RALOY

User Manual

Basic Style KVM Switch
1U KVM Switch with DB-15 Connections

Options :

» KVM Over IP
» Remote Console
» 8 or 16 port
» Single or Multi-User

Contents

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Safety Notice

## Please read the following before using your Raloy unit:

- Unplug equipment before cleaning. Don't use liquid or spray detergent; use a moist cloth.

- Keep equipment away from excessive humidity and heat. Preferably, keep it in an air-conditioned environment with temperatures not exceeding 40º Celsius (104º Fahrenheit).

- When installing, place the equipment on a sturdy, level surface to prevent it from accidentally falling and causing damage to other equipment or injury to persons nearby.

- When the equipment is in an open position, do not cover, block or in any way obstruct the gap between it and the power supply. Proper air convection is necessary to keep it from overheating.

- Arrange the equipment's power cord in such a way that others won't trip or fall over it.

- If you are using a power cord that didn't ship with the equipment, ensure that it is rated for the voltage and current labeled on the equipment's electrical ratings label. The voltage rating on the cord should be higher than the one listed on the equipment's ratings label.

- Observe all precautions and warnings attached to the equipment.

- If you don't intend on using the equipment for a long time, disconnect it from the power outlet to prevent being damaged by transient over-voltage.

- Keep all liquids away from the equipment to minimize the risk of accidental spillage. Liquid spilled on to the power supply or on other hardware may cause damage, fire or electrical shock.

- Only qualified service personnel should open the chassis. Opening it yourself could damage the equipment and invalidate its warranty.

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1 Product Overview

1-1 Package Content (Standalone KVM)
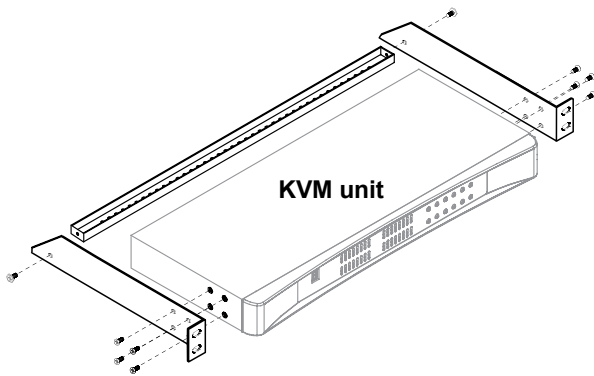
- **1 x KVM Unit**
- 1 x Mounting set w/ bracket & screws
- 1 x Power cord (for KVM)
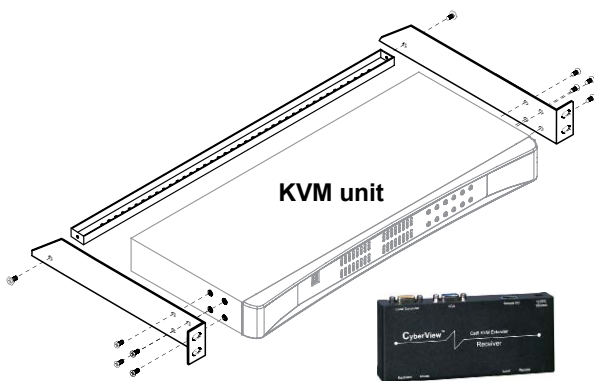
KVM with Remote User

- **1 x KVM Unit**
- 1 x Mounting set w/ bracket & screws
- 1 x Power cord (for KVM)
- 1 x Receiver box for remote console
- 1 x Power adapter with power cord (for receiver)
- 1 x RCE-6 6ft combo KVM cable for receiver

1-2 Package Content (Integrated KVM)
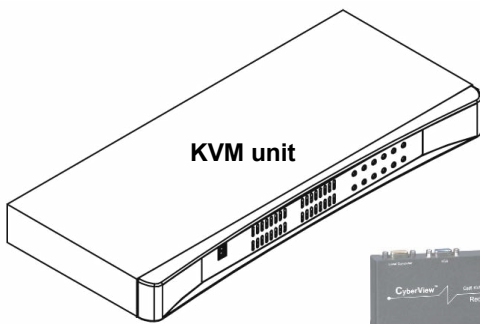
- **1 x KVM Unit**

KVM with Remote User

- **1 x KVM Unit**
- 1 x Receiver box for remote console
- 1 x Power adapter with power cord (for receiver)
- 1 x RCE-6 6ft combo KVM cable for receiver

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1-3 Basic Style KVM Table

Multi-User Matrix	Part Numbers	Concurrent Users	Local	Remote		Ports
	KVM21016*	2	1	1	0	16
	KVM31116*	3	1	1	1	16
	KVM32016*	3	1	2	0	16
	KVM42116*	4	1	2	1	16
	KVM41216*	4	1	1	2	16
	KVM43016*	4	1	3	0	16
Single User	Part Numbers	Concurrent Users	Local	Remote		Ports
	KVM10008*	1	1	0	0	8
	KVM10016*	1	1	0	0	16
	KVM10108*	1	1	0	1	8
	KVM10116*	1	1	0	1	16
	KVM11008*	1	1	1	0	8
	KVM11016*	1	1	1	0	16

* Replace with either an e for the touchpad or b for the trackball. i.e. RNX119-KVM10108e

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2 Installation

2-1 Before Installation

- It is very important to mount the equipment in a suitable cabinet or on a stable surface.
- Make sure the place has a good ventilation, is out of direct sunlight, away from sources of excessive dust, dirt, heat, water, moisture and vibration.

2-2 Unpacking the Unit

The equipment comes with the standard parts shown in package content. Check and make sure they are included and in good condition. If anything is missing, or damaged, contact Raloy immediately.

2-3 Installation Instructions (Standalone KVM)
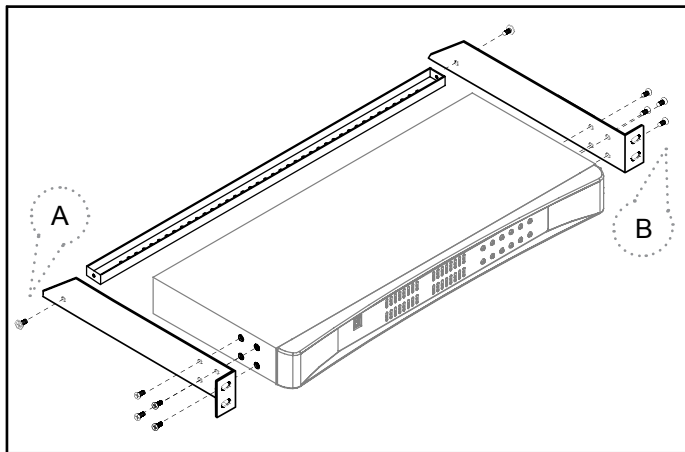
Step 1

- Install each bracket using the screws provided.

Screw A: 2 pcs

M3.2 x 4.5 mm

Screw B: 8 pcs

M4 x 10 mm
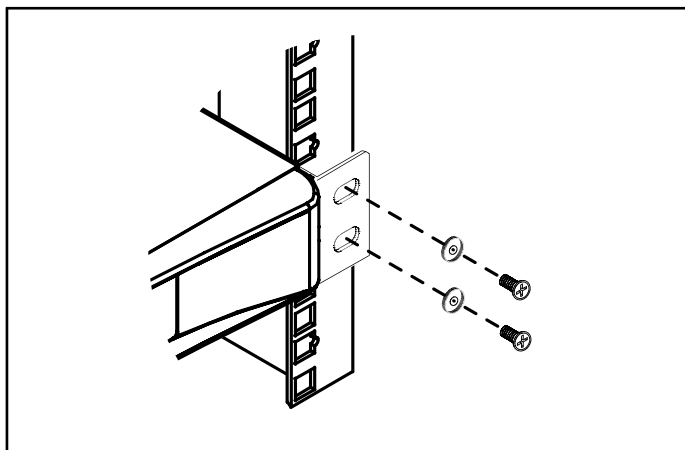
Step 2

- Mount the KVM into the rack.

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2-4 KVM Port & CATx Dongle Connection

CE-6 / CE-10 / CE-15

- 6 / 10 / 15 ft Combo KVM cable
- Support PS/2 or USB server

USB Servers

RDB-15 Combo KVM port

| 16 | 15 | 14 | 13 | 12 | 11 | 10 | 9 |
| 8 | 7 | 6 | 5 | 4 | 3 | 2 | 1 |

RCE - 6 / 10 / 15 Combo KVM cable support PS/2 or USB server

PS/2 Servers
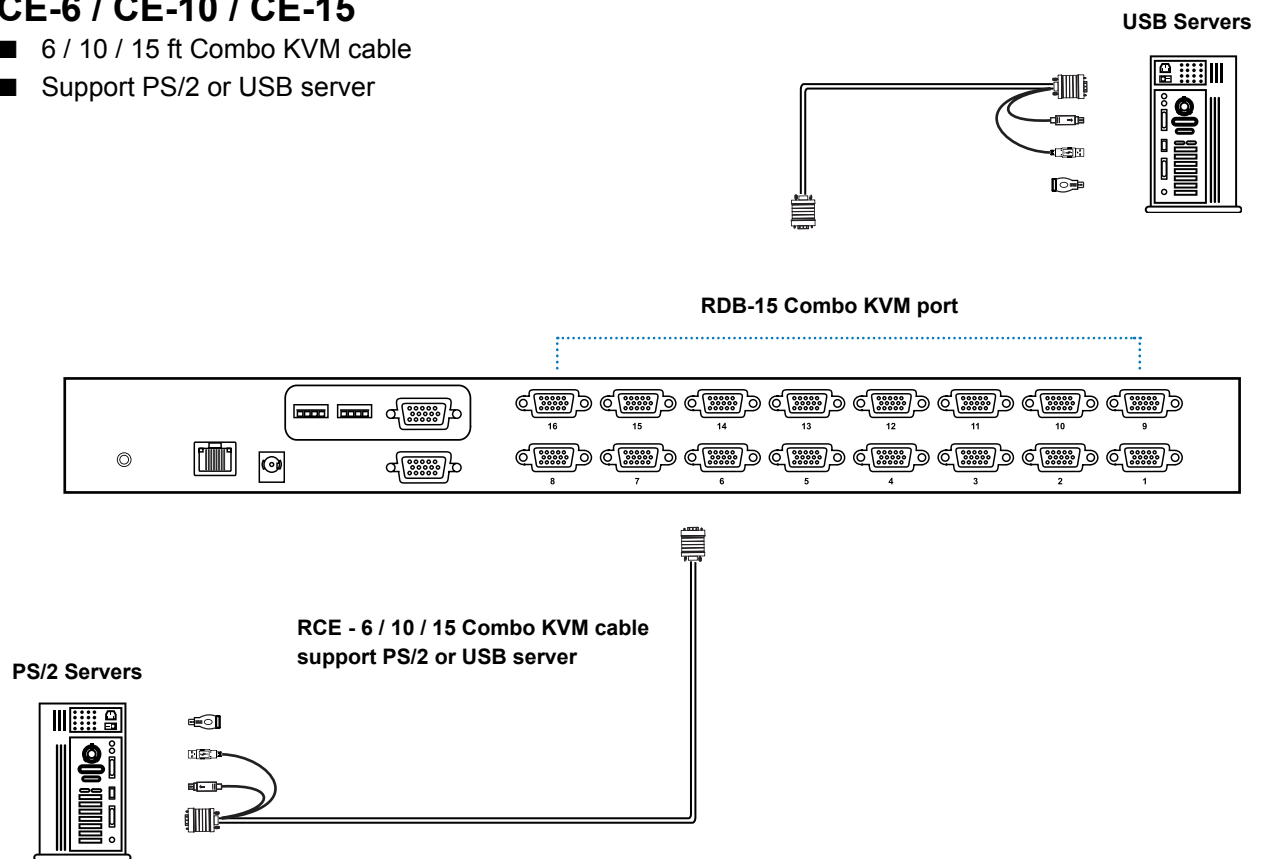
RCE-6 / RCE-10 / RCE-15 Combo KVM Cable

- 6 / 10 / 15 ft. Combo KVM cable
- Supports PS/2 or USB server

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2-5 Cascading the KVM

Raloy KVMs CATx10008 / CATx10016 / CATx10032 can be cascaded.

- Cascade up to 8 levels (256 servers max)
- Cascade multiple KVM Switches with RCBC-6 cascade cable.

RCBC-6
- 6ft Combo KVM cascade cable

Master KVM
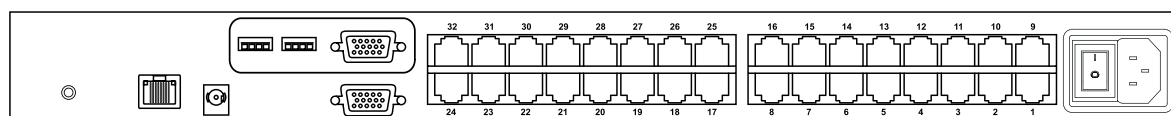
Cascade

To console VGA port

Slave KVM level 2

Slave KVM level 3

Slave KVM level 4
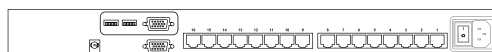
Slave KVM level 5
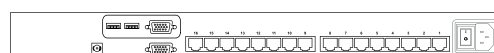
Slave KVM level 6
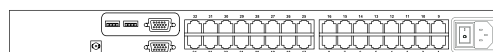
Slave KVM level 7
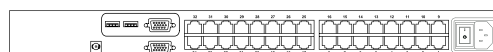
Slave KVM level 8
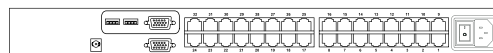
⚠ **When multiple CATx KVMs cascade together, the master KVM at level 1 will take all control of other slave KVM switches (e.g. level 2 to 8).**

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2-6 Local and Remote Console Diagram

Local USB console

32 31 30 29 28 27 26 25   16 15 14 13 12 11 10 9
24 23 22 21 20 19 18 17   8 7 6 5 4 3 2 1

Remote Cat6 Console

CAT 5 / 6 cable
max. 150m

Receiver

Remote USB console

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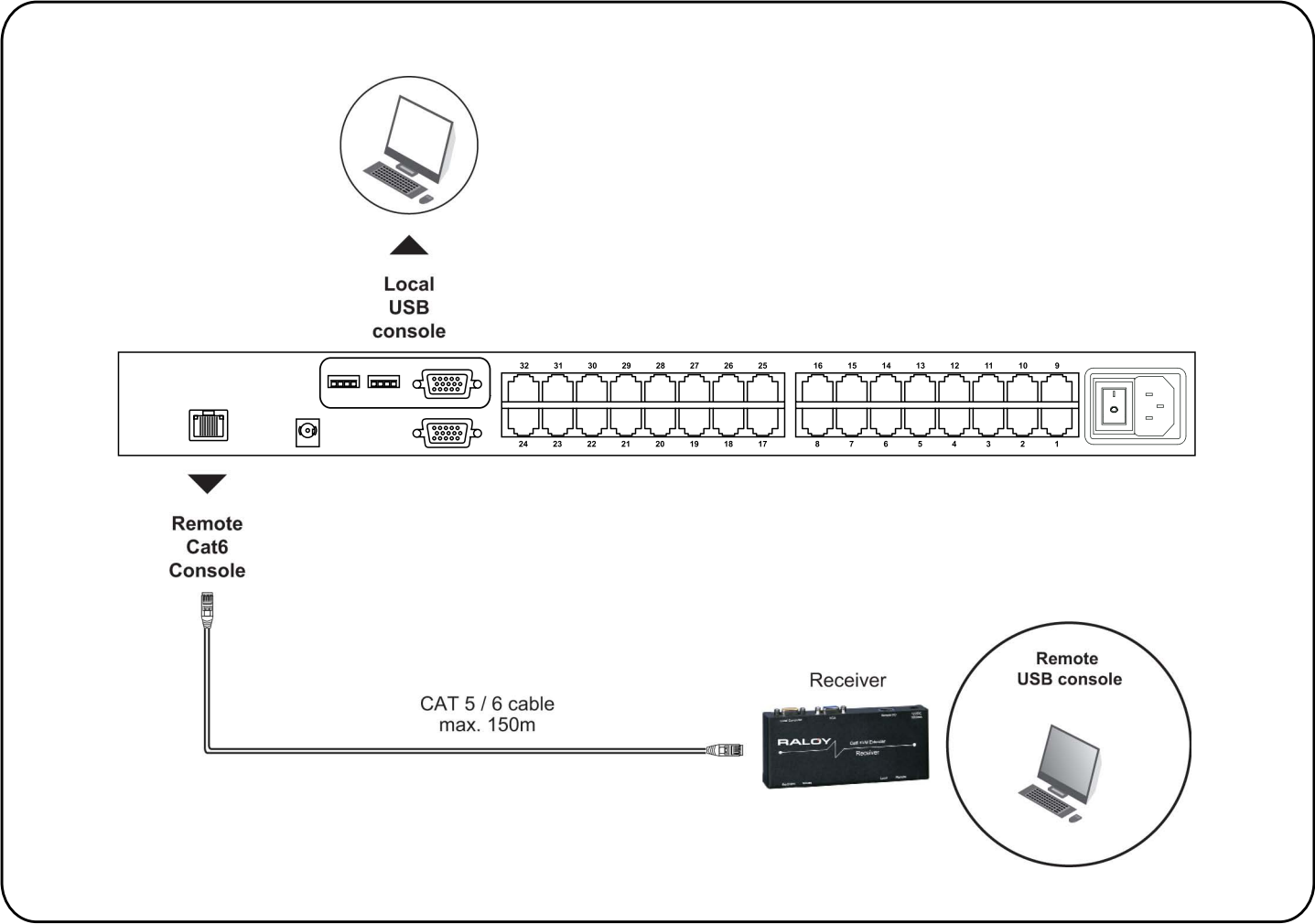
2-7 Connecting a Remote Console

Receiver

Front

Local Computer   Monitor   Remote I/O   Power

Rear

USB
K/B   Mouse
Local
Button to PC
Remote
Button to KVM switch
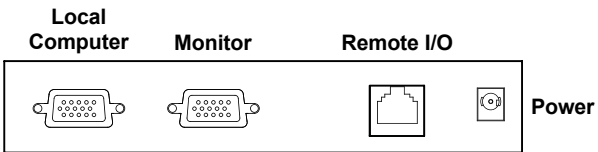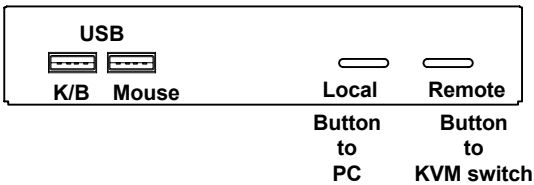
⚠️ **The receiver provides a hotkey function for remote console.**

Local computer
(Optional setup)

RCE-6
Combo
KVM cable

Monitor

VGA
cable

Remote
Console

Cat6 cable
up to 150m

12V DC Power
Adapter

Front

Rear

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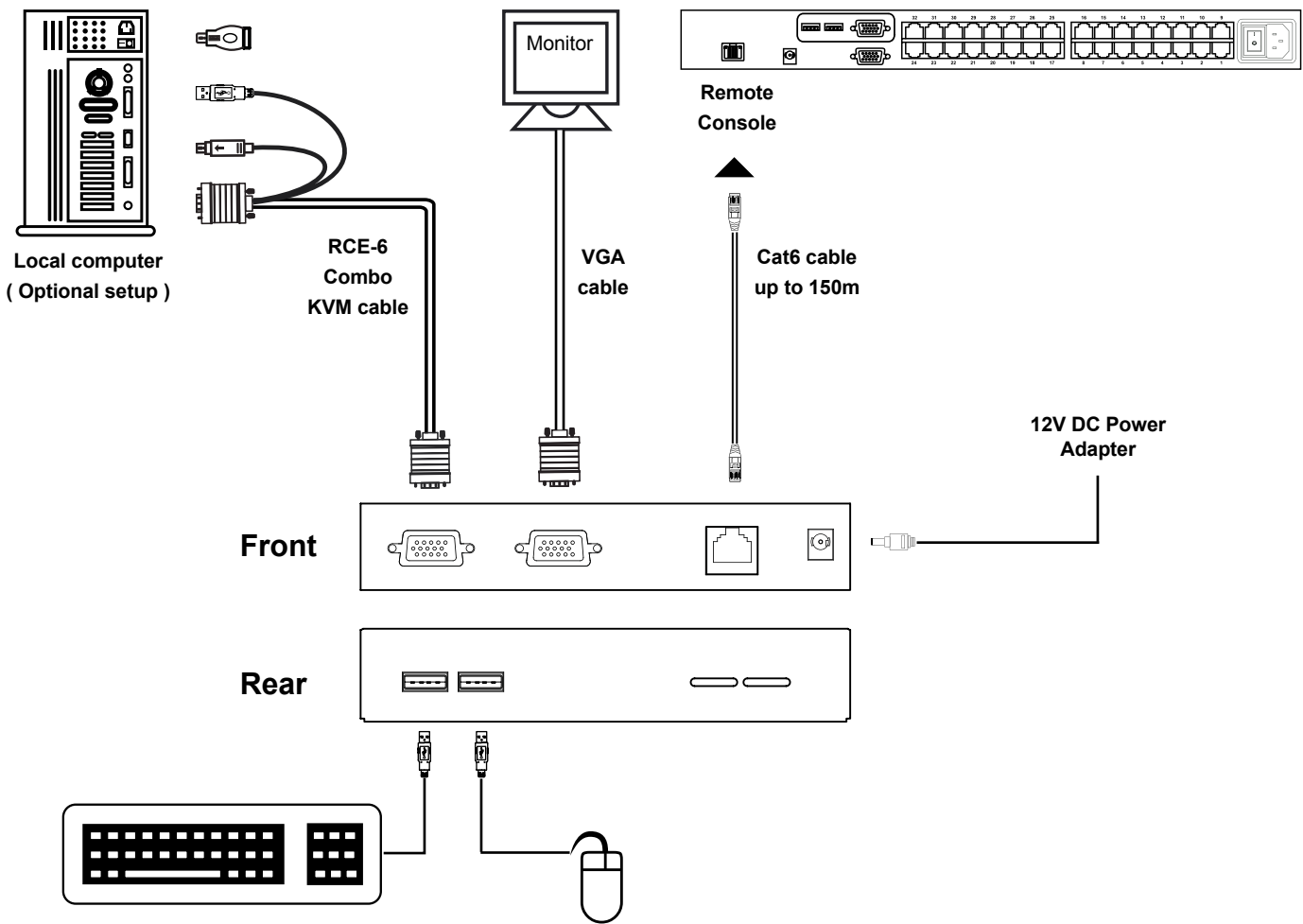
3 Operation

3-1 KVM Button

Power ON

- Turn off all servers and KVM switches
- Make sure all cables / connectors are properly connected
- Power ON sequence
    1. Turn on Rack Monitor (if applicable)
    2. Turn on KVM switch
    3. Turn on Servers

Front Panel - Port LED Indications

8 ports

| Bank no. | PC port LEDs | Channel button | Bank button |
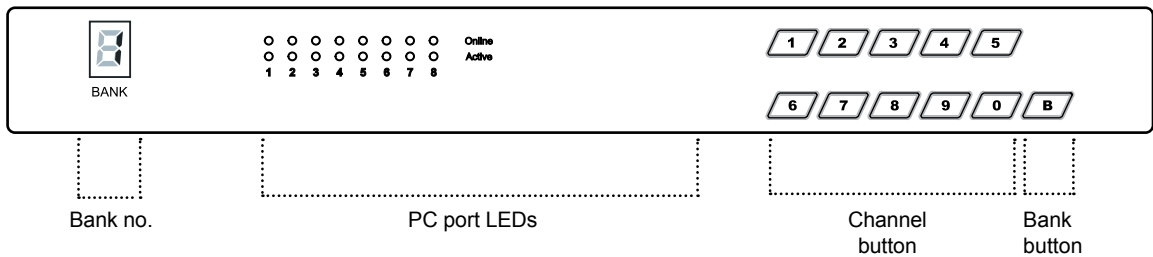
16 ports
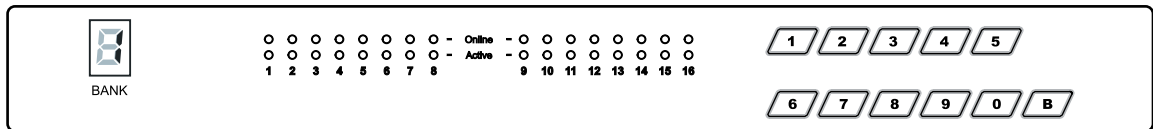
32 ports
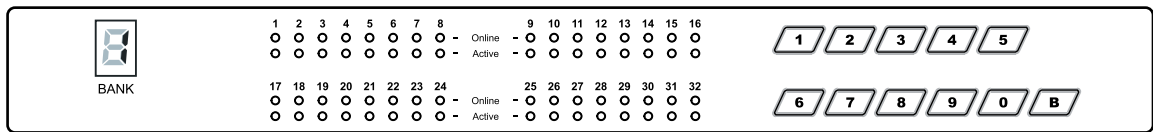
Bank no.	7-Segment BANK LED indication
PC port LEDs	Online : Blue LED on indicating a PC is connecting to the port
	Active : Green LED on indicating a selected channel
Channel button	Press to select channel from 01 to 32
Bank button	Select the bank from 1 to 8

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3-2 Password

The password is enabled by default. The default password is "00000000" **(Do not use "0" on number pad)**

- **Enable password**
  1. Press the KVM hotkey Scroll Lock + Scroll Lock + U
  2. Logout of the KVM by pressing the hotkey Scroll Lock + Scroll Lock + P
  3. In SUPERVISOR level, enter "00000000" in both the user name & password fields (Do not use "0" on number pad)
  4. In USER level, press Space bar + Enter in user name & password field
  5. Note: The system will automatically logout after 10 minutes of inactivity

- **Set your own user name & password**
  1. Login to the KVM on the SUPERVISOR level by entering "00000000" in user name & password fields
  2. Open KVM OSD menu by pressing the KVM hotkey Scroll Lock + Scroll Lock + Space Bar
  3. Press F1 to access the MAIN MENU
  4. Select "USER SECURITY"
  5. Set password in SUPERVISOR & USER level
     a. In the left-top row "S" (SUPERVISOR), press Enter to set your own user name & password
     b. In the row 1 to 8 (USER), press Enter to set your own user name & password
  6. Press Enter to save the new password setting or press Esc to cancel the editing without saving changes
   a. Note: Blank has underscore, while SPACE doesn't have one
     b. Press any alphanumeric key to move to next input item. SPACE is treated as a valid character

- **Change your password**
  1. Login to the KVM in SUPERVISOR level by entering your user name & password
  2. Open KVM OSD menu by pressing the KVM hotkey Scroll Lock + Scroll Lock + Space Bar
  3. Press F1 to access the MAIN MENU
  4. Select "USER SECURITY"
  5. Change password in SUPERVISOR & USER level
     a. In the left-top row "S" (SUPERVISOR), press Enter to change your user name & password
     b. In the row 1 to 8 (USER), press Enter to change your user name & password
  6. Press Enter to save the new password setting or press Esc to cancel the editing without saving changes
     a. Note: Blank has underscore, while SPACE doesn't have
     b. Press any alphanumeric key to move to next input item. SPACE is treated as a valid character

- **Disable your password**
  1. Press the KVM hotkey Scroll Lock + Scroll Lock + U
  2. Logout of the KVM by pressing the KVM hotkey Scroll Lock + Scroll Lock + P
  3. You don't need user name & password to access the KVM OSD menu

- **Forgot your password**

Please contact your supplier for further support

Please Note:
- You must press the KVM hotkey within 2 seconds
- A beep sound will be heard upon pressing KVM hotkey

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3-3 On-Screen Display (OSD)

OSD Menu

```
PORT   NAME

BANK : 1                    F1 : MENU
01☼  SYSTEM    01☞         F2 : LOGOUT
02☼  SYSTEM    02           F3 : PREV
03☼  SYSTEM    03           ESC : QUIT
04☼  SYSTEM    04           ENTER : COMPLETE
05☼  SYSTEM    05           ⬆/⬇ : SELECT
06☼  SYSTEM    06           PgUp/PgDn :
07☼  SYSTEM    07           BANK SELECT
08☼  SYSTEM    08
                            USER :
                            SUPERVISOR
                            SCAN TIME :
                            10 SEC        FW1V3
```

OSD operation

☼	next to the system name	The PC is powered on
☞	next to the system name	The PC is selected
F1		Access F1 MAIN MENU
F2		Logout of the OSD menu
F3		Previous menu
Esc		Cancel / Quit
Enter		Complete / Switch to selected port
⬆/⬇		Switch to previous or next port
PgUp/PgDn		Switch to previous bank or next bank
1 / 2 / 3 / 4		Display port 01 ~ 08 / 09 ~ 16 / 17 ~ 24 / 25 ~ 32
		Remark: Display port 17 ~ 32 for 32 port model only

F1 Main Menu

```
MAIN  MENU                              ☞ X
SELECT OPTION :
01      LANGUAGE
02      PORT NAME  EDIT
03      PORT SEARCH
04      USER SECURITY
05      ACCESS LIST
06      HOTKEY
07      TIME SETTINGS
08      OSD MOUSE
```

01	LANGUAGE	OSD language change
02	PORT NAME EDIT	Define port name
03	PORT SEARCH	Quick searching by port name
04	USER SECURITY	Change password
05	ACCESS LIST	Define user access authority
06	HOTKEY	Change hotkey
07	TIME SETTINGS	Modify scan display time interval
08	OSD MOUSE	Modify OSD mouse speed

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3-4 IP Operations

Please refer to the IP Manual for information on how to set-up and use the IP functions on compatible Raloy KVM Switches. The IP Manual can be found at www.Raloy.com/files/Raloy-KVM-IP-Manual.pdf

3-5 Hotkeys for KVM & Remote Console

Local Console Hotkey	Function
Scroll Lock + **Scroll Lock** + **Space Bar**	Calling OSD menu
Right-button mouse + **Esc**	Calling OSD menu
Scroll Lock + **Scroll Lock** + ↑	Switch to previous port
Scroll Lock + **Scroll Lock** + ↓	Switch to next port
Scroll Lock + **Scroll Lock** + **PgUp / PgDn**	Switch to previous bank or next bank
Scroll Lock + **Scroll Lock** + Bank no. + Port no.	Switch to specific port
Scroll Lock + **Scroll Lock** + **B**	Turn the buzzer ON and OFF * Default the buzzer is ON
Scroll Lock + **Scroll Lock** + **P**	Logout the KVM if password security is ON. Show up the status windows

Advance hotkeys (for Supervisor login only)	
Scroll Lock + **Scroll Lock** + **S**	Activate auto-scan mode for connected servers *Press any key to exit the auto-scan mode
Scroll Lock + **Scroll Lock** + **R**	Reset all the KVM settings to factory default *Except User Security settings
Scroll Lock + **Scroll Lock** + **U**	Disable and enable password security *Default security is ON
Scroll Lock + **Scroll Lock** + **L**	To enable / disable the screen saving function and 10 minutes auto-logout *Default the screen saving is OFF

Note:
■ Example of "Scroll Lock + Scroll Lock + Bank no. + Port no."

- ■ Bank No. : 1 to 8
- ■ Port No. : 01 to 32
- ■ e.g. Bank 1 Port 4 : Scroll Lock + Scroll Lock + 1 + 0 + 4
- ■ e.g. Bank 2 Port 16 : Scroll Lock + Scroll Lock + 2 + 1 + 6

■ You must press the hotkey within 2 seconds

■ A beep sound will be heard for successful entering

■ The numeric keypad is not supported, while in OSD screen, the arrow keys, PgUp, PgDn, and Enter keys are supported

Remote Console Hotkey	Function
Scroll Lock + **Scroll Lock** + **C**	Toggle switch between remote & local port
Scroll Lock + **Scroll Lock** + **Q**	Turn the buzzer ON & OFF *Default the buzzer is ON
Scroll Lock + **Scroll Lock** + **S**	Activate auto-scan mode for remote & local port *The scan time interval is 5 seconds
Scroll Lock + **Scroll Lock** + **A**	Auto-adjust the video signal

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4 Product Specifications

4-1 Specifications Table

Product Information	Dimensions (W x D x H)	443 x 171 x 44 mm (17.4 x 6.7 x 1.73 in.)
	Gross Weight	5.5 lbs / 2.5 kg
Packaging Information	Dimensions (W x D x H)	500 x 400 x 90 mm (19.7 x 15.7 x 3.5 in.)
	Gross Weight	9 lbs / 4.1 kg

Environmental	Operating Temperature	0 to 50 °C (32 to 122 °F)
	Storage Temperature	-5 to 60 °C (23 to 140 °F)
	Relative Humidity	90% non-condensing
	Shock	50G peak acceleration (11ms, half-sine wave)
	Vibration	58~100Hz / 0.98G (11ms / cycle)

KVM	Number of Ports	8, 16
	Connector	DB-15 Combo
	Connectivity	Combo 4-in-1 KVM Cable Up to 6, 10, and 15 feet

Local Console	Graphic Connector	1 x DB-15 VGA
	Resolution	Up to 1600 x 1200
	Input Device	2 x USB type A (keyboard & mouse)

Remote Console	Connector	1 x DB-15 VGA
	Resolution	Up to 1600 x 1200 (500ft.); Up to 1024 x 768 (1000ft.)
	Input Device	2 x USB type A (keyboard & mouse)
	Remote I/O	RJ45 via CAT6/CAT5e/CAT5 cable up to 500 feet
	Compensation	Auto adjusts for cable length
IP Remote Console	Connector	RJ45 Ethernet
	User Management	15-user login; 1 active user
	Network Protocol	DHCP / BOOTP / DNS
	Security	SSL v3, RSA, AES, HTTP / HTTPs, CSR
	Resolution	Up to 1600 x 1200
	Browser	IE, Firefox, Safari, Netscape

Compatibility	Multi-Platform	Mix PCs, SUN and Mac G3 / G4 Mac / iMac
	Support	Windows 7 / Vista / 2003 / XP, Linux, Unix

Power	Input	Auto sensing 11 to 240VAC, 50/60 Hz; or AC / DC power adapter 12V@3.3A (optional)
	Option DC	12V / 24V / 48V DC input
	Consumption	Max. 24W; Standby 5W

Regulatory	Safety	cUL, FCC, CE
	Environment	RoHS2, REACH

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4-2 DC Power: 12V, 24V, 48V Input
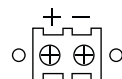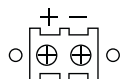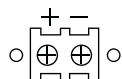
Model	12V	24V	48V
Input rating			
Input voltage:	12-Volt	24-Volt	48-Volt
Input range:	9 ~ 18V	18 ~ 36V	36 ~ 75V
Input current			
- No load	50 mA	50 mA	50 mA
- Full load	4950 mA	2450 mA	1220 mA
Output rating			
Output voltage:	12-Volt	12-Volt	12-Volt
Output current:	4.16A	4.16A	4.16A
Efficiency	84%	85%	85%

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5 Important Information

Warranty Information

I. Raloy Limited Warranty

Raloy Customer Support warrants to the original retail purchaser that this product is and will be free from defects in materials and workmanship for a period of twenty-four (24) months from date of purchase. During the warranty period, the purchaser must promptly contact Raloy Tech Support for assistance to report a unit failure.

II. Warranty Period

1. The standard warranty period is 24 months commencing from the date of your Raloy invoice.

2. For Touch Screen and High Brightness LCD custom units, the standard warranty period is 15 months commencing from the date of your Raloy invoice.

3. Warranty will be void if any of these cases apply: physical damages by accident, natural disaster, neglect, misuse or improper use of the equipment.

III. Product Return Procedure

Please see the Raloy website at www.raloy.com/support/raloy-product-warranty.html for detailed product return information.

IV. Raloy Extended Warranty

Raloy also provides the option to extend your warranty service up to 60 Months, please contact our sales at sales@raloy.com for more warranty service and upgrade details.

Disclaimer of Warranty

EXCEPT AS SPECIFICALLY PROVIDED ABOVE AND TO THE MAXIMUM EXTENT ALLOWED BY LAW, RALOY DISCLAIMS ALL WARRANTIES AND CONDITIONS WHETHER EXPRESSED, IMPLIED, OR STATUTORY AS TO ANY MATTER WHATSOEVER INCLUDING, WITHOUT LIMITATION, TITLE, NON-INFRINGEMENT, CONDITION, MERCHANTABILITY OR FITNESS FOR ANY PARTICULAR OR INTENDED PURPOSE. EXCEPT AS EXPRESSLY PROVIDED ABOVE AND TO THE MAXIMUM EXTENT ALLOWED BY LAW, RALOY SHALL NOT BE LIABLE FOR ANY SPECIAL, INDIRECT OR CONSEQUENTIAL DAMAGES (INCLUDING WITHOUT LIMITATION, LOSS OF PROFIT, LOSS OF BUSINESS, LOSS OF INFORMATION, FINANCIAL LOSS, PERSONAL INJURY, LOSS OF PRIVACY OR NEGLIGENCE) WHICH MAY BE CAUSED BY OR RELATED TO, DIRECTLY OR INDIRECTLY, THE USE OF A PRODUCT OR SERVICE, THE INABILITY TO USE A PRODUCT OR SERVICE, INADEQUACY OF A PRODUCT OR SERVICE FOR ANY PURPOSE OR USE THEREOF OR BY ANY DEFECT OR DEFICIENCY THEREIN EVEN IF RALOY OR AN AUTHORIZED RALOY RESELLER HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES OR LOSSES.

Visit www.Raloy.com for full warranty information.

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What the Warranty Does Not Cover

- Any product, on which the serial number has been defaced, modified or removed.
- Damage, deterioration or malfunction resulting from:
  - Accident, misuse, neglect, fire, water, lightning, or other acts of nature, unauthorized product modification, or failure to follow instructions supplied with the product.
  - Repair or attempted repair by anyone not authorized by us.
  - Any damage of the product due to shipment.
  - Removal or installation of the product.
  - Causes external to the product, such as electric power fluctuation or failure.
  - Use of supplies or parts not meeting our specifications.
  - Normal wear and tear.
  - Any other causes which does not relate to a product defect.
- Removal, installation, and set-up service charges.

Regulatory Notices Federal Communications Commission (FCC)

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation.

Any changes or modifications made to this equipment may void the user's authority to operate this equipment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications.

However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Re-position or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.

Legal Information

Information in this document has been carefully checked for accuracy; however, no guarantee is given to the correctness of the contents. The information in this document is subject to change without notice. We are not liable for any injury or loss that results from the use of this equipment.

The company reserves the right to modify product specifications without prior notice and assumes no responsibility for any error which may appear in this publication.

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