

MD-119 Series

19-inch type approved ECDIS marine display, 1280 x 1024 resolution



- > 19-inch screen, 5:4 aspect ratio, 1280 x 1024 resolution
- > LED backlighting
- > Full range dimming, optional optical bonding
- > Touch screen models available
- > Dual-power supply (AC 110 V to 230 V, DC 24 V)
- > Picture-in-Picture and Picture-by-Picture display
- > ECDIS color calibration (optional)



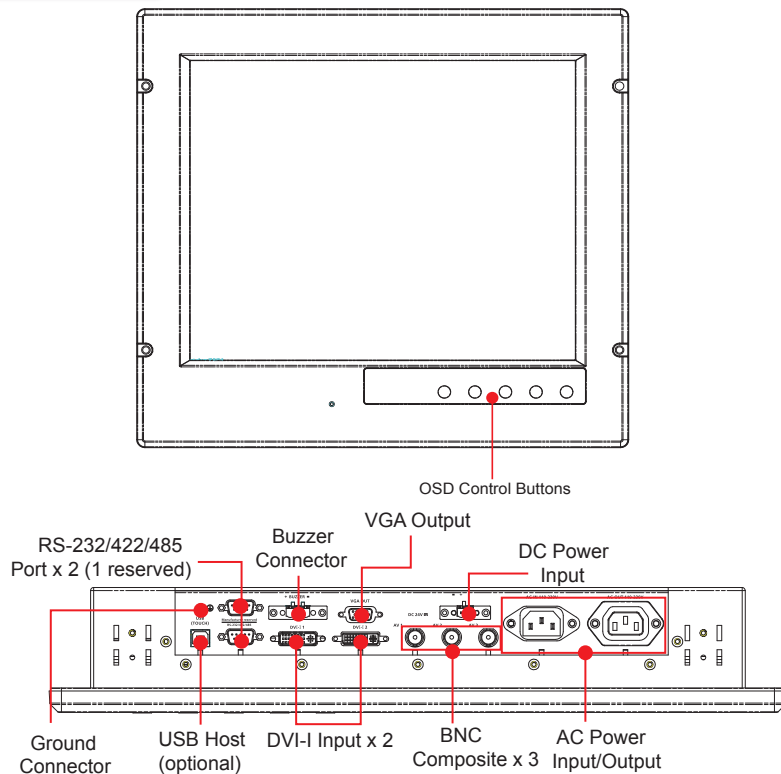
Overview

The MD-119 is the 19-inch version of our marine display series. Designed for durably reliable service as an ECDIS display component, the MD-119 has a 5:4 aspect ratio with 1280 x 1024 pixel resolution, alongside full range dimming and optional optical bonding, making them well-suited not only for ECDIS applications, but for a variety of other bridge applications, as well.

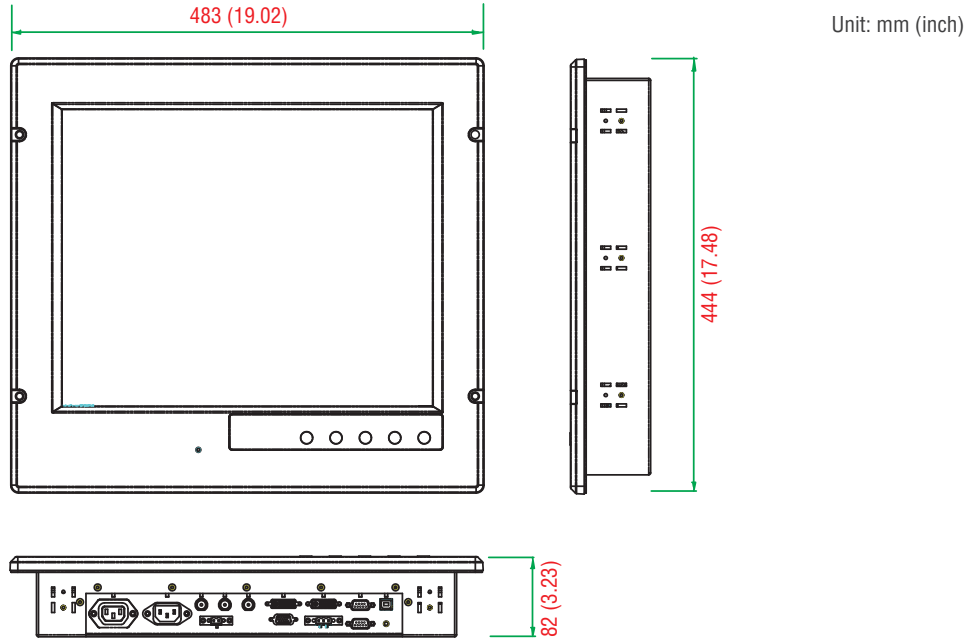
The MD-119 further comes with PIP (picture-in-picture) and PBP (picture-by-picture) functions, allowing for multiple display configurations that may be tailored to a variety of situations. Finally, with both AC and DC power inputs, the MD-119 may be conveniently installed on any bridge, without the need for extra hardware.

Moxa's marine displays are compliant with the most important industrial marine standards, such as IEC 60945, DNV, and IACS-E10, giving strong assurance of their suitability for marine applications.

Appearance



Dimensions



Specifications

Display

- Panel Size:** 19"
- Aspect Ratio:** 5:4
- Pixels:** 1280 x 1024
- Pixel Pitch (RGB):** 0.294 (H) x 0.294 (V) mm
- Response Time:** 5 ms (gray to gray)
- Contrast Ratio:** 1000:1
- Light Intensity:** 350 cd/mxm
- Viewing Angles:** 85° x 80° (right-left/up-down)
- Active Display Area:** 376.32 (H) x 301.06 (V) mm / 14.81 (H) x 11.85 (V) in
- Max Colors:** 16.7M (8 bit)
- Display Interface:** VGA output x 1, DVI-I input x 2, BNC composite x 3
- Resolution:**
 - VGA: 640 x 480
 - SVGA: 800 x 600
 - XGA: 1024 x 768
 - SXGA: 1280 x 1024

Serial Interface

Serial Standards: 1 software-selectable RS-232/422/485 ports (DB9, male), 1 mfr reserved for flashing firmware

Serial Communication Parameters

- Data Bits:** 5, 6, 7, 8
- Stop Bits:** 1, 1.5, 2
- Parity:** None, Even, Odd, Space, Mark
- Flow Control:** XON/XOFF, ADDC® (automatic data direction control) for RS-485
- Baudrate:** 9600 Kbps

Serial Signals

- RS-232:** TxD, RxD, DTR, DSR, 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

- LEDs:** Storage, Power
- OSD:** 5 x OSD control
- USB:** 1 USB 2.0 host for touch screen function (optional)

Physical Characteristics

- Housing:** Aluminum sheet metal
- Weight:** 9.7 kg
- Dimensions:** 82 x 483 x 444 mm (3.23 x 19.02 x 17.48 in)
- Mounting:** Flush 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)
 - 115 to 230 VAC, 50/60 Hz
- Power Consumption:** 42 W
 - 1.75 A @ 24 VDC
 - 0.38 A @ 110 VAC

Standards and Certifications

- Safety:** UL 60950-1, CCC (pending)
- EMC:** EN 55022 Class B, EN 55024-4-2, EN 55024-4-3, EN 55024-4-4, FCC Part 15 Subpart B Class A
- Green Product:** RoHS, cRoHS, WEEE

Reliability

- MTBF (mean time between failures):** 39,675 hrs
- Automatic Reboot Trigger:** Built-in WDT (watchdog timer) supporting 1 to 255 levels for time interval system reset, software programmable

Warranty

- Warranty Period:** 1 year
- Details:** See 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°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°C for bridge applications, it is best to ensure that the operating temperature does not exceed 25°C . Doing so will increase the life of your display and minimize service costs.

: Ordering Information

Available Models

MD-119-X1: 19-inch type approved ECDIS marine display with 5:4 aspect ratio, 1280 x 1024 resolution, LED backlighting, tape bonding, and dual AC/DC power supplies

Package Checklist

- MD-119-X1 display
- DVI to VGA adapter
- VGA Cable
- DVI-D Cable
- Console Mounting Kits
- DC terminal block (for powering device)
- DC terminal block (for powering the buzzer)
- Documentation and driver DVD
- Quick installation guide (printed)
- Warranty card