

MC-7400 Series

Intel® 6th Gen Core™ CPU marine computers with DNV GL certification, 3 independent display ports (1 DVI-I, 1 DVI-D, 1 DisplayPort), 1 Mini PCIe expansion slot for wireless, and 4 NMEA 0183 ports



Features and Benefits

- 6th Gen Intel® Core™ i5/i7 processor
- DDR4 SO-DIMM memory up to 32 GB
- 3 independent displays (1 x DVI-I, 1 x DVI-D, 1 x DisplayPort)
- Various I/O interfaces, including 9 USB ports, 5 LAN ports, and 4 COM ports
- 2 removable 2.5" SSD storage bays
- AC or DC power models available
- Supports Win 10 IoT and Debian 9 operating systems
- Supports Moxa Proactive Monitoring utility for system status monitoring

Certifications



Introduction

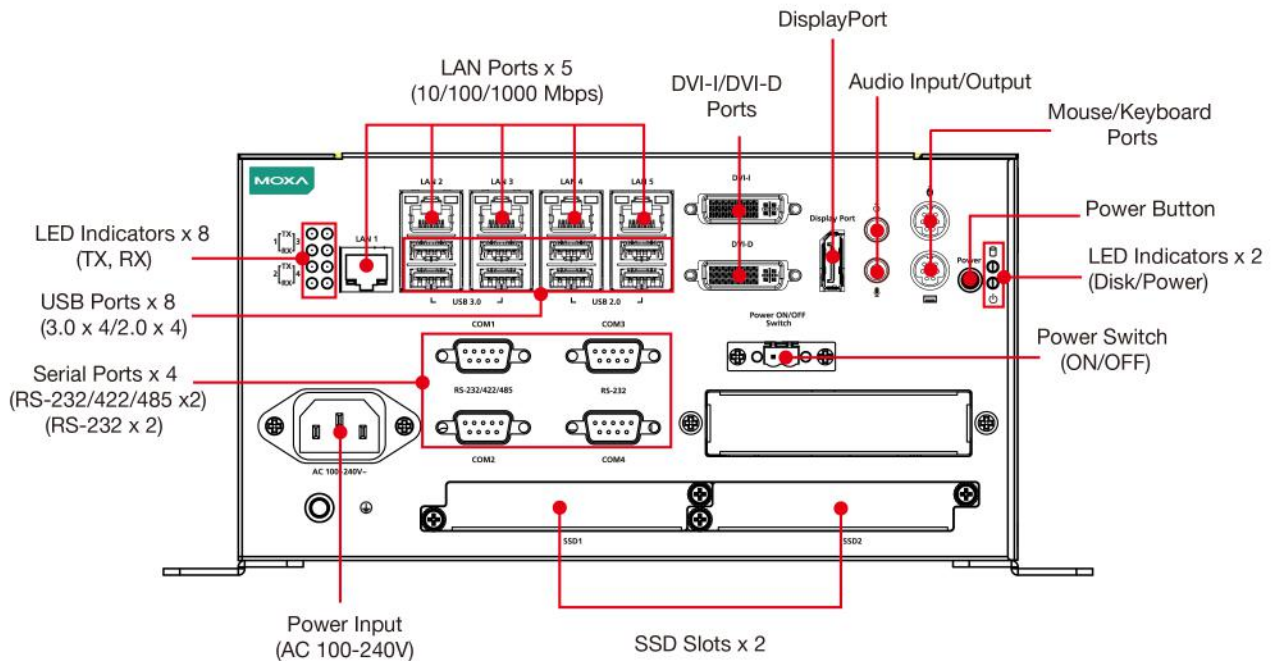
The MC-7400 Series marine computers are powered by the 6th generation Intel® Core™ i5/i7 processor, delivering a full range of I/O connectivity, including NMEA 0183 ports, serial ports, Gigabit Ethernet ports, as well as USB 2.0/3.0 ports and a miniPCI slot for extensions. The MC-7400 is designed to provide outstanding PC performance, bringing a new level of flexibility and control to marine applications.

Proactive Monitoring Function

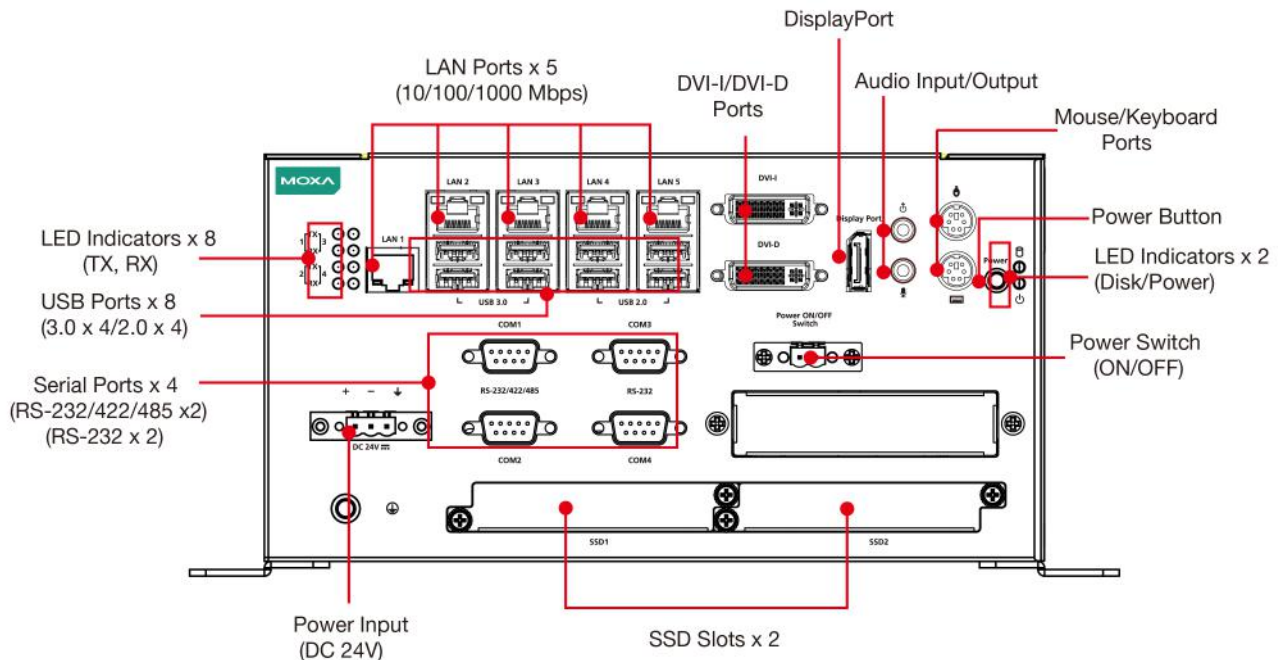
Moxa Proactive Monitoring is a small-footprint, resource-friendly, easy-to-use utility that allows users to track a number of system parameters. Users can view the current parameter values for these key parts by simply clicking on the icons corresponding to the parameters in the user interface. User-defined key part indicators (KPIs) are used to monitor the computer's key parts. Visible and/or audio alerts are triggered automatically via relay and SNMP traps when these KPIs exceed their preset threshold values, making it extremely convenient for operators to avoid system downtime by setting up predictive maintenance tasks well in advance.

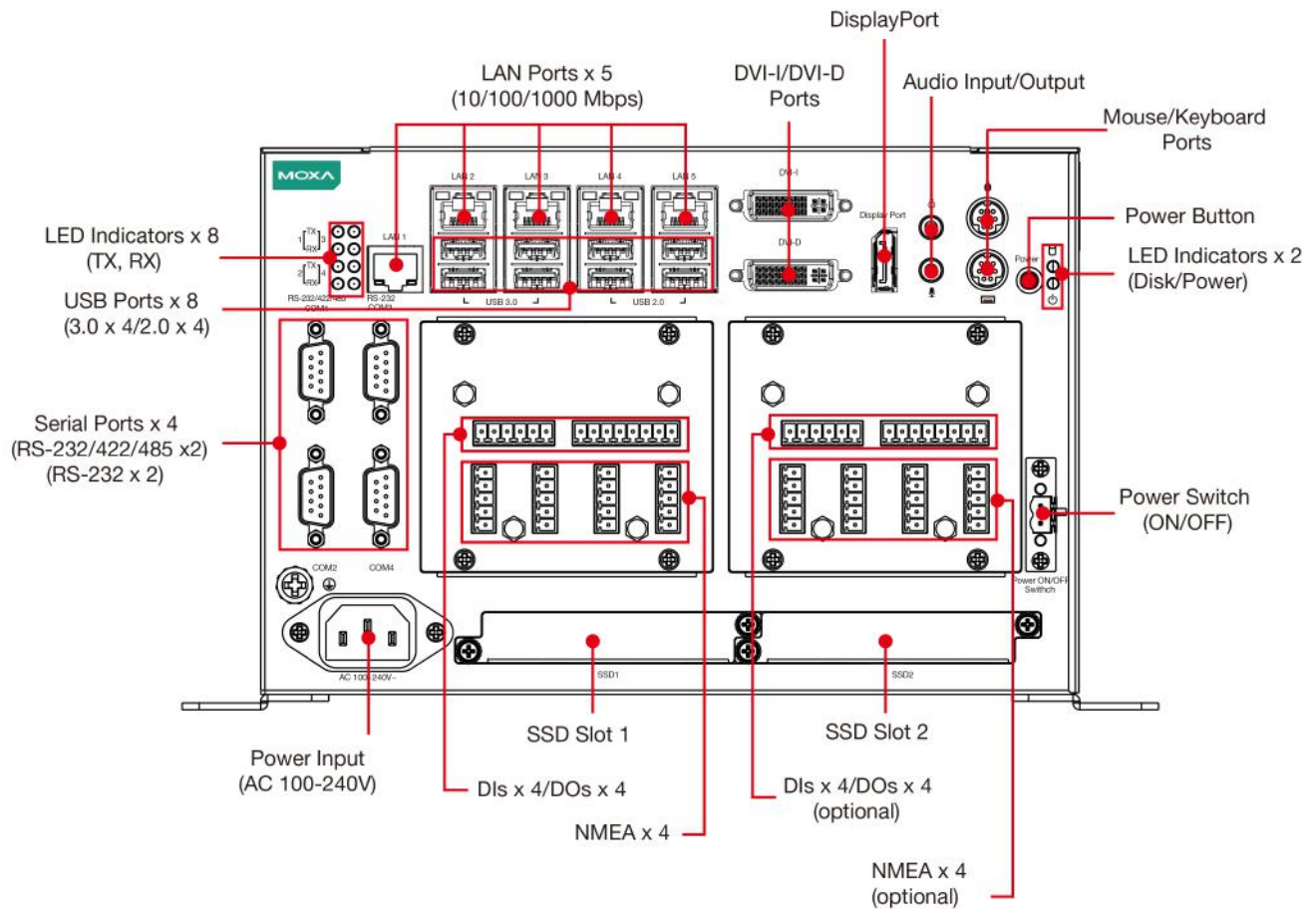
Appearance

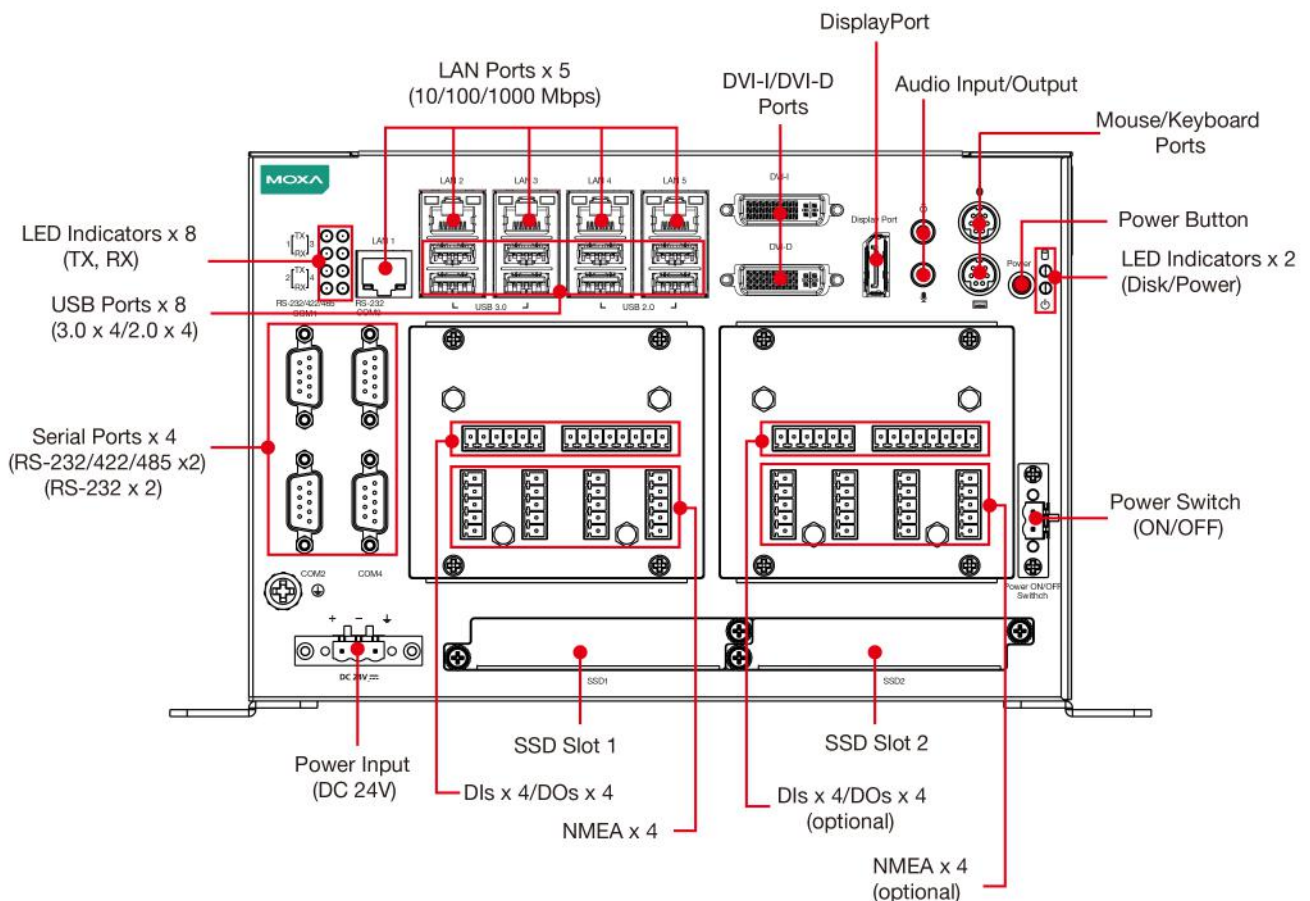
MC-7410 AC Model



MC-7410 DC Model







Specifications

Computer

CPU	Intel® Celeron® Processor G3902E (2M Cache, 1.60 GHz) Intel® Core™ i5-6442EQ Processor (6M Cache, up to 2.70 GHz) Intel® Core™ i7-6822EQ Processor (6M Cache, up to 2.80 GHz)
System Chipset	Mobile Intel® QM170 Chipset
Graphics Controller	Celeron: Intel® HD Graphics 510 Core i5: Intel® HD Graphics 530 Core i7: Intel® HD Graphics 530
System Memory Slot	SODIMM DDR4 slot x 2
Supported OS	Windows 10 Embedded IoT Ent 2016 LTSP Value EPKEA Linux Debian 9 Note: OS available by CTOS
Storage Slot	2.5" HDD/SSD slots x 2

Computer Interface

Ethernet Ports	Auto-sensing 10/100/1000 Mbps ports (RJ45 connector) x 5
Serial Ports	RS-232 ports x 2 (DB9 male) RS-232/422/485 ports x 2, software selectable (DB9 male)
USB 2.0	USB 2.0 hosts x 5, type-A connectors
USB 3.0	USB 3.0 hosts x 4, type-A connectors

Audio Input/Output	Line in x 1, Line out x 1, 3.5 mm phone jack
Digital Input	DIs x 4 Only for MC-7420 series
Digital Output	DOs x 4 Only for MC-7420 series
NMEA Port	NMEA 0183 ports x 4 (terminal block) Only for MC-7420 series
Video Input	DVI-D x 1, 29-pin DVI-D connector (female) DVI-I x 1, 29-pin DVI-I connector (male)
Video Output	DisplayPort x 1
PS/2	Keyboard PS/2 x 1 + Mouse PS/2 x 1

Relays

Connector	Screw-fastened Euroblock terminal
Contact Current Rating	Resistive load: 2 A @ 30 VDC
Contact Resistance	50 milli-ohms (max.)
Initial Insulation Resistance	1000 mega-ohms (min.) @ 500 VDC
Mechanical Endurance	100,000,000 operations
Minimum Permitted Load	20 A @ 30 VDC

LED Indicators

System	Power x 1 Storage x 1
LAN	2 per port (10/100/1000 Mbps)
Serial	2 per port (Tx, Rx)

Serial Interface

Baudrate	50 bps to 115.2 kbps
Connector	DB9 male
Data Bits	5, 6, 7, 8
Flow Control	ADDIC® (automatic data direction control) for RS-485, RTS/CTS, XON/XOFF
Isolation	None
Parity	None, Even, Odd, Space, Mark
NMEA Interface	NMEA 0183: RS-422 Baudrate: 4800 bps Data Bits: 8 Handshake: None Optical Isolation Protection: 3 kV Parity: None Stop Bits: 1, 1.5, 2

Power Parameters

Power Consumption	100 W
Input Voltage	100 to 240 VAC, 24 VDC
Power Connector	Terminal block (for DC models)

Reliability

Automatic Reboot Trigger	Built-in WDT
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Physical Characteristics

Weight	MC-7410 Series: 5500 g (12.12 lb) MC-7420 Series: 6000 g (13.23 lb)
Dimensions (with ears)	MC-7410 Series: 240 x 209 x 125 mm (9.45 x 8.23 x 4.92 in) MC-7420 Series: 240 x 209 x 160 mm (9.45 x 8.23 x 6.3 in)
Housing	Metal

Environmental Limits

Operating Temperature	-25 to 55°C (-13 to 131°F)
Storage Temperature (package included)	-30 to 60°C (-22 to 140°F)
Ambient Relative Humidity	5 to 95% (non-condensing)

Standards and Certifications

Maritime	IEC 60945
Safety	CE, IEC 62368-1, UL 60950-1
Radio Frequency	FCC
EMC	EN 55032/24
EMI	CISPR 22, FCC Part 15B Class A
EMS	IEC 61000-4-2 ESD: Contact: 6 kV; Air: 8 kV IEC 61000-4-3 RS: 80 MHz to 1 GHz: 10 V/m IEC 61000-4-4 EFT: Power: 2 kV; Signal: 1 kV IEC 61000-4-5 Surge: Power: 1 kV; Signal: 1 kV IEC 61000-4-6 CS: 10 V IEC 61000-4-8 PFMF
Green Product	RoHS, CRoHS, WEEE

Warranty

Warranty Period	3 years
Details	See www.moxa.com/warranty

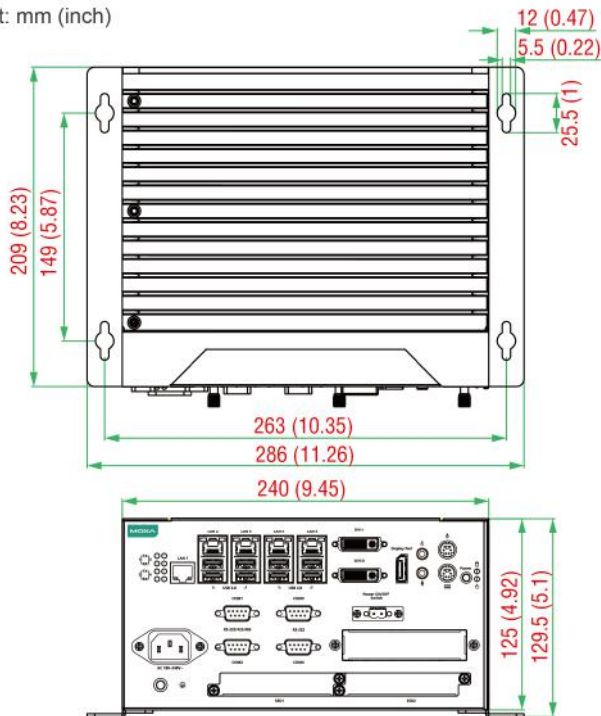
Package Contents

Device	1 x MC-7400 device
Documentation	1 x warranty card 1 x quick installation guide
Installation Kit	1 x terminal block, 2-pin, for power ON/OFF switch 1 x wall-mounting kit 1 x terminal block, 3-pin, for DC power input (DC model) 1 x terminal block, 6-pin, for digital input (MC-7420 model only) 4 x terminal block, 5-pin, for NMEA 0183 (MC-7420 model only) 1 x terminal block, 8-pin, for digital output (MC-7420 model only)

Dimensions

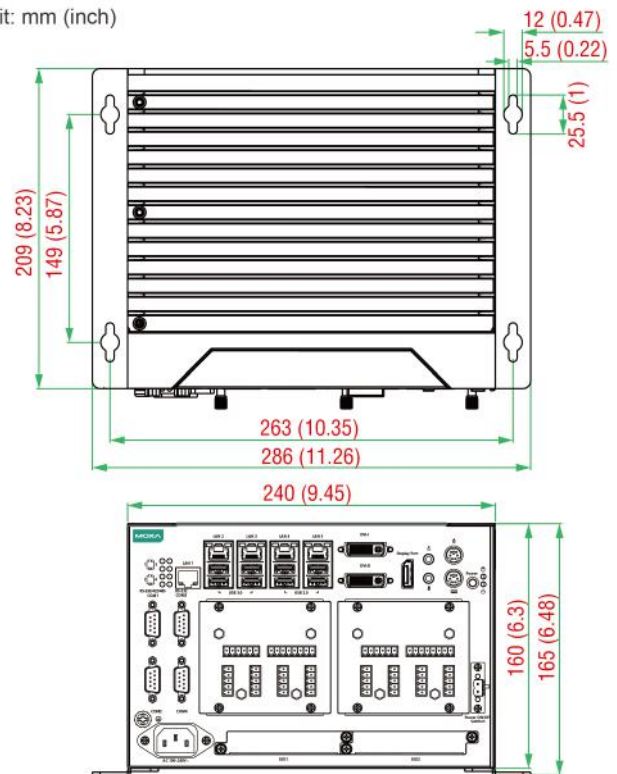
MC-7410 AC Model

Unit: mm (inch)



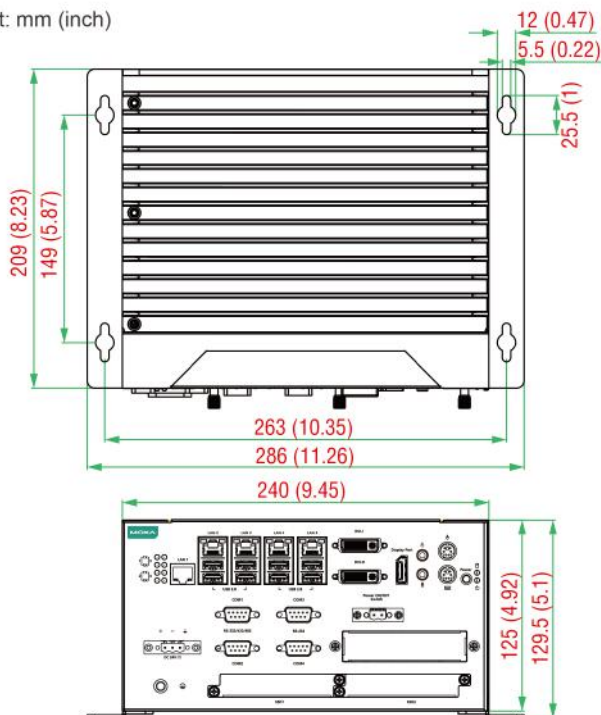
MC-7420 AC Model

Unit: mm (inch)



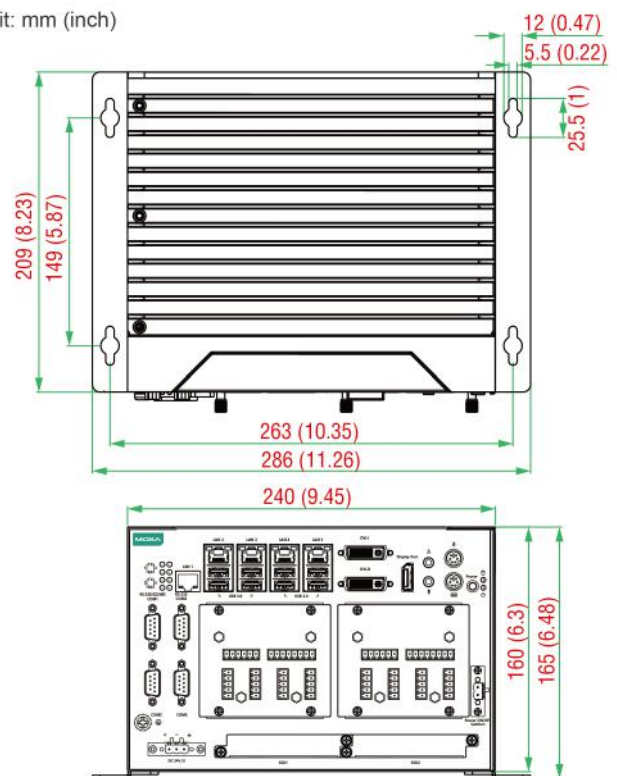
MC-7410 DC Model

Unit: mm (inch)



MC-7420 DC Model

Unit: mm (inch)



Ordering Information

Model Name	Processor	RAM	HDD/SSD Slots	LAN Ports	Serial Ports	DI/DO	NMEA 0183	Power Input
MC-7410-C1-AC	Celeron G3902E	DDR4, 2133 MHz (max 16 GHz)	2	5	4	–	–	100-240 VAC
MC-7410-C1-DC	Celeron G3902E	DDR4, 2133 MHz (max 16 GHz)	2	5	4	–	–	24 VDC
MC-7410-C5-AC	i5-6442EQ	DDR4, 2133 MHz (max 16 GHz)	2	5	4	–	–	100-240 VAC
MC-7410-C5-DC	i5-6442EQ	DDR4, 2133 MHz (max 16 GHz)	2	5	4	–	–	24 VDC
MC-7410-C7-AC	i7-6822EQ	DDR4, 2133 MHz (max 16 GHz)	2	5	4	–	–	100-240 VAC
MC-7410-C7-DC	i7-6822EQ	DDR4, 2133 MHz (max 16 GHz)	2	5	4	–	–	24 VDC
MC-7420-C1-AC	Celeron G3902E	DDR4, 2133 MHz (max 16 GHz)	2	5	4	4 DIs, 4 DOs	4	100-240 VAC
MC-7420-C1-DC	Celeron G3902E	DDR4, 2133 MHz (max 16 GHz)	2	5	4	4 DIs, 4 DOs	4	24 VDC
MC-7420-C5-AC	i5-6442EQ	DDR4, 2133 MHz (max 16 GHz)	2	5	4	4 DIs, 4 DOs	4	100-240 VAC
MC-7420-C5-DC	i5-6442EQ	DDR4, 2133 MHz (max 16 GHz)	2	5	4	4 DIs, 4 DOs	4	24 VDC
MC-7420-C7-AC	i7-6822EQ	DDR4, 2133 MHz (max 16 GHz)	2	5	4	4 DIs, 4 DOs	4	100-240 VAC
MC-7420-C7-DC	i7-6822EQ	DDR4, 2133 MHz (max 16 GHz)	2	5	4	4 DIs, 4 DOs	4	24 VDC

Accessories (sold separately)

Power Cords

PWC-C13AU-3B-183	Power cord with Australian (AU) plug, 1.83 m
PWC-C13CN-3B-183	Power cord with three-prong China (CN) plug, 1.83 m
PWC-C13EU-3B-183	Power cord with Continental Europe (EU) plug, 1.83 m
PWC-C13UK-3B-183	Power cord with United Kingdom (UK) plug, 1.83 m
PWC-C13US-3B-183	Power cord with United States (US) plug, 1.83 m

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