# **MC-1200 Series**

## x86 fanless, wide-temperature industrial computer



#### **Features and Benefits**

- 3 Mini-PCIe sockets for Wi-Fi, 3G, LTE, GPS, and mSATA expansion modules
- 7th Gen Intel® Core™ processor (Kaby Lake U)
- 2 built-in DDR4 memory slots; total capacity up to 32 GB
- ATEX and IECEx Zone 2 compliance
- Built-in TPM 2.0 module
- Variety of interfaces: 2 serial ports, 2 Giga LANs, 3 USB 3.0 (type A) ports

#### Certifications



### Introduction

The MC-1200 Series computers are built around a 7th Gen Intel® Celeron® or Intel® Core™ i3, i5, or i7 processor and come with 1 HDMI display port, 3 USB 3.0 ports, 2 gigabit LAN ports, and 2 3-in-1 RS-232/422/485 serial ports. The MC-1200 is equipped with a 2.5" HDD/SSD slot and a built-in TPM 2.0 module.

Additional value and convenience is provided through a modular design with three independent slots for flexible system integration and expansion. Users have the option to add a variety of different communications modules, including Wi-Fi, 3G, LTE, GPS, and mSATA expansion modules.

With UL Class 1 Division 2, ATEX and IECEx Zone 2 compliance, the MC-1200 is sure to deliver stable and reliable system operation for oil and gas applications. Class 1 Division 2 (C1D2) is a certification issued to products that allow them to be used in potentially hazardous environments. Examples of hazardous work settings include locations where flammable or explosive gasses, certain chemicals, airborne fibers, or vapors could be excessive under abnormal circumstances.

Class 1 Division 2 (C1D2) certification indicates that a device is deemed safe to operate in specific hazardous environments under abnormal circumstances. This means that in a worst case scenario, the MC-1200 computer will not ignite the substances around it causing a fire, explosion, or other catastrophe.

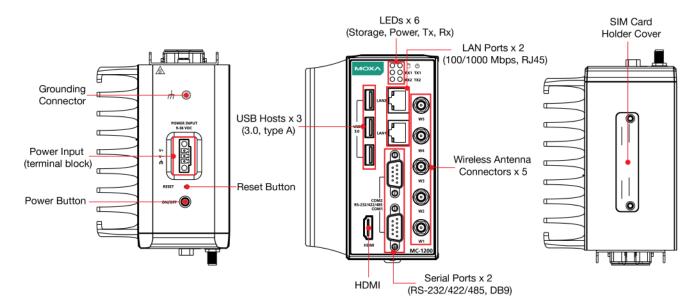
The MC-1200 is designed to operate reliably in extreme conditions, such as continuous exposure to low or high temperatures, humidity, high vibration, and power surges, making them perfect for heavy industry, solar grid, water/wastewater, oil and gas, and transportation applications.

#### **Proactive Monitoring Function**

Moxa Proactive Monitoring is a small-footprint, resource-friendly, easy-to-use utility that allows users to track a number of system parameters. Users can view the current parameter values for these key parts by simply clicking on the icons corresponding to the parameters in the 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 relay 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.



## Appearance



# **Specifications**

Computer						
CPU	MC-1220-KL7-T-S: Intel® Core™ i7-7600U Processor (4M Cache, up to 3.90 GHz) MC-1220-KL5-T-S: Intel® Core™ i5-7300U Processor (3M Cache, up to 3.50 GHz) MC-1220-KL1-T-S: Intel® Celeron® Processor 3965U (2M Cache, 2.20 GHz) MC-1220-KL5-T: Intel® Core™ i5-7300U Processor (3M Cache, up to 3.50 GHz)					
Storage Slot	mSATA slots x 1, SATA 3.0, internal mini-PCle socket					
System Memory Slot	SODIMM DDR4 slot x 2, up to 32 GB max.					
Supported OS	Linux Debian 9, 64-bit, kernel 4.9 (optional via CTOS) Windows 10 Enterprise LTSC 1809 64-bit (optional via CTOS)					
Graphics Controller	MC-1220-KL7-T-S: Intel® HD Graphics 620 MC-1220-KL5-T-S: Intel® HD Graphics 620 MC-1220-KL1-T-S: Intel® HD Graphics 610 MC-1220-KL5-T: Intel® HD Graphics 620					
Computer Interface						
Video Input	HDMI x 1, up to 3840 x 2160 resolution at 30 Hz					
USB 3.0	USB 3.0 hosts x 3, 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)	2				
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 (with optional kit), DIN-rail mounting				
Housing	Metal				
Dimensions	134 x 60.4 x 120 mm (5.28 x 2.38 x 4.72 in)				
Weight	Product only: 1.40 kg (0.63 lb)				
Declaration					
Green Product	RoHS, CRoHS, WEEE				
Power Parameters					
Power Button	ON/OFF (rear panel) Reset button				
Input Voltage	9 to 36 VDC				
Environmental Limits					
Storage Temperature	-40 to 75°C (-40 to 185°F)				
Operating Temperature	-40 to 70°C (-40 to 158°F)				
Ambient Relative Humidity	5 to 95% (non-condensing)				
Shock	IEC 60068-2-27				
Standards and Certifications					
Safety	UL 60950-1, UL 62368-1, EN 60950-1, EN 62368-1				
EMC	EN 55032/35, CISPR 32, FCC Part 15B Class A				
Reliability					
Alert Tools	Built-in RTC (real-time clock) with lithium battery backup				
Warranty					
Warranty Period	3 years				
Details	See www.moxa.com/warranty				

See www.moxa.com/warranty



#### Package Contents

Device

Installation Kit

Documentation

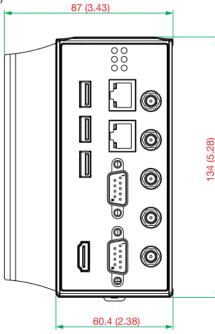
1 x MC-1200 Series computer 1 x DIN-rail kit

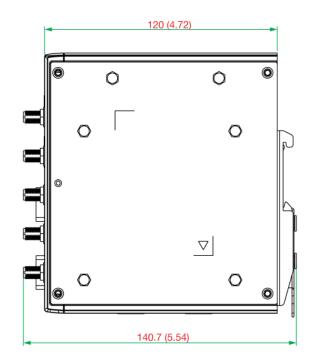
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1 x quick installation guide 1 x warranty card

## **Dimensions**

Unit: mm (inch)





# **Ordering Information**

Model Name	CPU	Memory	TPM 2.0	Optional OS Storage (mSATA)	LAN/Serial Ports	SSD/HDD Slots	USB 3.0 Ports	Interface Expansion	Operating Temp
MC-1220-KL7-T-S	Intel® Core™ i7- 7600U	8 GB	$\checkmark$	16 GB	2/2	1	3	3 x mPCle	-40 to 70°C
MC-1220-KL5-T-S	Intel® Core™ i5- 7300U	8 GB	V	16 GB	2/2	1	3	3 x mPCle	-40 to 70°C
MC-1220-KL1-T-S	Intel® Celeron® 3965U	8 GB	$\checkmark$	16 GB	2/2	1	3	3 x mPCle	-40 to 70°C
MC-1220-KL5-T	Intel® Core™ i5- 7300U	8 GB	-	16 GB	2/2	1	3	3 x mPCle	-40 to 70°C

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