MPC-2240 Series

24-inch ECDIS color calibrated, fanless panel computers



Features and Benefits

- 24-inch panel computer
- Color calibrated for ECDIS compliance (available by CTOS)
- Intel® Core™ processor: i7 3517UE 1.7 GHz or Celeron® 1047UE 1.40 GHz
- SavvyTouch display controls
- Fanless system design
- Built-in NMEA 0183 and 3-in-1 software selectable RS-232/422/485 interfaces
- Multiple power supplies (AC & DC)

Certifications

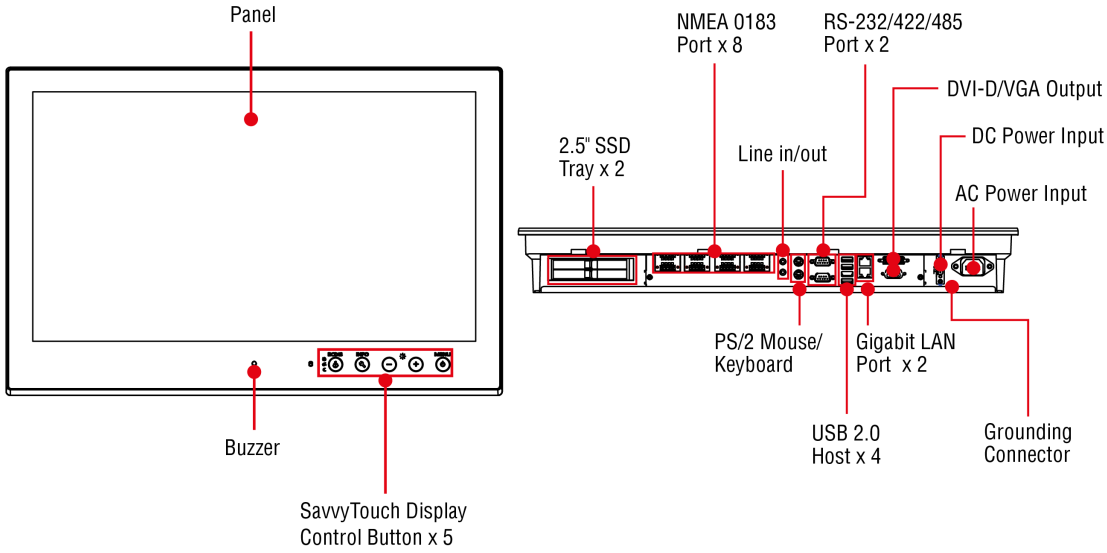
Introduction

MPC-2240 Series panel computers feature Intel® processors Ivy Bridge Core or Celeron and built-in 4 GB system memory, delivering a reliable, high-performance platform of wide versatility for use in industrial marine environments. With its RS-232/422/485 serial, NMEA 0183, and Gigabit Ethernet ports, the MPC- 2240 panel computer supports a wide variety of serial- and marine-specific interfaces alongside high-speed IT communications, all with native network redundancy.

The MPC-2240 Series comes with a range of standard display enhancements useful in industrial environments (including 0 to 100% full-range dimming, 178°/178° wide viewing angles, optional optical bonding, and/or multi-touch screen), as well as Moxa's innovative SavvyTouch display controls.

The MPC-2240 panel computers are compliant with several marine industry standards, including IEC 60945 4th, IEC 61174, IEC 61162, DNV 2.4, and IACS E10, verifying their resilient and durability in marine operations. An optional IP65-rated unibody shell provides strong additional protection against the harsh conditions found in marine environments. The MPC-2240 Series delivers rugged, type-approved, high-performance, and user-friendly panel computers that are perfect for ECDIS navigation systems and other marine IBS applications.

Appearance



Specifications

Computer

CPU	MPC-2240X/2240Z: Intel® Celeron® Processor 1047UE (2M Cache, 1.40 GHz) MPC-2247X/2247Z: Intel® Core™ i7-3517UE Processor (4M Cache, up to 2.80 GHz)
System Chipset	Mobile Intel® HM65 Express Chipset
Graphics Controller	Intel® HD Graphics 520
System Memory Pre-installed	4 GB DDR3/DDR3L
System Memory Slot	SODIMM DDR3/DDR3L slot x 1
Pre-installed OS	OS is not pre-installed
Supported OS	Windows 7 Pro for Embedded Systems Windows Embedded Standard 7 (WS7P) 64-bit Windows 10 Pro 64-bit Windows 10 Embedded IoT Ent 2016 LTSB High End EPKEA Windows 10 Embedded IoT Ent 2016 LTSB Value EPKEA
Storage Slot	2.5-inch HDD/SSD slots x 2

Computer Interface

Ethernet Ports	Auto-sensing 10/100/1000 Mbps ports (RJ45 connector) x 2
Serial Ports	RS-232/422/485 ports x 2, software selectable (DB9 male)
USB 2.0	USB 2.0 hosts x 4, type-A connectors
Audio Input/Output	Line in x 1, Line out x 1, 3.5 mm phone jack
PS/2	Keyboard PS/2 x 1, Mouse PS/2 x 1
Video Output	DVI-D x 1, 29-pin DVI-D connectors (female) VGA x 1, 15-pin D-sub connector (female)
NMEA Port	NMEA 0183 ports x 8 (terminal block)

LED Indicators

System	Power x 1
LAN	2 per port (10/100/1000 Mbps)

Display

Active Display Area	531.36 (H) x 98.89 (V) mm
Aspect Ratio	16:9
Contrast Ratio	5000:1
Light Intensity (Brightness)	300 cd/m^2
Max. No. of Colors	16.7M (8-bit/color)
Panel Size	24-inch viewable image
Panel Type	MVA
Pixel Pitch (RGB)	0.276 (H) x 0.276 (V) mm
Pixels	1920 x 1080

Response Time	25 ms (gray to gray)
Viewing Angles	178°/178°

Touch Function

Touch Type	MPC-2240Z/2247Z: Capacitive Touch (PCAP) MPC-2240X/2247X: None
Touch Support Points	MPC-2240Z/2247Z: 4 points

Serial Interface

Baudrate	50 bps to 115.2 kbps
Data Bits	5, 6, 7, 8
Flow Control	RTS/CTS, XON/XOFF, ADDC® (automatic data direction control) for RS-485, RTS Toggle (RS-232 only)
Parity	None, Even, Odd, Space, Mark
Stop Bits	1, 1.5, 2
NMEA Interface	Serial Standards: NMEA 0183: RS-422 NMEA 2000: CAN bus (available on request) Baudrate: 4800 bps Data Bits: 8 Handshake: None Optical Isolation Protection: 3 kV Parity: None Serial Standards: NMEA 0183v2 (NMEA 2000 available on request) Stop Bits: 1, 1.5, 2 Voltage Differential: -6 V to +6 V (maximal differential level)

Serial Signals

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

Power Parameters

Input Voltage	100 to 240 VAC, 18 to 34 VDC

Physical Characteristics

Housing	Metal
IP Rating	IP54, front IP20, rear
Dimensions	595 x 393 x 75 mm (23.44 x 15.48 x 2.95 in)
Weight	12,400 g (27.34 lb)

Environmental Limits

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

Standards and Certifications

EMC	EN 55032/24
EMI	CISPR 32, FCC Part 15B Class A
EMS	IEC 61000-4-2 ESD: Contact: 4 kV; Air: 8 kV IEC 61000-4-3 RS: 80 MHz to 1 GHz: 10 V/m IEC 61000-4-4 EFT: Power: 1 kV; Signal: 0.5 kV IEC 61000-4-5 Surge: Power: 2 kV; Signal: 1 kV IEC 61000-4-6 CS: 10 V
Environmental Testing	IEC 60068-2-1, DNVGL-CG-0339 IEC 60068-2-2, DNVGL-CG-0339 IEC 60068-2-2, IEC 60945 IEC 60068-2-30, IEC 60945
Maritime	ABS, CCS, DNV-GL
Safety	EN 60950-1, IEC 60950-1, UL 60950-1
Vibration	IEC 60068-2-6, IEC 60945, IEC 60068-2-64, DNVGL-CG-0339

Warranty

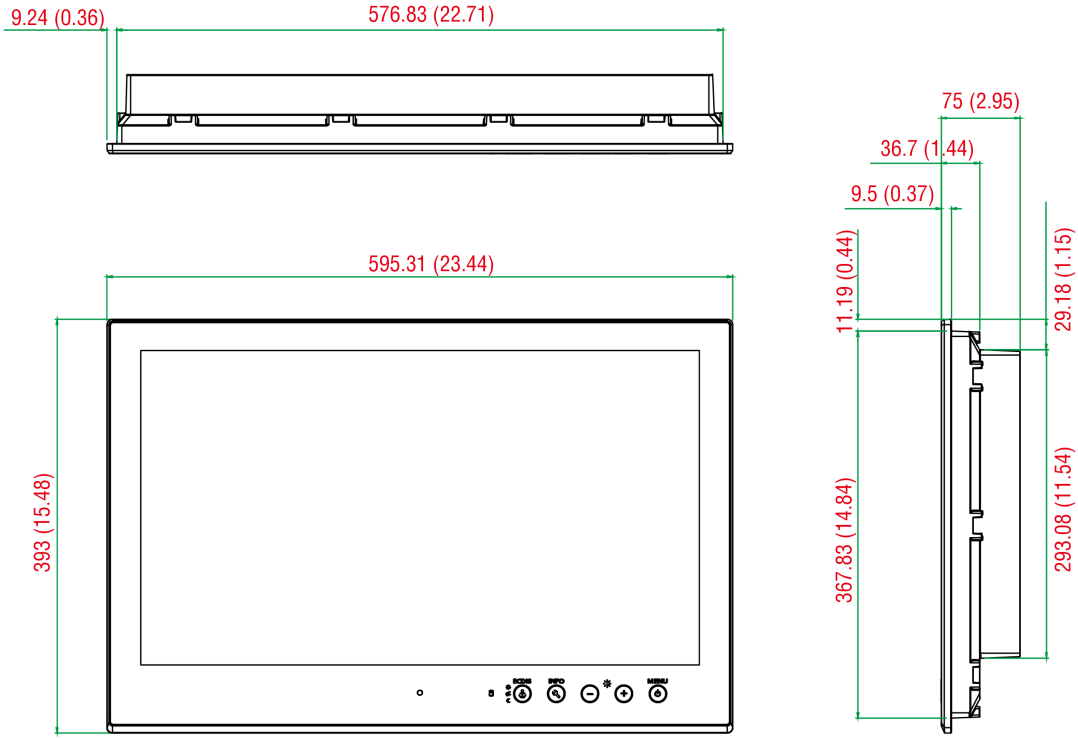
Warranty Period	LCD: 1 year System: 3 years
Details	See www.moxa.com/warranty

Package Contents

Device	1 x MPC-2240 Series computer
Installation Kit	2 x storage key 1 x terminal block, 2-pin 4 x terminal block, 5-pin 1 x panel-mounting kit
Documentation	1 x document and software CD 1 x quick installation guide 1 x warranty card

Dimensions

Unit: mm (inch)



Ordering Information

Model Name	Panel	CPU	RAM	OS Preinstalled	Touchscreen	LAN	Serial	NMEA 0183	Video Outputs	Power Input	IP Rating	Operating Temp.
MPC-2240Z	24" (16:9) 300 nits	Celeron 1047UE	4 GB	–	Capacitive	2	2	8	1 x VGA 1 x DVI-D	12/24 VDC 100-240 VAC	IP54 (front), IP20 (rear)	-15 to 55°C
MPC-2247Z	24" (16:9) 300 nits	i7-3517UE	4 GB	–	Capacitive	2	2	8	1 x VGA 1 x DVI-D	12/24 VDC 100-240 VAC	IP54 (front), IP20 (rear)	-15 to 55°C
MPC-2240X	24" (16:9) 300 nits	Celeron 1047UE	4 GB	–	–	2	2	8	1 x VGA 1 x DVI-D	12/24 VDC 100-240 VAC	IP54 (front), IP20 (rear)	-15 to 55°C
MPC-2247X	24" (16:9) 300 nits	i7-3517UE	4 GB	–	–	2	2	8	1 x VGA 1 x DVI-D	12/24 VDC 100-240 VAC	IP54 (front), IP20 (rear)	-15 to 55°C

Accessories (sold separately)

Desktop Mounting Kits

MPC-MD-2-24-26-DMTK w/ hinge	Desktop-mounting kit for 24/26-inch panels
MPC-MD-2-24-26-DMTK w/o hinge	Desktop-mounting kit for 24/26-inch panels, (no hinge)

Panel Mounting Kits

MPC-MD-2-24-PMTK	24-inch panel-mounting kit, 14 mounting clamps
MPC-MD-2-24-RMTK	Rubber gasket for 24-inch panels

VESA Mounting Kits

MPC-MD-2-24-VESAMTK	VESA kit for 24-inch panels (can be used with 200 x 100 mm or 280 x 150 mm VESA mounts)

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