

User Manual

Rackmount LCD Drawer

- 17", 19", 20" screen size
- Designed for SUN Solaris



Models
SP117 / 119 Series



Models
SP220 Series

- Ultra high resolution 1600 x 1200
- 2U height

Options :

- AV / BNC
- DVI
- DC power

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

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.

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

- 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 drawer 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.

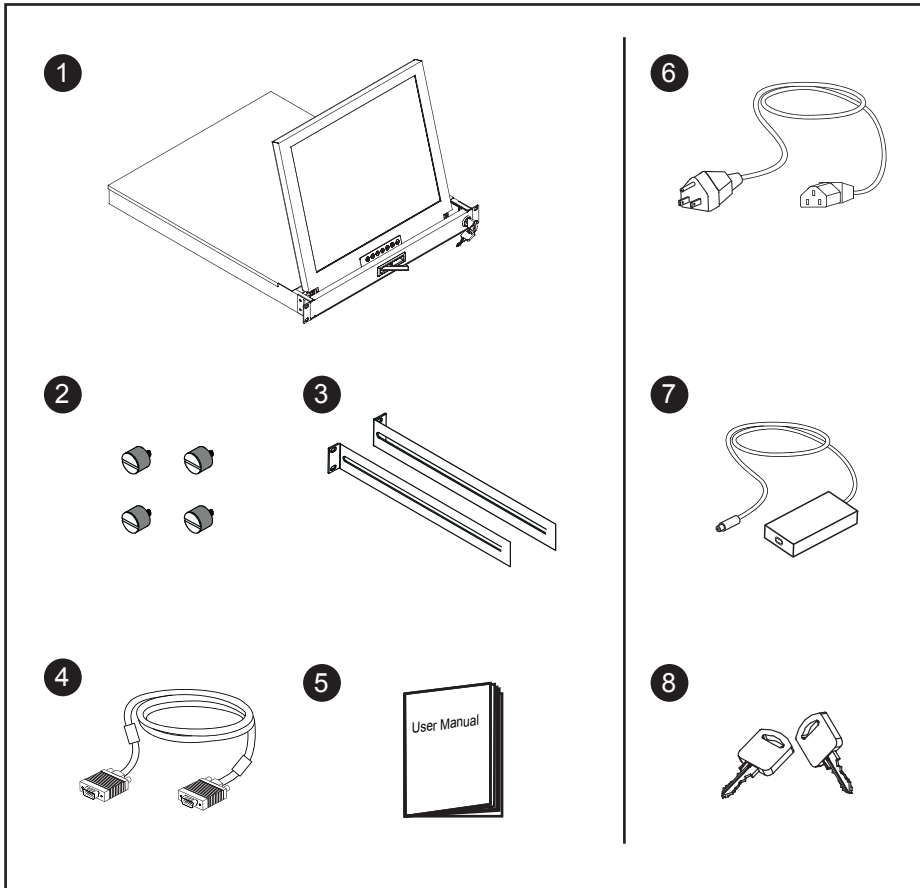
Regulatory Notices Federal Communications Commission (FCC)

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.



- ① Rackmount LCD drawer x 1 pc
- ② Fasteners for rear L-bracket x 4 pcs
- ③ 330mm rear mounting L-bracket x 1 pair
 - * SP117 series mounting depth-adjustable from 210 to 795mm
 - * SP119 series mounting depth-adjustable from 260 to 845mm
 - * SP220 series mounting depth-adjustable from 350 to 830mm
- ④ 6' VGA cable (male to male) x 1 pc
- ⑤ User manual x 1 pc
- ⑥ Power cord x 1 pc
- ⑦ Auto switch power adapter (for external power version) x 1pc
- ⑧ Key x 2 pcs

1.4 Before Installation

- It is very important to locate the Rackmount LCD Drawer in a suitable environment.
- The surface for placing and fixing the Rackmount LCD Drawer should be stable and level or mounted into a suitable cabinet.
- Make sure the place has good ventilation, is out of direct sunlight, away from sources of excessive dust, dirt, heat, water, moisture and vibration.
- Convenience for connecting the Rackmount LCD Drawer to the related facilities should be well considers too.

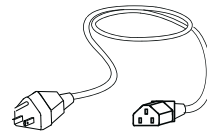
1.5 Unpacking

The Rackmount LCD Drawer comes with the standard parts shown on the package contents. Check and make sure they are included and in good condition. If anything is missing, or damage, contact the supplier immediately.

1.6 Optional Accessories

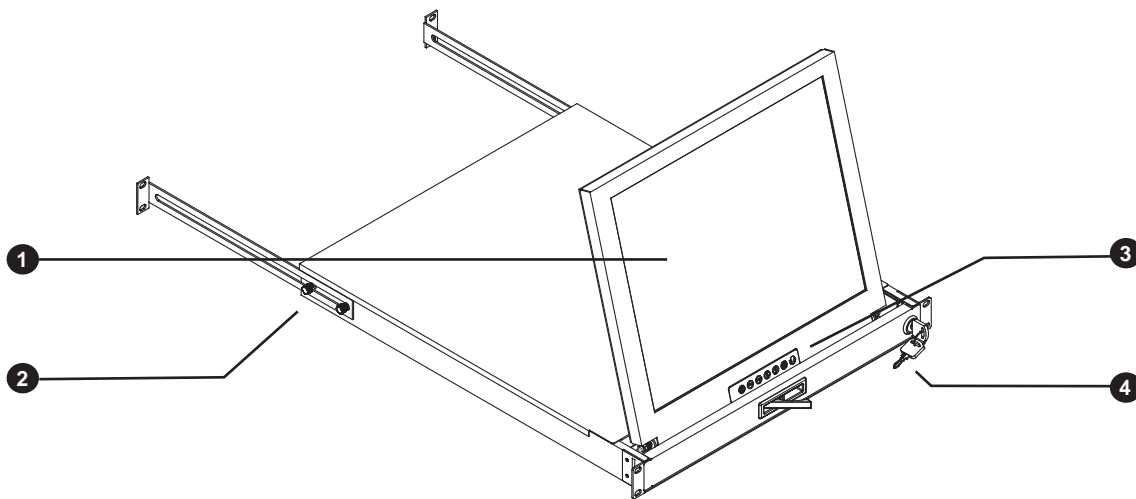
1. Power Cord

- 1.1 IEC power cord
- 1.2 NEMA 5-15 power cord (US)
- 1.3 BS 1363 power cord (UK)
- 1.4 CEE 7/4 power cord (German)
- 1.5 AS 3112 power cord (Australia)



Item	Model No.	Description
DB-15 KVM	CV-S801 / CV-S1601	8 / 16-port USB KVM
Cat5 KVM	UIP-1602 / UIP-3202	16 / 32-port IP Cat5 KVM
	U-1602 / U-3202	16 / 32-port two console Cat5 KVM
	U-1601 / U-3201	16 / 32-port high density Cat5 KVM
Keyboard Drawer	RK-1	Rackmount keyboard drawer (with KVM options)
	RK-2	Rackmount keyboard drawer (short depth version)

1.8 Structure Diagram



- ① SAMSUNG Class A TFT LCD panel
- ② Adjustable rear mounting L-bracket
- ③ LCD membrane
- ④ Lock with keys

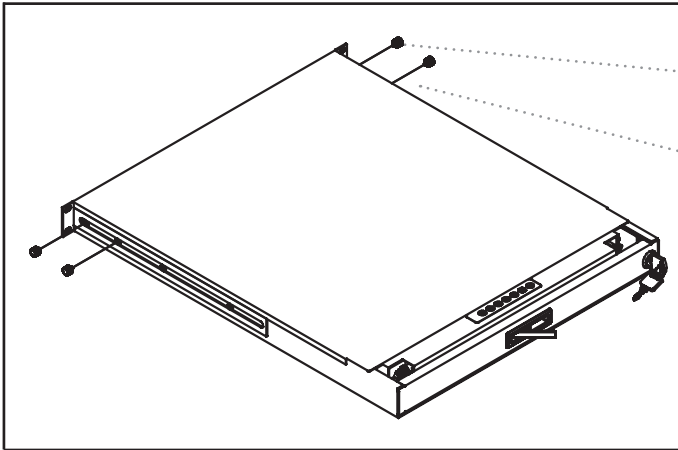


Figure 1. Installing the rear L-bracket to the LCD keyboard drawer.

- Install each rear L-bracket using two fasteners shown in **Figure 1**.
- Leaving the fasteners slightly loose

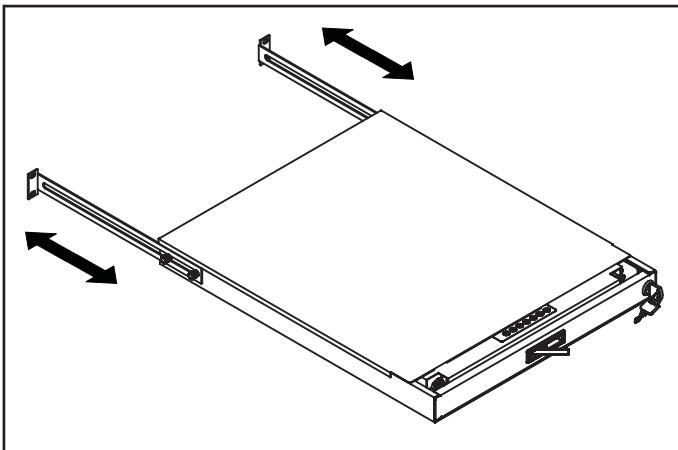


Figure 2. Aligning the rear L-brackets to a suitable length for the rack.

- Measure the front and rear mounting depth of the rack.
- Align each rear L-bracket to a suitable length and tighten the fasteners shown in **Figure 2**.

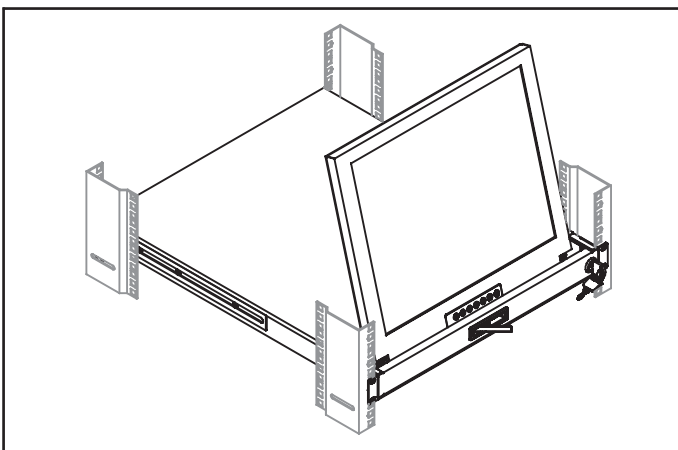
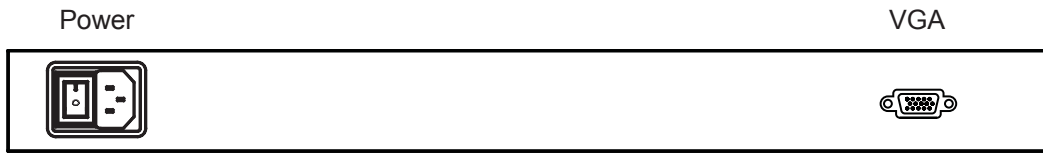


Figure 3. Fixing the LCD keyboard drawer into the rack.

- Fixed the the LCD keyboard drawer into the rack.
- * Hardware (screws and cage nuts) for fixing the mounting bracket to the rack is not provided.

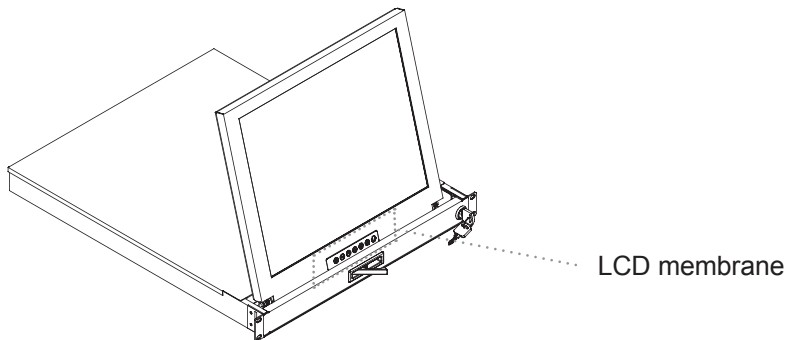
Internal power version



Caution : The Rackmount LCD Drawer are 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 of the servers, KVM and Rackmount LCD Drawer. Before attempting to connect anything to the Rackmount LCD Drawer, we suggest that turn off power to all devices before connecting them. Apply power to connected devices again only after the Rackmount LCD Drawer receiving power. The company is not responsible for damage caused in this way.

2.1 On-screen Display Operation

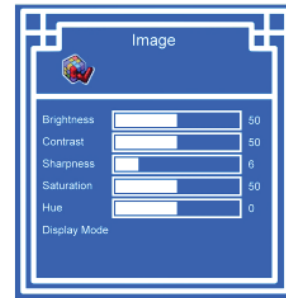
Chapter 2



Membrane Switch	Function
<ul style="list-style-type: none"> ○ ● ● 	Power light Green = On Orange = Power saving
	Power on / off LCD
	Display the OSD menu
	Scrolls through menu options and adjusts the displayed control
	Exit the OSD screen Shortcut key to auto adjustment by pressed the button for 5 seconds OR Toggle analog, digital & video connection (DVI-D and video options only)

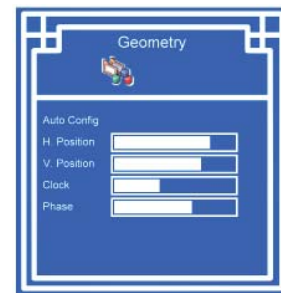
1. Image

- Brightness: Adjust background black level of the screen image
- Contrast: Adjust the difference between the image background (black level) and the foreground (white level)
- Sharpness: Adjust the image from weak to sharp
- Saturation: Adjust the saturation of the image color
- Hue: Adjust the screen hue value



2. Geometry

- Auto Config: Adjust automatically sizes, centers, and fine tunes the video signal to eliminate waviness and distortion. An "Adjusting" message is displayed during the process.
- H. Position: Align the screen image left or right
- V. Position: Align the screen image up or down
- Clock : Adjust the clock value
- Phase: Adjust the phase value



3. Function

- OSD Position: Adjust OSD menu horizontal and vertical position
- OSD Zoom: Adjust the difference between the image background (black level) and the foreground (white level).
- Color Temp: Select the screen color - 5500K, 6500K & 9500K. The factory default is 6500K.



4. System


- Language: Select the language in which the OSD menu is displayed - English, Chinese (中文), Japanese (日本語), German, French, Spanish, Italian.
- Time: Function is not supported
- Power OFF: Function is not supported
- Reset: Recall returns the adjustments back to factory settings.



Note : The current resolution and refresh rate information show on the top right hand side of the screen when the LCD powered on.

Main menu	Sub menu	Display mode			
		VGA	DVI	S-Video	RCA
Image	Brightness	√	√	√	√
	Contrast	√	√	√	√
	Sharpness	√	√	√	√
	Saturation	X	X	√	√
	Hue	X	X	√	√
Geometry	Auto Config	√	N/A	N/A	N/A
	H. Position	√	N/A	N/A	N/A
	V. Position	√	N/A	N/A	N/A
	Clock	√	N/A	N/A	N/A
	Phase	√	N/A	N/A	N/A
Function	OSD Position	√	√	√	√
	OSD Zoom	√	√	√	√
	Color Temp	√	√	√	√
System	Language	√	√	√	√
	Time	√	√	√	√
	Power OFF	√	√	√	√
	Reset	√	√	√	√

Sign	Represent
√	Available and adjustable
X	Available but not adjustable
N/A	Not available and adjustable

Item	Description		
Form Factor	1U rack mounting on slide-out rails		
LCD Manufacturer			
Diagonal Size	17" TFT	19" TFT	20" TFT
Resolution	1152 x 900 (Direct)	1152 x 900 (Direct)	1152 x 900 (Direct)
	1280 x 1024 (Native)	1280 x 1024 (Native)	1600 x 1200 (Native)
Brightness (cd/m ²)	300	300	300
Color Support	16.7 Mil.	16.7 Mil.	16.7 Mil.
Contrast Ratio (typ.)	1000:1	1000:1	800:1
Viewing Angle (H/V)	160° x 160°	160° x 160°	160° x 160°
Display Area (mm)	338 x 270	376 x 301	408 x 306
Tr Response Time (ms)	1.3	1.3	1
LCD Panel MTBF (hrs)	50,000	50,000	50,000
VGA Signal Input	Analog RGB, 0.7Vp-p		
Sync. Type	Separate H/V, Composite, SOG		
Resolution	640 x 350, 70Hz		
	720 x 400, 70Hz		
	640 x 480, 60 /72 /75Hz		
	800 x 600, 60 /70 /72 /75Hz		
	1024 x 768, 60 /70 /72 /75Hz		
	1152 x 864, 60 /70 /75Hz		
	1152 x 900, 66 /76Hz		
	1280 x 1024, 60 /70 /75Hz		
Plug & Play DDC	EDID 1.3		
Console Port	3-in-1 DB-15 connector for VGA / keyboard / mouse Support USB servers or KVM switches		
Power Input	Auto-sensing 100 to 240VAC, 50 / 60Hz		
Power Consumption	Max. 40 Watt, Standby 5 Watt		
Compatibility	Multi-platform - Mix PCs, SUNs, IBMs, HPs & DELLs.		
Regulation Approval	FCC, CE		

Options

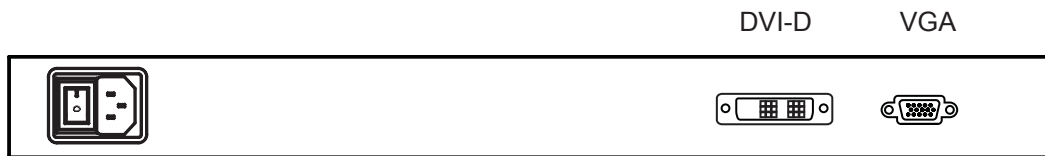
Graphic Input	DVI-D, BNC, S-Video & RCA video input
DC Power	DC power input with 12V, 24V, 48V selection

Environmental

Operation	0° to 50°C Degree
Storage	-5° to 60°C Degree
Relative Humidity	5~90%, non-condensing
Shock	10G acceleration (11ms duration)
Vibration	5~500Hz 1G RMS random vibration

4.1 DVI-D Option

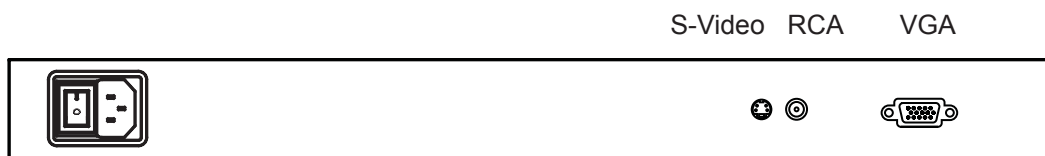
Chapter 4



Remarks

- Package includes with a 6' DVI-D cable

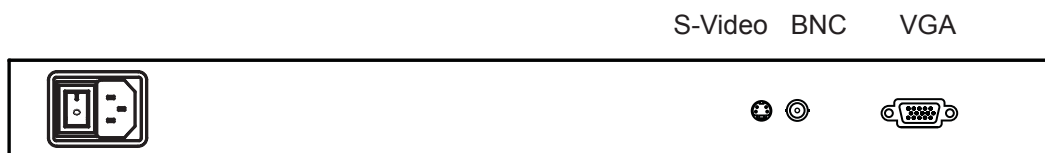
4.2 S-Video + RCA Input Option



Remarks

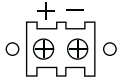
- Package includes an extra 6ft S-Video and 6ft RCA cables

4.3 S-Video + BNC Input Option



Remarks

- Package includes an extra 6ft S-Video cable



DC Power input VGA



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%

Remarks

- Package does not include power cord and AC power adapter

1. How can I adjust the monitor resolution to 1152 x 900 for SUN Micro system ?

The S solution LCD drawer will automatically detect the 1152 x 900 resolution, so no user configuration should be necessary.

2. How do I adjust the resolution in MS Windows operation system?

To change monitor resolution, click Start -> Control Panel -> Display. Select Setting tab to adjust the monitor resolution in Desktop Area. The available resolutions, "640 x 480", "800 x 600", "1024 x 768", "1152 x 864", "1280 x 1024", are determined by the display card in your computer.

3. Is interference signal appeared on LCD normal when shutting down the computer ?

In rare cases, interference may appear on the monitor. This may be caused by signal rate of VGA card and is considered normal. The image quality can be improved by adjusting the phase or pixel rate automatically or manually.

4. The membrane power light is not ON

Press the power On / Off on LCD membrane to check if the monitor is in the ON mode.

Check the power cord is properly connected to the LCD drawer and power outlet.

5. Screen image is not centered or sized properly

Press the  button for two seconds to automatically adjust the image.

Adjust the H-position and V-position settings via On-screen menu.

6. Is the LCD drawer hot-pluggable ?

The LCD drawer is hot-pluggable, but components of connected devices, such as the servers and KVMs, may not be hot-pluggable. We suggest turning off the power to all devices before connecting them. Apply power to connected devices again only after the LCD receives power.

Model	Product Dimension (W x D x H)	Packing Dimension (W x D x H)	Net Weight	Gross Weight
SP117 series	442 x 550 x 42 mm 17.4 x 21.6 x 1.74"	581 x 705 x 175 mm 22.9 x 27.8 x 6.9"	12 kg 26 lb	17 kg 37 lb
SP119 series	442 x 600 x 44 mm 17.4 x 23.6 x 1.73"	581 x 755 x 172 mm 22.9 x 29.7 x 6.8"	13 kg 29 lb	18 kg 39 lb
SP220 series	442 x 600 x 88 mm 17.4 x 23.6 x 3.5"	581 x 753 x 216 mm 22.9 x 29.6 x 8.5"	14 kg 31 lb	19 kg 42 lb

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