

SmartRack 232

User Guide



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1. Welcome

Thank you for buying the SmartRack 232 system.

Technical precautions

This equipment generates radio frequency energy and if not installed in accordance with the manufacturer's instructions, may cause radio frequency interference.

This equipment complies with Part 15, Subpart J of the FCC rules for a Class A computing device. This equipment also complies with the Class A limits for radio noise emission from digital apparatus set out in the Radio Interference Regulation of the Canadian Department of Communications. These above rules are designed to provide reasonable protection against such interference when operating the equipment in a commercial environment. If operation of this equipment in a residential area causes radio frequency interference, the user, and not Minicom Advanced Systems Limited, will be responsible.

Changes or modifications made to this equipment not expressly approved by Minicom Advanced Systems Limited could void the user's authority to operate the equipment.

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2. Introduction

2 users can access and control multiple mixed-platform computers with the SmartRack 232 Switch system. Connect up to 32 computers to the SmartRack 232.

The SmartRack 232 is based on Minicom's innovative ROC technology in which each computer / server is directly connected to the switch via a ROC using standard CAT5 cable at a distance of up to 30m/100ft in a star configuration. No external power is needed at the ROCs.

To access servers, just slide out the drawer and flip up its top to display the large, high resolution 17" TFT LCD display.

The display is (VGA/SVGA/XGA/SXGA compatible) with front-panel high-quality controls and touchpad for easy adjustment.

2.1 Features

- Hot-Swap - disconnect and reconnect computers without rebooting
- 1U rack mountable
- 2 simultaneous users
- Operate the system using an On Screen Display (OSD)
- The computers can be placed up to 30m/100ft from the SmartRack 232
- Mixed-platform interface— supports PS/2, and USB computers/servers

2.2 Compatibility

The SmartRack 232 is compatible with:

- PS/2, and USB computers/servers
- DOS, Windows, Linux, UNIX, Mac and all other major operating systems

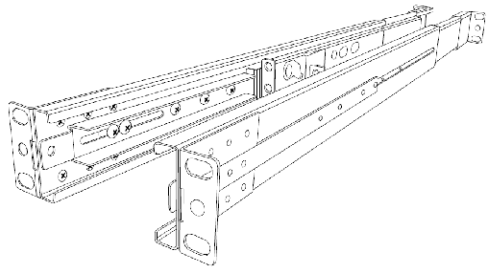
3. System components

The SmartRack 232 system consists of:

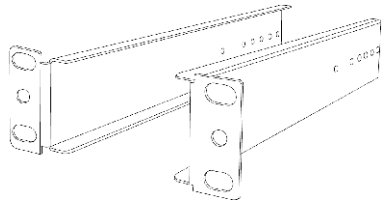
- SmartRack 232: Console + KVM Switch
- ROCs - PS/2, USB (ordered separately. ROC comes with CAT5 cable 1.5m)

3.1 Hardware kit contents

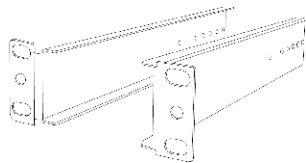
Rail with front and rear bracket x 2,
for rack depth of 614 ~ 800 mm.
Right and left sides are different.



Long bracket x 2. (For increased rack
depth of 905 ~ 990mm)



Medium bracket x 2. (For increased rack
depth of 800 ~ 905mm)




Short bracket x 2



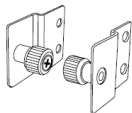
Bracket attachment x 2




Note! The short bracket and bracket attachment for a rack depth of 504~ 614 mm and without a KVM switch connected to the drawer.


Flat screws x 6 (for rail mount to console body) 

Screws x 6 



Bracket A with thumbscrew x 2

Screws x4 

Keys x 2. 

3.2 Pre-installation guidelines

- Switch off all computers
- Place cables away from fluorescent lights, air conditioners, and machines that are likely to generate electrical noise
- Ensure that the maximum distance between each computer and the SmartRack 232 does not exceed 30m/100ft

3.3 Avoiding general rack mounting problems

Elevated operating ambient temperature

The operating ambient temperature of the rack environment may be greater than the room ambient when installing into a closed or multi-unit rack assembly. So install the equipment in an environment compatible with the maximum rated ambient temperature.

Reduced airflow

Install the equipment in a rack in such a way that the amount of airflow required for safe operation is not compromised.

Mechanical loading

Mount the equipment in the rack in such a way that a hazardous condition is not achieved due to uneven mechanical loading.

Circuit overloading

When connecting the equipment to the supply circuit, consider the effect that overloading of circuits might have on over-current protection and supply wiring.

Reliable earthing of rack-mounted equipment should be maintained. Give attention to supply connections other than direct connections to the branch circuit (e.g. use of power strips).

3.4 Connecting to a rack

Note! For increased rack depth of between 800 ~ 990mm, first change the bracket to the medium or long bracket, see section 3.5 on page 9.

Note! The illustrations below show the connections to one side of the SmartRack 232. The connections are the same for the other side.

1. Move the rail until two screws appear, see Figure 1.

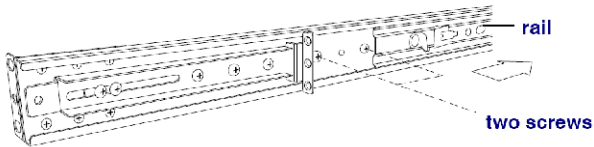


Figure 1 Exposing the 2 screws

2. Loosen slightly the 7 screws as shown below.

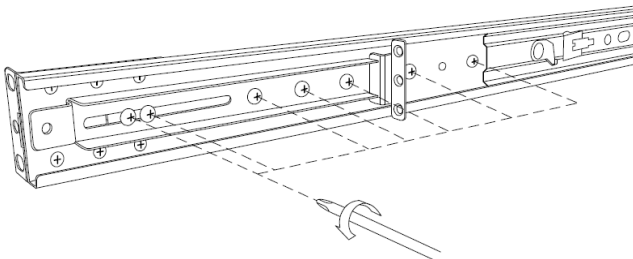


Figure 2 Loosen 7 screws

3. Adjust the rear bracket to fit your cabinet, see below.

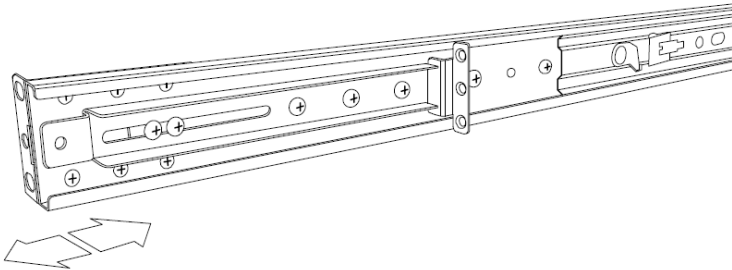


Figure 3 Adjusting the bracket

4. Install the front and rear bracket onto the cabinet, see figure below.

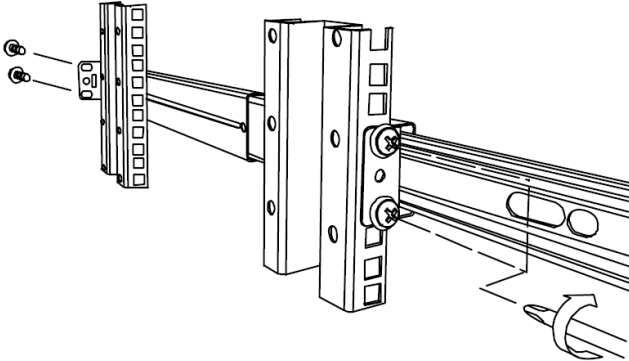


Figure 4 Installing front and rear bracket on cabinet

5. Tighten the 7 screws as shown below.

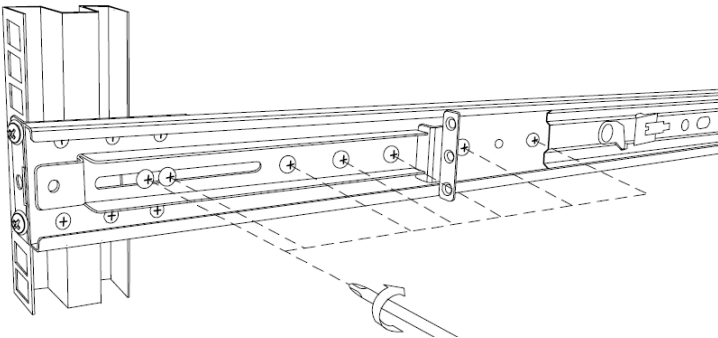


Figure 5 Tightening the 7 screws

6. Repeat the steps above to connect the other rail to the other side of the rack.
7. Slide the SmartRack console between the rails as shown below.

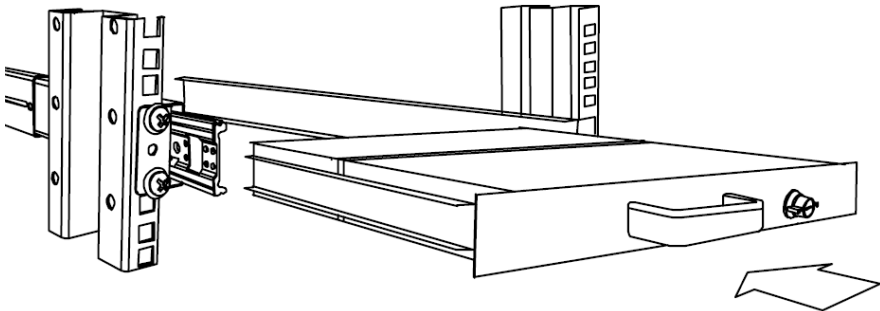


Figure 6 Sliding the SmartRack between the rails

8. Unlock and pull both left and right rail-lock switches together – see below – and push the console all the way into the rack.

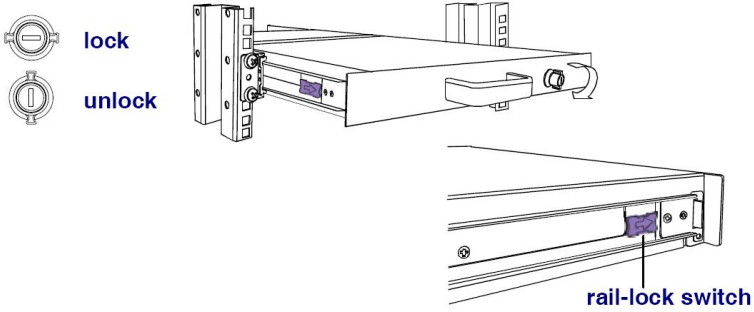


Figure 7 Rail-lock switch

9. Connect three flat screws to the rear of the console on both sides. See figure below.

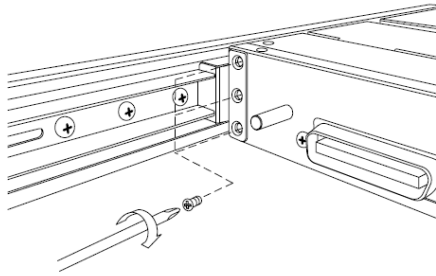


Figure 8 Connecting three flat screws to the rear of the console

The console now sits snugly in the rack, see Figure 9.

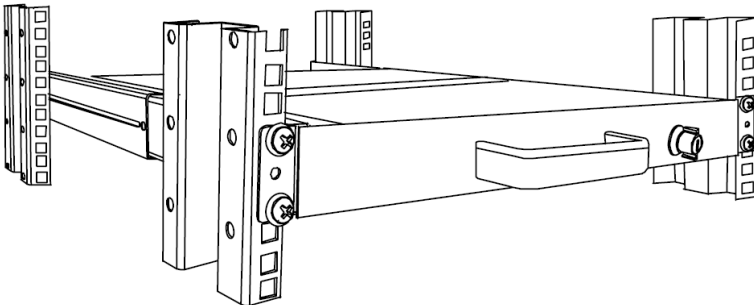


Figure 9 Console in the rack

3.5 Using the medium or longer bracket

For a rack depth of 800 ~ 905mm, use the medium bracket. For a rack depth of 905 ~ 990mm, use the longer bracket.

To replace the bracket with the medium or longer bracket:

1. Loosen the 7 screws as shown below.

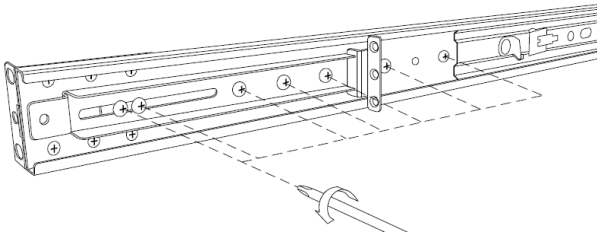


Figure 10 Loosening the 7 screws

Remove the six (different) screws as shown below.

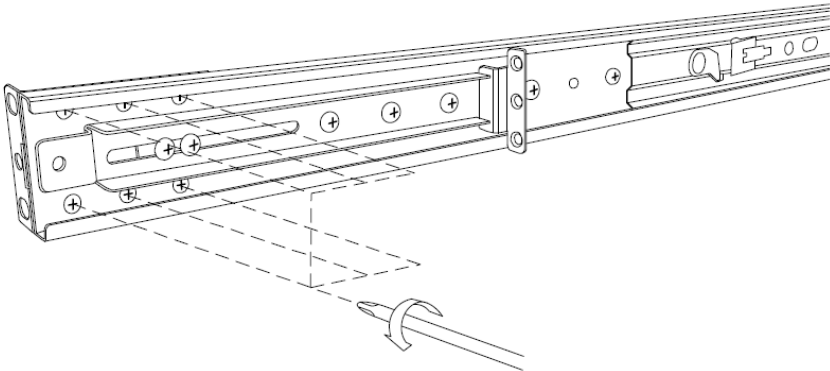
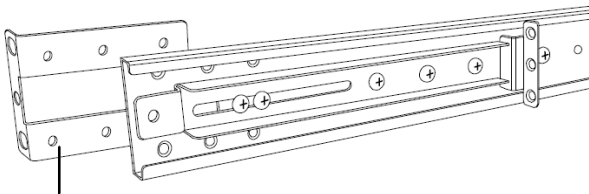




Figure 11 Removing the six screws

2. Take the rear bracket out, see below.



original bracket

Figure 12 Taking the rear bracket out

3. Insert the medium/long bracket into the rail then adjust the bracket to fit your cabinet.
4. Tighten at least 2~3 screws along the length you need. **Note!** For medium bracket use the round screws , and for the long bracket use the flat screws . See Figure 13.

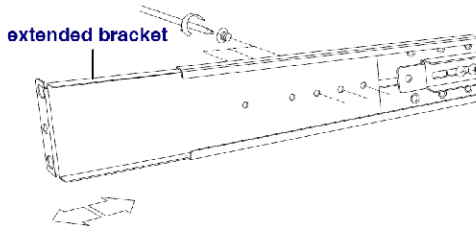


Figure 13 Inserting and tightening the medium/long bracket

5. Repeat the above steps for the other side.
6. Go to section 3.4 Connecting to a rack.

3.6 Connecting the KVM Switch 232

1. Connect the bracket A to the sides of the Switch using the two 6mm screws provided see figure below.

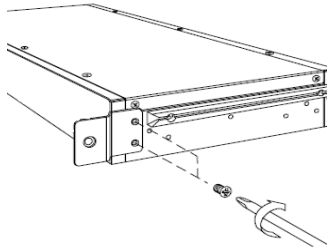


Figure 14 Connecting the bracket A to the sides of the Switch

2. Slide the Switch 232 into the rail and into the back of the SmartRack console until you hear a click. See the figure below.

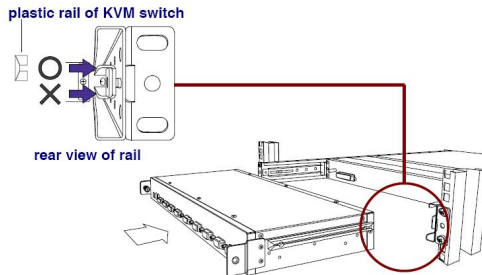


Figure 15 Slide switch into back of SmartRack

3. Secure the Switch 232 to the rail by inserting the thumbscrews through the bracket and into the rail and tightening them, see Figure 16.

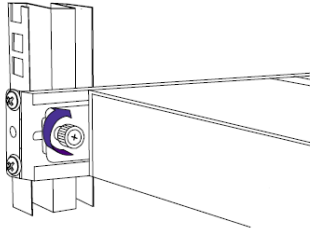


Figure 16 Tightening the thumbscrews

4. The SmartRack 232 system configuration

You connect servers to the SmartRack 232 via ROCs. Figure 17 illustrates the basic configuration of the 232 Switch.

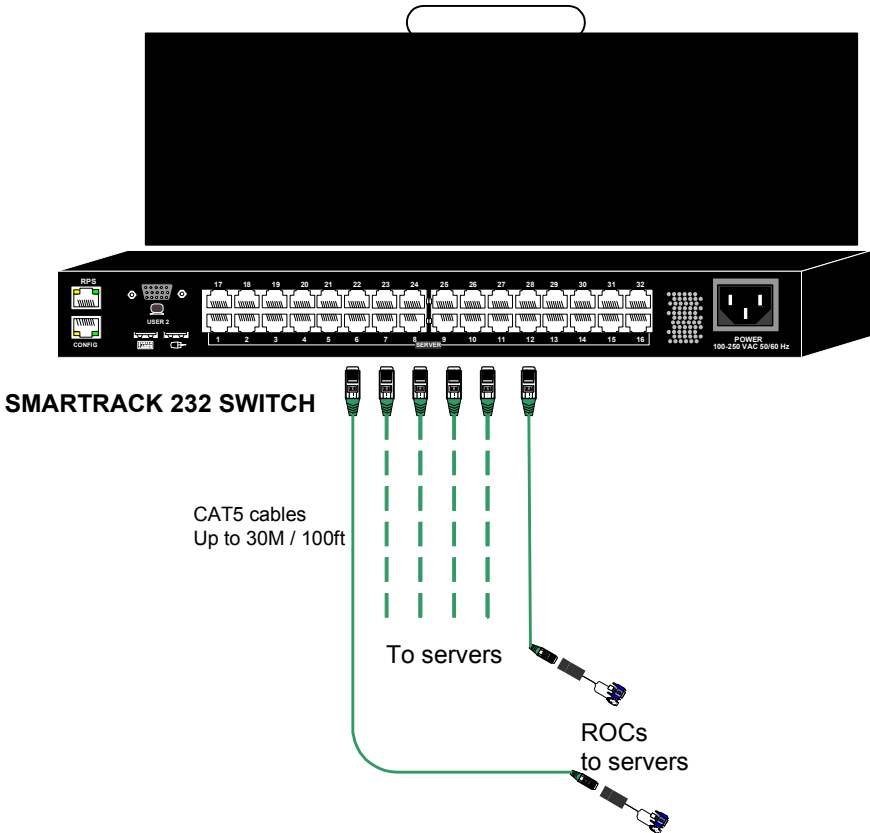


Figure 17 SmartRack 232 Switch system configuration

4.1 The KVM Switch 232

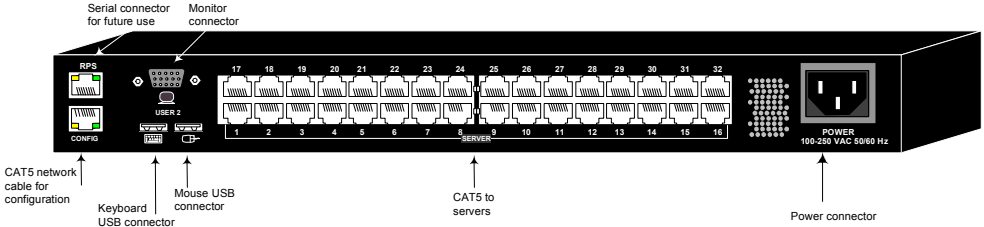


Figure 18 232 Switch ports

4.1.1.1 Connector table

Connector	Function
CONFIG	For configuring the system – see page 16
RPS	For future use
KVM - User 2	For connection of second user – see page 15
Server ports	Connect to servers via ROCs

4.2 Connecting ROCs to servers

Each computer/server is directly connected to the Switch 232 via the appropriate ROC using CAT5 cable in a star configuration. No external power is needed at the ROCs. The ROCs draw their power from the computer’s keyboard port (ROC PS/2) or from the USB port (ROC USB). The figures below illustrate the ROC PS/2 and ROC USB.

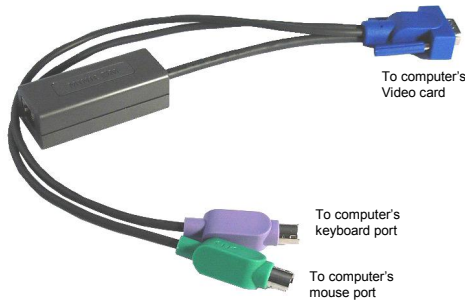


Figure 19 ROC PS/2

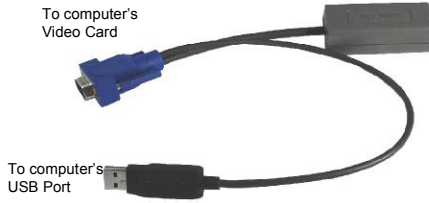


Figure 20 ROC USB

4.2.1 Connecting a ROC PS/2

Figure 21 illustrates the ROC PS/2 connections.

You can connect the ROC PS/2 to a powered on computer, but it must be in the following order:

1. Connect the Mouse connector to the computer's Mouse port.
2. Connect the Keyboard connector to the computer's Keyboard port.
3. Connect the Screen connector to the computer's Video port.

Failure to connect in the above order while the server is running, may lead to the mouse malfunctioning until the server is rebooted.

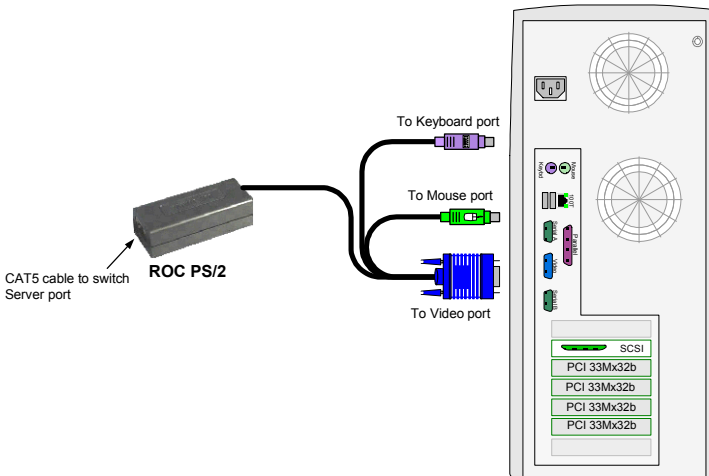


Figure 21 ROC PS/2 connections

4.2.2 Connecting a ROC USB

The ROC USB supports Windows 98 SE and later, MAC, SUN, SGI and all modern Linux distributions. Figure 22 illustrates the ROC USB and its connections.

To connect the ROC USB:

1. Connect the Screen connector to the computer's Video port.

2. Connect the USB connector to the computer's USB port.

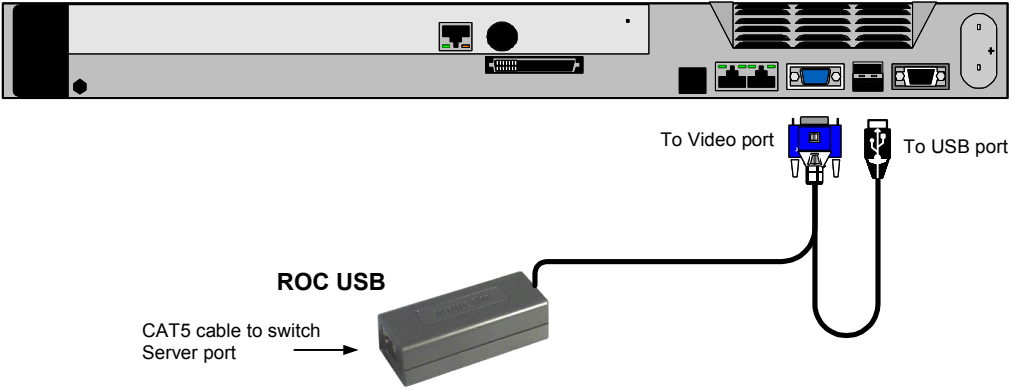


Figure 22 ROC USB

4.3 Connecting the CAT5 cables

1. Connect one connector to the ROC's RJ45 port.
2. Connect the other connector to one of the SmartRack Switch Server ports.
3. Follow the above 2 steps for each computer.

4.4 Connecting the power supply

1. Connect the Switch to the power supply using the Power cord provided. Only use the Power cord supplied with the unit.
2. Power on the Switch.

5. Connecting a second user

A first user uses the KVM console on the Smartrack 232. A second user, can be connected to the Switch 232 via:

- A KVM workstation
- Minicom's KVM Extender USB
- Minicom's PX USB

Extend the second user position up to of 150m / 500ft using Minicom's KVM Extender USB, or a second user can connect remotely via IP using Minicom's PX USB.

5.1 Connecting a second user via KVM workstation

Connect a keyboard and mouse to the Switch 232, **User 2** Keyboard and Mouse USB ports. Connect a monitor to the **User 2** Monitor port.

5.2 Connecting a second user via KVM Extender USB

Connect a KVM workstation to the KVM Extender USB Receiver. Connect a keyboard and mouse to the Receiver Keyboard and Mouse USB ports. Connect a monitor to the Receiver Monitor port. See Figure 23.

Connect the Switch 232 to the KVM Extender USB Transmitter. Connect a VGA + USB cable (supplied with the KVM Extender USB) to the Transmitter and the Switch 232. Connect the HD15 connector to the Transmitter Computer port and connect the VGA and USB connectors to the Switch 232 **User 2** Monitor and USB ports.

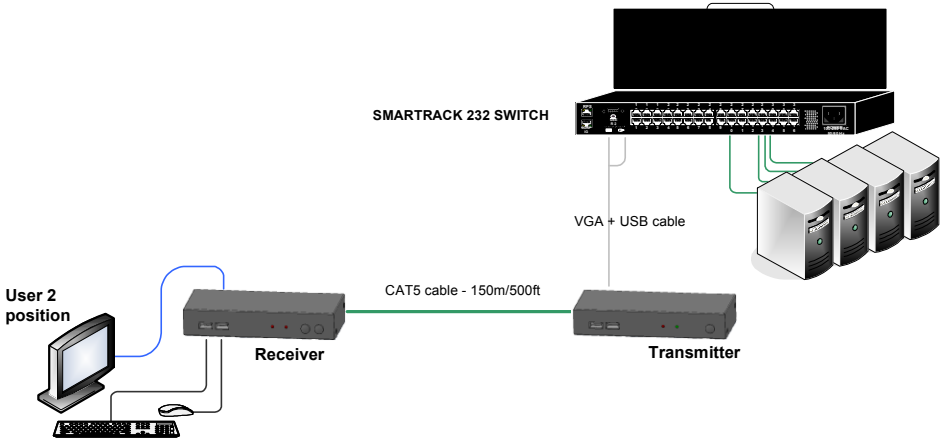


Figure 23 Switch 232 + KVM Extender USB

For the rest of the KVM Extender USB system installation and operating instructions, see the KVM Extender USB Quick Start Guide.

5.3 Connecting a second user via PX USB

A second user can connect remotely via IP using a PX USB.

Connect a PX USB to the Switch 232. Connect the PX USB Monitor connector to the Transmitter Computer port and connect the VGA and USB connectors to the Switch 232 **User 2** Monitor port and connect the PX USB USB port to the Switch 232 **User 2** Keyboard or Mouse USB port. See Figure 24.

You need to download and install firmware for the PX USB to support the Smartrack 232 switch. Download the firmware from:

<http://www.minicom.com/phandlm.htm>

For the rest of the PX USB installation and operating instructions, see the PX USB Quick Start Guide.

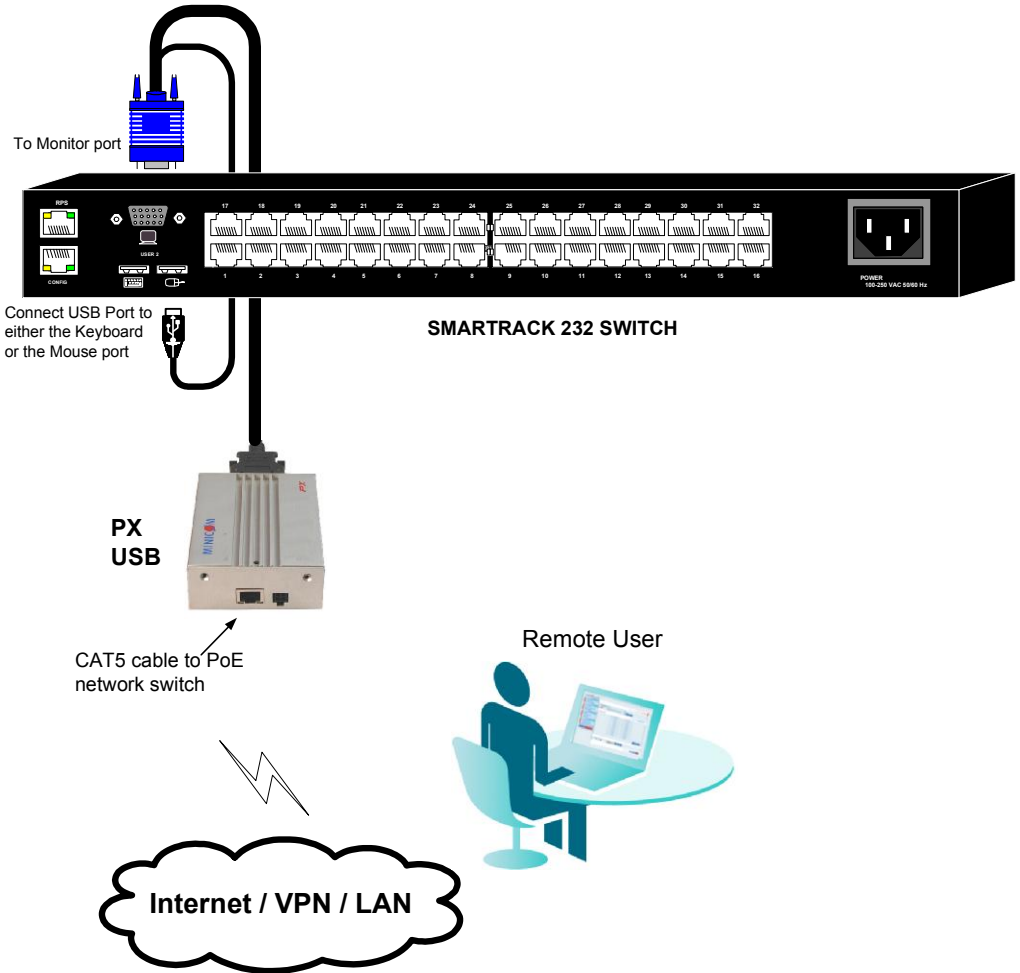


Figure 24

6. Configuring the system

Configuring the system includes:

- Assigning server names
- User and security settings
- Maintenance

6.1 Connecting to the Local Area Network (LAN)

Configuration is done mainly via a web interface. For this purpose connect a network cable to the CONFIG port of the Smart 232. This must be done before powering on the Smart 232.

6.2 Setting network parameters via the OSD

By default, Smart 232 boots with an automatically assigned IP address from a DHCP (Dynamic Host Configuration Protocol) server on the network. The DHCP server provides a valid IP address, gateway address and subnet mask.

You can identify the IP address from the OSD. Also where there is no DHCP server set the IP address via the OSD as follows:

1. From the local keyboard, press left **Shift** twice. The OSD Main window appears. See Figure 25.

```

MINICOM SMART SWITCH
MAIN

-- NAME                                USER  PM
01 File Server
02 Mail Server
03 AD DC
04 ESX 3i 3.5
05 Windows 2008
06 Firewall
07 Novell SuSE
08 RedHat Ent
MOVE LABEL F1      ESC-LOGOUT
TUNING             F5      F2-SETTING

```

Figure 25 OSD Main window

2. Press **F2**. The Settings window appears see Figure 26.

MINICOM SMART SWITCH SETTINGS

```

MAC ADD 00:15:9D:02:DB:5B
DHCP ENABLED
IP ADDRESS 192.168.2 .122
SUBNET MASK 255.255.255.0
GATEWAY 192.168.2 .1
HOTKEY :Shift-Shift
KEYBOARD LANGUAGE :English

Save -ESC          DDC-F10
  
```

Figure 26 Settings window

In the Settings window you navigate downwards using the Tab key. At the bottom of the window, press tab to go to the top of the window. Change settings by typing in the selected area or by pressing the spacebar – whichever is relevant.

6.2.1 Changing the Network parameters

DHCP Enable – When a DHCP server is active on the same network to which Smart 232 is connected, DHCP provides automatic IP assignment. (Displayed in the OSD).

When DHCP is disabled – (Recommended) – You can assign a fixed IP address to the Smart 232. Consult your Network Administrator regarding the use of the DHCP.

When DHCP is disabled, enter the **IP Address**, **Subnet Mask**, and **Gateway** as given by your Network Administrator.

Once the IP address is satisfactory, press ESC twice to save changes and restart the unit. You can now log into the web interface to complete the configuration, as explained below.

(Network parameters can also be changed from the web interface as explained on page 21).

7. Logging into the web configuration

1. Open your web browser.
2. Type the Smart 232 system IP address – `http` or `https://IP address/` - and press **Enter**. The login page appears.

3. Type the default Administrator user name - **admin** - and password - **access** - (both lower case).
4. Press **Enter**. The web interface opens at the Targets page. See Figure 27.



Figure 27 Targets page

Columns:

Server name - The server name can be changed in the configuration settings to give the server an identifiable name.

Server Status - Server Status can be on, off or busy (i.e. a user is accessing the server).

User - The current user (if any) accessing the server.

From the Targets page menu - see Figure 27 - an Administrator can:

- Change the password
- Reach the configuration pages
- See an event log (explained on page 30)

7.1 Changing the password

To change the password, from the menu click **Password**, the following appears.

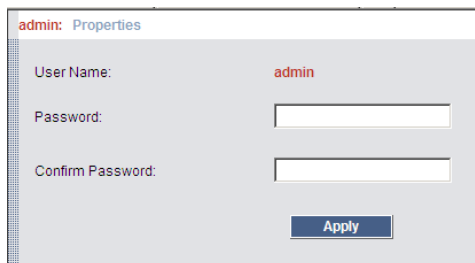


Figure 28 Properties

Type a new password according to the password policy set - see page 25. Click **Apply**.

8. Configuring the system

From the menu, click **Configuration**. The Network > Configuration appears, see Figure 29.



Figure 29 Network > Configuration page

8.1 Network > Configuration

Consult your Network Administrator for the network settings.

Device name - Type a name for the Smart 232.

8.1.1 LAN

In the LAN section – see Figure 29 – is the following:

Enable DHCP – When a DHCP server is active on the same network to which Smart 232 is connected, DHCP provides automatic IP assignment.

When DHCP is disabled – (Recommended) – You can assign a fixed IP address to the Smart 232.

Consult your Network Administrator regarding the use of the DHCP.

When DHCP is disabled, enter the **IP Address**, **Subnet Mask**, and **Default Gateway** for **LAN**, as given by your Network Administrator.

These parameters can be configured locally from the OSD as explained on page 18.

8.2 Administration > User Settings

From the menu click **User Settings**, Figure 30 appears.

Administration > User Settings

User: Password: Block:

Permission: Administrator Confirm Password:

	User Name	Permission	Status
1	admin	Administrator	not blocked

Figure 30 User Settings

On this page an Administrator creates or deletes users.

There are 2 levels of user access:

- Administrator
- User

Administrator

An Administrator has unrestricted access to all windows and settings. An Administrator can change the name and password and server access permissions of all users.

User

A User can access/control permitted servers. A User has no access to the web configuration interface.


8.2.1 Adding a user

To add a user:

1. Click and type a name and a password. The password must be at least 6 characters – letters or numbers, and must not include the user name, even if other characters are added.



Note! The following “special” characters: &, <, >, ” cannot be used for either the user name or password.

Depending on the security level chosen the user name and password parameters are different. See section 10 on page 25.

2. Select the permission type from the **Permission** box.
3. Click , the user appears in the list of users. The Permission column shows the user level (Administrator, User). The Status column shows whether the user is blocked or unblocked, explained in section 8.2.3 below.

8.2.2 Deleting a user

To delete a user:

1. Select the user from the list.
2. Click .
3. Click , the changes are saved.

8.2.3 Blocking a user

An alternative to deleting a user is blocking a user. This means that the user’s name and password is stored, but the user is unable to access the system. Check **Block** to block a user. Uncheck **Block** to allow the user access.

8.3 Administration > Switch Configuration

Assign unique names to the servers connected to the Smart 232, so that users accessing the system can identify the servers easily.

To do so:

1. From the menu click **Switch Configuration**. The **Switch Configuration** window appears, see Figure 31.



Figure 31 Switch Configuration

- In the **Server Name** section change the name of the connected servers by selecting the server name and typing a new name. Click **Apply** to save changes.

8.4 Administration > Power Management

The Power Management feature is currently unavailable.

9. Administration > User Targets

Define the access rights of each user separately.

To do so:

- From the menu click **User Targets**. The **User Targets Configuration** window appears, see Figure 32.



Figure 32 User Targets Configuration

2. Select a user from the **User** drop-down menu.
3. Check the servers the user can access (according to his access permissions). To select all servers, press **Control**.
4. Click **Apply**, the selection is saved.
5. Repeat the above steps for other users.

10. Security > Settings

Configure the security features, such as Account Blocking, Password Policy and Idle Timeout, as explained below.

From the **Security** section click **Settings**, the **Security Settings** appear, see Figure 33.

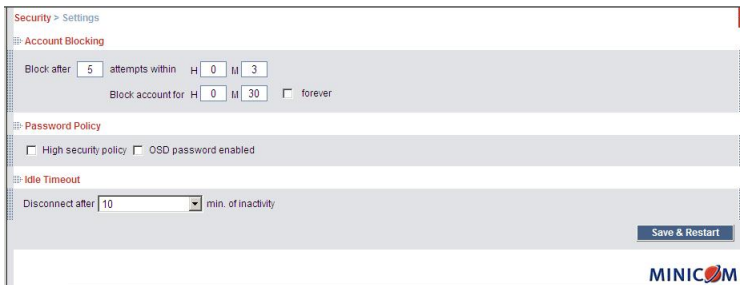


Figure 33 Security Settings

The Security Settings fields:

Account Blocking – decide on the number of attempts to login with a wrong username or password after which there is a time lock or a total block.

Password Policy

For OSD and web configuration access you have the option of a standard or high security level of password. The table below shows the parameters of the 2 options.

Standard security policy	High security policy
6 characters or more	8 characters or more must include at least 1 digit and 1 upper case letter and 1 "special" character as follows !@#%*^*()_+=[]:;?/{}
Must not include the user name	Must not include the user name

Check the box to enable the high security password policy. Unchecked, the standard security policy applies.

OSD password enabled - Access to the OSD can be password enabled or disabled (default), with the option of a standard or high security level of password as explained above. Select the checkbox to enable password security. **Note!** All user and server security settings depend on the OSD Password being enabled.

Idle Timeout – Select the Timeout inactivity period after which the user is disconnected from the system. Choose **No Timeout** to disable Timeout.

11. Security > SSL Certificate

You can install an SSL certificate.

To do so:

From the menu, select **SSL Certificate**, the install **SSL Certificate** page appears, see Figure 34.

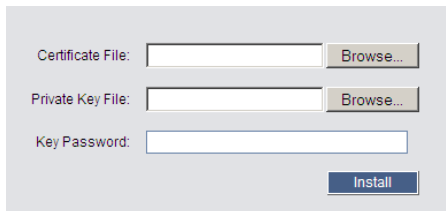


Figure 34 Install SSL Certificate page

Certificate File - Browse to locate the **cer** file (.ssl format).

Private Key File - Browse to locate the **private key** file (.pem format).

Key Password – Type the Key password.

Click . The certificate installs. The device restarts automatically.


12. Maintenance > Switch Upgrade

Upgrade the Smart 232 firmware to take advantage of new features. Download the firmware from the Support section of Minicom's website –www.minicom.com. Save the firmware file on the Client computer.

From the menu select Switch Upgrade. The Upgrade window appears showing the current firmware version see Figure 35.






Figure 35 Firmware Upgrade

1. Locate and upload the firmware file.
2. Click . The upgrade starts. The unit reboots automatically. After about 5 minutes the Login page appears.

13. Maintenance > RICCs/RoCs Upgrade

Upgrade the ROC firmware to take advantage of new features. Download the firmware from the Support section of Minicom's website –www.minicom.com. Save the firmware file on the Client computer.

1. From the menu select **RICCs/RoCs Upgrade**. The **RICCs/RoCs Upgrade** window appears showing the current firmware version see Figure 36.
2. Select the servers connected to the ROCs you wish to upgrade. Click  to select all.
3. Verify the current version of the firmware by pressing .
4. Locate and upload the firmware file.
5. Press , the firmware upgrades.

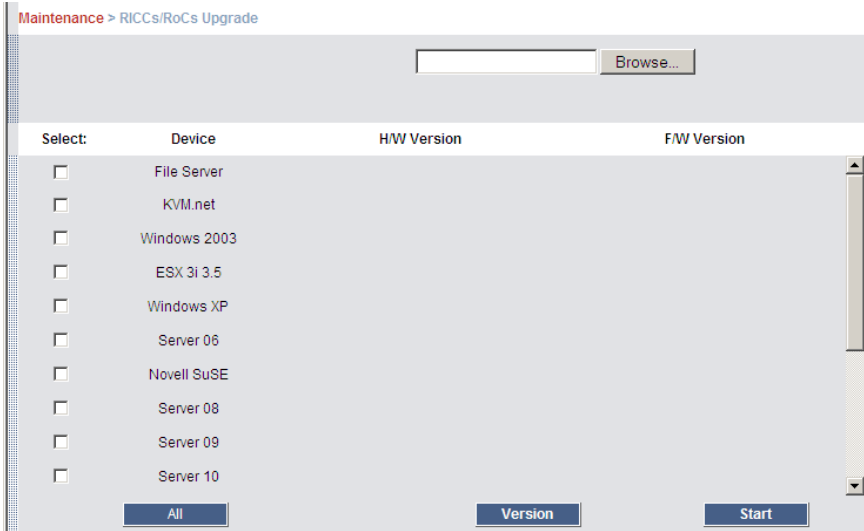


Figure 36 RICC/RoCs Upgrade

14. Restore Factory Settings

You can restore the Smart 232 unit to the factory settings. This restores the original Smart 232 parameters, resetting all the information added by the administrators, including: Network settings*, servers, users, and passwords etc.

* You have the option to preserve network settings – explained below.

Warning! Once reset the data cannot be retrieved.

To restore factory settings:

1. From the menu select **Restore Factory Settings**. **Restore Factory Settings** appears see Figure 37.

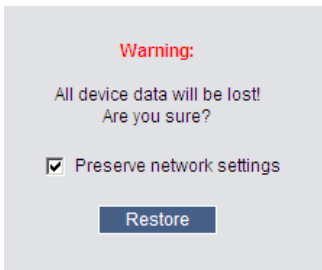


Figure 37 Restore factory settings

2. Check the box if you want to preserve Network settings.
3. Click **Restore**. The unit restarts.


15. Set Time & Date

The time and date set is used when recording log events (see page 30).

To set the time and date:

From the menu, select **Time & Date**, Figure 38 appears.

Figure 38 Set Time & Date

Type the appropriate parameters and click .

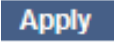
16. Backup & Restore

You can backup all configuration data and restore it at a later date. To do so:

From the menu select **Backup & Restore**, Figure 39 appears.


Figure 39 Backup & Restore


To backup the configuration data, click . And save the file.

To restore the configuration data, browse to locate the file and click , the device restarts.

17. Saving changes and logging out

To save any configuration changes click the relevant button on the current page. This could be  or just .

To restart the Smart 232 press .

To exit the Configuration menu and close the session, click .

Only one Administrator can log into the Configuration area at a time. After the idle Timeout – see section 10 page 25 – the session terminates.

18. Event log

To see a log of all system events:

From the **Targets** page menu – see Figure 27 on page 20 – select **Event Log**, the following appears.

The screenshot shows the 'Event Log' interface. At the top, there is a title 'Event Log'. Below it is a table with the following columns: User, Severity, Event, Time, and Details. The table contains several rows of event data, including 'User login succeeded', 'Config logout', 'Logout', 'Config login succeeded', 'User login succeeded', 'Config logout', 'Config login succeeded', 'Logout', 'User login succeeded', and 'System boot'. Below the table, there is a summary row that says 'Total Events: 10'. Underneath the summary row, there are navigation controls: a set of arrows and a page indicator '1/1', a dropdown menu showing '20', and two buttons: 'Download as file' and 'Clear log'. Annotations (A) and (B) are present. Annotation (A) points to the navigation arrows with the text: 'Where there are a number of pages, click forward or backwards here to navigate to the desired page'. Annotation (B) points to the dropdown menu with the text: 'Select here the number of events that should appear on each page'.

User	Severity	Event	Time	Details
admin	Info	User login succeeded	Wed 28 Jan 2004 16:31:52	Host:192.168.200.97,Peer:192.168.200.23,Level:Admin
admin	Info	Config logout	Wed 28 Jan 2004 15:06:39	Peer:192.168.200.23
admin	Info	Logout	Wed 28 Jan 2004 14:50:49	Host:192.168.200.97,Peer:192.168.200.23,Level:Admin
admin	Info	Config login succeeded	Wed 28 Jan 2004 14:50:49	192.168.200.23
admin	Info	User login succeeded	Wed 28 Jan 2004 14:50:34	Host:192.168.200.97,Peer:192.168.200.23,Level:Admin
admin	Info	Config logout	Tue 27 Jan 2004 21:11:51	Peer:192.168.200.79
admin	Info	Config login succeeded	Tue 27 Jan 2004 21:09:51	192.168.200.79
admin	Info	Logout	Tue 27 Jan 2004 21:09:51	Host:192.168.200.97,Peer:192.168.200.79,Level:Admin
admin	Info	User login succeeded	Tue 27 Jan 2004 21:09:49	Host:192.168.200.97,Peer:192.168.200.79,Level:Admin
admin	Info	System boot	Tue 27 Jan 2004 20:19:21	Version 1.0

Total Events: 10

Navigation: 1/1 | 20

Buttons: Download as file, Clear log

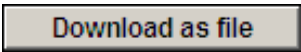
Figure 40 Events log

Navigate through the events pages using the forward or backward arrows, marked as (A) in Figure 40.

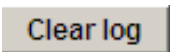
From the drop down menu, marked as (B) in Figure 40, choose the number of events that will appear on each page - between 10 – 40.

18.1.1 Downloading the log

You can download and save the log.

To do so, click  and save as a .csv file. The file can be viewed using Microsoft Excel or compatible software.

18.1.2 Clearing the log

To clear the log, click . A prompt appears asking if you first want to save the log.

19. Operating the SmartRack 232 system

Switch between the connected computers via the OSD (On Screen Display).

The OSD is also the place to adjust various settings as explained below.

19.1 Displaying the OSD

To display the OSD:

Press **Shift** twice. The OSD Main window appears. See Figure 41.

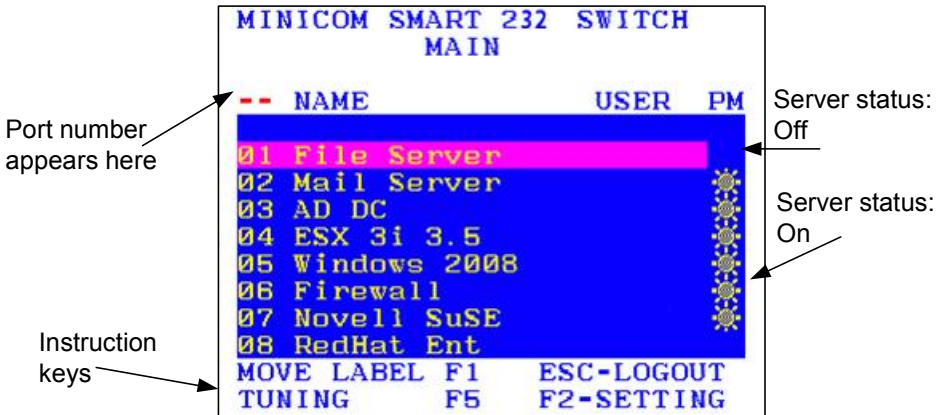


Figure 41 OSD Main window

19.1.1 Navigating the OSD

To navigate up and down use the Up and Down arrow keys.

To exit the OSD or return to a previous window within the OSD press **Esc**.

19.1.2 Selecting a computer

To select a computer:

1. Navigate to the desired computer line.
Or, type the 2-digit port number of the desired computer.
2. Press **Enter**. The selected computer is accessed. A confirmation label appears showing which computer is accessed.

19.1.3 Moving the Confirmation label – F1

The Confirmation label appears for 30 seconds showing which computer is currently accessed. This can be positioned anywhere on the screen.

To position the label:

1. Navigate to a computer line using the **Up** and **Down** arrow keys.

2. Press **F1**. The selected screen image and Confirmation label appear.
3. Use the arrow keys to move the label to the desired position.
4. Press **Esc** to save and exit.

19.1.4 Tuning – F5

You can tune the image of any computer screen from the Main window.

To adjust the screen image:

1. Navigate to the computer you wish to adjust.
2. Press **F5**. The screen image of the selected computer appears, together with the Image Tuning label, see Figure 42.

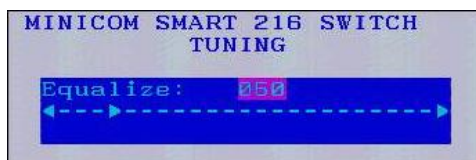


Figure 42 Image Tuning label

3. Adjust the image by using the **Right** and **Left** Arrow keys.
4. When the image is satisfactory, press **Esc**.

Note! Picture quality is relative to distance. The further away a computer is from the SmartRack 232, the lower the image quality, and the more tuning needed. So place the higher resolution computers closer to the manager unit.

19.2 The Settings window - F2

Press **F2**. The Settings window appears see Figure 43.

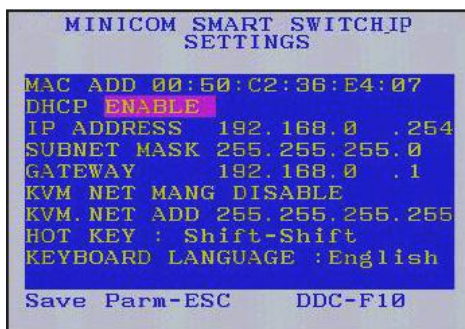


Figure 43 Settings window

In the Settings window navigate downwards using the **Tab** key. At the bottom of the window, press **Tab** to go to the top of the window. Change settings by typing in the selected area or by pressing the spacebar – whichever is relevant.

[Changing the network parameters from the OSD is explained with the initial configuration on page 18].

From In the Settings window you can do the following:

HOT KEY – By pressing **Shift, Shift** the OSD appears. You can replace **Shift, Shift** with any of the following:

- **Ctrl, Ctrl**
- **Ctrl, F11**
- **Print Screen**

Press the Spacebar to toggle between options.

To display the OSD press the new hotkey.

KEYBOARD LANGUAGE - Press the **Spacebar** to toggle between the language options. It can be changed to French or German.

19.2.1 DDC – F10

Display Data Channel (DDC) is a VESA standard for communication between a monitor and a video adapter.

From the **Settings** window, input the DDC information of the monitor connected to the Smart 232 switch into the memories of all connected ROCs when first installing system.

To input the DDC information:

Press **F10**. “Please wait” flashes a few times and disappears. The monitor’s DDC information is sent to all ROCs and stored in their memory.

19.2.1.1 Updating the DDC information

Update the DDC information in any of the following circumstances:

- When replacing the monitor connected to Smart 232 Switch
- When adding a new ROC to the system
- When reconnecting an existing ROC that was temporarily used in a different system

To update the DDC information, repeat the steps as set out above.

19.3 Saving changes to the settings

To save changes to the settings and return to the **Main** window, press **Esc**.

20. USB / SUN Combo keys

The SmartRack 232 keyboard does not have a special SUN keypad to perform special functions in the SUN Operating System environment. So when a ROC USB or SUN is connected to a SUN computer, the ROC emulates these SUN keys using a set of key combinations called Combo keys. See the table below.

SUN key	Combo key
Stop	Left Ctrl + Left Alt + F1
Props	Left Ctrl + Left Alt + F3
Front	Left Ctrl + Left Alt + F5
Open	Left Ctrl + Left Alt + F7
Find	Left Ctrl + Left Alt + F9
Again	Left Ctrl + Left Alt + F2
Undo	Left Ctrl + Left Alt + F4
Copy	Left Ctrl + Left Alt + F6
Paste	Left Ctrl + Left Alt + F8
Cut	Left Ctrl + Left Alt + F10
Help	Left Ctrl + Left Alt + F11
Compose	Application key or Left Ctrl + Left Alt + Keypad *
Crescent	Scroll Lock
Volume Up	Left Ctrl + Left Alt + Keypad –
Volume Down	Left Ctrl + Left Alt + Keypad +
Mute	Left Ctrl + Left Alt + F12
Sun Left ◊ key	Left Windows key
Sun Right ◊ key	Right Windows key
Alt-Graph	Right Alt or Alt Gr
Stop A	Left Ctrl + Left Alt +1

21. Technical specifications

Console display	17"
Operating systems	Windows, Novell, Linux, SUN Solaris
Panel type	Active matrix TFT LCD
Maximum resolution	1280X1024
Pixel pitch	Supports 0.264mm
Viewing angle	Right-left view 60° -70 °
	Up-down view 45 ° - 60 °
Contrast ratio	450:01
Brightness	White 250cd/m2
Standard for pixel defects	Sharp standard for TFT LCD 3-3-5 (LDI-15XRA01)
Back light	Four lamps
Supported colors	16.2M colors
Keyboard & mouse	106 key PS/2 keyboard with touchpad
Sync	45~80HZ
Power source	100-240 VAC input
Power consumption	25W, 19.05w / 21.05w for panel
Temperature	Operating - 0° - 40° degree C/32° -104°F
	Storage - 20° - 40° degree C/-4° - 104°F
Humidity	10%~90%RH
Response time	Rising time 2-6ms. Delay time 14-24ms
Dimensions	640 x 447.5 x 44mm/25.1 x 17.6 x 1.7in
Chassis construction	Heavy-duty steel
Number of ports	32
Multi-platform	Supports PS/2 and USB via ROCs
System cables	CAT5 FTP or UTP 2x4x24 AWG solid wire
Dimensions	169x420x44mm /6.6x16.5x1.7in
Computer to switch distance	Up to 30m/100ft

ROCs	ROC PS/2	ROC USB
Connections		
VGA	HDD15	HDD15
Keyboard/Mouse	MiniDin6	USB
System	RJ45	RJ45
Power	From computer's Keyboard port	From USB port
Product weight	All ROCs 100g / 0.20lb	
Shipping weight	All ROCs 172g / 0.38lb	
Dimensions	All ROCs 65 x 25 x 25mm / 2.55 x 0.98 x 0.98"	

21.1 Safety

The device must only be opened by an authorized Minicom technician. Disconnect device from AC mains before service operation!

21.2 User guide feedback

Your feedback is very important to help us improve our documentation. Please email any comments to: ug.comments@minicom.com

Please include the following information: Guide name, part number and version number (as appears on the front cover).

21.3 WEEE compliance

WEEE Information for Minicom Customers and Recyclers

Under the Waste Electrical and Electronic Equipment (WEEE) Directive and implementing regulations, when customers buy new electrical and electronic equipment from Minicom they are entitled to:

- Send old equipment for recycling on a one-for-one, like-for-like basis (this varies depending on the country)
- Send the new equipment back for recycling when this ultimately becomes waste

Instructions to both customers and recyclers/treatment facilities wishing to obtain disassembly information are provided in our website www.minicom.com.

