

MC-7400 Series Quick Installation Guide

Version 1.1, January 2021

Technical Support Contact Information
www.moxa.com/support

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P/N: 1802074001012



Overview

The MC-7400 box computer is powered by the 6th generation Intel Core™ i processor, delivering a full range of I/O connectivity, including serial ports, Gigabit Ethernet ports, NMEA 0183 ports, USB 2.0/3.0 ports, and a Mini PCI slot for storage expansion. The MC-7400 is designed to provide outstanding PC performance, bringing a new level of flexibility and control to marine applications.

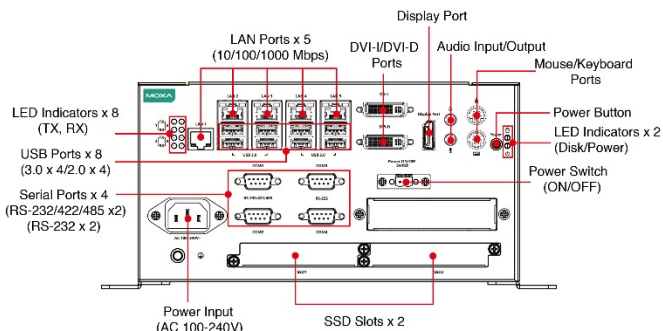
Package Checklist

Before installing the MC-7400, verify that the package contains the following items:

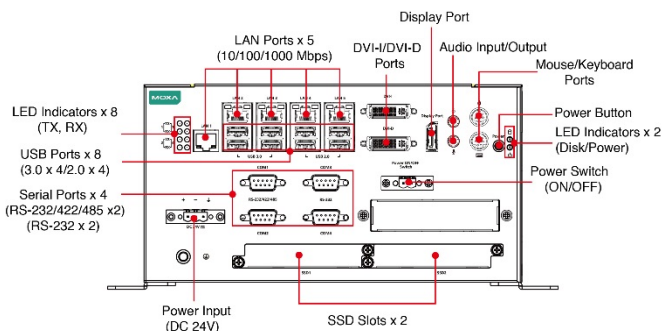
- MC-7400 embedded computer
- Terminal block to power jack converter
- Wall-mounting kit
- Quick installation guide (printed)
- Documentation
- Warranty card

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

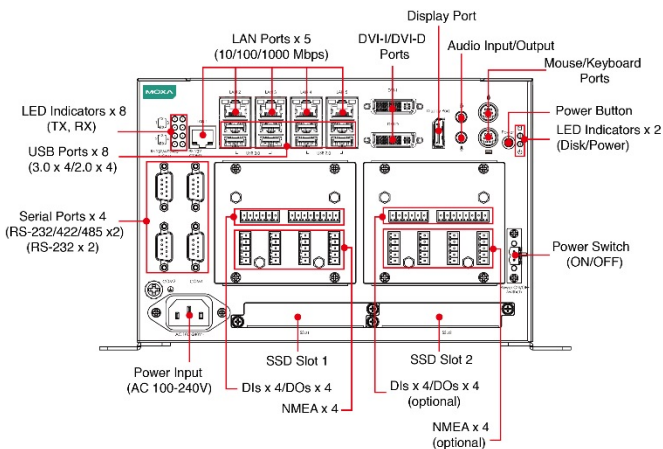
MC-7410 AC Model Panel Layout



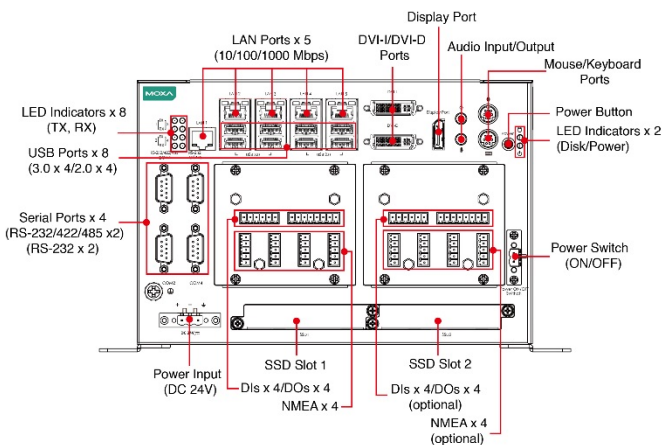
MC-7410 DC Model Panel Layout



MC-7420 AC Model Panel Layout



MC-7420 DC Model Panel Layout



LED Indicators

The following table describes the LED indicators located on the front panel of the MC-7400:

Real-time Clock

The embedded computer's real-time clock is powered by a lithium battery. We strongly recommend that you do NOT replace the lithium battery yourself. If the battery needs to be changed, contact the Moxa RMA service team at http://www.moxa.com/rma/about_rma.aspx.





ATTENTION

Used batteries are environmentally hazardous; dispose of them in the proper manner.



WARNING

There is a risk of explosion if the wrong type of battery is used. To avoid this potential danger, be sure to use the correct type of battery. Contact the Moxa RMA service team if you have any questions about replacing your battery.

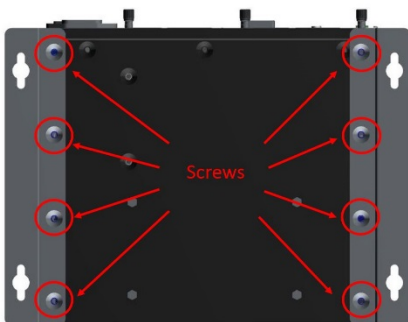
LED Name	Status	Description
Power 	Green	Power is on and computer is functioning normally
	Off	Power is off
Storage 	Yellow	Blinking: Data transmission
	Off	No data transmission.
Tx 1/2/3/4	Green	Blinking: Data is being transmitted.
	Off	No connection
Rx 1/2/3/4	Yellow	Blinking: Data is being transmitted.
	Off	No connection

Installing the MC-7400

Wall Mounting

The MC-7400 can be installed on a wall by using the wall-mounting kit.

STEP 1: Use eight screws for each bracket and attach the brackets to the rear of the MC-7400.

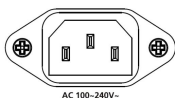


STEP 2: Use two screws (Ø3.7 mm, 60 mm in length) per side to attach the MC-7400 to a wall or cabinet.

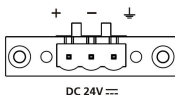


Connector Description

Power Connector



The MC-7400 comes with a 100 to 240 VAC power input or a 24 VDC power input (via the terminal block). If power is supplied properly, the Power LED will light up.



NOTE The DC model should be supplied by a UL-listed power source, whose output meets the ES1 standard and is rated at 24 VDC, 4.06 A (min.) If you need further assistance selecting a power source, contact a Moxa representative.

Grounding the MC-7400

Grounding and wire routing help limit the effects of noise due to electromagnetic interference (EMI). Run the ground connection from the grounding screw (M6) to the grounding surface prior to connecting the power as shown in the illustrations below:

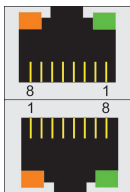
NOTE A 4 mm² conductor must be used when the connection to the external grounding screw is utilized. The heat sink is grounded to the chassis by an internal screw.



Ethernet Ports

The 10/100/1000 Mbps Ethernet ports use RJ45 connectors.

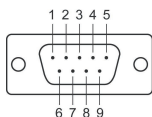
Pin	10/100 Mbps	1000 Mbps
1	ETx+	TRD(0)+
2	ETx-	TRD(0)-
3	ERx+	TRD(1)+
4	-	TRD(2)+
5	-	TRD(2)-
6	ERx-	TRD(1)-
7	-	TRD(3)+
8	-	TRD(3)-



Serial Ports

The serial ports use DB9 connectors. Each port can be configured by software for RS-232, RS-422, or RS-485 port. 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	-	-	-



Display Outputs

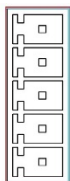
For connecting display monitors, the MC-7400 comes with 1 DisplayPort, 1 DVI-I interface, and 1 DVI-D interface. The DisplayPort supports a maximum resolution of 4096 x 2304 @ 60 Hz and the DVI interface supports a maximum resolution of 1920 x 1200 @ 60 Hz.

Removable Storage Tray

The MC-7400 computer has two removable SSD trays on the front panel. The default boot priority is the SSD 1 slot first.

NMEA 0183 Ports (MC-7420)

By default, the MC-7420 comes with 4 NMEA 0183 ports. You can expand it to 8 NMEA 0183 ports. See the following figure for the NMEA pin outs.

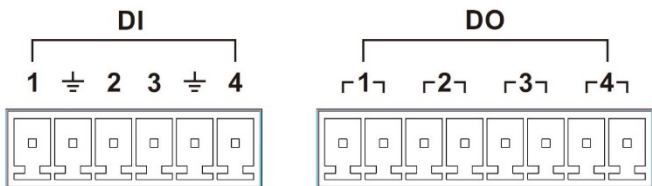


B }
A } Rx

C }
B } Tx
A }

Digital Input/Output Channels (MC-7420)

The MC-7400 comes with 4 digital input and 4 digital output channels. The interface could be expanded to 8 digital input and 8 digital output channels. You can connect to the input/output channels using the terminal blocks included in the package. See the following figure for the pin assignments.



Power ON/OFF Switch

The MC-7400 comes with a power ON/OFF switch on the front panel. You can use the 2-pin terminal block on the power ON/OFF switch to boot up a computer installed inside a marine console.

USB Hosts

The MC-7400 has five USB 2.0 and four SuperSpeed USB 3.0 type A ports and support xHCI/ EHCI mode for full high-speed bandwidth. The USB ports support peripherals like keyboards, mice, and other devices such as portable HDDs or DVD-ROMs.

Audio Interface

The MC-7400 comes with an audio line-out, and a microphone input, allowing users to connect a speaker system, an earphone, or a microphone.