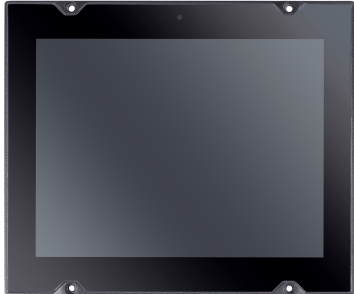


MPC-3101 Series

10.4-inch fanless industrial panel PCs with EN 50155 certifications



Features and Benefits

- 10-inch panel PCs
- Intel Atom® x6425E quad-core processor
- 500-nit or 1000-nit sunlight-readable LCD
- Glove-friendly, multi-touch screen
- -40 to 70°C wide-temperature design, no fan or heater
- 24 to 110 VDC wide range isolated power input
- Complies with all EN 50155 mandatory test items¹

Certifications



EN 50155



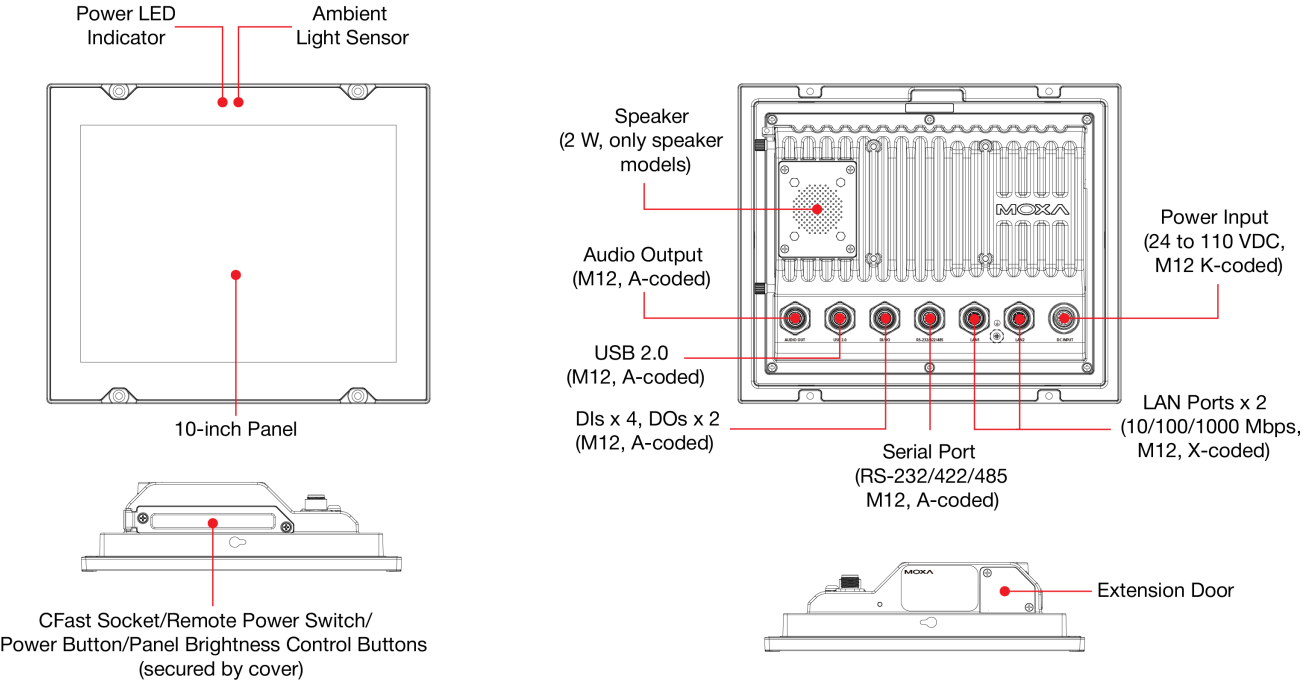
Introduction

The MPC-3101 10-inch panel PCs with Intel Atom® x6425E quad-core processor deliver a reliable, durable, and versatile platform for use in industrial environments. All interfaces come with IP66-rated M12 connectors to provide anti-vibration and waterproof connections. With two software selectable RS-232/422/485 serial ports and two Gigabit Ethernet ports, the MPC-3101 Panel PCs support a wide variety of serial interfaces as well as high-speed IT communications, all with native network redundancy.

The MPC-3101 panel PCs are designed for the -40 to 70°C temperature range, and come with a fanless, streamlined enclosure for highly efficient heat dissipation. This makes the computers a reliable industrial platform for harsh, hot, outdoor environments like oil and gas fields, or drilling platforms. The MPC-3101 also features a 500-nit or 1000-nit LCD panel offering a sunlight-readable, projected-capacitive, glove-friendly, multi-touch screen, providing an excellent user experience.

1. This product is suitable for rolling stock railway applications, as defined by the EN 50155 standard. For a more detailed statement, click here: www.moxa.com/doc/specs/EN_50155_Compliance.pdf

Appearance



Specifications

Computer	
CPU	Intel Atom® x6425E processor (Quad core, 1.5M cache, 2 GHz)
Graphics Controller	Intel® UHD Graphics
System Memory Pre-installed	8 GB DDR4 2400 MHz (32 GB max)
System Memory Slot	SODIMM DDR4 2400 slots x 1, up to 32 GB max.
Supported OS	Windows images and drivers supported: - Windows 10 IoT Enterprise LTSC 2021 (64-bit) - Windows 11 Professional (64-bit) - Windows 11 IoT Enterprise LTSC 2024 Linux image supported: - Debian 13 (kernel 6.10) Linux driver supported: - Ubuntu 24.04 LTS (kernel 6.10)
Storage Slot	CFast slot x 1 M.2 M-key 2242 sockets x 1
Expansion Slots	mPCIe slots x 1
Speaker	MPC-3101-E4-LB-SPK-CT-T/E4-SPK-CT-T: 1 (built-in, 2 W)
Computer Interface	
Ethernet Ports	Auto-sensing 10/100/1000 Mbps ports (M12 push-pull X-coded) x 2
Serial Ports	RS-232/422/485 ports (M12 push-pull A-coded 12P) x 1
Digital Input	DIs x 4 (M12 push-pull A-coded connector)
Digital Output	DOs x 2 (M12 push-pull A-coded connector)

Audio Input/Output	1 x Speaker out/Line out (M12 push-pull A-coded 8-pin)
USB	USB 2.0 hosts x 1 (M12 push-pull A-coded 5-pin), type-A connectors
TPM	TPM v2.0

Display

Panel Size	10 in (viewable image)
Aspect Ratio	4:3
Active Display Area	210.4 (H) x 157.8 (V) mm
Contrast Ratio	1000:1 (typ.)
Light Intensity (Brightness)	MPC-3101-E4-LB-CT-T/E4-LB-SPK-CT-T: 500 nits MPC-3101-E4-CT-T/E4-SPK-CT-T: 1000 nits
Max. No. of Colors	16.7M (8-bit/color)
Panel Type	AAS
Pixel Pitch (RGB)	0.205 (H) x 0.205 (V) mm
Pixels	1024 x 768
Response Time	(Tr+Tf) 25 ms
Viewing Angles	178°/178°

Touch Function

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

Ethernet Interface

Magnetic Isolation Protection	1.5 kV (built-in)
-------------------------------	-------------------

Serial Interface

Bitrate	50 bps to 115.2 kbps
Data Bits	5, 6, 7, 8
Flow Control	RTS/CTS, XON/XOFF, Automatic Data Direction Control (ADDC) 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

Digital Inputs

Isolation	Optical: 3 kV
Sensor Type	Dry contact Wet contact (NPN)
Voltage	Dry Contact: At 25 Hz: 0 to 30 VDC
Dry Contact	DI to COM: Logic 0: Close to GND Logic 1: Open
Wet Contact	Source to DI: Logic 0: 10 to 30 VDC Logic 1: 3 VDC max

Digital Outputs

Isolation	Optical: 3 kV
I/O Type	Sink
Current Rating	Max. 200 mA per channel
Voltage	Logic 0: 200 mA (max. per channel), sink Logic 1: 24 VDC (typ.), 30 VDC (max.), open collector

LED Indicators

System	Power x 1
--------	-----------

Power Parameters

Input Voltage	24 to 110 VDC
Power Consumption	44 W

Physical Characteristics

Housing	Metal
IP Rating	IPMPC-3101-E4-LB-SPK-CT-T/E4-SPK-CT-T: - IP66 (front) - IP40 (rear) MPC-3101-E4-LB-CT-T/E4-CT-T: - IP66 (front and rear)
Dimensions	256.9 x 214.4 x 58.9 mm (10.11 x 8.44 x 2.32 in)
Weight	2,600 g (5.73 lb)

Environmental Limits

Operating Temperature	-40 to 70°C (-40 to 158°F)
Ambient Relative Humidity	5 to 95% (non-condensing)
Storage Temperature (package included)	-40 to 70°C (-40 to 158°F)

Standards and Certifications

EMC	EN 55032/35
EMI	CISPR 32, 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: 3 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

Ordering Information

Model Name	Panel	Touchscreen	CPU	RAM	Embedded Speaker	LAN	Serial	DI/DO	Power Input	IP Rating	Operating Temp.
MPC-3101-E4-LB-CT-T	10.4" (4:3) 500 nits	PCAP	Intel Atom® x6425E	8 GB	–	2	1	4/2	24 to110 VDC	IP66 (front) IP66 (rear)	-40 to 70° C
MPC-3101-E4-LB-SPK-CT-T	10.4" (4:3) 500 nits	PCAP	Intel Atom® x6425E	8 GB	1 (2 W)	2	1	4/2	24 to110 VDC	IP66 (front) IP40 (rear)	-40 to 70° C
MPC-3101-E4-CT-T	10.4" (4:3) 1000 nits	PCAP	Intel Atom® x6425E	8 GB	–	2	1	4/2	24 to110 VDC	IP66 (front) IP66 (rear)	-40 to 70° C
MPC-3101-E4-SPK-CT-T	10.4" (4:3) 1000 nits	PCAP	Intel Atom® x6425E	8 GB	1 (2 W)	2	1	4/2	24 to110 VDC	IP66 (front) IP40 (rear)	-40 to 70° C

© Moxa Inc. All rights reserved. Updated Aug 19, 2026.

This document and any portion thereof may not be reproduced or used in any manner whatsoever without the express written permission of Moxa Inc. Product specifications subject to change without notice. Visit our website for the most up-to-date product information.