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User Manual 24" High Resolution LCD 1920 x 1200 (1152 x 900)



1920 x 1200
WUXGA

LCD1U24-02
1U SUN LCD Console Drawer

Options :

- DC power



Legal Information

First English printing, October 2002

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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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.

Unpacking

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 the supplier immediately.

How To Clean Your LCD Monitor



Caution :

- To avoid the risk of electric shock, make sure your hands are dry before unplugging your monitor from or plugging your monitor into an electrical outlet.
- When you clean your monitor, do not press down on the LCD screen. Pressing down on the screen can scratch or damage your display. Pressure damage is not covered under warranty.
- Use only cleansers made specifically for cleaning monitors and monitor screens. Cleansers not made to clean monitors and monitor screens can scratch the LCD display or strip off the finish.
- Do not spray any kind of liquid directly onto the screen or case of your monitor. Spraying liquids directly onto the screen or case can cause damage which is not covered under warranty.
- Do not use paper towels or abrasive pads to clean your monitor. Using an abrasive pad or any wood based paper product such as paper towels can scratch your LCD screen.

Cleaning Your Monitor

To clean your LCD safely, please follow these steps :

- ① Disconnect the power cord.
- ② Gently wipe the surface using a clean, dry microfiber cloth. Use as little pressure as possible.

Cleaning Tough Marks and Smudges

To remove tough marks and smudges, please follow these steps :

- ① Disconnect the power cord.
- ② Spray a small amount of non-abrasive cleanser on a microfiber cloth.



Caution : Do not spray or apply any liquids directly onto the monitor. Always apply the solution to your microfiber cloth first, not directly on the parts you are cleaning.

- ③ Gently wipe the surface. Use as little pressure as possible.
- ④ Wait until your monitor is completely dry before plugging it in and powering it up.

< Part 1 >

< 1.1 > Package Content



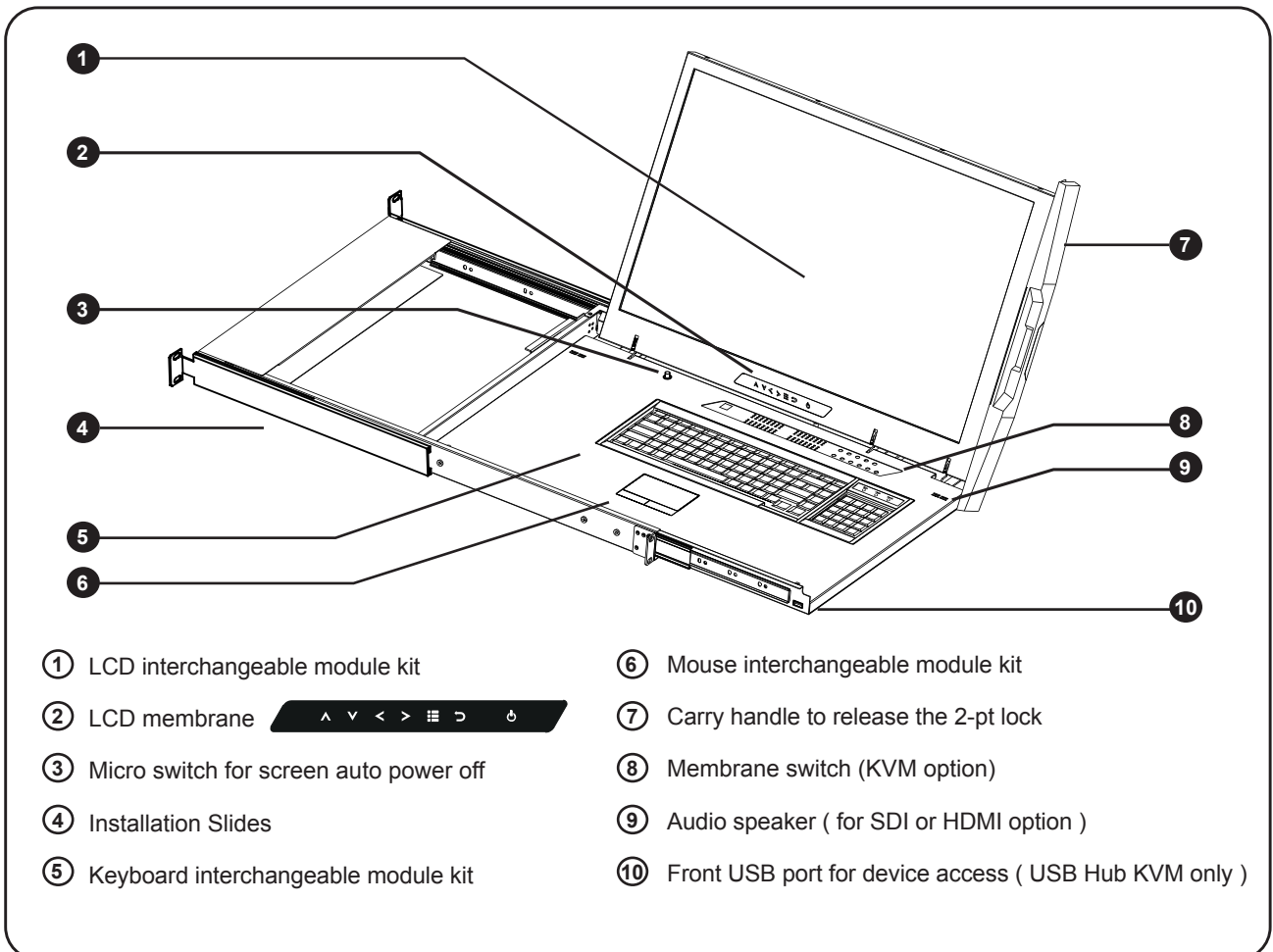
LCD1U24-02 unit X 1

- LCD-A3004 6ft DVI-D console cable X 1
- Power cord X 1
- M6 screw, cage nut & cup washer X 8



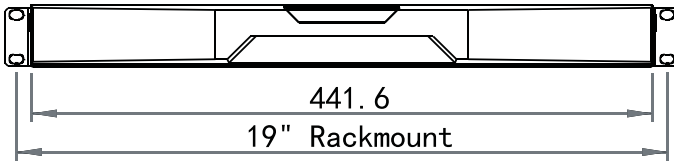
The above package content is only for the single console models. It varies with options such as KVM & DC power.

< 1.2 > Structure Diagram



< 1.2 > Dimension

Front View

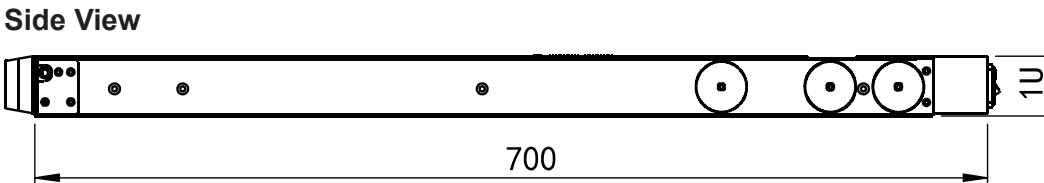


Rear View

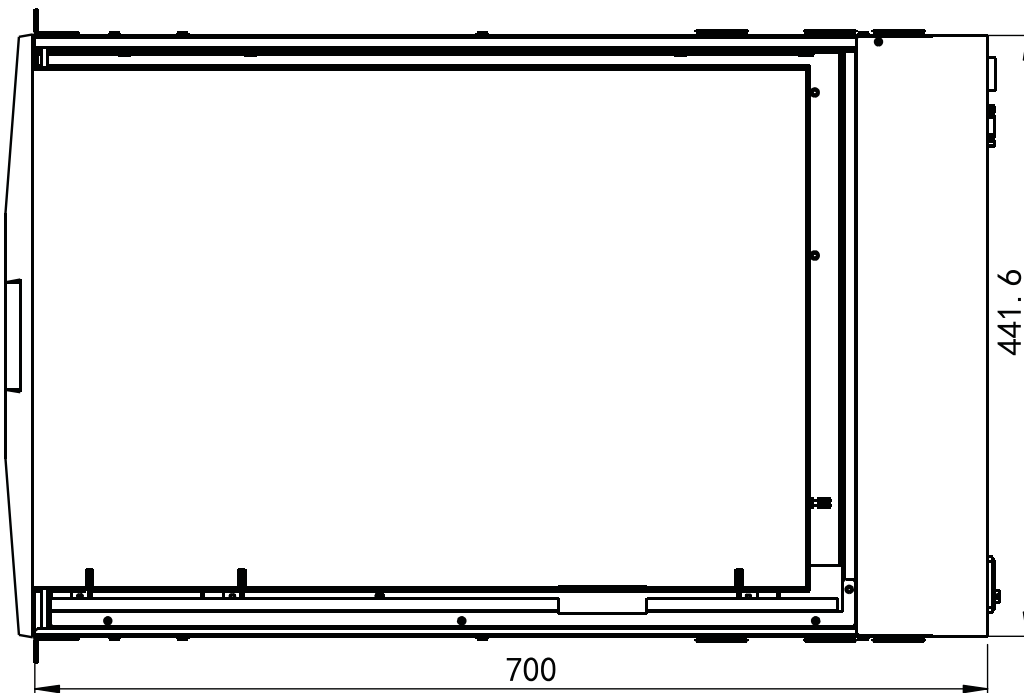


UNIT : mm
1mm = 0.03937 inch

Side View



Top View

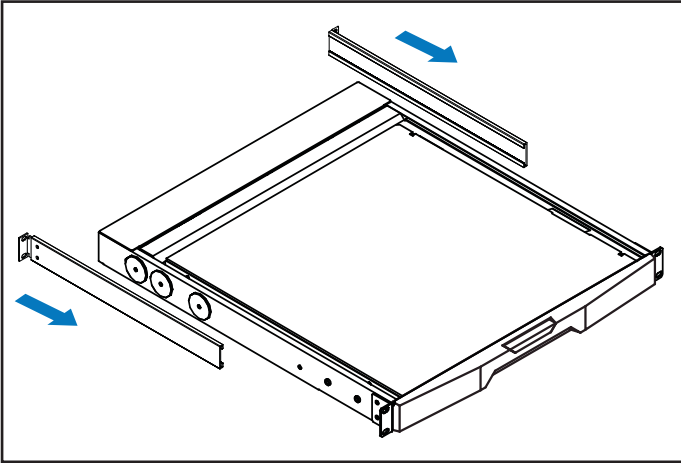


Model	Product Dimension (W x D x H)	Net Weight
LCD1U24-02	441.6 x 700 x 44 mm 17.4 x 27.6 x 1.73"	15.3 kg 33.7 lb

! The weight is only for the single console models. It varies with accessories & options such as KVM & DC power.

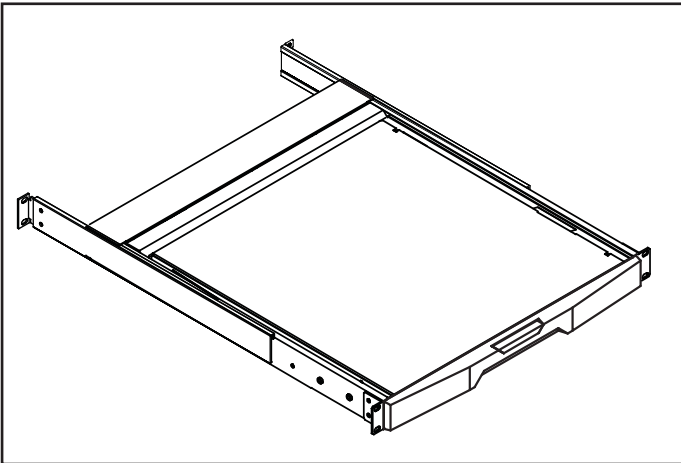
< 1.3 > Installation - How to install

Installation Slides



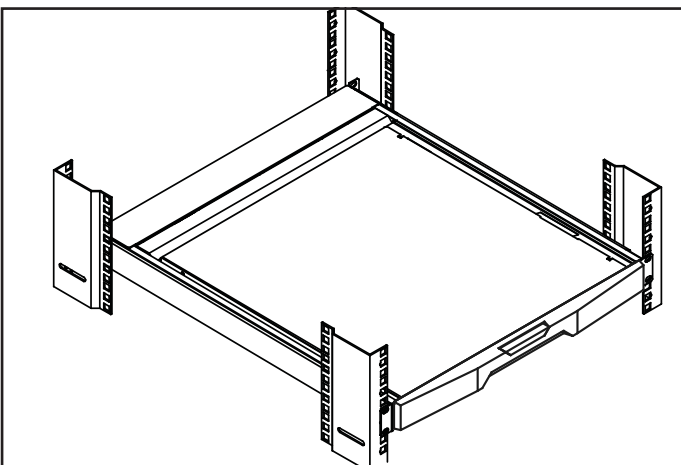
Step 1

- Insert the left and right rear mounting brackets into the LCD console drawer.



Step 2

- Measure the depth of the front and rear mounting rails.
- Align each rear mounting bracket to a suitable length.



Step 3

Complete the installation

- Fix the LCD console drawer into the rack.



M6 screw, cage nut & cup washer x 8 are provided.

< 1.3 > Installation- How to use the drawer



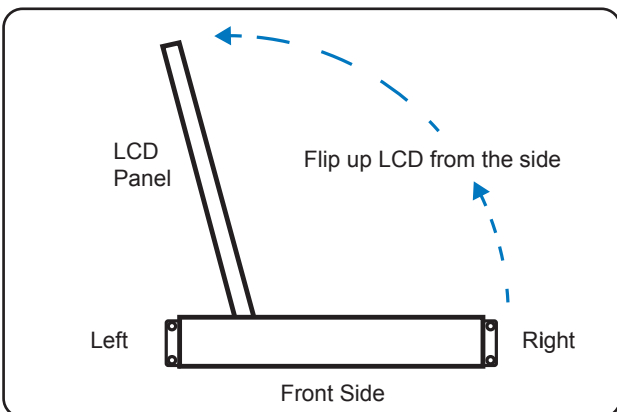
- Hold the handle and slide out the drawer.



- Flip up the LCD to a suitable angle.



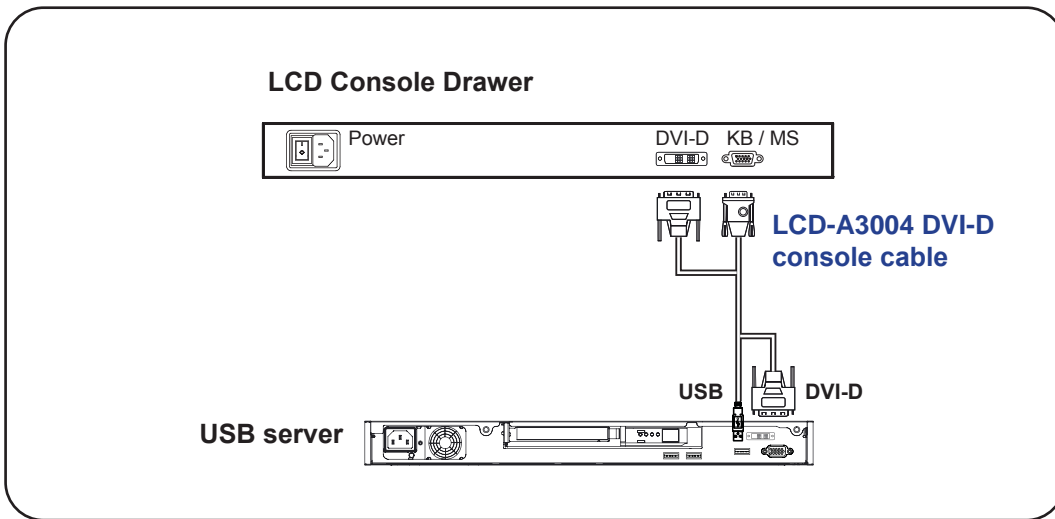
- Operate the LCD console drawer.



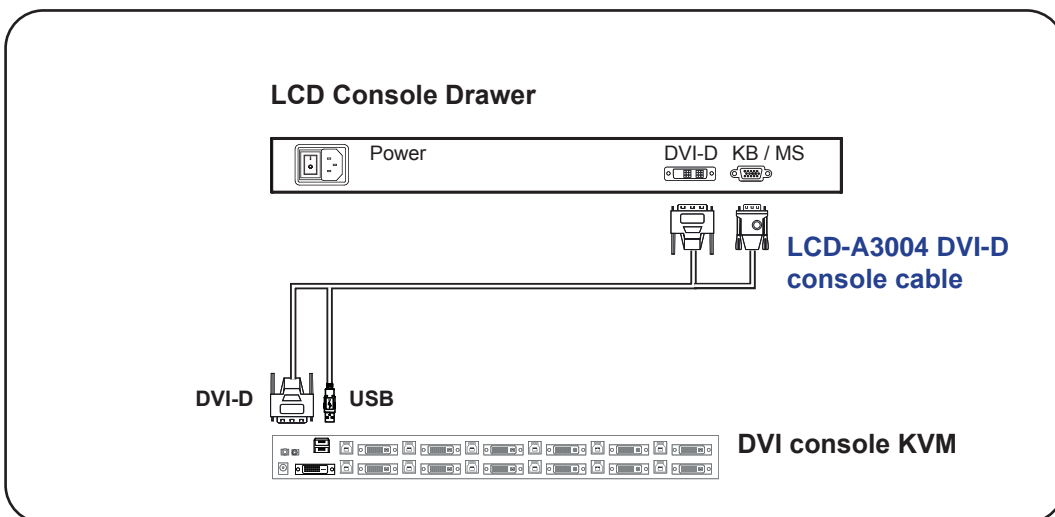
Option - Right Side Open

- Add **R** at the end of the model no.

< 1.4 > Connection to **USB Server** via LCD-A3004 cable



< 1.4 > Connection to **external KVM** via LCD-A3004 cable



Caution : The LCD console drawer is hot-pluggable, but components of connected devices, such as the servers and KVM switch, may not be hot-pluggable. Plugging and unplugging cables while servers and KVM are powered on may cause irreversible damage to the servers, KVM and LCD console drawer. Before attempting to connect anything to the LCD console drawer, we suggest turning off the power to all devices. Apply power to connected devices again only after the LCD console drawer is receiving power. The company is not responsible for damage caused in this way.

< Part 2 >

< 2.1 > Product Specifications

LCD Panel	Panel Size (diagonal)	24.1-inch Widescreen TFT color LCD
	Display pixel (dots x lines)	1920 x 1200
	Brightness (typ.)	300
	Contrast Ratio (typ.)	1000:1
	Color	16.7 M
	Viewing Angle (L/R/U/D)	89/89/89/89
	Response Time (ms)	14
	Dot pitch (mm)	0.27
	Display Area (mm)	518.40H x 324.0V
	Surface treatment	Anti-glare, Hard-coating
	Surface hardness	3H
	Backlight Type	LED
	MTBF (hrs)	30,000

Video Connectivity	Digital	HDMI	HDMI 1.3, CEA-861-D
		DVI	DVI-D, TMDS single link
	Plug & Play	DVI	VESA EDID structure 1.3

Power	Power Supply	Range	Auto-sensing 100 to 240VAC, 50 / 60Hz
	Power Consumption for Single Console	Screen ON	Max. 40W
		Power saving mode	Max. 5W
		Power button OFF	Max. 1W
	Power Consumption with KVM integration	Screen ON	Max. 65W
		Power saving mode	Max. 30W

*For details, please refer to our KVM rear kit user manuals

Regulatory	Safety	FCC & CE certified
	Environmental	RoHS2 & REACH compliant

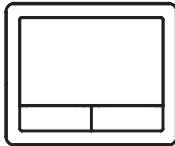
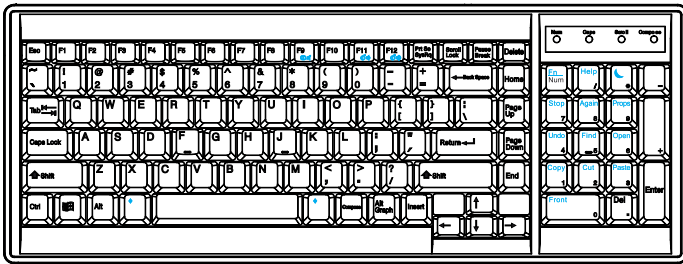
Environmental Conditions	Operating	Temperature	0 to 55°C degree
		Humidity	20~90%, non-condensing
		Altitude	16,000 ft
	Storage / Non-operating	Temperature	-20 to 60°C degree
		Humidity	5~90%, non-condensing
		Altitude	40,000 ft
		Shock	10G acceleration (11ms duration)
		Vibration	5~500Hz 1G RMS random

Physical Specification	Product (W x D x H)	441.6 x 700 x 44 mm 17.4 x 27.6 x 1.73 inch
	Net Weight	15.3 kgs / 33.7 lbs

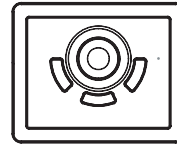
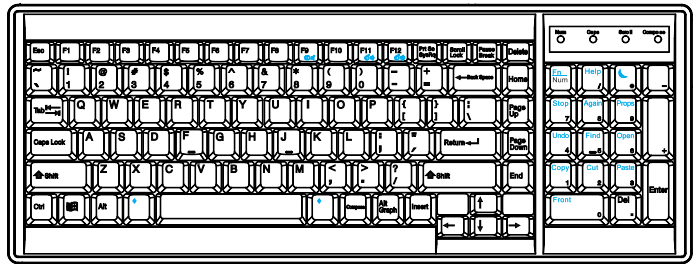
Applicable Format	DVI-D Input	PC Signal	1920 x 1200 x 60Hz
			1360 x 768 x 60Hz
			1280 x 1024 x 60 / 75Hz
			1280 x 960 x 60Hz
			1280 x 768 x 60 / 75Hz
			1152 x 864 x 75Hz
			1024 x 768 x 60 / 70 / 75Hz
			848 x 480 x 60Hz
			800 x 600 x 60 / 72 / 75Hz
			720 x 400 x 70Hz
			640 x 480 x 60 / 72 / 75Hz
			640 x 400 x 70Hz
			640 x 350 x 70Hz

< 2.2 > SUN Keyboard / Mouse Options

Sn SUN keyboard integrated with touchpad



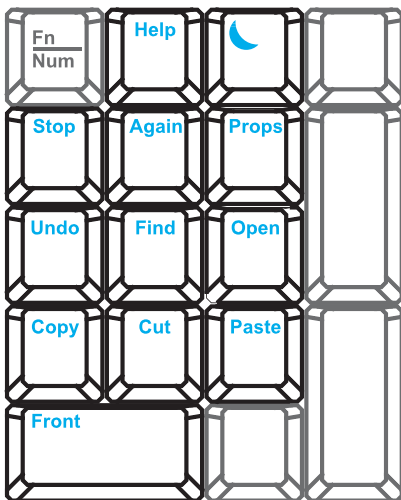
Sb SUN keyboard integrated with trackball



SUN keyboard integrated with touchpad / trackball

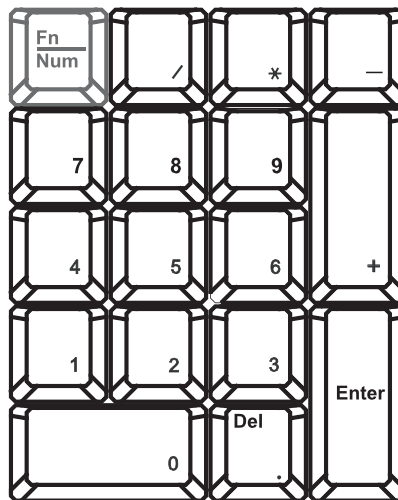
- Incorporates SUN keys, including Stop, Cut, Paste, Compose, Copy and Help
- 104 key notepad keyboard with full numerical pad and SUN function
- USB interface
- US layout only

How to Use "SUN" Keyboard



Num LED in Off mode

Key pad behaves as a SUN Solar system administration command mode

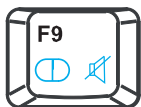


Num LED in Green mode

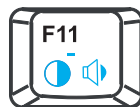
Key pad behaves as a normal key pad mode

Audio / Display Keys

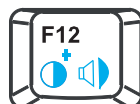
* Please ask your supplier for full details



F9
Audio : Mute
Display : Degauss





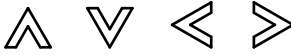

F11
Audio : Decrease volume
Display : Decrease contrast




F12
Audio : Increase volume
Display : Increase contrast



< 2.3 > On-screen Display Operation (OSD)



Membrane Switch	Function
	Turn the monitor on or off
	Display the OSD menu Act as an Enter key to select screen setting options
	Scroll through menu options and adjust the displayed control
	Exit the OSD screen Go back to the previous on-screen sub-menu or main menu

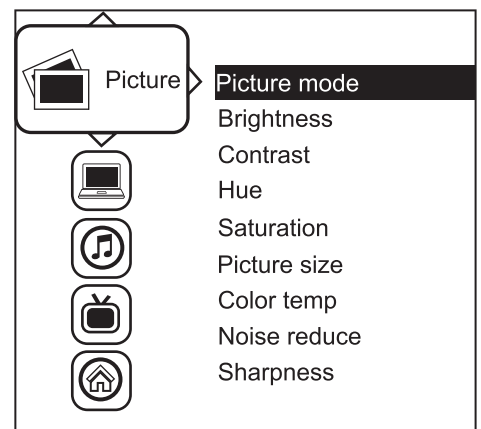
Remark : All LED touch buttons in **WHITE** light.

The LED of **Power**  touch button will flash continuously when there is no signal input.

- ① All the LED touch buttons will automatically turn off after 10 minutes of idle status (except the **Power** ).
- ② Light up all membrane buttons, please press any button for 1 - 2 seconds (except the **Power** ).

① Picture

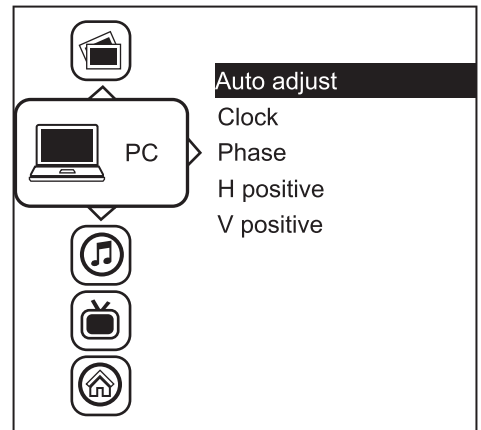
Picture mode :	Standard / Vivid / Soft / User mode to choose
Brightness :	Adjust background black level of the screen image
Contrast :	Adjust the difference between the image background (black level) and the foreground (white level)
Hue:	Adjust the screen hue value
Saturation :	Adjust the saturation of the image color
Picture size :	Adjust the image size
Color temp :	Standard / Cool / Warm / User to choose
Noise reduce :	Reduce the noise of the image
Sharpness :	Adjust the image from weak to sharp



< 2.3 > On-screen Display Operation (OSD)

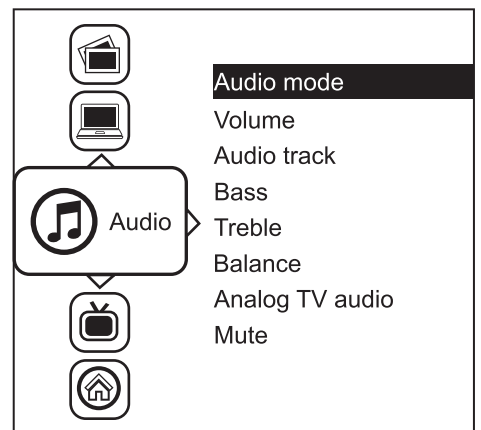
② PC

Auto adjust :	Automatically adjust sizes, centers and fine tunes the video signal to eliminate waviness and distortion.
Clock :	Adjust the clock value
Phase :	Adjust the phase value
H. Position :	Align the screen image left or right
V. Position :	Align the screen image up or down



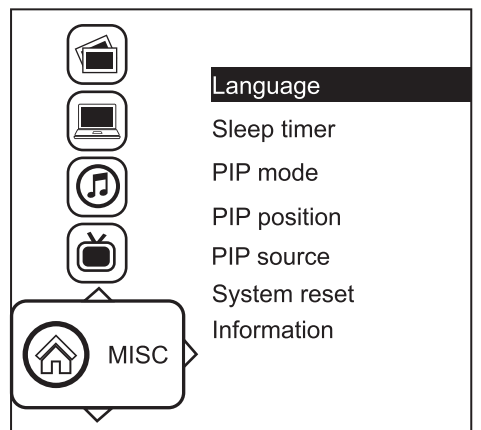
③ Audio

Audio mode :	Movie / Voice / Normal / Music mode to choose
Volume :	Adjust the volume of sound
Bass :	Set the value of bass sound
Treble :	Set the value of treble sound
Balance :	Set the balance value of treble and bass sound
Analog TV audio :	Set the value of analog TV audio sound
Mute :	Turn off the surrounding sound



④ MISC

Language :	Select the language in which the OSD menu is displayed - English
Sleep timer :	Set the off time
PIP mode :	Adjust picture in picture setting
PIP position :	Enter into PIP position
PIP source :	Enter into the Sub source and sound source
System reset :	Return the adjustment back to factory setting
Information :	Select for Help



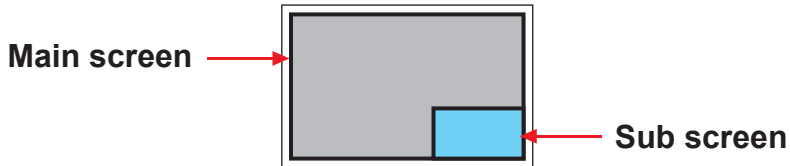
< 2.4 > How to Use Picture In Picture (PIP) / Picture By Picture (PBP)

< 2.4.1 > Picture in Picture (PIP)

Mode

Display the Sub screen in the Main screen.

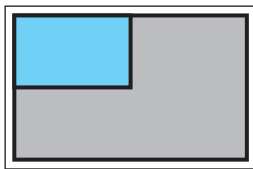
OSD Menu → MISC → PIP Mode → Large / Small / OFF



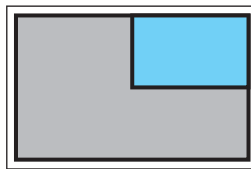
Position

Adjust the position of the Sub screen (top left, bottom left, top right, bottom right)

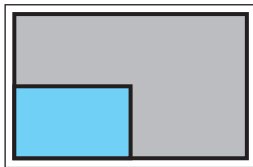
OSD Menu → MISC → PIP Position → top left / top right / bottom left / bottom right



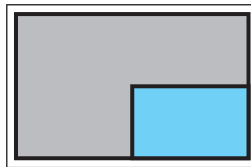
top left



top right



bottom left



bottom right

Size

Adjust the size of the Sub screen (Large / Small)

OSD Menu → MISC → PIP Mode → Large / Small

Size of Sub screen

LCD Monitor	Large Sub screen	Small Sub screen
1920 x 1200	552 x 414	480 x 360
1920 x 1080	552 x 414	480 x 360
1440 x 900	414 x 310	360 x 270
1366 x 768	392 x 294	340 x 254
1280 x 1024	368 x 276	320 x 240

< 2.4.2 > Picture By Picture (PBP)

Mode

Display the Sub screen next to the Main screen.

OSD Menu → MISC → PIP Mode → PBP



Size

LCD Monitor	Main / Sub screen
1920 x 1200	955 x 716
1920 x 1080	955 x 716
1440 x 900	715 x 536
1366 x 768	678 x 508
1280 x 1024	635 x 476

< 2.4.3 > PIP / PBP Source

To select an input signal for PIP / PBP Sub screen.

OSD Menu → MISC → PIP Source → VGA / S-Video / Composite / DVI / HDMI / SDI / YPbPr / TV

The PIP / PBP is operable in the following table :

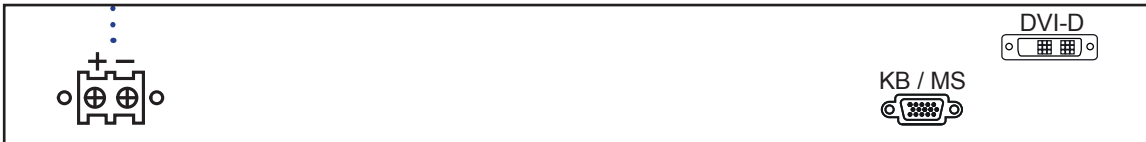
Main \ Sub	VGA	S-Video	Composite	DVI-D	HDMI	SDI	YPbPr	TV
VGA	X	O	O	O	O	O	O	O
S-Video	O	X	X	O	O	O	O	X
Composite	O	X	X	O	O	O	O	X
DVI	O	O	O	X	X	O	O	O
HDMI	O	O	O	X	X	O	O	O
SDI	O	O	O	O	O	X	X	O
YPbPr	O	O	O	O	O	X	X	O
TV	O	X	X	O	O	O	O	X

< Part 3 >

< 3.1 > Options : DC Power

Model	12V	24V	48V	110 ~ 125V
Input rating				
Input voltage:	12-Volt	24-Volt	48-Volt	110-Volt
Input range:	9 ~ 18V	18 ~ 36V	36 ~ 75V	66 ~ 160V
Input current				
- No load	50 mA	50 mA	50 mA	40 mA
- Full load	4950 mA	2450 mA	1220 mA	993 mA
Output rating				
Output voltage:	12-Volt	12-Volt	12-Volt	12-Volt
Output current:	4.16A	4.16A	4.16A	8.4A
Efficiency	84%	85%	85%	92%

DC power





*** For DC power option :

- (1) DC option excludes AC power adapter and power cord.
- (2) Casing depth will be extended from 700mm (27.6") to 750mm (29.5")


< Part. 4 > KVM Integration

For right side open - Add **R** at the end of the model no.


Matrix DB-15 KVM 	Local	Remote	IP	8-port	16-port	32-port
	1	1	1	-M83IP	-M163IP	-
	1	1	2	-M84IP2	-M164IP2	-
	1	1	0	-M82	-M162	-
	1	2	0	-M83	-M163	-
	1	3	0	-M84	-M164	-

Combo DB-15 KVM 	Local	Remote	IP	8-port	16-port	32-port
	1	0	1	-8KVM2IP	-16KVM2IP	-
	1	1	0	-8KVM2	-16KVM2	-
	1	0	0	-8KVM-u	-16KVM-u	-

For right side open - Add **R** at the end of the model no.

DVI-D KVM 	Local	Remote	IP	12-port	-	-
	1	0	0	-12DVI	-	-

For right side open - Add **R** at the end of the model no.

USB Hub DB-15 KVM 	Local	Remote	IP	8-port	16-port	32-port
	1	0	1	-H8KVM2IP	-H16KVM2IP	-
	1	1	0	-H8KVM2	-H16KVM2	-
	1	0	0	-H8KVM	-H16KVM	-

Model	Product Dimension (W x D x H)	Net Weight
with KVM	441.6 x 800 x 44 mm 17.4 x 31.5 x 1.73"	16.1 kg 35.4 lb

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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