

MC-3201 Series

Compact computers with 11th Gen Intel® Core™ processor, designed for IIoT, AI, and marine applications, -20 to 55°C operating temperature



Features and Benefits

- 11th Gen Intel® Core™ processor (Tiger Lake U)
- 2 built-in DDR4 memory slots; total capacity up to 32 GB
- M.2 B key socket for 5G, GPS, and M.2 SATA SSD expansion modules
- M.2 E key socket for Wi-Fi and BT expansion modules
- Variety of interfaces: 2 serial ports, 4 Giga LAN ports, 2 USB 3.1 (type A) ports, and 4 USB 2.0 (type A) ports
- Built-in TPM 2.0 module
- Complies with IEC-60945 and IACS E10 standards

Certifications



Introduction

The MC-3201 Series computers are built around a 11th Gen Intel® Celeron® or Intel® Core™ i3, i5, or i7 processor and come with 2 DisplayPort interfaces, 2 USB 3.1 ports, 4 GbE ports, and 2 3-in-1 RS-232/422/485 serial ports. The computers are also equipped with a 2.5-inch SSD/HDD slot and a built-in TPM 2.0 module.

Additional value and convenience are provided through a modular design with two independent slots for flexible system integration and expansion. Users have the option to add a variety of different communications modules, including Wi-Fi, 5G, LTE, GPS, and M.2 SATA SSD expansion modules.

Compliance with the IEC-60945 and IACS E10 standards ensures the MC-3201 delivers stable and reliable system operations for marine and IIoT applications. These certifications are issued to indicate the suitability of product for use in marine applications.

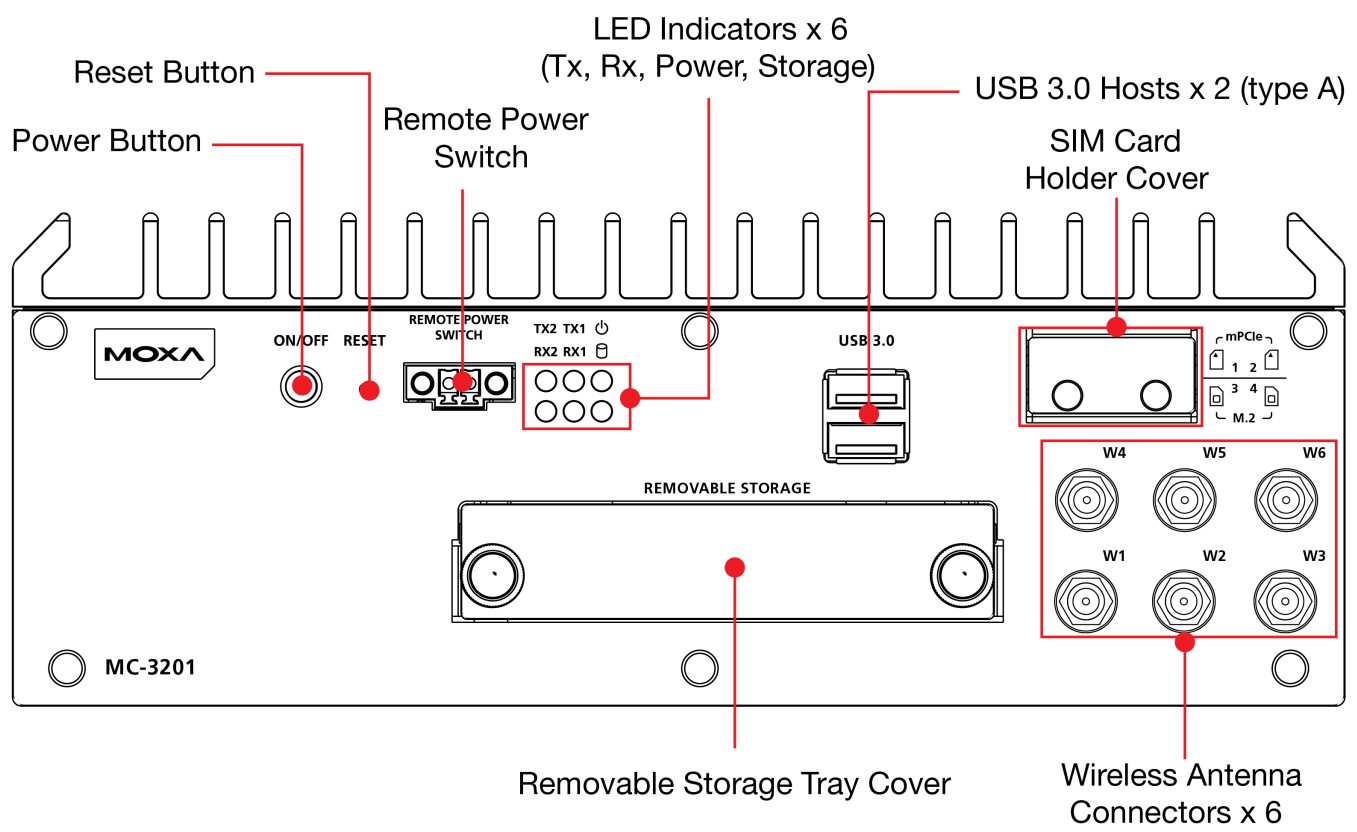
Proactive Monitoring Function

Moxa Proactive Monitoring is a small-footprint, resource-friendly, easy-to-use utility available with some Moxa computers to track a number of system parameters. You can view the current values for key parts by simply clicking on the icons corresponding to the parameters in a Windows-based 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 relays 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.

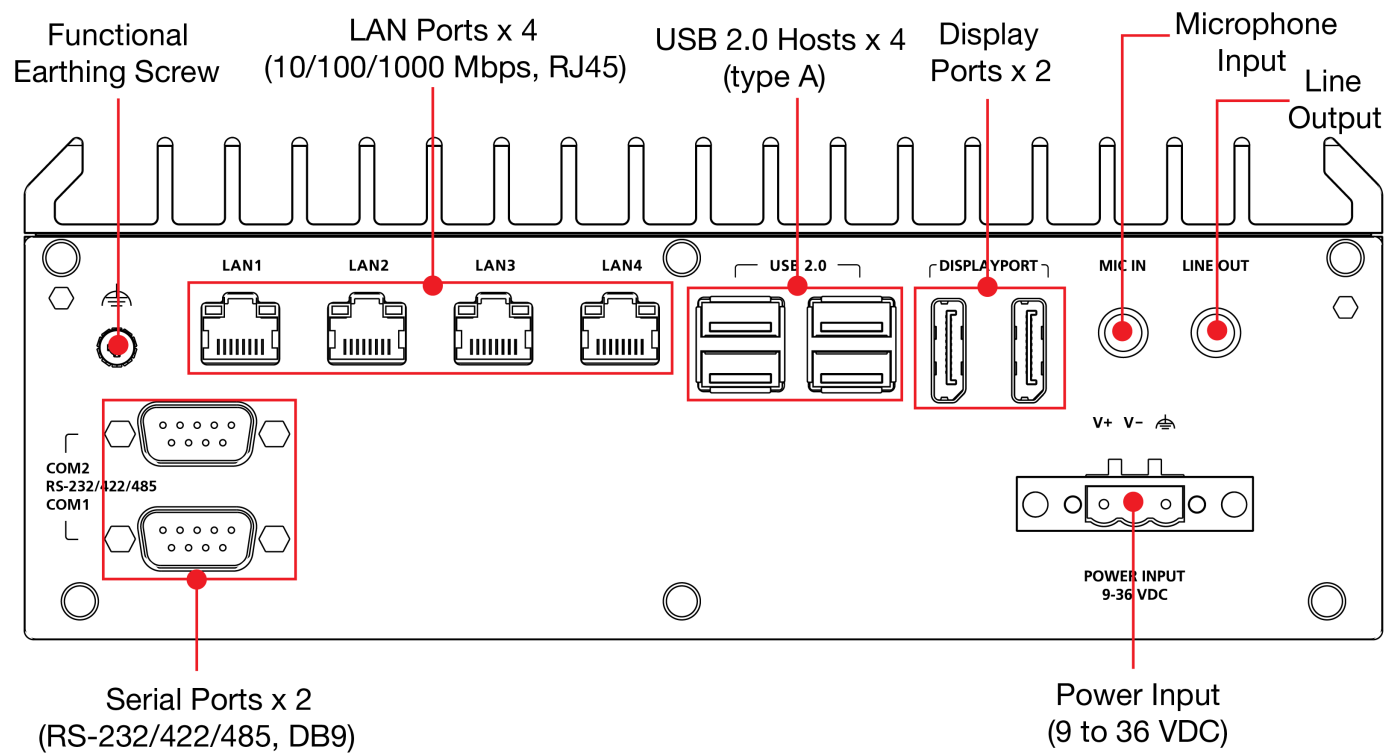
The Proactive Monitoring tool is currently available with DA-720 Series, DA-820C Series, MC-1200 Series, MC-3201 Series, and MC-7400 Series.

Appearance

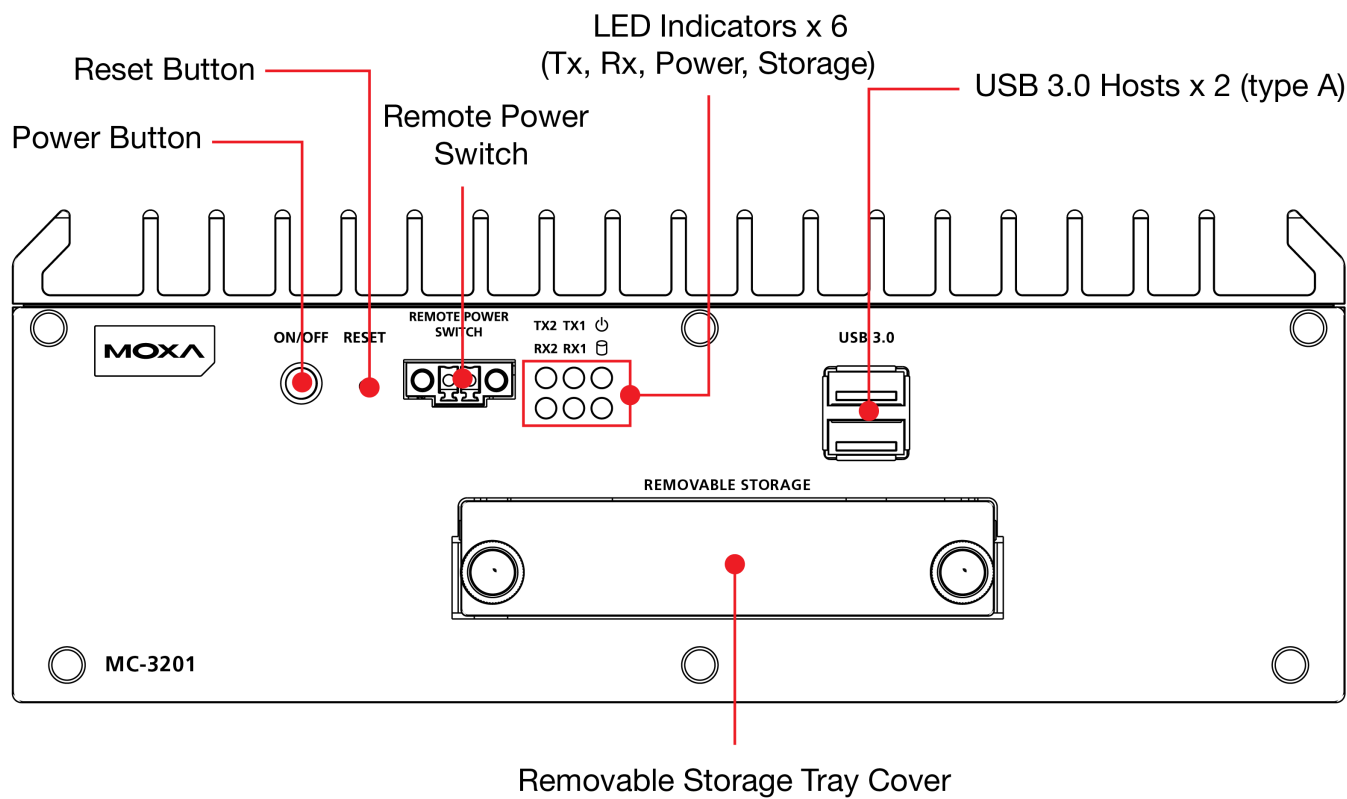
MC-3201-TGL1-S-S Front Panel



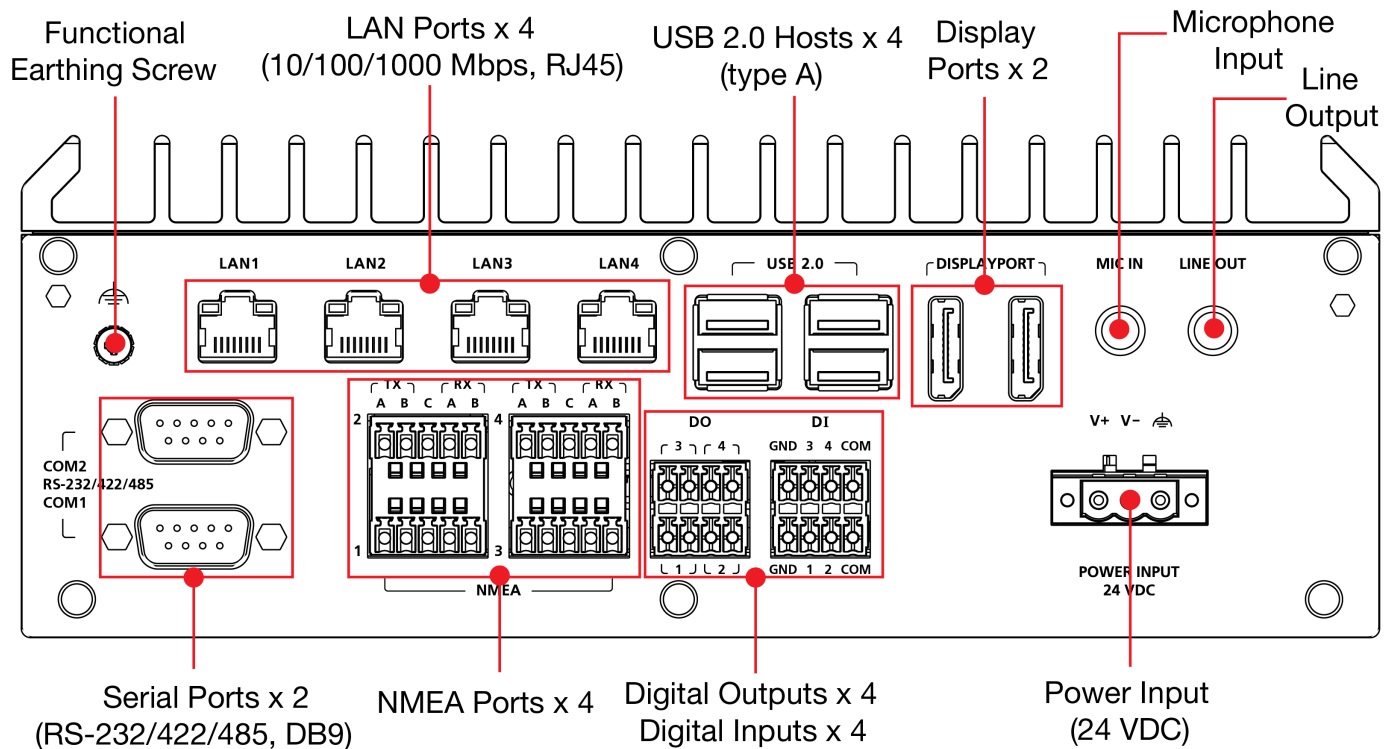
MC-3201-TGL1-S-S Rear Panel



MC-3201-TGL7-M-S Front Panel



MC-3201-TGL7-M-S Rear Panel



Specifications

Computer

CPU	MC-3201-TGL7-M-S: Intel® Core™ i7-1185G7E processor (12M Cache, up to 1.8 GHz) MC-3201-TGL1-S-S: Intel® Celeron® 6305E processor (8M Cache, up to 1.8 GHz)
Storage Slot	SSD slot x 1; SATA 3.0, internal mPCIe socket
System Memory Slot	SODIMM DDR4 2133 slot x 2, up to 32 GB max.
Supported OS	Linux Debian 11, 64-bit, kernel 5.10 Windows 10 Embedded IoT Ent 2019 LTSC 64-bit (Both optional, available via CTOS)
Graphics Controller	Intel® Iris® Xe Graphics

Computer Interface

Video Output	DisplayPort x 2 up to 3840 x 2160 resolution at 60 Hz
USB 3.0	USB 3.0 hosts x 2, type-A connectors
USB 2.0	USB 2.0 hosts x 4, type-A connectors
Buttons	Reset button

Serial Interface

Connector	DB9 male
Serial Standards	RS-232/422/485 (software selectable)
Serial Ports	2 x RS-232/422/485

Flow Control	RTS/CTS, XON/XOFF
Baudrate	50 bps to 115.2 kbps
ESD Protection	4 kV contact, 8 kV air
Ethernet Interface	
Magnetic Isolation Protection	1.5 kV (built-in)
10/100/1000BaseT(X) Ports (RJ45 connector)	4
LED Indicators	
System	Power x 1
Serial	2 per port (Tx, Rx)
Serial Signals	
RS-232	TxD, RxD, RTS, CTS, GND
RS-485-4w	Tx+, Tx-, Rx+, Rx-, GND
RS-422	Tx+, Tx-, Rx+, Rx-, GND
RS-485-2w	Data+, Data-, GND
Physical Characteristics	
Installation	Wall mounting
Housing	Metal
Dimensions	220 x 80 x 170 mm (8.66 x 3.15 x 6.69 in)
Weight	Product only: 1.40 kg (0.63 lb)
Declaration	
Green Product	RoHS, CRoHS, WEEE
Power Parameters	
Input Voltage	MC-3201-TGL7-M-S: 24 VDC MC-3201-TGL1-S-S: 9 to 36 VDC
Power Button	ON/OFF (rear panel) Reset button
Environmental Limits	
Operating Temperature	-20 to 55°C (-4 to 131°F)
Storage Temperature	-30 to 60°C (-22 to 140°F)
Ambient Relative Humidity	5 to 95% (non-condensing)
Shock	IEC 60068-2-27
Standards and Certifications	
EMC	EN 55032/35 CISPR 32, FCC Part 15B Class A
Safety	UL 62368-1 EN 62368-1 IEC 62368-1 IEC 60950-1

Reliability

Alert Tools	Built-in RTC (real-time clock) with lithium battery backup
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MTBF

Time	323,270 hrs
Standards	Telcordia (Bellcore) Standard TR/SR

Warranty

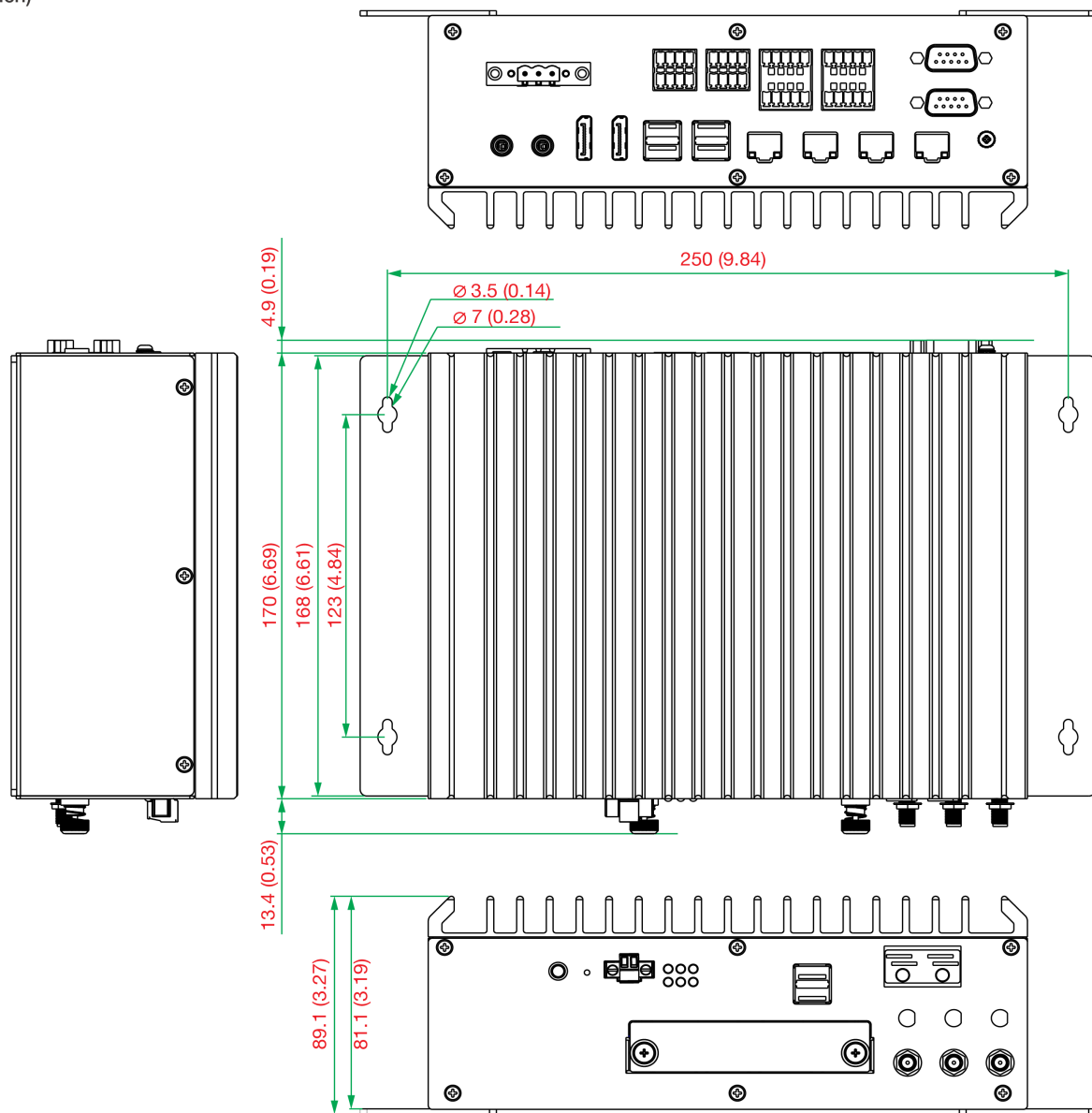
Warranty Period	3 years
Details	See www.moxa.com/warranty

Package Contents

Device	1 x MC-3201 Series computer
Installation Kit	1 x wall-mounting kit
Cable	1 x Power-jack-to-terminal-block cable
Documentation	1 x quick installation guide 1 x warranty card

Dimensions

Unit: mm (inch)



Ordering Information

Model Name	CPU	Memory	TPM 2.0	Optional OS Storage (SSD)	LAN/Serial Ports	SSD/HDD Slots	USB 3.1 Ports	Interface Expansion	Operating Temp
MC-3201-TGL7-M-S	Intel® Core™ i7-1185G7E	8 GB	✓	512 MB (max)	4/2	1	2	1 x mPCIe 1 x M.2 B key 1 x M.2 E key	-20 to 55°C
MC-3201-TGL5-M-S	Intel® Core™ i5-1145G7E	8 GB	✓	512 MB (max)	4/2	1	2	1 x mPCIe 1 x M.2 B key 1 x M.2 E key	-20 to 55°C
MC-3201-TGL3-M-S	Intel® Core™ i3-1115G4E	8 GB	✓	512 MB (max)	4/2	1	2	1 x mPCIe 1 x M.2 B key 1 x M.2 E key	-20 to 55°C
MC-3201-TGL1-M-S	Intel® Celeron® 6305E	8 GB	✓	512 MB (max)	4/2	1	2	1 x mPCIe 1 x M.2 B key	-20 to 55°C

Model Name	CPU	Memory	TPM 2.0	Optional OS Storage (SSD)	LAN/Serial Ports	SSD/HDD Slots	USB 3.1 Ports	Interface Expansion	Operating Temp
								1 x M.2 E key	
MC-3201-TGL7-S-S	Intel® Core™ i7-1185G7E	8 GB	✓	512 MB (max)	4/2	1	2	1 x mPCIe 1 x M.2 B key 1 x M.2 E key	-20 to 55°C
MC-3201-TGL5-S-S	Intel® Core™ i5-1145G7E	8 GB	✓	512 MB (max)	4/2	1	2	1 x mPCIe 1 x M.2 B key 1 x M.2 E key	-20 to 55°C
MC-3201-TGL3-S-S	Intel® Core™ i3-1115G4E	8 GB	✓	512 MB (max)	4/2	1	2	1 x mPCIe 1 x M.2 B key 1 x M.2 E key	-20 to 55°C
MC-3201-TGL1-S-S	Intel® Celeron® 6305E	8 GB	✓	512 MB (max)	4/2	1	2	1 x mPCIe 1 x M.2 B key 1 x M.2 E key	-20 to 55°C

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