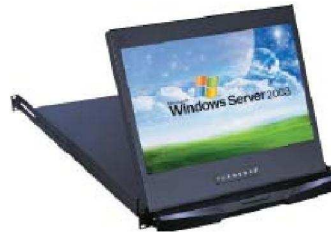


# User Manual

## Widescreen LCD Display - 19", 22" size



**Rackmount display**  
: RKMTL-8U-22W  
RKMTL-7U-19W



**1U Display drawer**  
: RKMTL-1U-19W

## 4:3 LCD Display - 17", 19", 20" size

### **Rackmount display :**

RKMTL-7U-17 / RKMTL-8U-19 /  
RKMTL-9U-20 RKMTLS-7U-17 /  
RKMTLS-8U-19 / RKMTLS-9U-20

### **1U Display drawer :**

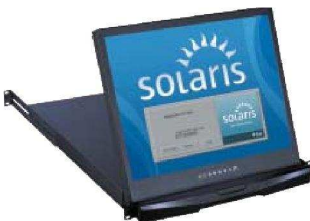
RKMTL-1U-17 / RKMTL-1U-19 / RKMTL-1U-20  
RKMTL-1USD-17 / RKMTL-1USD-19 ( short-  
depth )



### **1U Display drawer :**

RKMTLS-1U-17 / RKMTLS-1U-19 /  
RKMTLS-1U-20

(designed for SUN Solaris)



### **Options :**

- BNC + S-Video
- DVI
- Audio
- Touchscreen
- DC power
- Quad Display

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## **Part 2      4:3 LCD Display**

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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.

### 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.

## 1.3 Before Installation

# Chapter 1

- It is very important to locate the Rackmount LCD Drawer / Display in a suitable environment.
- The surface for placing and un-boxing the Rackmount LCD Drawer / 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 Drawer / Display to the related facilities should be well considered too.

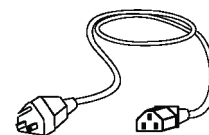
## 1.4 Unpacking

The Rackmount LCD Drawer / 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.

## 1.5 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)



## 1.6 Peripheral Products

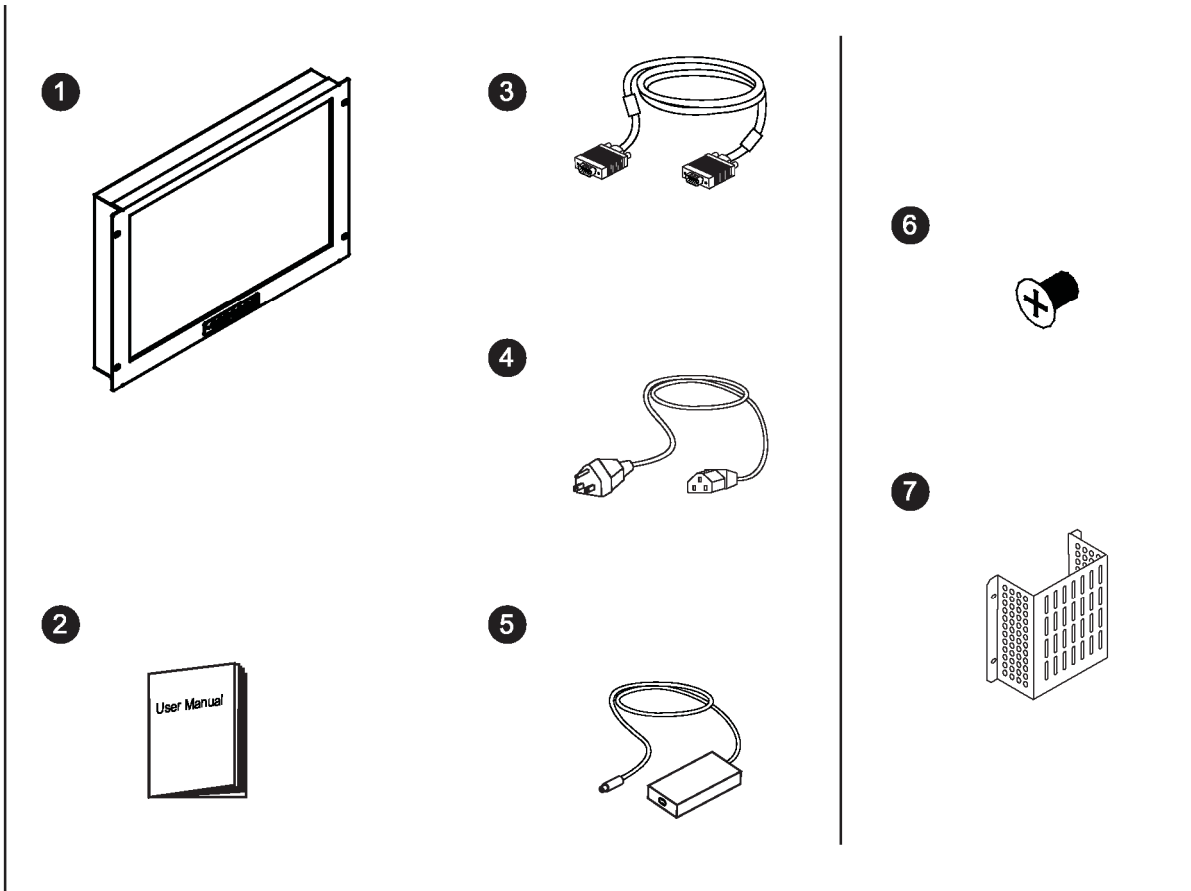
## Chapter 1

Item	Description
<b>Matrix Cat6 KVM</b>	Matrix Cat6 16 port KVM Matrix IP Cat6 16 port KVM Matrix Cat6 32 port KVM Matrix IP Cat6 32 port KVM
<b>Matrix DB-15 KVM</b>	Matrix DB-15 8 port KVM Matrix IP DB-15 8 port KVM Matrix DB-15 16 port KVM Matrix IP DB-15 16 port KVM
<b>Combo Cat6 KVM</b>	Combo Cat6 8 port KVM Combo Cat6 16 port KVM Combo Cat6 32
<b>Combo DB-15 KVM</b>	Combo DB-15 8 port KVM Combo DB-15 16 port
<b>PS/2 DB-15 KVM</b>	4 / 8 / 16 port PS/2 DB-15 KVM
<b>Keyboard Drawer</b>	Rackmount keyboard drawer (with KVM options) Rackmount keyboard drawer (short depth version)

## 2.1 Package Contents

## Chapter 2

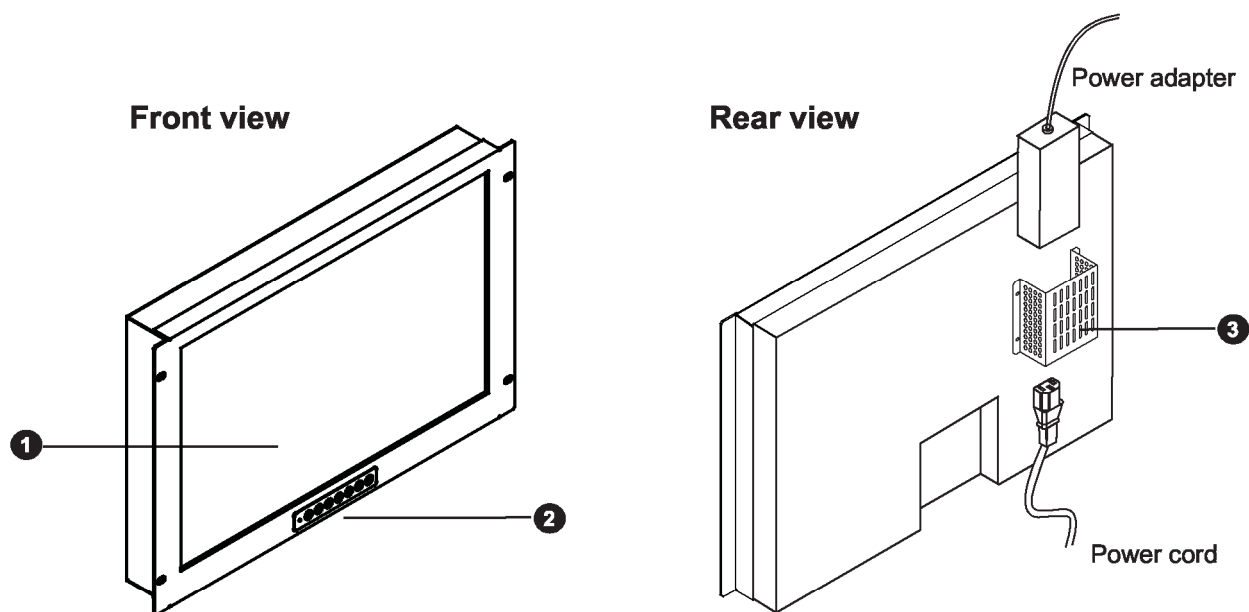
### RKMTL-7U-19W & RKMTL-8U-22W



- ① Rackmount LCD display x 1 pc
- ② User manual x 1 pc
- ③ 6' VGA cable (male to male) x 1 pc
- ④ Power cord x 1 pc
- ⑤ Auto switch power adapter x 1 pc
- ⑥ M3.2\*4.5mm screw x 4 pcs
- ⑦ Power adapter bracket x 1 pc

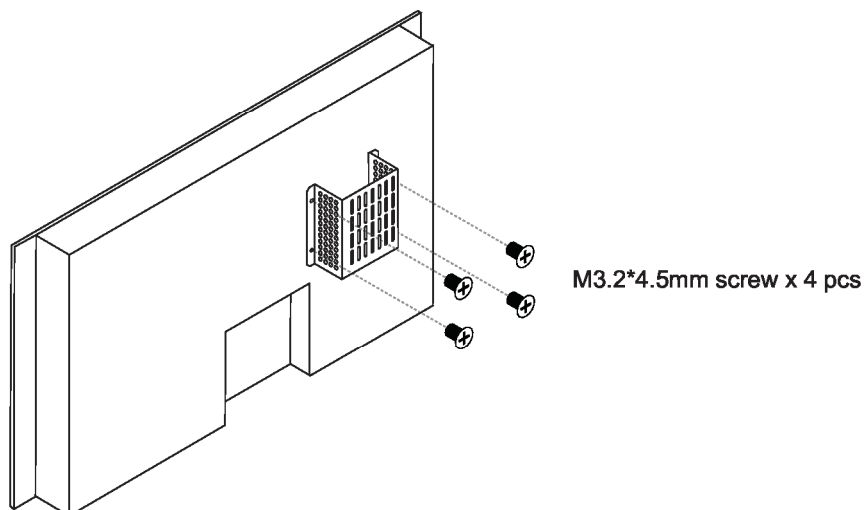


### RKMTL-7U-19W & RKMTL-8U-22W

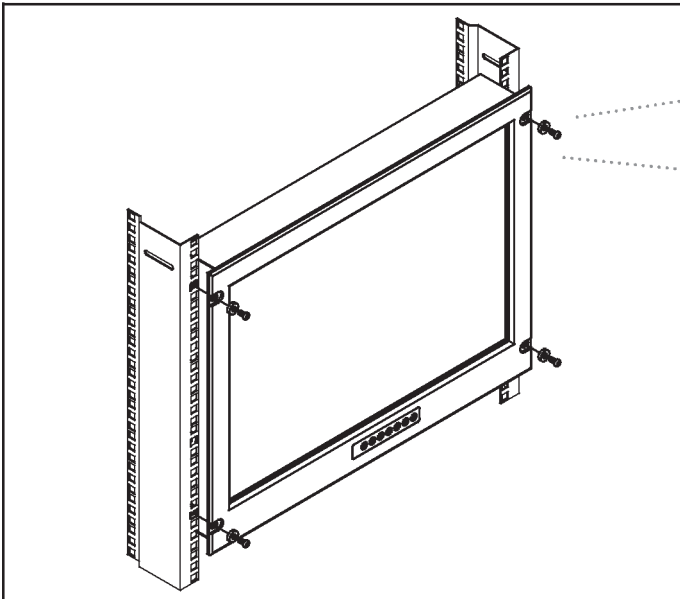


- ① LCD interchangeable module kit
- ② LCD membrane
- ③ Power adapter bracket

### Power adapter bracket installation

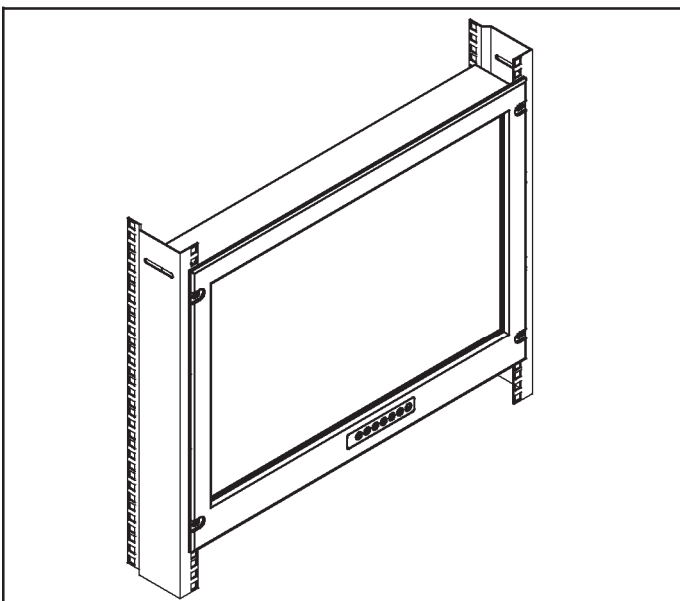


RKMTL-7U-19W



■ Install each screw shown in Figure 1.

Figure 1.



■ Fix the LCD into the rack.

\* M6 screws are not provided.

Figure 2.

### RKMTL-8U-22W

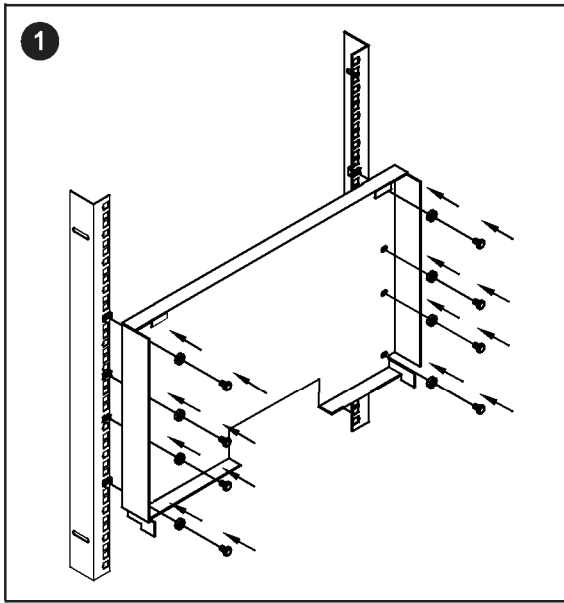


Figure 3.

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

\* M6 screws are not provided.

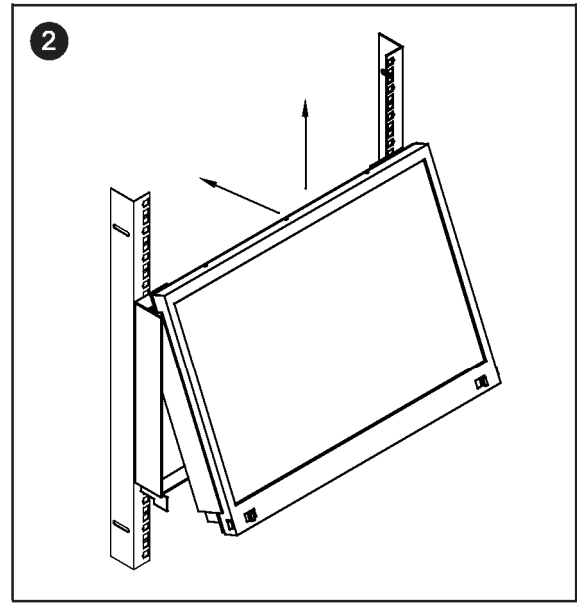


Figure 4.

■ Insert the upper part of the LCD display to the rack shown in **Figure 4**.

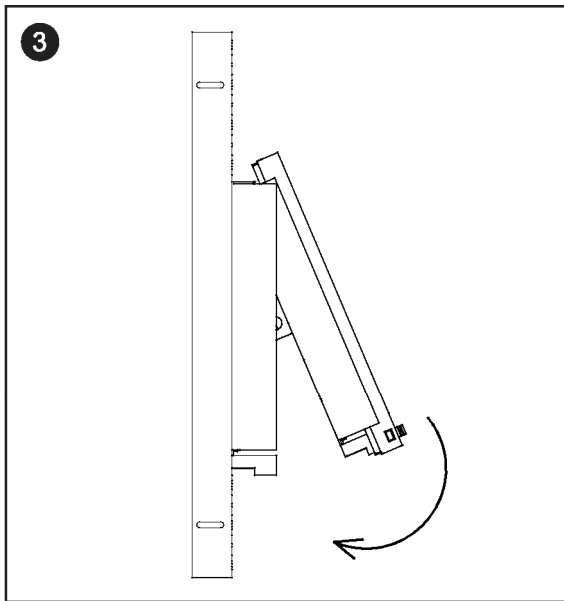


Figure 5.

■ Push the lower part of the LCD into the rack.

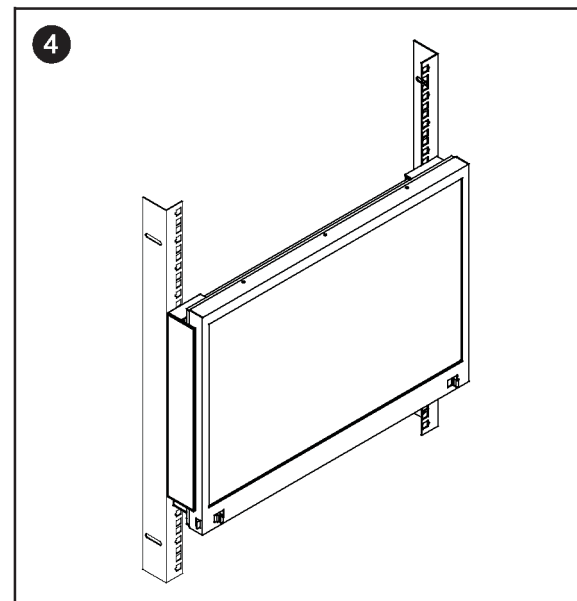
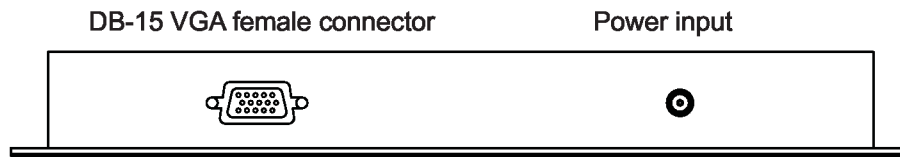


Figure 6.

■ Installation completed.

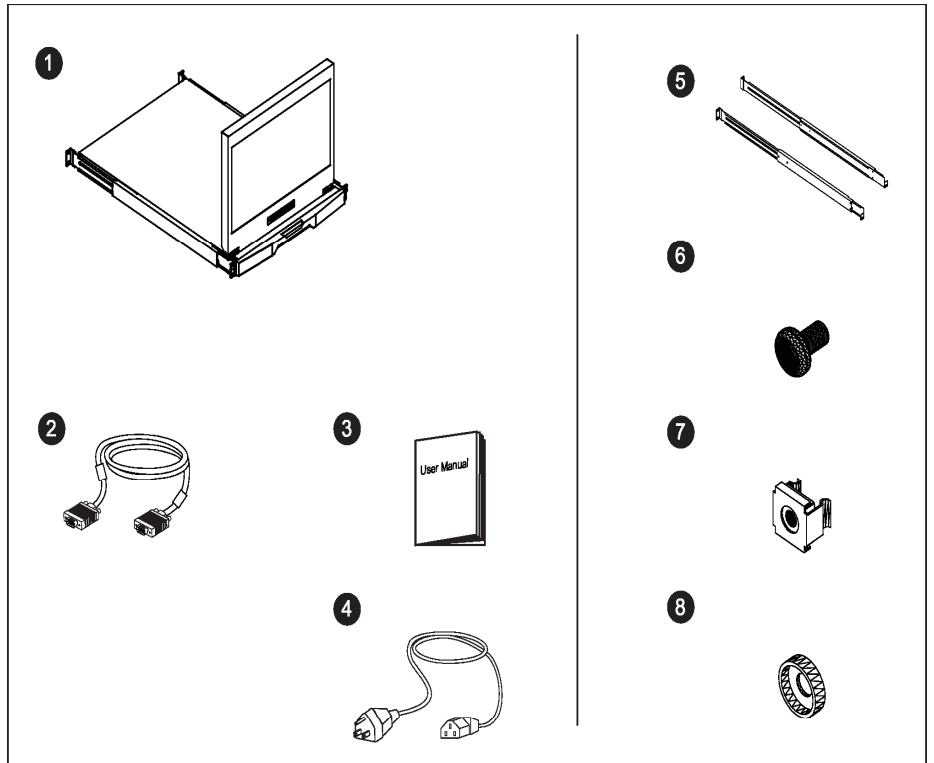
### RKMTL-7U-19W & RKMTL-8U-22W



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

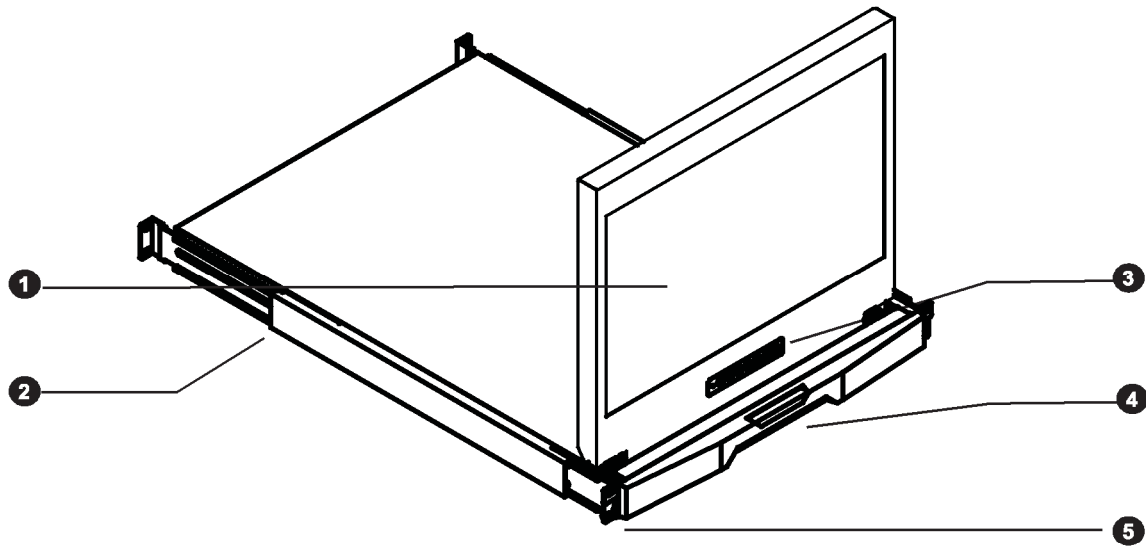
### 3.1 Package Contents RKMTL-1U-19W

### Chapter 3



- ① LCD drawer 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 Mounting bracket x 2 pcs
- ⑥ M6\*15mm screw x 8 pcs
- ⑦ M6 cage nut x 6 pcs
- ⑧ Cup washer x 8 pcs

#### RKMTL-1U-19W



① LCD interchangeable module kit

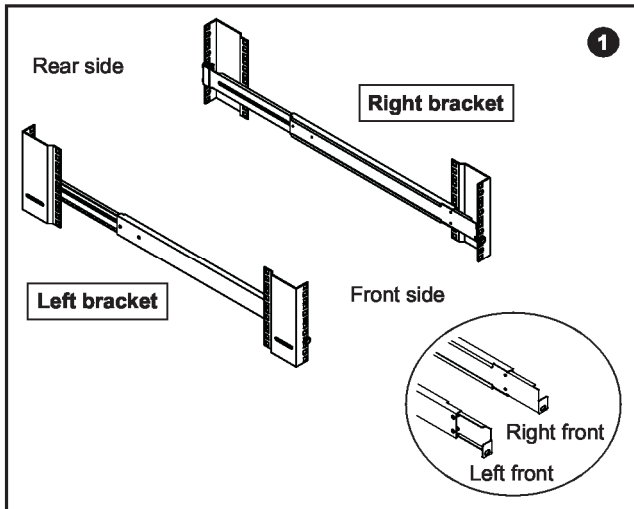
② "One Man" Installation Slide

③ LCD membrane

④ Carry handle to release the 2-pt lock

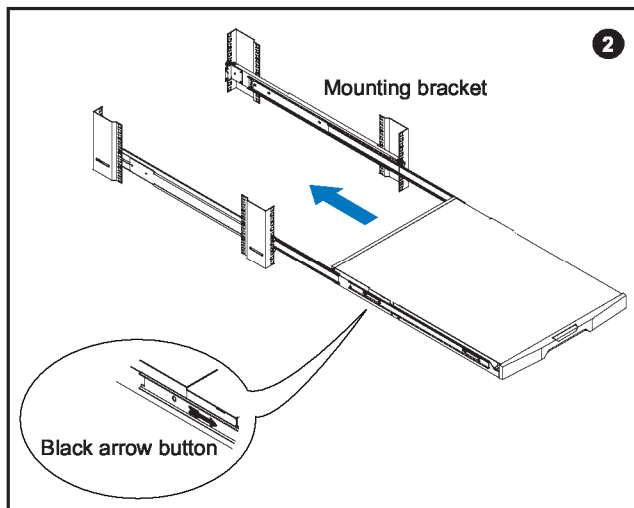
⑤ 2-point lock

#### Install into rack

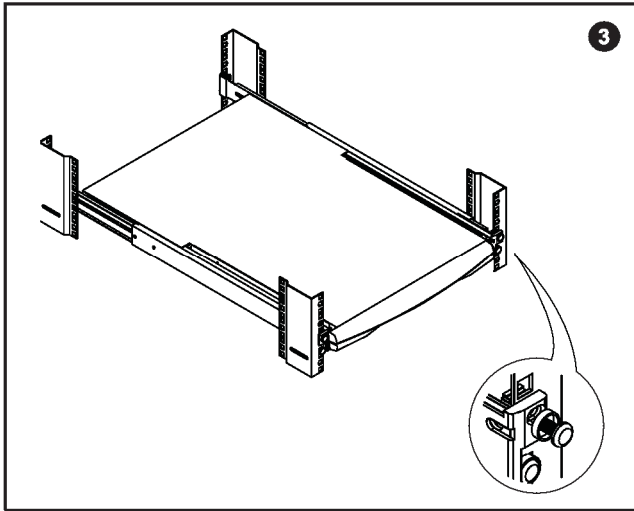


- Attach the left and right mounting bracket to rack 19" mounting rails.
- Adjust the rear mounting bracket to fit your rack.
- M6 screw and cup washer x 6 pcs included.

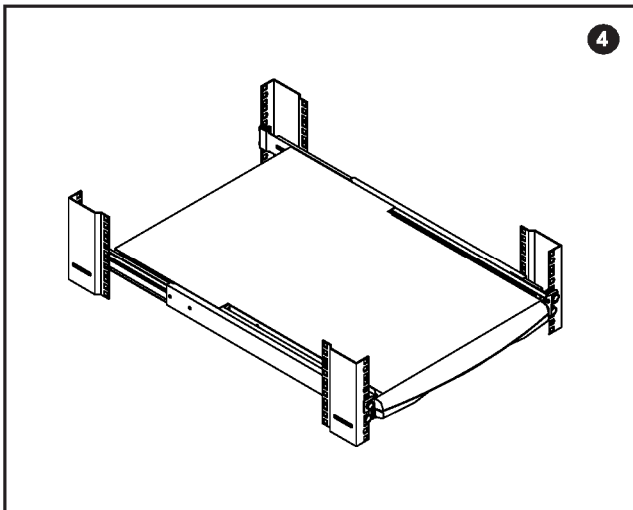
**Caution :** Leaving the screws slightly loose, until you complete the installation in step 4



- Pick up the LCD drawer.
- Insert the LCD drawer into the mounting bracket.
- Pull and hold the left & right black arrow buttons on the rails.
- Return the LCD drawer to park position.



- Attach front left and right mounting ears of the LCD drawer to vertical mounting rails.
- M6 screw and cup washer x 2 pcs included.



#### Complete the installation

- Tighten all 8 pcs of M6 screw to complete the installation.



RKMTL-1U-19W

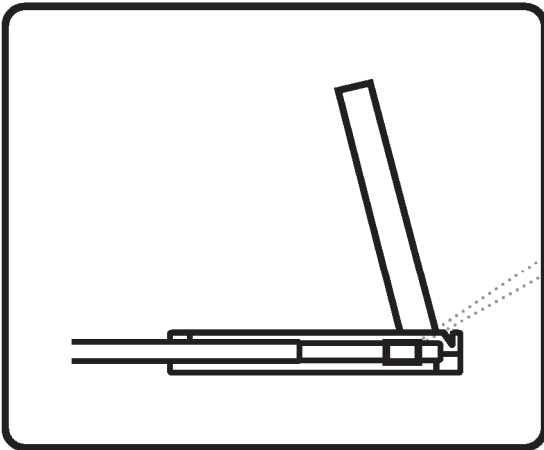


Figure 7.

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

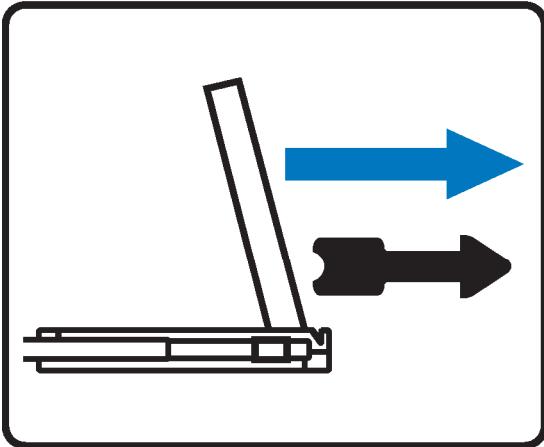


Figure 8.

- Pull and hold the black arrow button on either side of the LCD drawer to unlock. (shown in Figure 8).

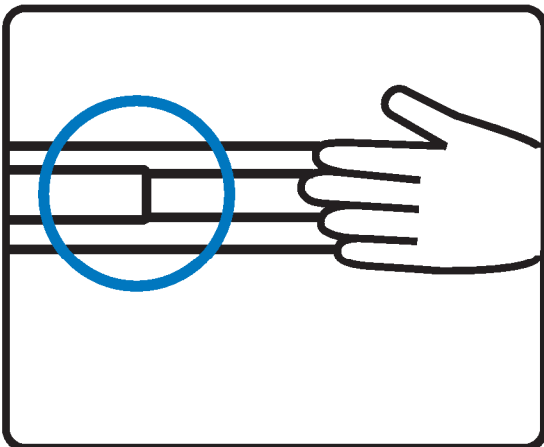

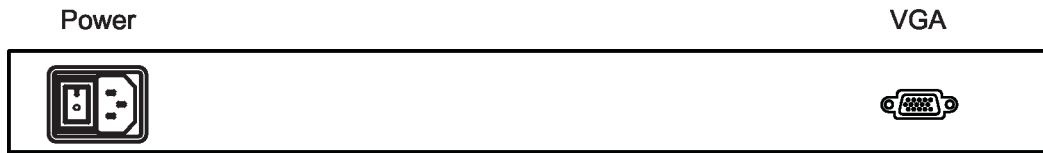


Figure 9.

- Push the LCD drawer into the rack. (shown in Figure 9).

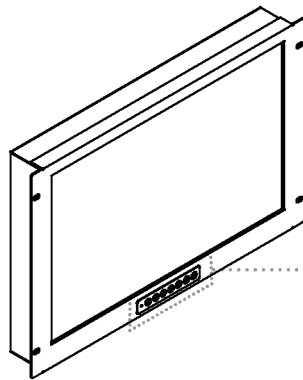
 **Caution :** Keep your fingers away from the side stop

#### RKMTL-1U-19W



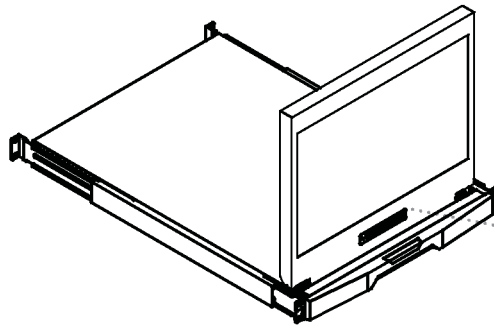
**Caution :** The Rackmount LCD Drawer & Display are hot-pluggable, but components of connected devices, such as the servers and KVM switch, may not be hot-pluggable. Plugging and unplugging cables while servers and KVM are powered on may cause irreversible damage of the servers, KVM and Rackmount LCD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

RKMTL-7U-19W &  
RKMTL-8U-22W



LCD membrane

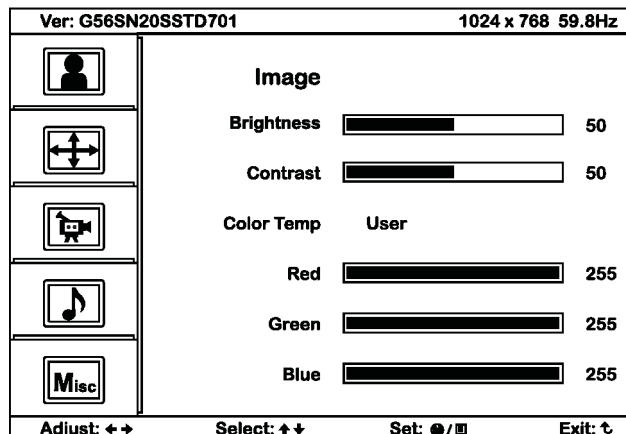
RKMTL-1U-19W



LCD membrane

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
	Display the OSD menu
	Scrolls through menu options and adjusts the displayed control (To auto adjustment by pressing the button  for 5 seconds)
	Exit the OSD screen Toggle analog, digital & video connection (DVI-D and video options only)

RKMTL-7U-19W, RKMTL-8U-22W & RKMTL-1U-19W

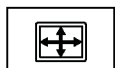


OSD Configuration Page



**Image:**

To enter into the brightness, contrast, color temp, red, green, and blue



**Geometry:**

To enter into the auto adjust, H position, V position, phase and clock



**Video:**

To enter into the colour, tint, sharpness, noise reduction, DCDi and TV Setup



**Audio:**

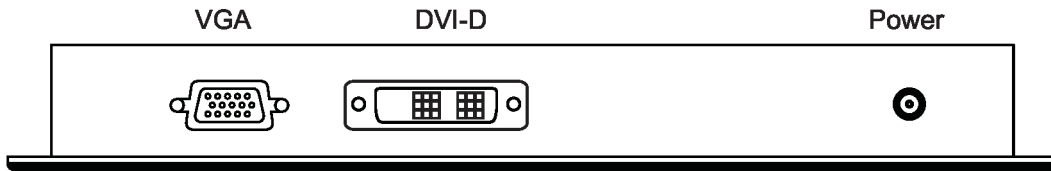
To enter into volume, bass, treble, balance, AVL and mute



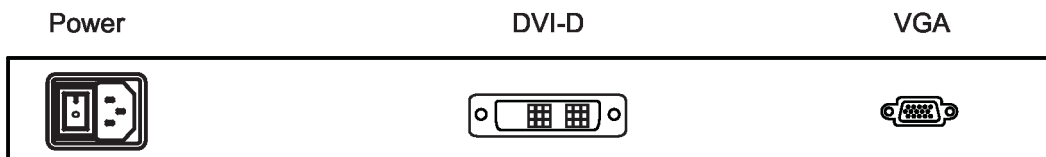
**Misc:**

To enter into the language, OSD position, graphic mode, ratio, reset and timer

RKMTL-7U-19W & RKMTL-8U-22W



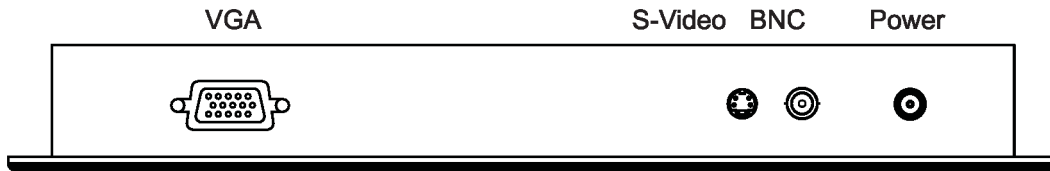
RKMTL-1U-19W



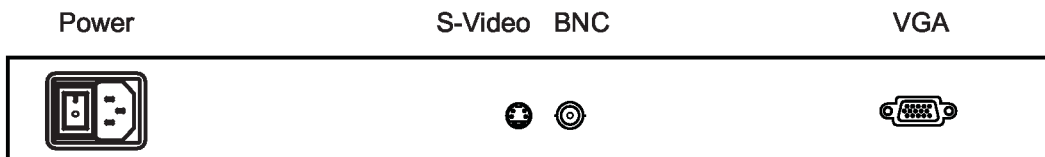
Remarks

- Package includes 1 x 6ft DVI-D cable

RKMTL-7U-19W & RKMTL-8U-22W



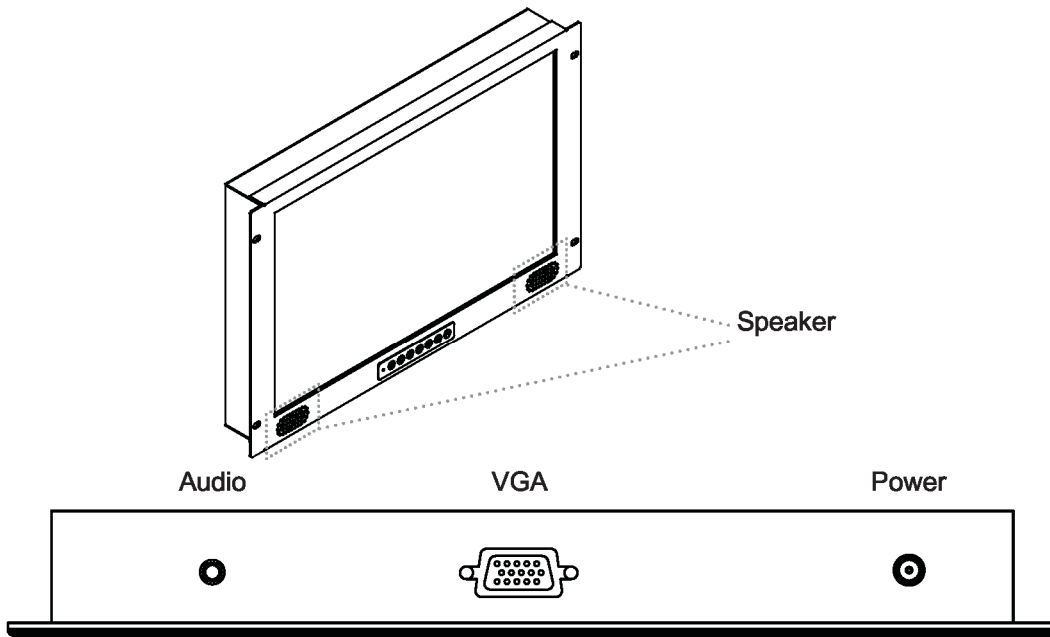
RKMTL-1U-19W



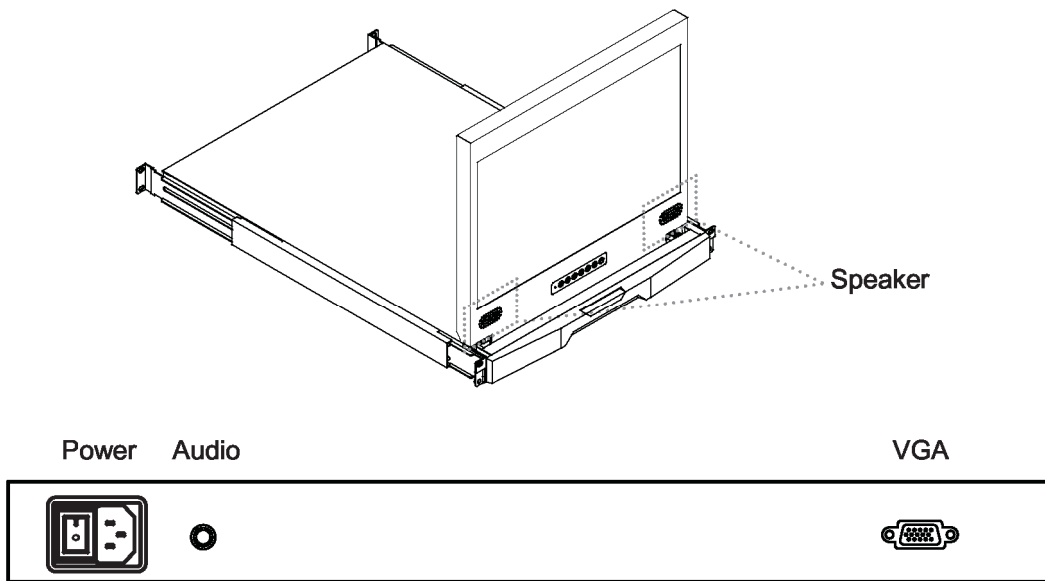
Remarks

- Package includes 1 x 6ft S-Video cable

RKMTL-7U-19W & RKMTL-8U-22W



RKMTL-1U-19W



Remarks:

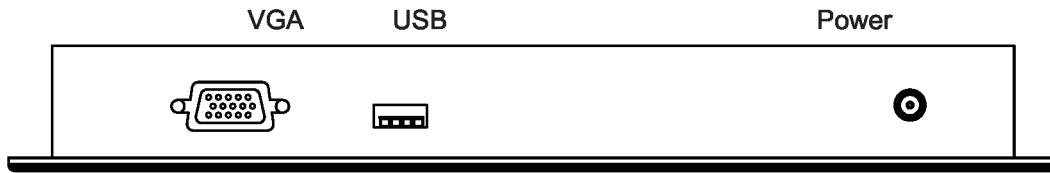
- Audio input is 35mm audio plug
- The speaker is sharing the same power with LCD.

## 5.4 Touchscreen Options

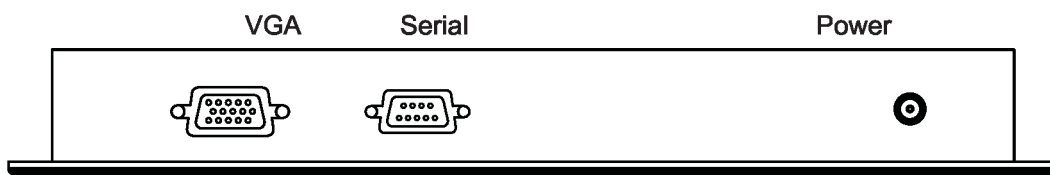
RKMTL-7U-19W & RKMTL-8U-22W

## Chapter 5

### USB interface



### Serial interface







Model	-19WTRB / -19WTRS	-22WTRB / -22WTRS
Screen size	19" wide	22" wide
Interface	USB / serial	
Optical transmittance	80% ± 3%	
Surface hardness	≥3H (JIS K5400)	
Operating system	Windows 98 / 2000 / ME / XP / NT / CE, DOS, Linux	

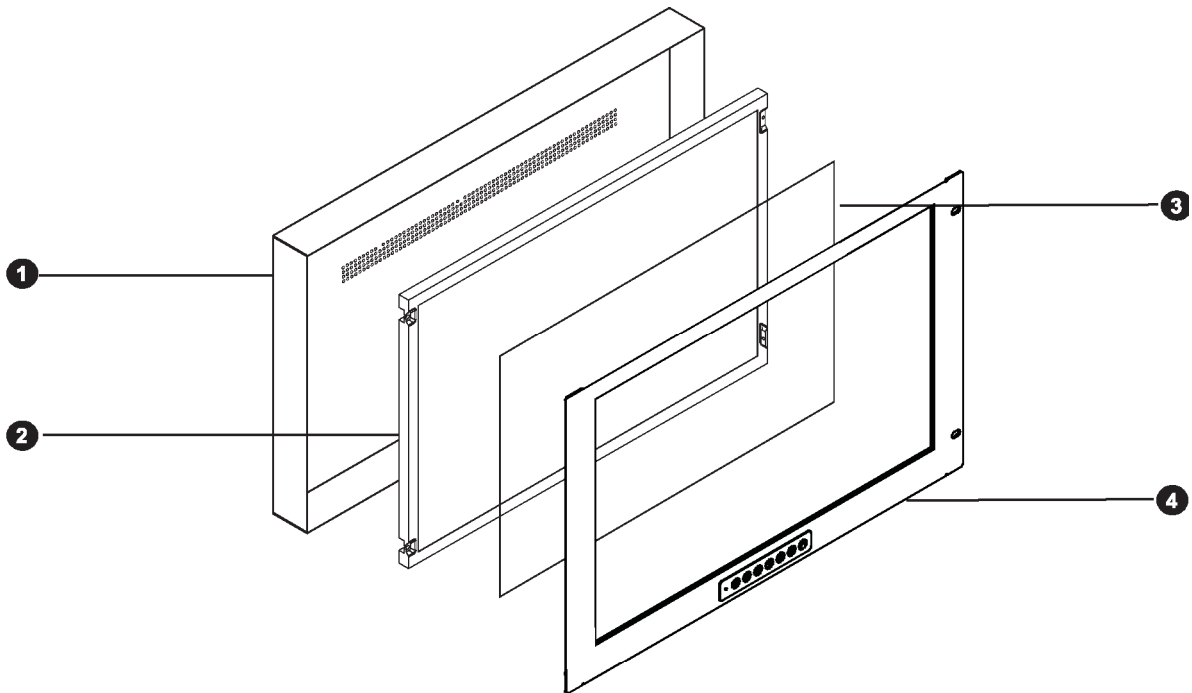
**e-Capacitive**

Model	-19WTCB / -19WTCS	-22WTCB / -22WTCS
Screen size	19" wide	22" wide
Interface	USB / serial	
Optical transmittance	93% ± 2%	
Surface hardness	>9H Surface hardness, withstand over 300 million touches	
Operating system	Windows 98 / 2000 / ME / XP / NT / CE, DOS, Linux	

**Remarks**

- USB touchscreen package includes 1 x 6ft USB cable, quick reference guideline and CD disc
- Serial touchscreen package includes 1 x 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
- Touchscreen in other brands are available on request

RKMTL-7U-19W & RKMTL-8U-22W

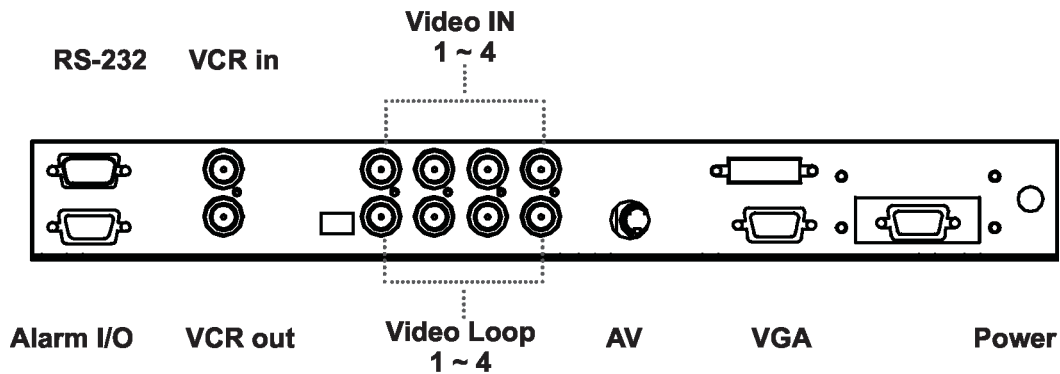


- ① Rear case
- ② LCD panel
- ③ 4mm protective glass (Front NEMA 4 / IP65 protection)
- ④ Aluminum front panel

Remarks

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

## 5.6 Quad Display Option Specifications

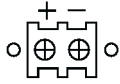


Item		Description
Model Number		QD (NTSC)                      QD (PAL)
Number of Color		16.7 M                              16.7 M
Imaging System		NTSC                                PAL
Resolution		1024 x 525                        1024 x 625
Refresh Rate		60                                     50
Video Input	Camera Input	1.0 Vpp, 75 Ohm x 4
	VCR Input	1.0 Vpp, 75 Ohm x 1
Video Output	Live Monitor	1.0 Vpp, 75 Ohm x 1
	Loop Through Out	1.0 Vpp, 75 Ohm x 4
	VCR Output	1.0 Vpp, 75 Ohm x 1
Auto Gain Control		Yes
Time / Date		Yes
On Screen Display		Yes
Camera Title		8 Character Title
Display Format	2 x Zoom On Playback	Yes
	QUAD	Yes
	FULL	Yes
	SEQUENCY	Yes
Dwell Time		0 to 99 Sec Adjustable
Built-in Buzzer		Yes
Key Lock		Yes

### Remarks

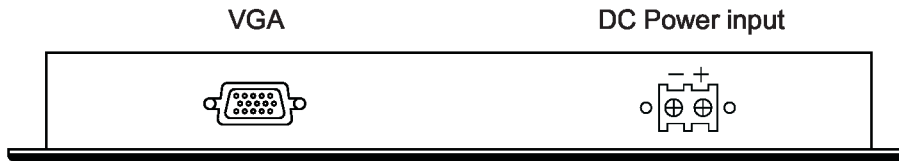
- For more details, please refer to Quad Display User Manual.

## 5.7 DC Power Options

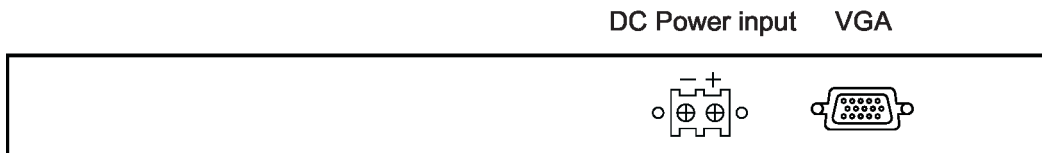


### RKMTL-7U-19W & RKMTL-8U-22W

## Chapter 5



### RKMTL-1U-19W

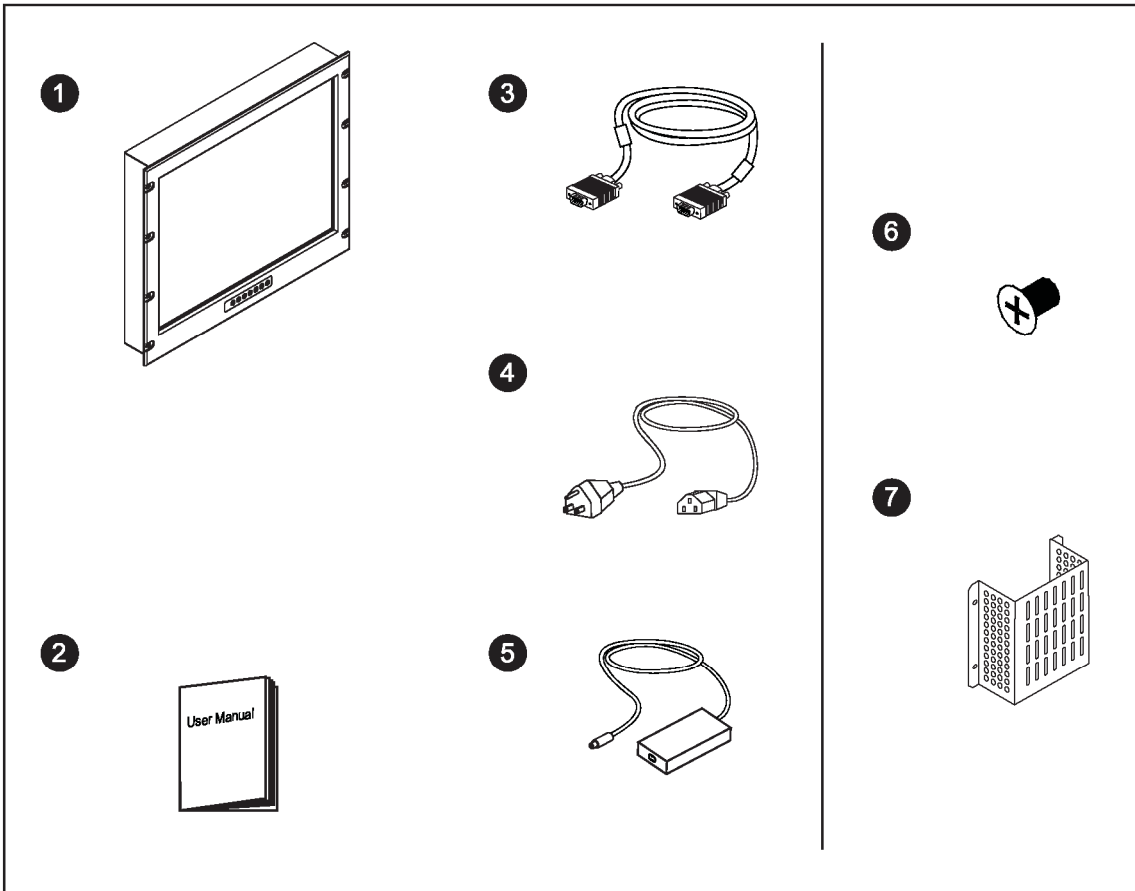


Model	12V	24V	48V
<b>Input rating</b>			
Input voltage:	12-Volt	24-Volt	48-Volt
Input range:	9 — 18V	18 — 36V	36 — 75V
Input current			
- No load	50 mA	50 mA	50 mA
- Full load	4950 mA	2450 mA	1220 mA
<b>Output rating</b>			
Output voltage:	12-Volt	12-Volt	12-Volt
Output current:	4.16A	4.16A	4.16A
<b>Efficiency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

#### Remarks

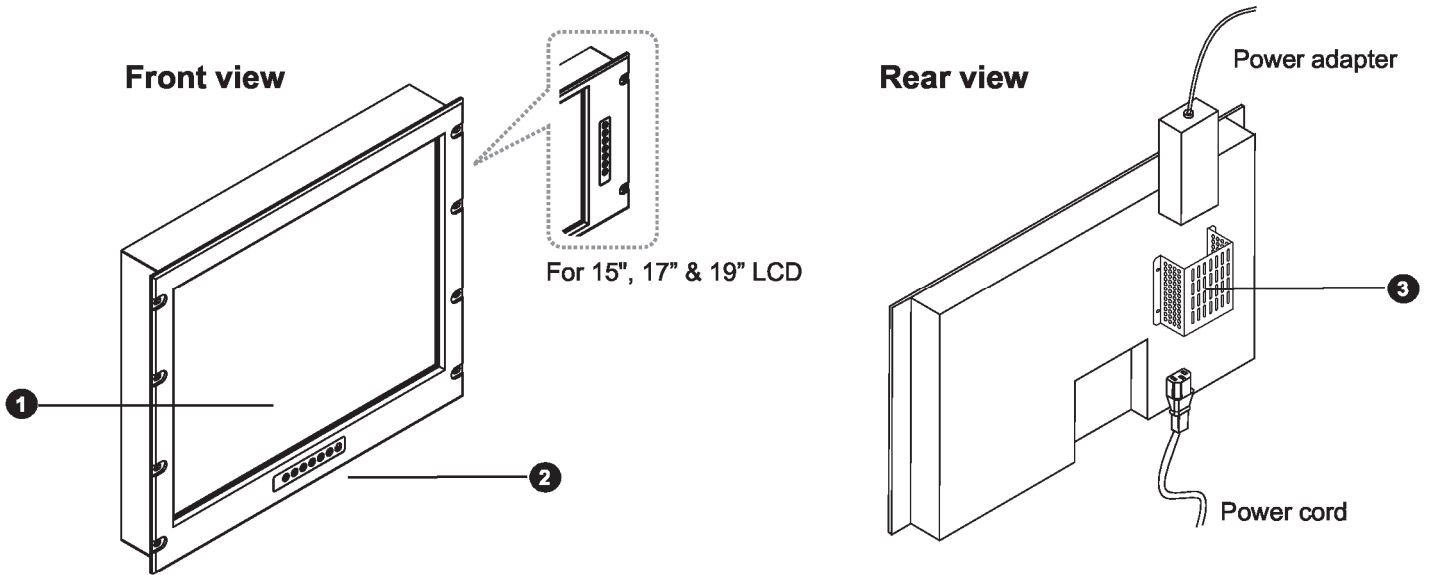
- Package does not include power cord and AC power adapter

RKMTL-7U-17, RKMTL-8U-19 & RKMTL-9U-20  
RKMTLS-7U-17, RKMTLS-8U-19 & RKMTLS-9U-20



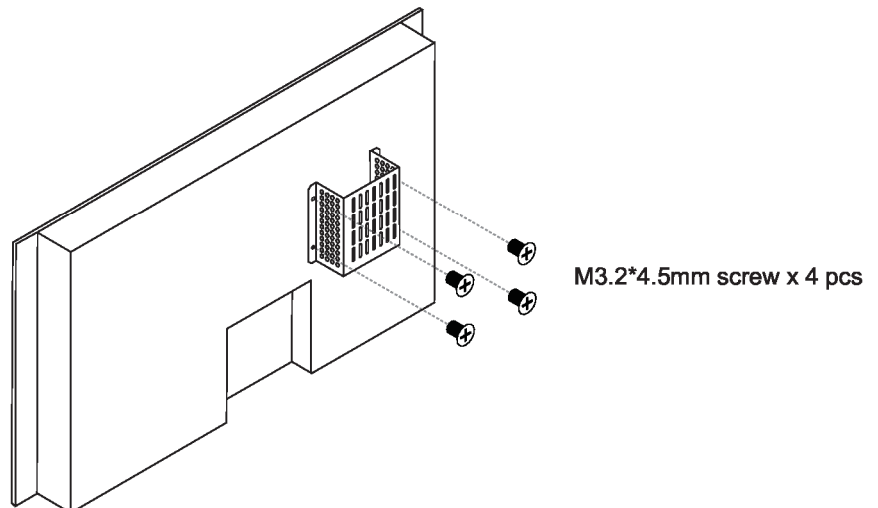
- ① Rackmount LCD display x 1 pc
- ② User manual x 1 pc
- ③ 6' VGA cable (male to male) x 1 pc
- ④ Power cord x 1 pc
- ⑤ Auto switch power adapter x 1 pc
- ⑥ M3.2\*4.5mm screw x 4 pcs
- ⑦ Power adapter bracket x 1 pc

**RKMTL-7U-17, RKMTL-8U-19 & RKMTL-9U-20  
RKMTLS-7U-17, RKMTLS-8U-19 & RKMTLS-9U-20**

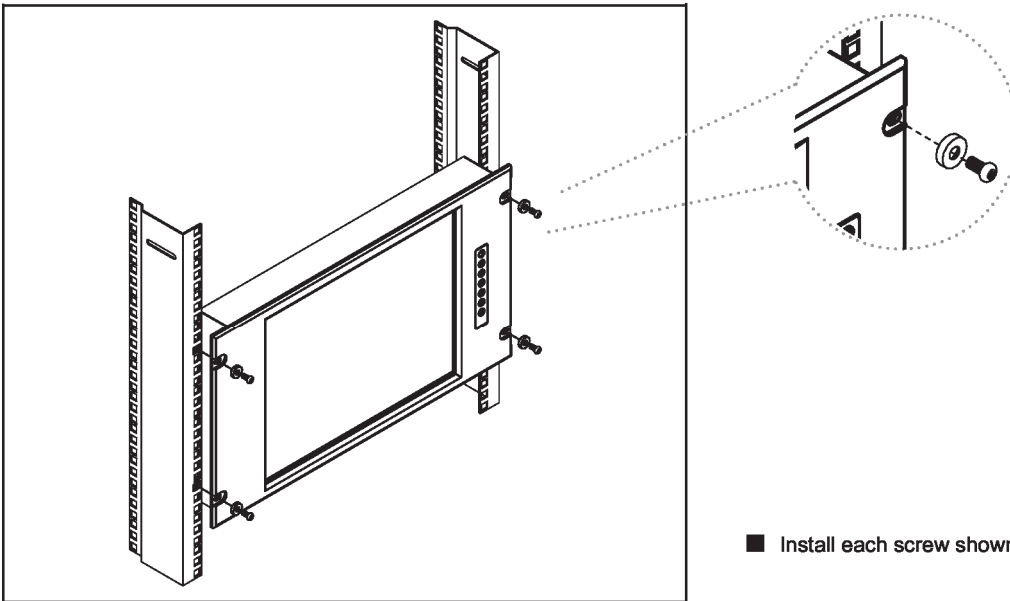


- ① LCD interchangeable module kit
- ② LCD membrane
- ③ Power adapter bracket

**Power adapter bracket installation**

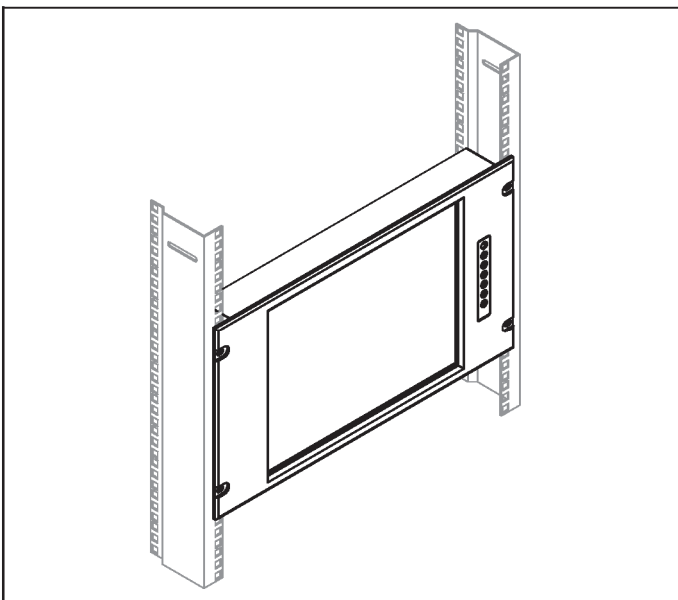


RKMTL-7U-17 & RKMTL-8U-19 RKMTLS-7U-17  
& RKMTLS-8U-19



■ Install each screw shown in Figure 10.

Figure 10.

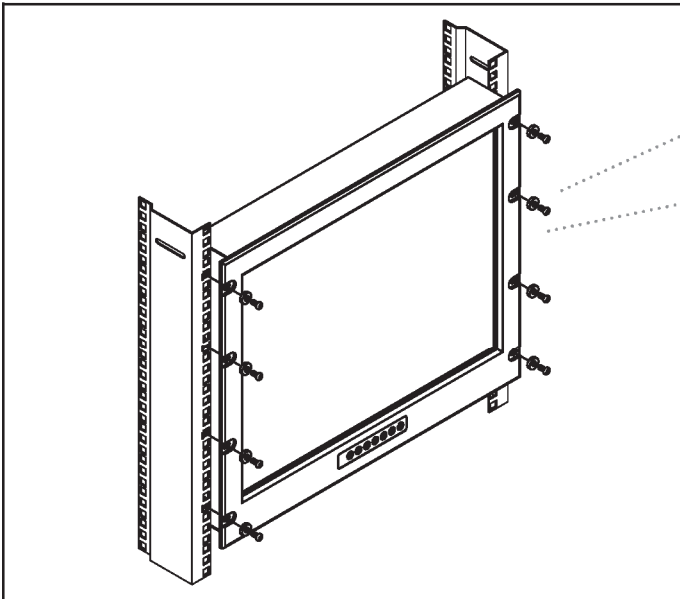


■ Fix the LCD into the rack.

\* M6 screws are not provided.

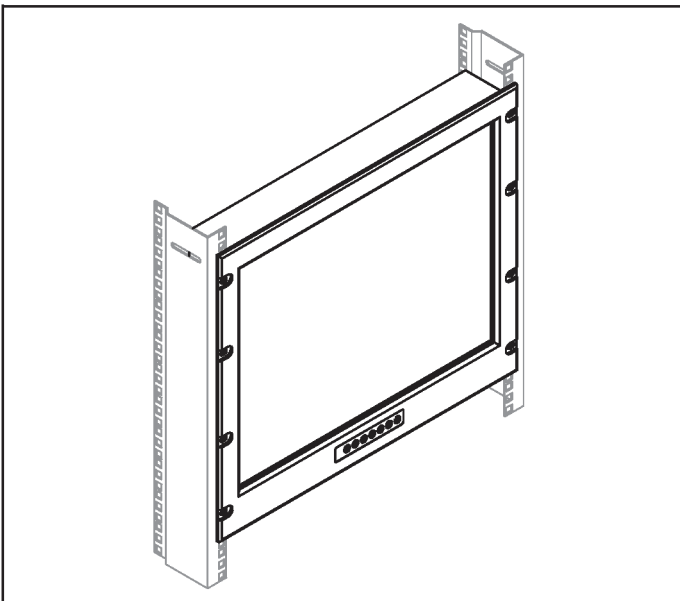
Figure 11.

RKMTL-9U-20 & RKMTLS-9U-20



■ Install each screw shown in Figure 12.

Figure 12.



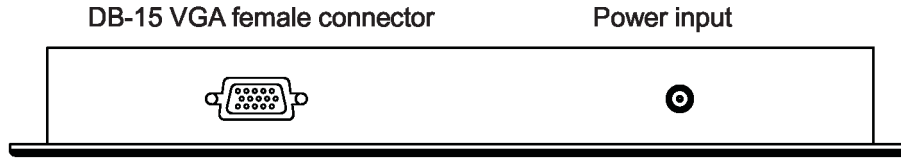
■ Fix the LCD into the rack.

\* M6 screws are not provided.

Figure 13.

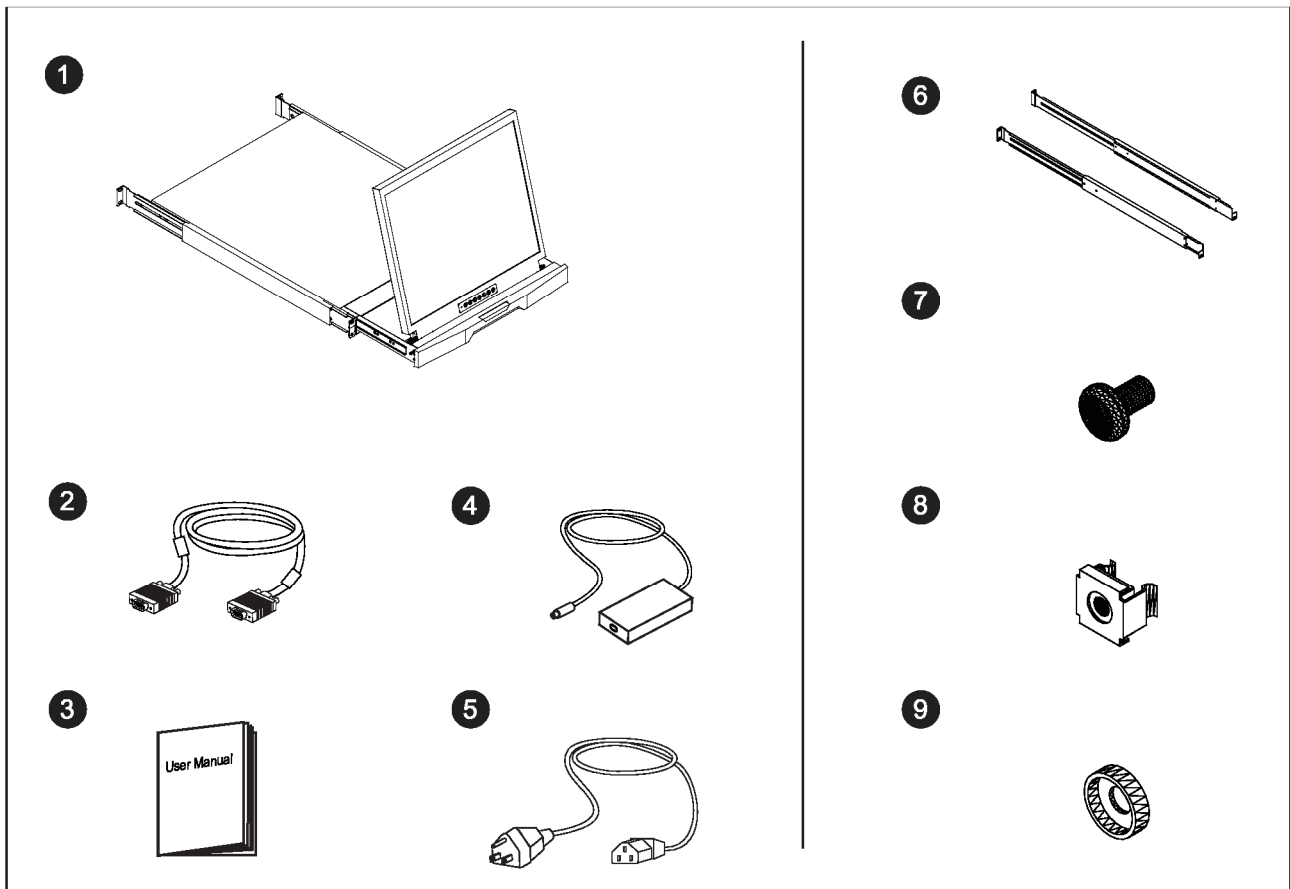


**RKMTL-7U-17, RKMTL-8U-19 &  
RKMTL-9U-20 RKMTLS-7U-17,  
RKMTLS-8U-19 & RKMTLS-9U-20**



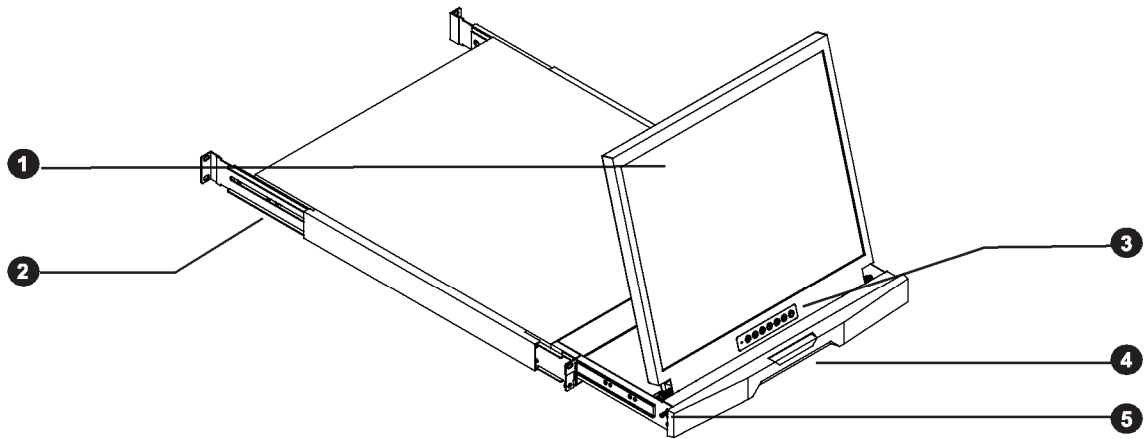
**Caution :** The Rackmount LCD Drawer & Display are hot-pluggable, but components of connected devices, such as the servers and KVM switch, may not be hot-pluggable. Plugging and unplugging cables while servers and KVM are powered on may cause irreversible damage of the servers, KVM and Rackmount LCD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

### RKMTL-1U-20 & RKMTLS-1U-20 RKMTL-1U-17, RKMTL-1U-19, RKMTLS-1U-17 & RKMTLS-1U-19 , RKMTL-1USD-17 & RKMTL-1USD-19



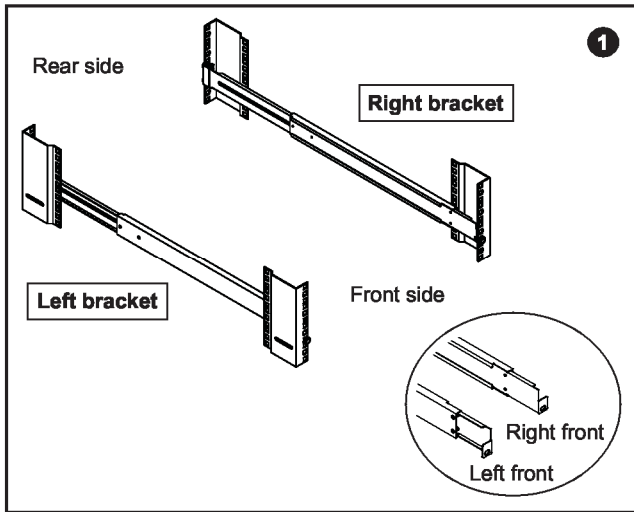
- ① LCD drawer x 1 pc
- ② 6' VGA cable (male to male) x 1 pc
- ③ User manual x 1 pc
- ④ Auto switch power adapter ( for external power version) x 1 pc
- ⑤ Power cord x 1 pc
- ⑥ Mounting bracket x 2 pcs
- ⑦ M6\*15mm screw x 8 pcs
- ⑧ M6 cage nut x 6 pcs
- ⑨ Cup washer x 8 pcs

**RKMTL-1U-20 & RKMTLS-1U-20**  
**RKMTL-1U-17, RKMTL-1U-19, RKMTLS-1U-17 &**  
**RKMTLS-1U-19 , RKMTL-1USD-17 & RKMTL-1USD-19**



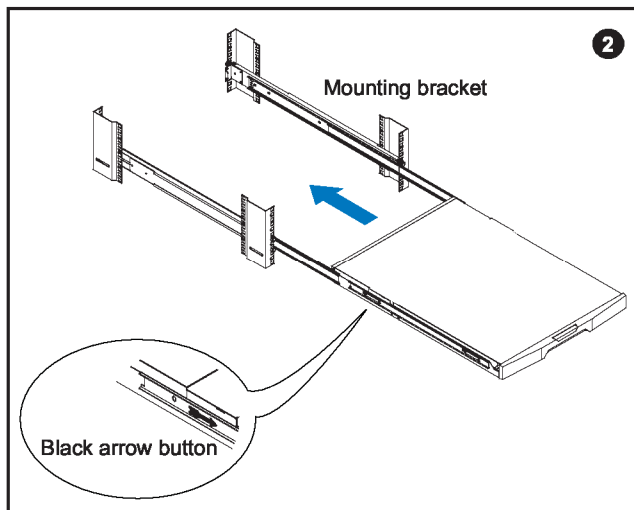
- ① LCD interchangeable module kit
- ② "One Man" Installation Slide
- ③ LCD membrane
- ④ Carry handle to release the 2-pt lock
- ⑤ 2-point lock

## Install into rack

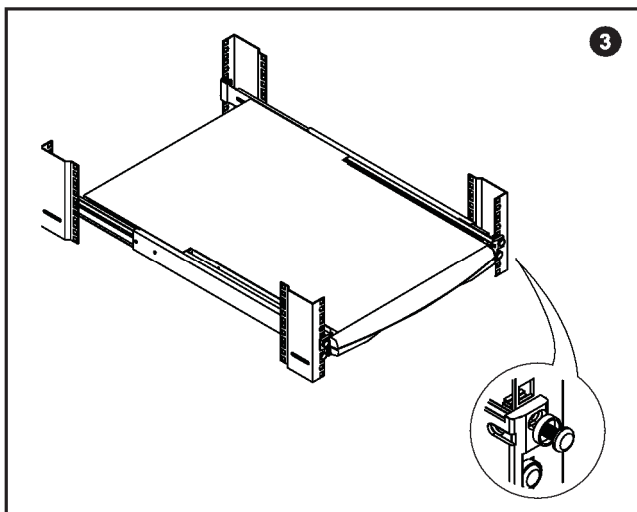


- Attach the left and right mounting bracket to rack 19" mounting rails.
- Adjust the rear mounting bracket to fit your rack.
- M6 screw and cup washer x 6 pcs included.

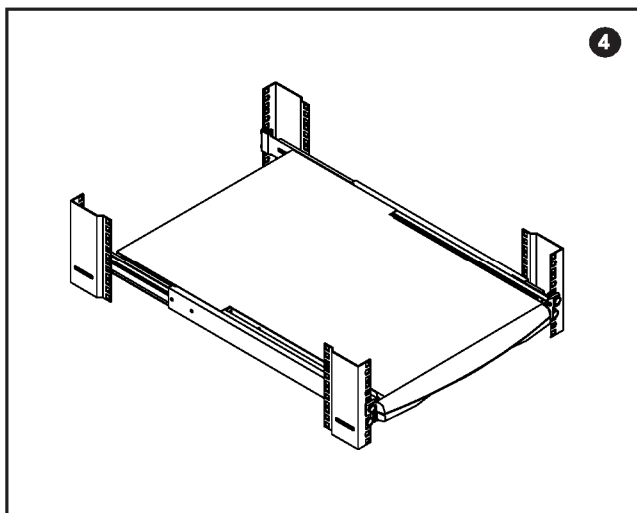
**Caution :** Leaving the screws slightly loose, until you complete the installation in step 4



- Pick up the LCD drawer.
- Insert the LCD drawer into the mounting bracket.
- Pull and hold the left & right black arrow buttons on the rails.
- Return the LCD drawer to park position.



- Attach front left and right mounting ears of the LCD keyboard drawer to vertical mounting rails.
- M6 screw and cup washer x 2 pcs included.



#### Complete the installation

- Tighten all 8 pcs of M6 screw to complete the installation.

RKMTL-1U-20 & RKMTLS-1U-20  
RKMTL-1U-17, RKMTL-1U-19, RKMTLS-1U-17 &  
RKMTLS-1U-19 , RKMTL-1USD-17 & RKMTL-1USD-19

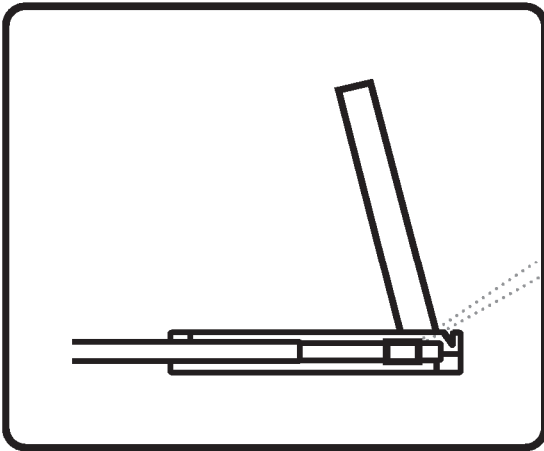


Figure 14.

- A black arrow release button is located on the outside of each slide. (shown in Figure 14).

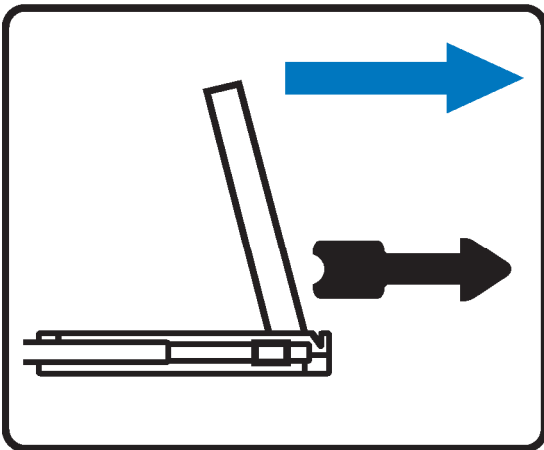


Figure 15.

- Pull and hold the black arrow button on either side of the LCD drawer to unlock. (shown in Figure 15).

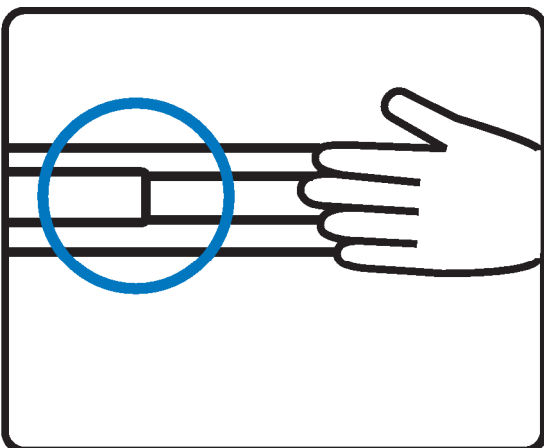



Figure 16.

- Push the LCD drawer into the rack. (shown in Figure 16).

 **Caution :** Keep your fingers away from the slide stop

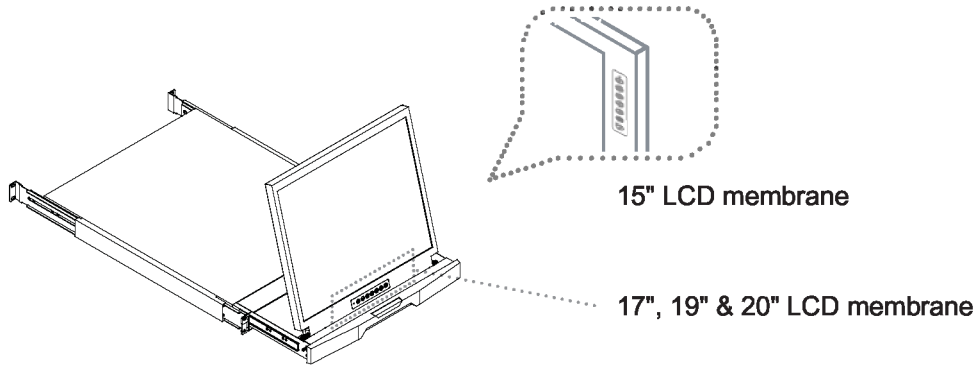
### RKMTL-1U-20 & RKMTLS-1U-20 RKMTL-1U-17, RKMTL-1U-19, RKMTLS-1U-17 & RKMTLS-1U-19 , RKMTL-1USD-17 & RKMTL-1USD-19

External power version ( For short depth version)



**Caution :** The Rackmount LCD Drawer & 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 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.

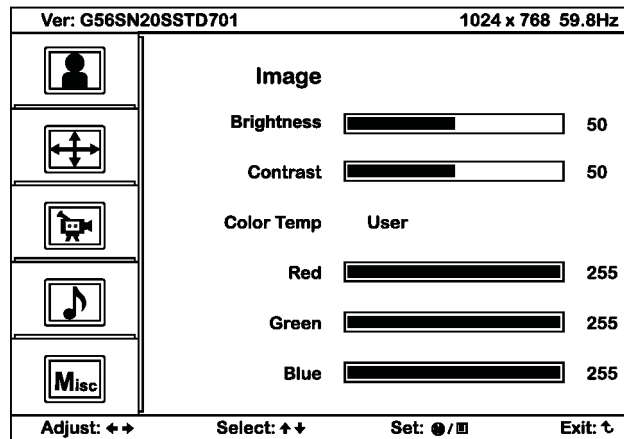
**RKMTL-1U-20 & RKMTLS-1U-20  
 RKMTL-1U-17, RKMTL-1U-19, RKMTLS-1U-17 &  
 RKMTLS-1U-19 , RKMTL-1USD-17 & RKMTL-1USD-19**



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
	Display the OSD menu
	Scrolls through menu options and adjusts the displayed control (To auto adjustment by pressing the button  for 5 seconds)
	Exit the OSD screen Toggle analog, digital & video connection (DVI-D and video options only)



**RKMTL-1U-20 & RKMTLS-1U-20  
 RKMTL-1U-17, RKMTL-1U-19, RKMTLS-1U-17 &  
 RKMTLS-1U-19 , RKMTL-1USD-17 & RKMTL-1USD-19**

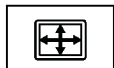


**OSD Configuration Page**



**Image:**

To enter into the brightness, contrast, color temp, red, green, and blue



**Geometry:**

To enter into the auto adjust, H position, V position, phase and clock



**Video:**

To enter into the colour, tint, sharpness, noise reduction, DCDi and TV Setup



**Audio:**

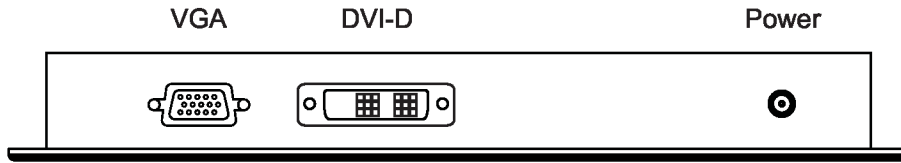
To enter into volume, bass, treble, balance, AVL and mute



**Misc:**

To enter into the language, OSD position, graphic mode, ratio, reset and timer

**RKMTL-7U-17, RKMTL-8U-19 & RKMTL-9U-20  
RKMTLS-7U-17, RKMTLS-8U-19 & RKMTLS-9U-20**



**Remarks**

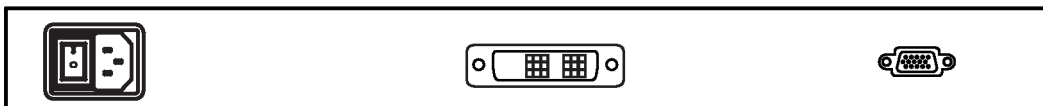
- Package includes 1 x 6ft DVI-D cable

**RKMTL-1U-20 & RKMTLS-1U-20  
RKMTL-1U-17, RKMTL-1U-19, RKMTLS-1U-17 &  
RKMTLS-1U-19 , RKMTL-1USD-17 & RKMTL-1USD-19**

Internal power version

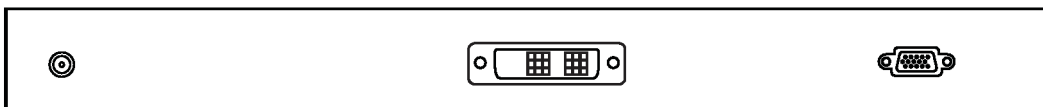
DVI-D

VGA



External power version

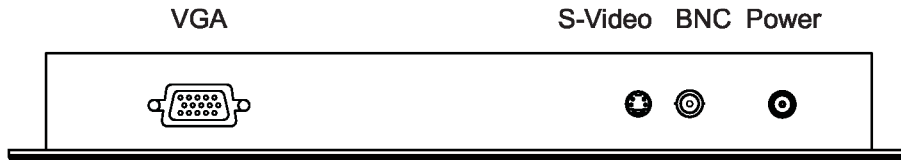
( For short depth version - / 1417 / 1419 )



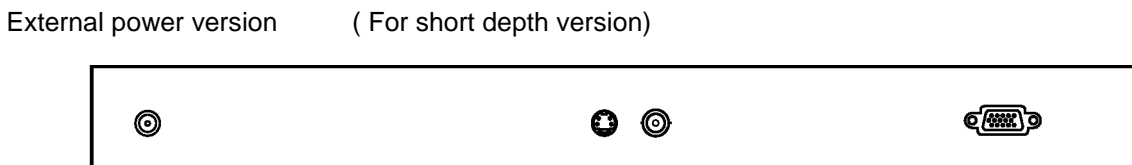
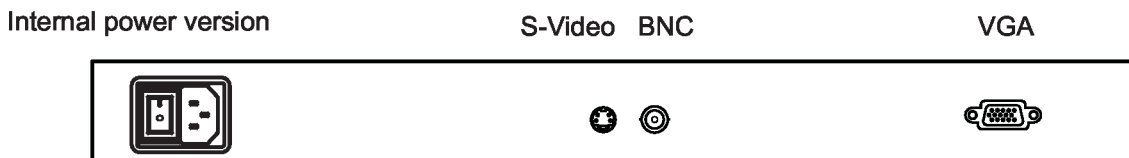
**Remarks**

- Package includes 1 x 6ft DVI-D cable
- The depth of / 1417 / 1419 will be extended from 480mm ( 18.9" ) to 530mm ( 20.9" )

**RKMTL-7U-17, RKMTL-8U-19 & RKMTL-9U-20**



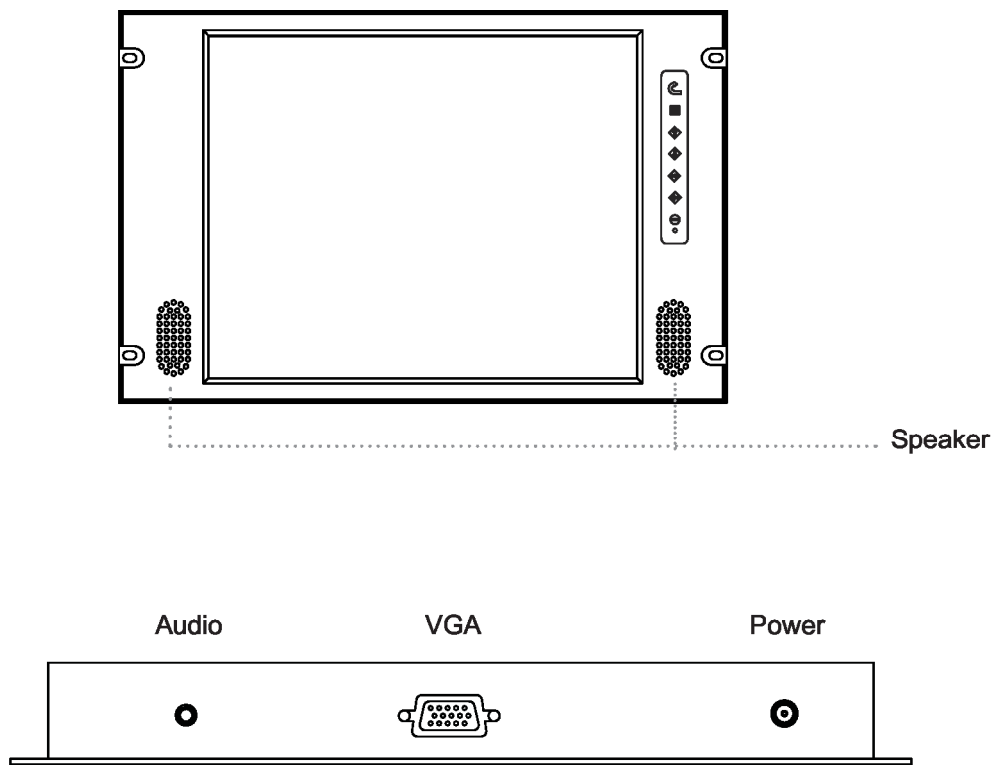
**RKMTL-1U-20  
 RKMTL-1U-17 & RKMTL-1U-19  
 RKMTL-1USD-17 & RKMTL-1USD-19**



**Remarks**

- Package includes 1 x 6ft S-Video cable

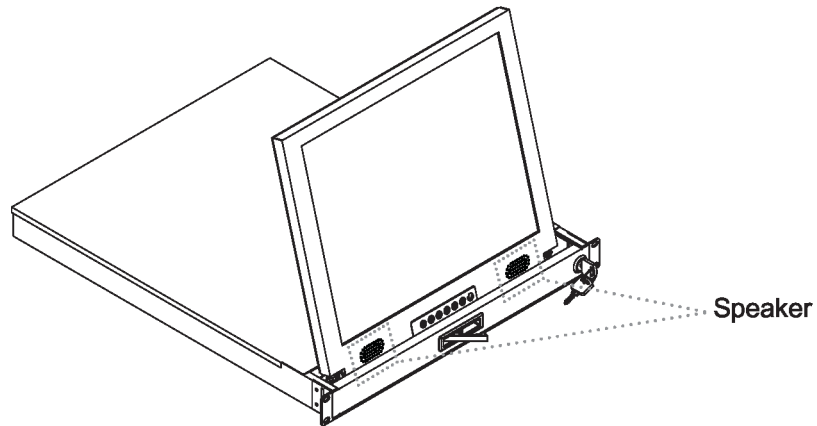
RKMTL-7U-17, RKMTL-8U-19 & RKMTL-9U-20



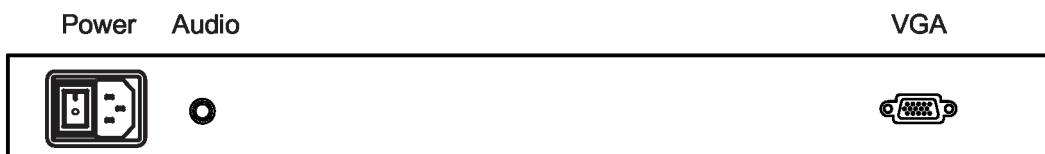
**Remarks**

- Audio input is 35mm audio plug
- The speaker is sharing the same power with LCD.

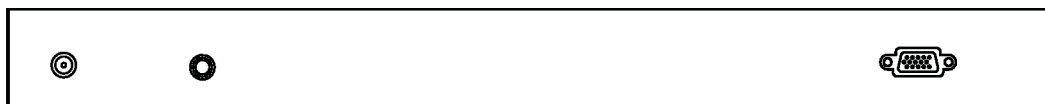
RKMTL-1U-20  
RKMTL-1U-17 & RKMTL-1U-19  
RKMTL-1USD-17 & RKMTL-1USD-19



Internal power version



External power version ( For short depth version - / 1417 / 1419 )

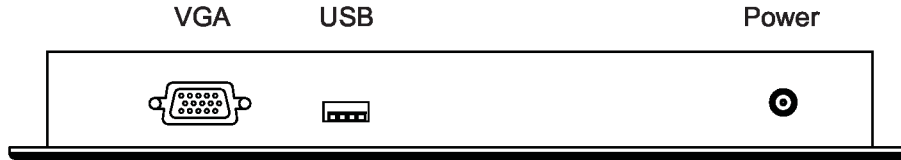


**Remarks:**

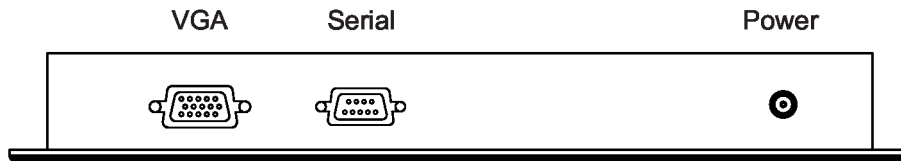
- Audio input is 35mm audio plug
- The speaker is sharing the same power with LCD.

RKMTL-7U-17, RKMTL-8U-19 & RKMTL-9U-20

**USB interface**

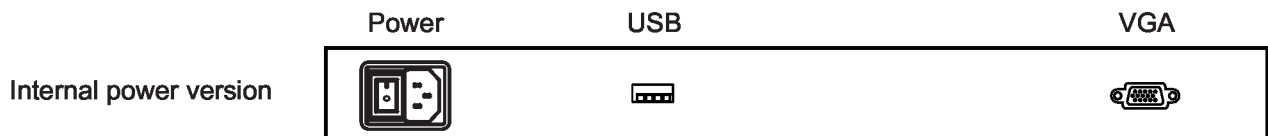


**Serial interface**



RKMTL-1U-20  
 RKMTL-1U-17 & RKMTL-1U-19  
 RKMTL-1USD-17 & RKMTL-1USD-19

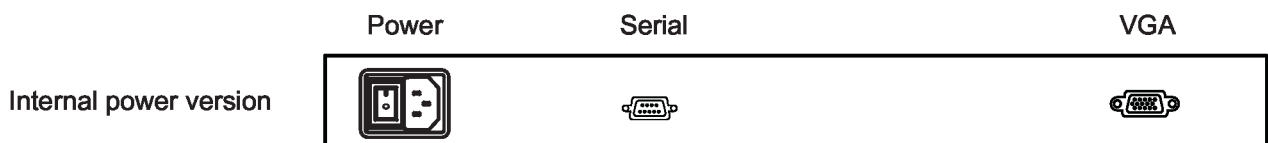
**USB interface**



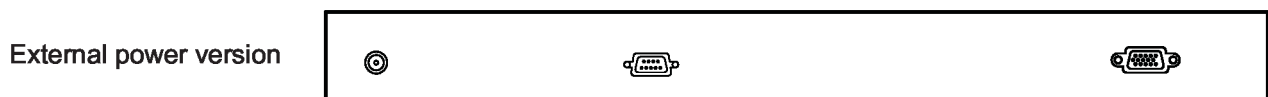
( For short depth version )



**Serial interface**



( For short depth version )





**e-Resistive**

<b>Screen size</b>	15"	17"	19"	20"
<b>Interface</b>	USB / serial			
<b>Optical transmittance</b>	80% ± 3%			
<b>Surface hardness</b>	≥3H (JIS K5400)			
<b>Operating system</b>	Windows 98 / 2000 / ME / XP / NT / CE, DOS, Linux			

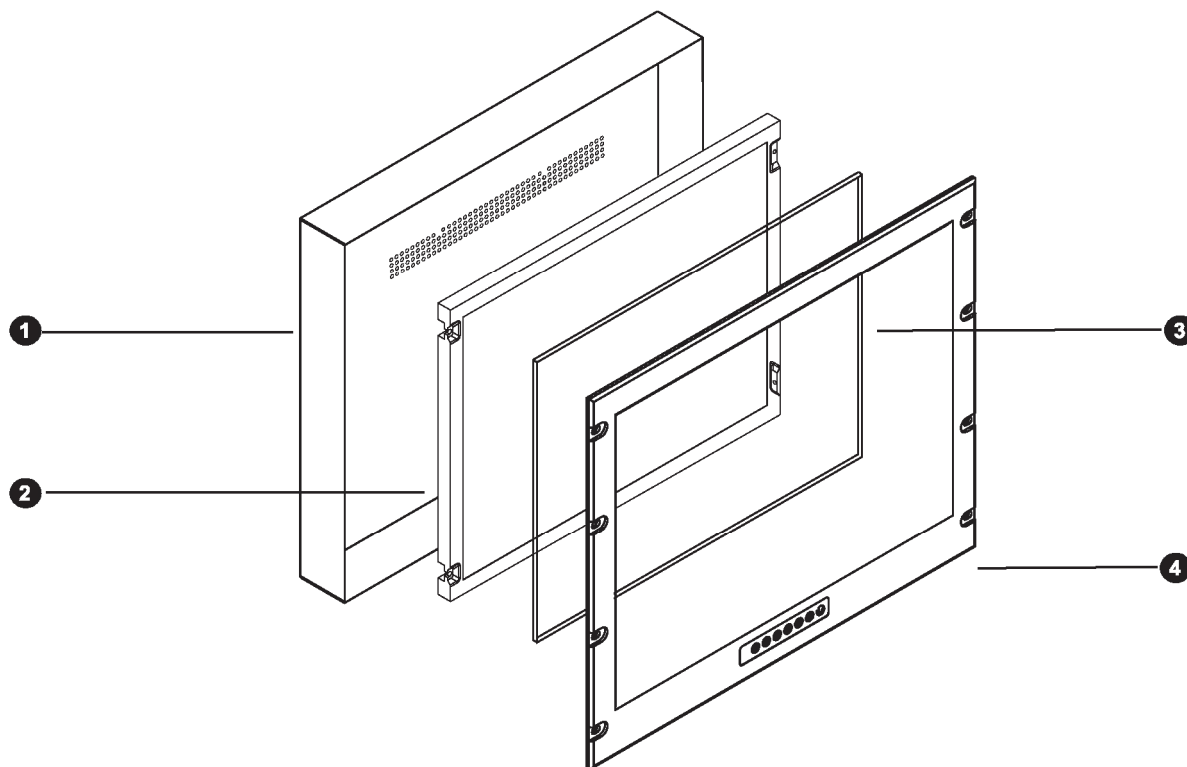
**e-Capacitive**

<b>Screen size</b>	15"	17"	19"	22"
<b>Interface</b>	USB / serial			
<b>Optical transmittance</b>	93% ± 2%			
<b>Surface hardness</b>	>9H Surface hardness, withstand over 300 million touches			
<b>Operating system</b>	Windows 98 / 2000 / ME / XP / NT / CE, DOS, Linux			

**Remarks**

- USB touchscreen package includes 1 x 6ft USB cable, quick reference guideline and CD disc
- Serial touchscreen package includes 1 x 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
- Touchscreen in other brands are available on request

### RKMTL-7U-17, RKMTL-8U-19 & RKMTL-9U-20



- 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.



## 9.6 Quad Display Option Specifications

## Chapter 9

RS-232 VCR in                      Video IN  
1 ~ 4

Alarm I/O VCR out              Video Loop      AV      VGA              Power  
1 ~ 4

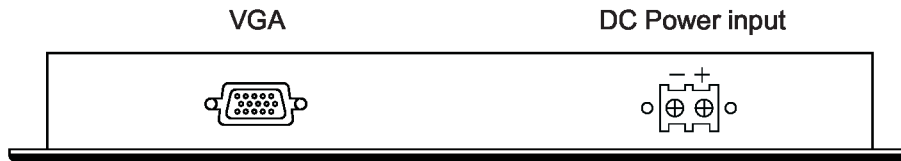
Item		Description
Model Number		QD (NTSC)                      QD (PAL)
Number of Color		16.7 M                      16.7 M
Imaging System		NTSC                      PAL
Resolution		1024 x 525                      1024 x 625
Refresh Rate		60                      50
Video Input	Camera Input	1.0 Vpp, 75 Ohm x 4
	VCR Input	1.0 Vpp, 75 Ohm x 1
Video Output	Live Monitor	1.0 Vpp, 75 Ohm x 1
	Loop Through Out	1.0 Vpp, 75 Ohm x 4
	VCR Output	1.0 Vpp, 75 Ohm x 1
Auto Gain Control		Yes
Time / Date		Yes
On Screen Display		Yes
Camera Title		8 Character Title
Display Format	2 x Zoom On Playback	Yes
	QUAD	Yes
	FULL	Yes
	SEQUENCY	Yes
Dwell Time		0 to 99 Sec Adjustable
Built-in Buzzer		Yes
Key Lock		Yes

### Remarks

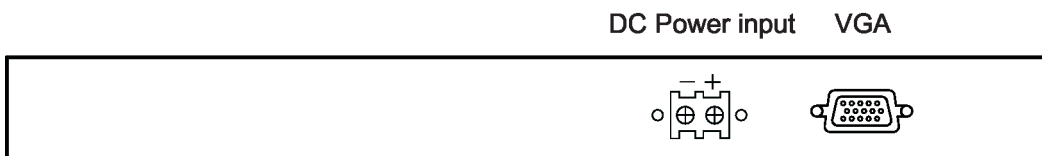
- For more details, please refer to Quad Display User Manual.
- Quad display input is not applicable for SP series.

## 9.7 DC Power Options

### RKMTL-7U-17, RKMTL-8U-19 & RKMTL-9U-20 RKMTLS-7U-17, RKMTLS-8U-19 & RKMTLS-9U-20



### RKMTL-1U-20 & RKMTLS-1U-20 RKMTL-1U-17, RKMTL-1U-19, RKMTLS-1U-17 & RKMTLS-1U-19 , RKMTL-1USD-17 & RKMTL-1USD-19



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	50 mA	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
- The depth of short depth units will be extended from 480mm ( 18.9" ) to 530mm ( 20.9" )

RKMTL-7U-19W, RKMTL-8U-22W & RKMTL-1U-19W

Item	Description		
LCD Manufacturer	Samsung		
	RKMTL-1U-19W	RKMTL-7U-19W	RKMTL-8U-22W
Diagonal Size	Wide 19" TFT	Wide 19" TFT	Wide 22" TFT
Max. Resolution	1440 x 990	1440 x 990	1680 x 1050
Brightness (cd/m <sup>2</sup> )	300	300	300
Color Support	16.7 M	16.7 M	16.7 M
Contrast Ratio (typ.)	1000:1	1000:1	1000:1
Viewing Angle (H/V)	160° x 160°	160° x 160°	160° x 160°
Display Area (mm)	408 x 255	408 x 255	474 x 296
Tr Response Time (ms)	1.3	1.3	3.6
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	720 x 400, 70 Hz		
	640 x 480, 60/ 70/ 72/ 75 Hz		
	800 x 600, 60/ 70/ 72/ 75 Hz		
	1024 x 768, 60/ 70/ 75 Hz		
	1152 x 864, 60/ 70/ 75 Hz		
	1280 x 720, 60/ 70/ 75 Hz		1280 x 720, 60/ 75 Hz
	1280 x 1024, 60/ 70/ 75 Hz		1280 x 1024, 60/ 75 Hz
	1440 x 900, 60 Hz		1680 x 1050, 60 Hz
Plug & Play DDC	EDID 1.3		
Connector	DB-15 connector		
Power Input	Auto-sensing 100 to 240VAC, 50 / 60Hz		
Power Consumption	Max. 48 Watt, Standby 5 Watt		
Compatibility	Multi-platform - Mix PCs, SUNs, IBMs, HPs & DELLs.		

**Options**

Graphic Input	DVI-D, BNC, S-Video & Quad display input		
DC Power	DC power input with 12V, 24V, 48V selection		
Touchscreen	-	Resistive & capacitive	
AU	35mm audio plug		
NEMA 4 / IP65	4mm thickness of protective glass		

**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		

# 10.1 LCD Specifications

# Chapter 10

RKMTL-1U-20  
 RKMTL-1USD-17 &  
 RKMTL-1USD-19

RKMTL-1U-17, RKMTL-1U-19  
 RKMTL-7U-17, RKMTL-8U-19 & RKMTL-9U-  
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Item	Description			
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> )	250	250	250	300
Color Support	16.2 M	16.7 M	16.7 M	16.7 M
Contrast Ratio (typ.)	700:1	1000:1	1000:1	800:1
Viewing Angle (H/V)	160° x 130°	160° x 160°	160° x 160°	178° x 178°
Display Area (mm)	304 x 228	338 x 270	376 x 301	408 x 306
Tr Response Time (ms)	5.7	1.3	1.3	7
LCD Panel MTBF (hrs)	30,000	50,000	50,000	45,000
VGA Signal Input	Analog RGB, 0.7Vp-p			
Sync. Type	Separate H/V, Composite, SOG			
Resolution	640 x 400, 70 Hz	-		
	720 x 400, 70 Hz			
	640 x 480, 60/ 70/ 72/ 75 Hz			
	800 x 600, 60/ 70/ 72/ 75 Hz			
	1024 x 768, 60/ 70/ 72/ 75 Hz	1024 x 768, 60/ 70/ 75 Hz		
	-	1152 x 864, 60/ 70/ 75 Hz		
	-	1280 x 720, 60/ 70/ 75 Hz	1280 x 720, 60/ 75 Hz	
	-	1280 x 1024, 60/ 70/ 72/ 75 Hz	1280 x 1024, 60/ 70/ 75 Hz	
	-	-	1400 x 1050, 60 Hz	
-	-	1600 x 1200, 60 Hz		
Plug & Play DDC	EDID 1.3			
Connector	DB-15 connector			
Power Input	Auto-sensing 100 to 240VAC, 50 / 60Hz			
Power Consumption	Max. 48 Watt, Standby 5 Watt			
Compatibility	Multi-platform - Mix PCs, SUNs, IBMs, HPs & DELLs.			
Regulation Approval	FCC, CE			

### ***Options***

<b>Graphic Input</b>	DVI-D, BNC, S-Video & Quad display input
<b>DC Power</b>	DC power input with 12V, 24V, 48V selection
<b>Touchscreen</b>	Resistive & capacitive
<b>AU</b>	35mm audio plug
<b>NEMA 4 / IP65</b>	4mm thickness of protective glass

### ***Environmental***

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

**RKMTLS-1U-20  
RKMTLS-7U-17,**

**RKMTLS-1U-17 &  
RKMTLS-1U-19**

Item	Description		
Form Factor	1U rack mounting on slide-out rails		
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 <sup>2</sup> )	250	250	300
Color Support	16.7 M	16.7 M	16.7 M
Contrast Ratio (typ.)	1000:1	1000:1	800:1
Viewing Angle (H/V)	160° x 160°	160° x 160°	178° x 178°
Display Area (mm)	338 x 270	376 x 301	408 x 306
Tr Response Time (ms)	1.3	1.3	7
LCD Panel MTBF (hrs)	50,000	50,000	45,000
VGA Signal Input	Analog RGB, 0.7Vp-p		
Sync. Type	Separate H/V, Composite, SOG		
Resolution	720 x 400, 70 Hz		
	640 x 480, 60 /70 /72 /75 Hz		
	800 x 600, 60 /70 /72 /75 Hz		
	1024 x 768, 60 /70 /75 Hz		
	1152 x 864, 60 /70 /75 Hz		
	1280 x 720, 60 /70 /75 Hz		1280 x 720, 60 /75 Hz
	1280 x 1024, 60 /70 /72 /75 Hz		1280 x 1024, 60 /70 /75 Hz
	-		1400 x 1050, 60 Hz
	-		1600 x 1200, 60 Hz
Plug & Play DDC	EDID 1.3		
Connector	DB-15 connector		
Power Input	Auto-sensing 100 to 240VAC, 50 / 60Hz		
Power Consumption	Max. 48 Watt, Standby 5 Watt		
Compatibility	Multi-platform - Mix PCs, SUNs, IBMs, HPs & DELLs.		
Regulation Approval	FCC, CE		

**Options**

Graphic Input	DVI-D 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

### 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 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 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.

## For SP series LCD Drawer

### 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.

### 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.

**RKMTL-7U-19W, RKMTL-8U-22 & RKMTL-1U-19W ,  
 RKMTL-7U-17, RKMTL-8U-19 & RKMTL-9U-20  
 RKMTLS-7U-17, RKMTLS-8U-19 & RKMTLS-9U-20**

Model	Product Dimension (W x D x H)		Packing Dimension ( W x D x H )	Net Weight	Gross Weight
<b>RKMTL-7U-19W</b>	480 x 57.5 mm 18.9 x 2.3"	7U	565 x 495 x 156 mm 22.2 x 19.5 x 6.1"	8 kg 18 lb	10 kg 22 lb
<b>RKMTL-8U-22W</b>	500.4 x 59.1 mm 19.7 x 2.3"	8U	565 x 539 x 156 mm 22.2 x 21.2 x 6.1"	12 kg 26 lb	15 kg 33 lb
<b>RKMTL-1U-19W</b>	442 x 650 x 44 mm 17.4 x 25.6 x 1.73"		581 x 755 x 172 mm 22.9 x 29.7 x 6.8"	13 kg 29 lb	18 kg 40 lb
<b>RKMTL-7U-17 series</b>	480 x 54 mm 18.9 x 2.1"	7U	565 x 450 x 156 mm 22.2 x 17.7 x 6.1"	7 kg 15 lb	8.5 kg 19 lb
<b>RKMTL-8U-19 series</b>	480 x 53 mm 18.9 x 2.1"	8U	565 x 495 x 156 mm 22.2 x 19.5 x 6.1"	8 kg 18 lb	10 kg 22 lb
<b>RKMTL-9U-20 series</b>	480 x 64 mm 18.9 x 2.5"	9U	565 x 539 x 156 mm 22.2 x 21.2 x 6.1"	12 kg 26 lb	15 kg 33 lb
<b>RKMTLS-7U-17 series</b>	480 x 57 mm 18.9 x 2.2"	7U	565 x 450 x 156 mm 22.2 x 17.7 x 6.1"	7 kg 15 lb	8.5 kg 19 lb
<b>RKMTLS-8U-19 series</b>	480 x 57 mm 18.9 x 2.2"	8U	565 x 495 x 156 mm 22.2 x 19.5 x 6.1"	8 kg 18 lb	10 kg 22 lb
<b>RKMTLS-9U-20 series</b>	480 x 67 mm 18.9 x 2.6"	9U	565 x 539 x 156 mm 22.2 x 21.2 x 6.1"	12 kg 26 lb	15 kg 33 lb



**RKMTL-1U-20**  
**RKMTLS-1U-20**  
**RKMTL-1U-17, RKMTL-1U-19**  
**RKMTLS-1U-17 & RKMTLS-1U-19**  
**RKMTL-1USD-17 & RKMTL-1USD-19**

Model	Product Dimension (W x D x H)	Packing Dimension (W x D x H)	Net Weight	Gross Weight
<b>RKMTL-1U-20 series</b>	442 x 650 x 44 mm 17.4 x 25.6 x 1.73"	581 x 755 x 172 mm 22.9 x 29.7 x 6.8"	14 kg 31 lb	19 kg 42 lb
<b>RKMTLS-1U-20 series</b>	442 x 650 x 44 mm 17.4 x 25.6 x 1.73"	581 x 755 x 172 mm 22.9 x 29.7 x 6.8"	14 kg 31 lb	19 kg 42 lb
<b>RKMTL-1U-17 series</b>	446 x 600 x 44 mm 17.6 x 23.6 x 1.73"	581 x 755 x 172 mm 22.9 x 29.7 x 6.8"	12 kg 26 lb	17 kg 37 lb
<b>RKMTL-1U-19 series</b>	446 x 600 x 44 mm 17.6 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 40 lb
<b>RKMTLS-1U-17 series</b>	446 x 600 x 44 mm 17.6 x 23.6 x 1.73"	581 x 755 x 172 mm 22.9 x 29.7 x 6.8"	12 kg 26 lb	17 kg 37 lb
<b>RKMTLS-1U-19 series</b>	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 40 lb
<b>RKMTL-1USD-17 series</b>	446 x 480 x 44 mm 17.6 x 18.9 x 1.73"	584 x 641 x 169 mm 23 x 25.2 x 6.7"	12 kg 26 lb	17 kg 37 lb
<b>RKMTL-1USD-19 series</b>	446 x 480 x 44 mm 17.6 x 18.9 x 1.73"	584 x 641 x 169 mm 23 x 25.2 x 6.7"	13 kg 29 lb	18 kg 40 lb

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