:**        To enter the Command line help, type the following:
**`gtkRConsole-k1`** <ENTER>

**Note:**        To uninstall the package, type the following:
**`rpm –e gtkRConsole-k1`** <ENTER>

Cont'd

## Remote Console Redirection Tool, Continued

The *Remote Console Login* prompt will appear. Type the *username* and *password* into the appropriate fields. Select the *OK* button to log in.

When you first try to access your MegaRAC K1, you will be prompted to enter a user name and password. The default root user name and password are as follows:

| Field | Default |
|---|---|
| Root User Name | **root** |
| Password | **superuser** |

**Note:**    The default root user name and password are in lower-case characters.

**Note:**    When you log in using the default root user name and password, you have full administrative powers. It is advised that once you log in, you change the root password.

There are also options you can set prior to logging in.

| Option | Description |
|---|---|
| Limit bandwidth to: | You can use the dropdown menu to limit the bandwidth to 28 Kbps, 56 Kbps, 128 Kbps, 512 Kbps, 1 Mbps, 10 Mbps (default), or 100 Mbps. |
| Color: | You can use the dropdown menu to limit the colors to 64 K Colors, 4 K Colors, 256 Colors, 216 Colors (default), 125 Colors, 64 Colors, Gray Scale, or Black and White. |
| Level2 Compression: | You can use the dropdown menu to toggle the second level of compression on and off. |

**Remote Console Shortcut Key Combinations**

The most powerful feature of your MegaRAC K1 is the ability to redirect the host system's console. To redirect the host system's console is the ability to manage your host system as if it were physically in front of you, when it is not. The following table is a list of basic keystrokes and their functions:

| Keystroke | Description |
|---|---|
| <ATL> + <S> | Start Console Redirection |
| <ATL> + <T> | Stop Console Redirection |
| <ATL> + <R> | Restart Console Redirection |

**Redirection Menu**

This dropdown menu contains the following dropdown menu items:

| Menu Item | Description |
|---|---|
| *Start Redirection* | This menu item can be used to begin Console Redirection. |
| *Stop Redirection* | This menu item can be used to halt Console Redirection. |
| *Restart Redirection* | This menu item can be used to stop Console Redirection and then start Console Redirection again. |

**Color Menu**

This dropdown menu contains the following dropdown menu items:

| Menu Item | Description |
|---|---|
| *64 K Colors* | Select this menu item to limit the colors to 64 K Colors. |
| *4 K Colors* | Select this menu item to limit the colors to 4 K Colors. |
| *256 Colors* | Select this menu item to limit the colors to 256 Colors. |
| *216 Colors* | Select this menu item to limit the colors to 216 Colors (default). |
| *215 Colors* | Select this menu item to limit the colors to 125 Colors. |
| *64 Colors* | Select this menu item to limit the colors to 64 Colors. |
| *Gray Scale* | Select this menu item to limit the colors to Gray Scale. |
| *Black White* | Select this menu item to limit the colors to Black and White. |

Cont'd

**View Menu**

This dropdown menu contains the following dropdown menu items:

| Menu Item | Description |
|---|---|
| *Toolbar* | This menu item can be used to open the Console Redirection toolbar. |
| *Full Screen* | This menu item can be used to view the Console Redirection in Full Screen mode.<br><br>**Note:** Set your client system's screen resolution to 1024 x 768 so that you can view the host system in true full screen. |

**Redirected Devices Menu**

This dropdown menu contains the following dropdown menu items:

| Menu Item | Description |
|---|---|
| *Mouse* | This menu item can be used to enable or disable mouse redirection. Default is on (signified by a check mark next to the menu item). |
| *Keyboard* | This menu item can be used to enable or disable keyboard redirection. Default is on (signified by a check mark next to the menu item). |
| *CD-ROM* | This menu item can be used to start redirection of the CD-ROM drive.<br><br>**Note:** You must be logged in as an administrator on the client to perform *CD-ROM drive* redirection.<br><br>**Note:** For information on how to create a bootable CD, visit nero.com or roxio.com. You can do a search on how to create a bootable CD using their products. You can also consult your CD writer's documentation. |
| *PS2 Keyboard/Mouse* | This menu item allows the K1 to emulate a PS/2 Keyboard and PS/2 Mouse. (Default) |
| *USB Keyboard/Mouse* | This menu item allows the K1 to emulate a USB Keyboard and USB Mouse. |

**Power Control**

This dropdown menu contains the following dropdown menu items:

| Menu Item | Description |
|---|---|
| *Using Serial Port* | Click on the Using Serial Port option to Toggle Port Usage between using the K1's onboard serial port for power control or as a management port, for Power Management to send commands to the MegaRAC K1, or set the serial port parameters in COM Settings. |
| *Using Power Buddy* | Click on the Using Power Buddy option to control the power through the Power Buddy Control. |
| *Using IPMI* | Click on the Using IPMI option to control the power via IPMI. |

**Performance**

This dropdown menu contains the following dropdown menu items:

| Menu Item | Description |
|---|---|
| *Bandwidth Usage* | The Bandwidth Usage option allows you to adjust the bandwidth. |

**Keys**

This dropdown menu contains the following dropdown menu items:

| Menu Item | Description |
|---|---|
| *Left ALT* | This menu item can be used to act as the left-side <ALT> key when in Console Redirection. |
| *Right ALT* | This menu item can be used to act as the right-side <ALT> key when in Console Redirection. |
| *Control-Alt-Delete* | This menu item can be used to act as if you depressed the <CTRL>, <ALT> and <DEL> keys down simultaneously on the host system that you are redirecting. |
| Macros | This menu item can be used to record a set of keystrokes. A good example is when using the K1 in conjunction with a KVM. Normally, you must use a key sequence to switch systems. If you programmed a macro, you would be able to switch systems by selecting a preprogrammed macro. |

**Ports**

This dropdown menu contains the following dropdown menu items:

| Menu Item | Description |
|---|---|
| *Configure* | The Configure Port menu item allows you to use the K1 with a traditional KVM. Simply attach the K1 to your KVM as if it were a local keyboard, video display, and mouse. You can then set up the K1 to send keyboard strokes to the KVM. This is an especially useful feature to access a particular system. |

**Options**

This dropdown menu contains the following dropdown menu items:

| Menu Item | Description |
|---|---|
| *Preferences* | The Video Parameters allows you to customize the performance of your Remote Console session. |
| *Disable Local Video* | The Disable Local Video option allows you to toggle the local video on and off. |
| *Keyboard Encryption* | This menu item can be used to encrypt all keyboard strokes. Normally, all keystrokes are sent in plain text. |
| *Dual Mouse Mode* | The Dual Mouse option allows you to view two pointers. One pointer on the host system and one pointer on your local client system. This is desirable when you want to retain functionality on both your host system and local client system. |

**Help**

This dropdown menu contains the following dropdown menu items:

| Menu Item | Description |
|---|---|
| *Information* | This dropdown menu item allows you to view the gtkRConsole version number and copyright information. |

**Remote Console Toolbar**

The *Remote Console Toolbar* allows you to use *Console Redirection* more easily in full screen mode.

| Item | Description |
|---|---|
| Redirection | Can be used to toggle to start and stop redirection. |
| Redirected Devices | Contains Mouse, Keyboard and CD-ROM redirection toggles. |
| Fullscreen | Can be used to toggle between fullscreen and windowed view modes. |
| Alt Key | Can be used to hold down the <ALT> key. |
| Ctl-Alt-Del | Can be used to send the <CTRL>, <ALT> and <DELETE> keys. |
| X Close | Can be used to close the *Remote Console Toolbar*. |

**Video Parameters**

The *Video Performance Parameters* allows you to enhance the frame rate of your remote console session.

**Note:** The *Video Parameter* function is only active on the K1 VGA. The K1 DVI does not require video tweaking to enhance performance.

| Item | Description |
|---|---|
| Noise Threshold slider | This slider allows you to increase or decrease the performance of the video redirection by altering the video artifacts. A higher value will increase visible video artifacts (giving a lower image quality), but at the same time, increase the frame rate. A lower value will have a better image quality, but at the same time, decrease the frame rate. |
| Red Gain slider | This slider allows you to increase or decrease the amount of red. |
| Green Gain slider | This slider allows you to increase or decrease the amount of green. |
| Blue Gain slider | This slider allows you to increase or decrease the amount of blue. |
| Horz_Pos slider | This slider allows you to modify the horizontal position of the screen. |
| Vert_Pos slider | This slider allows you to modify the vertical position of the screen. |
| Set Default Gains button | This button allows you to reset the color gains to the default levels. |
| Auto Calibrate button | This button allows the K1 to automatically set the color gains and noise thresholds. |
| Apply button | This button allows you to immediately apply the changes. |
| OK button | Left click the OK button to save your settings. |
| Cancel button | Left click the Cancel button to exit without saving your settings. |

# lincuri Command Line Configuration Tool

**For Network Connections**

To install lincuri-k1-(version number).i386.rpm, type the following command:

`rpm –Uvh lincuri-k1-(version number).i386.rpm` <ENTER>

**Note:**  This is command is case sensitive. There is a space after RPM and –Uvh. There is a space between –Uvh and lincuri-k1-(version number).i386.rpm.

The application is installed in `usr/sbin/lincurik1`. Make sure that the execution path is set to `usr/sbin` to run the application from anywhere in the command line. If not, you will have to go to the installed directory to run the application.

To run, type the following into the command line:

`Lincurik1 -nw <K1's IP ADDRESS>  <username>`<ENTER>

**Note:**  The K1's IP address is usually formatted as: 192.168.0.1. The username can be any configured username on the K1, for example, `root`.

**Note:**  To enter the Command line help, type the following:

`Lincurik1` <ENTER>

**Note:**  To uninstall the package, type the following:

`rpm –e lincuri–k1`<ENTER>

You will be prompted for a password. Enter the username's password.

**For USB Inband Connections**

You must connect the K1 directly to the Linux host machine via a USB cable. To run, type the following into the command line on the Linux host machine:

`Lincurik1 -cd`<ENTER>

# Command Line Commands

You can view all the commands by typing in the following:

**Help**

| Menu Item | Description |
|-----------|-------------|
| GetHostName | Retrieves hostname |
| SetHostName | Sets host name |
| SetDefaultHostName | Sets the default hostname |
| GetFWInfo | Gets the firmware info |
| GetManagedServerInfo | Gets the managed server info |
| SetManagedServerInfo | Sets the managed server info |
| GetAllUserInfo | Gets info of all users |
| AddUser | Adds a new user |
| DelUser | Deletes an existing user |
| GetNetworkCfg | Gets the cards network configuration |
| SetNetworkCfg | Configures the cards network |
| FwallGetBlockRules | Gets all blocked rules |
| FwallAddBlockRule | Adds a block rule |
| FwallDelBlockRule | Deletes a block rule |
| FwallEditBlockRule | Edits a block rule |
| FwallGetAllowRules | Gets all allowed rules |
| FwallAddAllowRule | Adds a  allow rule |
| FwallDelAllowRule | Deletes a allow rule |
| FwallEditAllowRule | Edits a allow rule |
| SConMenu | SConsole Main Menu |
| GetMaxConPerPort | Retrieves Max No of connections per port |
| SetMaxConPerPort | Sets Max No of connections per port |
| GetNoiseThreshold | Gets Noise Threshold |
| SetNoiseThreshold | Sets Noise Threshold |
| GetMigrationState | Gets the Migration State |
| SetMigrationState | Sets the Migration State |
| GetChannelGain | Gets ChannelGain |
| SetChannelGain | Sets ChannelGain |
| AutoCalibrateVideoSource | Calibrates Video Source |
| ExPBCmd | PowerBuddy Power control |
| GetPBPwrStatus | Get PowerBuddy Host Power Status |
| ExIPMICmd | IPMI power control |
| GetIPMIPwrStatus | Get Host Power Status using IPMI Over LAN |
| ConfigureSerialPort | Configure Serial port for power control |
| SendSrlPwrCmd | Send Serial Port power control command |
| GetNoOfSrlPwrCmds | Get No of Power Commands in the card |
| AddSrlPwrCmd | Add Serial Power Command |
| SetSrlOptions | Change Serial Port Settings |
| GetSrlOptions | Get the Serial Port Settings |
| GetSrlPwrCmds | Get Serial Power Commands in the card |
| DelSrlPwrCmd | Delete specified Serial Power Command |
| GetSrlCfgStatus | Gets the current Serial port configuration Status |
| FullImageFlash | Flashes full firmware image to the card |
| help | Displays this message |
| Quit | Quit command option |
| Exit | Similar to quit |