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# User Manual 16.2" Ultra High Resolution LCD 1920 x 1200



LCD1U17-017

1U LCD Drawer

1920 × 1200 Wuxga

**Options :** 

- SDI

- DVI-D

- Touchscreen / DC power



#### Legal Information

First English printing, July 2023

Information in this document has been carefully checked for accuracy; however, no guarantee is given to the correctness of the contents. The information in this document is subject to change without notice. We are not liable for any injury or loss that results from the use of this equipment.

#### Safety Instructions

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

- Unplug equipment before cleaning. Don't use liquid or spray detergent; use a moist cloth.
- Keep equipment away from excessive humidity and heat. Preferably, keep it in an air-conditioned environment with temperatures not exceeding 40° Celsius (104° Fahrenheit).
- When installing, place the equipment on a sturdy, level surface to prevent it from accidentally falling and causing damage to other equipment or injury to persons nearby.
- When the equipment is in an open position, do not cover, block or in any way obstruct the gap between it and the power supply. Proper air convection is necessary to keep it from overheating.
- Arrange the equipment's power cord in such a way that others won't trip or fall over it.
- If you are using a power cord that didn't ship with the equipment, ensure that it is rated for the voltage and current labeled on the equipment's electrical ratings label. The voltage rating on the cord should be higher than the one listed on the equipment's ratings label.
- Observe all precautions and warnings attached to the equipment.
- If you don't intend on using the equipment for a long time, disconnect it from the power outlet to prevent being damaged by transient over-voltage.
- Keep all liquids away from the equipment to minimize the risk of accidental spillage. Liquid spilled on to the power supply or on other hardware may cause damage, fire or electrical shock.
- Only qualified service personnel should open the chassis. Opening it yourself could damage the equipment and invalidate its warranty.
- If any part of the equipment becomes damaged or stops functioning, have it checked by qualified service personnel.

#### What the warranty does not cover

- Any product, on which the serial number has been defaced, modified or removed.
- Damage, deterioration or malfunction resulting from:
  - Accident, misuse, neglect, fire, water, lightning, or other acts of nature, unauthorized product modification, or failure to follow instructions supplied with the product.
  - $\hfill\square$  Repair or attempted repair by anyone not authorized by us.
  - □ Any damage of the product due to shipment.
  - □ Removal or installation of the product.
  - $\hfill\square$  Causes external to the product, such as electric power fluctuation or failure.
  - □ Use of supplies or parts not meeting our specifications.
  - $\Box$  Normal wear and tear.
  - $\Box$  Any other causes which does not relate to a product defect.
- Removal, installation, and set-up service charges.

#### **Regulatory Notices Federal Communications Commission (FCC)**

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation.

Any changes or modifications made to this equipment may void the user's authority to operate this equipment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications.

However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Re-position or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.

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## **Before Installation**

- It is very important to mount the equipment in a suitable cabinet or on a stable surface.
- Make sure the place has a good ventilation, is out of direct sunlight, away from sources of excessive dust, dirt, heat, water, moisture and vibration.

## Unpacking

The equipment comes with the standard parts shown in package content. Check and make sure they are included and in good condition. If anything is missing, or damaged, contact the supplier immediately.

## How To Clean Your LCD Monitor

# A Caution :

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

## **Cleaning Your Monitor**

To clean your LCD safely, please follow these steps :

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

## **Cleaning Tough Marks and Smudges**

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

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

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

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

# < Part 1 > < 1.1 > Package Content

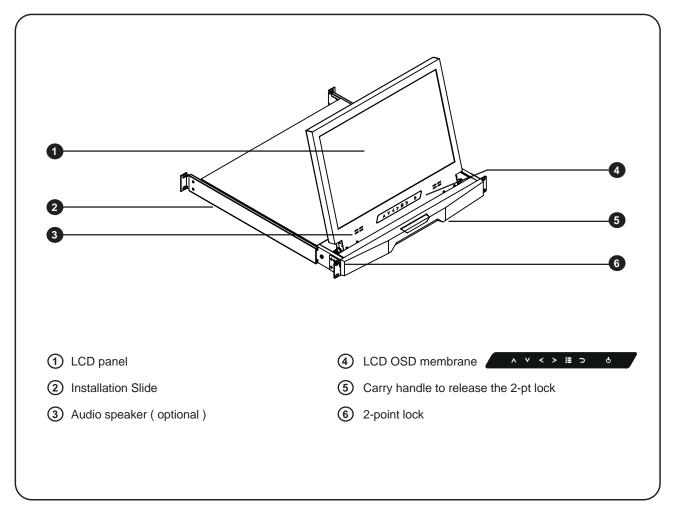


### LCD1U17-017 unit X 1

- 6ft VGA cable X1
- Power cord X1
- M6 screw, cage nut & cup washer X8

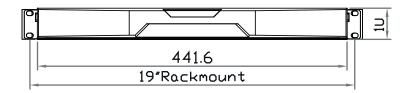
The above package content is only for the pure model (VGA and HDMI only). It varies with options such as SDI, DVI-D, audio, touchscreen & DC power.

## < 1.2 > Structure Diagram

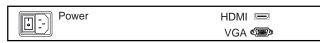


# < 1.2 > Dimension

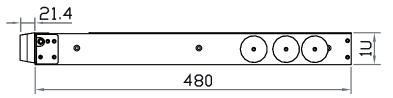
#### **Front View**



#### **Rear View**

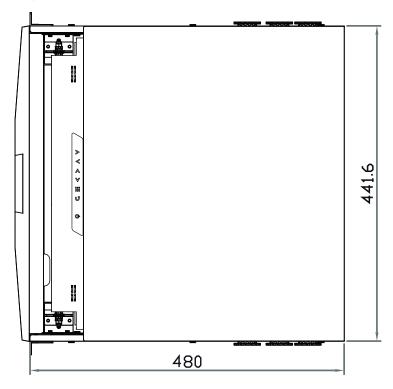


#### **Side View**



UNIT : mm 1mm = 0.03937 inch

#### **Top View**

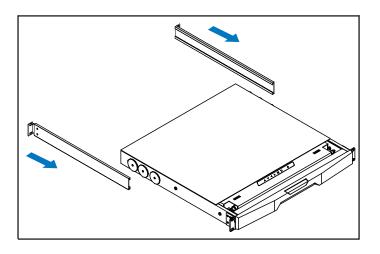


Model	Product Dimension (W x D x H)	Net Weight
LCD1U17-017	441.6 x 480 x 44 mm 17.4 x 18.1 x 1.73 inch	11 kg 24.2 lb



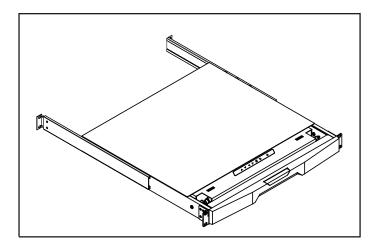
The weight is only for the pure models. It varies with accessories & options such as SDI, DVI-D, audio, touchscreen & DC power.

# < 1.3 > Installation - How to install Installation Slides



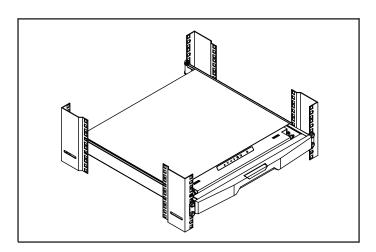


Insert the left and right rear mounting brackets into the display drawer.





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





Fix the display drawer into the rack.





#### After use the drawer

Basically, user can push in the drawer back to park position by releasing the left & right slide lock arrow (as long as the drawer starts moving, he/she can release their finger right away, holding the arrow is not necessary).

# < Part 2 > Specifications / OSD

# < 2.1 > Product Specifications

LCD Donol	Panel Size (diagonal)	16.2-inch Widescreen TFT color LCD
Panel	Display pixel ( dots x lines )	1920 x 1200
	Brightness ( typ. )	300
	Contrast Ratio ( typ. )	800:1
	Color	16.7 M, 8-bit
	Viewing Angle ( L/R/U/D )	89/89/89
	Response Time ( ms )	30
	Dot pitch (mm)	0.191
	Display Area ( mm )	343.80H x 214.90V
	Surface treatment	Anti-glare, Hard-coating
	Surface hardness	3Н
	Backlight Type	LED
	MTBF ( hrs )	20,000

Video Connectivity	Digital	HDMI DVI	HDMI 1.4, HDCP 1.4 DVI-D, TMDS single link
	Analog	VGA	Analog 0.7Vp-p
	Plug & Play	DVI / VGA	VESA EDID structure 1.3
	Synchronization	VGA	Separate, Composite & SOG

Connectivity Speaker Dual Stereo Speaker 2W x 2
---

\* When the audio output is connected, speaker output is OFF

Power	Power Supply	Range	Auto-sensing 100 to 240VAC,
			50 / 60Hz
	Power Consumption	Screen ON	Max. 34W
		Power saving mode	Max. 4W
		Power button OFF	Max. 1W

Compliance	EMC	FCC & CE
	Safety	CE / LVD & UKCA
	Environmental	RoHS3 & REACH

Environmental	Operating	Temperature	0 to 55°C degree
Conditions	S	Humidity	20~90%, non-condensing
		Altitude	16,000 ft
	Storage / Non-operating	Temperature	-20 to 60°C degree
		Humidity	5~90%, non-condensing
		Altitude	40,000 ft
		Shock	10G acceleration (11ms duration)
		Vibration	10~300Hz 0.5G RMS random vibration

Physical Specification	Product (W x D x H)	441.6 x 460 x 44 mm
opeonioation		17.4 x 18.1 x 1.73 inch
	Net Weight	11 kg / 24.2 lb

\* All dimensions stated are subject to change if options are selected / integrated to base model part codes

Applicable	DVI-D / VGA Input	PC Signal	1920 x 1200 x 60Hz
Format			
			1360 x 768 x 60Hz
			1280 x 1024 x 60 / 75Hz
			1280 x 960 x 60Hz
			1280 x 768 x 60 / 75Hz
			1152 x 864 x 75Hz
			1024 x 768 x 60 / 70 / 75Hz
			848 x 480 x 60Hz
			800 x 600 x 60 / 72 / 75Hz
			720 x 400 x 70Hz
			640 x 480 x 60 / 72 / 75Hz
			640 x 400 x 70Hz
			640 x 350 x 70Hz
	HDMI Input	PC Signal	Same as VGA
		Video Signal	1080p : 60Hz
			720p : 50 / 60Hz
			480p : 60Hz
			576p : 50Hz
		Audio Signal	2ch Linear PCM ( 32 / 44.1 / 48 KHz )

# < 2.2 > On-screen Display Operation ( OSD )

	Membrane Switch	Function
	Ċ	Turn the monitor on or off
		Display the OSD menu Act as an Enter key to select screen setting options
	${\Bbb A}~{\Bbb V}~{{\vartriangleleft}}~{\Bbb S}$	Scroll through menu options and adjust the displayed control
	Ś	Exit the OSD screen Go back to the previous on-screen sub-menu or main menu
Rer	nark : All LED touch buttons in N The LED of <b>Power </b> () to	WHITE light. buch button will flash continuously when there is no signal input.
1 All t	he LED touch buttons will autor	matically turn off after 10 minutes of idle status (except the <b>Power (</b>

# < 2.2 > On-screen Display Operation ( OSD )

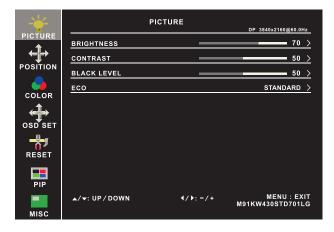
## 1 Picture

Brightness : Adjust the screen brightness

Contrast	: Adjust the difference between the image background	
	( black level ) and the foreground ( white level )	
Black level : Adjust background black level of the screen		

- Full Screen / 4:3 / 5:4 / Pixel to Pixel

Eco : Screen in power saving mode



	P	OSITION	DP 3840	0x2160@60.01	Ηz
PICTURE	PICTURE SIZE		FULL	SCREEN	>
	DP VERSION			DP 1.2	>
COLOR					
OSD SET					
RESET					
PIP					
MISC	▲/▼: UP/DOWN	<b>∢/</b> ▶: −/+	N M91KW43	MENU:EX 0STD7011	

## 3 Color

2

Position

Picture size : Adjust the image size

DP version : Select the DP version

Color temperature	: User / Warm / Cool / 5400k mode and Red / Green / Blue color balance	
Sharpness	: Adjust the image from weak to sharp	
Hue	: Adjust the screen hue value	
Saturation	: Adjust the saturation of the image color	
Dynamic Iuminous control	: Control the dynamic brightness	

	, c	COLOR	DP 3840x2160@60.0Hz
PICTURE	COLOR TEMPERATURE		USER >
<b>←↓</b> →	SHARPNESS		50 >
POSITION	HUE		50 >
COLOR	SATURATION		<b>50</b> >
.1.	DYNAMIC LUMINOUS C	CONTROL	0FF >
OSD SET			
RESET			
PIP			
MISC	▲/ <del>▼</del> : UP/DOWN	<b>∢/</b> ▶: -/+	MENU:EXIT M91KW430STD701LG

## (4) OSD Set

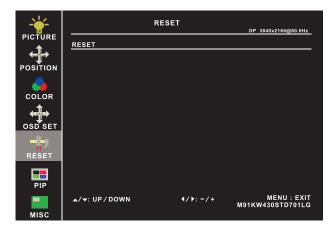
Language	: Select the language in which the OSD menu is displayed - English
OSD H-Position	: Align the screen image left or right
OSD V-Position	: Align the screen image up or down
OSD time out	: Adjust the screen timeout
OSD transparency	: Adjust the screen transparency
OSD size	: Adjust the screen size - Normal / Small
OSD rotation	: Rotate the screen - 90° / 180° / 270°

	OSD	SET	DP 3840x2160@60.0Hz
	LANGUAGE		
←	OSD H-POSITION		<b>50</b> >
POSITION	OSD V-POSITION		<b>50</b> >
	OSD TIME OUT		60 >
COLOR	OSD TRANSPARENCY		0 >
	OSD SIZE		NORMAL >
OSD SET	OSD ROTATION		OFF >
RESET			
PIP			
MISC	▲/▼: UP/DOWN	<b>∢/</b> ▶: <b>-</b> /+	MENU:EXIT M91KW430STD701LG

# < 2.2 > On-screen Display Operation (OSD)

#### (5) Reset

Reset : Return the adjustment back to factory setting



### 6 PIP

PIP mode	: Enter into PIP / PBP setting - PIP MODE / PBP 2WIN (Main screen + 1 sub screen) / PBP 3WIN (Main screen + 2 sub screen) / PBP 4WIN (Main screen + 3 sub screen) Select the signal input of each sub screen	
PIP size	: Adjust the size of the Sub screen - Small / Medium / Large / Huge	
PIP position		
Swap	: Swap the input signal of PIP / PBP sub screen	

		PIP	DP 3840x2160@60.	OHz
PICTURE	PIP MODE		PIP MODE	>
←₽	WINDOW2 INPUT		HDMI2	>
POSITION	WINDOW3 INPUT		HDMI1	
	WINDOW4 INPUT		DP	>
COLOR	PIP SIZE		MEDIUM	>
<b>↔</b> ]→	PIP POSITION		TOP LEFT	>
OSD SET	SWAP			
RESET				
PIP				
MISC	▲/▼: UP/DOWN	<b>∢/</b> ▶: -/+	MENU:E M91KW430STD701	

## 7 MISC

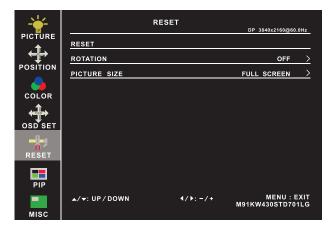
Signal source : Select the signal source - $\mbox{DP}/\mbox{HDMI1}/\mbox{HDMI2}$			
Mute	: Turn off the surrounding sound		
Audio in	: Auto / Line in / DP		
Volume	: Adjust the volume of sound		
Sleep mode : Set the off time - 10 min / 20 min / 30 min 50 min / 60 min / 120 min / 240 min			

		MISC	DP 3840x2160@60.0Hz	
PICTURE	SIGNAL SOURCE		DP >	
←	MUTE		OFF >	
POSITION	AUDIO IN		AUTO >	
	VOLUME	_	8 >	
COLOR	SLEEP MODE		OFF >	
OSD SET				
RESET				
PIP				
MISC	▲/ <del>▼</del> : UP/DOWN	<b>∢/ ▶</b> : -/+	MENU:EXIT M91KW430STD701LG	

#### **Options on Reset page**

Rotation : Rotate the image in Full screen or 1:1  $-90^{\circ}$  / 180° / 270°

Picture size : Adjust the image size in Full screen or 1:1

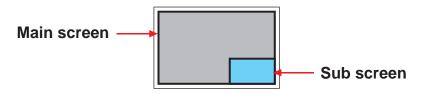


# < 2.3 > How to Use Picture In Picture (PIP) / Picture By Picture (PBP)

## < 2.3.1 > Picture in Picture ( PIP )

#### Mode

Display the Sub screen in the Main screen. OSD Menu  $\rightarrow$  MISC  $\rightarrow$  PIP Mode  $\rightarrow$  Large / Small / OFF



#### Position

Adjust the position of the Sub screen (top left, bottom left, top right, bottom right) OSD Menu  $\rightarrow$  MISC  $\rightarrow$  PIP Position  $\rightarrow$  top left / top right / bottom left / bottom right



top left





bottom left



bottom right

#### Size

Adjust the size of the Sub screen ( Large / Small ) OSD Menu  $\rightarrow$  MISC  $\rightarrow$  PIP Mode  $\rightarrow$  Large / Small

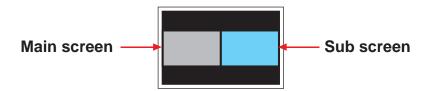
#### Size of Sub screen

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

## < 2.3.2 > Picture By Picture ( PBP )

#### Mode

Display the Sub screen next to the Main screen. OSD Menu  $\rightarrow$  MISC  $\rightarrow$  PIP Mode  $\rightarrow$  PBP



#### Size

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

## < 2.3.3 > PIP / PBP Source

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

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

The PIP / PBP is operable in the following table :

Sub Main	VGA	S-Video	Composite	DVI-D	HDMI	SDI	YPbPr	τν
VGA	х	0	0	0	0	0	0	0
S-Video	0	х	х	0	ο	0	0	х
Composite	0	х	Х	0	0	0	0	х
DVI	0	0	0	х	х	0	0	0
HDMI	0	0	0	х	х	0	0	0
SDI	0	0	0	0	0	х	х	0
YPbPr	0	0	0	0	0	х	х	0
τν	0	x	х	0	0	0	0	х

# < Part 3 > Options < 3.1 > Options : 3G / HD / SD-SDI input

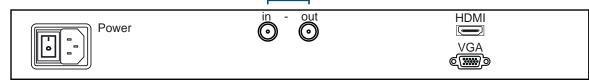


Our SDI input is an ideal solution for the broadcast-grade video and high resolution CCTV market.

Designed for use with NOVA series displays, a SDI input module can support up to 1080p @60Hz resolution without using additional space or power and it comes standard with a 1-year warranty.

\* SDI option comes with speakers.





Chassis extension in depth to 530mm (20.9")

INPUT	3G-SDI IN	BNC x 1 / 0.8Vp-p ( 75 ohm )
	3G-SDI OUT	BNC x 1 / Active through, equalized & relocked

Standard Compliance	Video	SMPTE 425M / 274M / 296M / 125M ITU-R BT.656
	Audio	SMPTE 299M / 272M-C

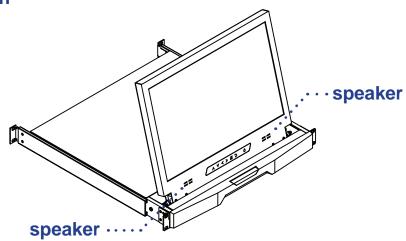
Compatible Video Format	3G-SDI HD-SDI	1080p 1080p 1080i 720p 1080p 1080i 720p	@60 / 50Hz, 4:2:2 @30 / 25 / 24Hz, 4:4:4 @60 / 50Hz, 4:4:4 @60 / 50Hz, 4:4:4 @30 / 25 / 24Hz, 4:2:2 @60 / 50Hz, 4:2:2 @60 / 50Hz, 4:2:2
	SD-SDI	480i	@60Hz, 4:2:2
	ITU-R BT.656	576i	@50Hz, 4:2:2

Compatible Audio Format	3G-SDI	48kHz, 16 / 20 / 24 bit, 2 CH, Synchronized Video
	HD-SDI	48kHz, 16 / 20 / 24 bit, 2 CH, Synchronized Video
	SD-SDI	48kHz, 16 / 20 / 24 bit, 2 CH, Synchronized / Asyn- chronized Video

Max. Transmission Distance	3G-SDI	150m at 2.97Gb/s
75 ohm coaxial cable	HD-SDI	250m at 1.485Gb/s
	SD-SDI	480m at 270Mb/s

< 3.2 > Options : Speaker, DVI-D, BNC

# **Speaker Option**



## < 3.3 > Options : Touchscreen & driver



#### **Resistive 1-pt Touchscreen Specification**

Model	TRB Resistive					
Technology	5-Wire Resistive					
Touch Point	Single					
Method	Stylus or Finger					
Activation Force	≤ 50g / Stylus=R0.8					
Durability	10 million touches					
Response Time	15 ms					
Optical Transmittance	80% ± 3%					
Surface Hardness	3Н					
Haze	8% ± 3%					
Glass	2.2 ±0.2 mm					
Connector	USB Type A					
Compatibility	Windows 7 / XP / Vista, Linux					

■ USB touchscreen package includes 1 x 6ft USB 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

## **USB** Touchscreen

•	HDMI
	VGA CIIIID



#### **TRB Driver**

## Please follow the below steps to setup the touch screen:-Step 1. Run the bundled CD disc or download the driver from the link below :

https://www.rackmountmart.com/downloads.html

Step 2. Double click the Setup.exe

- Step 3. Follow the installation instruction to finish the setup
- Step 4. After installation, run the TouchKit program & the "4 point calibration"



Please do the initial calibration after the first setup



# < 3.4 > Options : DC Power



Model	12V	24V	48V	125V	250V	
Input rating						
Input voltage:	12-Volt	24-Volt	48-Volt	110-Volt	300-Volt	
Input range:	9 ~ 18V	18 ~ 36V	36 ~ 75V	66 ~ 160V	180 ~ 425V	
Input current						
- No load	50 mA	50 mA	50 mA	35 mA	10 mA	
- Full load	4950 mA	2450 mA	1220 mA	749 mA	600 mA	
Output rating						
Output voltage:	12-Volt	12-Volt	12-Volt	12-Volt	12-Volt	
Output current:	4.16A	4.16A	4.16A	6.25A	12.5A	
Efficiency	84%	85%	85%	91%	86%	

## **DC power**



#### **\*\*\*** For DC power option :

(1) If the unit with LCD, earthing may be required

(2) DC option excludes AC power adapter and power cord.

(3) Chassis extension in depth to 530mm (20.9")

The company reserves the right to modify product specibcations without prior notice and assumes no responsibility for any error which may appear in this publication.

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