

MPC-2000 Series

Quick Installation Guide

First Edition, July 2015

Overview

The MPC-2000 series panel computer features advanced Intel processors—3rd generation Ivy Bridge Core or Celeron—matched to 4 GB of system memory, delivering a reliable, high-performance marine computing platform of wide versatility. With its RS-232/422/485 serial, NMEA 0183, and Gigabit Ethernet LAN ports, the MPC-2000 series supports a wide variety of serial- and marine-specific interfaces with high-speed network communications and native network redundancy.

The MPC-2000 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 a multi-touch screen), as well as Moxa's innovative SavvyTouch display controls.

The following lists the models in the MPC-2000 series:

- MPC-2260X/MPC-2267X: 26-inch panel computer
- MPC-2240X/MPC-2240Z/MPC-2247X: 24-inch panel computer
- MPC-2190X/MPC-2190Z/MPC-2197X: 19-inch panel computer

Package Checklist

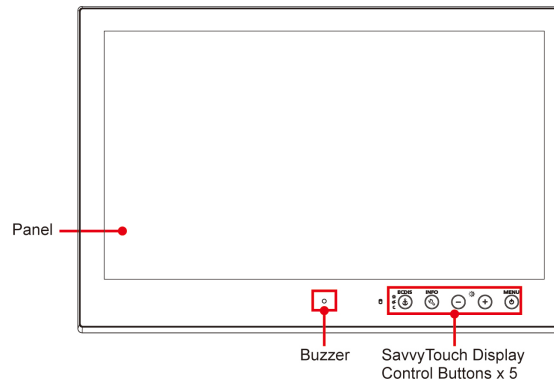
Before installing the MPC-2000 series, verify that the package contains the following items:

- 1 MPC-2000 series panel computer
- 2 keys for the locking, removable mass storage trays
- 1 terminal block for DC power input
- 4 5-pin Euroblock terminals for NMEA 0183 v2 interfaces
- Documentation and software DVD
- Quick installation guide (printed)
- Warranty card

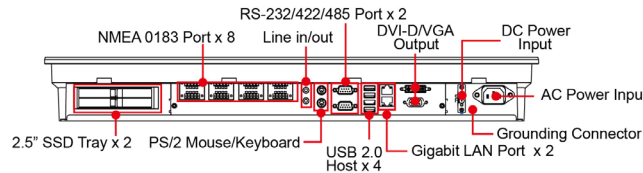
NOTE: Please notify your sales representative if any of the above items are missing or damaged.

Hardware Installation

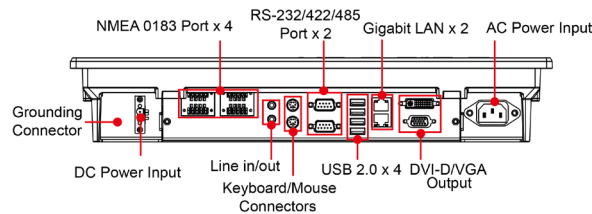
NOTE Unless otherwise specified, graphics shown for the MPC-2260 are for example.



MPC-2240/MPC-2260








MPC-2190



SavvyTouch Display Control Buttons

The following table describes the SavvyTouch display controls on the front panel of the MPC-2000 series. These intelligent controls will light up with a simple wave over the area of the screen where they are located.

Name	Color	Control Function / Color Legend
 Power	Green	Computer is powered on and functioning normally.
	Red	Power on standby and system is shut down.
	Off	Power is off.
 Brightness	White	+ : To increase brightness of display panel.
		- : To decrease brightness of display panel.

Name	Color	Control Function / Color Legend
 Info	Off	System is functioning normally.
	Red	System hardware error has occurred.
 Display mode (ECDIS models only)	White	Displays the brightness mode.
	Off	Brightness of display panel is out of ECDIS standard range.
 Storage	Red (on)	Storage drive is functioning properly.
	Red (blinking)	Accessing or writing data to storage drive.
	Off	Storage drive is offline.

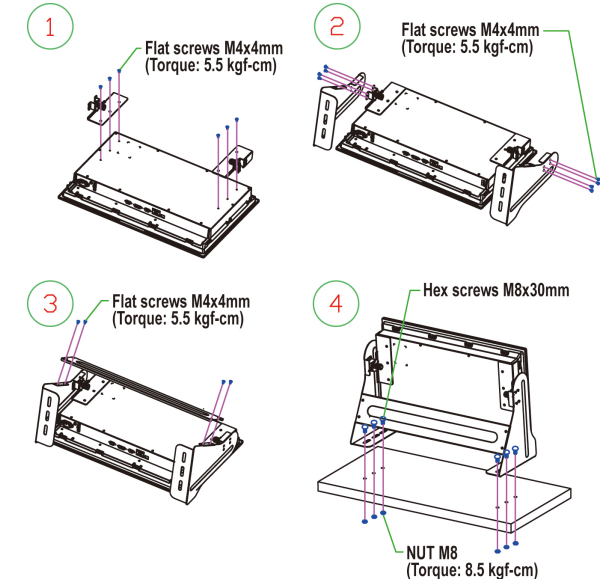
Installing the MPC-2000 Series

Desktop

The MPC-2000 series comes with optional brackets that allow you to install the display on a horizontal surface, such as a desktop. Three round screws are required for each bracket. See the figure for detailed screw specifications and their torque values.

Place your MPC-2000 series display on a clean, flat, well-ventilated desktop. To protect the computer from overheating, leave some ventilation space between the MPC-2000 series and other equipment.

Do NOT place equipment or objects on the panel, as this might damage internal components.



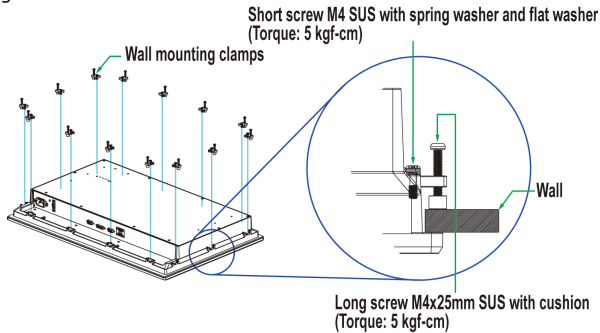
P/N: 1802022600030

Wall Mounting

The MPC-2000 series comes with optional clamp mounts for installation onto a wall (where space has been cut out to accommodate the rest of the hardware) or into computing stations where a flush mount is desired.

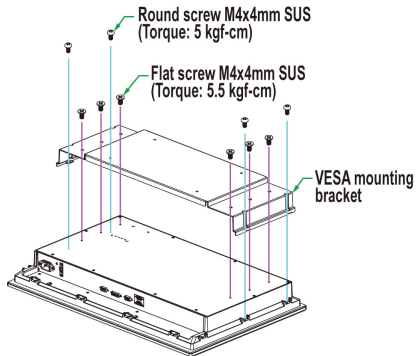
For a secure mounting, use all 14 clamps on the MPC-2260 and MPC-2240, or use 10 clamps on the MPC-2190.

The clamp arms are fastened into slots on all four sides of the MPC-2000 series. Use the short M4 SUS screws to fasten the clamp arms to the MPC-2000 series mounting slots, as shown in the following figure. Next, use the clamps to fasten the MPC-2000 series to its mounting point; note the torque value as shown in the figure.



VESA Mounting

The MPC-2000 series also comes with an optional VESA mounting kit. Six flat screws and four round screws are required to attach the VESA mounting bracket. See the following figure for detailed screw specifications and torque values.



An additional four screws (not included in the kit) are required to mount the MPC-2000 series on a VESA rack. For this purpose, use M6 screws with a length between 10 and 12 mm.

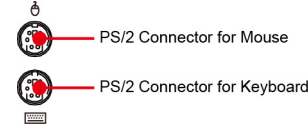
Connector Description

Extending the Display

The MPC-2000 series comes with both standard VGA (DB15) and DVI-D (DB29) interfaces (on the bottom panel) that can be used to simultaneously display across two monitors.

Connecting to a Keyboard and Mouse

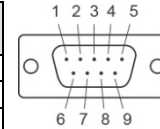
The MPC-2000 series comes with two PS/2 connectors located on the bottom panel for connecting a keyboard and a mouse.



Serial Ports

The MPC-2000 series has two software-selectable RS-232/422/485 DB9 serial ports. Refer to the MPC-2000 Series Hardware Manual for information on serial port configuration. The pin assignments for the ports are shown in the following table.

Pin	RS-232	RS-422	RS-485 (4-wire)	RS-485 (2-wire)
1	DCD	TxDA(-)	TxDA(-)	-
2	RxD	TxDB(+)	TxDB(+)	-
3	TxD	RxDB(+)	RxDB(+)	DataB(+)
4	DTR	RxDA(-)	RxDA(-)	DataA(-)
5	GND	GND	GND	GND
6	DSR	-	-	-
7	RTS	-	-	-
8	CTS	-	-	-



Ethernet Ports

The pin assignments for the two Gigabit Ethernet 100/1000 Mbps RJ45 ports are shown in the following table.

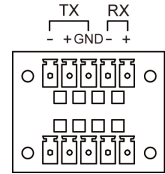
LAN	Pin	100 Mbps	1000 Mbps
LAN 2	1	ETx+	TRD(0)+
	2	ETx-	TRD(0)-
LAN 1	3	ERx+	TRD(1)+
	4	-	TRD(2)+
LAN 1	5	-	TRD(2)-
	6	ERx-	TRD(1)-
LAN 1	7	-	TRD(3)+
	8	-	TRD(3)-

The following table describes the LAN LED indicators.

LAN (on connectors)	Green	100 Mbps Ethernet mode
	Yellow	1000 Mbps (Gigabit) Ethernet mode
	Off	No activity or 10 Mbps Ethernet mode

NMEA Ports

The MPC-2000 series comes with eight NMEA ports on the bottom panel. The figure shows the pin assignments.



Powering the MPC-2000 Series On or Off

To power on the MPC-2000 series, connect the **Terminal Block to Power Jack Converter** to the MPC-2000 series DC terminal block (located on the bottom panel) and then connect a power adapter; or, alternately, you may power the device using the AC power cord.

Touch the **MENU** button (in the lower right corner of the display panel) for one second to turn on the computer. It takes about 10 to 30 seconds for the system to boot up.

To power off the MPC-2000 series, touch the **MENU** button for four seconds; depending on the power management settings of the operating system, you can select the "standby", "hibernation", or "system shutdown" mode.

If you encounter any technical problems, touch the **MENU** button for 10 seconds to force the system to shut down.

NOTE If the MPC-2000 series is powered using a DC converter, the system displays **Fail** for the AC power status in the **INFO** dialog. This does not affect the operation of the MPC-2000 series.

Grounding the MPC-2000 Series

Proper grounding and wire routing help to limit the effects of noise from electromagnetic interference (EMI). Run the ground connection from the ground screw to the grounding surface prior to connecting the power source.

For detailed information on setup and configuration, refer to the MPC-2000 Series Hardware Manual, which you can download from the Moxa company website at www.moxa.com.

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