

MKD6XXXCM

Rackmount KVM Console Drawers
Integrated Matrix Cat6 KVM Switch
3 Type User Consoles

Rack Consoles

User Manual

Integrated Matrix Cat6 KVM for LCD Console Drawers

Legal Information

First English printing, August 2022

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.

Safety Instructions

Please read all of these instructions carefully before you use the device. Save this manual for future reference.

- 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 40° Celsius (104° 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.
- If any part of the equipment becomes damaged or stops functioning, have it checked by qualified service personnel.

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.

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< Part. 2 > Matrix Cat6 KVM

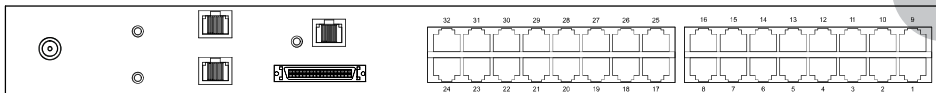
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Matrix Cat6 IP KVM

KVM Rear Kit

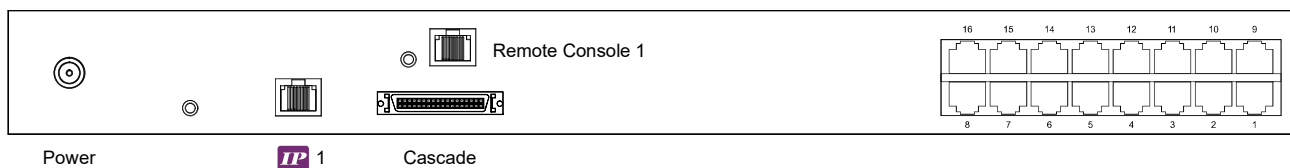


back

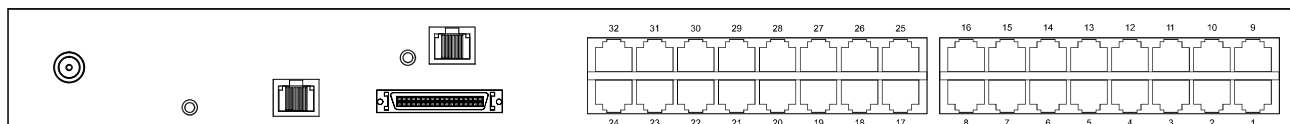


- Receiver box for remote console x 1
- Power adapter w/ power cord (for receiver) x 1
- CE-6 6ft Combo KVM cable for receiver box x 1

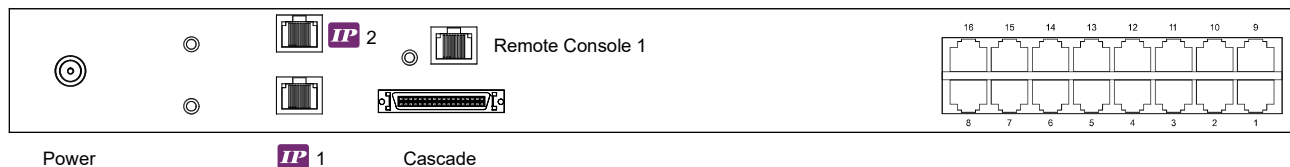
16-Port Matrix Cat6 IP KVM - 1 IP



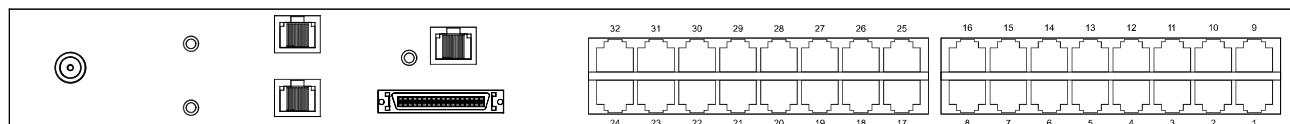
32-Port Matrix Cat6 IP KVM - 1 IP

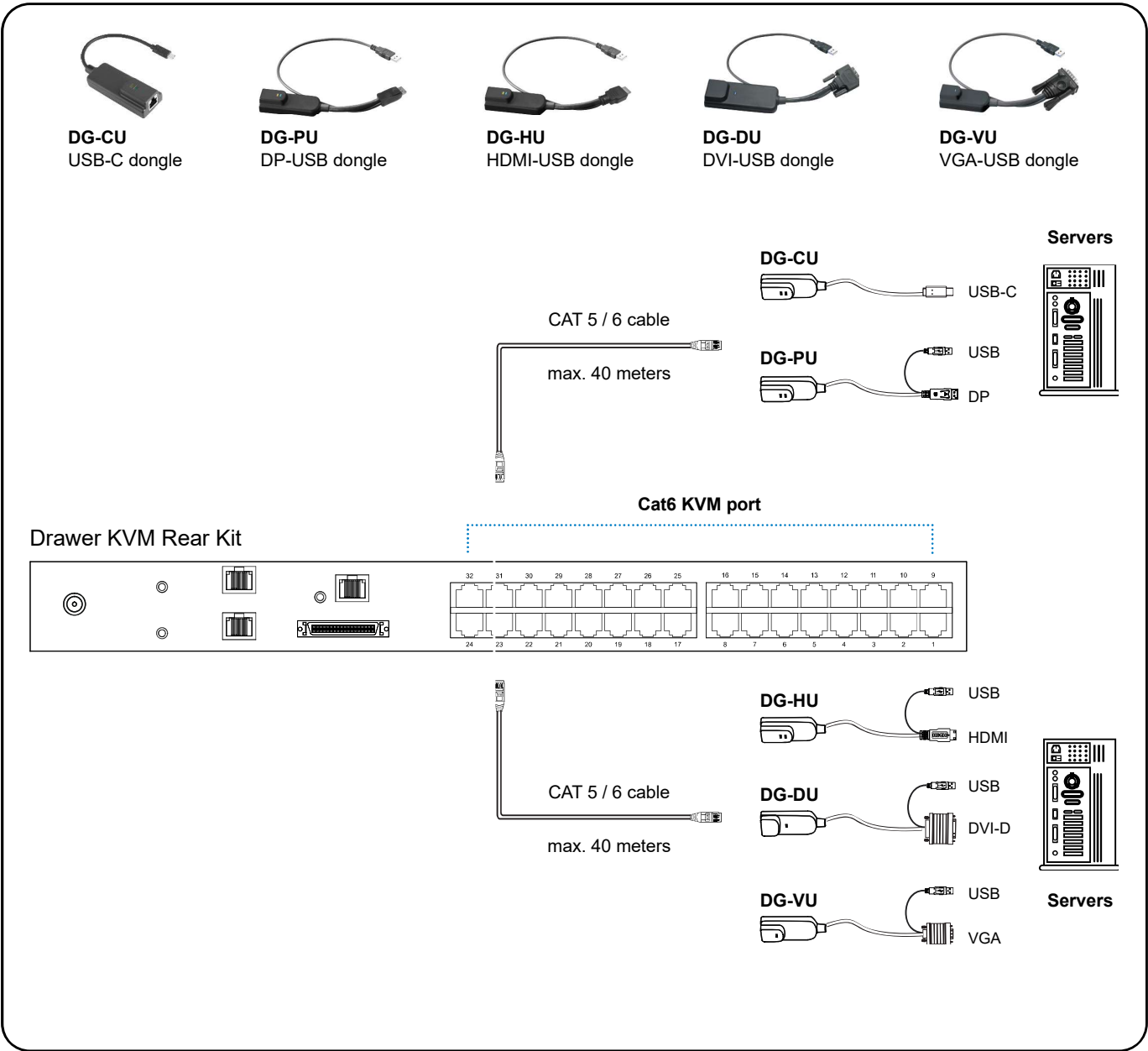


16-Port Matrix Cat KVM - 2 IP



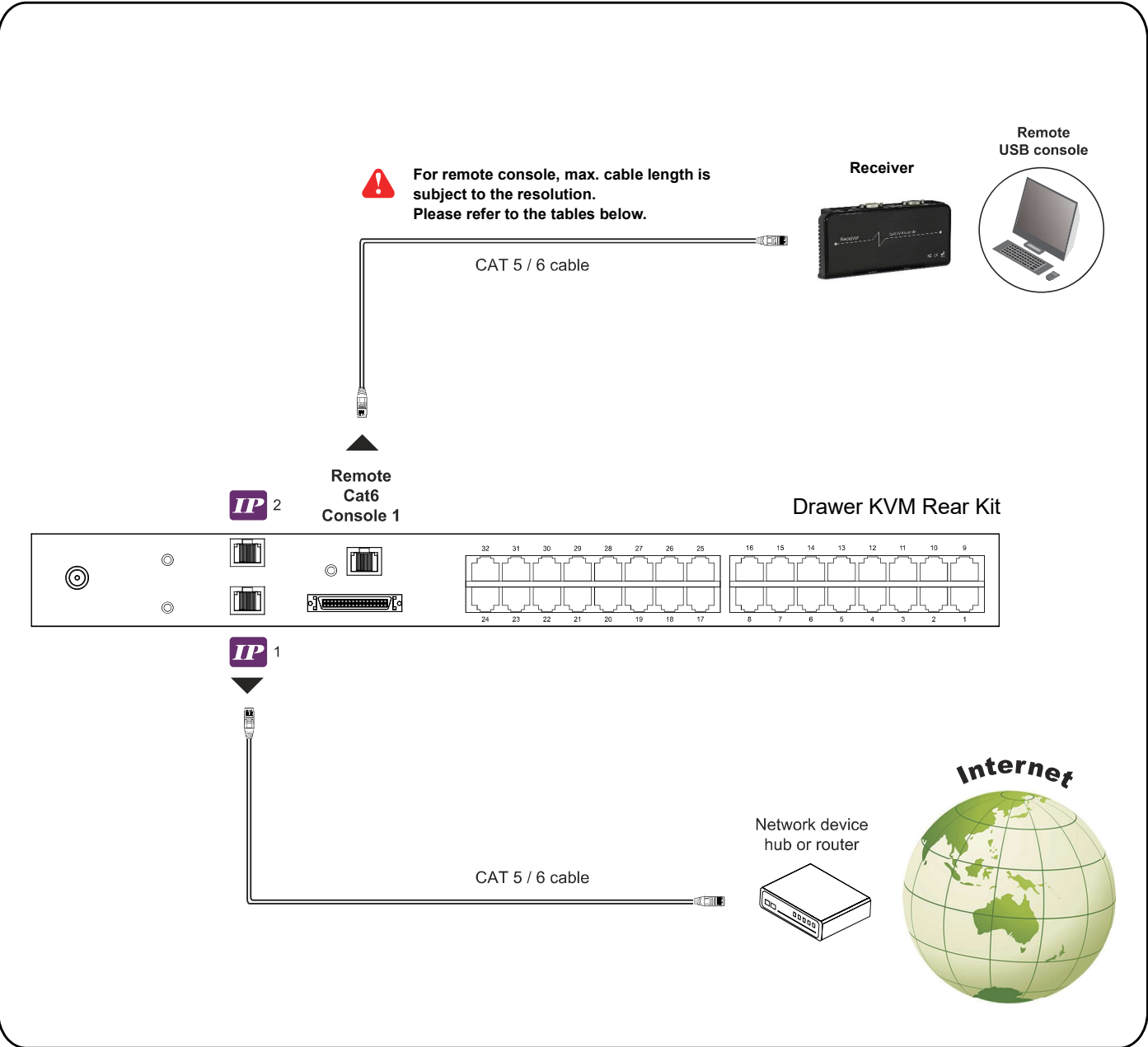
32-Port Matrix Cat KVM - 2 IP





Cat6 Dongle

Resolution Support	Frequency (Hz)
1920 x 1080	60
1600 x 1200	60
1440 x 900	60
1280 x 1024	60
1024 x 768	60 / 70 / 75



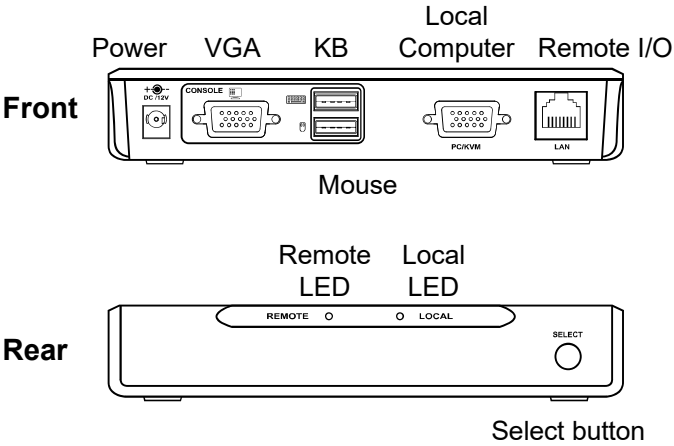
IP Console

Resolution Support	Frequency (Hz)
1920 x 1080	60
1920 x 1200	60
1600 x 1200	60
1280 x 1024	60
1024 x 768	60

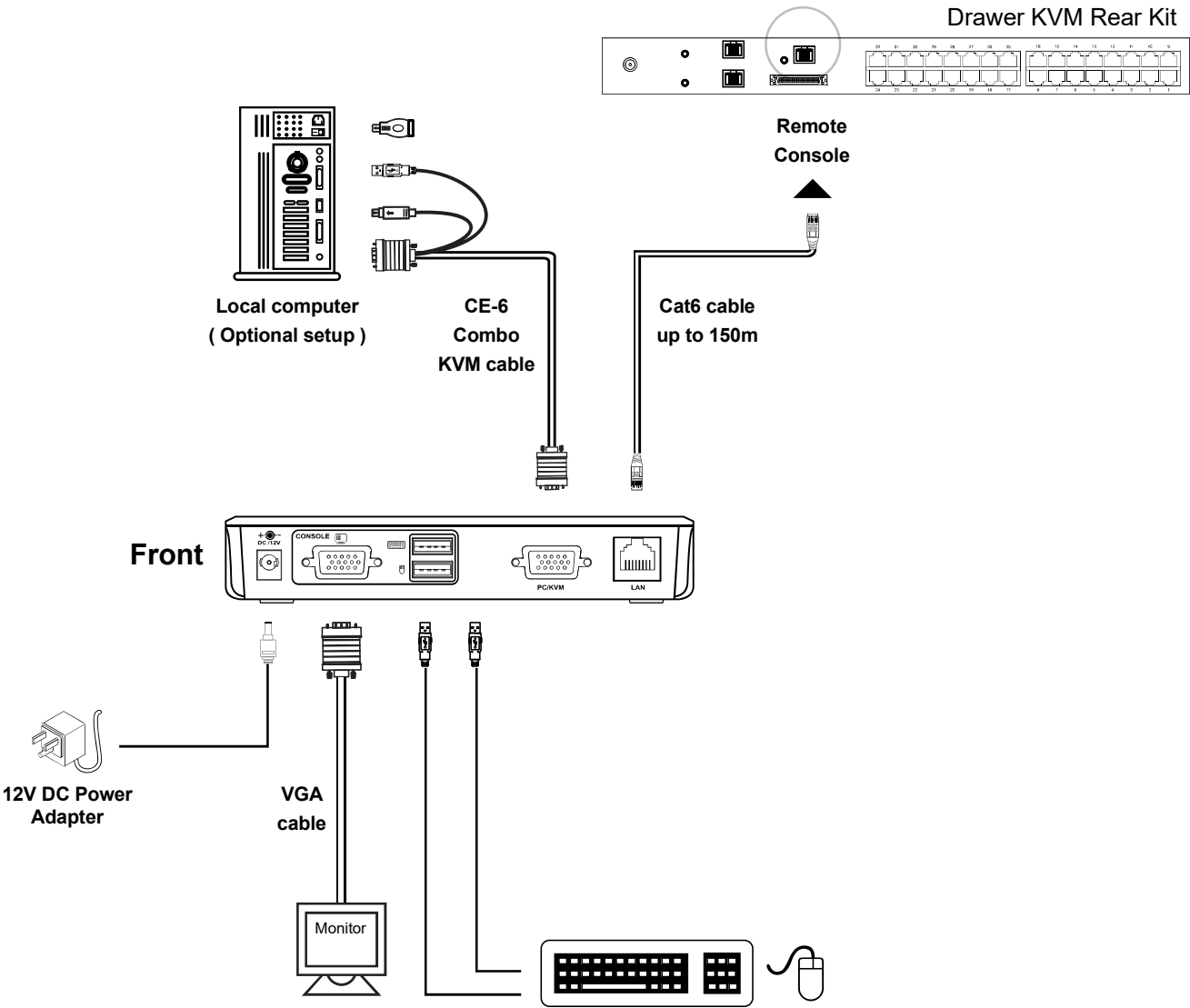
Remote Console

Resolution Support	Frequency (Hz)	Max. Cat6 Cable Length (M)
1920 x 1080	60	50
1920 x 1200	60	50
1600 x 1200	60	100
1440 x 900	60	100
1280 x 1024	60	150
1024 x 768	60 / 70 / 75	150

Receiver



The receiver provides a hotkey function for remote console. Please refer to P.19

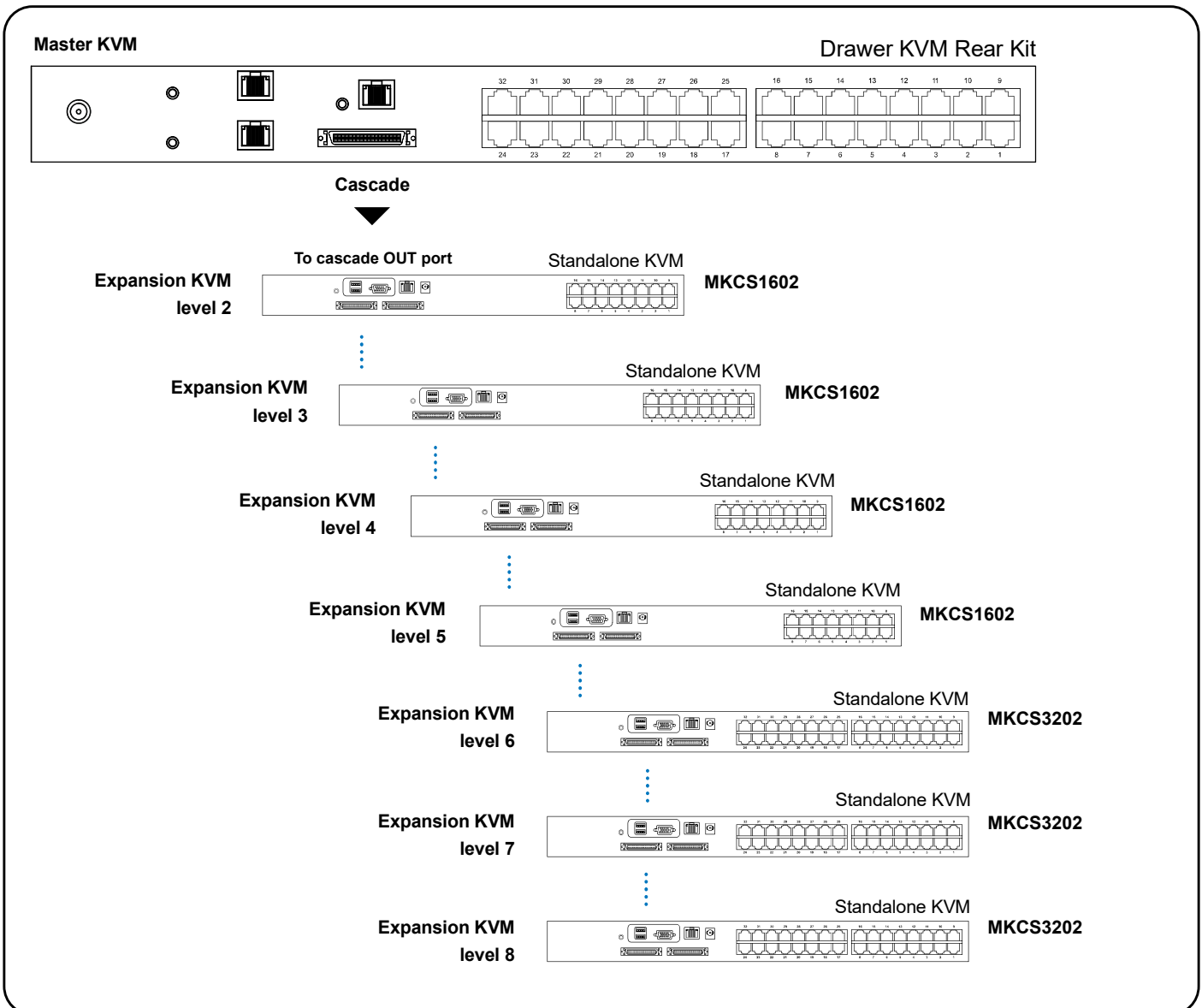


< 1.4 > KVM Cascade

Matrix Cat6 IP KVM

- Cascade up to 8 levels, 256 servers
- Cascading multiple KVM with CM8-CMC cascade cable.

- ⚠ **Cascaded KVMs from level 2 to 8 must be the models of MKCS1602 / MKCS3202.**
- ⚠ **When multiple matrix KVMs cascade together, the master KVM at level 1 will take all control of other Expansion KVM switches (e.g. level 2 to 8).**
- ⚠ **The slave matrix KVM will be as a port expansion module of the master matrix KVM, the original remote console on Expansion KVM will be sacrificed and disabled.**



CM8-CMC

- 8ft Matrix KVM cascade cable

Matrix Cat6 IP KVM		
■ KVM Port Number of ports : 16 or 32 Connector : RJ-45 Connectivity : DVI-D / VGA connector dongle up to 40 meters (132 feet) via Cat6 / Cat5 cable		
■ Local Console : Nil for LCD console drawer version		
■ Cat6 Remote Console Number of remote port : 1 Monitor port : DB15-pin VGA Keyboard & mouse port : 2 x USB type connector for keyboard & mouse Remote I/O : RJ45 via Cat5 / Cat5e / Cat6 cable up to 500 feet Resolution support : 16:9 - max. 1920 x 1080 16:10 - max. 1920 x 1200 4:3 - max. 1600 x 1200		
■ IP Remote Console Number of IP console : 1 for -MKCP1613 / -MKCP3213 2 for -MKCP1624 / -MKCP3224 User management : 15-user login, 1 x active user Browser : Chrome, Firefox, Edge, etc. Security : TLS 1.3, AES, LDAP, Active Directory (AD), HTTP(s) IP Access : RJ45 Ethernet per IP console Resolution support : 4:3 - max. 1600 x 1200		
■ Expansion : Up to 256 servers by 8-level cascade		
■ Compatibility Hardware : HP / IBM / Dell PC, Server and Blade Server SUN / Mac OS Support : Windows / Linux / Unix / Mac OS		
■ Power Input : AC power adapter Consumption : Max. 34W		
■ Compliance EMC : FCC & CE Safety : CE / LVD & UKCA Environment : RoHS3 & REACH / WEEE		
■ Environmental		
	Operating	Storage / Non-operating
Temperature :	0 to 55°C degree	-20 to 60°C degree
Humidity :	10~90%, non-condensing	5~90%, non-condensing
Altitude :	16,000 ft	40,000 ft
Shock :	-	10G acceleration (11ms duration)
Vibration :	-	10~300Hz 0.5G RMS random vibration

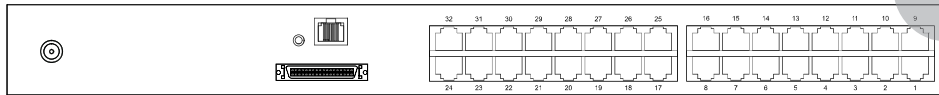
< Part 2 > Matrix Cat6 KVM

< 2.1 > Package Contents

Matrix Cat6 KVM

Matrix Cat6 KVM - 1 Remote Console

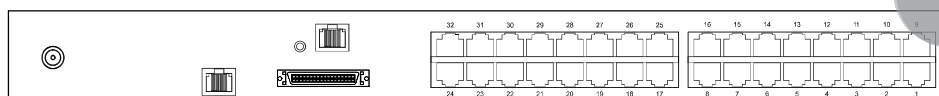
KVM Rear Kit



- Receiver box for remote console x 1
- Power adapter w/ power cord (for receiver) x 1
- CE-6 6ft Combo KVM cable for receiver box x 1

Matrix Cat6 KVM - 2 Remote Consoles

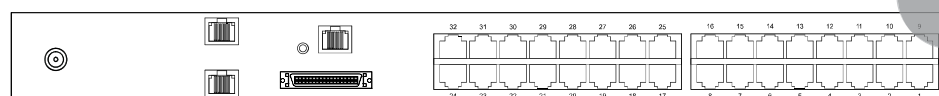
KVM Rear Kit



- Receiver box for remote console x 2
- Power adapter w/ power cord (for receiver) x 2
- CE-6 6ft Combo KVM cable for receiver box x 2

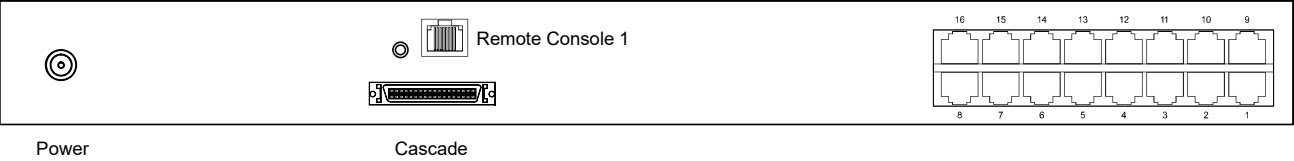
Matrix Cat6 KVM - 3 Remote Consoles

KVM Rear Kit

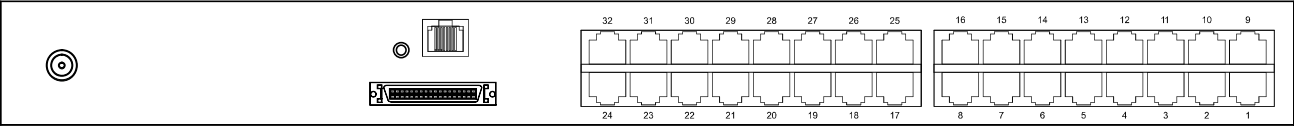


- Receiver box for remote console x 3
- Power adapter w/ power cord (for receiver) x 3
- CE-6 6ft Combo KVM cable for receiver box x 3

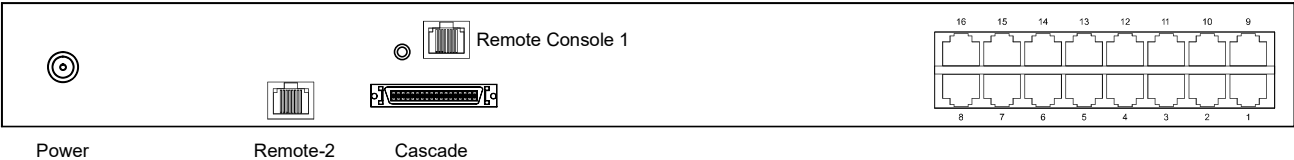
16-Port Matrix Cat6 KVM - 1 Remote Console



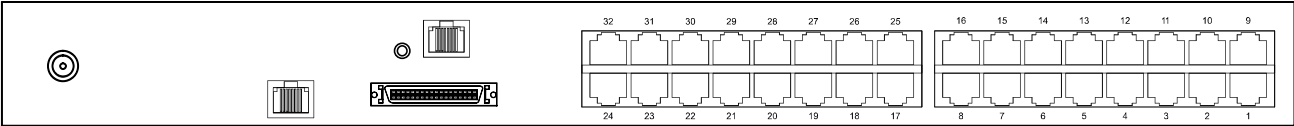
32-Port Matrix Cat6 KVM - 1 Remote Console



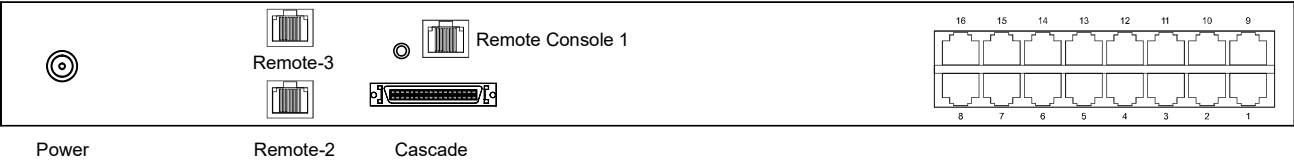
16-Port Matrix Cat6 KVM - 2 Remote Consoles



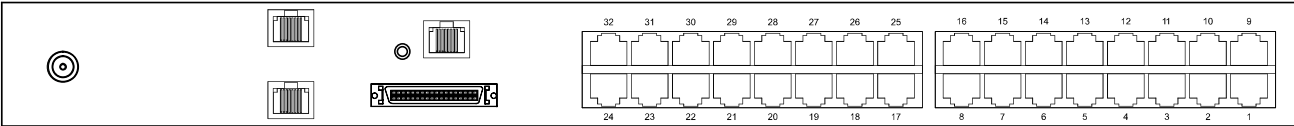
32-Port Matrix Cat6 KVM - 2 Remote Consoles

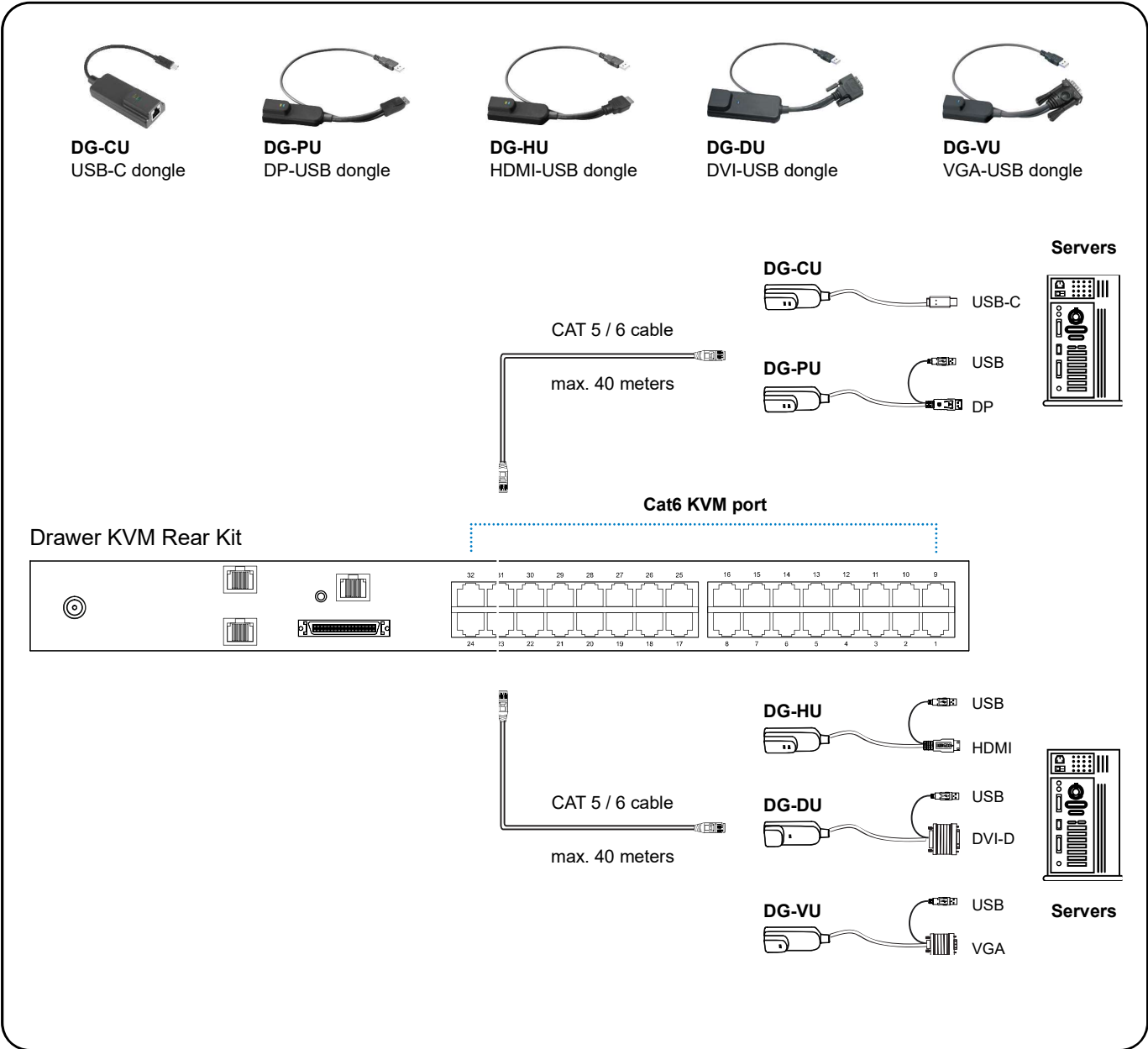


16-Port Matrix Cat6 KVM - 3 Remote Consoles



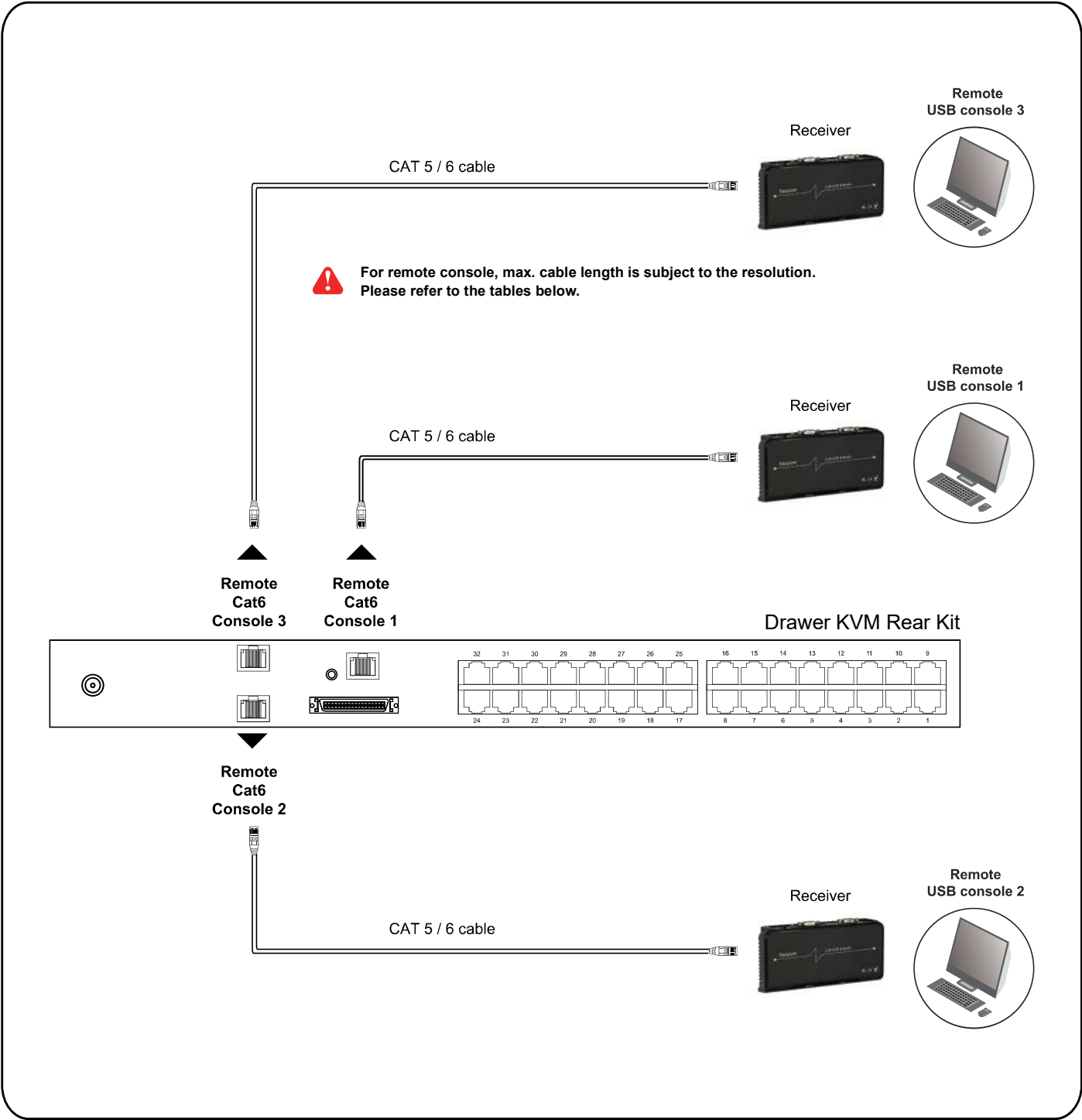
32-Port Matrix Cat6 KVM - 3 Remote Consoles





Cat6 Dongle

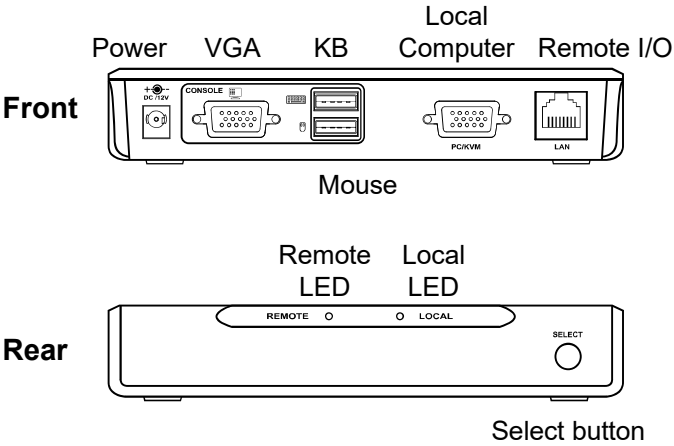
Resolution Support	Frequency (Hz)
1920 x 1080	60
1600 x 1200	60
1440 x 900	60
1280 x 1024	60
1024 x 768	60 / 70 / 75



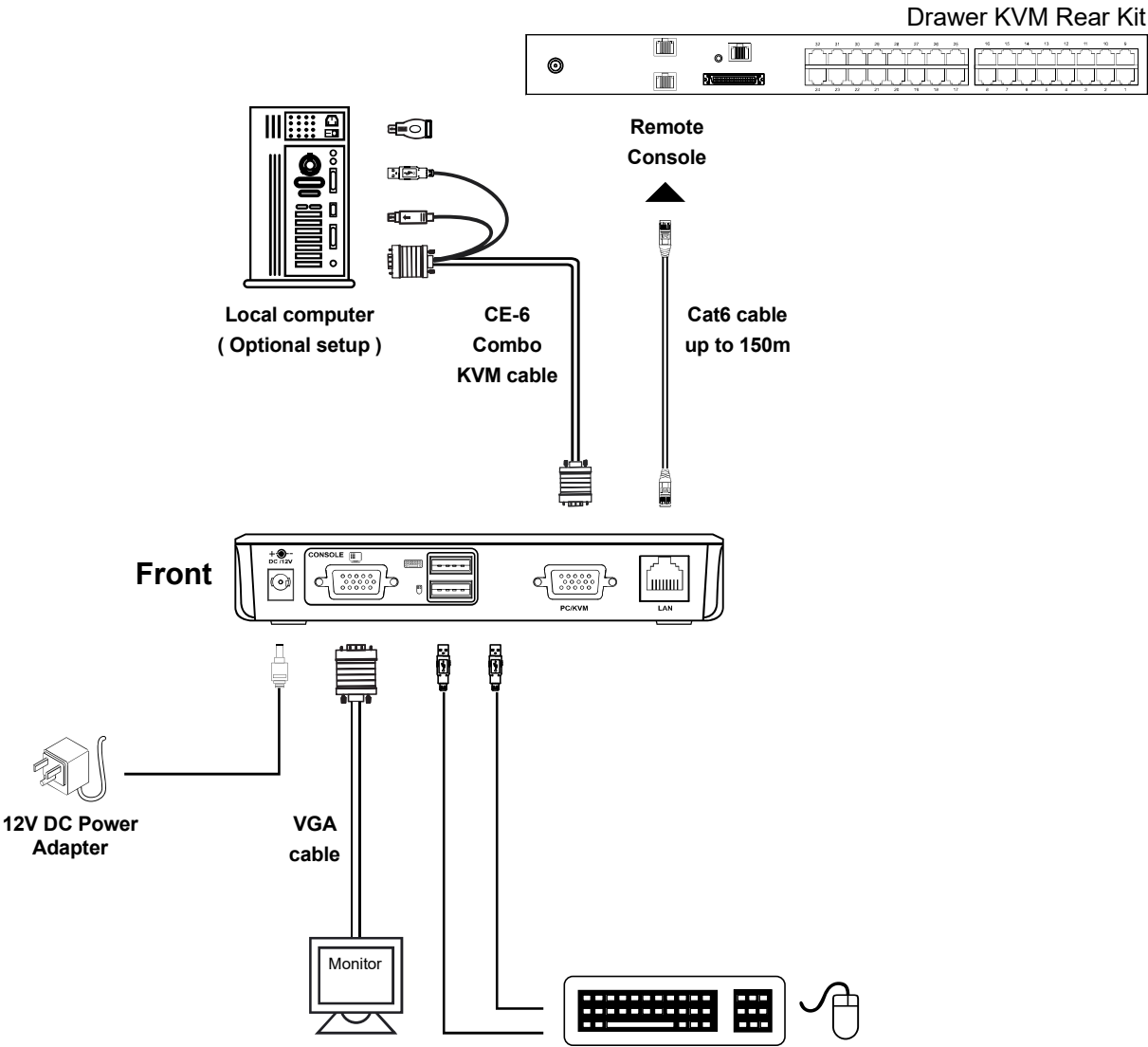
Remote Console

Resolution Support	Frequency (Hz)	Max. Cat6 Cable Length (M)
1920 x 1080	60	50
1920 x 1200	60	50
1600 x 1200	60	100
1440 x 900	60	100
1280 x 1024	60	150
1024 x 768	60 / 70 / 75	150

Receiver



The receiver provides a hotkey function for remote console. Please refer to P.17

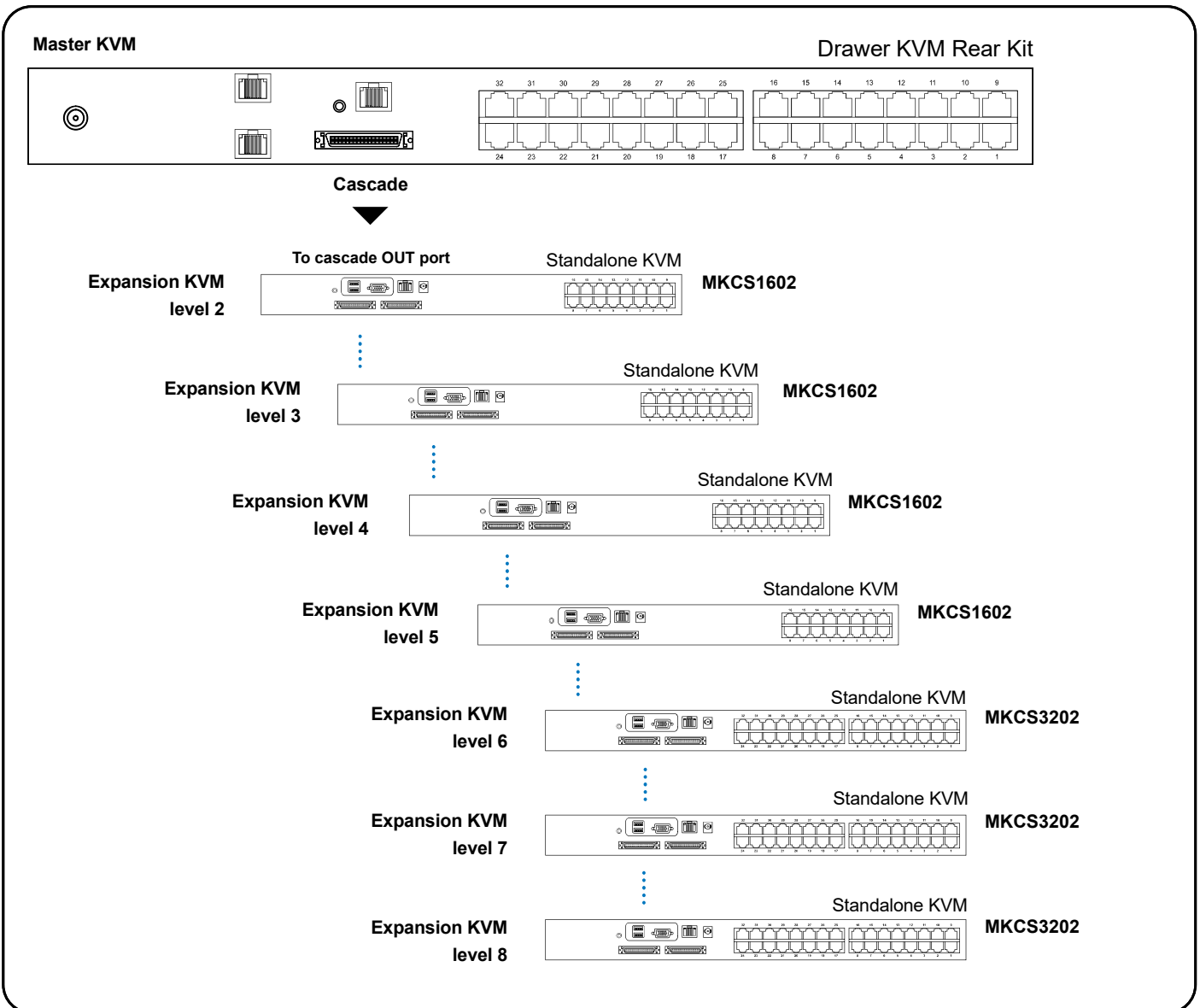


< 2.4 > KVM Cascade

Matrix Cat6 KVM

- Cascade up to 8 levels, 256 servers
- Cascading multiple KVM with CM8-CMC cascade cable.

- ⚠ **Cascaded KVMs from level 2 to 8 must be the models of MKCS1602 / MKCS3202.**
- ⚠ **When multiple matrix KVMs cascade together, the master KVM at level 1 will take all control of other Expansion KVM switches (e.g. level 2 to 8).**
- ⚠ **The slave matrix KVM will be as a port expansion module of the master matrix KVM, the original remote console on Expansion KVM will be sacrificed and disabled.**



CM8-CMC

- 8ft Matrix KVM cascade cable

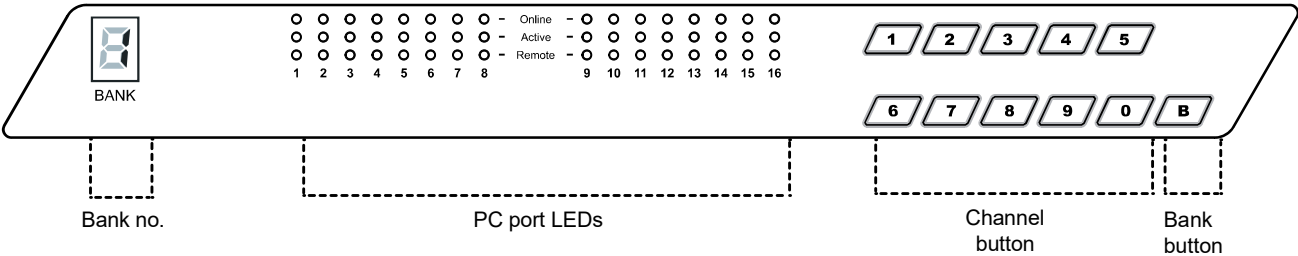
Matrix Cat6 KVM		
■ KVM Port		
Number of ports :	16 or 32	
Connector :	RJ-45	
Connectivity :	DVI-D / VGA connector dongle up to 40 meters (132 feet) via Cat6 / Cat5 cable	
■ Local Console : Nil for LCD console drawer version		
■ Cat6 Remote Console		
Number of remote port :	1 for -MKCS1602 / -MKCS3202 2 for -MKCS1603 / -MKCS3203 3 for -MKCS1604 / -MKCS3204	
Monitor port :	DB15-pin VGA	
Keyboard & mouse port :	2 x USB type connector for keyboard & mouse	
Remote I/O :	RJ45 via Cat5 / Cat5e / Cat6 cable up to 500 feet	
Resolution support :	16:9 - max. 1920 x 1080 16:10 - max. 1920 x 1200 4:3 - max. 1600 x 1200	
■ Expansion : Up to 256 servers by 8-level cascade		
■ Compatibility		
Hardware :	HP / IBM / Dell PC, Server and Blade Server SUN / Mac	
OS Support :	Windows / Linux / Unix / Mac OS	
■ Power		
Input :	AC power adapter	
Consumption :	Max. 20W	
■ Compliance		
EMC :	FCC & CE	
Safety :	CE / LVD & UKCA	
Environment :	RoHS3 & REACH / WEEE	
■ Environmental	Operating	Storage / Non-operating
Temperature :	0 to 55°C degree	-20 to 60°C degree
Humidity :	10~90%, non-condensing	5~90%, non-condensing
Altitude :	16,000 ft	40,000 ft
Shock :	-	10G acceleration (11ms duration)
Vibration :	-	10~300Hz 0.5G RMS random vibration

Power ON

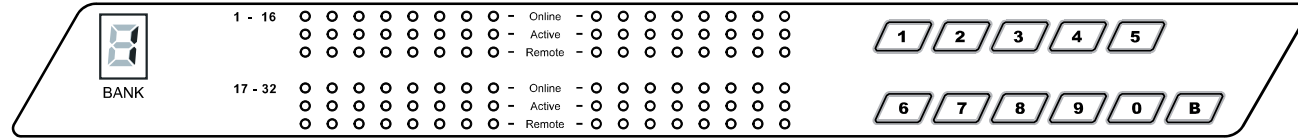
- Turn off all servers and KVM switches
- Make sure all cables / connectors are properly connected
- Recommend Power ON sequence is monitor, KVM switch finally computer

Front Panel - Port LED Indications

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 Remote : Orange LED on indicating the port is selecting by IP / remote console
Channel button	Press to select channel from 01 to 32
Bank button	Select the bank from 1 to 8

The password is enabled by default, the default password is “00000000” eight zeros (**Do not use “0” on number pad**)

■ Enable password

1. Press the KVM hotkey **Scroll Lock + Scroll Lock + U**
2. Logout the KVM by pressing the hotkey **Scroll Lock + Scroll Lock + P**
3. In SUPERVISOR level, enter “00000000” eight zeros in user name & password field (**Do not use “0” on number pad**)
4. In USER level, press **Space bar + Enter** in user name & password field

Remark: Automatic logout after 10 minutes of inactivity

■ Set your own user name & password

1. Login the KVM in SUPERVISOR level by pressing “00000000” eight zeros in user name & password field
2. Call KVM OSD menu by pressing the KVM hotkey **Scroll Lock + Scroll Lock + Space Bar**
3. Press **F1** to 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 setting or press **Esc** to cancel the editing without any change

Remark: a. 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

■ Change your password

1. Login the KVM in SUPERVISOR level by pressing your own user name & password
2. Call KVM OSD menu by pressing the KVM hotkey **Scroll Lock + Scroll Lock + Space Bar**
3. Press **F1** to 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 setting or press **Esc** to cancel the editing without any change

Remark: a. 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 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

■ Forget your password

Please contact your supplier for further support

Remark:

- You must press the KVM hotkey within 2 seconds
- A beep sound will be heard for successful entering KVM hotkey

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 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

Local / IP Remote 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

Remarks: ■ Example of “**Scroll Lock + Scroll Lock + Bank no. + Port no.**”

- Bank No. : 1 to 8
- Port No. : 01 to 16
- 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 supports

Cat6 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