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 compliant[1]
- Wide-range 10 to 36 VDC power input
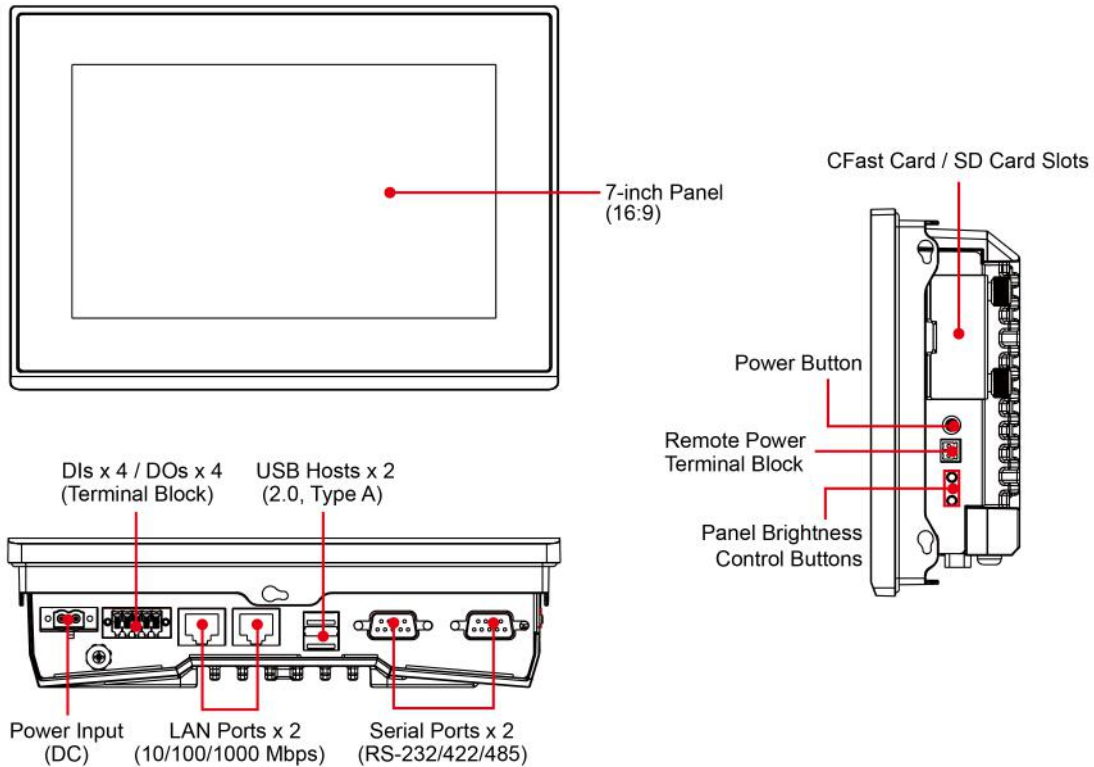
Certifications

Introduction

The MPC-2070 7-inch panel computers with E3800 Series Intel® Atom™ processor deliver a reliable and durable platform of wide versatility 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, making this 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.

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

Appearance

7-inch Panel (16:9)

CFast Card / SD Card Slots

Power Button

Remote Power Terminal Block

Panel Brightness Control Buttons

DIs x 4 / DOs x 4 (Terminal Block)

USB Hosts x 2 (2.0, Type A)

Power Input (DC)

LAN Ports x 2 (10/100/1000 Mbps)

Serial Ports x 2 (RS-232/422/485)

Specifications

Computer

CPU	Intel Atom® Processor E3826 (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 LTSB Entry 64-bit
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

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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
Aspect Ratio	16:9
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

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, DNVGL-CG-0339 IEC 60068-2-2, DNVGL-CG-0339 IEC 60068-2-2, IEC 60945 IEC 60068-2-30, IEC 60945
Hazardous Locations	ATEX, Class I Division 2, IECEx
Maritime	DNV-GL
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, DNVGL-CG-0339

Declaration

Green Product	RoHS, CRoHS, WEEE

Warranty

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

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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)
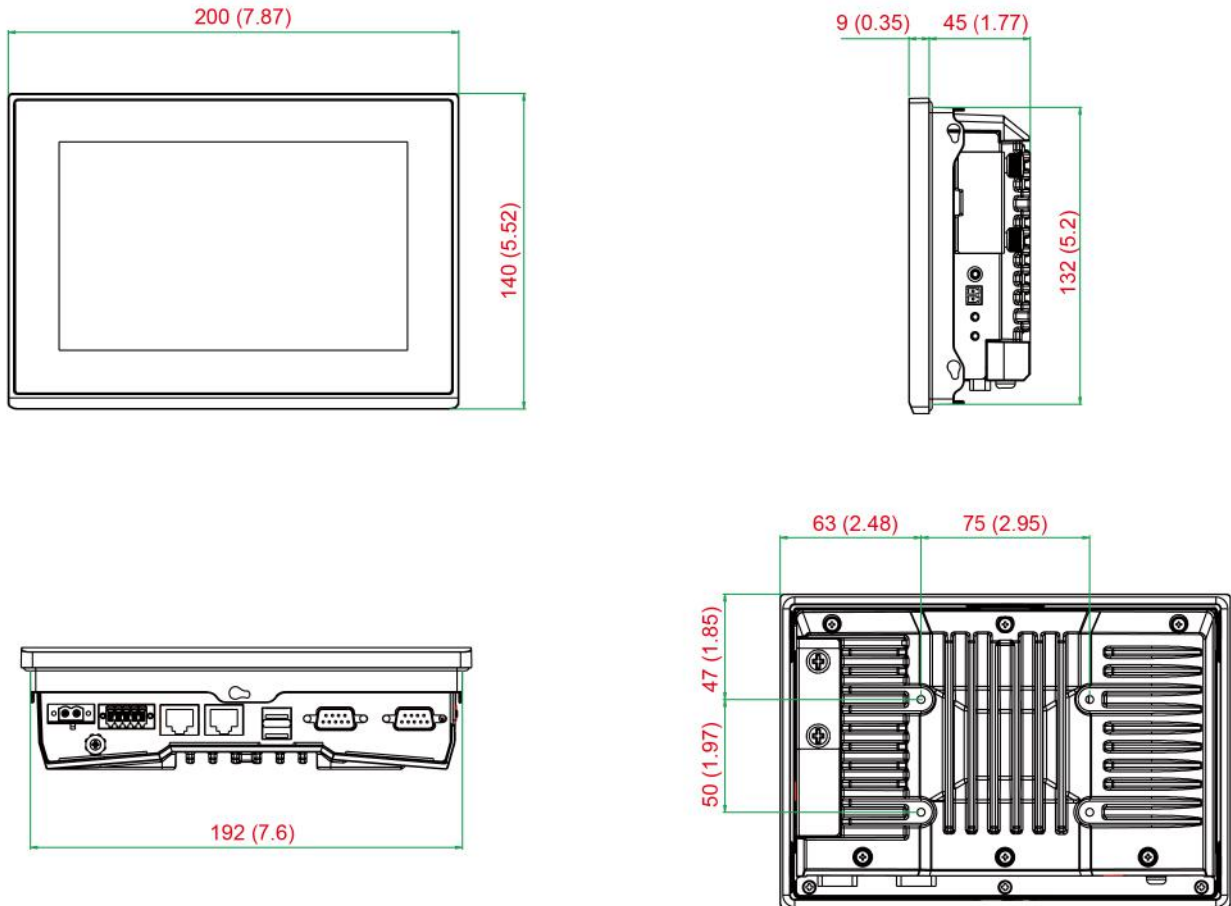
Ordering Information

Model Name	Panel	CPU	RAM	OS Preinstalled	LAN	Serial	DI/DO	Power Input	Operating Temp.
MPC-2070-E2-T	7" (16:9) 1,000 nits	Intel Atom® E3826	4 GB	–	2	2	4/4	12/24 VDC	-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	2	2	4/4	12/24 VDC	-40 to 70°C
MPC-2070-E2-LB-T	7" (16:9) 350 nits	Intel Atom® E3826	4 GB	–	2	2	4/4	12/24 VDC	-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	2	2	4/4	12/24 VDC	-40 to 70°C