

MPC-122-K Series

x86 marine panel computers with Intel Core 2 Duo 2.26 GHz, VGA, DVI, audio, 2 Gigabit LANs, 2 serial ports, 7 USB 2.0 ports, CompactFlash



- > 22" wide viewable image size with 16:10 aspect ratio and 1680 x 1050 pixel resolution
- > High performance with Intel Core 2 Duo 2.26 GHz processor
- > Full range dimming, optical bonding (optional), and wide angle view (178/178)
- > Dual independent displays (VGA + DVI-D)
- > Water and dust proof IP66-rated enclosure (flush mounting)
- > 2 Gigabits Ethernet LAN ports
- > 2 RS-232/422/485 optically-isolated serial ports
- > 7 USB 2.0 ports for high speed peripherals
- > CompactFlash socket for storage expansion
- > 2 SATA connectors for storage expansion
- > Supports Windows 7 and Windows XP SP3
- > Rugged and fanless design
- > ECDIS-compliant models available



Introduction

The MPC-122-K marine panel computer features a 2.26 GHz Intel Core 2 Duo processor with up to 4 GB of system memory to deliver a reliable high performance platform for marine system operations. Two RS-232/422/485 optically-isolated serial ports and two Gigabit LAN ports provide reliable serial communications and high speed Ethernet transmissions with network redundancy.

The panel is outfitted with a range of industrial features, such as optional optical bonding, wide view angles, and full range dimming. The panel is designed to modularly integrate with the computer to reduce system integration costs and reduce your time-to-market. Full

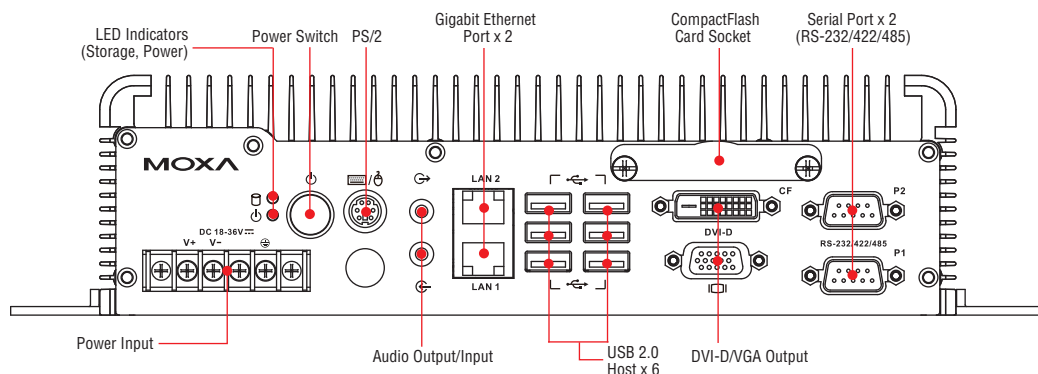
support is provided for a wide range of panel resolutions in order to meet the specific requirements of many different marine applications.

The MPC-122-K marine panel computers are compliant with many different industrial marine standards, such as IEC 60945, DNV, and IACS-E10, to verify their resilience in maritime operations. The IP66 rated enclosure provides additional protection against harsh marine environments.

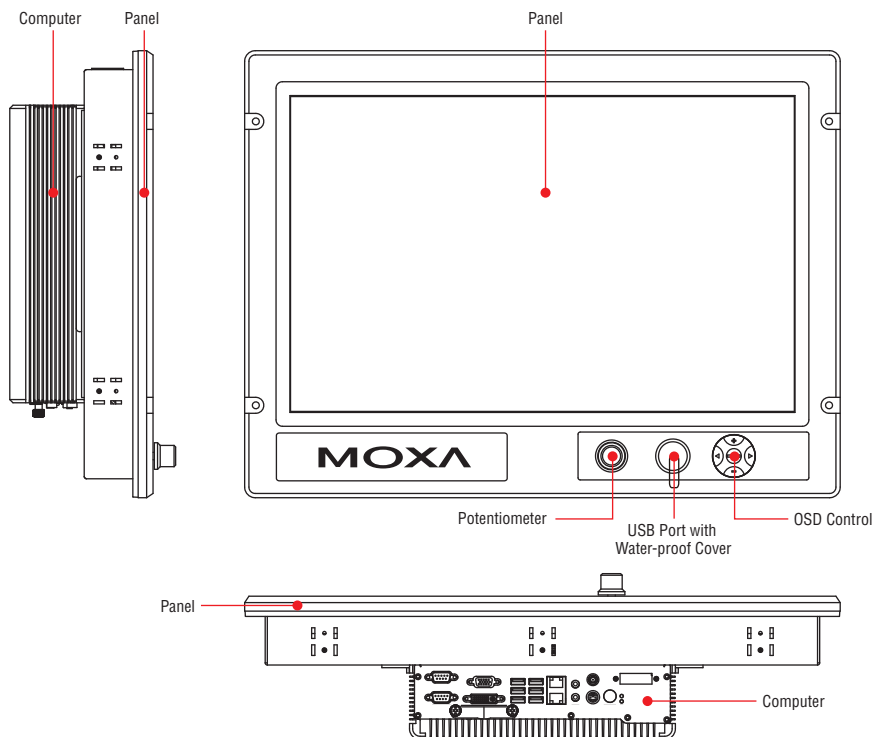
In addition, ECDIS-approved models are also available, offering the optimal solution for computers that meet the ECDIS requirements.

Appearance

Computer



Panel



Specifications

Computer

- CPU:** Intel Core 2 Duo SP9300 2.26 GHz, 6 MB for L2 cache
- OS:** Windows 7, Windows XP SP3 (models with OS pre-installed available by request)
- System Chipset:** Intel GS45 + ICH9M
- BIOS:** 8 Mbit Flash BIOS SPI type, ACPI function supported
- FSB:** 1066 MHz
- System Memory:** 2 GB DDR3 SDRAM onboard (supports DDR3 up to 4 GB)
- Graphics Controller:** Intel GS45 built-in
- Video Output:** DVI-D x 1, VGA x 1 (female)
- Expansion Bus:** Mini-PCIe onboard
- USB:** USB 2.0 hosts x 7, type A connectors, supporting system boot up (6 ports on the computer, 1 port on the panel)

Storage

- Storage Expansion:** CompactFlash socket
- SATA Storage Support:** (models with SDD/HDD pre-installed available by request)
 - 2.5-inch SSD
 - 2.5-inch HDD

Other Peripherals

- KB/MS:** 1 PS/2 interface supporting standard PS/2 keyboard and mouse through Y-type cable
- Audio:** Line-in and line-out interface, with 3.5 mm mini jack

Display

- Panel Size:** 22" wide viewable image size
- Panel Type:** MVA
- Aspect Ratio:** 16:10
- Pixels:** 1680 x 1050 (WSXGA+)
- Pixel Pitch (RGB):** 0.282 (H) x 0.282 (V) mm
- Response Time:** 8 ms (gray to gray)
- Contrast Ratio:** 1000:1
- Light Intensity:** 300 cd/m²
- Viewing Angles:** 178/178
- Active Display Area:** 473.76 (H) x 296.1 (V) mm
- Max Colors:** 16.7M (8 bits/color)
- Resolution:**
 - VGA: 640 x 480

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

Ethernet Interface

- LAN:** 2 auto-sensing 10/100/1000 Mbps ports (RJ45)
- Magnetic Isolation Protection:** 1.5 KV built-in

Serial Interface

- Serial Standards:** 2 RS-232/422/485 ports, software-selectable (DB9 male)
- Optical Isolation Protection:** 4 KV

Serial Communication Parameters

- Data Bits:** 5, 6, 7, 8
- Stop Bits:** 1, 1.5, 2
- Parity:** None, Even, Odd, Space, Mark
- Flow Control:** RTS/CTS, XON/XOFF, ADDC® (automatic data direction control) for RS-485
- Baudrate:** 50 bps to 921.6 Kbps (supports non-standard baudrates; see user's manual for details)

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

LEDs

- System:** Storage, Power
- LAN:** 100M/Link x 2, 1000M/Link x 2 (on connector)

Front Panel

- LEDs:** Storage, Power
- OSD:** 1 x OSD control
- USB:** 1 USB 2.0 host
- Potentiometer:** For brightness control

Physical Characteristics

- Housing:** Aluminum sheet metal
- Weight:** 15 kg
- Dimensions:** 124 x 560 x 420 mm (4.88 x 22.05 x 16.54 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 (18 to 36 VDC), screw-type terminal block

Power Consumption: 112 W

- 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

Reliability

Automatic Reboot Trigger: Built-in WDT (watchdog timer) supporting 1-255 levels for time interval system reset, software programmable

MTBF (mean time between failures): 39,675 hrs

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:

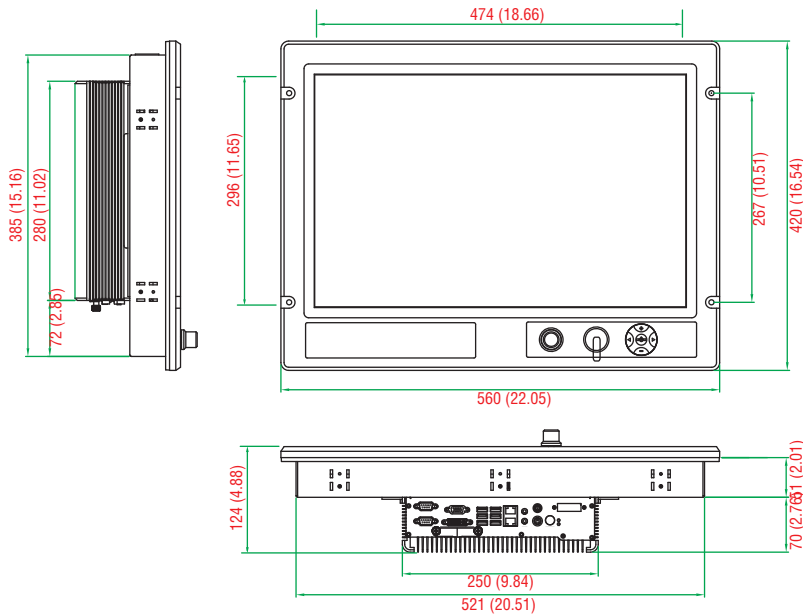
- Position the display within $\pm 40^\circ$ of the vertical.
- Install an external fan to increase airflow upwards through the display if (a) the display is not positioned within $\pm 40^\circ$ of the vertical, (b) the operating temperature exceeds 25°C, or (c) the display is used in a location with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

Dimensions

Unit: mm (inch)



Ordering Information

Available Models

MPC-122X-K: Intel Core 2 Duo 2.26 GHz panel computer with 22" screen, full-dimming, tape bonding glass

MPC-122Y-K: Intel Core 2 Duo 2.26 GHz panel computer with 22" screen, full-dimming, optical bonding glass

MPC-122X-K-ECDIS: Intel Core 2 Duo 2.26 GHz panel computer with 22" screen, full-dimming, tape bonding glass, ECDIS

MPC-122Y-K-ECDIS: Intel Core 2 Duo 2.26 GHz panel computer with 22" screen, full-dimming, optical bonding glass, ECDIS

Package Checklist

- MPC-122-K panel computer
- PS/2 to KB/MS Y-type cable
- 2 hard drive cables and 1 SATA disk power cable
- Rubber water proofing cushion
- Hard drive ground sticker
- Documentation and software CD
- Quick installation guide (printed)
- Warranty card