

MPC-2070 Series

7-inch industrial fanless panel computers



Features and Benefits

- 7-inch panel computer
- Intel Atom® processor E3826 1.46 GHz
- -40 to 70°C wide-temperature design, no fan or heater
- 1000-nit sunlight-readable LCD
- Glove-friendly, multi-touch screen
- Class 1 Division 2, ATEX Zone 2, and IECEx compliant¹
- Wide-range 10 to 36 VDC power input

Certifications



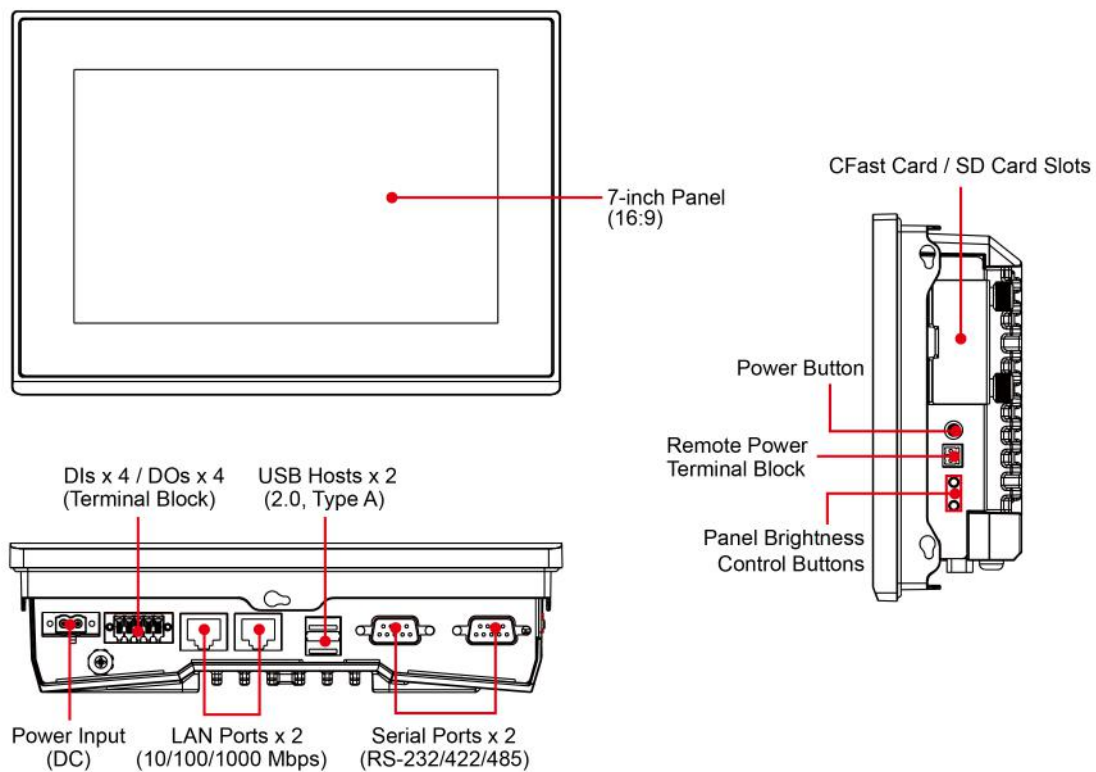
Introduction

The MPC-2070 7-inch panel computers with E3800 Series Intel Atom® processor deliver a reliable, durable, and versatile platform for use in industrial environments. With two software selectable RS-232/422/485 serial ports and two Gigabit Ethernet ports, the MPC-2070 panel computers support a wide variety of serial interfaces as well as high-speed IT communications, all with native network redundancy.

The MPC-2070 Series panel computers are designed with a wide, -40 to 70°C temperature range, and come with a fanless, streamlined enclosure designed for highly efficient heat dissipation. This makes the MPC-2070 Series one of the most reliable industrial platforms available for harsh, hot, outdoor environments like oil and gas fields, or drilling platforms. The MPC-2070 also features a 1000-nit LCD panel offering a sunlight-readable, projected-capacitive, glove-friendly, multi-touch screen, providing an excellent user experience for outdoor applications.

1. Certification is underway for DNV, ATEX, and IECEx. Please check Moxa's website for the most up-to-date certification status.

Appearance



Specifications

Computer

CPU	Intel Atom® E3826 processor (1M cache, 1.46 GHz)
Graphics Controller	Intel® HD Graphics
System Memory Pre-installed	4 GB DDR3L
System Memory Slot	SODIMM DDR3/DDR3L slot x 1
Pre-installed OS	MPC-2070-E2-T/MPC-2070-E2-LB-T: OS is not pre-installed MPC-2070-E2-T-W7E/MPC-2070-E2-LB-T-W7E: OS is 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 LTSP Entry 64-bit Linux Debian 9
Storage Slot	CFast slot x 1 SD slots x 1, SD 3.0 (SDHC/SDXC) socket
Storage Pre-installed	MPC-2070-E2-T-W7E/MPC-2070-E2-LB-T-W7E: 32 GB CFast card pre-installed

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 2, type-A connectors
Digital Input	DIs x 4
Digital Output	DOs x 4

LED Indicators

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

Display

Active Display Area	152.4 (H) x 91.44 (V) mm
Contrast Ratio	600:1
Light Intensity (Brightness)	MPC-2070-E2-T Series: 1000 cd/m ² MPC-2070-E2-LB-T Series: 350 cd/m ²
Max. No. of Colors	16.2M (8-bit/color)
Panel Size	7-inch viewable image
Panel Type	TN
Pixel Pitch (RGB)	0.1905 (H) x 0.1905 (V) mm
Pixels	800 x 480
Response Time	5 ms (gray to gray)
Viewing Angles	140°/120°

Touch Function

Touch Type	Capacitive Touch (PCAP)
Touch Support Points	4 points
Glove Support	Yes

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

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	10 to 36 VDC
Power Consumption	40 W (max.)

Physical Characteristics

Housing	Metal
IP Rating	IP66, front IP20, rear
Dimensions	200 x 140 x 45 mm (7.9 x 5.5 x 1.8 in)
Weight	1,400 g (3.09 lb)

Environmental Limits

Operating Temperature	-40 to 70°C (-40 to 158°F)
Storage Temperature (package included)	-40 to 70°C (-40 to 158°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 IEC 61000-4-8 PFMF
Environmental Testing	IEC 60068-2-1, DNV-CG-0339 IEC 60068-2-2, DNV-CG-0339 IEC 60068-2-2, IEC 60945 IEC 60068-2-30, IEC 60945
Hazardous Locations	ATEX Class I Division 2 IECEx
Maritime	DNV
Mechanical Protection Rating	IEC 60529, IP code
Safety	EN 60950-1 IEC 60950-1 UL 60950-1
Shock	IEC 60068-2-27
Vibration	IEC 60068-2-6 IEC 60068-2-6, IEC 60945 IEC 60068-2-64, DNV-CG-0339

Declaration

Green Product	RoHS, CRoHS, WEEE
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Warranty

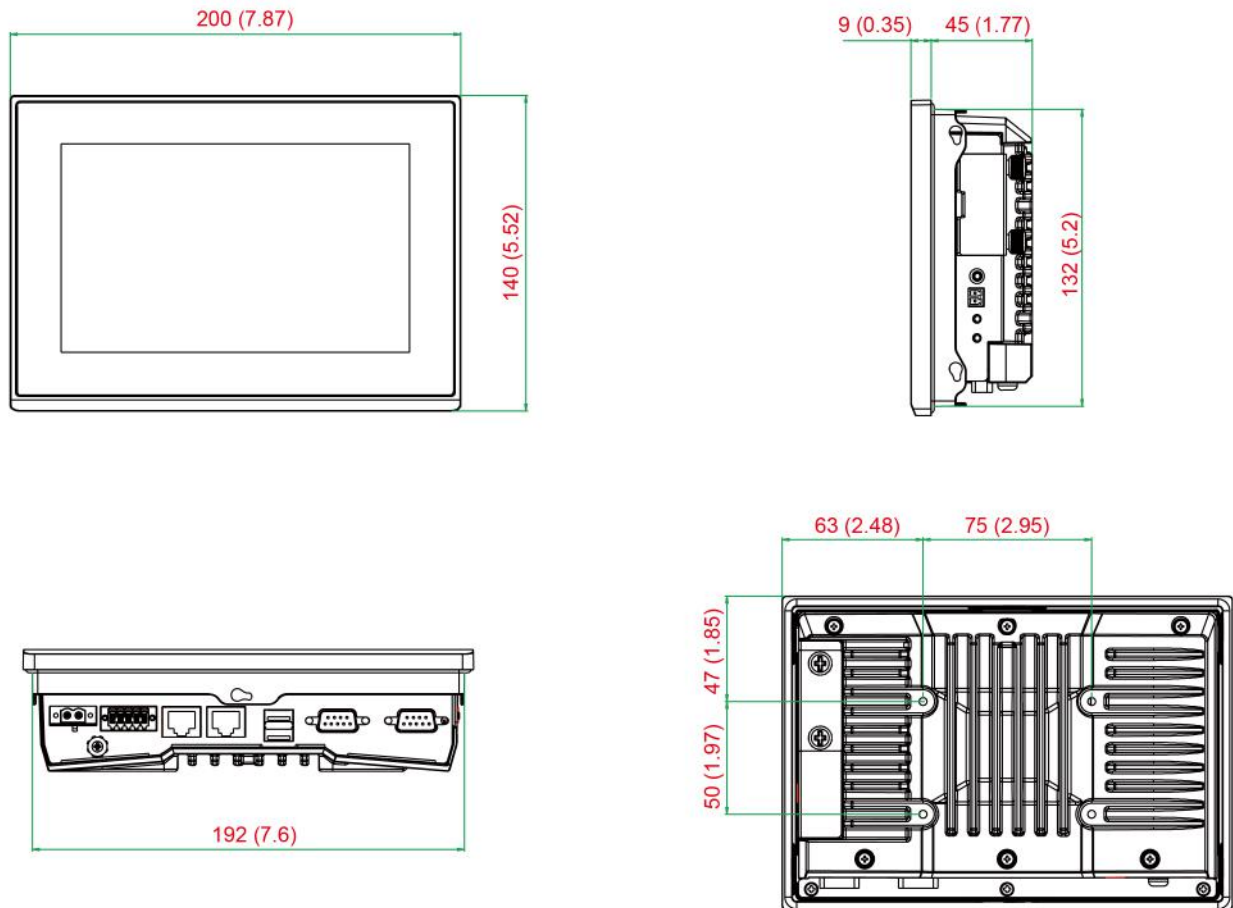
Warranty Period	LCD: 1 year System: 3 years
Details	See www.moxa.com/warranty

Package Contents

Device	1 x MPC-2070 Series computer
Installation Kit	6 x screw, for panel-mounting 1 x terminal block, 2-pin, for DC power input 1 x terminal block, 10-pin, for DIO 1 x terminal block, 2-pin, for remote power switch
Documentation	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	D/I DO	Power Input	IP Rating	Operating Temp.
MPC-2070-E2-T	7" (16:9) 1,000 nits	Intel Atom® E3826	4 GB	–	Capacitive	2	2	4/4	12/24 VDC	IP66 (front), IP20 (rear)	-40 to 70°C
MPC-2070-E2-T-W7E	7" (16:9) 1,000 nits	Intel Atom® E3826	4 GB	W7E OS 32 GB CFast	Capacitive	2	2	4/4	12/24 VDC	IP66 (front), IP20 (rear)	-40 to 70°C
MPC-2070-E2-LB-T	7" (16:9) 350 nits	Intel Atom® E3826	4 GB	–	Capacitive	2	2	4/4	12/24 VDC	IP66 (front), IP20 (rear)	-40 to 70°C
MPC-2070-E2-LB-T-W7E	7" (16:9) 350 nits	Intel Atom® E3826	4 GB	W7E OS 32 GB CFast	Capacitive	2	2	4/4	12/24 VDC	IP66 (front), IP20 (rear)	-40 to 70°C

