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# User Manual

Rackmount LCD Display  
15", 17", 19", 20" screen size



**Models**  
**LCDR6U15-01**  
**LCDR7U17-02**  
**LCDR8U19-02 Series**



**Models**  
**LCDR9U20-01 Series**

- Ultra high resolution 1600 x 1200

## Options :

- AV / BNC
- Touchscreen
- Front NEMA 4 / IP 65 protection
- DC power
- DVI

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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.

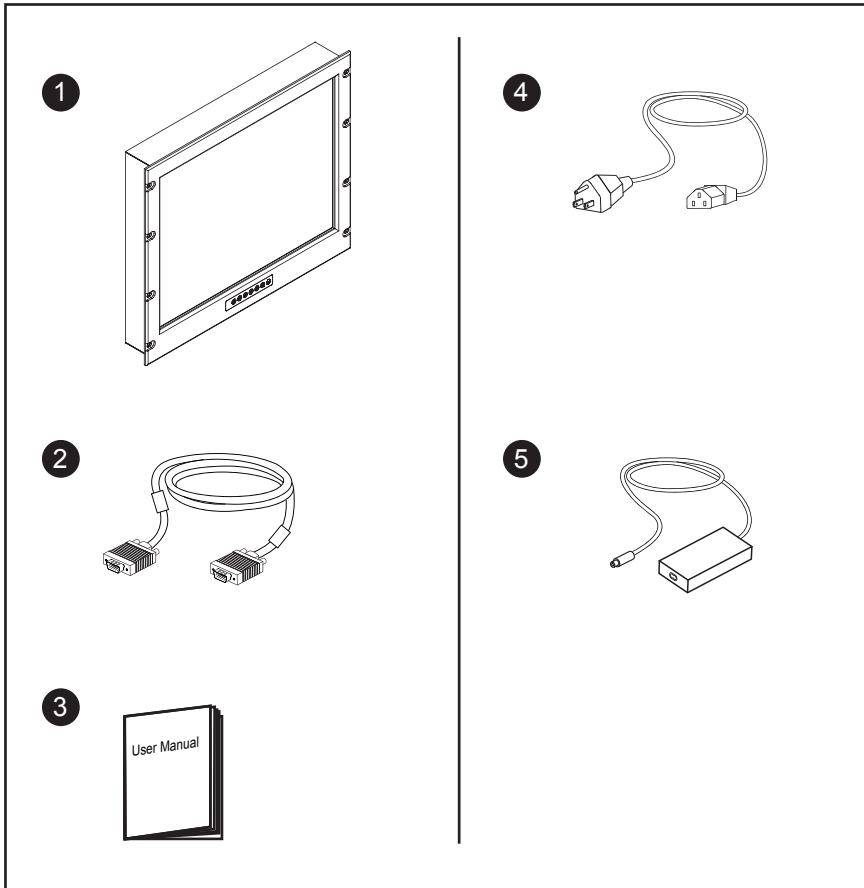
### Regulatory Notices Federal Communications Commission (FCC)

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 display x 1 pc
- ② 6' VGA cable (male to male) x 1 pc
- ③ User manual x 1 pc
- ④ Power cord x 1 pc
- ⑤ Auto switch power adapter x 1pc

## 1.4 Before Installation

- It is very important to locate the Rackmount LCD Display in a suitable environment.
- The surface for placing and fixing the Rackmount LCD Display 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 Display to the related facilities should be well considers too.

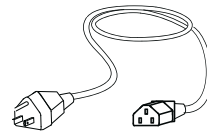
## 1.5 Unpacking

The Rackmount LCD Display 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

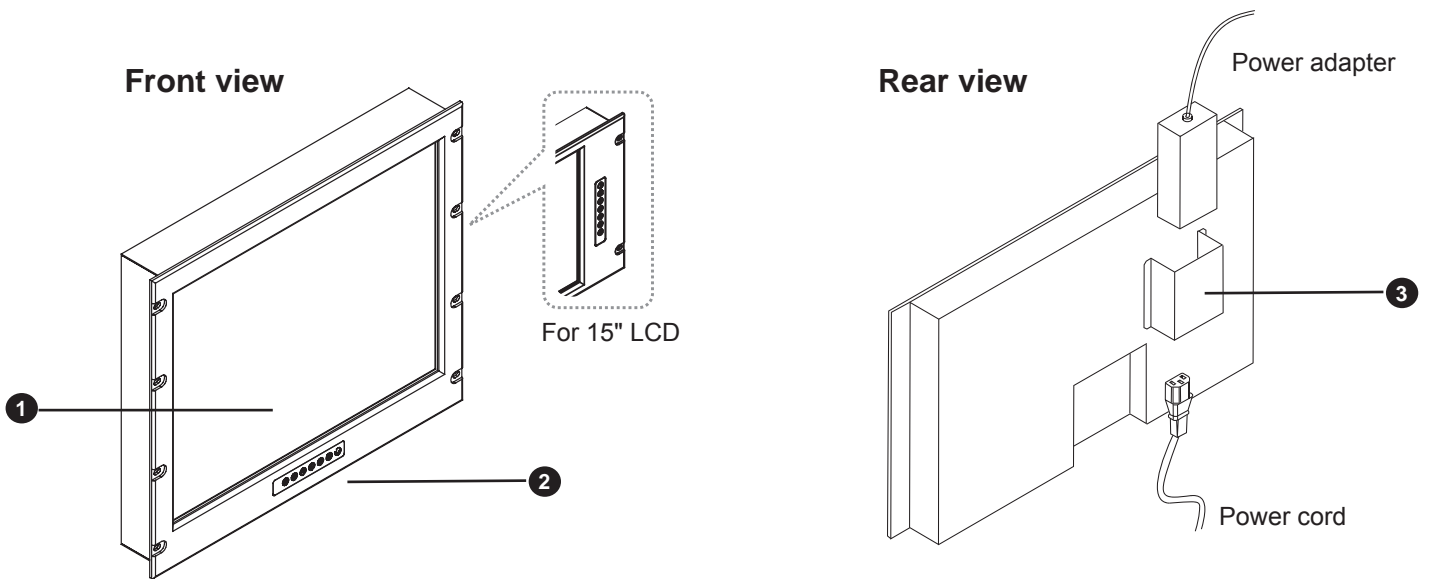
### 1. Power Cord

- 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
<b>DB-15 KVM</b>	LCDK1038 / 39	8 / 16-port IP PS/2 KVM
	LCDK1024 / 25	8 / 16-port two console PS/2 KVM
	LCDK1009 / 10 / 11	4 / 8 / 16-port PS/2 KVM
	LCDK1020 / 21	8 / 16-port USB KVM
<b>Cat5 KVM</b>	LCDK1047 / 48	16 / 32-port IP Cat5 KVM
	LCDK1045 / 46	16 / 32-port two console Cat5 KVM
	LCDK1043 / 44	16 / 32-port high density Cat5 KVM
<b>KVM Extender</b>	LCDK1042	IP KVM extender
	LCDK1019	Cat5 PS/2 KVM Extender
	LCDK1041	Cat5 USB KVM Extender
<b>Keyboard Drawer</b>	LCDK1002	Rackmount keyboard drawer (with KVM options)
	LCDK1016	Rackmount keyboard drawer (short depth version)

1.8 Structure Diagram



- ① SAMSUNG Class A TFT LCD panel
- ② LCD membrane button
- ③ Power Adapter Bracket

For LCDR6U15-01 / LCDR7U17-02 / LCDR8U19-02 series

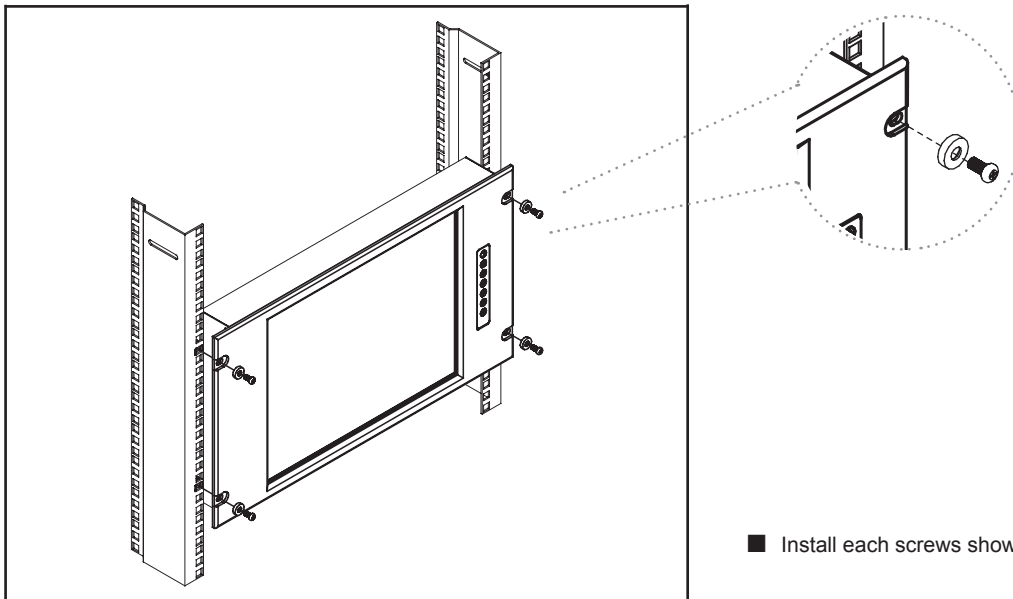


Figure 1.

■ Install each screws shown in **Figure 1**.

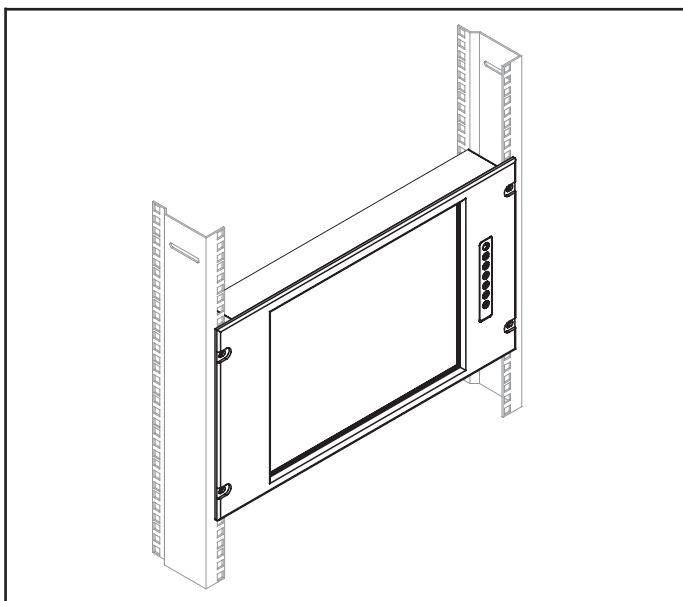
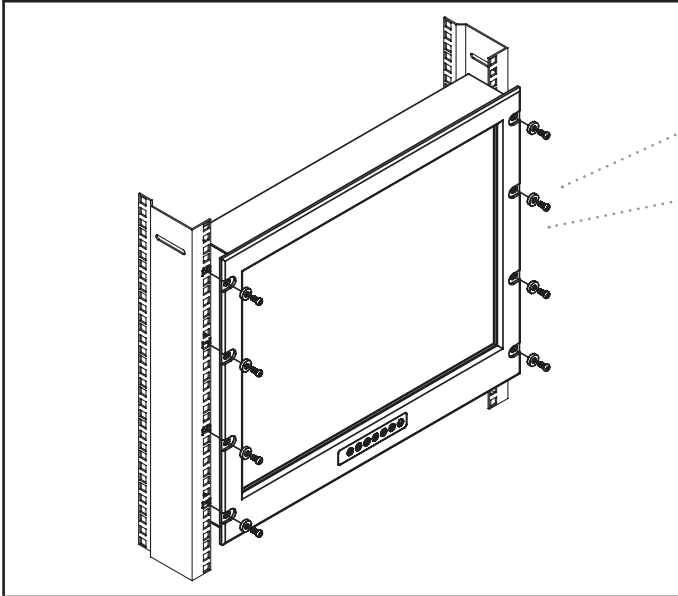


Figure 2.

■ Fixed the LCD into the rack.

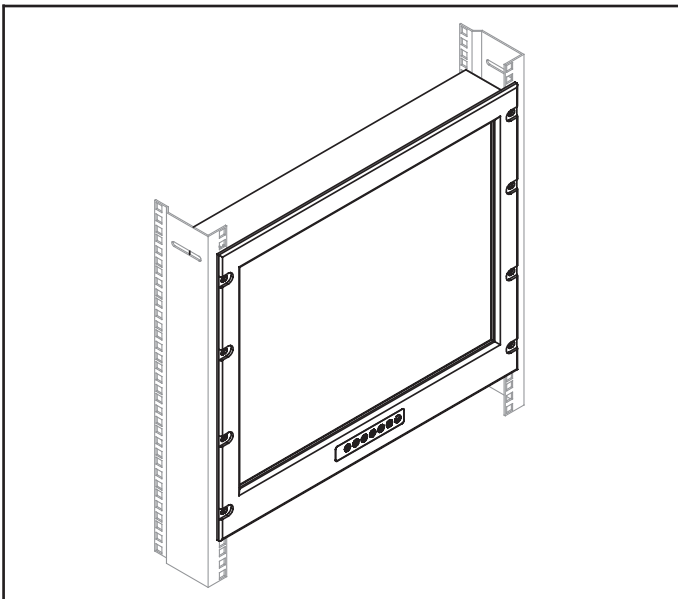
\* M6 screws is not provided.

For Lcdr9U20-01 series



■ Install each screws shown in **Figure 3**.

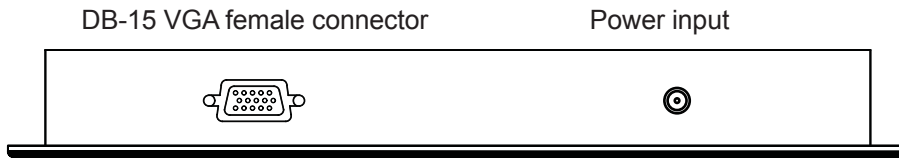
Figure 3.



■ Fixed the LCD into the rack.

\* M6 screws is not provided.

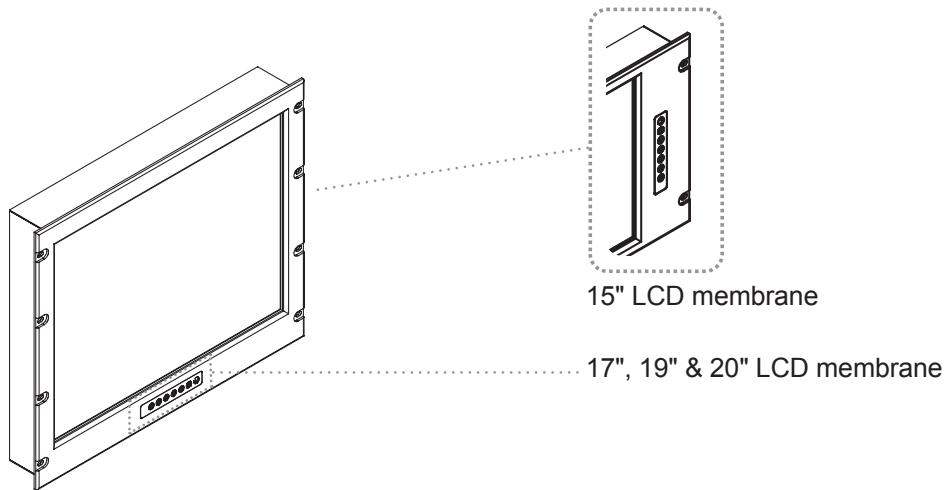
Figure 4.



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

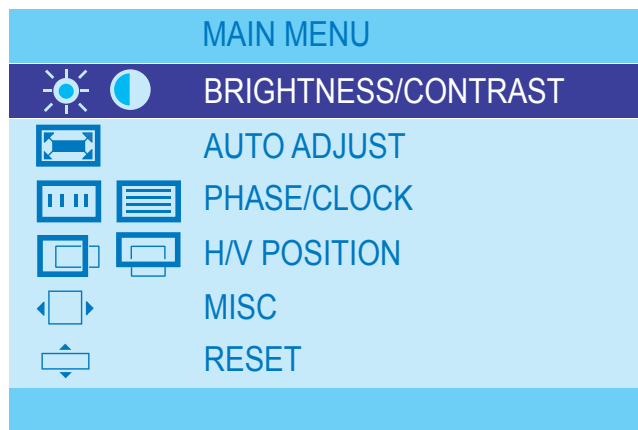
2.1 On-screen Display Operation

Chapter 2



Membrane Switch	Function
<ul style="list-style-type: none"> <li>○</li> <li>●</li> <li>●</li> </ul>	Power light Green = On Orange = Power saving
⊖	Power on / off LCD
M [Menu Icon]	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 <b>OR</b> Toggle analog, digital & video connection (DVI-D and video options only)

### For LCDR6U15-01 / LCDR7U17-02 / LCDR8U19-02 series



#### **BRIGHTNESS / CONTRAST**

**Brightness:** Adjust background black level of the screen image.

**Contrast:** Adjust the difference between the image background (black level) and the foreground (white level).

#### **AUTO ADJUST**

**Auto Adjust:** Fine tunes the video signal to eliminate waviness and distortion. A "Adjusting" message is displayed during the process.

**Auto Tune:** Optimize phase, clock, position and size. An "Adjusting" message is displayed during the process.

#### **PHASE/CLOCK**

**Phase / Clock:** To enter into the phase & clock sub menu

#### **H/V POSITION**

**H/V Position:** Align the screen image left or right and up or down.

#### **MISC**

**Information:** Display the current resolution, refresh rate and frequency information on the screen.

**OSD Timer:** Set the time duration in seconds that the OSD is visible after the last button is pressed. The factory default is 10 seconds.

**Color:** Select the screen color - 5500K, 6500K & 9500K. The factory default is 9500 K.

**Language:** Select the language in which the OSD menu is displayed - English, Chinese (中文), Japanese (日本語), German, French, Spanish, Italian

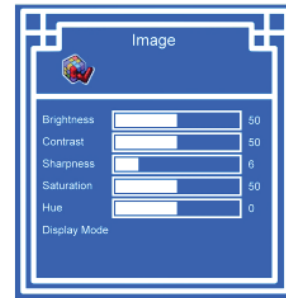
**RESET** Restore the settings to factory defaults.

## 2.2 On-screen Menu

### For Lcdr9U20-01 series

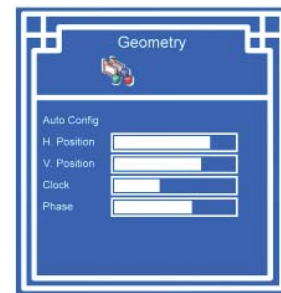
#### 1. Image

- 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 6500 K.




#### 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.

Item	Description			
Form Factor	1U rack mounting on slide-out rails			
LCD Manufacturer				
Diagonal Size	15" TFT	17" TFT	19" TFT	20" TFT
Max. Resolution	1024 x 768	1280 x 1024	1280 x 1024	1600 x 1200
Brightness (cd/m <sup>2</sup> )	Min. 250	300	300	300
Color Support	16.2 Mil.	16.2 Mil.	16.7 Mil.	16.7 Mil.
Contrast Ratio (typ.)	450:1	700:1	1000:1	800:1
Viewing Angle (H/V)	130° x 100°	150° x 135°	150° x 135°	160° x 160°
Display Area (mm)	304 x 228	337 x 270	376 x 301	408 x 306
Tr Response Time (ms)	3	2	1.3	1
VGA Signal Input	Analog RGB, 0.7Vp-p			
Sync. Type	Separate H/V, Composite, SOG			
Resolution	640 x 350, 70 Hz			
	720 x 400, 70 Hz			
	640 x 480, 60/ 72/ 75 Hz			
	800 x 600, 60/ 70/ 72/ 75 Hz			
	1024 x 768, 60/ 70/ 72/ 75 Hz			
	--	1152 x 864, 60/ 70/ 75 Hz		
	--	1280 x 1024, 60/ 70/ 75 Hz		
	--	1600 x 1200, 60 Hz		
Plug & Play DDC	EDID 1.3			
Console Port (Combo)	3-in-1 DB15 connector for VGA / keyboard /mouse Support USB & PS/2 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**

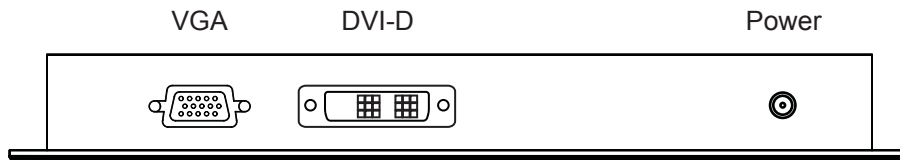
Graphic Input	DVI-D, BNC, S-Video & RCA video input		
DC Power	DC power input with 12V, 24V, 48V selection		
Touchscreen	Resistive and capacitive	Resistive	

**Environmental**

Operation	0° to 50°C Degree
Storage	-5° to 65°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

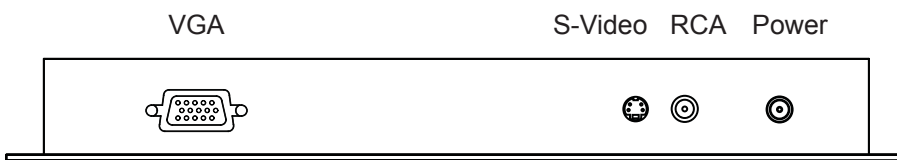
# Chapter 4



### Remarks

- Package includes with a 6' DVI-D cable

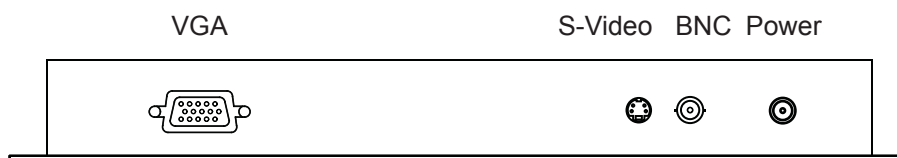
## 4.2 S-Video + RCA Input Option



### 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

## 4.4 On-screen Menu for DVI, BNC, S-Video & RCA Input Chapter 4

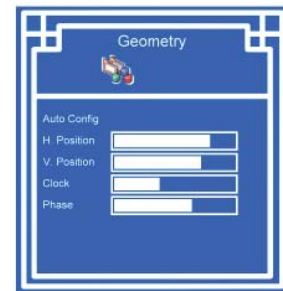
### 1. Image

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- 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



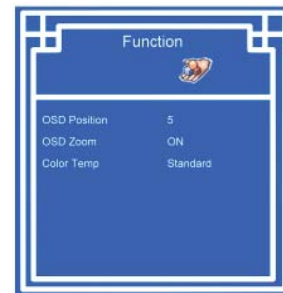
### 2. Geometry

- 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



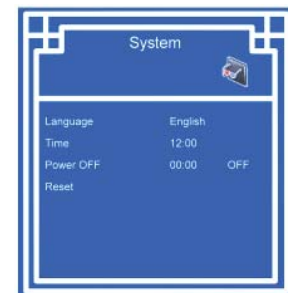
### 3. Function

- 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 6500 K.



### 4. System

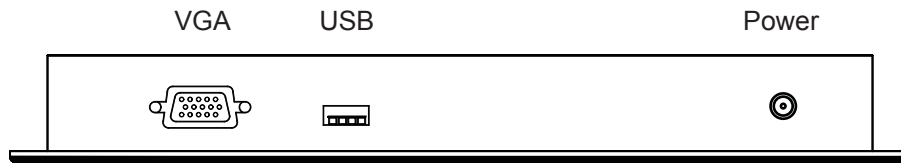
- Language: Select the language in which the OSD menu is displayed - English, Chinese (中文), Japanese (日本語), German, French, Spanish, Italian.
- Time: Function is not supported
- Power OFF: Function is not supported
- Reset: Recall returns the adjustments back to factory settings.



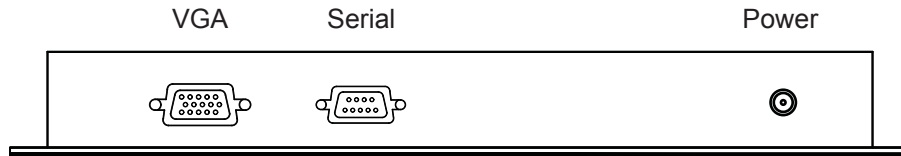
**Note :** The current resolution and refresh rate information show on the top right hand side of the screen when the LCD powered on.



For USB touchscreen



For serial touchscreen



e-Resistive

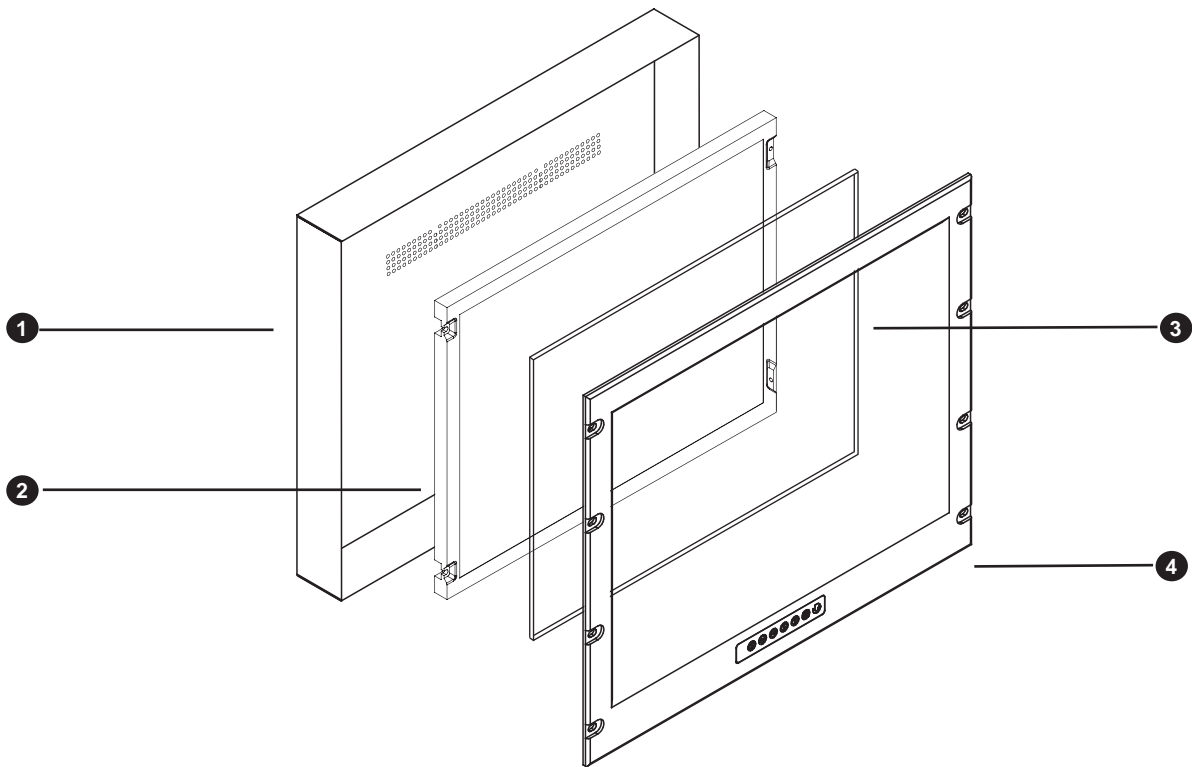
Model	-15TRB / -15TRS	-17TRB / -17TRS	-19TRB / -19TRS	-20TRB / -20TRS
Screen size	15"	17"	19"	20"
Interface	USB / serial			
Optical transmittance	82%±5%			
Surface hardness	≥3H (JIS K5400)			
Operating system	Windows 98 / 2000 / ME / XP / NT / CE, DOS, Linux			

3M Capacitive

Model	-15TCB_3M / -15TCS_3M	-17TCB_3M / -17TCS_3M	-19TCB_3M / -19TCS_3M
Screen size	15"	17"	19"
Interface	USB / serial		
Optical transmittance	88%		
Surface hardness	Mohs' hardness rating: 6		
Operating system	Windows 98 / 2000 / ME / XP / NT / CE, DOS, Linux		

Remarks

- USB touchscreen package includes an extra 6ft USB cable, quick reference guideline and CD disc
- Serial touchscreen package includes an extra 6ft serial cable, quick reference guideline and CD disc
- For detailed information, please refer to the attached CD disc
- As the touchscreen unit is not made of toughened glass, please handle it carefully.

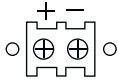


- ① Rear case
- ② LCD panel
- ③ 4mm protective glass (Front NEMA 4 / IP65 protection)
- ④ Aluminum front panel

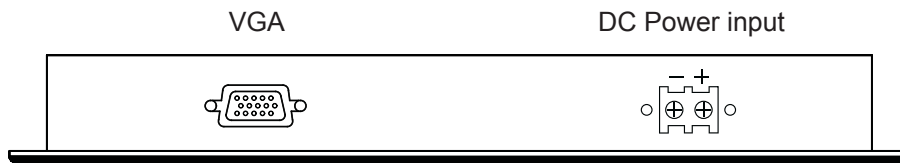
### Remarks

- 4mm thickness of protective glass is not toughened one, please handle it carefully.

## 7.1 DC Power Options



## Chapter 7



Model	12V	24V	48V
<b>Input rating</b>			
Input voltage:	12-Volt	24-Volt	48-Volt
Input range:	9 ~ 18V	18 ~ 36V	36 ~ 75V
Input current			
- No load	50 mA	50mA	50 mA
- Full load	4950 mA	2450 mA	1220 mA
<b>Output rating</b>			
Output voltage:	12-Volt	12-Volt	12-Volt
Output current:	4.16A	4.16A	4.16A
<b>Efficiency</b>	84%	85%	85%

### Remarks

- Package does not include power cord and AC power adapter

### 1. How do I adjust the resolution?

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.


### 2. 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.

### 3. 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.

### 4. 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.

Model	Unit	Product Dimension (W x D)	Packing Dimension (W x D x H)	Net Weight	Gross Weight
LCDR6U15-01	6U	480 x 52 mm 18.9 x 2"	565 x 406 x 156 mm 22.2 x 16 x 6.1"	6 kg 13 lb	8 kg 18 lb
LCDR7U17-02	7U	480 x 57 mm 18.9 x 2.2"	565 x 450 x 156 mm 22.2 x 17.7 x 6.1"	7 kg 15 lb	8.5 kg 19 lb
LCDR8U19-02	8U	480 x 57 mm 18.9 x 2.2"	565 x 495 x 156 mm 22.2 x 19.5 x 6.1"	8 kg 18 lb	10 kg 22 lb
LCDR9U20-01	9U	480 x 67 mm 18.9 x 2.6"	565 x 539 x 156 mm 22.2 x 21.2 x 6.1"	12 kg 26 lb	15 kg 33 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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