User Manual

Power Over Ethernet Touch Screen - Secure Line (SL)

Before operating the unit, please read this manual thoroughly, and retain it for future reference .

Table of Contents

Notice

1. When disconnecting the display from an electrical outlet, the plug must be pulled out from the socket. Do not remove power cord from outlet by pulling from the cord. Pull from the plug head.

2. WARNING – To reduce the risk of fire or electric shock, do not expose this appliance to rain or other forms of moisture.

3. Display must not be exposed to liquids via dripping or splashing. Please do not place liquid –filled items such as vases near the display.

4. Use only a properly grounded plug and receptacle.

5. CAUTION – These instructions are for use by qualified service personnel only. To reduce the risk of electric shock, do not perform any service other than that contained in the operating instructions unless you are qualified to do so.

Power Source Equipment (PSE) such as injector/PoE switch NOT INCLUDED and must be purchased separately.

CAUTION

RISK OF ELECTRIC SHOCK
DO NOT OPEN

CAUTION : TO REDUCE THE RISK OF ELECTRIC SHOCK,
DO NOT REMOVE COVER (OR BACK).
NO USER-SERVICEABLE PARTS INSIDE.
REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.

This symbol is intended to alert the user to the presence of insulated “dangerous voltage” within the product’s enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.

This symbol is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the product.

Important Safety Instructions

1. Read these instructions.
2. Keep these instructions.
3. Heed all warnings.
4. Follow all instructions.
5. Do not use this product near water.
6. Clean only with dry microfiber cloth.
7. Use alcohol-free screen cleaner if dry cloth is insufficient.
8. Do not block any ventilation openings. Install in accordance with the manufacturer's instructions.
9. Do not install near any heat sources such as radiators, heat registers, stoves, or other display (including amplifiers) that produce heat.
10. Do not remove ground prong from three-pronged plugs. If your outlet will not accept three-pronged plugs, consult an electrician for replacement.
11. Protect the power cord from being walked on or pinched, particularly at plugs, convenience receptacles, and the point where they exit from the display.
12. Only use attachments/accessories specified by the manufacturer.
13. Use only with the cart, stand, tripod, bracket, or table specified by the manufacturer, or sold with the display. When a cart is used, exercise caution when moving the cart/display combination to avoid injury from tip-over.
14. Unplug this display during lightning storms or when unused for long periods of time.
15. Refer all servicing to qualified service personnel. Servicing is required when the display has been damaged in any way, such as power-supply cord or plug is damaged, liquid has been spilled or objects have fallen into the display, the display has been exposed to rain or moisture, does not operate normally, or has been dropped.
16. Do not expose this display to dripping or splashing and ensure that no objects filled with liquids, such as vases, are placed on the display.
17. To completely disconnect this display from the wall outlet, disconnect the power supply cord plug from the AC receptacle/wall socket
18. The mains plug of the power supply cord shall remain readily operable.
19. An display with CLASS I construction shall be connected to a wall socket outlet with a protective grounding connection.
20. Note: Prolonged use of headphones at a high volume may cause damage your ears.
21. Notice to users: This is a Class A digital device
22. This device is designed for commercial use and features safety certificates for electromagnetic interference (EMI). Users should be mindful of EMI issues.

Environmental Conditions for Installation

The LCD panel is highly sensitive to physical impact, so please exercise caution during installation.

- Allow a minimum clearance of 10 cm around the product to ensure proper airflow and ventilation. Avoid installing the monitor in airtight or nearly airtight spaces. Insufficient ventilation may lead to overheating, malfunction, or shortened product lifespan.
- If the monitor must be installed in a location with poor ventilation, provide additional airflow through ventilation openings or fans to maintain an internal operating temperature between 0–40°C.
- If installing the display on a wall that is not sufficiently solid, is uneven, or if building the unit into a wall, carefully follow the special installation instructions provided.
- The monitor and all connected devices must be properly connected to a common frame ground (chassis ground) to ensure safe operation and prevent electrical interference.
- Ensure that electrical outlets and power supply equipment are rated to support the monitor's power consumption requirements.

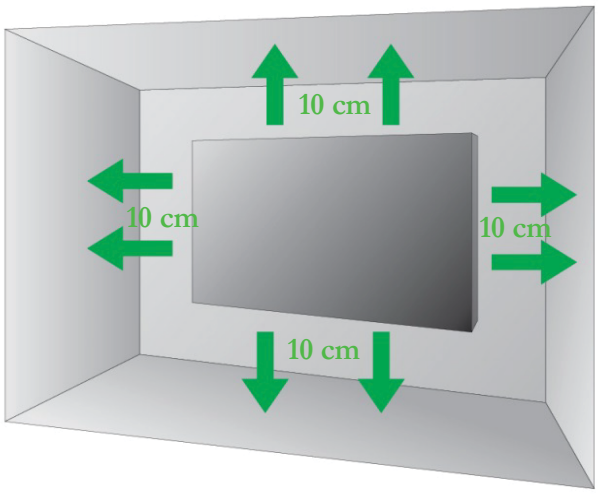
Clearance for Ventilation

When installing the product, make sure there is at least 10cm clearance on all sides for proper ventilation and do not seal the product in an enclosed space.

If the product is installed in a location with poor ventilation, the internal temperature can increase rapidly, and it can cause frequent malfunctions and rapid reduction of the product lifespan.

Embedded Product

In cases where less clearance is provided than the recommendations on the right, make sure to add cooling fans near the upper part of the set to reduce inner temperature



Mounting on a Wall Surface

Please secure minimum clearance as shown in the image above for adequate ventilation and technical service.

- **Ventilation space in front of Product must be furnished for heat dispersion. If the front space of Product must be sealed, there must be consideration for the heat dispersion in the rear side of Product.**

Handling Precautions

To ensure safety and proper use, please read this manual carefully before installation. Keep it in a secure place for future reference.

Installation

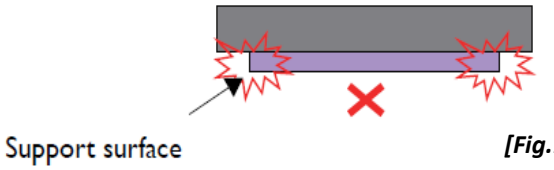
- Install the display only on a flat, level, and sturdy surface capable of supporting its weight.
- Ensure wall-mounting brackets are securely fastened and tightened.
- Leave at least a 0.5mm gap between displays to prevent damage from direct weight transfer.

LCD Panel Protection

- The LCD panel can be easily scratched, chipped, or cracked.
- Avoid applying pressure to the panel surface at all times.
- If construction or other work is taking place nearby, cover and protect the displays from dust, debris, or impact.
- Always handle the display by the frame or house, never by the panel itself.

Handling & Transportation

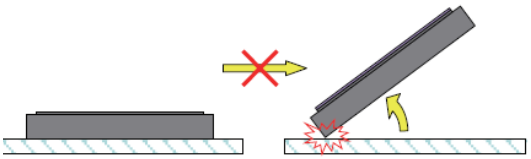
- At least two adults are required to move or carry a display.
- Always transport the display upright and balanced to avoid bending, warping, or uneven stress.
- Avoid dropping, vibration, or strong impacts during handling.
- Retain the original shipping box and packaging for future transportation.
- PoE displays have limited mechanical strength. Handle with care to avoid issues such as glass scratches, line defects, bezel bending, light leakage, or performance failure.



[Fig.1]

Placing the Display Face Down (Panel Side):

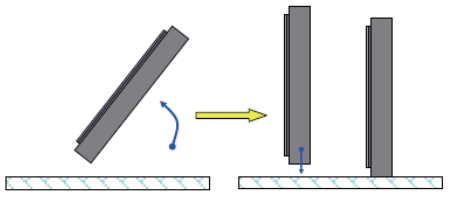
- Prepare a flat, level surface larger than the display.
- Place a thick protecctive sheet or foam on the surface. (Fig. 1)
- Lay the display down gently and horizontally.
- Do not rest the display on its bezel edges or corners. (Fig. 2)



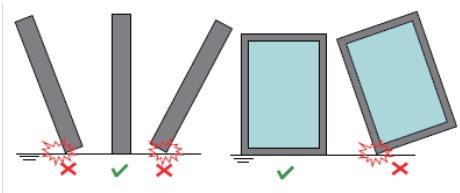
[Fig.2]

Lifting and Placing Upright:

- Lift the display horizontally by supporting the top or side bezel with one hand and the bottom bezel with the other.
  (Fig. 3).
- Avoid scratching any part of the display during lifting and placement.
- When upright, ensure the display stands vertically with its weight evenly distributed along the bottom bezel.
- Do not allow the display to rest on corners or lean forward/back. (Fig. 4).



[Fig.3]



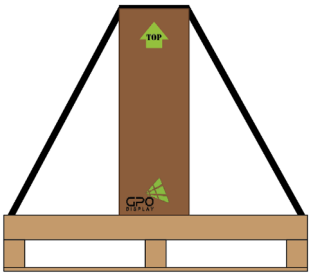
[Fig.4]

Storage & Packing

To ensure optimal performance and longevity of your display, it is important to follow the proper storage and packing procedures.

Packing

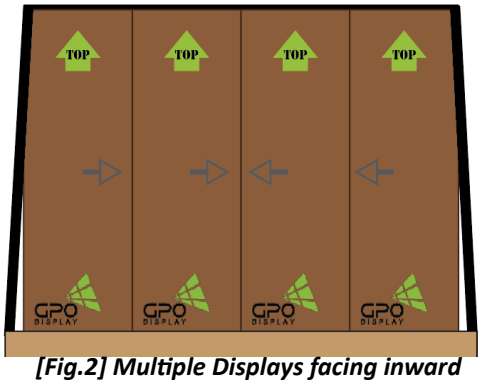
- Before packing the display, make sure it is turned off and unplugged from the power source.
- The PoE display should be packed in the same box and packing materials that it came with. This includes the packing foam case, anti-static bag, and edge protectors.
- Place the display carefully inside the anti-static bag and wrap it neatly around the display.
- Insert the wrapped display into the foam case inside the box.
- Ensure the screen of the display is facing the front as marked on the box.
- Ensure the display is placed upright.
- Store the accessories behind the display (opposite of the display screen).
- Store the wall mount behind the display (opposite of the display screen).
- Insert the top foam.
- Close and tape the box.
- Keep the box upright at all times.



[Fig.1] Single display strapped onto a pallet.

Palletizing

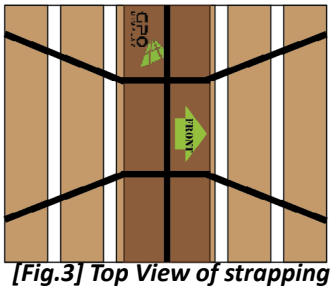
- Use a standard wooden pallet that can support the weight and size of the displays. The pallet should be in good condition and free of nails, splinters, or cracks. The original pallet that the display was shipped with will always be the best option.
- Have the front of the displays facing inward towards the middle of the pallet. This will reduce the risk of damage to the screen during transportation.
- Strap the displays securely to the pallet. Use the edge protectors to protect the boxes from the straps.
- Use two straps going across horizontally. For a single-unit pallet, fewer straps are required (see Fig. 3).
- The straps should be tight enough to prevent the displays from moving, but not too tight to cause pressure or deformation at the contact points (Fig. 3).



[Fig.2] Multiple Displays facing inward on a pallet.

Storage

- Store the displays in a cool, dry, and well-ventilated area. Avoid direct sunlight, heat sources, and moisture. See Fig. 4 for storage and operating parameters.
- If you need to store the displays for a long time, check them periodically for any signs of deterioration or malfunction.
- If you need to transport the displays, use a pallet to avoid any potential damage. Follow the instructions above.



[Fig.3] Top View of strapping on a single display.

Parameter	Value		Unit
	Min.	Max.	
Operating Temperature	0	40	˚C
Operating Ambient Humidity	20	80	%RH
Storage Temperature	-20	60	˚C
Storage Humidity	5	90	%RH

[Fig.4] Storage & Operating Parameters of the Display

Unpacking and Handling

PoE Displays require special care during handling, transportation, and installation. To avoid physical damage, performance issues, or voiding of warranty, please follow the guidelines below carefully.

Unpacking and Handling Instructions

1. Prior to opening, inspect the shipping box for any visible signs of damage. If damage is present, document the condition and contact your supplier before proceeding. (Fig.1)

[Fig. 1] Product packaging

2. Opening the box:
- Carefully cut along the top seam using a box cutter or similar tool.

CAUTION: Do not insert the blade too deep to prevent damage to internal contents.

3. Remove Foam and Accessorries:
- Inside the box, you will find the top foam, display encased in an antistatic bag, bottom foam, accessories, and mount (if applicable).
- Remove all accessories and mounts before attempting to lift the display. (Fig.2)

[Fig. 2] Contents revealed beneath top box layer

4. Lifting the Display:
- Displays are packed inside an anti static foam bag. This bag can be removed as the display is being lifted.

CAUTION: Do not touch or lift by the front panel. These areas are fragile and can be damaged easily.

- Scrunch the anti static foam bag down and reach behind the unit to grip the bottom of the metal housing and support the rear cover. (Fig.3)(Fig.4)
- Do not apply any pressure to the front panel.
- Support the bottom of the display during lifting. (Fig.4)
- Begin lifting the display up vertically. (Fig.4)
- Simultaneously, pull down and remove the anti static foam bag, bottom foam(s), and box.

[Fig.3] Scrunch the foam bag down and grasp metal frame only

[Fig.4] Bottom display support and vertical transport

Unpacking and Handling Cont'd

PoE Displays require special care during handling, transportation, and installation. To avoid physical damage, performance issues, or voiding of warranty, please follow the guidelines below carefully.

Unpacking and Handling Instructions Cont'd

5. Work Surface Requirements (if applicable):

- If placing on a work surface, always place the display on a large, flat, cushioned work surface that is larger then the display itself to provide support. (Fig.2)(Fig.3)

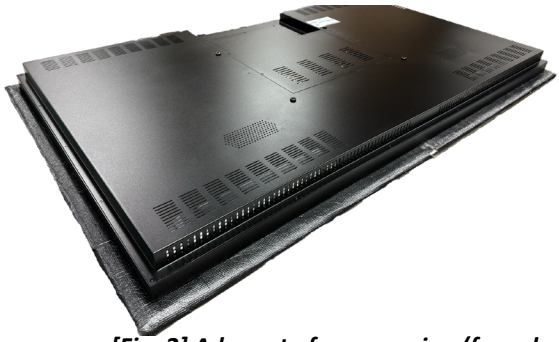
If Placing Face-Up (panel facing upward):

- Ensure that the surface is large, flat, and cushioned.
- Lay the display down gently and horizontally. **Do not allow the display to rest/put weight on bezel edges and corners.** (Fig.1)

[Fig. 1] Lay display down evenly on both sides

If Placing Face-Down (for mounting purposes):

- Prepare a flat, level, horizontal surface that is larger than the display and spread a soft, thick protective sheet/foom on it.
- Lay the display down gently and horizontally. **Do not allow the display to rest/put weight on bezel edges and corners.** (Fig.1)



[Fig. 2] Adequate foam spacing (face-down)

6. Installation Considerations:

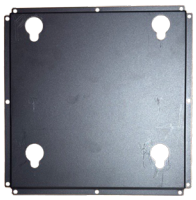
- Mounting hardware should be pre-installed before positioning the display.
- Avoid twisting or flexing the display during mounting.
- Maintain a slight gap between multiple displays to account for thermal expansion.
- Do not place tools, hands or objects on top of the display during installation.

[Fig.3] Adequate foam spacing (face-up)

7 Retain the original box, foam inserts, and anti-static bag in a dry, secure location for future use (e.g., storage, relocation, or RMA shipment).

Accessories

HDMI Cable



Wall Mount(s)

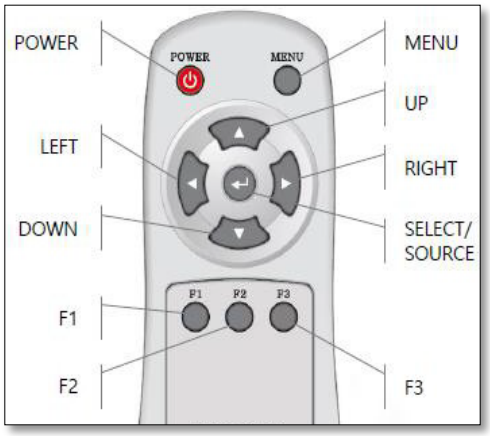
Remote Controller

UTP Cable, AV-6utp-1m(G), M

Power Harness (1M)

Batteries for Remote Controller (AAA x2)

Remote Controller



Key	Function	Data Code
POWER	Turn on or turn off display power.	0x1A
MENU	Display the OSD menu on no menu status or Exit a menu of sub-menu	0x05
OK	Select highlighted function.	0x13
↑	Select previous menu item / Decrease slider value.	0x11
↓	Select next menu item / Increase slider value.	0x10
←	Decrease the audio volume, Navigate leftward in OSD menu, decrease slider value.	0x15
→	Increase the audio volume, Navigate rightward in OSD menu, increase slider value.	0x14

Buttons & Indicators

OSD Controls

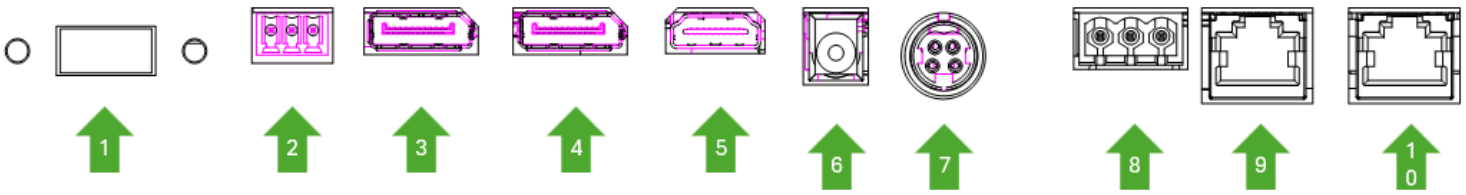
Button	Function
POWER	Powers display On or Off
MENU	Displays/toggles the OSD menu, exits sub-menus
SELECT	Select highlighted menu function
DOWN	Navigate downward in OSD menu, Decrease slider value
LEFT	Navigate leftward in OSD menu, Decrease slider value
UP	Navigate upward in OSD menu, Increase slider value
RIGHT	Navigate rightward in OSD menu, Increase slider value

LED Indicator Status

Status	Color	Operation
No Power	Off	Off
Normal	Blue	On
Not Connected (No Signal)	Blue	On
DPMS	Blue	On

Mechanical Layout

IN/OUT Connectivity



1	USB	USB Type-A (Touch USB)
2	RS232 Input	3-pin Terminal Block (3.5mm pitch) – Serial Control
3	DP Output	Display Port Output - up to 1920x1080 @ 60Hz
4	DP Input	Display Port Input - up to 1920x1080 @ 60Hz
5	HDMI Input	HDMI Input - up to 1920x1080 @ 60Hz
6	1-pin DC Power Output/Input	Output when PoE is Active. Alternate Power Unit
7	4-pin DC Power Output/Input	Output when PoE is Active. Alternate Power Unit
8	12/24V DC Outlet	Power Output for Third-Party Devices such as Media Players
9	RJ45 Port Output	Data Output for Third-Party Devices such as Media Players
10	RJ45 Port Input	PoE Input (Power/Data)

Touch Functions

Setup

With SoC (-AS Models):
Built-in. Touch is processed internally and no USB connection is required.

With Windows:
Plug-and-Play. No drivers are required and the touch screen is recognized as an HID (Human Interface Device).

With Other Operating Systems:
Drivers may be required to support single and multi-touch functionality. Contact GPO Display for more information on the requirements associated with your specific OS (e.g. Mac, Linux)

Contact us: support@gpodisplay.com or (510) 659-9855

Touch Calibration

If you are expeiencing issue with touch calibration (touch sensitivity, acuracy, etc.):

• First, use Windows' native touch calibration function.
• If the Windows tool does not create desiered result, reach out to GPO Display and they can provide you with a PCAP Calibration tool.

PCAP Technology

PCAP:

- PCAP = Projective Capacitive touchscreen
- When using PCAP, you will need to use a human finger or specialized stylus for the touch points to be recognized.

RS232 Input

Wiring a 3-Pin RS232 Input:

The 3-pin RS232 input consists of three wires: transmit (Tx), receive (Rx), and ground (GND).

You will need the following tools and materials for this project:

- A 3-pin RS232 connector (male)
- Wire strippers
- Pliers
- Flathead screwdrivers
- Electric tape
- Wire nuts or crimp connectors

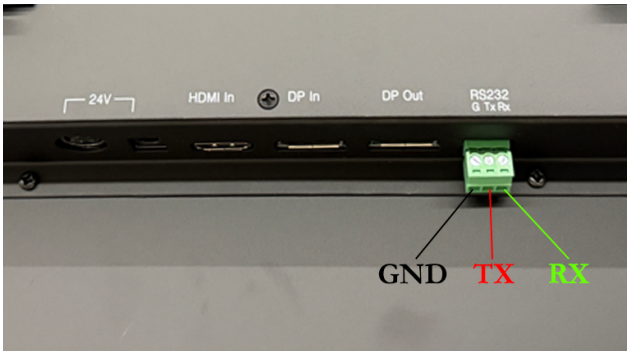
Identify the 3-pin RS232 connector on the PoE display (see fig 5). The three pins on the terminal are identified in Fig. 6.

1. Cut a length of wire for each terminal of the 3-pin RS232 connector. Strip about ¼ inch of insulation from both ends of each wire. Twist the exposed strands of each wire together to prevent fraying.

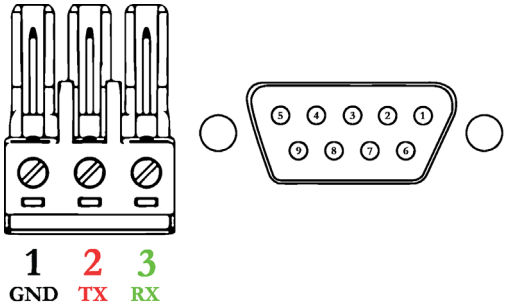
2. Connect one end of each wire to the corresponding terminal of the 3-pin RS232 connector. Use a small flathead screwdriver to tighten the screws on the terminals. Make sure there is no wire insulation inside the terminals, and there are no stray wire strands outside the terminals.

3. Connect the other end of each wire to the corresponding pin of the RS232 port on your control device. If you are using a D-Sub 9 connector, the Tx wire should go to pin 3, the Rx wire should go to pin 2, and the GND wire should go to pin 5. Use wire nuts or crimp connectors to secure the connections. Wrap each connection with electrical tape to insulate them.

D-Sub 9Pin	-	TB 3Pin
2 RX	<---------->	2 TX
3 TX	<---------->	3 RX
5 GND	<---------->	1 GND
Control Device	-	Display Side



[Fig. 5] Rear view of display



[Fig. 6] 3-pin RS232 terminal

[Fig. 7] RS232 terminal with wires inserted

12/24VDC Outlet

Wiring a 12/24VDC Outlet:

The 12/24VDC outlet is a power source that can provide either 12 volts or 24 volts of direct current (DC), depending on the configuration.

Wiring a 12/24VDC Outlet:

1. Identify the power cord that you will use to connect the display to the third-party device.

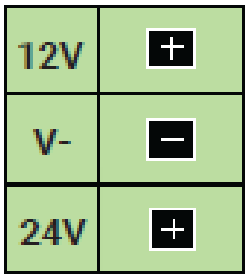
2. Plug the power cord into the input of the third-party device. Make sure the power is switched off before plugging it in.

3. Determine the power needs of the third-party device and whether it requires 12 or 24VDC. Refer to p. 14 of this manual for power requirements based on display model and Power Source Equipment (PSE).

4. Cut a length of wire for each terminal (+/-). NOTE: Use both terminals as failure to do so can cause damage to equipment.

5. Strip about ¼ inch of insulation from both ends of each wire. Twist the exposed strands of each wire together to prevent fraying.

6. Connect the other end of each wire to the corresponding terminal of the 12/24VDC outlet (fig. 8 & 9). Use a flathead screwdriver to tighten the screws on the terminals. Make sure there is no wire insulation inside the terminals, and there are no stray wire strands outside the terminals.



[Fig. 8] 12/24VDC terminal graphic

[Fig. 9] 12/24VDC terminal

Connectivity and Power Requirements

Input Signal Connector

HDMI	HDMI 1.4a x 1
DisplayPort	DisplayPort V1.2a (2.7GHz, HBR)
RS-232	3-Pin (Tx Rx GND), Straight-through
RJ45	PoE x 1

Output Signal Connector

DisplayPort	DisplayPort V1.2a (2.7GHz, HBR)
RJ45	Data Output x 1

Power Requirements

Model	**Display Power Consumption**	**Available Power via DC Output for Input Source Devices/Media Players**			
		Type 3 PoE++ PSE [51W to Powered Device (PD)]		**Type 4 PoE++ PSE [71W to Powered Device (PD)]**	
EM21SL	20W	12V DC: 24.0W, 2.0A	24V DC: 28.8W, 1.2A	12V DC: 24.0W, 2.0A	24V DC: 43.2W, 1.8A
EM27SL	16.5W	12V DC: 24.0W, 2.0A	24V DC: 33.6W, 1.4A	12V DC: 24.0W, 2.0A	24V DC: 43.2W, 1.8A
EM32SL	40W	12V DC: 10.8W, 0.9A	24V DC: 9.6W, 0.4A	12V DC: 24.0W, 2.0A	24V DC: 28.8W, 1.2A
EM43SL	55W	12V DC: -	24V DC: -	12V DC: 15.6W, 1.3A	24V DC: 14.4W, 0.6A

User Controls

OSD Key Button	5-Key
OSD Language	English

Supported Timing

Scanning Frequency

Horizontal	31 ~ 95KHz
Vertical	56 ~ 75Hz

Input Resolution [HDMI, DP]

Recommended Resolution	1920x1080 @ 60Hz
Supported Input Resolution	720x400p @70Hz - IBM VGA 640x480p @60Hz - IBM VGA 640x480p @67Hz - Apple Mac II 640x480p @72Hz - VESA 640x480p @75Hz - VESA 800x600p @56Hz - VESA 800x600p @60Hz - VESA 800x600p @72Hz - VESA 800x600p @75Hz - VESA 1024x768i @87Hz - IBM 1024x768p @60Hz - VESA 1024x768p @70Hz - VESA 1024x768p @75Hz - VESA 1280x1024p @75Hz - VESA 1152x870p @75Hz - Apple Mac II 1280x720p @60Hz - VESA STD 1680x1050p @60Hz - VESA STD 1280x1024p @60Hz - VESA STD 1440x900p @60Hz - VESA STD 1600x900p @60Hz - VESA STD 1680x1050p @60Hz - VESA STD 1152x864p @60Hz - VESA STD 1920x1080p @60Hz - VESA STD

Quick Installation Guide

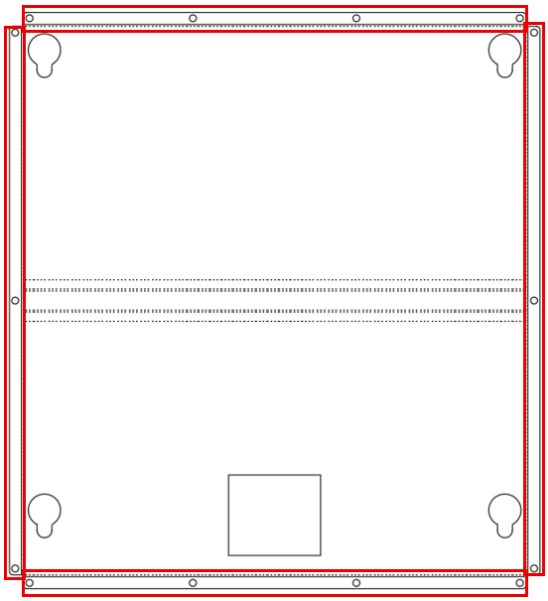
Outline Dimensions

Model	W (mm)	H (mm)	D (mm)
ET21SL	516.6	313.1	51.3
ET27SL	652.4	393.4	51.3
ET32SL	739	433	57.6
ET43SL	1008	596.2	62.4

Quick Install Guide

1. Wall Mount Installation

a. Note direction of bracket openings. They should appear as shown below:
b. Ensure mount is level and insert lag screws into wall/backing at positions indicated by the red boxes.
*Note: Mount appearance varies by model



2. Display Installation

a. Insert cables (HDMI, RJ45, etc.) into the display before mounting.
b. Align brackets on the rear side of the display with with corresponding openings in the wall mount as shown below.
c. Ensure that the display is parallel to the mount.
d. Once the backets are inserted into the mount, sloly ease the display downwards until they lock in place.