

# USER MANUAL

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KVT617A

# SERVVIEW HD KVM TRAY

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24/7 TECHNICAL SUPPORT AT 1.877.877.2269 OR VISIT [BLACKBOX.COM](http://BLACKBOX.COM)



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# CHAPTER 1: SPECIFICATIONS

## 1. SPECIFICATIONS

### 1.1 GENERAL SPECIFICATIONS

#### SERVVIEW HD KVM TRAY SPECIFICATIONS

<b>FORM FACTOR</b>	1U rack mounting on slide-out rails
<b>DIAGONAL SIZE</b>	17.3" TFT
<b>NATIVE RESOLUTION</b>	1920 x 1080
<b>PANEL TYPE</b>	Active Matrix TFT LCD with LED backlight unit
<b>PIXEL PITCH</b>	0.1989 (H) x 0.1989 (V)
<b>BRIGHTNESS (CD/M<sup>2</sup>)</b>	300
<b>COLOR SUPPORT</b>	262 K
<b>CONTRAST RATIO (TYP.)</b>	650:1
<b>VIEWING ANGLE</b>	70° x 70°
<b>DISPLAY AREA (MM)</b>	380 x 215
<b>KEYBOARD/MOUSE</b>	104 keyboard/touchpad or US keyboard
<b>DDC COMPATIBLE</b>	DDC, DDC2, DDC2B
<b>CONNECTORS</b>	Server Console Ports: (1) USB Type B, (1) VGA, (1) DisplayPort, (1) HDMI Local Console Ports: (2) USB Type A, (1) VGA, (1) DisplayPort, (1) HDMI
<b>POWER INPUT</b>	Autosensing, 100 to 240 VAC, 50/60 Hz
<b>POWER OUTPUT</b>	12 VDC, 5.42 A
<b>OPERATING SYSTEM</b>	Windows®/Linux®/Sun® Microsystems
<b>TEMPERATURE TOLERANCE</b>	Operating: 32 to 104° F (0 to 40° C) Storage: 23 to 140° F (-5 to 60° C)
<b>RELATIVE HUMIDITY</b>	5 to 90%, non-condensing
<b>DIMENSIONS</b>	1.7" H x 17" W x 20.7" D (4.3 x 43.4 x 52.6 cm)
<b>WEIGHT</b>	23.37 lb. (10.6 kg)
<b>APPROVALS</b>	FCC, CE

# CHAPTER 1: SPECIFICATIONS

## 1.2 RESOLUTION SUPPORT

**SUPPORTED TIMING TABLE ( RESOLUTION SUPPORT)**

S/N	PIXEL FORMAT	REFRESH RATE	HORIZONTAL FREQUENCY	PIXEL FREQUENCY	REMARK
1	640 X 350	70.1 HZ	31.5 KHZ	25.175 MHZ	INDUSTRY
2	640 X 480	50 HZ	24.6 KHZ	19.6 MHZ	UEFI/BIOS
3	640 X 480	59.9 HZ	31.5 KHZ	25.175 MHZ	VESA
4	640 X 480	72.8 HZ	37.9 KHZ	31.500 MHZ	VESA
5	640 X 480	75.0 HZ	37.5 KHZ	31.500 MHZ	VESA
6	720 X 400	70.1 HZ	31.5 KHZ	28.322 MHZ	MGA TEXT MODE
7	800 X 600	50 HZ	31.0 KHZ	31.7 MHZ	UEFI/BIOS
8	800 X 600	56.3 HZ	35.2 KHZ	36.000 MHZ	VESA
9	800 X 600	60.3 HZ	37.9 KHZ	40.000 MHZ	VESA
10	800 X 600	72.2 HZ	48.1 KHZ	50.000 MHZ	VESA
11	800 X 600	75.0 HZ	46.9 KHZ	49.500 MHZ	VESA
12	1024 X 768	50 HZ	39.7 KHZ	52.0 MHZ	UEFI/BIOS
13	1024 X 768	60.0 HZ	48.4 KHZ	65.000 MHZ	VESA
14	1024 X 768	70.1 HZ	56.5 KHZ	75.000 MHZ	VESA
15	1024 X 768	75.0 HZ	60.0 KHZ	78.750 MHZ	VESA
16	1152 X 864	75.0 HZ	67.5 HZ	108.000 MHZ	VESA
17	1280 X 720	50 HZ	37.7 KHZ	62.1 MHZ	UEFI/BIOS
18	1280 X 720	60.0 HZ	45.0 KHZ	74.250 MHZ	VESA
19	1280 X 960	60.0 HZ	60.0 KHZ	108.000 MHZ	VESA
20	1280 X 1024	60.0 HZ	64.0 KHZ	108.000 MHZ	VESA
21	1280 X 1024	75.0 HZ	80.0 KHZ	135.000 MHZ	VESA
22	1360 X 768	60.0 HZ	47.7 KHZ	85.500 MHZ	VESA
23	1366 X 768	60.0 HZ	47.7 KHZ	85.500 MHZ	VESA
24	1440 X 900	60.0 HZ	55.9 KHZ	106.500 MHZ	VESA
25	1600 X 900	60.0 HZ	60.0 KHZ	108.000 MHZ	VESA (RB)
26	1600 X 1200	60.0 HZ	75.0 KHZ	162.000 MHZ	VESA
27	1680 X 1050	60.0 HZ	65.3 KHZ	146.250 MHZ	VESA
28	1920 X 1080	50 HZ	56.4 KHZ	124.0 MHZ	UEFI/BIOS
29	1920 X 1080	60 HZ	67.5 KHZ	148.500 MHZ	VESA



## CHAPTER 2: OVERVIEW

### 2. OVERVIEW

#### 2.1 INTRODUCTION

The ServView HD KVM Tray combines a 17.3" LED-backlit display, keyboard, and touchpad in only 1U of valuable rack space. With built-in VGA, DisplayPort, and HDMI interfaces, it can support a variety of KVM switches for multiple server management. The ServView HD KVM Tray also provides an extra loop-through for local console. It's perfect for the administration of servers in data centers, server rooms, and labs.

#### 2.2 FEATURES

- ◆ 17.3-inch eDP TFT LCD panel
- ◆ LED backlight, saving power consumption
- ◆ Support video resolutions up to 1920 x 1080 at 60 Hz, 1080p
- ◆ Variety of video inputs and outputs (VGA, DisplayPort, and HDMI)
- ◆ Loop-through for local console
- ◆ Front USB Hub supports USB HID (KB/MS) and storage devices
- ◆ USB console connected with PC/Server
- ◆ Embedded power supply 12 V, 5.42 A
- ◆ Supports rack cabinet in-depth 20.5 to 35.8 inch (52 to 91 cm) with adjustable mountable bracket
- ◆ One-person easy installation
- ◆ Screen automatic video-off when frame folding fall down below 30-degree angle
- ◆ OSD buttons on the front panel dedicated to the required functionality

## CHAPTER 2: OVERVIEW

### 2.3 HARDWARE DESCRIPTION

#### 2.3.1 FRONT VIEW

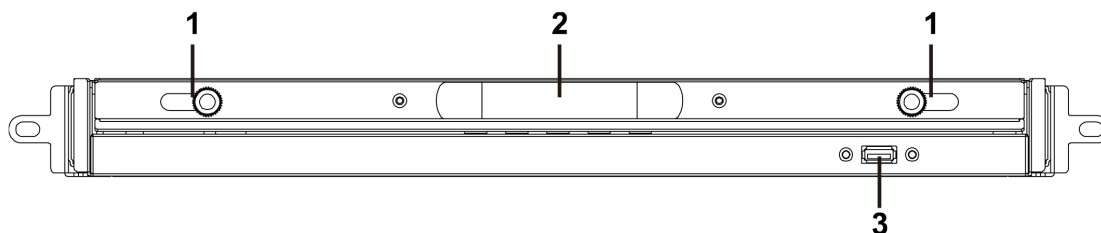


FIGURE 2-1. FRONT VIEW

TABLE 2-1. FRONT-PANEL COMPONENTS

NUMBER	COMPONENT	DESCRIPTION
1	Latch Lock	Lock or unlock the LCD console drawer when it is closed.
2	Upper Handle	Pull out/ Push in the LCD console drawer. Open/Close the LCD console drawer.
3	USB Port	The USB port is available to connect a USB peripheral device to the server, such as a flash drive, a CD-ROM drive, or a wireless USB mouse for users who prefer to use an external mouse.

## 2.3.2 BACK VIEW

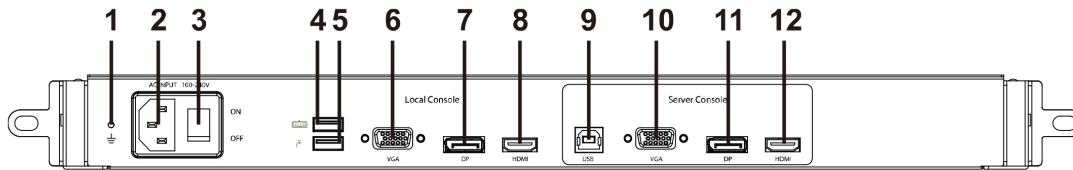


FIGURE 2-2. BACK VIEW

TABLE 2-2. BACK-PANEL COMPONENTS

NUMBER	COMPONENT	DESCRIPTION
1	Grounding Terminal	The grounding wire (used to ground the unit) attaches here.
2	Power Socket	This is a standard 3 prong AC power socket. The power cord from an AC source plugs in here.
3	Power Switch	This is a standard rocker switch that powers the device on and off.
4	Local Console USB Type A connector	Connect a USB keyboard.
5	USB Type A connector	Connect a USB mouse.
6	VGA Connector	Connect a VGA monitor
7	DP Connector	Connect a DisplayPort monitor
8	HDMI Connector	Connect an HDMI monitor
9	Server Console USB Type B Connector	Connect to a USB port of the source device
10	VGA Connector	Connect a VGA-based source device
11	DP Connector	Connect a DisplayPort-based source device
12	HDMI Connector	Connect an HDMI based source device

## CHAPTER 2: OVERVIEW

## 2.3.3 OPEN VIEW

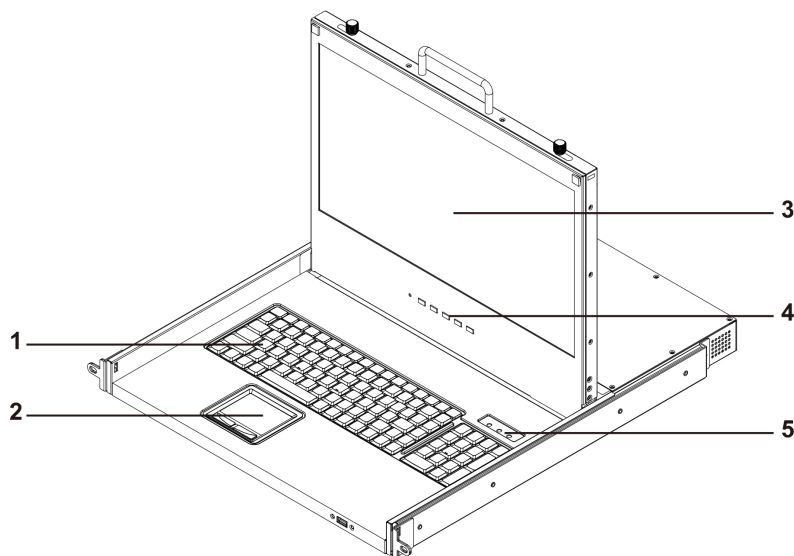


FIGURE 2-3. OPEN VIEW

TABLE 2-3. OPEN VIEW COMPONENTS

NUMBER	COMPONENT	DESCRIPTION
1	Keyboard	Standard 104-key keyboard
2	Touchpad	Standard mouse touchpad
3	LCD Display	Display the OSD and the source devices' video output
4	OSD buttons, power button and indicator lamp (Please see Chapter 5 for detailed settings)	OSD buttons: Display and operate the OSD menu, which adjusts the video or OSD settings of the built-in LCD display. <ul style="list-style-type: none"> <li>• LCD power button: Turn on or off the power supply to the LCD display.</li> <li>• LCD power indicator lamp: The indicator is lit when the LCD power button is turned on.</li> </ul>
5	Indicators	The Num Lock, Caps Lock, Scroll Lock LEDs are located here.

## CHAPTER 3: RACKMOUNT PROCEDURE

### 3. RACKMOUNT PROCEDURE

#### Before Installation:

- ♦ The surface for placing and fixing this device should be stable and level or mounted into a suitable cabinet.
- ♦ Make sure the place has enough ventilation, is out of direct sunlight, away from sources of excessive dust, dirt, heat, water, moisture, and vibration.
- ♦ The slide/rail-mounted equipment can't be used as a shelf or a workspace.
- ♦ Consider convenient connection of this product to related facilities.

1. Adjust the length of both brackets to match the mounting depth of your rack.

\* Adjustable depth from 520 to 908 mm

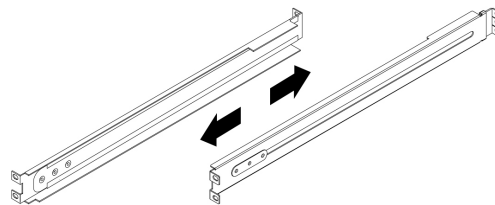


FIGURE 3-1. ADJUST BRACKETS, STEP 1A

Now the brackets look similar as below.

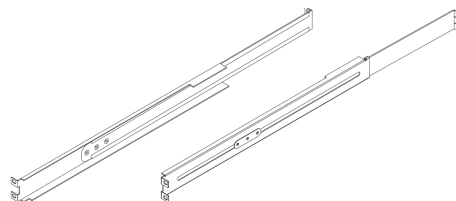


FIGURE 3-2. ADJUST BRACKETS, STEP 1B

## CHAPTER 3: RACKMOUNT PROCEDURE

2. Fasten the brackets to the rack pillars securely with the screws and cage nuts.

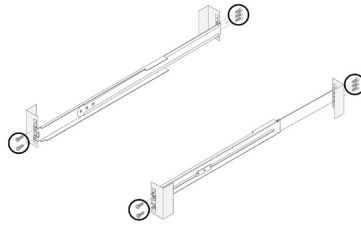


FIGURE 3-3. SECURE WITH HARDWARE

3. Slide the LCD console drawer between the brackets.

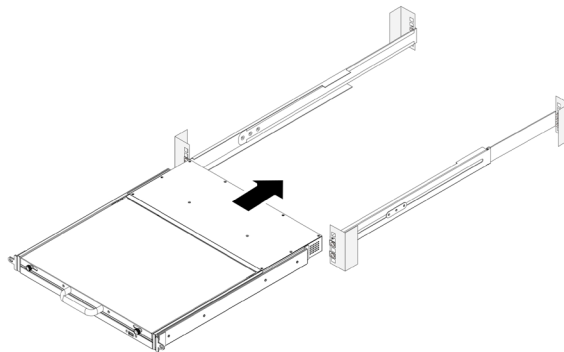


FIGURE 3-4. SLIDE IN CONSOLE DRAWER

4. Fasten the LCD console drawer to the rack pillars by using screws.

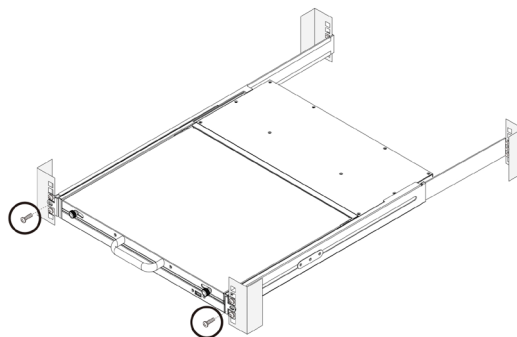


FIGURE 3-5. FASTEN DRAWER TO RACK PILLARS

## CHAPTER 4: USING THE SERVVIEW HD KVM TRAY

### 4. USING THE SERVVIEW HD KVM TRAY

After finishing the rack mounting, you can start to use the ServView HD KVM Tray.

#### NOTES:

Do not place any object or lean on the LCD console drawer when it is pulled out. This may cause personal injury and/or property damage. Do not apply force to the monitor screen and do not scratch it. This could damage the screen.

#### 4.1 OPENING THE LCD CONSOLE DRAWER

1. Pull out the LCD console drawer.

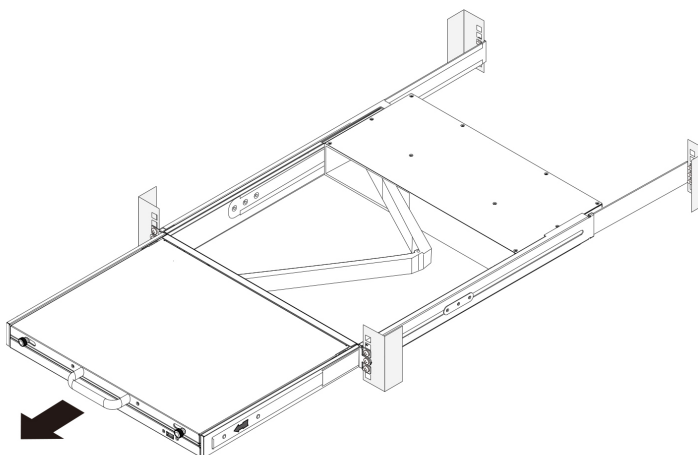


FIGURE 4-1. PULL OUT DRAWER

2. Push the latch levers toward the center to release the locking position.

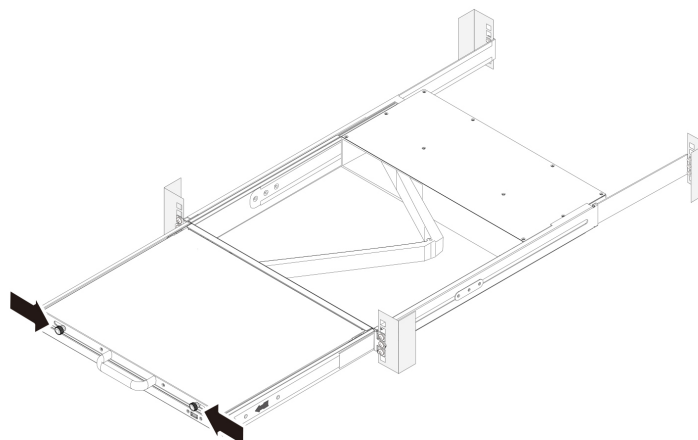


FIGURE 4-2. RELEASE LOCK

## CHAPTER 4: USING THE SERVVIEW HD KVM TRAY

3. Flip up the LCD console drawer.

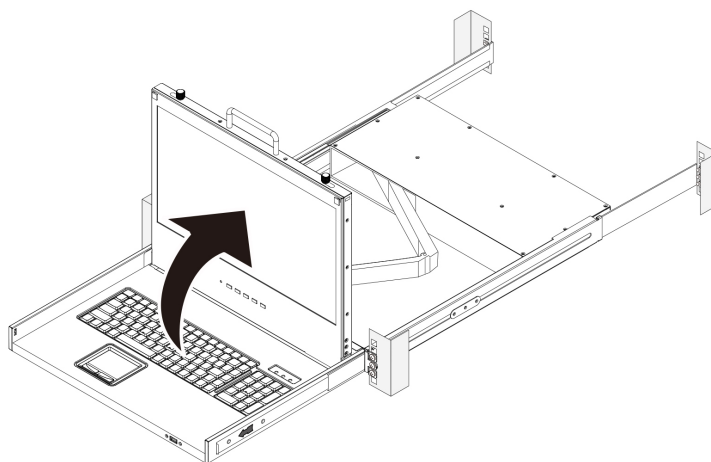


FIGURE 4-3. FLIP UP DRAWER

### 4.2 CLOSING THE LCD CONSOLE DRAWER

1. Fold the LCD console drawer.
2. Push both latches with your index fingers in the direction as indicated before sliding the LCD console drawer into the rack.

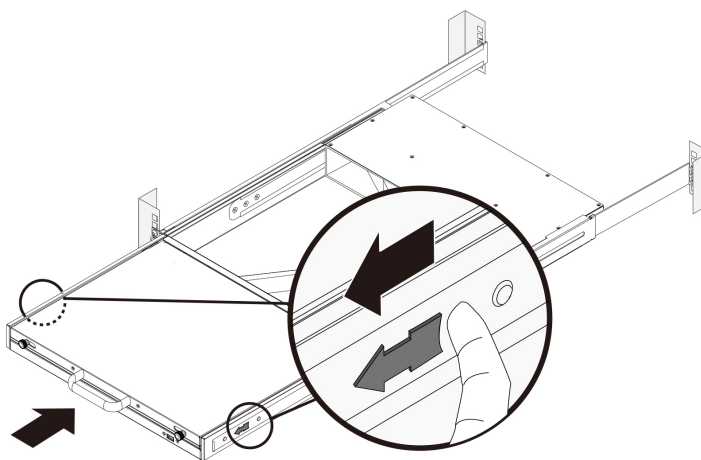


FIGURE 4-4. CLOSE DRAWER

3. Keep pushing the latches and slide the LCD console drawer in evenly until the device is back into the rack completely.

NOTE: Use caution when pressing the device rail release latches and sliding a device into or out of a rack; the slide rails can pinch your fingers.

## CHAPTER 4: USING THE SERVVIEW HD KVM TRAY

### 4.3 CONNECTING A SERVER OR KVM SWITCH

Follow the installation drawings and instructions below for standard connections. After the installation is completed, the LCD console drawer can be powered on. Then power on connected the equipment.

**NOTES:**

Properly ground the equipment.

Use the same type of video interface and cable on the Local Console and the Server Console to connect the equipment, such as a server, monitor, KVM switch, and KVM extender.

#### 4.3.1 CONNECTING A SERVER

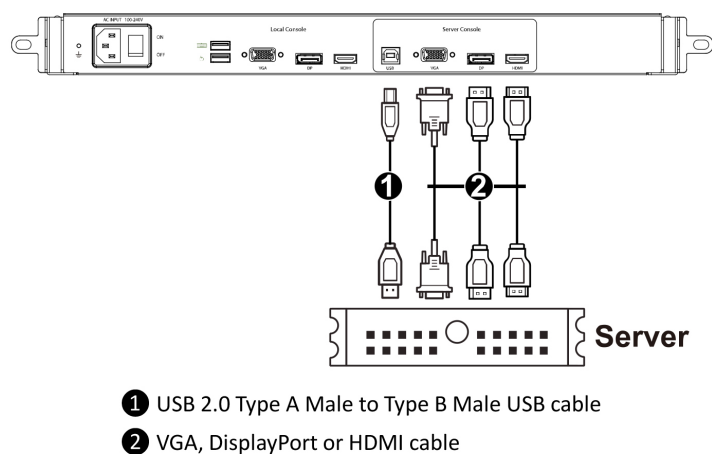


FIGURE 4-5. CONNECT A SERVER

#### 4.3.2 CONNECTING A KVM SWITCH

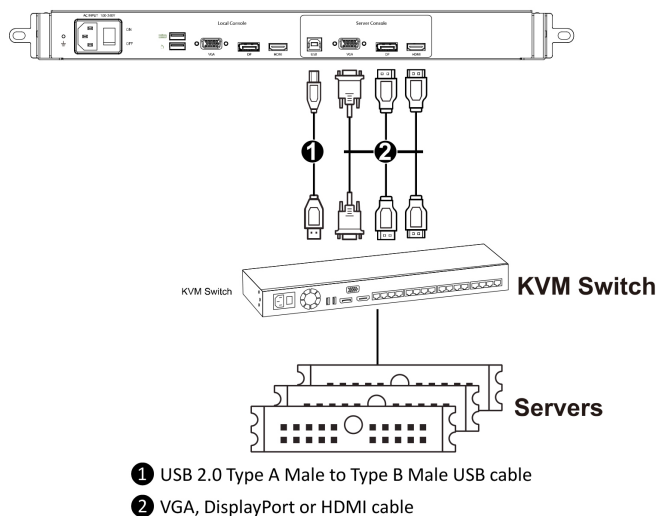


FIGURE 4-6. CONNECT A KVM SWITCH

# CHAPTER 4: USING THE SERVVIEW HD KVM TRAY

## 4.4 CONNECTING A KEYBOARD/MONITOR/MOUSE OR KVM EXTENDER

NOTE: Both the LCD console drawer and the keyboard and mouse connected to the “local console” can operate the equipment.

### 4.4.1 CONNECTING A KEYBOARD/MONITOR/MOUSE

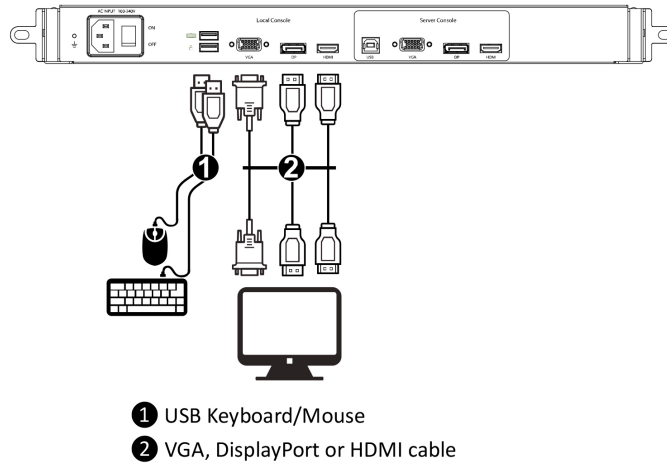


FIGURE 4-7 CONNECT KEYBOARD/MONITOR/MOUSE

### 4.4.2 CONNECTING A KVM EXTENDER

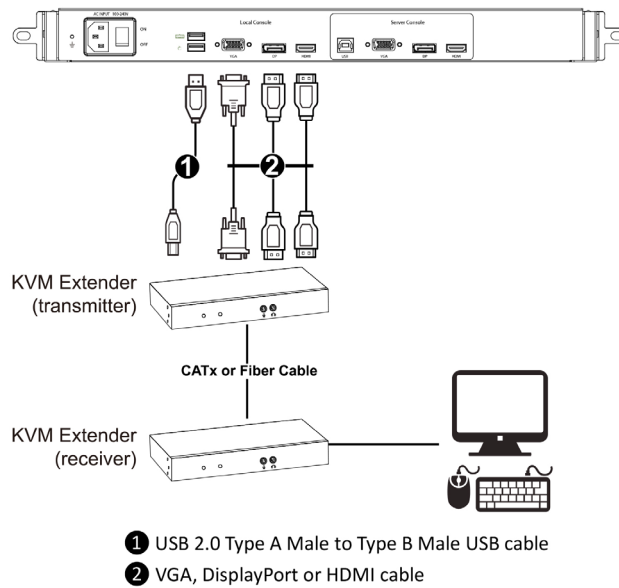


FIGURE 4-8 CONNECT A KVM EXTENDER

## CHAPTER 4: USING THE SERVVIEW HD KVM TRAY

### 4.5 CONNECTING AN EXTERNAL USB DEVICE

Connect any USB device to the front panel USB-A port of the LCD console drawer.

NOTE: The server should detect the connection of the external USB device. If necessary, install the driver for the detected USB device.

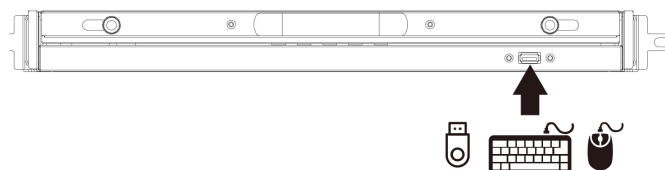


FIGURE 4-9 CONNECT A USB DEVICE

### 4.6 CONNECTING THE POWER CORD

Connect the power cord to the power inlet on the LCD console drawer and then to a power outlet.

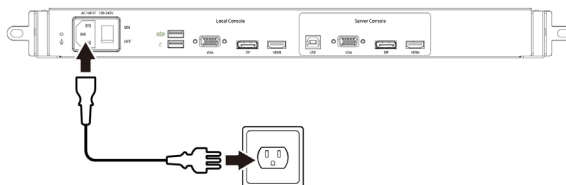


FIGURE 4-10 CONNECT THE POWER CORD

### 4.7 ADJUSTING THE VIDEO SETTINGS

The OSD menu controls the video quality. Use the buttons on the LCD panel to fine-tune the LCD display settings.

**To auto tune the LCD display:**

1. If the integrated LCD panel is not switched on, press POWER.
2. Press UP/AUTO. An "Auto Adjusting" message appears, indicating that video settings are being fine-tuned.

**To manually fine-tune the LCD display: (See Chapter 5 for detailed settings.)**

1. Press MENU. The OSD menu appears.
2. Press UP/AUTO and DOWN/SOURCE to select the desired setting or option.
3. Press MENU to confirm your selection or changes.
4. After making the necessary changes, press EXIT to quit the current setting page or close the OSD menu.

## CHAPTER 5: ON-SCREEN DISPLAY INTERFACE

### 5. ON-SCREEN DISPLAY INTERFACE

#### 5.1 OSD BUTTONS

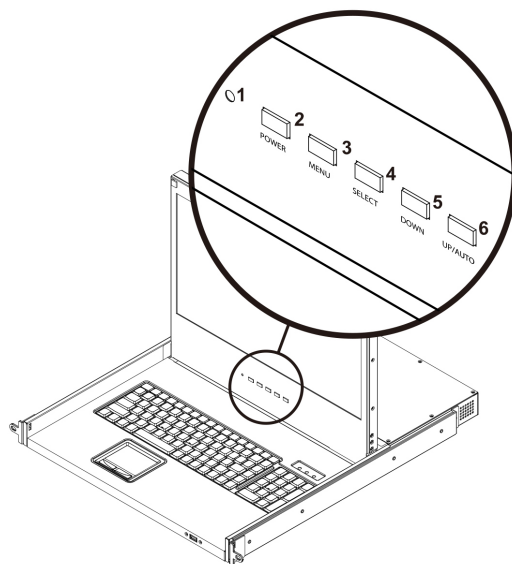


FIGURE 5-1 OSD INDICATOR/BUTTONS

TABLE 5-1. OSD BUTTONS

NUMBER	COMPONENT	DESCRIPTION
1	LCD indicator	<p>The LED indicator lamp indicates the current power status.</p> <ul style="list-style-type: none"> <li>• Light off = LED display is power-off</li> <li>• Light on = LED display is power-on</li> <li>• Light blinking = LED display is in power-saving mode</li> </ul>
2	POWER	Power on/off the built-in LED display.
3	MENU	<p>This button has two functions:</p> <ol style="list-style-type: none"> <li>1. When OSD is not displayed, pressing this button triggers the OSD menu.</li> <li>2. When the OSD is displayed, this button functions as the Back key for going back to the last action.</li> </ol>
4	SELECT	<p>This button has two functions:</p> <ol style="list-style-type: none"> <li>1. When OSD is not displayed, this button is used to select the video input source (VGA, DisplayPort or HDMI).</li> <li>2. When the OSD is displayed, this button is as the Enter key and can be used to confirm the selection.</li> </ol>
5	DOWN	When the OSD is displayed, pressing this button moves down (or left) the selection.
6	UP/AUTO	<p>This button has two functions:</p> <ol style="list-style-type: none"> <li>1. When OSD is not displayed, pressing this button optimizes the visual settings. (This function is only available for VGA input port.)</li> <li>2. When the OSD is displayed, pressing this button moves up (or right) the selection.</li> </ol>

## CHAPTER 5: ON-SCREEN DISPLAY INTERFACE

### 5.2 OSD MENUS

An explanation of the OSD adjustment settings is next.

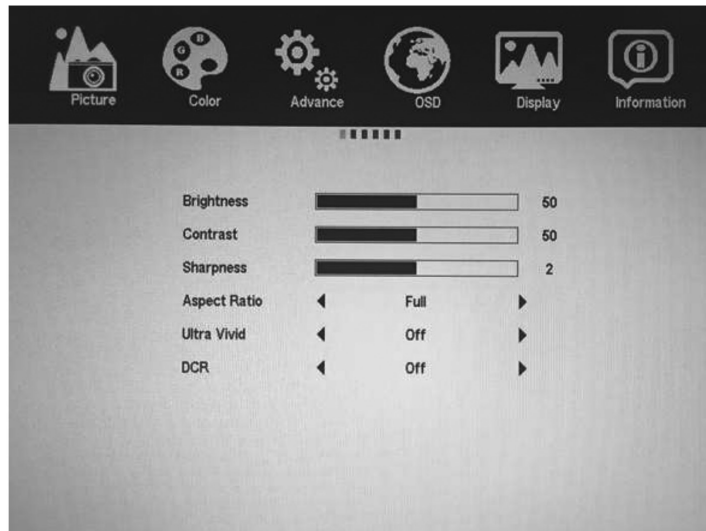


FIGURE 5-2 PICTURE MENU

TABLE 5-2. PICTURE MENU COMPONENTS

PICTURE NO.	SETTING	EXPLANATION
1	Brightness	Make the screen image brighter or darker.
2	Contrast	Adjust the difference between the background black level and the foreground white level.
3	Sharpness	Fine-tune the sharpness of the screen image.
4	Aspect Ratio	Set the Aspect Ratio
5	Ultra Vivid	On/off the Ultra Vivid function.
6	DCR	On/off the Dynamic Contrast Ratio function.

## CHAPTER 5: ON-SCREEN DISPLAY INTERFACE

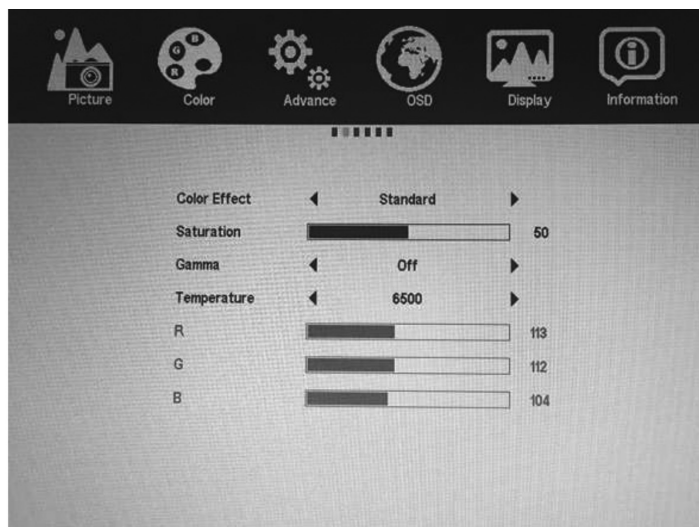


FIGURE 5-3 COLOR MENU

**TABLE 5-3. COLOR MENU COMPONENTS**

COLOR NO.	SETTING	EXPLANATION
1	Color Effect	Choose the Color Effect.
2	Saturation	Adjusts the Saturation setting.
3	Gamma	On/off the Gamma function.
4	Temperature	Select the screen color temperatures.
5	R/G/B	Adjust red, green, and blue colors respectively.

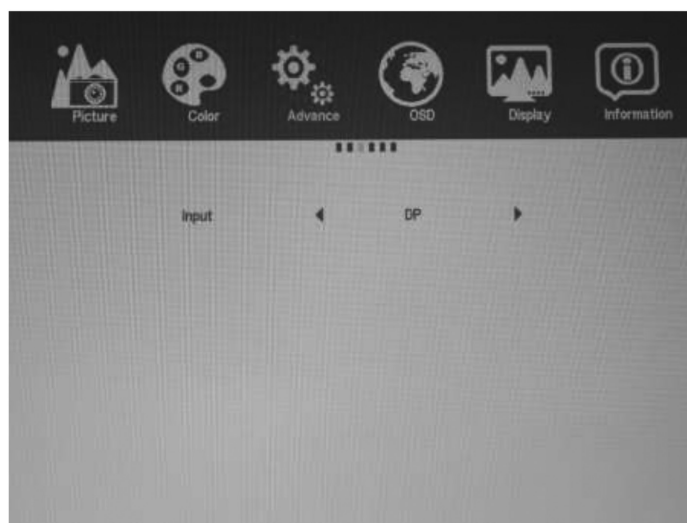


FIGURE 5-4 ADVANCE MENU

**TABLE 5-4. ADVANCE MENU COMPONENTS**

ADVANCE NO.	SETTING	EXPLANATION
1	Input	Select the video input source – VGA, DisplayPort or HDMI.

# CHAPTER 5: ON-SCREEN DISPLAY INTERFACE

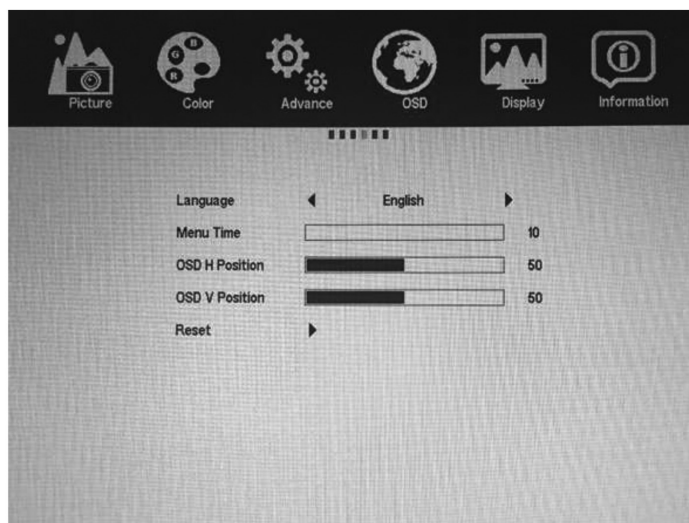


FIGURE 5-5 OSD MENU

TABLE 5-5. OSD MENU COMPONENTS

OSD NO.	SETTING	EXPLANATION
1	Language	Selects the language that the OSD displays its menus in.
2	Menu Time	Set the time duration in seconds for which the OSD remains visible after the last button is pressed.
3	OSD H Position	Adjust the horizontal position of the OSD
4	OSD V Position	Adjust the vertical position of the OSD
5	Reset	Reset all settings to factory defaults.

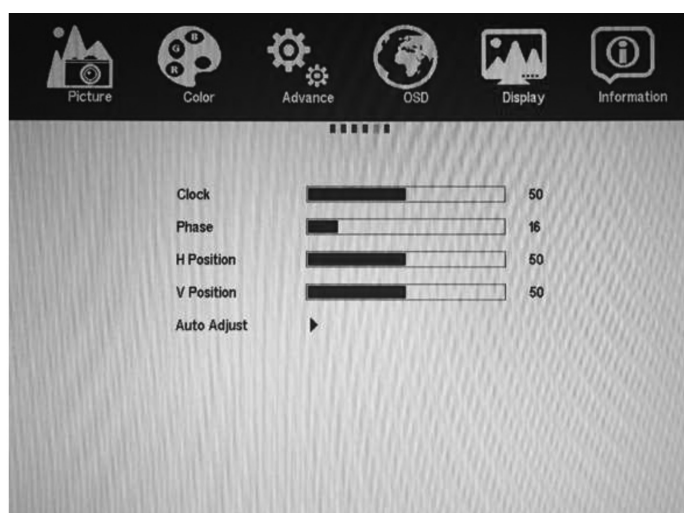


FIGURE 5-6 DISPLAY MENU

\*The adjustments are only for VGA signal input.

## CHAPTER 5: ON-SCREEN DISPLAY INTERFACE

TABLE 5-6. DISPLAY MENU COMPONENTS

DISPLAY NO.	SETTING	EXPLANATION
1	Clock	Adjust the clock to synchronize the sampling clock of the display with the pixel clock of the connected equipment.
2	Phase	Adjust the phase to synchronize the frequency settings of the display with the frequency output of the connected equipment.
3	H Position	Move the screen image left or right.
4	V Position	Move the screen image up or down.
5	Auto Adjust	Optimize the visual settings.



FIGURE 5-7 INFORMATION MENU

Display the current video input information on the screen.

## APPENDIX A: REGULATORY INFORMATION

### A.1 FCC CLASS A STATEMENT

This equipment generates, uses, and can radiate radio-frequency energy, and if not installed and used properly, that is, in strict accordance with the manufacturer's instructions, may cause interference to radio communication. It has been tested and found to comply with the limits for a Class A computing device in accordance with the specifications in Subpart B of Part 15 of FCC rules, which are designed to provide reasonable protection against such interference when the equipment is operated in a commercial environment. Operation of this equipment in a residential area is likely to cause interference, in which case the user at his own expense will be required to take whatever measures may be necessary to correct the interference.

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

This digital apparatus does not exceed the Class A limits for radio noise emission from digital apparatus set out in the Radio Interference Regulation of Industry Canada.

Le présent appareil numérique n'émet pas de bruits radioélectriques dépassant les limites applicables aux appareils numériques de classe A prescrites dans le Règlement sur le brouillage radioélectrique publié par Industrie Canada.

## APPENDIX A: REGULATORY INFORMATION

### A.2 NOM STATEMENT

1. Todas las instrucciones de seguridad y operación deberán ser leídas antes de que el aparato eléctrico sea operado.
2. Las instrucciones de seguridad y operación deberán ser guardadas para referencia futura.
3. Todas las advertencias en el aparato eléctrico y en sus instrucciones de operación deben ser respetadas.
4. Todas las instrucciones de operación y uso deben ser seguidas.
5. El aparato eléctrico no deberá ser usado cerca del agua—por ejemplo, cerca de la tina de baño, lavabo, sótano mojado o cerca de una alberca, etc.
6. El aparato eléctrico debe ser usado únicamente con carritos o pedestales que sean recomendados por el fabricante.
7. El aparato eléctrico debe ser montado a la pared o al techo sólo como sea recomendado por el fabricante.
8. Servicio—El usuario no debe intentar dar servicio al equipo eléctrico más allá a lo descrito en las instrucciones de operación. Todo otro servicio deberá ser referido a personal de servicio calificado.
9. El aparato eléctrico debe ser situado de tal manera que su posición no interfiera su uso. La colocación del aparato eléctrico sobre una cama, sofá, alfombra o superficie similar puede bloquea la ventilación, no se debe colocar en libreros o gabinetes que impidan el flujo de aire por los orificios de ventilación.
10. El equipo eléctrico deber ser situado fuera del alcance de fuentes de calor como radiadores, registros de calor, estufas u otros aparatos (incluyendo amplificadores) que producen calor.
11. El aparato eléctrico deberá ser conectado a una fuente de poder sólo del tipo descrito en el instructivo de operación, o como se indique en el aparato.
12. Precaución debe ser tomada de tal manera que la tierra física y la polarización del equipo no sea eliminada.
13. Los cables de la fuente de poder deben ser guiados de tal manera que no sean pisados ni pellizcados por objetos colocados sobre o contra ellos, poniendo particular atención a los contactos y receptáculos donde salen del aparato.
14. El equipo eléctrico debe ser limpiado únicamente de acuerdo a las recomendaciones del fabricante.
15. En caso de existir, una antena externa deberá ser localizada lejos de las líneas de energía.
16. El cable de corriente deberá ser desconectado del cuando el equipo no sea usado por un largo periodo de tiempo.
17. Cuidado debe ser tomado de tal manera que objetos líquidos no sean derramados sobre la cubierta u orificios de ventilación.
18. Servicio por personal calificado deberá ser provisto cuando:
  - A: El cable de poder o el contacto ha sido dañado; u
  - B: Objetos han caído o líquido ha sido derramado dentro del aparato; o
  - C: El aparato ha sido expuesto a la lluvia; o
  - D: El aparato parece no operar normalmente o muestra un cambio en su desempeño; o
  - E: El aparato ha sido tirado o su cubierta ha sido dañada.



## APPENDIX B: DISCLAIMER/TRADEMARKS

### B.1 DISCLAIMER

Black Box Corporation shall not be liable for damages of any kind, including, but not limited to, punitive, consequential or cost of cover damages, resulting from any errors in the product information or specifications set forth in this document and Black Box Corporation may revise this document at any time without notice.

### B.2 TRADEMARKS USED IN THIS MANUAL

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