

RKP-C110 Series

Rackmount computers with 11th Gen Intel® Core™ Tiger Lake processor base model and high-interface models



Features and Benefits

- 1U rackmount computer with fanless design
- 11th Gen Intel® Celeron®, or Intel® Core™ i3, i5, or i7 processor
- Rich interface options for up to 12 LAN ports and up to 10 serial ports
- 12/24 VDC and dual 100 to 240 VAC/VDC power input options
- Unified front-panel connectivity design for easy access of interfaces
- -30 to 60°C operating temperature range

Certifications



Introduction

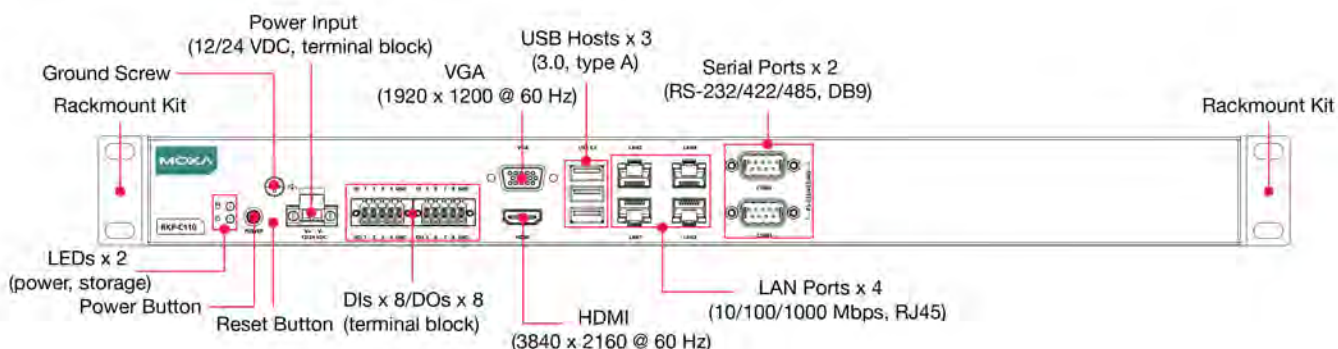
The RKP-C110 rackmount computers are powered by 11th Gen Intel® Celeron®, or Intel® Core™ i3, i5, or i7 processor. The computers come with a rich set of interface options including up to up to 12 Gigabit Ethernet ports, 10 software-selectable RS-232/422/485 serial ports, and 8 digital inputs and 8 digital outputs. The communication interfaces are all located on the front panel for enabling easy access and convenient expansion for industrial applications. Two hand-rotated 2.5" SSD storages and an outer replaceable RTC battery design deliver a reliable, durable, and versatile platform for a more user-friendly option.

Designed as 1U standard form factor fanless rackmount computers with an operating temperature range of -30 to 60°C and a build-in TPM 2.0 module, the RKP-C110 computers are ideal as reliable and secure computing platforms for industrial applications in extreme operating environments.

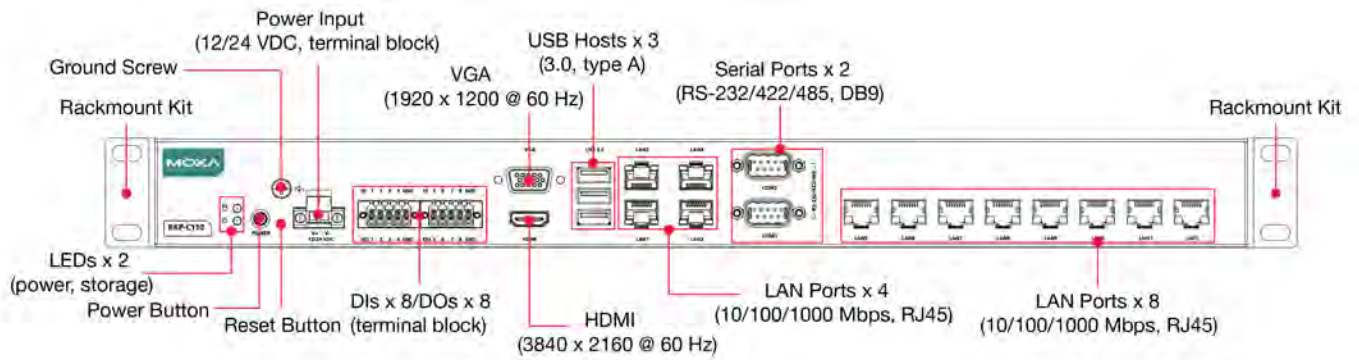
Appearance

Front View

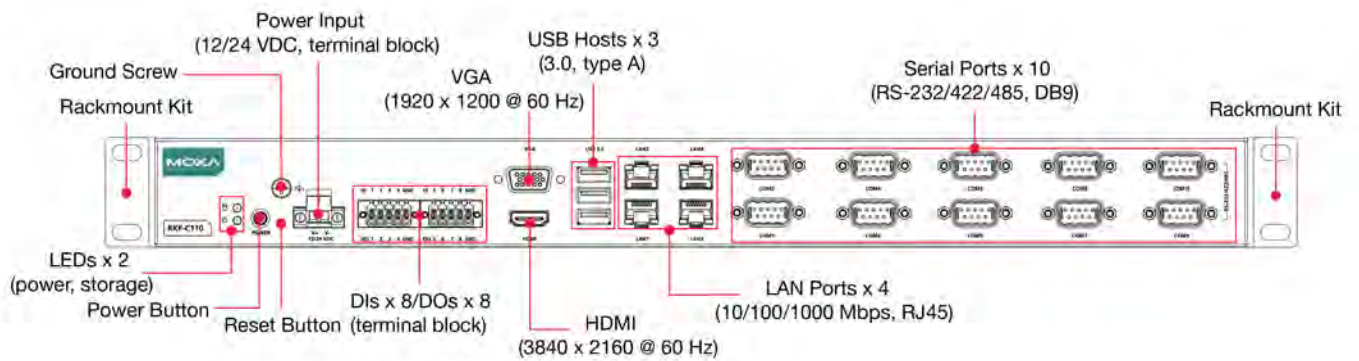
RKP-C110-C1-T/C3-T/C5-T/C7-T/C1-T-Win10/C3-T-Win10/C5-T-Win10/C7-T-Win10 Models



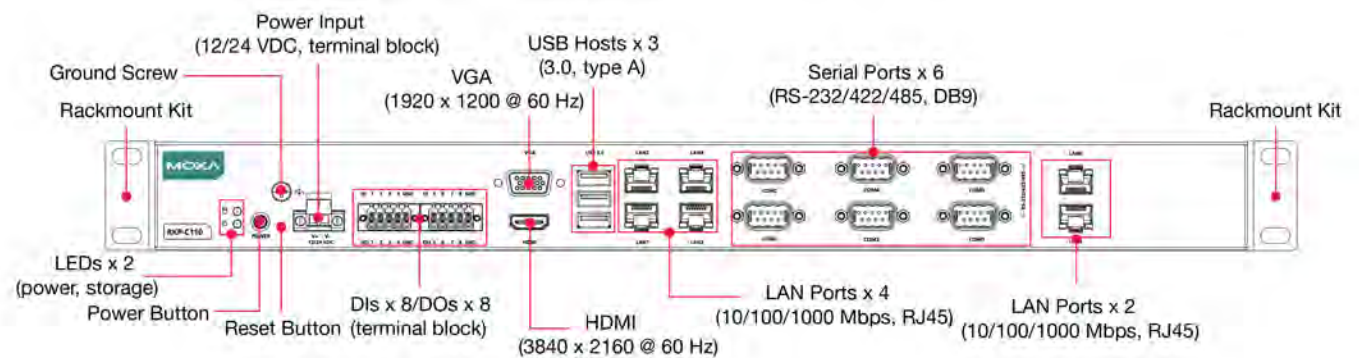
RKP-C110-C1-8L-T/C3-8L-T/C5-8L-T/C7-8L-T Models



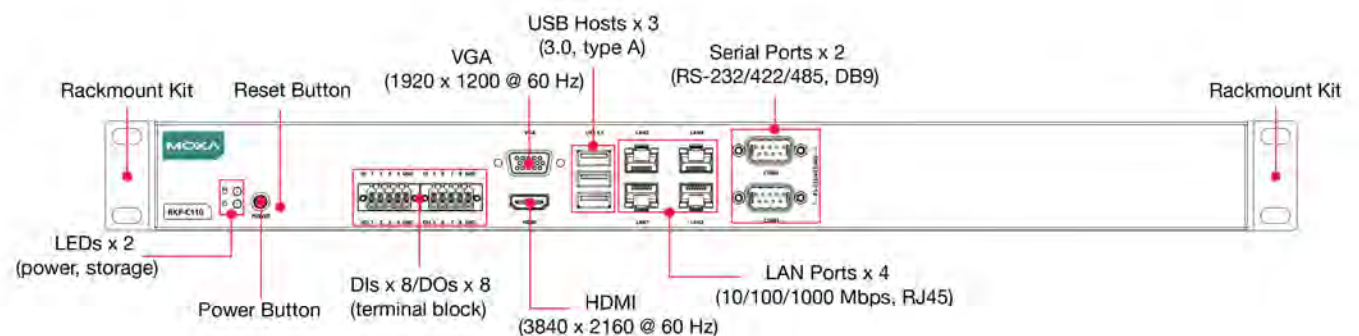
RKP-C110-C1-8C-T/C3-8C-T/C5-8C-T/C7-8C-T Models



RKP-C110-C1-2L4C-T/C3-2L4C-T/C5-2L4C-T/C7-2L4C-T Models



RKP-C110-C1-2HV-T/C3-2HV-T/C5-2HV-T/C7-2HV-T Models

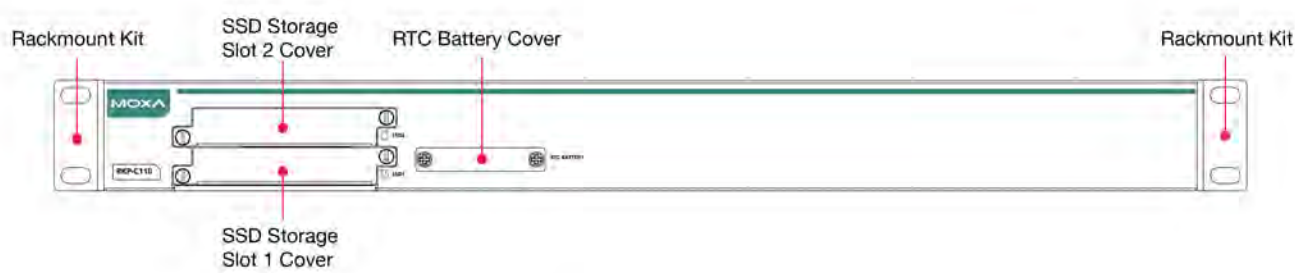


RearView

RKP-C110-C1-2HV-T/C3-2HV-T/C5-2HV-T/C7-2HV-T Models



All Other Models



Specifications

Computer

CPU	RKP-C110-C1 models: Intel® Celeron® 6305E "(Dual core, 4M cache, 1.80 GHz) RKP-C110-C3 models: Intel® Core™ i3-1115G4E (Quad core, 4M cache, 3 GHz, Base: 2.20 GHz) RKP-C110-C5 models: Intel® Core™ i5-1145G7E (Quad core, 8M cache, 2.60 GHz, Base: 1.50 GHz) RKP-C110-C7 models: Intel® Core™ i7-1185G7E (Quad core, 12M cache, 2.80 GHz, Base: 1.80 GHz)
System Memory Slot	SODIMM DDR4 slots x 1, up to 32 GB max.
System Memory Pre-installed	8 GB DDR4
Storage Slot	2.5-inch SSD slots x 2 (SATAIII interface) RAID 0/1 support
Supported OS	Windows images and drivers supported: - Windows 11 IoT Ent LTSC 2024 64-bit - Windows 10 IoT Ent LTSC 2021 64-bit - Windows 11 Professional 64-bit - Windows Server 2022 (driver support only) Linux image supported: - Debian 12 (kernel 6.10) Linux drivers supported: - Debian 12 (kernel 6.10) - Ubuntu 22.04 LTS/HWE - RHEL 9 (kernel 5.14)
Graphics Controller	Intel® Iris® Xe Graphics

Computer Interface

Ethernet Ports	RKP-C110-C1-8L-T/C3-8L-T/C5-8L-T/C7-8L-T models: Auto-sensing 10/100/1000 Mbps ports (RJ45 connector) x 12 RKP-C110-C1-2L4C-T/C3-2L4C-T/C5-2L4C-T/C7-2L4C-T models: Auto-sensing 10/100/1000 Mbps ports (RJ45 connector) x 6 All other models: Auto-sensing 10/100/1000 Mbps ports (RJ45 connector) x 4
Serial Ports	RKP-C110-C1-8C-T/C3-8C-T/C5-8C-T/C7-8C-T models: RS-232/422/485 ports x 10, software selectable (DB9 male) RKP-C110-C1-2L4C-T/C3-2L4C-T/C5-2L4C-T/C7-2L4C-T models: RS-232/422/485 ports x 6, software selectable (DB9 male) All other models: RS-232/422/485 ports x 2, software selectable (DB9 male)
USB 3.0	USB 3.0 hosts x 3, type-A connectors
Digital Input	DIs x 8
Digital Output	DOs x 8
TPM	TPM v2.0
Video Output	HDMI 2.0b x 1, (type A connector) VGA x 1, 15-pin D-sub connector (female)
Buttons	Reset button Power button

Ethernet Interface

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

Baudrate	50 bps to 115.2 kbps
Connector	DB9 male
Data Bits	5, 6, 7, 8
Parity	None, Even, Odd, Space, Mark
Stop Bits	1, 1.5, 2
Flow Control	RTS/CTS, XON/XOFF

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

Connector	Spring-type Euroblock terminal
Sensor Type	Dry contact
Dry Contact	Logic 0: Short to GND Logic 1: Open

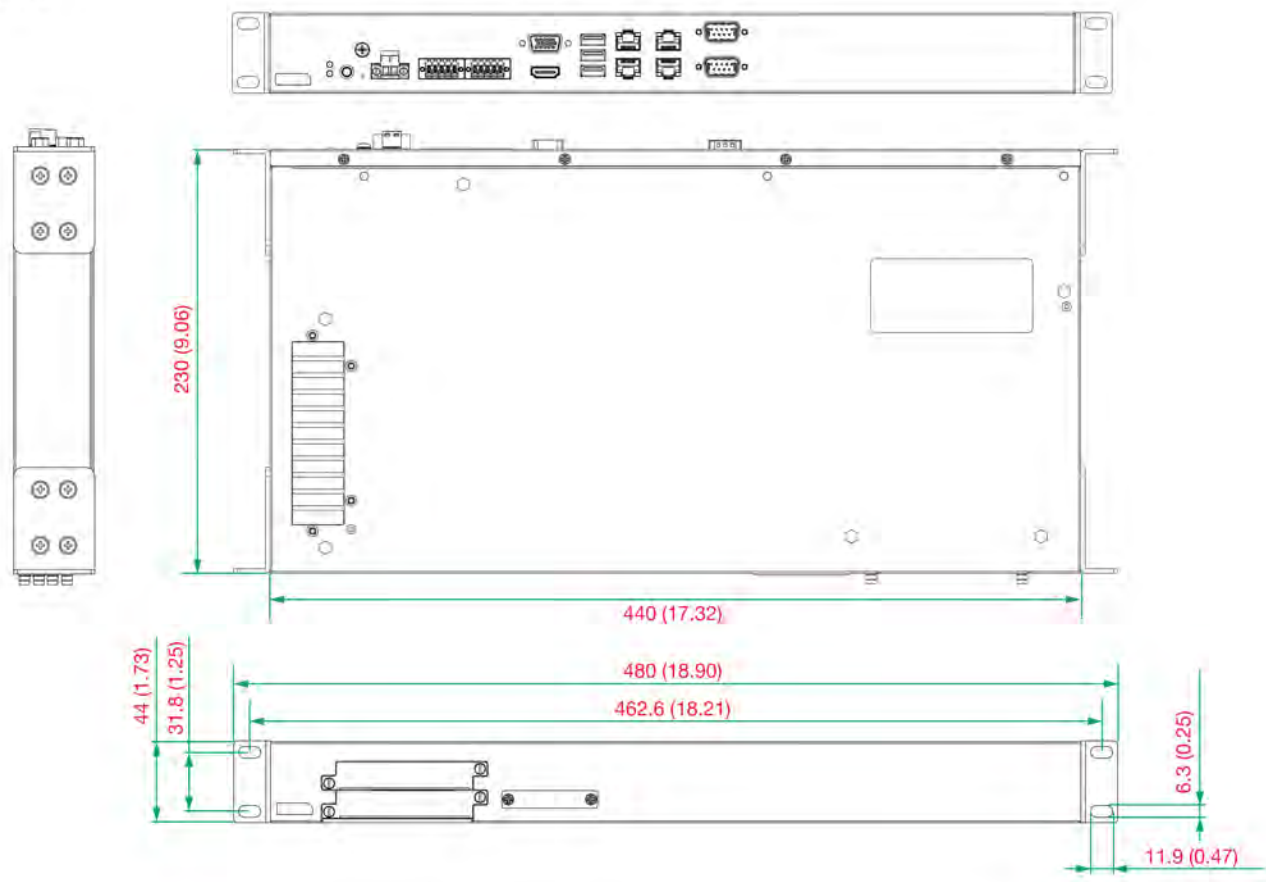
Digital Outputs	
Connector	Spring-type Euroblock terminal
I/O Type	Sink
Current Rating	200 mA per channel
Voltage	0 to 24 VDC
LED Indicators	
System	Power x 1 Storage x 1
LAN	2 per port (10/100/1000 Mbps)
Power Parameters	
Input Voltage	12/24 VDC 2HV-T models: 100 to 240 VAC/VDC
Power Connector	Screw-fastened Euroblock terminal
Power Consumption	90 W
Physical Characteristics	
Housing	Metal
IP Rating	IP20
Dimensions	440 x 230 x 43.6 mm (17.32 x 9.06 x 1.72 in) 2HV-T models: 440 x 360 x 43.65 mm (17.32 x 14.17 x 1.72 in)
Weight	RKP-C110-C1-8C-T/C3-8C-T/C5-8C-T/C7-8C-T models: 3,610 g (7.95 lb) RKP-C110-C1-2L4C-T/C3-2L4C-T/C5-2L4C-T/C7-2L4C-T models: 3,540 g (7.80 lb) RKP-C110-C1-8L-T/C3-8L-T/C5-8L-T/C7-8L-T models: 3,800 g (8.37 lb) RKP-C110-C1-T/C3-T/C5-T/C7-T/C1-T-Win10/C3-T-Win10/C5-T-Win10/C7-T-Win10 models: 3,350 g (7.38 lb) RKP-C110-C1-2HV-T/C3-2HV-T/C5-2HV-T/C7-2HV-T models: 5,616 g (12.38 lb)
Installation	Rack mounting (standard 1U)
Environmental Limits	
Operating Temperature	-30 to 60°C (-22 to 140°F)
Storage Temperature	-40 to 75°C (-40 to 167°F)
Ambient Relative Humidity	5 to 95% (non-condensing)
Standards and Certifications	
EMC	EN 55032/35
EMI	CISPR 32, FCC Part 15B Class A BSMI
EMS	IEC 61000-4-2 ESD: Contact: 4 kV; Air: 8 kV IEC 61000-4-3 RS: 80 MHz to 1 GHz: 3 V/m IEC 61000-4-4 EFT: Power: 0.5 kV; Signal: 0.5 kV IEC 61000-4-5 Surge: Power: 0.5 kV, Signal: 1 kV IEC 61000-4-6 CS: 3 V IEC 61000-4-8 PFMF: 1 A/m at 50 to 60 Hz

Safety	IEC 62368-1 UL 62368-1 BSMI
Shock	IEC 60068-2-27
Vibration	IEC 60068-2-64
Package Drop Test	ISTA 1A
Package Vibration Test	ISTA 1A
Declaration	
Green Product	RoHS, CRoHS, WEEE
Reliability	
Time Source	Built-in RTC (real-time clock) with lithium-battery backup
Automatic Reboot Trigger	Built-in WDT
MTBF	
Time	493,336 2HV-T models: 1,435,365 hrs
Standards	Telcordia (Bellcore), GB
Warranty	
Warranty Period	3 years
Details	See www.moxa.com/warranty
Package Contents	
Device	1 x RKP-C110 Series computer
Installation Kit	2 x terminal block, 10-pin for DI/DOs 1 x terminal block, 2-pin for DC power (non-2HV models only) 1 x terminal block, 5-pin for AC/DC power (2HV models only) 2 x rack-mounting ears with 16 screws (2HV models only)
Documentation	1 x quick installation guide 1 x warranty card

Dimensions

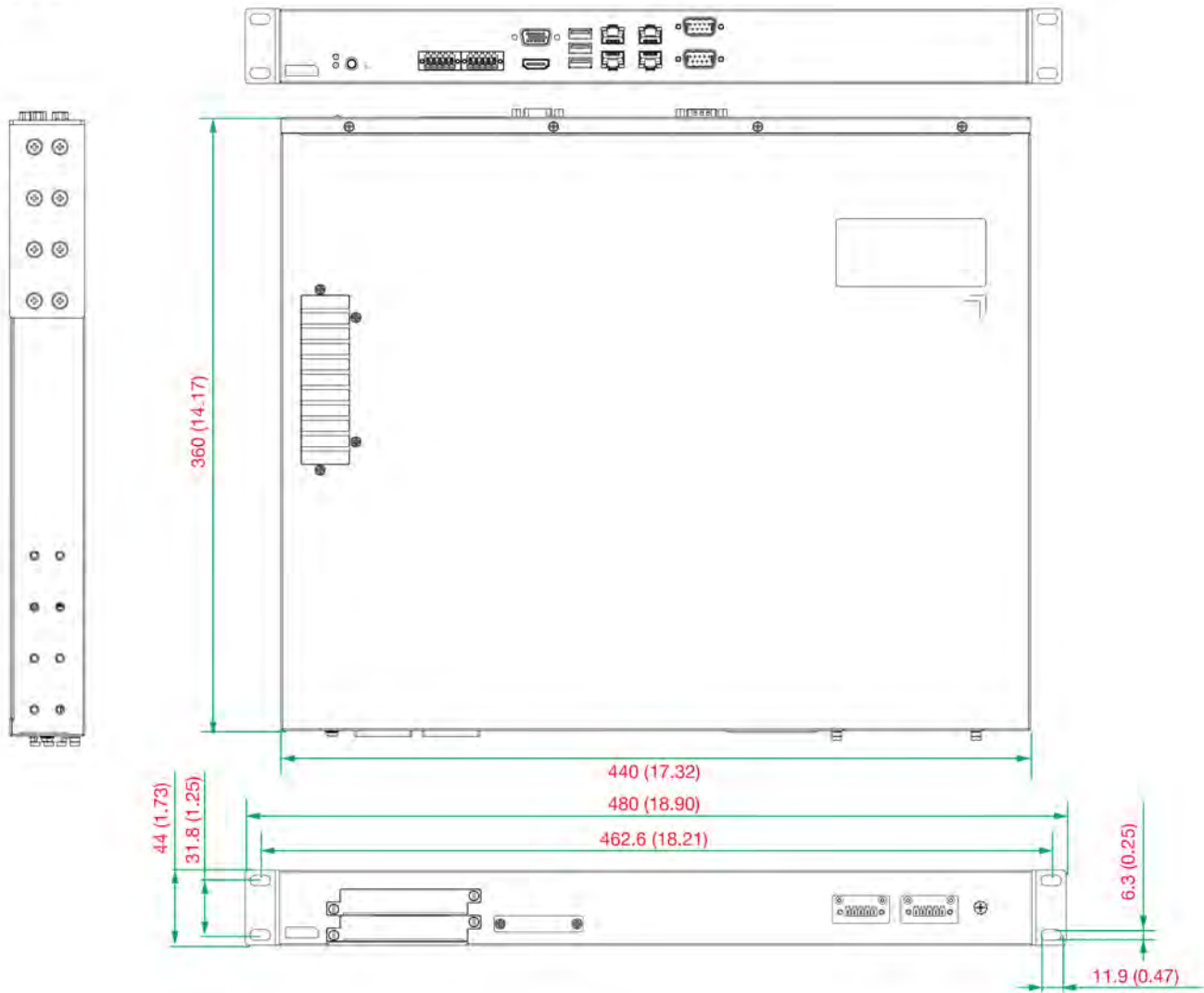
RKP-C110-C1-T/C3-T/C5-T/C7-T/C1-T-Win10/C3-T-Win10/C5-T-Win10/C7-T-Win10 Models

Unit: mm (inch)



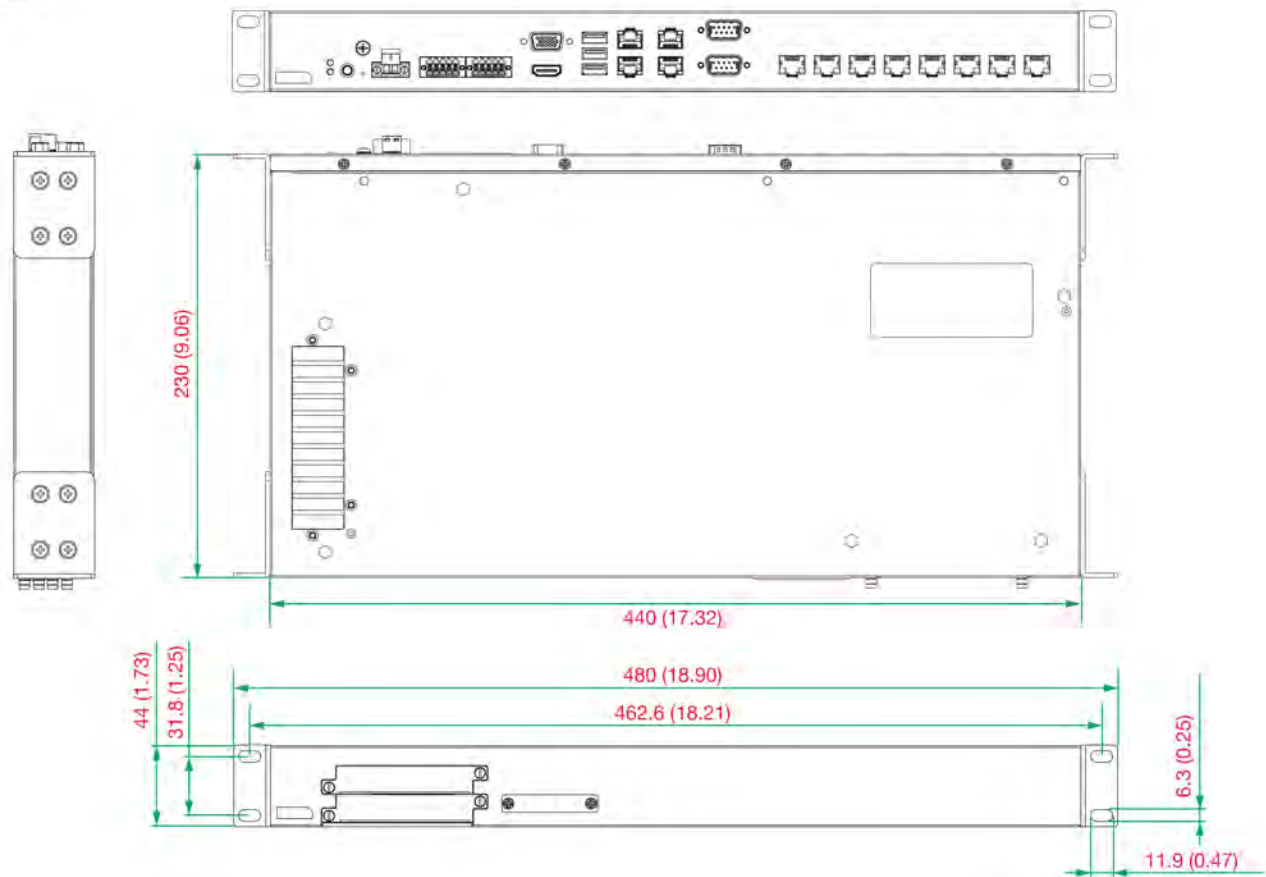
RKP-C110-C1-2HV-T/C3-2HV-T/C5-2HV-T/C7-2HV-T Models

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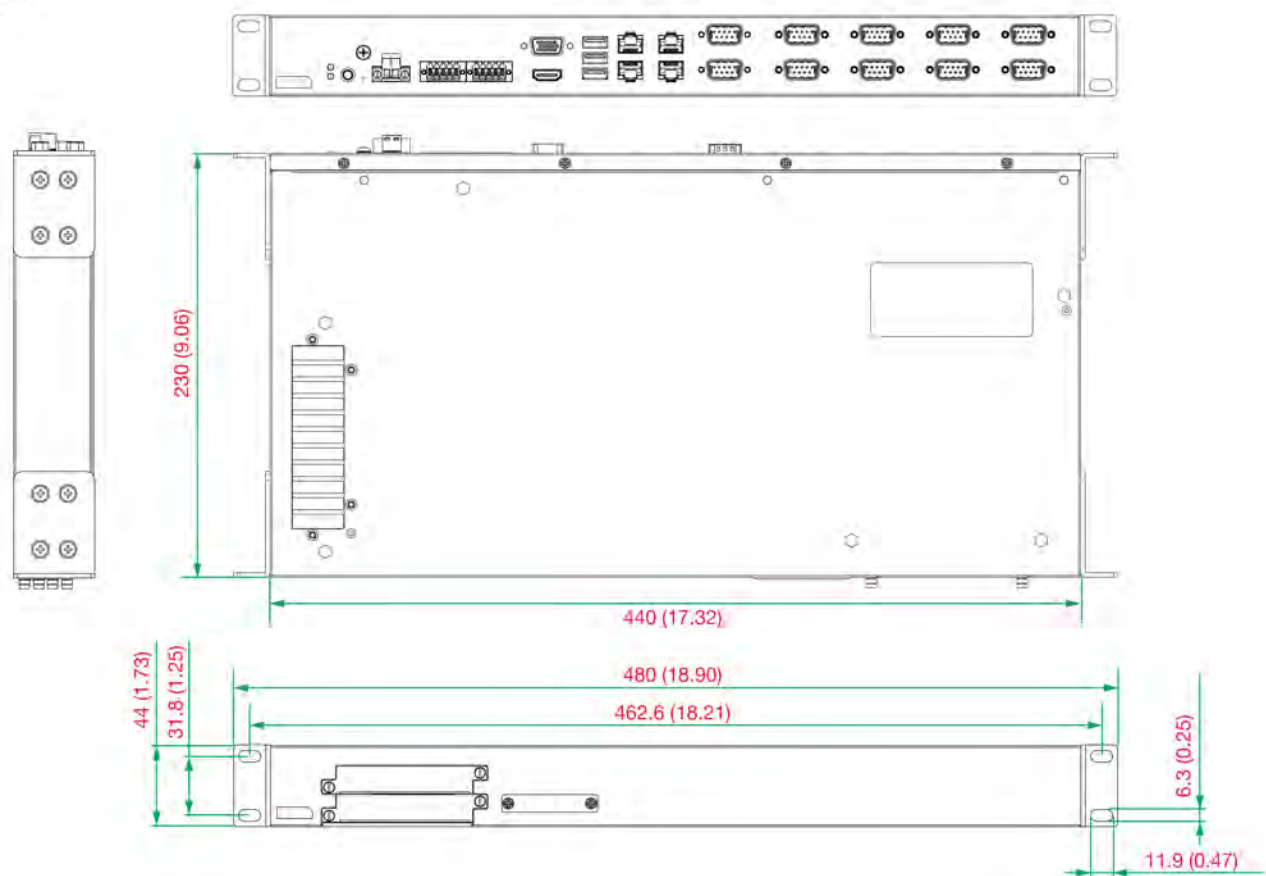
RKP-C110-C1-8L-T/C3-8L-T/C5-8L-T/C7-8L-T Models

Unit: mm (inch)



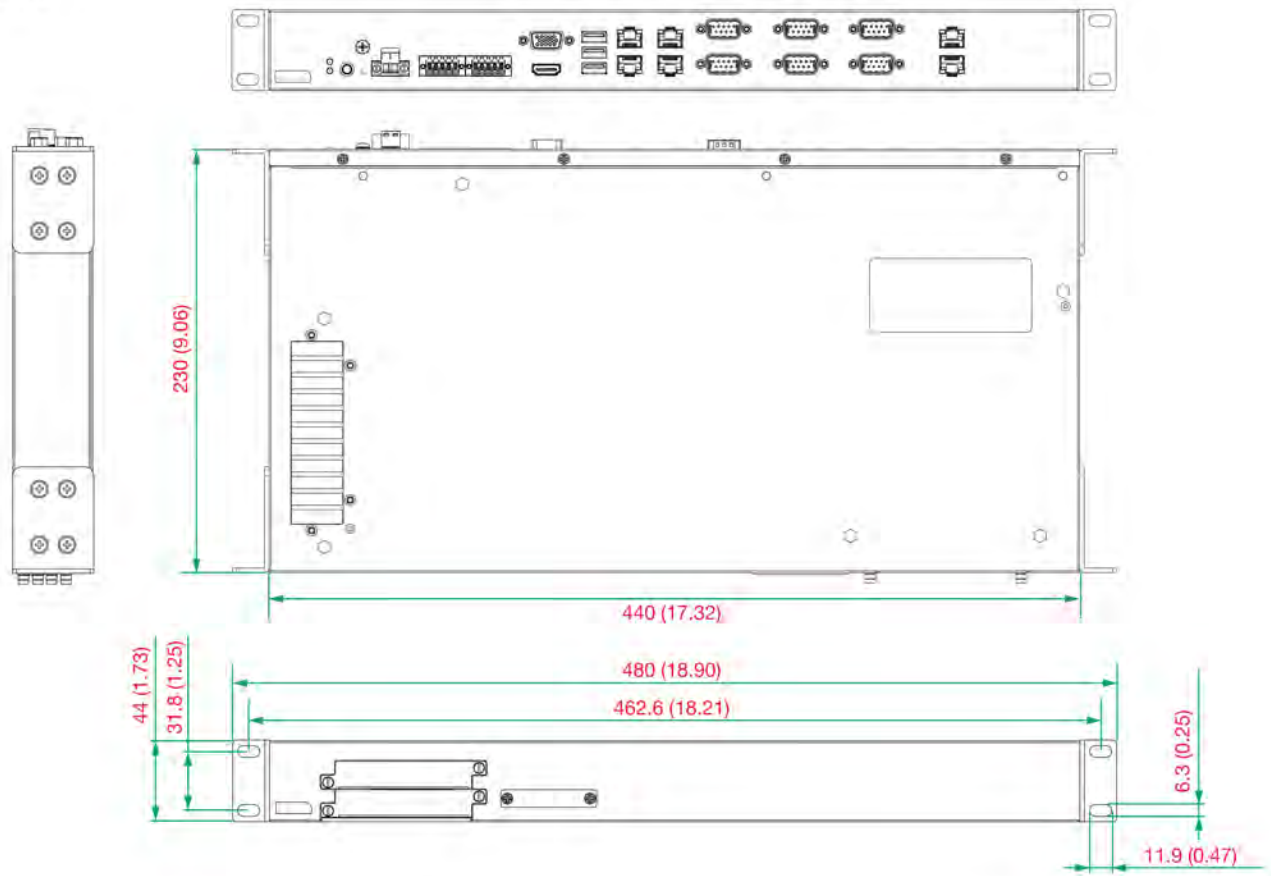
RKP-C110-C1-8C-T/C3-8C-T/C5-8C-T/C7-8C-T Models

Unit: mm (inch)



RKP-C110-C1-2L4C-T/C3-2L4C-T/C5-2L4C-T/C7-2L4C-T Models

Unit: mm (inch)



Ordering Information

Model Name	CPU	RAM	Storage Slots	OS Preinstalled	LAN/Serial	USB 3.0	DIs/ DOs	Video Outputs	Power Input
RKP-C110-C1-T	Intel® Celeron® 6305E	8 GB	2 x 2.5" SSD	-	4/2	3	8 x DIs 8 x DOs	1 x VGA 1 x HDMI	12/24 VDC
RKP-C110-C1-T-Win10	Intel® Celeron® 6305E	8 GB	2 x 2.5" SSD	Win 10 LTSC (64 GB SSD)	4/2	3	8 x DIs 8 x DOs	1 x VGA 1 x HDMI	12/24 VDC
RKP-C110-C1-8L-T	Intel® Celeron® 6305E	8 GB	2 x 2.5" SSD	-	12/2	3	8 x DIs 8 x DOs	1 x VGA 1 x HDMI	12/24 VDC
RKP-C110-C1-8C-T	Intel® Celeron® 6305E	8 GB	2 x 2.5" SSD	-	4/10	3	8 x DIs 8 x DOs	1 x VGA 1 x HDMI	12/24 VDC
RKP-C110-C1-2L4C-T	Intel® Celeron® 6305E	8 GB	2 x 2.5" SSD	-	6/6	3	8 x DIs 8 x DOs	1 x VGA 1 x HDMI	12/24 VDC
RKP-C110-C5-T	Intel® Core™ i5-1145G7E	8 GB	2 x 2.5" SSD	-	4/2	3	8 x DIs 8 x DOs	1 x VGA 1 x HDMI	12/24 VDC
RKP-C110-C5-T-Win10	Intel® Core™ i5-1145G7E	8 GB	2 x 2.5" SSD	Win 10 LTSC (64 GB SSD)	4/2	3	8 x DIs 8 x DOs	1 x VGA 1 x HDMI	12/24 VDC
RKP-C110-C5-8L-T	Intel® Core™ i5-1145G7E	8 GB	2 x 2.5" SSD	-	12/2	3	8 x DIs 8 x DOs	1 x VGA 1 x HDMI	12/24 VDC

Model Name	CPU	RAM	Storage Slots	OS Preinstalled	LAN/Serial	USB 3.0	DIs/ DOs	Video Outputs	Power Input
RKP-C110-C5-8C-T	Intel® Core™ i5-1145G7E	8 GB	2 x 2.5" SSD	–	4/10	3	8 x DIs 8 x DOs	1 x VGA 1 x HDMI	12/24 VDC
RKP-C110-C5-2L4C-T	Intel® Core™ i5-1145G7E	8 GB	2 x 2.5" SSD	–	6/6	3	8 x DIs 8 x DOs	1 x VGA 1 x HDMI	12/24 VDC
RKP-C110-C7-T	Intel® Core™ i7-1185G7E	8 GB	2 x 2.5" SSD	–	4/2	3	8 x DIs 8 x DOs	1 x VGA 1 x HDMI	12/24 VDC
RKP-C110-C7-T-Win10	Intel® Core™ i7-1185G7E	8 GB	2 x 2.5" SSD	Win 10 LTSC (64 GB SSD)	4/2	3	8 x DIs 8 x DOs	1 x VGA 1 x HDMI	12/24 VDC
RKP-C110-C7-8L-T	Intel® Core™ i7-1185G7E	8 GB	2 x 2.5" SSD	–	12/2	3	8 x DIs 8 x DOs	1 x VGA 1 x HDMI	12/24 VDC
RKP-C110-C7-8C-T	Intel® Core™ i7-1185G7E	8 GB	2 x 2.5" SSD	–	4/10	3	8 x DIs 8 x DOs	1 x VGA 1 x HDMI	12/24 VDC
RKP-C110-C7-2L4C-T	Intel® Core™ i7-1185G7E	8 GB	2 x 2.5" SSD	–	6/6	3	8 x DIs 8 x DOs	1 x VGA 1 x HDMI	12/24 VDC
RKP-C110-C1-2HV-T	Intel® Celeron® 6305E	8 GB	2 x 2.5" SSD	–	4/2	3	8 x DIs 8 x DOs	1 x VGA 1 x HDMI	100 to 240 VAC/VDC
RKP-C110-C3-2HV-T	Intel® Core™ i3-1115G4E	8 GB	2 x 2.5" SSD	–	4/2	3	8 x DIs 8 x DOs	1 x VGA 1 x HDMI	100 to 240 VAC/VDC
RKP-C110-C5-2HV-T	Intel® Core™ i5-1145G7E	8 GB	2 x 2.5" SSD	–	4/2	3	8 x DIs 8 x DOs	1 x VGA 1 x HDMI	100 to 240 VAC/VDC
RKP-C110-C7-2HV-T	Intel® Core™ i7-1185G7E	8 GB	2 x 2.5" SSD	–	4/2	3	8 x DIs 8 x DOs	1 x VGA 1 x HDMI	100 to 240 VAC/VDC

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