RackView LCD Panel

Rack Mount LCD Display Panel

ROSE.COM

Installation
and
Operation Manual

ROSE ELECTRONICS

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LIMITED WARRANTY

Rose Electronics® warrants the RackView LCD Display Panel to be in good working order for one year from the date of purchase from Rose Electronics or an authorized dealer. Should this product fail to be in good working order at any time during this one-year warranty period, Rose Electronics will, at its option, repair or replace the Unit as set forth below. Repair parts and replacement units will be either reconditioned or new. All replaced parts become the property of Rose Electronics. This limited warranty does not include service to repair damage to the Unit resulting from accident, disaster, abuse, or unauthorized modification of the Unit, including static discharge and power surges.

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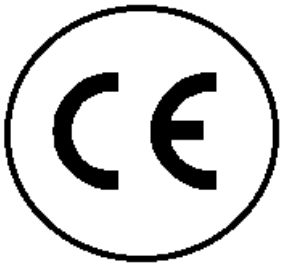
DECLARATIONS OF CONFORMITY

This is to certify that, when installed and used according to the instructions in this manual, the units listed and described here are shielded against the generation of radio interferences in accordance with the application of Council Directives 2014/30/EU and 2014/30/EU, as well as these standards:

- EN 55022: 2010/AC:2011 (Class B)
- EN 55024:2010 + A1:2015



This equipment has been found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at their own expense.

The manufacturer complies with the EU Directive 2012/19/EU on the prevention of waste electrical and electronic equipment (WEEE). The device labels carry a respective marking.

These devices comply with Directive 2011/65/EU of the European Parliament and of the council of 8 June 2011 on the restriction of the use of certain hazardous substances in electrical and electronic equipment (RoHS 2, RoHS II). The device labels carry a respective marking.

TABLE OF CONTENTS

Contents

Disclaimer 1
System Introduction 1
Features 1
RackView LCD Panel Options 1
Package Contents 2
Additional Items Required 2
  Before Installation 2
RackView LCD Panel Models 3
RackView LCD Panel - Rear Connector Layout 3
RackView LCD Panel Chassis Dimensions 4
Operating the RackView LCD Panel 9
  OSD Operation 9
  PIP and PBP Operation 11
Safety 13
Maintenance and Repair 14
Technical Support 14

Figures

Figure 1. RackView LCD Panels – front and rear layout 3
Figure 2. RackView LCD panel - rear panel connector layout 3
Figure 3. Chassis dimensions and LCD panel graphics 6
Figure 4. Installation steps for mounting the RackView LCD panels 8
Figure 5. OSD operation and control 9
Figure 6. OSD configuration and settings 10
Figure 7. PIP and PBP settings and operation 11
Figure 8. PIP and PBP video sources 12
Figure 9. Schematic showing the back panel with the touchscreen option (USB-A) installed 18
Figure 10. Touchscreen setup procedure 19
Figure 11. Back panel of the RackView LCD Panel showing standard and optional connectors 20
Figure 12. Multi Display Controller 22
Figure 13. Multi Display Controller – Installed System 22
Figure 14. RackView with DC power connector fitted 23
Figure 15. RackView DC power options 23
Figure 16. MIL Type and Lockable Connectors 24

Tables

Table 1. RackView LCD panel – weights and dimensions 17
Table 2. Touchscreen options 18
Table 3. RackView LCD panel video options 19
Table 4. 3G/HD/SD-SDI video formats 20
Table 5. DVI-D and VGA video formats 21

TABLE OF CONTENTS

Appendices

Appendix A — Specifications 15
Appendix B — Part Numbers 16
Appendix C — Weight and Dimensions 17
Appendix D — Touchscreen Options 18
Appendix E — RackView LCD Panel Video Options 19
Appendix F — Multi LCD Panel Display Control 22
Appendix G — RackView DC Power Options 23
Appendix H — RackView MIL Type and Lockable Connectors 24

INTRODUCTION

Disclaimer

While every precaution has been taken in the preparation of this manual, the manufacturer assumes no responsibility for errors or omissions. Neither does the manufacturer assume any liability for damages resulting from the use of the information contained herein. The manufacturer reserves the right to change the specifications, functions, circuitry of the product, and manual content at any time without notice.

The manufacturer cannot accept liability for damages due to misuse of the product or other circumstances outside the manufacturer's control. The manufacturer will not be responsible for any loss, damage, or injury arising directly or indirectly from the use of this product (See limited warranty).

System Introduction

Thank you for choosing the Rose Electronics RackView LCD Display Panel. The RackView Panel is available in several different high-performance LCD display sizes. All RackView Display Panels are rack mounted and operation follows the same general procedure for each panel type.

The instructions in this manual assume a general knowledge of computer installation procedures, familiarity with cabling requirements, and some understanding video display device operation.

Features

- Rackmountable LCD display and presentation panels
- Available in 17", 19", 20", 21", 23" and 24" models with widescreen, HD, and touchscreen formats
- DVI and VGA video resolutions from 1280×1024 to 1920x1200
- The 17" and 23" 4K LCD display panels feature a DisplayPort 1.2 video interface with resolutions up to 3840×2160
- The 17" widescreen LCD panel supports 1920×1080 (1080p) and the 17" high-resolution version supports 1920×1200.
- PIP screen format is available on the 17" Widescreen, 17"FHD, 21", 24" and 4K display models
- The display OSD allows for easy adjustments of video source, color, brightness, contrast, position. The OSD is easily accessible and controlled via front panel push buttons.
- Quick and easy "One Man" rack mounting installation.

RackView LCD Panel Options

- Capacitive and/or resistive touchscreen on most displays
- HDMI with audio
- S-Video + Composite (BNC) with audio
- 3G/HD/SD-SDI broadcast grade video with audio
- DC power, 12, 24, 48V
- MIL grade or lockable connectors for video, USB and power
- Multi-Screen Control software enables PC control of multiple RackView LCD panels

Package Contents

The package contents consist of the following:

- 1 × RackView LCD display panel unit
- 1 × External power adapter
- 1 × Power cable
- 1 × Manual

Some RackView LCD panel units can include additional mounting accessories.

Additional Items Required

M6 mounting screws and cage nuts are normally provided as accessories with the rack cabinet and not with the RackView LCD panel.

Before Installation

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

RackView LCD Panel Models

The RackView LCD panel is available in 10 different models. The main difference between each of the models is the display size and video resolution capabilities. There are several options available that can differ with each model of RackView LCD panel. The options for each model are explained in the Appendix pages of this manual. The two illustrations below show the general layout of the front and back panels as applicable to all RackView LCD Panel models.

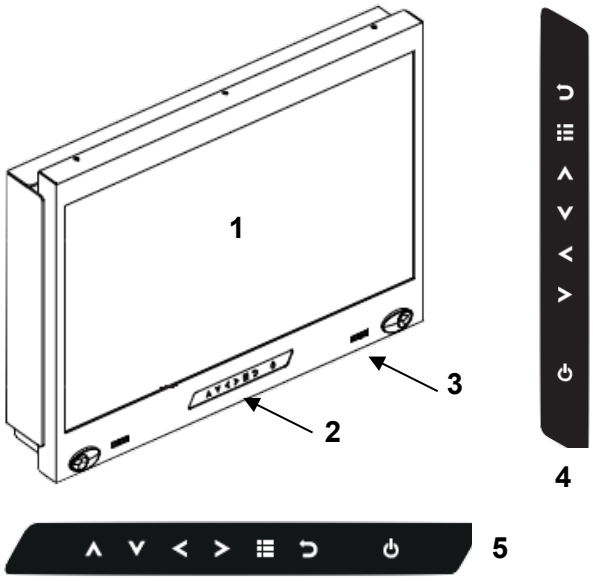
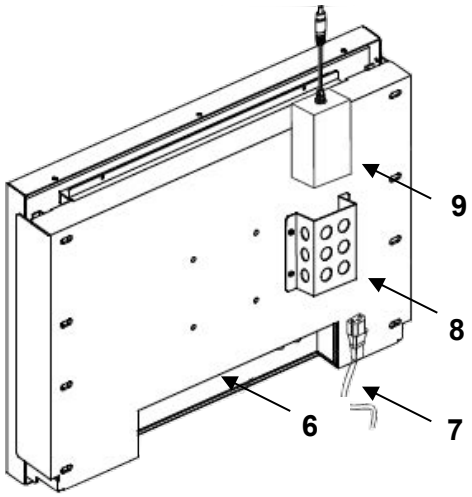
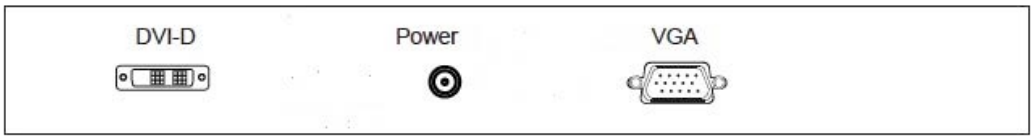
RackView LCD Panel – front view	RackView LCD panel – rear view
	
1. LCD display 2. LCD membrane 3. Audio speaker 4. LCD membrane – vertical 5. LCD membrane - horizontal	6. Location for connectors 7. Power cord 8. Power supply bracket 9. External power supply

Figure 1. RackView LCD Panels – front and rear layout

Depending on the RackView LCD Panel display, the push-button membrane panel can be either horizontally mounted underneath the display, or vertically mounted to one side of the display.

RackView LCD Panel - Rear Connector Layout

The RackView LCD rear panel includes an HD15(KVM) and DVI-D connector as standard. This diagram shows the approximate positioning of the connectors on the rear panel.



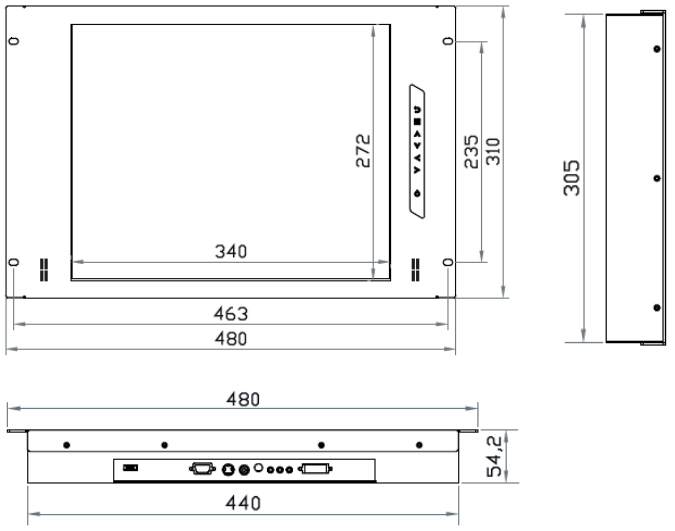
RackView LCD Panel - rear panel connector layout for the standard interface

Figure 2. RackView LCD panel - rear panel connector layout

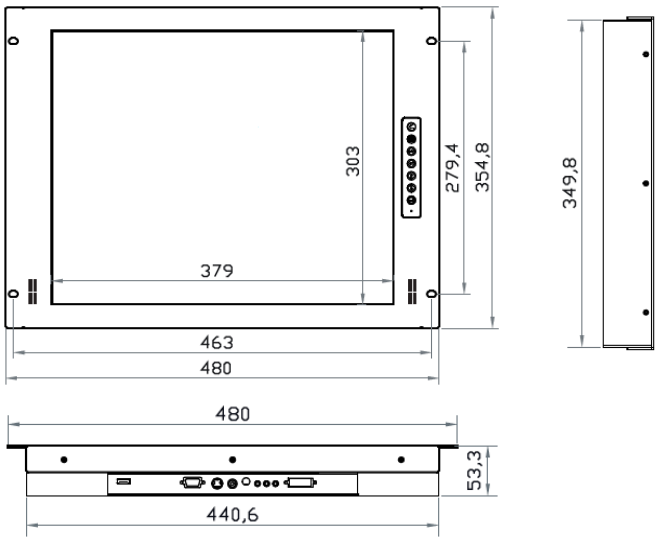
RackView LCD Panel Chassis Dimensions

The front, side and bottom dimensions of each of the RackView LCD panels are shown in millimeters

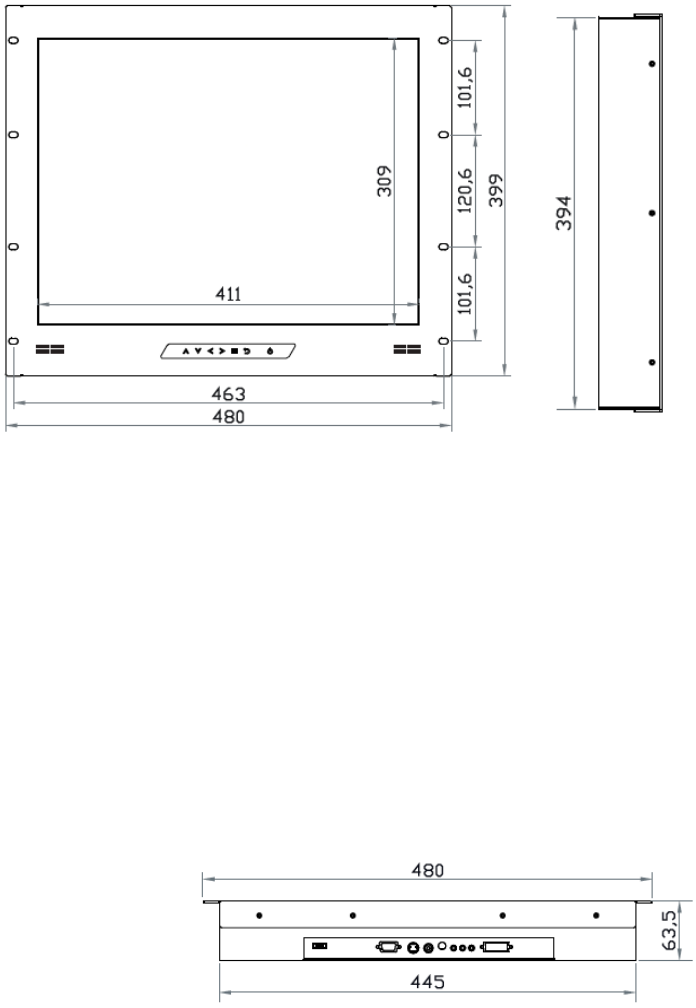
RackView LCD Panel 17"



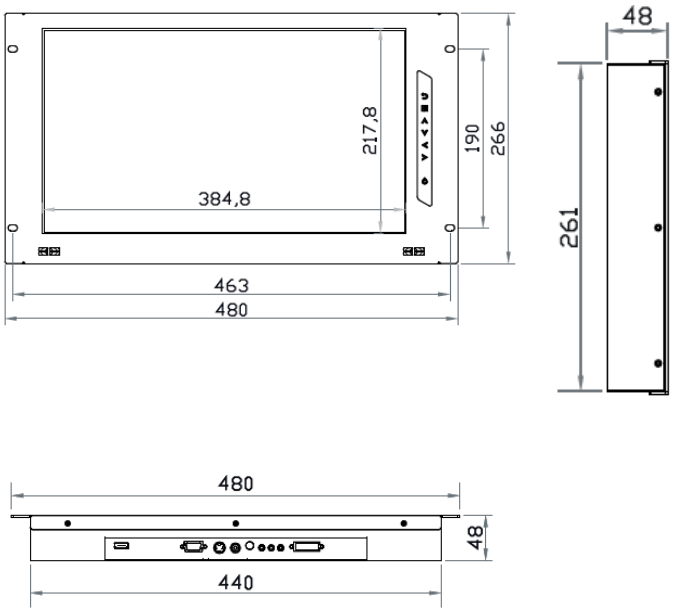
RackView LCD Panel 19"



RackView LCD Panel 20"



RackView LCD Panel 17" Widescreen



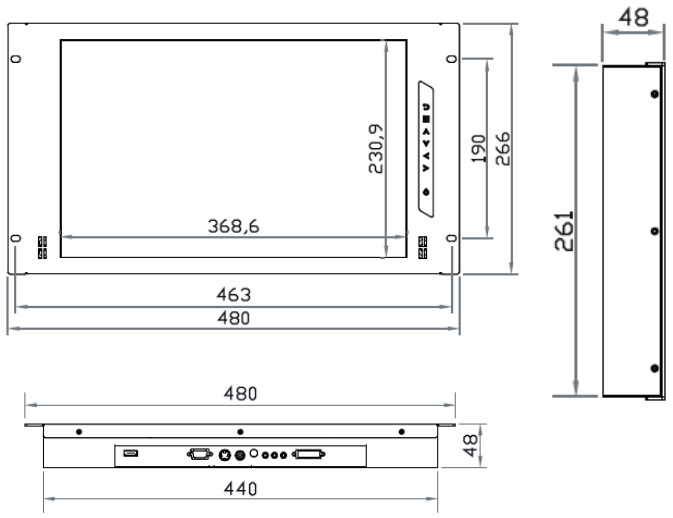
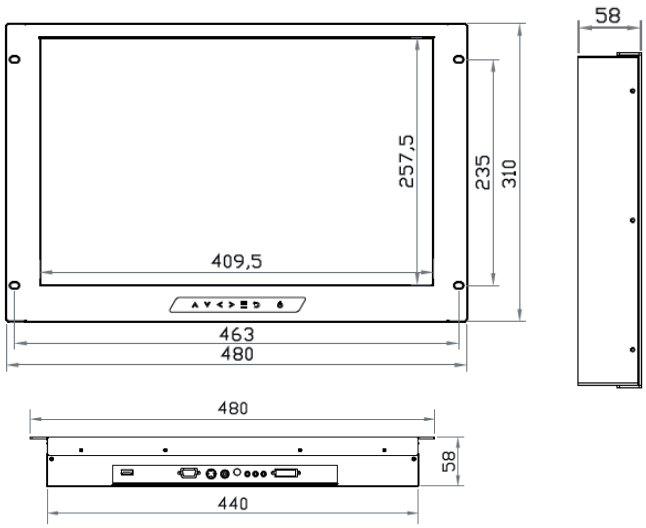
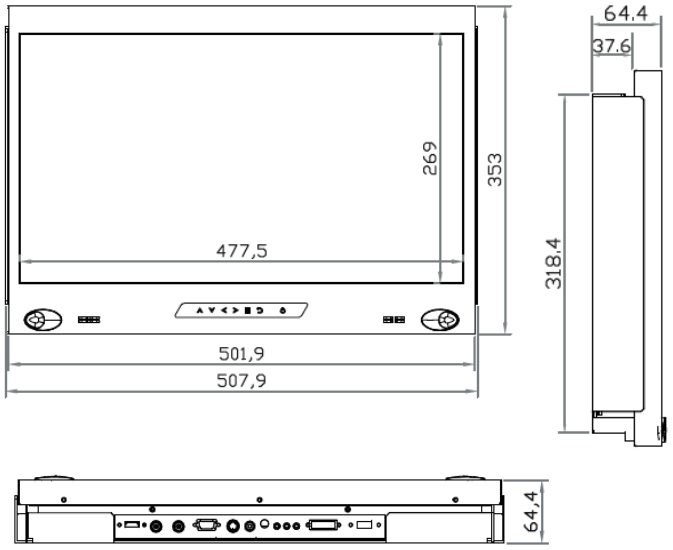
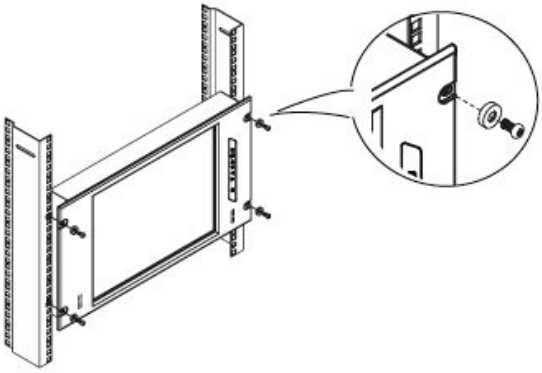
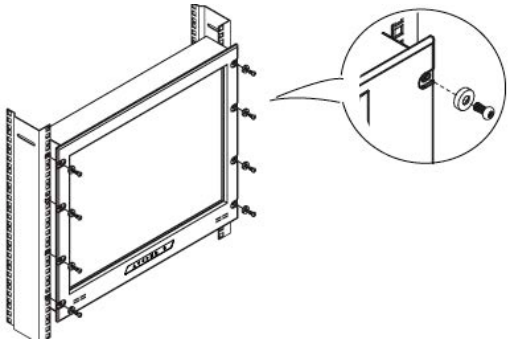
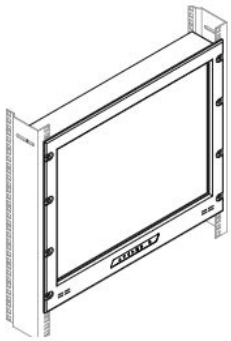
RackView LCD Panel 17" FHD	RackView LCD Panel 19" Widescreen
	
RackView LCD Panel 21" FHD	
	

Figure 3. Chassis dimensions and LCD panel graphics

Please check Appendix C for a listing of all RackView LCD Panel dimensions and weights.

Installation Steps for RackView LCD Panels - 17", 19", 17" WS, 17" FHD, 19" WS	
	**Step 1** Mount the display panel with an M6 screw set. M6 screw x 4 pcs required (Left & right side). (M6 screw sets are not provided)
	Step 2 Fix the LCD into the rack.
Installation Steps for RackView LCD Panel - 20"	
	**Step 1** Mount the display panel with an M6 screw set. M6 screw x 8 pcs required (Left & right side). (M6 screw sets are not provided)
	**Step 2** Fix the LCD into the rack.

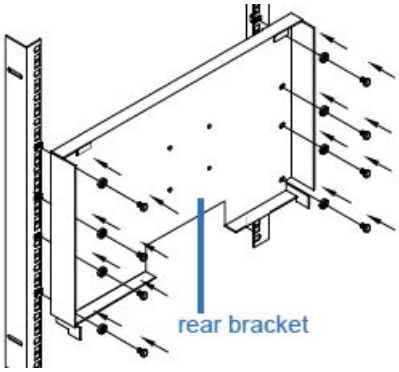
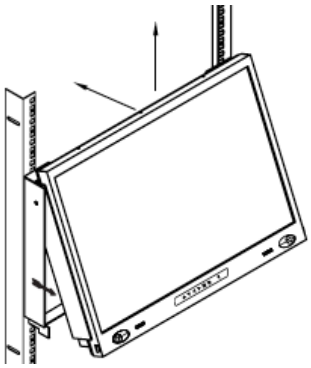
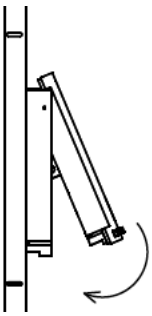
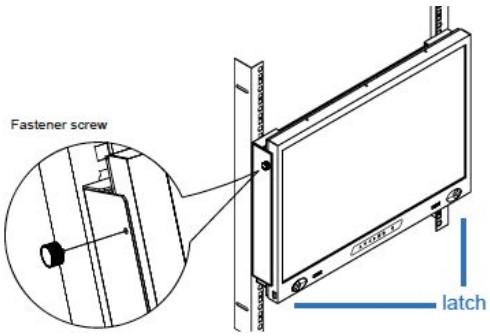
Installation Steps for RackView LCD Panel - 21"	
	**Step 1** Mount the rear bracket with an M6 screw set. 8 x M6 screw set are required. (M6 screw sets are not provided).
	**Step 2** Insert the upper part of the RackView display panel into the rear bracket.
	**Step 3** Push the lower part of the RackView display panel into the rear bracket.
	**Step 4** Fix the RackView display panel into the rear bracket with two fasteners (Left & right side). Lock the RackView display panel by the latch (on the bottom left & right side).

Figure 4. Installation steps for mounting the RackView LCD panels

OSD Operation

The OSD (On-Screen Display) is activated by pressing the buttons on the front panel of the display frame. The push-button membrane control panel may be mounted horizontally or vertically on the display panel, however the OSD operation is the same for all models.

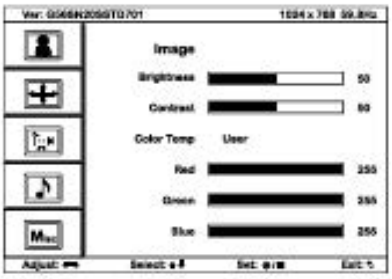
OSD Operation

Membrane Switch	Function
	Turn the monitor on or off
	Display the OSD menu Act as an Enter key to select screen setting options
	Scroll through menu options and adjust the displayed control
	Exit the OSD screen Go back to the previous on-screen sub-menu or main menu

Remark : All LED touch buttons in **WHITE** light.
The LED of **Power** touch button will flash continuously when there is no signal input.

① All the LED touch buttons will automatically turn off after 10 minutes of idle status (except the **Power**).

② Light up all membrane buttons, please press any button for 1 - 2 seconds (except the **Power**).



OSD Configuration Page

	Image: for the brightness, contrast, color temp, red, green, and blue
	Geometry: for the auto adjust, H position, V position, phase and clock
	Video: for the colour, tint, sharpness, noise reduction, DCDi and TV Setup
	Audio: for volume, bass, treble, balance, AVL and mute
	Misc: for the language, OSD position, graphic mode, ratio, reset and timer

Figure 5. OSD operation and control

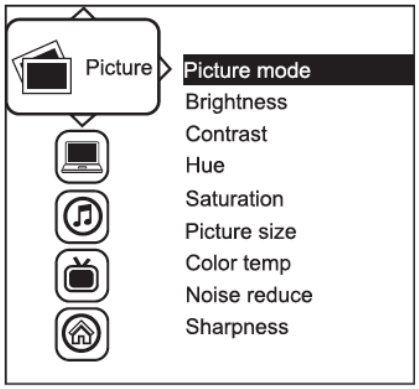
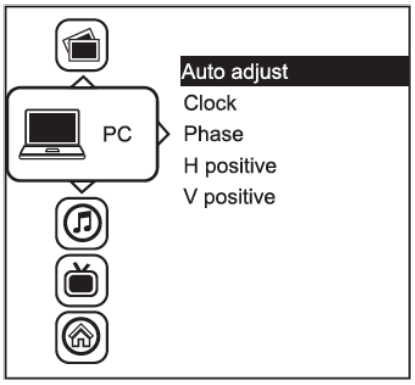
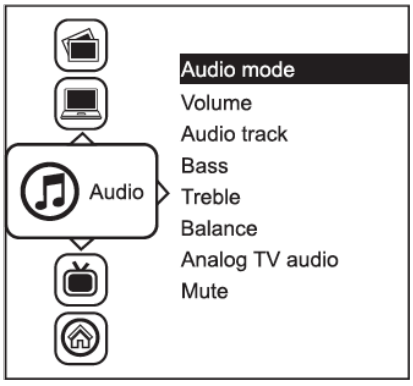
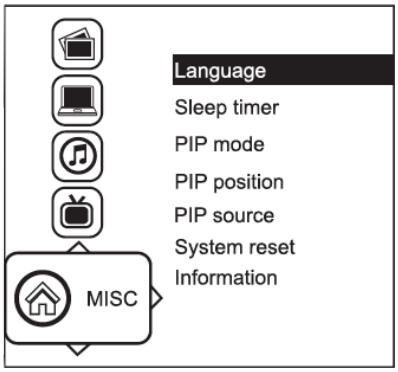
OSD Configuration and Settings	
	**Picture** Picture mode: Standard / Vivid / Soft / User mode to choose Brightness: Adjust background black level of the screen image Contrast: Adjust the difference between the image background (black level) and the foreground (white level) Hue: Adjust the screen hue value Saturation: Adjust the saturation of the image color Picture size: Adjust the image size Color temp: Standard / Cool / Warm / User to choose Noise reduce: Reduce the noise of the image Sharpness: Adjust the image from weak to sharp
	**PC** Auto adjust: Automatically adjust sizes, centers and fine tunes the video signal to eliminate waviness and distortion. Clock: Adjust the clock value Phase: Adjust the phase value H. Position: Align the screen image left or right V. Position: Align the screen image up or down
	**Audio** Audio mode: Movie / Voice / Normal / Music mode to choose Volume: Adjust the volume of sound Bass: Set the value of bass sound Treble: Set the value of treble sound Balance: Set the balance value of treble and bass sound Analog TV audio: Set the value of analog TV audio sound Mute: Turn off the surrounding sound
	**Misc.** Language: Select the language in which the OSD menu is displayed - English Sleep timer: Set the off time PIP mode: Adjust picture in picture setting PIP position: Enter into PIP position PIP source: Enter into the Sub source and sound source System reset: Return the adjustment back to factory setting Information: Select for Help

Figure 6. OSD configuration and settings

PIP and PBP Operation

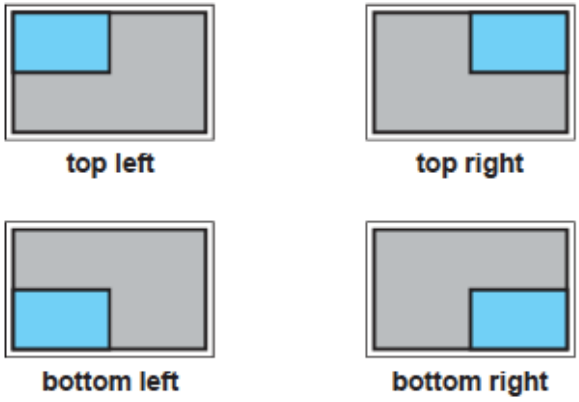
PIP (Picture-In-Picture) and PBP (Picture-By-Picture) settings are available for the following RackView LCD Panel models.

PIP/PBP Function: RackView LCD Panel 17" Widescreen, 17" FHD and 21", 24", and 4K display models

PIP and PBP Settings

PIP Mode

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



PIP Position

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

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

PIP Size

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

PBP Mode

Display the Sub screen next to the Main screen.
OSD Menu → MISC → PIP Mode → PBP

Figure 7. PIP and PBP settings and operation

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

PBP Size

Adjust the size of the Sub-screen (Large/Small)
OSD Menu --- MISC --- PBP Mode --- Large/Small

PIP / PBP Source

To select an input signal for PIP / PBP Sub screen.
OSD Menu → MISC → PIP Source → VGA / S-Video / Composite / DVI / HDMI / SDI / YPbPr / TV

Main \ Sub	VGA	S-Video	Composite	DVI-D	HDMI	SDI	YPbPr	TV
VGA	X	O	O	O	O	O	O	O
S-Video	O	X	X	O	O	O	O	X
Composite	O	X	X	O	O	O	O	X
DVI	O	O	O	X	X	O	O	O
HDMI	O	O	O	X	X	O	O	O
SDI	O	O	O	O	O	X	X	O
YPbPr	O	O	O	O	O	X	X	O
TV	O	X	X	O	O	O	O	X

Figure 8. PIP and PBP video sources

Safety

The RackView LCD Panel, like all electronic equipment, should be used with care. To protect yourself from possible injury and to minimize the risk of damage to the Unit, read and follow these safety instructions.

- Follow all instructions and warnings marked on this Unit.
- Except where explained in this manual, do not attempt to service this Unit yourself.
- Do not use this Unit near water.
- Assure that the placement of this Unit is on a stable surface.
- Provide proper ventilation and air circulation.
- Keep connection cables clear of obstructions that might cause damage to them.
- Use only power cords, power adapter and connection cables designed for this Unit.
- Keep objects that might damage this Unit and liquids that may spill, clear from this Unit. Liquids and foreign objects might come in contact with voltage points that could create a risk of fire or electrical shock.
- Do not use liquid or aerosol cleaners to clean this Unit. Always unplug this Unit from the power source before cleaning.

Remove power from the unit and refer servicing to a qualified service center if any of the following conditions occur:

- The connection cables are damaged or frayed.
- The Unit has been exposed to any liquids.
- The Unit does not operate normally when all operating instructions have been followed.
- The Unit has been dropped or the case has been damaged.
- The Unit exhibits a distinct change in performance, indicating a need for service.

SERVICE AND MAINTENANCE

Maintenance and Repair

This Unit does not contain any internal user-serviceable parts. In the event a Unit needs repair or maintenance, you must first obtain a Return Authorization (RA) number from Rose Electronics or an authorized repair center. This Return Authorization number must appear on the outside of the shipping container.

See Limited Warranty for more information.

When returning a Unit, it should be double-packed in the original container or equivalent, insured and shipped to:

Rose Electronics

Attn: RA _____

10707 Stancliff Road

Houston, Texas 77099 USA

Technical Support

If you are experiencing problems, or need assistance installing your product, consult the appropriate section of this manual. If, however, you require additional information or assistance, please contact the Rose Electronics Technical Support Department at:

Phone: (281) 933-7673

E-mail: TechSupport@rose.com

Web: www.rose.com

Technical Support hours are from: 8:00 am to 6:00 pm CST (USA), Monday through Friday.

Please report any malfunctions in the operation of this Unit or any discrepancies in this manual to the Rose Electronics Technical Support Department.

Appendix A — Specifications

RackView LCD Panel	17" LCD (7U)	17" Wide LCD (6U)	17" HI-RES LCD (6U)	19" LCD (8U)	19" Wide LCD (7U)	20" LCD (9U)
Dimensions (inch) W x D x H (mm)	18.9 x 12.2 x 2.1 480 x 310 x 54	18.9 x 10.5 x 1.9 480 x 266 x 48	18.9 x 10.5 x 1.9 480 x 266 x 48	18.9 x 114 x 2.1 480 x 355 x 54	18.9 x 12.2 x 2.3 480 x 310 x 58	18.9 x 15.7 x 2.5 480 x 399 x 63.5
Weight	13.4lb (6.1kg)	9.8lbs (4.5kg)	9.2lbs (4.2kg)	12.5lb (5.7kg)	12.8lbs (5.8kg)	18.7lbs (8.5kg)
Size	17" TFT	17.3" TFT	17.1" TFT	19" TFT	19" Wide TFT	20.1" TFT
Video Connectors	DVI-D and VGA	DVI-D and VGA	DVI-D and VGA	DVI-D and VGA	DVI-D and VGA	DVI-D and VGA
Video (optional)	HDMI 1.2, 3G/SDI, S-Video (BNC)	HDMI 1.3, 3G/SDI, S-Video (BNC)	HDMI 1.3, 3G/SDI, S-Video (BNC)	HDMI 1.2, 3G/SDI, S-Video (BNC)	HDMI 1.2, 3G/SDI, S-Video (BNC)	HDMI 1.2, 3G/SDI, S-Video (BNC)
Resolution	1280 × 1024	1920 × 1080p	1920 × 1200 HD	1280 × 1024	1440 × 900	1600 × 1200
Brightness (cd/m2)	250	400	210	250	300	300
Backlight Type	LED	LED	LED	LED	CCFL	CCFL
Colors	16.7M	16.7M, 8 Bit	16.7M, 8-bit	16.7M	16.7M	16.7M
Contrast Ratio	1000:1	600:1	600:1	1000:1	1000:1	800:1
Viewing Angle L/R/U/D	85/85/80/80	80/80/60/80	65/65/55/55	85/85/80/80	80/80/80/80	89/89/89/89
Display Area H/V	338 × 270mm	382 × 215mm	367 × 230mm	376 × 301mm	408 × 255mm	408 × 306mm
Screen Surface	Haze 25%. Hard	Anti-glare. Hard	Anti-glare. Hard	Haze 25%. Hard	Haze 25%. Hard	Anti-glare. Hard
Response Time	5ms	40ms	30ms	5ms	5ms	16ms
Dot Pitch (mm)	0.264	0.1989	0.191	0.294	0.2835	0.255
MTBF (hours)	30,000	50,000	20,000	30,000	50,000	45,000
PIP function	No	No	Yes	No	No	No
Touchscreen-USB	Yes (Cap or Res)	Yes (Res only)	Yes (Cap or Res)	Yes (Cap or Res)	Yes (Cap or Res)	Yes (Res only)
Consumption (Watts)	Max 25 / Idle 4	Max 25 / Idle 4	Max 34 / Idle 4	Max 25 / Idle 4	Max 25 / Idle 4	Max 48 / Idle 4
AC Power	100-240VAC, 50/60HZ					
DC Power (option)	12V / 24V / 48V / 125V / 250V terminal block					
Video Signal	VGA (Analog 0.7Vp-p). DVI-D (TMDS single link)					
Shock / Vibration	Shock: 10G acceleration (11ms duration). Vibration: 10~300Hz 0.5G RMS random vibration					
Audio (option)	2 × 3.5mm with L/R Speakers. Impedance 30KΩ / 750mV. (HDMI /DisplayPort Model) Speaker Power – 2*2W					
Temperature Relative Humidity	Operating Temperature: 32°F to 131°F / 0°C to 55°C Storage Temperature: -4°F to 140°F / -20°C to 60°C Operating humidity: 20 to 90% non-condensing. Storage humidity: 5 to 90% non-condensing					
Approvals	FCC, CE, RoHS2, Reach					

RackView 4K Video and Large-Screen Displays

RackView LCD Panel	17" 4K Display (6U)	23" 4K Display (9U)	21" FHD Display (8U)	24" WUXGA Display (9U)
Dimensions (inch) W x D x H (mm)	18.9 x 10.5 x 1.9 480 x 266 x 48	21.7 x 15.2 x 2.6 551 x 385 x 65	19.8 x 13.9 x 2.5 502 x 353 x 64	21.8 x 15.2 x 2.8 553 x 385 x 70
Weight	9.2lbs (4.2kg)	19.4lbs (8.6kg)	19.4lbs (8.6kg)	25.1lbs (11.4kg)
Size	17.3" TFT	23.8" TFT	21.5" TFT	24.1" TFT
Video Connectors	DisplayPort 1.2	DisplayPort 1.2	DVI-D and VGA	DVI-D and VGA
Video (optional)	HDMI 2.0, 3G/SDI,	HDMI 2.0, 3G/SDI,	HDMI 1.3, 3G/SDI, S-Video	HDMI 1.3, 3G/SDI
Resolution	3840 × 2160	3840 × 2160	1920 x 1080	1920 x 1200
Brightness (cd/m2)	400	310	250	300
Backlight Type	LED	LED	LED	LED
Colors	16.7M, 8-bit	1.07 billion, 10-bit	16.7M	16.7M
Contrast Ratio	1000:1	1000:1	1000:1	1000:1
Viewing Angle	89/89/89/89	89/89/89/89	85/85/80/80	89/89/89/89
Display Area H/V	382 × 215mm	527 × 296mm	477 × 268mm	518 × 324mm
Screen Surface	Anti-glare 3H	Anti-glare 3H	Haze 25%, Hard, 3H	Anti-glare, Hard, 3H
Response Time	30ms	25ms	5ms	14ms
Dot Pitch (mm)	0.0995	0.13725	0.248	0.27
MTBF (hours)	20,000	30,000	30,000	30,000
PIP function	Yes	Yes	Yes	Yes
Touchscreen-USB	Yes (Cap or Res)	Yes (Cap or Res)	Yes (Cap or Res)	Yes (Resistive only)
Consumption (Watts)	Max 29 / Idle 9	Max 45 / Idle 9	Max 32 / Idle 9	Max 40 / Idle 5
AC Power	100-240VAC, 50/60HZ			
DC Power (option)	12V / 24V / 48V / 125V / 250V terminal block			
Video Signal	VGA (Analog 0.7Vp-p). DVI-D (TMDS single link)			
Shock / Vibration	Shock: 10G acceleration (11ms duration). Vibration: 5~500Hz 1G RMS random vibration			
Audio (option)	2 × 3.5mm with L/R Speakers. Impedance 30KΩ / 750mV. (HDMI /DisplayPort Model) Speaker Power – 2*2W			
Temperature Relative Humidity	Operating Temperature: 32°F to 131°F / 0°C to 55°C Storage Temperature: -4°F to 140°F / -20°C to 60°C Operating humidity: 20 to 90% non-condensing. Storage humidity: 5 to 90% non-condensing			
Approvals	FCC, CE, RoHS2, Reach			

Appendix B — Part Numbers

RVR-LCDA17/DVI/Kn	17" LCD Panel 1280×1024
RVR-LCDA17/DVI/DWS/HD/Kn	17" LCD Panel Widescreen, 1080p
RVR-LCDA17/DVI/FHD/Kn	17" LCD Panel Full HD, 1920×1200
RVR-LCDA17-4K/Kn	17" LCD Panel 4K, 3840×2160
RVR-LCDA19/DVI/Kn	19" LCD Panel 1280×1024
RVR-LCDA19/WS/Kn	19" LCD Panel/Widescreen 1440×900
RVR-LCDA20/DVI/Kn	20" LCD Panel Widescreen, 1600×1200
RVR-LCDA21/DVI/Kn	21" LCD Panel Widescreen, 1920×1080
RVR-LCDA24/DVI/Kn	24" LCD Panel Widescreen, 1920×1200
RVR-LCDA23-4K/Kn	23" LCD Panel 4K Widescreen, 3840x2160
RackView LCD Panel Options	
/TSR	Resistive USB Touchscreen
/TSC	Capacitive USB Touchscreen
/HM	HDMI video with speakers
/AV	S-Video+Composite with audio
/SD	3G/HD/SD-SDI video
/MCS	Multi-Screen Control Software
/MIL	MIL connector (power and VGA)
/LOCK	Lockable connector (power and USB)
/nnnDC	12/24/48/125/250V DC power
/K4	VGA Cable, M/M 6ft (2.0m)
/K5	DVI Cable, M/M 6ft (2.0m)
/K6	DisplayPort Cable, M/M 6ft (2.0m)
/K7	HDMI Cable, M/M 6ft (2.0m)

Appendix C — Weight and Dimensions

RackView Weight and Dimensions

Model	Product Dimension (W × D × H) approx	Packing Dimension (W × D × H) approx	Net Weight	Gross Weight
17" LCD	18.9 x 2.1 x 12.2 inch 480 x 54 x 310 mm	20.8 x 4.9 x 19.5 inch 529 x 124 x 495 mm	13.4lb (6.1kg)	18lb (8.2kg)
17" LCD Widescreen	18.9 x 1.9 x 10.5 inch 480 x 48 x 266 mm	20.8 x 4.9 x 17.8 inch 529 x 124 x 451 mm	9.8lb (4.5kg)	13.2lb (6.0kg)
17" LCD High-Res	18.9 x 1.9 x 10.5 inch 480 x 48 x 266 mm	20.8 x 4.9 x 17.8 inch 529 x 124 x 451 mm	9.2lb (4.2kg)	13.6lb (6.2 kg)
17" 4K Display	18.9 x 1.9 x 10.5 inch 480 x 48 x 266 mm	20.8 x 4.9 x 17.8 inch 529 x 124 x 451 mm	9.2lb (4.2kg)	13.6lb (6.2 kg)
19" LCD	18.9 x 2.1 x 14 inch 480 x 53 x 355 mm	21.2 x 5.1 x 20.8 inch 539 x 129 x 529 mm	12.5lb (5.7kg)	17.6lb (8.0kg)
19" LCD Widescreen	18.9 x 2.3 x 12.2 inch 480 x 58 x 310 m	20.8 x 4.9 x 17.8 inch 529 x 124 x 451 mm	12.8lb (5.8kg)	17.4lb (7.9kg)
20" LCD	18.9 x 2.5 x 15.7 inch 480 x 64 x 399 mm	23 x 4.9 x 20.8 inch 583 x 124 x 529 mm	18.7lbs (8.5kg)	24.2lb (11.0kg)
21" FHD Display	19.8 x 2.5 x 13.9 inch 502 x 64 x 353 mm	23 x 4.9 x 21.9 inch 583 x 124 x 557 mm	19.4lbs (8.8kg)	24.6lb (11.2kg)
24" WUXGA Display	21.8 x 2.8 x 15.2 inch 553 x 70 x 385 mm	23 x 4.9 x 20.8 inch 583 x 124 x 529 mm	25.1lbs (11.4kg)	28.0lb (12.7kg)
23" 4K Display	21.7 x 2.6 x 15.2 inch 551 x 65 x 385 mm	23 x 4.9 x 20.8 inch 583 x 124 x 529 mm	19.4lbs (8.8kg)	24.6lb (11.2kg)

Table 1. RackView LCD panel – weights and dimensions

Appendix D — Touchscreen Options

RackView LCD Panel with Touchscreen

The RackView LCD Panels can be ordered with optional touchscreen support. In most cases, the touchscreen can be either Resistive or Capacitive type, however, the RackView 20" and RackView 17" DWS Widescreen are only available with resistive type touchscreen.

The RackView Touchscreen option includes a 6ft (2.0m) USB cable and a CD including operating instructions.

RackView Touchscreen Options

Features	Resistive Touchscreen	Capacitive Touchscreen
Display Size	All Models	All Models except 17" DWS and 20"
Technology	5-Wire Resistive	Capacitive
Touch Point	Single	Single
Method	Stylus or Finger	Finger
Activation Force	≤ 50g / Stylus=R0.8	≤ 50g
Durability	10 ~ 35 million touches	300 million touches
Response Time	15ms	20ms
Optical Transmittance	80% ± 3%	87% ~ 93% ± 2%
Surface Hardness	3H	9H
Haze	8% ± 3%	7%
Connector	USB Type A	USB Type A
Compatibility	Windows 7 / XP / Vista, Linux	Windows 7 / XP / Vista, Linux
Glass (17")	Resistive: 17" - 1.4 ±0.2 mm	
Glass (17")	Capacitive: 17" - 2.8mm±10	
Glass (17" DWS Widescreen)	Resistive: 17" DWS - 2.2 ±0.2 mm	
Glass (17" FHD)	Resistive: 17" FHD - 2.2 ±0.2 mm	
Glass (17" FHD)	Capacitive: 17" FHD - 2.8mm±10	
Glass (19")	Resistive: 19" - 3.2 ±0.2 mm	
Glass (19")	Capacitive: 19" - 2.8mm±10	
Glass (19" Widescreen)	Resistive: 19" Widescreen - 3.2 ±0.2 mm	
Glass (19" Widescreen)	Capacitive: 19" Widescreen - 2.8mm±10	
Glass (20")	Resistive: 3.2 ±0.2 mm	
Glass (21")	Resistive: 21" - 3.2 ±0.2 mm	
Glass (21")	Capacitive: 21" - 2.8mm±10	

Table 2. Touchscreen options

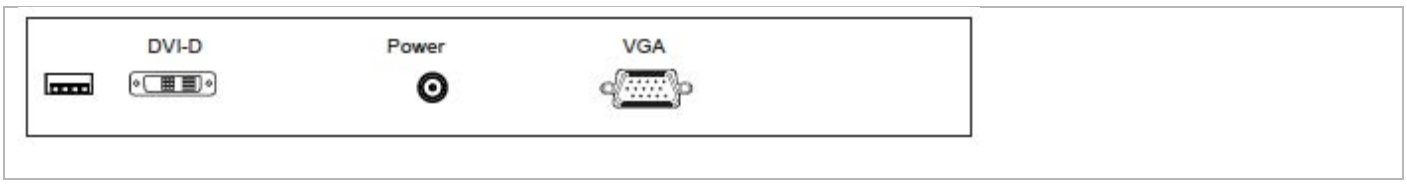


Figure 9. Schematic showing the back panel with the touchscreen option (USB-A) installed

Please follow the below steps to setup the touch screen:-

Step 1. Run the bundled CD disc

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

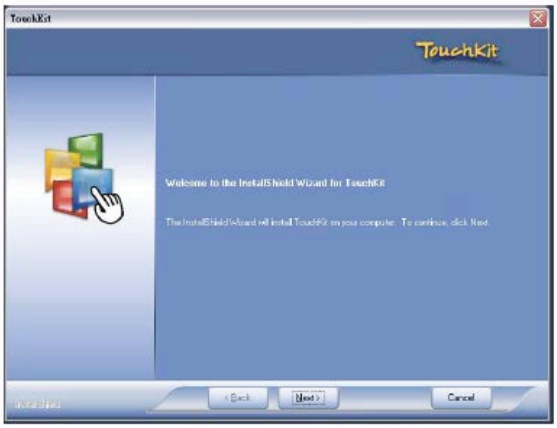


Figure 10. Touchscreen setup procedure

Appendix E — RackView LCD Panel Video Options

RackView Video Options with HDMI, S-Video/BNC and 3G/SDI Video Interface

The following video options are available with the range of RackView display panel products

The RackView 17" 4K Display Panel and the RackView 23" 4K Display Panel have DisplayPort 4K and HDMI video interface as standard. All other RackView Panels have DVI and VGA as the standard video interface.

RackView Model	DVI/S-Video(BNC)	DVI/HDMI/S-Video	DVI/HDMI/S-Video/SDI
17" LCD	Yes	Yes	Yes
17" LCD Widescreen	Yes	Yes	Yes
17" LCD High-Res	Yes	Yes	Yes
17" 4K Display	No	DisplayPort 4K/HDMI	DisplayPort 4K/SDI
19" LCD	Yes	Yes	Yes
19" LCD Widescreen	Yes	Yes	Yes
20" LCD	Yes	Yes	Yes
21" FHD Display	Yes	Yes	Yes
24" WUXGA Display	No	DisplayPort 4K/HDMI	DisplayPort 4K/HDMI/SDI
23" 4K Display	No	DVI and HDMI	DVI, HDMI and SDI

Table 3. RackView LCD panel video options

RackView LCD Panel Options – Rear Panel View

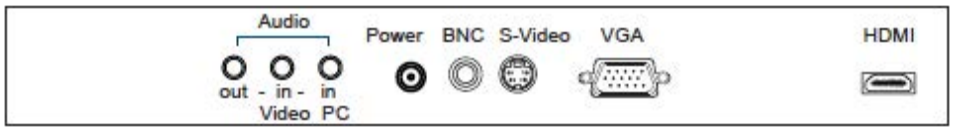
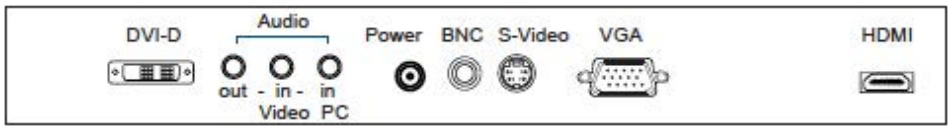
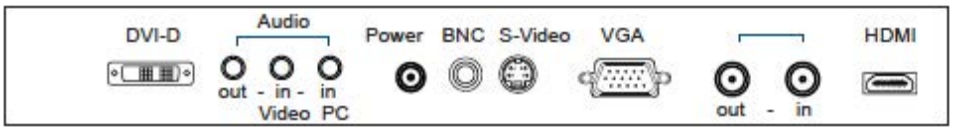
	RackView LCD Panel S-Video/BNC Option Resolutions up to 1920×1200 DVI and VGA with the S-Video/BNC option
	**RackView LCD Panel HDMI/S-Video/BNC Option** Resolutions up to 1920×1200 VGA with HDMI and S-Video/BNC option
	**RackView LCD Panel HDMI/S-Video/BNC Option** Resolutions up to 1920×1200 DVI and VGA with the HDMI and S-Video/BNC option
	**RackView LCD Panel SDI Option** Resolutions up to 1920×1200 DVI, VGA, HDMI, S-Video/BNC and SDI options

Figure 11. Back panel of the RackView LCD Panel showing standard and optional connectors

Notes:

1. The SDI option comes with DVD, VGA, HDMI, S-Video/BNC and SDI connectors
2. The audio jacks are for 3.5mm stereo audio in and out, and 2W + 2W speakers installed
3. All Video/Audio options must be factory fitted at the time of order

Video Formats (3G/HD/SD-SDI)

Description	Video Signal	Resolution/Refresh Rate/Signal
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	1080p@60 / 50Hz, 4:2:2 1080p@30 / 25 / 24Hz, 4:4:4 1080i@60 / 50Hz, 4:4:4 720p@60 / 50Hz, 4:4:4
	HD-SDI	1080p@30 / 25 / 24Hz, 4:2:2 1080i@60 / 50Hz, 4:2:2 720p@60 / 50Hz, 4:2:2
	SG-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 Channel, Synchronized Video
	HD-SDI	48kHz, 16 / 20 / 24-bit, 2 Channel, Synchronized Video
	SG-SDI	48kHz, 16 / 20 / 24-bit, 2 Channel, Synchronized / Asynchronized Video
Max transmission distance 75 ohm coaxial cable	3G-SDI	150m at 2.97Gb/s
	HD-SDI	250m at 1.485Gb/s
	SG-SDI	480m at 270Mb/s

Table 4. 3G/HD/SD-SDI video formats

Video Formats (DVI-D and VGA)

DVI-D / VGA Input	PC Signal	Resolution/Refresh Rate
Applies to 21" model only	Applies to 21" model only	1920 x 1080 x 60Hz
Applies to 21" model only	Applies to 21" model only	1360 x 768 x 60Hz
Applies to 20" model only	Applies to 20" model only	1600 x 1200 x 60Hz
Applies to 20" model only	Applies to 20" model only	1400 x 1050 x 60Hz
Applies to 20" model only	Applies to 20" model only	1440 x 900 x 60Hz
Applies to 20" model only	Applies to 20" model only	1360 x 768 x 60Hz
Applies to 19" Widescreen	Applies to 19" Widescreen	1440 x 900 x 60Hz
Applies to 17" FHD model	Applies to 17" FHD model	1920 x 1200 x 60Hz
Applies to 17" FHD model	Applies to 17" FHD model	1360 x 768 x 60Hz
Applies to 17" DWS model	Applies to 17" DWS model	1920 x 1080 x 60Hz
Applies to 17" DWS model	Applies to 17" DWS model	1360 x 768 x 60Hz
Applies to all models	Applies to all models	1280 x 1024 x 60Hz / 75Hz
Applies to all models	Applies to all models	1280 x 960 x 60Hz
Applies to all models	Applies to all models	1280 x 768 x 60Hz / 75Hz
Applies to all models	Applies to all models	1152 x 864 x 75Hz
Applies to all models	Applies to all models	1024 x 768 x 60Hz / 70Hz / 75Hz
Applies to all models	Applies to all models	848 x 480 x 60Hz
Applies to all models	Applies to all models	800 x 600 x 60Hz / 72Hz / 75Hz
Applies to all models	Applies to all models	720 x 400 x 70Hz
Applies to all models	Applies to all models	640 x 480 x 60Hz / 72Hz / 75Hz
Applies to all models	Applies to all models	640 x 400 x 70Hz
Applies to all models	Applies to all models	640 x 350 x 70Hz
HDMI Input	**PC Signal**	**Resolution/Refresh Rate and notes**
Applies to 17" DWS, 17" FHD and 21" model only		1080p, 50 / 60Hz
Applies to all models	Applies to all models	720p, 50 / 60Hz
Applies to all models	Applies to all models	480p, 60 Hz
Applies to all models	Applies to all models	576p, 50 Hz
	Audio Signal	2 channel linear PCM (32 / 44.1/48 KHz)
	Speaker	Dual stereo speaker, 2x2W

Table 5. DVI-D and VGA video formats

Appendix F — Multi LCD Panel Display Control

Multi LCD Panel Display Control

The Multi Panel Display Controller enables up to 64 RackView LCD Display Panels to be controlled from a single PC. This is a very convenient option when the OSD and display settings need to be updated or changed on a regular basis.

The Multi Panel Display Controller is a control card which is mounted inside each RackView LCD panel. This control card is configured with DVI-D, VGA, HDMI, S-Video/BNC and audio connectors.

It also has 2-dip switches, 2 RJ45 CATx ports (In/Out) and a DB9 (RS-232) serial port for direct connection to a notebook or PC up to 15ft (4.5 meters). The RackView LCD panels are then connected using CATx cable and daisy-chained up to a maximum of 3,300ft (1,000m). Each link should be no longer than 1,000ft (300m)

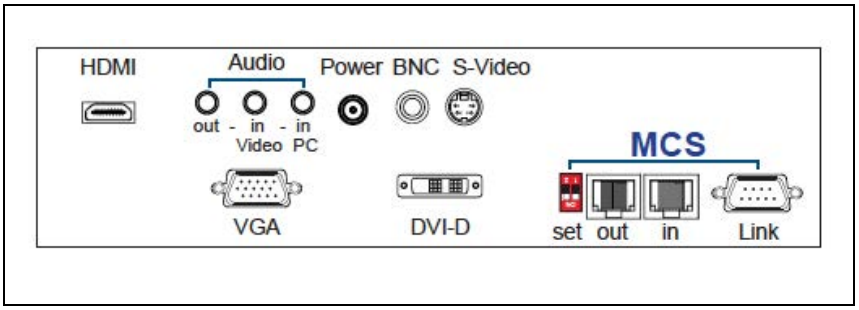


Figure 12. Multi Display Controller

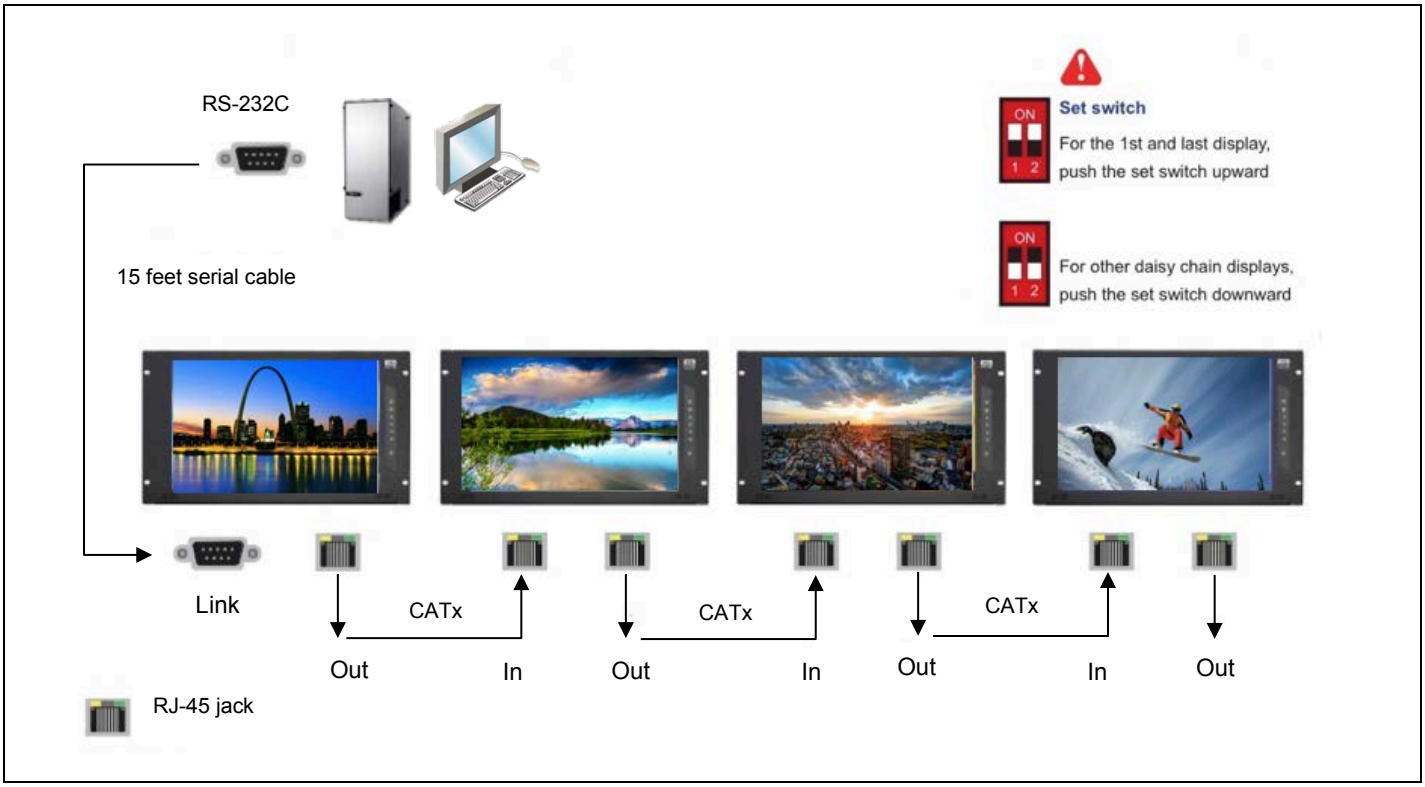


Figure 13. Multi Display Controller – Installed System

Appendix G — RackView DC Power Options

RackView DC Power

The RackView LCD Panels can be ordered with optional DC power input as specified in the table below. Select the DC voltage required, then add the voltage to the RackView part number as /nnnDC
For example, adding 48VDC to a RackView 17” would result in **RVR-LCDA17/DVI/Kn/48DC** part number.

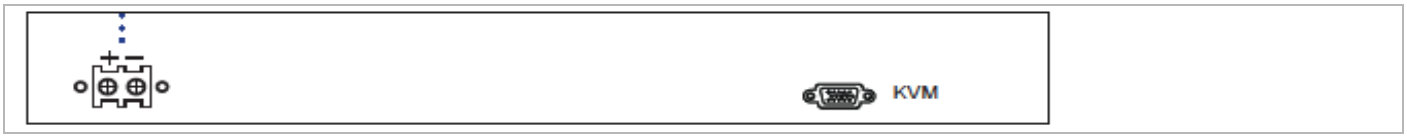


Figure 14. RackView with DC power connector fitted

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

Figure 15. RackView DC power options

The DC power option excludes the AC power adapter and power cord

Appendix H — RackView MIL Type and Lockable Connectors

MIL Type and Lockable Connectors

MIL and Lockable type connectors are available for integration with the RackView LCD Panel.
For further information on these connectors, please contact Rose Electronics

	Input	Product	MIL Standard
MIL Type Connector	DC Power (Male)		MIL - DTL - 26482
	VGA (Male)		MIL - DTL - 26482
	Input	**Product**	**Standard**
Lockable Connector	DC Power (Male)		D-type 3W3
	USB		

Figure 16. MIL Type and Lockable Connectors

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