

# MD-124 Series

**24-inch marine display with wide viewable image size (16:9 aspect ratio), 1920 x 1080 pixel resolution**



- > 24-inch wide viewable image size with 16:9 aspect ratio and 1920 x 1080 pixel resolution
- > LED backlighting
- > Optical bonding (Y model)
- > Surface capacity touch (Z model)
- > ECDIS color calibration model available (by request)
- > PIP/PBP
- > Multi-power input (24 VDC, 110 to 230 VAC)
- > IP66 rated front panel



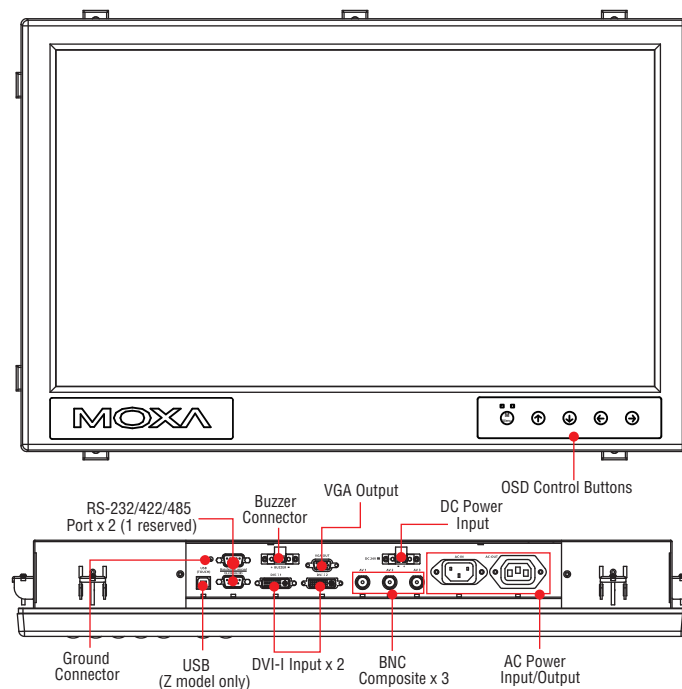
## : Overview

The MD-124 Series marine displays are designed to fit the great demands of the marine industry. The 24-inch wide viewable image size with 16:9 aspect ratio and 1920 x 1080 pixel resolution make the displays ideal for a variety of marine applications. In addition, the full range dimming, optical bonding (Y model only), and wide angle view functions are well-suited for a variety of marine applications, and meet the required marine standards.

The PIP (Picture-In-Picture) and PBP (Picture-By-Picture) functions are available to offer multiple selections for screen displays. Users can also use either AC or DC power inputs, simplifying the installation of the displays at field sites.

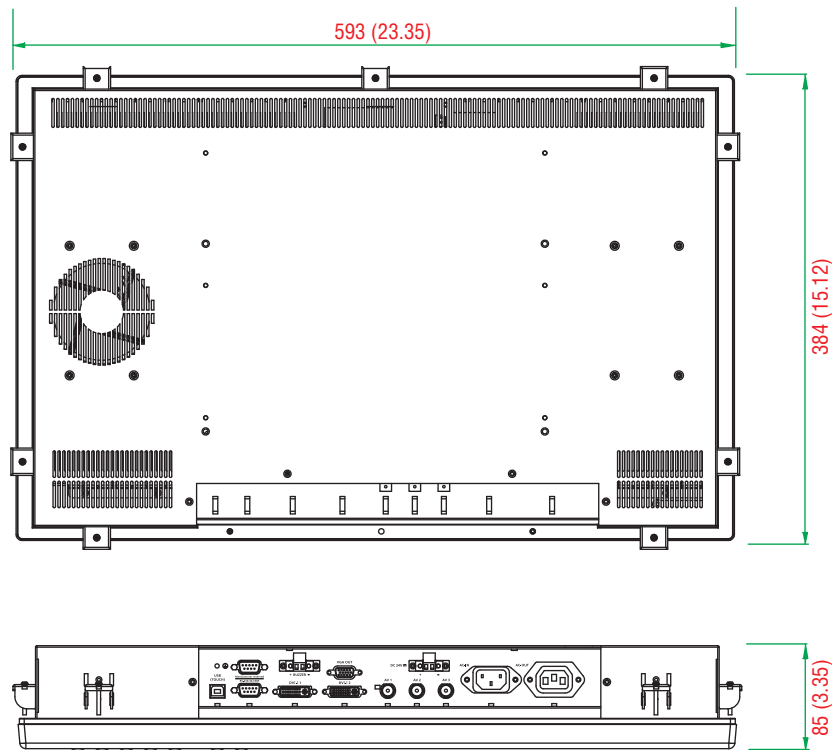
The MD-124 displays are compliant with many a variety of industrial marine standards, including IEC 60945, DNV, and IACS-E10, lending greater credence to their suitability for maritime operations.

## : Appearance



## Dimensions

Unit: mm (inch)



## Specifications

### Display

**Panel Size:** 24" wide viewable image size  
**Panel Type:** MVA  
**Aspect Ratio:** 16:9  
**Pixels:** 1920 x 1080 (WSXGA+)  
**Pixel Pitch (RGB):** 0.282 (H) x 0.282 (V) mm  
**Response Time:** 8 ms (gray to gray)  
**Contrast Ratio:** 5000:1  
**Light Intensity:** 300 cd/m<sup>2</sup>  
**Viewing Angles:** 178/178  
**Active Display Area:** 531.36 (H) x 298.89 (V) mm  
**Max Colors:** 16.7M (8 bits/color)  
**Display Interface:** VGA x 1, DVI-I x 2, BNC composite x 3

### Resolution:

- VGA: 640 x 480
- SVGA: 800 x 600
- XGA: 1024 x 768
- SXGA: 1280 x 1024
- WSXGA+: 1680 x 1050 (optimal setting)

### Serial Interface

**Serial Standards:** 1 RS-232/422/485 ports, software-selectable (DB9 male)

### Serial Signals

**RS-232:** TxD, RxD, DTR, DSR, RTS, CTS, DCD, GND  
**RS-422:** TxD+, TxD-, RxD+, RxD-, GND  
**RS-485-4w:** TxD+, TxD-, RxD+, RxD-, GND  
**RS-485-2w:** Data+, Data-, GND

### Front Panel

**Panel Control Buttons:** 1 Power, 4 OSD controls  
**LEDs:** Status, Power

### Physical Characteristics

**Housing:** Aluminum sheet metal  
**Weight:** 12 kg  
**Dimensions:** 95 x 647 x 414 mm (3.74 x 25.47 x 16.30 in)  
**Mounting:** Console mounting

### Environmental Limits

**Operating Temperature:** -15 to 55°C (5 to 131°F)  
**Storage Temperature:** -20 to 60°C (-4 to 140°F)  
**Ambient Relative Humidity:** 5 to 95% (non-condensing)

### Anti-Vibration:

- IEC 60945
- DNV 2.4, Class A/Class C

### Power Requirements

#### Input Voltage:

- 24 VDC (with tolerance from 18 to 36 VDC, 2-pin terminal block)
- 110 to 230 VAC, 50/60 Hz

#### Power Consumption:

- 75 W (standard) to 90 W (full-loading)
- 6.21 A @ 18 VDC
- 4.55 A @ 24 VDC
- 2.95 A @ 36 VDC

### Standards and Certifications

**Safety:** UL/cUL, CCC

**EMC:** EN 55022 Class B, EN 55024-4-2, EN 55024-4-3, EN 55024-4-4, FCC Part 15 Subpart B Class A

**Marine:** IEC 60945 4th. (Pending), DNV (Pending), IACS-E10 (Pending)

**Green Product:** RoHS, cRoHS, WEEE

### Warranty

**Warranty Period:** 1 year

**Details:** See [www.moxa.com/warranty](http://www.moxa.com/warranty)

We recommend taking the following precautions to minimize heat build-up within the display:

- Position the display within  $\pm 40^\circ$  of the vertical.
- Install an external fan to increase airflow upwards through the display if (a) the display is not positioned within  $\pm 40^\circ$  of the vertical, (b) the operating temperature exceeds  $25^\circ\text{C}$ , or (c) the display is used in a location with minimal ventilation.

**Important Safety Precaution:**

Even though the display is rated to operate within the IEC 60945 standard of  $-15$  to  $55^\circ\text{C}$  for bridge applications, it is best to ensure that the operating temperature does not exceed  $25^\circ\text{C}$ . Doing so will increase the life of your display and minimize service costs.

**: Ordering Information**

**Available Models**

**MD-124X:** 24-inch marine display with 16:9 aspect ratio, full HD (1920x1080), LED backlighting, multi-power supply (AC/DC) with tape bonding

**MD-124Y:** 24-inch marine display with 16:9 aspect ratio, full HD (1920x1080), LED backlighting, multi-power supply (AC/DC) with optical bonding

**MD-124Z:** 24-inch marine display with 16:9 aspect ratio, full HD (1920x1080), LED backlighting, multi-power supply (AC/DC) with touch

**Package Checklist**

- MD-124 panel
- Rubber waterproofing cushion
- Documentation and software CD
- Quick installation guide (printed)
- Warranty card