

# MPC-3150 Series

### 15-inch multi-interface fanless panel computers



#### **Features and Benefits**

- 15-inch panel computer
- Intel Atom® x6211E dual-core or x6425E quad-core processor
- -30 to 60°C operating temperature, fanless design, no heater required
- 400-nit or 1000-nit sunlight-readable LCD
- · Glove-friendly, multi-touch screen
- DNV, CID2, ATEX Zone 2, and IECEx compliant1
- 12/24 VDC power input

#### **Certifications**









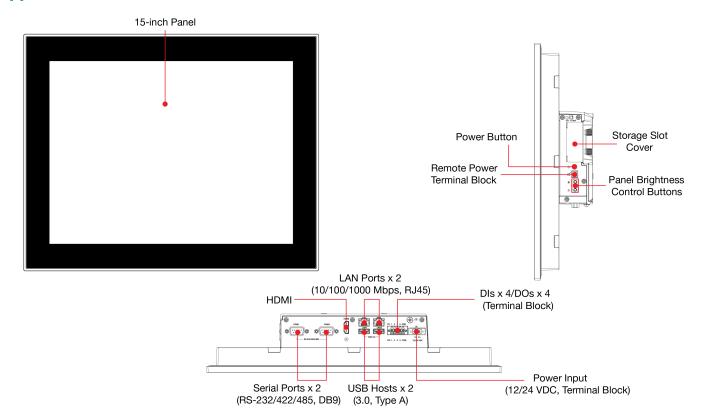
#### Introduction

The MPC-3150 15-inch panel computers with Intel Atom® x6000E dual-core/quad-core 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-3150 panel computers support a wide variety of serial interfaces as well as high-speed IT communications, all with native network redundancy.

The MPC-3150 panel computers are designed for the -30 to 60°C temperature range, and come with a fanless, streamlined enclosure designed for highly efficient heat dissipation. This makes the computers reliable industrial platforms for harsh, hot, outdoor environments like oil and gas fields and drilling platforms. The MPC-3150 also features a 400–nit or 1000–nit LCD panel offering a sunlight-readable, projected-capacitive, glove-friendly, multi-touch screen for excellent user experience in outdoor applications.

### **Appearance**





# **Specifications**

### Computer

CPU	E2 models: Intel Atom® Elkhart Lake dual-core x6211E 1.30 GHz E4 models: Intel Atom® Elkhart Lake quad-core x6425E 2.0 GHz
Graphics Controller	Intel® HD Graphics
System Memory Pre-installed	8 GB DDR4 2400 MHz (32 GB max)
System Memory Slot	SODIMM DDR4 2400 slots x 1
Supported OS	Windows 10 IoT Enterprise LTSC 2021 Windows 11 Professional (64-bit) Debian 11 (kernel 5.10) Ubuntu 22.04 LTS (kernel 5.1x) RHEL 9 (kernel 5.14)
Storage Slot	CFast slot x 1 SD slots x 1, SD 3.0 interface (SDHC/SDXC)

#### 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 connector)
USB 3.0	USB 3.0 hosts x 2, type-A connectors
Digital Input	Dls x 4 (with isolation protection)
Digital Output	DOs x 4 (with isolation protection)



### **LED Indicators**

Display   Panel Size   15 in (viewable image)   Aspect Ratio   4:3   Active Display Area   304.1 (H) x 228.1 (V) mm   Contrast Ratio   309.1 (Mpc.)   Appect Ratio   4:3   Active Display Area   304.1 (H) x 228.1 (V) mm   Contrast Ratio   309.1 (Mpc.)   Appect Ratio   4:3   Active Display Area   309.1 (Mpc.)   Appect Ratio   309.1 (Mpc.)   Appect Ratio   4:4   Appect Ratio   4:4   Appect Ratio   4:5   Appect Ratio	System	Power x 1
Panel Size         15 in (viewable image)           Aspect Ratio         4:3           Active Display Area         304.1 (H) x 228.1 (V) mm           Contrast Ratio         3000.1 (kyp.)           Light Intensity (Brightness)         MPC-3150-E2-TE-1-1000 nits MPC-3150-E2-LB-TF-4-LB-T-400 nits           Max. No. of Colors         262k, 16.7M (B-bit/color)           Panel Type         MVA           Pixel Pitch (ROB)         0.297 (H) x 0.297 (V) mm           Pixels         1024 x 788           Response Time         25 ms           Viewing Angles         176*/176*           Touch Function         Touch Function           Touch Support Points         4 points           Glove Support         4 points           Scrial Interface         50 bps to 115.2 kbps           Baudrate         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)           Party         None, Even, Odd, Space, Mark           Stop Bits         1, 1, 5, 2           Serial Signals         Tx, Tx, Rx+, Rx-, GND           RS-422         Tx, D, RAD, RTS, CTS, DTR, DSR, DCD, GND           RS-425-2w         Data-, Data-, GND	LAN	2 per port (10/100/1000 Mbps)
Panel Size         15 in (viewable image)           Aspect Ratio         4:3           Active Display Area         304.1 (H) x 228.1 (V) mm           Contrast Ratio         3000.1 (Vp.)           Light Intensity (Brightness)         MPC-3150-E2-T/E4-T: 1000 nits MPC-3150-E2-LB-7/E4-LB-7: 400 nits           Max. No. of Colors         262k, 16.7M (B-bit/color)           Panel Type         MVA           Pixel Pitch (ROB)         0.297 (H) x 0.297 (V) mm           Pixels         1024 x 788           Response Time         25 ms           Viewing Angles         15 m/176*           Touch Tunction         Touch Function           Touch Support Points         4 points           Glove Support         4 points           Serial Interface         50 bps to 115.2 kbps           Baudrate         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)           Party         None, Even, Odd, Space, Mark           Stop Bits         1,1,5,2           Serial Signals         1,2,5           RS-422         Tx, Tx, Rx+, Rx-, GND           RS-485-2w         Dates, Data-, GND           RS-486-4	Display	
Active Display Area   304.1 (H) x 228.1 (V) mm		15 in (viewable image)
Contrast Ratio   300011 (typ.)	Aspect Ratio	4:3
Light Intensity (Brightness)   MPC-3150-E2-T/E4-T: 1000 nits   MPC-3150-E2-LB-T/E4-LB-T: 400 nits	Active Display Area	304.1 (H) x 228.1 (V) mm
MPC-3150-E2-LB-T/E4-LB-T: 400 nits           Max. No. of Colors         262k, 16.7M (8-bit/color)           Panel Type         MVA           Pixel Pitch (RGB)         0.297 (H) x 0.297 (V) mm           Pixels         1024 x 768           Response Time         25 ms           Viewing Angles         176°/176°           Touch Function         Touch Function           Touch Support Points         4 points           Glove Support         Yes           Serial Interface         Serial Interface           Baudrate         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         1, 1.5, 2           Serial Signals         Tx+, Tx-, Rx+, Rx-, GND           RS-485-2w         Data+, Data-, GND           RS-486-4w         Tx+, Tx-, Rx+, Rx-, GND           Power Parameters         Input Voltage         12/24 VDC           Power Consumption         51 W	Contrast Ratio	3000:1 (typ.)
Panel Type         MVA           Pixel Pitch (RGB)         0.297 (H) x 0.297 (V) mm           Pixels         1024 x 768           Response Time         25 ms           Viewing Angles         176*/176*           Touch Function         Touch Function           Touch Type         Projective Capacitive touchscreen (PCAP)           Touch Support Points         4 points           Glove Support         Yes           Serial Interface         Serial Interface           Baudrate         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-282 only)           Parity         None, Even, Odd, Space, Mark           Stop Bits         1, 1.5, 2           Serial Signals         RS-232           RS-232         TxD, RxD, RTS, CTS, DTR, DSR, DCD, GND           RS-422         Tx+, Tx-, Rx+, Rx-, GND           RS-485-4w         Data+, Data-, GND           RS-485-4w         Tx+, Tx-, Rx+, Rx-, GND           Power Parameters         Input Voltage         12/24 VDC           Power Consumption         51 W	Light Intensity (Brightness)	
Pixel Pitch (RGB)         0.297 (H) x 0.297 (V) mm           Pixels         1024 x 768           Response Time         25 ms           Viewing Angles         176"/176"           Touch Function         Touch Type           Projective Capacitive touchscreen (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, 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         TxD, RxD, RTS, CTS, DTR, DSR, DCD, GND           RS-422         Txb, Rx-, Rx-, Rx-, GND           RS-485-4w         Tx+, Tx-, Rx+, Rx-, GND           Power Parameters         Input Voltage         12/24 VDC           Power Consumption         51 W	Max. No. of Colors	262k, 16.7M (8-bit/color)
Pixels   1024 x 768   1024 x 768   176°/176°   176°/176°   176°/176°   176°/176°   170ch Function   170ch Type   Projective Capacitive touchscreen (PCAP)   170ch Support Points   4 points   4 points   4 points   176°/176°   170ch Support Points   50 bps to 115.2 kbps   175.2	Panel Type	MVA
Response Time         25 ms           Viewing Angles         176°/176°           Touch Function         Touch Type           Projective Capacitive touchscreen (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, 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           Power Parameters         Input Voltage         12/24 VDC           Power Consumption         51 W	Pixel Pitch (RGB)	0.297 (H) x 0.297 (V) mm
Viewing Angles  176°/176°  Touch Function  Touch Type Projective Capacitive touchscreen (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, 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  Power Parameters Input Voltage 12/24 VDC  Power Consumption 51 W	Pixels	1024 x 768
Touch Function Touch Type Projective Capacitive touchscreen (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, 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  Power Parameters Input Voltage 12/24 VDC  Power Consumption 51 W	Response Time	25 ms
Touch Type Projective Capacitive touchscreen (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, 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  Power Parameters  Input Voltage 12/24 VDC  Power Consumption 51 W	Viewing Angles	176°/176°
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, 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  Power Parameters Input Voltage 12/24 VDC  Power Consumption 51 W	Touch Function	
Glove Support         Yes           Serial Interface         Second Interface           Baudrate         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           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         12/24 VDC           Power Consumption         51 W	Touch Type	Projective Capacitive touchscreen (PCAP)
Serial Interface         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           Power Parameters         Input Voltage         12/24 VDC           Power Consumption         51 W	Touch Support Points	4 points
Baudrate 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  Power Parameters  Input Voltage 12/24 VDC  Power Consumption 51 W	Glove Support	Yes
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  Power Parameters  Input Voltage 12/24 VDC  Power Consumption 51 W	Serial Interface	
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  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  12/24 VDC  Power Consumption  51 W	Baudrate	50 bps to 115.2 kbps
(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         12/24 VDC         Power Consumption       51 W	Data Bits	5, 6, 7, 8
Stop Bits       1, 1.5, 2         Serial Signals       TxD, RxD, RTS, CTS, DTR, DSR, DCD, GND         RS-232       Tx+, Tx-, Rx+, Rx-, 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         Power Consumption       51 W	Flow Control	
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         Power Consumption       51 W	Parity	None, Even, Odd, Space, Mark
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         Power Consumption       51 W	Stop Bits	1, 1.5, 2
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 12/24 VDC  Power Consumption 51 W	Serial Signals	
RS-485-2w Data+, Data-, GND  RS-485-4w Tx+, Tx-, Rx+, Rx-, GND  Power Parameters  Input Voltage 12/24 VDC  Power Consumption 51 W	RS-232	TxD, RxD, RTS, CTS, DTR, DSR, DCD, GND
RS-485-4w Tx+, Tx-, Rx+, Rx-, GND  Power Parameters Input Voltage 12/24 VDC  Power Consumption 51 W	RS-422	Tx+, Tx-, Rx+, Rx-, GND
Power Parameters Input Voltage 12/24 VDC Power Consumption 51 W	RS-485-2w	Data+, Data-, GND
Input Voltage 12/24 VDC  Power Consumption 51 W	RS-485-4w	Tx+, Tx-, Rx+, Rx-, GND
Power Consumption 51 W	Power Parameters	
	Input Voltage	12/24 VDC
	Power Consumption	



#### **Physical Characteristics**

Physical Characteristics	
Housing	Metal
IP Rating	IP66, front IP20, rear
Dimensions	370 x 297 x 73.7 mm (14.57 x 11.69 x 2.90 in)
Weight	4,300 g (9.48 lb)
Environmental Limits	
Operating Temperature	-30 to 60°C (-22 to 140°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 55032/35
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
Environmental Testing	IEC 60068-2-1, DNV-CG-0339 IEC 60068-2-1, IEC 60945 IEC 60068-2-2, DNV-CG-0339 IEC 60068-2-2, IEC 60945 IEC 60068-2-30, DNV-CG-0339
Hazardous Locations	ATEX Zone 2 Class I Division 2 IECEx Zone 2
Maritime	DNV-CG-0339, IEC 60945, IACS E10
Safety	IEC 62368-1 UL 62368-1
Shock	IEC 60068-2-27
Vibration	IEC 60068-2-6, DNV-CG-0339, IEC 60945 IEC 60068-2-64, DNV-CG-0339
Declaration	
Green Product	RoHS, CRoHS, WEEE
Warranty	
Warranty Period	System: 3 years LCD: 1 year
Details	See www.moxa.com/warranty

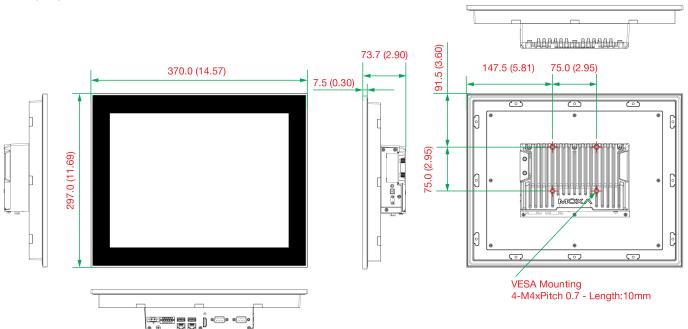


#### **Package Contents**

Device	1 x MPC-3150 Series computer
Installation Kit	12 x screws, 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	Touchscreen	LAN	Serial	DI/DO	Power Input	IP Rating	Operating Temp.
MPC-3150-E2-T	15" (4:3) 1000 nits	Intel Atom® x6211E	8 GB	PCAP	2	2	4/4	12/24 VDC	IP66 (front), IP20 (rear)	-30 to 60°C
MPC-3150-E2-LB-T	15" (4:3) 400 nits	Intel Atom® x6211E	8 GB	PCAP	2	2	4/4	12/24 VDC	IP66 (front), IP20 (rear)	-30 to 60°C
MPC-3150-E4-T	15" (4:3) 1000 nits	Intel Atom® x6425E	8 GB	PCAP	2	2	4/4	12/24 VDC	IP66 (front), IP20 (rear)	-30 to 60°C
MPC-3150-E4-LB-T	15" (4:3) 400 nits	Intel Atom® x6425E	8 GB	PCAP	2	2	4/4	12/24 VDC	IP66 (front), IP20 (rear)	-30 to 60°C

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