

User Manual

NS117 / 119 SUN LCD Keyboard Drawer



- With KVM Options
- 1U 17", 19" screen size
- Designed for SUN Solaris

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1.1 Important Safeguards

Chapter 1

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.

1.2 Regulatory Notice

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.

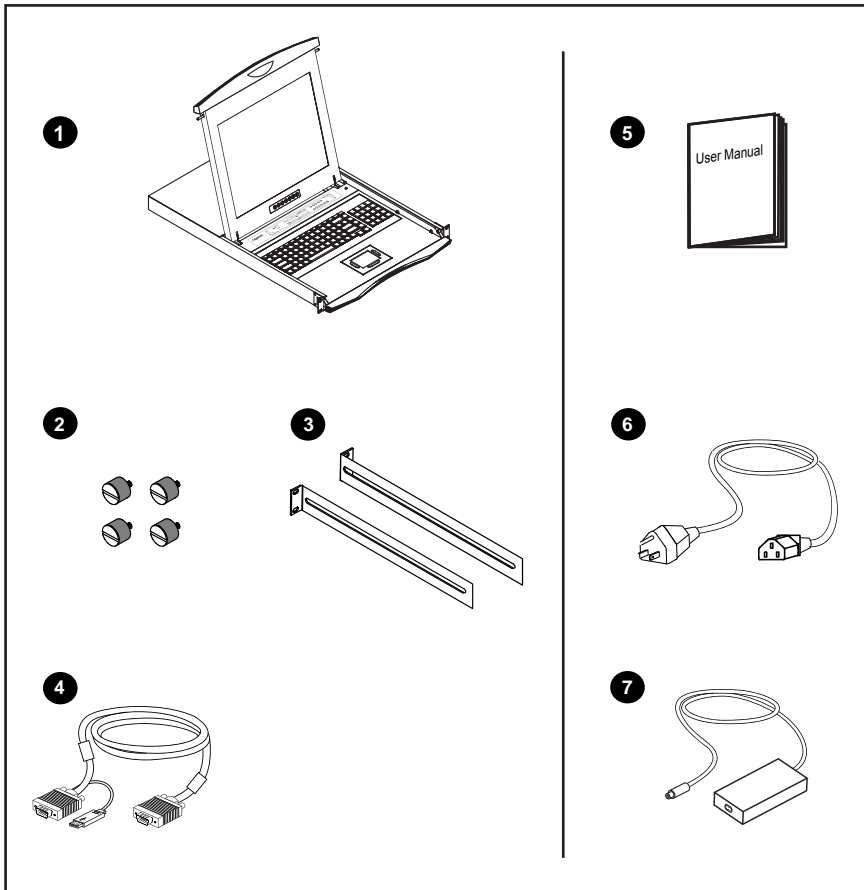
Regulatory Notices Federal Communications Commission (FCC)

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 LCD keyboard drawer x 1 pc
- ② Fasteners for rear L-bracket x 4 pcs
- ③ 330mm rear mounting L-bracket x 1 pair
* NS117 / 119 series mounting depth-adjustable from 315 to 880mm
- ④ **CB-6** 2-in-1 USB KVM cable 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

1.4 Before Installation

- It is very important to locate the LCD Keyboard Drawer in a suitable environment.
- The surface for placing and fixing the LCD Keyboard 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.
- Position LCD Keyboard Drawer with respect to related facilities.

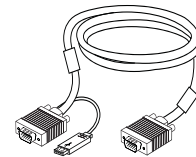
1.5 Unpacking

The LCD keyboard 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

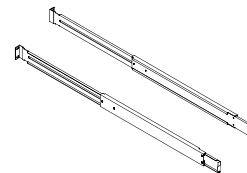
1. USB 2-in-1 KVM cable

- 1.1 CB-6 6 feet
- 1.2 CB-10 10 feet
- 1.3 CB-15 15 feet



2. "One Man" installation slides

- 2.1 NBK-01 Single or "One Man" installation slides
- * Please refer to P.9 - 11 for Installation guidelines



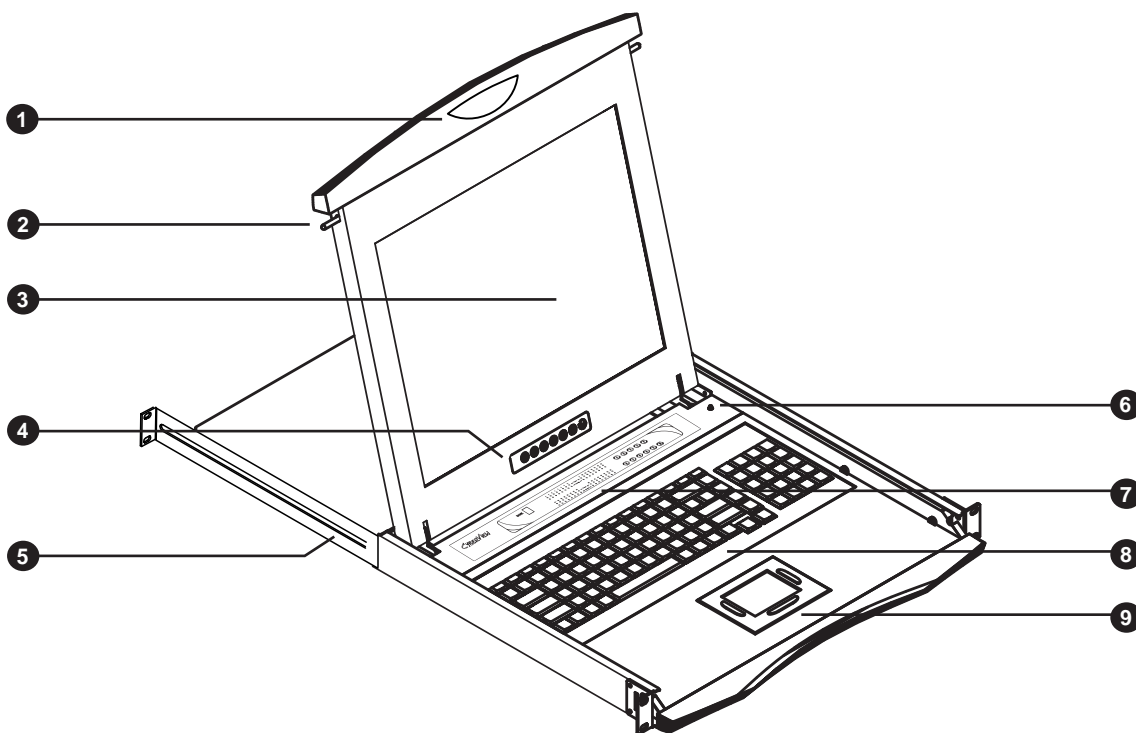
3. Power Cord

- 3.1 IEC power cord
- 3.2 NEMA 5-15 power cord (US)
- 3.3 BS 1363 power cord (UK)
- 3.4 CEE 7/4 power cord (German)
- 3.5 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

1.8 Structure Diagram



- ① Carry handle to release the 2-pt lock
- ② 2-point lock
- ③ LCD interchangeable module kit
- ④ LCD membrane
- ⑤ Adjustable rear mounting L-bracket
- ⑥ Micro switch for screen auto power off
- ⑦ Membrane switch (KVM option)
- ⑧ Keyboard interchangeable module kit
- ⑨ Mouse interchangeable module kit

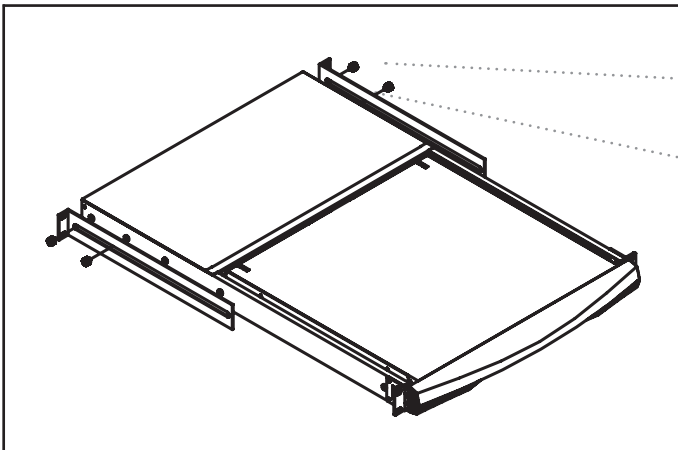
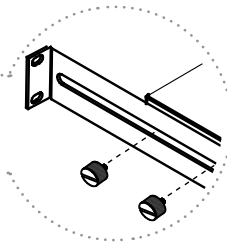


Figure 1. Installing the rear L-bracket to the LCD keyboard drawer.



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

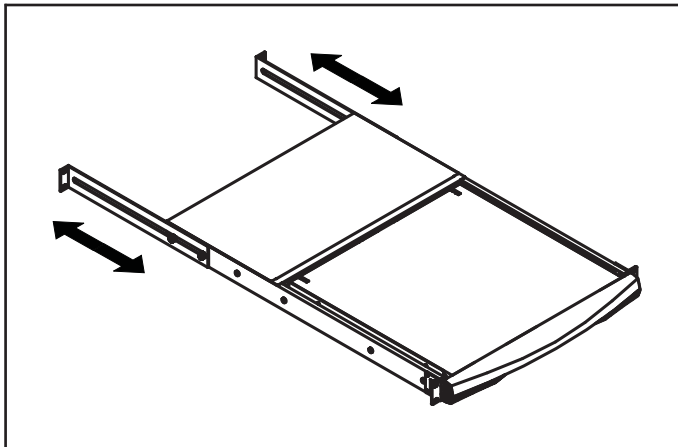


Figure 2. Aligning the rear L-brackets to a suitable length for the rack.

- 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**.

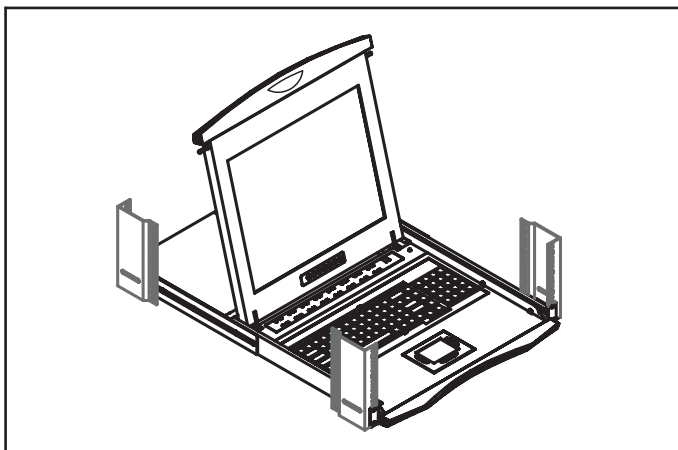


Figure 3. Fixing the LCD keyboard drawer into the rack.

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



Figure 4. Pulling the tab toward the front of LCD.

- Gently pull the tab toward the front of the LCD shown in **Figure 4**.



Figure 5. Flipping up the LCD to a suitable angle.

- Flip up the LCD to a suitable angle shown in **Figure 5**.



Figure 6. Operating the LCD keyboard drawer

- Operate the LCD keyboard drawer shown in **Figure 6**.



Figure 7. White arrow button.

- A white arrow release button is located on the outside of each slide (shown in **Figure 7**).



Figure 8. Pushing the white arrow button.

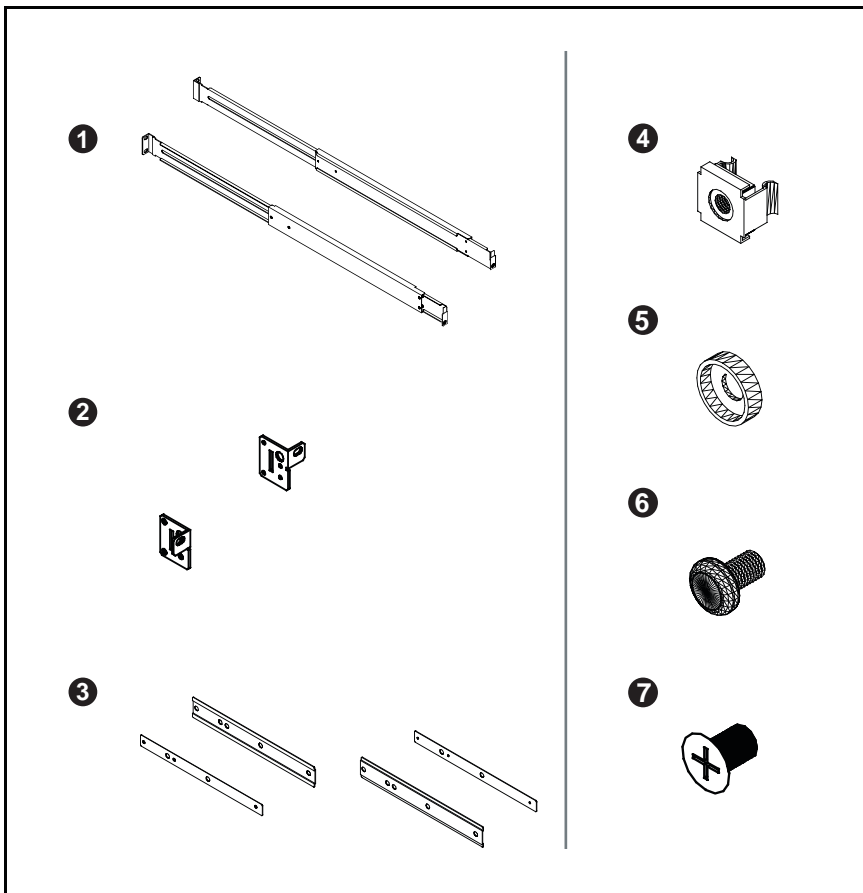
- Push the white arrow button on either side of the LCD keyboard drawer to unlock (shown in **Figure 8**). Avoid pressing the red button located on either side.



Figure 9. Pushing the LCD keyboard drawer into the rack.

- Hold down the white arrow button until the LCD keyboard drawer is located in the rack (shown in **Figure 9**).

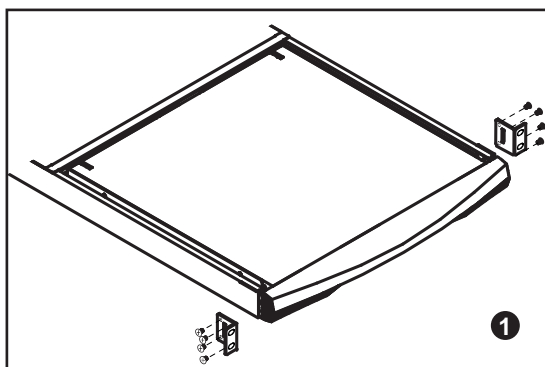
Package Contents



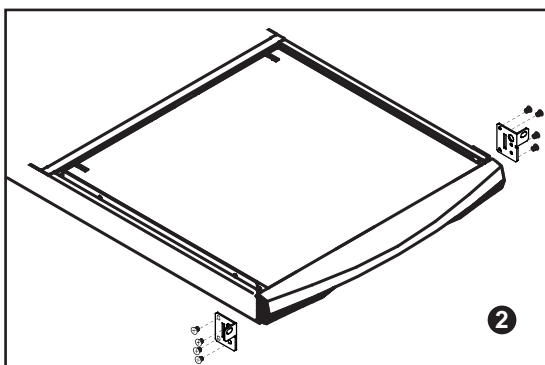
Model No : NBK-01

- ① Mounting bracket x 2 pcs
- ② Front mounting ear (left & right) x 2 pcs
- ③ Support bracket x 4 pcs
- ④ M6 cage nut x 6 pcs
- ⑤ M6 washer x 8 pcs
- ⑥ M6*15mm screw x 8 pcs
- ⑦ M3.2*4.5mm screw x 14 pcs

Install the Front Mounting Ear x 2 pcs

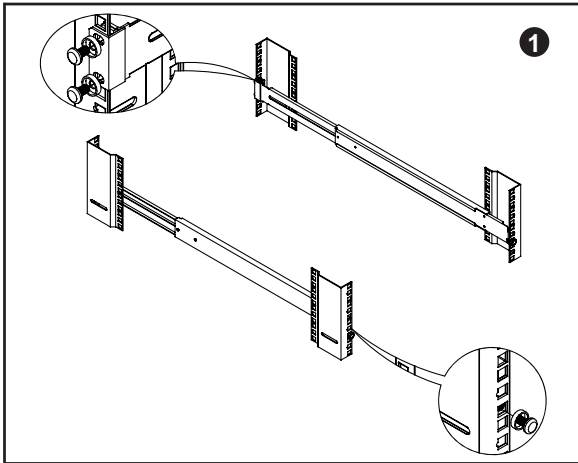


■ Disassemble the standard front mounting ears carefully.



■ Install the optional front mounting ears with M3.2*4.5mm screw x 8 pcs.

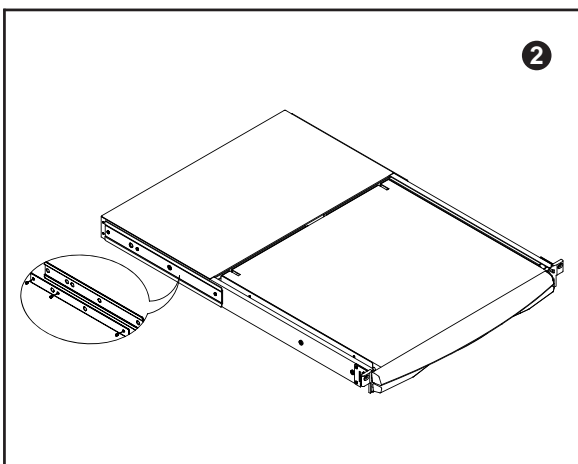
Install into rack



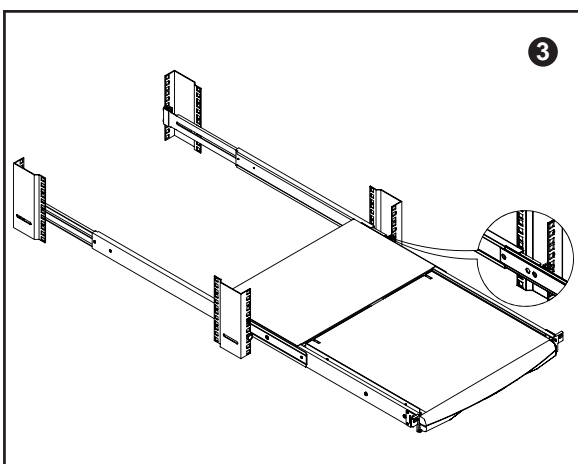
Model No : NBK-01

- Attach the mounting bracket to vertical mounting rails.
- Adjust the rear mouting bracket to fit your rack.
- Repeat the above steps for the other side

⚠ Caution : Leaving the screws slightly loose (Not release).



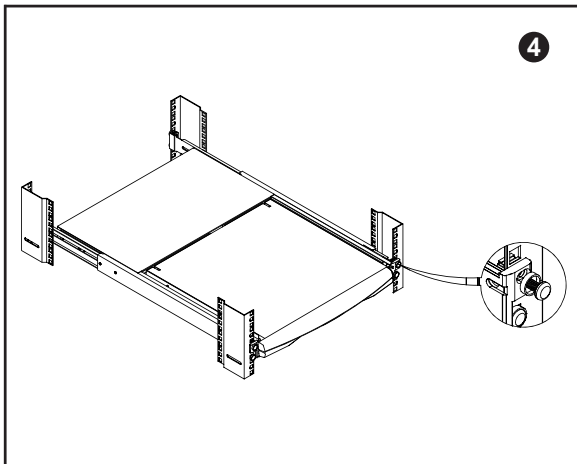
- Attach support brackets to chassis with M3.2*4.5mm screw x 3 pcs.
- Repeat the above step for the other side.



- Pickup the chassis.
- Insert inner members of slides into the already mounted internal slide members in the rack.
- Push the white arrow button on each slide that is installed on the LCD keyboard drawer to unlock (Push at the same time).

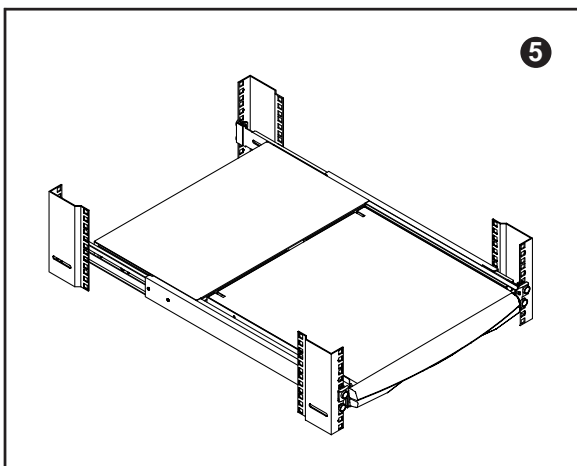
⚠ Caution : Be careful when pushing the chassis into the left and right slides. Avoid pressing the red button located on either side of the slide.

Install into rack



Model No : NBK-01

- Hold down the white arrow button and push the chassis to the end.
- Attach left and right mounting ears to vertical mounting rails.
- Tighten the screws on both sides.



- Installation completed.

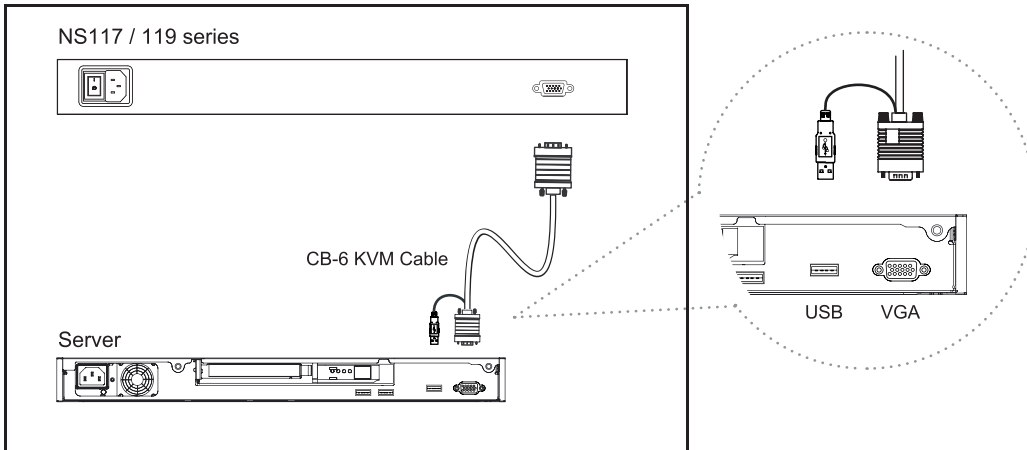


Figure 10. Example of connecting CB-6 2-in-1 USB KVM cable to server via USB interface

1.14 Connect to KVM via USB Interface

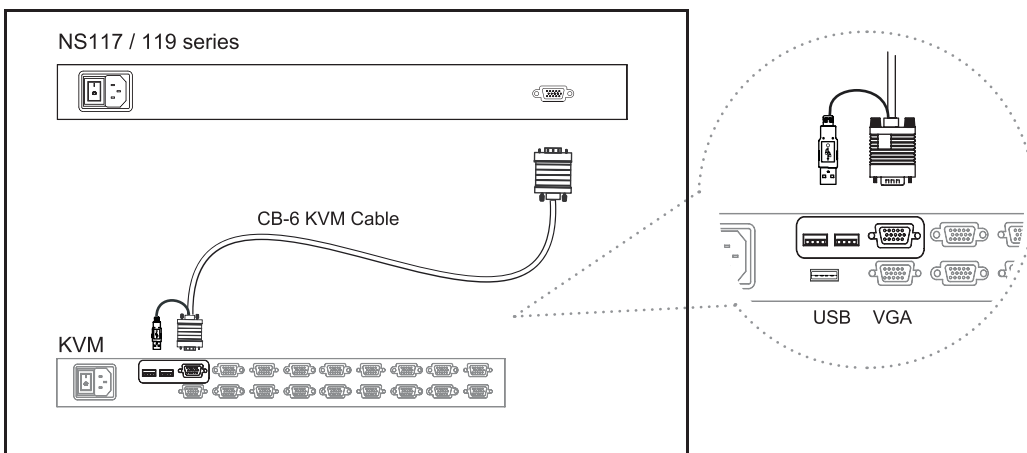


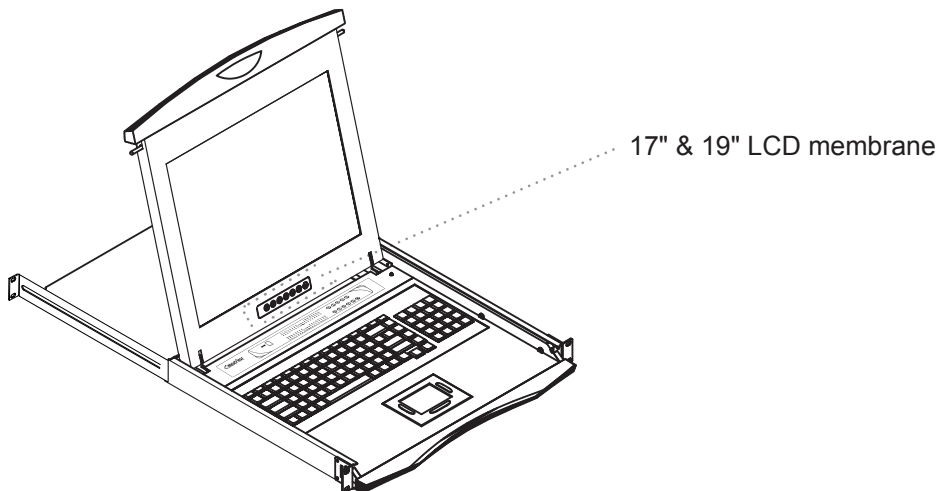
Figure 11. Example of connecting CB-6 2-in-1 USB KVM cable to KVM via USB interface

Remarks :

- The above connection is only for the LCD keyboard without KVM switch built-in.
- For the LCD keyboard drawer with KVM switch built-in, please refer to attached KVM switch user manual.



Caution : The LCD keyboard 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 keyboard drawer. Before attempting to connect anything to the LCD keyboard drawer, we suggest turning off the power to all devices before connecting them. Apply power to connected devices again only after the LCD keyboard is receiving power. The company is not responsible for damage caused in this way.

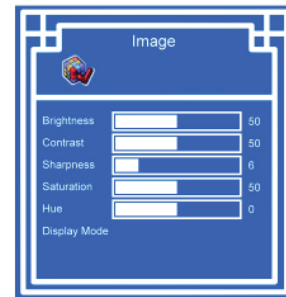


Membrane Switch	Function
<ul style="list-style-type: none"> ○ ● ● 	Power light Green = On Orange = Power saving
	Power on / off LCD
	Display the OSD menu
	Scrolls through menu options and adjusts the displayed control
	Exit the OSD screen Shortcut key to auto adjustment by pressing the button for 5 seconds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

2.2 On-screen Menu

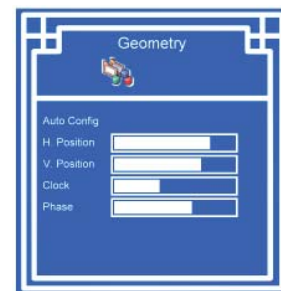
1. Image

- 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 is powered on.

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

Sign


Represent

√

Available and adjustable

X

Available but not adjustable

Item	Description	
Form Factor	1U rack mounting on slide-out rails	
LCD Manufacturer		
Diagonal Size	17" TFT	19" TFT
Resolution	1152 x 900 (Direct)	1152 x 900 (Direct)
	1280 x 1024 (Native)	1280 x 1024 (Native)
Brightness (cd/m ²)	300	300
Color Support	16.7 Mil.	16.7 Mil.
Contrast Ratio (typ.)	1000:1	1000:1
Viewing Angle (H/V)	160° x 160°	160° x 160°
Display Area (mm)	338 x 270	376 x 301
Tr Response Time (ms)	2	1.3
LCD Panel MTBF (hrs)	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	

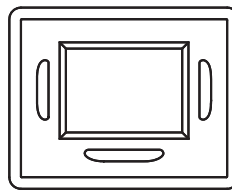
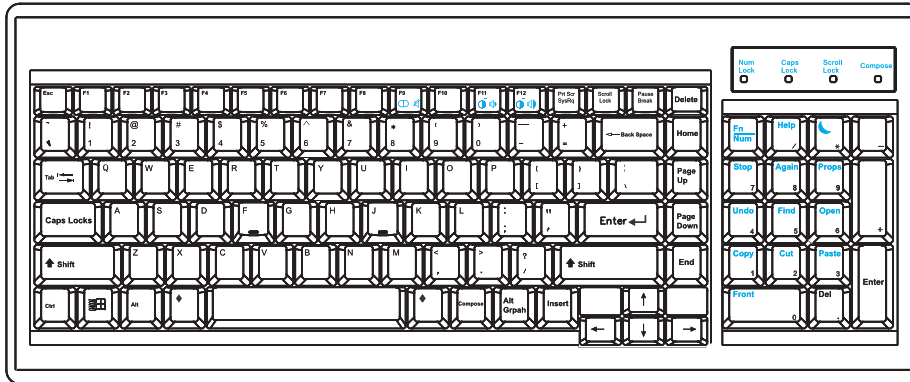
Options

KVM Integration	Cat5 & DB-15 KVM with IP console and 2-console selection
Keyboard & mouse	Full-size multilingual keyboard with touchpad or trackball
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

Se

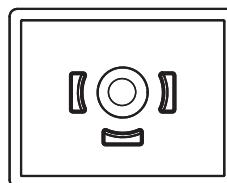
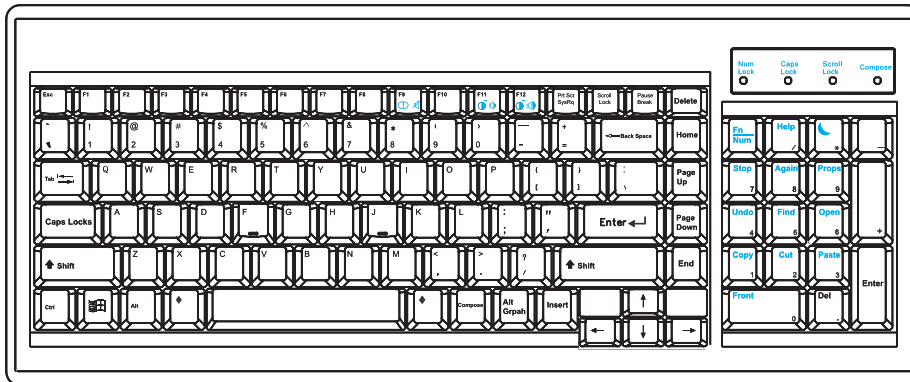


NS keyboard integrated with touchpad



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

Sb

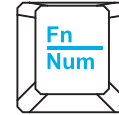
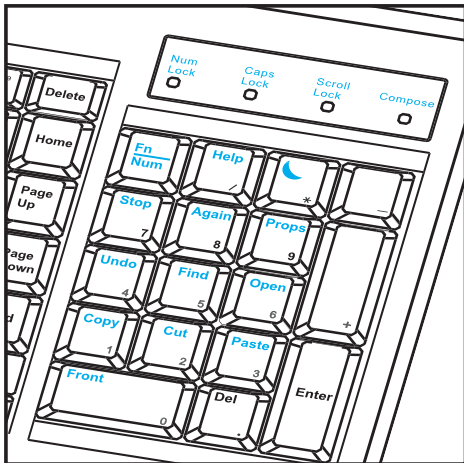


NS keyboard integrated with trackball

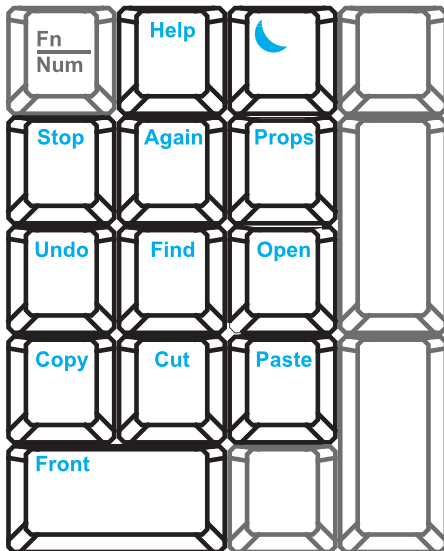


- Incorporates SUN keys, including Stop, Cut, Paste, Compose, Copy and Help
- 104 key notepad keyboard with full numerical pad and SUN function
- US layout only
- USB interface

- NS SUN-compatible keyboard incorporates SUN short-cut keys.

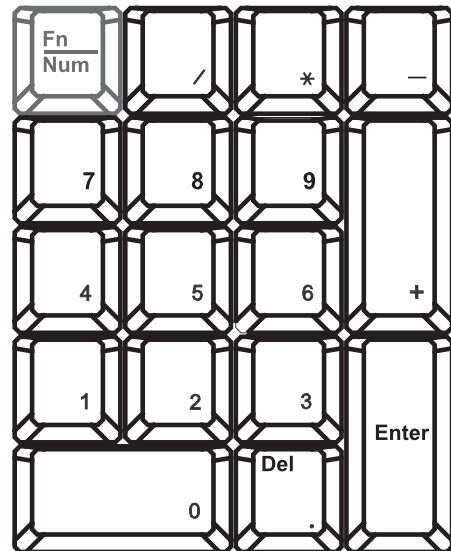


- Press the Fn/Num button to switch the color the Num LED.



Num LED in Off mode

Key pad behaves as a SUN Solaris system administration command mode

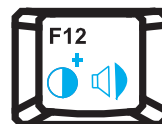
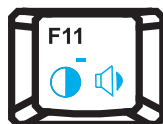
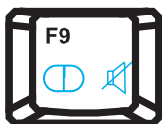


Num LED in Green color

Key pad behaves as a normal key pad mode

Three Audio / Display keys are located in the upper-right corner of the NS keyboard:

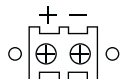
- Audio : Mute, decrease in volume and increase in volume.
- Display : Degauss, decrease contrast and increase contrast.
- Please ask your supplier for full details



Our KVM is designed to seamlessly integrate into the rear of our full range of LCD drawer solutions:

- For KVM operation, please refer to "Integrated LCD KVM Switch" user manual
- Option with high density Cat5 KVM with either 16 or 32 ports
- Option with cost efficient DB-15 KVM integration with either 8 or 16 ports
- Please ask your supplier for full KVM details

4.2 DC Power Options



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 NS solution LCD keyboard 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. The Stop-A hot key is not work in Trusted Solaris

The keyboard combination Stop-A (L1-A) is not available in Trusted Solaris by default. The security administrator can change this.


4. 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.

5. The membrane button power light is not ON

Press the power On / Off on LCD membrane button to check if the monitor is in the ON mode. Check the power cord is properly connected to the LCD keyboard drawer and power outlet.

6. 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.

7. Is the LCD keyboard drawer hot-pluggable ?

The LCD keyboard 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 keyboard receives power.

Model	Product Dimension (W x D x H)	Packing Dimension (W x D x H)	Net Weight	Gross Weight
NS117 series	442 x 650 x 44 mm 17.4 x 25.6 x 1.73"	589 x 856 x 168 mm 23.2 x 33.7 x 6.6"	16 kg 35 lb	22 kg 48 lb
NS119 series	442 x 650 x 44 mm 17.4 x 25.6 x 1.73"	589 x 856 x 168 mm 23.2 x 33.7 x 6.6"	17 kg 37 lb	23 kg 51 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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