

MPC-122-K Series Preliminary

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



- > High performance with Intel Core 2 Duo 2.26 GHz processor
- > Dual independent displays (VGA + DVI-D)
- > 2 10/100 Mbps Ethernet ports
- > 2 RS-232/422/485 serial ports
- > 7 USB 2.0 ports for high speed peripheral
- > CompactFlash socket for storage expansion
- > 2 SATA-150 connector for hard disk drive expansion
- > Ready-to-run Windows XP SP3 or Windows 7 platform
- > Full range dimming, optical bonding, and wide view angle
- > Color calibration (ECDIS compliant)
- > Auto-scaling to maximal panel resolution
- > Rugged and fanless design with compact size



Overview

The MPC-122-K marine panel computers feature 2.26 GHz Intel Core 2 Duo processor with up to 4 GB system memory, providing a high performance for system operation. The MPC-122-K computers offer 2 RS-232/422/485 serial ports for reliable serial communication, and the 2 Gigabit LAN ports can provide high speed Ethernet transmission and network redundancy, offering the most reliable solution while using in the marine applications.

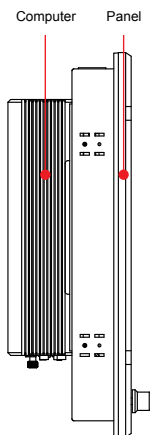
Meanwhile, the panel contains specific features, including full range dimming, optical bonding, wide view angle, and color calibration, promising the industrial-grade applications for marine market.

Meanwhile, the modular design helps easily integrate the panel with the computer, reducing system integration cost for time-to-market. Moreover, it supports various panel resolutions, fully satisfying customers' great demands for panel application in different marine field sites.

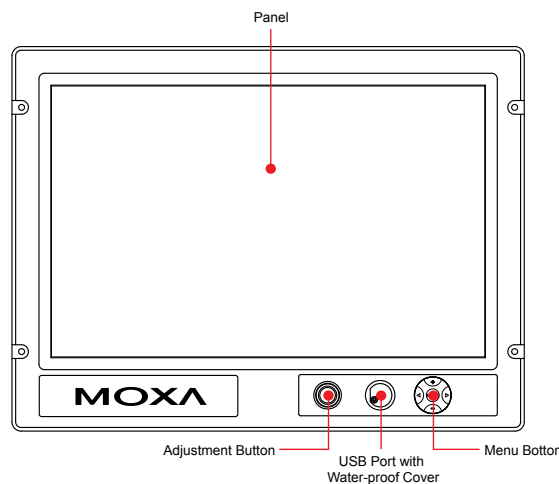
The MPC-122-K marine panel computers meet different industrial standards, such as DNV, IEC 60945 4th., IACS-E10, and is ECDIS compliant, guaranteeing the reliable solution for use in the marine market.

Appearance

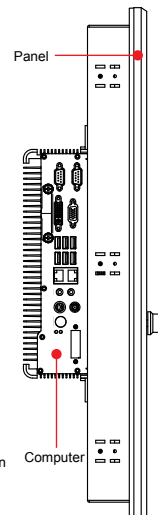
Side View



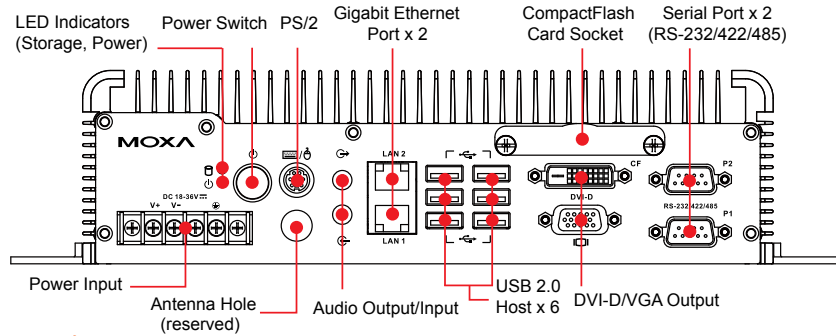
Front View



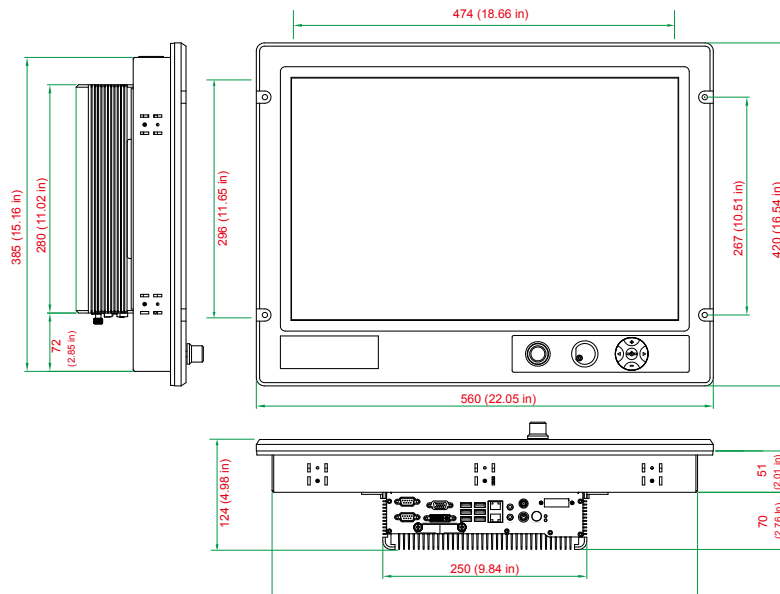
Bottom View



Computer Front View



Dimensions (unit = mm)



Hardware Specifications

Display

Graphics Controller: Intel GS45 built-in
Video Interface: DVD-D x 1, VGA x 1 (female)
Panel Size: 22" viewable image size
Panel Type: MVA
Aspect ratio: 16:10
Pixel Number: 1680X1050 (WSXGA+)
Pixel Pitch (RGB): 0.282(H)X0.282(V) mm
Response Time: 8ms (gray to gray)
Contract 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 (8bits/color)

Computer

CPU: Intel Core 2 Duo SP9300 2.26 GHz, 6 M Level2 cache
OS (optional): Microsoft Windows XP SP3, or Windows 7
System Chipset: Intel GS45 + ICH9M
BIOS: 8 Mbit Flash BIOS, SPI type, ACPI function supported
FSB: 800/1066 MHz
System Memory: 1 x 200-pin DDR2 SODIMM socket support DDR3 up to 4 GB, built-in 1 GB
Expansion Bus: 1 mini-PCIe slot onboard
USB: USB 2.0 compliant hosts x 7, type A connector, supports system boot up (6 ports on the computer, 1 port on panel)

Storage

Built-in: 2 GB onboard industrial CompactFlash card to store OS
HDD Support: (optional)
 • 2.5-inch HDD: 60 GB to 160 GB (low power)
 • 2.5-inch SDD: 8 to 128 GB (industrial grade)

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

Resolutions:

- VGA: 640X480
- SVGA: 800X600
- XGA: 1024X768
- SXGA: 1280X1024
- UXGA: 1600X1200
- WSXGA+: 1680X1050 (optimal setting)
- WUXGA: 1920X1200

Ethernet Interface

LAN: 2 auto-sensing 10/100/1000 Mbps ports (RJ45)

Serial Interface

Serial Standards: 2 RS-232/422/485 ports, software selectable (DB9 male)

Optical Isolation Protection: 4 KV for all signals

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 (non-standard baudrates supported; 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: Power, Storage

Serial: Tx x 4, Rx x 4

LAN: 10M/Link/ACT x 2, 100M/Link/ACT x 2

Front I/O

Power Switch: on/off

Panel Control Buttons: Brightness, Contrast, RGB, OSD Control

USB Host: USB 2.0 host x 1

Knob: for brightness control

Rear I/O

LAN: 10/100/1000 Mbps port x 2 (RJ45)

USB: USB 2.0 host x 6

Serial Port: RS-232/422/485 port x 2 (DB9 male)

Storage Expansion: CompactFlash socket x 1

Video Output: DVI-D x 1, VGA x 1 (female)

Audio: Line in x 1, line out x 1 (3.5 mm mini jack)

WiFi Antenna Hole: Reserved

Power Input: 24 VDC x 1 (screw terminal block)

Physical Characteristics

Housing: Aluminum

Weight: 19 kg

Dimensions: 135 x 560 x 420 mm (5.31 x 22.05 x 16.54 in)

Mounting: DIN-Rail, wall, VESA

Environmental Limits

Operating Temperature: -15 to 55°C (5 to 131°F)

Operating Humidity: 5 to 95% RH

Storage Temperature: -20 to 60°C (-4 to 140°F)

Anti-vibration:

Anti-shock:

Power Requirements

Input Voltage: 18 to 36 VDC

Power Consumption: 48.6 W

1.35 mA @ 36 VDC

1.96 mA @ 24 VDC

2.61 mA @ 18 VDC

Regulatory Approvals

EMC: CE, FCC

Safety: DVN, IEC 60945 4th, IACS-E10

Green Product: RoHS, CROHS, WEEE

IP Rating: IP65 for flush mounting

Reliability

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

Warranty

Warranty Period: 3 years

Details: See www.moxa.com/warranty

Ordering Information

Available Models

MPC-122-K: x86 marine panel computers with Intel Core 2 Duo 2.26 GHz, VGA, DVI, audio, 2 Gigabit LANs, 2 serial ports, 6 USB 2.0 ports, CompactFlash

Package Checklist

- 1 MPC-122-K computer
- Terminal block to power jack converter
- PS2 to KB/MS Y-type cable
- Wall mounting kit
- Document & Software CD or DVD
- Quick Installation Guide (printed)
- Product Warranty Statement (printed)