



FANLESS EMBEDDED SYSTEMS

RCO-6000-CML

Superior Fanless Embedded System w/ LGA 1200 for Intel 10th Gen CPU & W480E PCH



Features

- LGA 1200 socket for 10th Gen. Intel® CML S Processor (65W/35W TDP)
- Intel® W480E chipset
- 2x DDR4 2666/2933MHz SODIMM. Max. up to 64GB
- Triple Independent Display: 2x DisplayPort, 1x DVI-I
- 2x Intel® GbE supporting Wake-on-LAN and PXE
- 2x Full-size Mini PCIe for communication or expansion modules, 2x SIM socket
- 3x 2.5" SATA HDD Bay (1x Internal) and with RAID 0, 1, 5 support
- 1x M.2 (E Key, PCIe x1, USB 2.0, 2230)
- 8x RS-232/422/485 (6x internal), 6x USB 3.2 Gen 2, 3x USB 3.2 Gen 1 (1x internal)
- 8x DI + 8x DO with isolation
- 9 to 48VDC Wide Range Power Input Supporting AT/ATX Mode
- Wide Operating Temperature -25°C to 70°C (35W/65W CPU)
- TPM 2.0 Supported
- UL Listed



Specifications

System

Processor

- Support 10th Gen Intel® CML S Processor (LGA 1200, 65W/35W TDP)
- Intel® Xeon® W-1290TE, 10 Cores, 20MB Cache, up to 4.5 GHz
- Intel® Xeon® W-1270TE, 8 Cores, 16MB Cache, up to 4.4 GHz
- Intel® Xeon® W-1250TE, 6 Cores, 12MB Cache, up to 3.8 GHz
- Intel® Core™ i9-10900E, 10 Cores, 20MB Cache, up to 4.7 GHz
- Intel® Core™ i9-10900TE, 10 Cores, 20MB Cache, up to 4.5 GHz
- Intel® Core™ i7-10700E, 8 Core, 16MB Cache, up to 4.5 GHz
- Intel® Core™ i7-10700TE, 8 Cores, 16MB cache, up to 4.4 GHz
- Intel® Core™ i5-10500T, 6 Cores, 12MB Cache, up to 4.2 GHz
- Intel® Core™ i5-10500TE, 6 Core, 12MB Cache, 3.7 GHz
- Intel® Core™ i3-10100T, 4 Cores, 6MB cache, up to 3.8 GHz
- Intel® Core™ i3-10100TE, 4 Cores, 9MB Cache, up to 3.6 GHz

System Chipset

Intel® W480E Chipset

LAN Chipset

GbE1: Intel I219 (Support Wake-on-LAN and PXE)
GbE2: Intel I210 (Support Wake-on-LAN and PXE)

Audio Codec

Realtek ALC888S

System Memory

2x 260-Pin DDR4 2666 /2933MHz SODIMM.
Max. up to 64GB (ECC and Non-ECC)

Graphics

Intel® UHD Graphics 630

BIOS

AMI 256Mbit SPI BIOS

Watchdog

Software Programmable Supports 1~255 sec. System Reset

TPM

TPM 2.0

Display

Display Port

2x DisplayPort, support resolution 4096 x 2304, DP++

DVI

1x DVI-I, support resolution 1920 x 1200

Multiple Display

Triple Display

VGA

Yes (by optional split cable)

Storage

SIM Socket

2x External SIM socket (Mini PCIe attached)

SSD/HDD

1x Internal 2.5" SATA/SSD HDD Bay (support H=9mm)
2x Removable 2.5" SATA HDD Bay (support H=7mm,
Hot-swappable)
Support RAID 0, 1, 5

Expansion

M.2

1x M.2 (E Key, PCIe x1, USB 2.0, 2230)

Mini PCIe

2x Full-size Mini PCIe

Expansion Modules

Occupied One Universal I/O Slot:

- 4-port GbE module with Intel® I350 Chipset, RJ-45 or M12 connector (PoE optional)
- 2-Port RJ45 10GbE with Intel X710 Chipset
- 4-Port USB with Renesas uPD720201K8 host controller (share PCIe Gen2 x1 bandwidth)
- 1x M.2 for 5G (B Key, PCIe x1, USB 3.0, 3042/3052), Including 2x SIM socket, 1x SIM switch (1x Universal Slot Only)

I/O

Audio

1x Mic-in, 1x Line-out

CAN

2x CAN 2.0 A/B 2-pin Internal header

COM

2x RS-232/422/485 ; 6x RS-232/422/485 (internal)

DIO

8 in / 8 out (Isolated)

LAN

2x RJ45

Universal I/O Bracket

2x Universal I/O Bracket (By mini PCIe interface)

USB

6x USB 3.2 Gen 2 (10 Gbps)
3x USB 3.2 Gen 1 (5 Gbps, 1x Internal)
2x USB 2.0 header (internal)

Others

5x WiFi Antenna Holes

1x Power Switch, 1x AT/ATX Switch, 1x Remote Power On/Off

1x PC/Car Mode Switch, 1x Delay Time Switch

1x Removable CMOS Battery

4x 4-Pin Power Connector, 1x 4-PIN FAN Connector

Operating System

Windows

Windows 10

Linux

Linux kernel

Power

Power Adapter

Optional AC/DC 24V/5A, 120W
Optional AC/DC 24V/9.2A, 220W

Power Mode

AT, ATX

Power Ignition Sensing

Power Ignition Management

Power Supply Voltage

9~48VDC

Power Connector

5-pin Terminal Block

Power Protection

OVP (Over Voltage Protection)
OCP (Over Current Protection)
Reverse Protection

Environment

Operating Temperature

-25°C to 70°C (35W/65W CPU)

Storage Temperature

-30°C to 85°C

Relative Humidity

10% to 95% (non-condensing)

Certification

UL, CE, FCC Class A

Vibration

With SSD: 5 Grms, 5 - 500 Hz, 0.5 hr/axis
With HDD: 1 Grms, 5 - 500 Hz, 0.5 hr/axis

Shock

With SSD: 50G, half sine, 11ms

Physical

Dimensions

240 (W) x 261 (D) x 79 (H) mm

Weights

3.1~3.5 kg

Construction

Extruded Aluminum with Heavy Duty Metal

Mounting Options

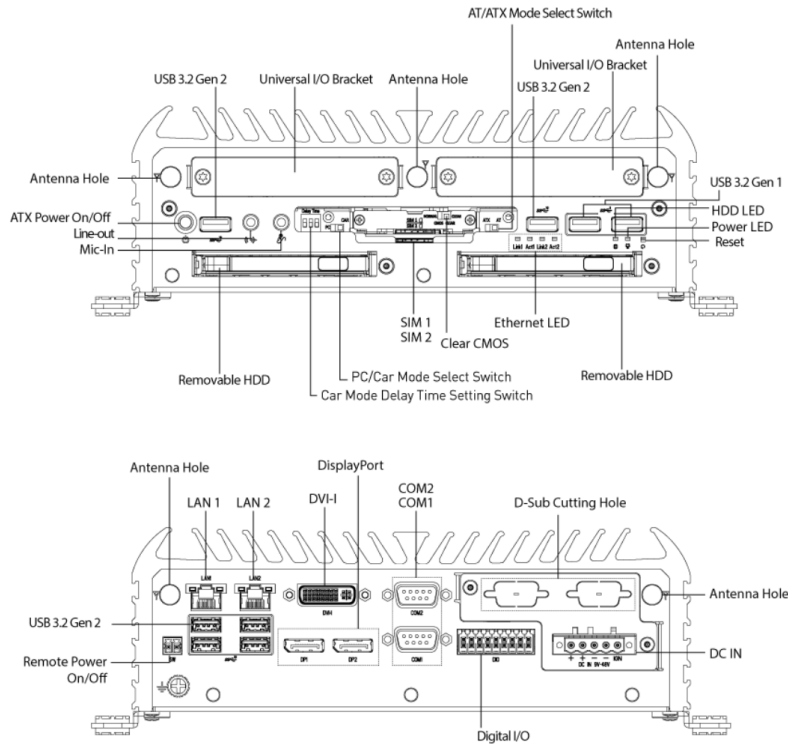
Wall Mounting

• All specifications and photos are subject to change without notice.

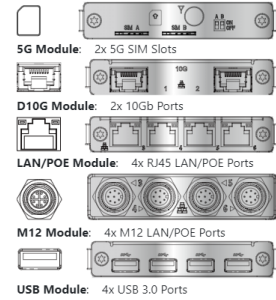


RCO-6000-CML

External I/O Mechanical Layout

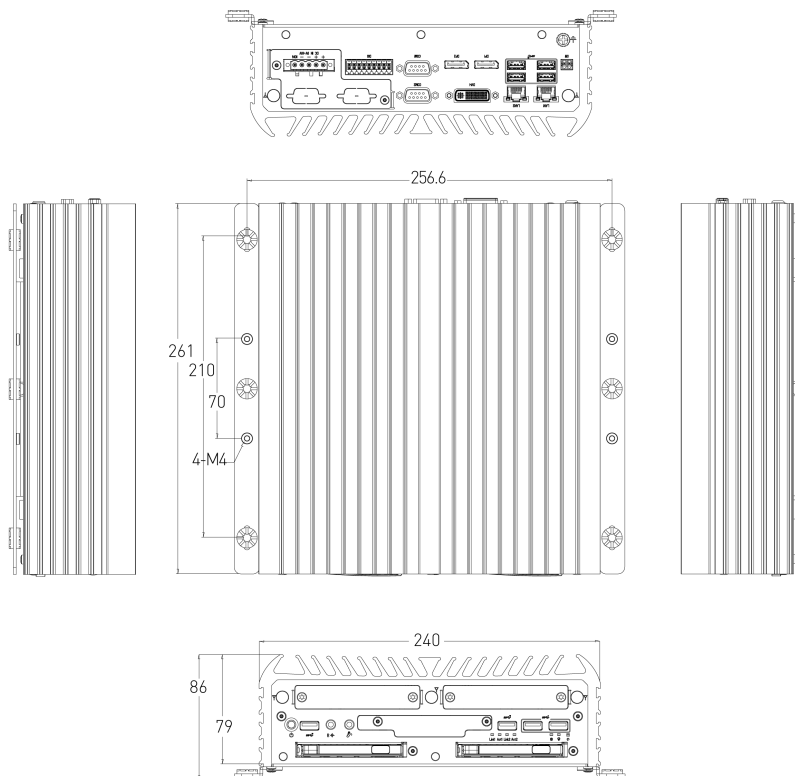


Available Modules



Dimension

Unit: mm





RCO-6000-CML

Available Models

Model No.	Description
RCO-6000-CML	Superior Fanless Embedded System w/ LGA 1200 for Intel® 10th Gen CPU & W480E PCH, 2x LAN
RCO-6000-CML-4L	Superior Fanless Embedded System w/ LGA 1200 for Intel® 10th Gen CPU & W480E PCH, 6x LAN
RCO-6000-CML-4LM12	Superior Fanless Embedded System w/ LGA 1200 for Intel® 10th Gen CPU & W480E PCH, 2x LAN, 4x M12 LAN
RCO-6000-CML-4P	Superior Fanless Embedded System w/ LGA 1200 for Intel® 10th Gen CPU & W480E PCH, 2x LAN, 4x PoE
RCO-6000-CML-4PM12	Superior Fanless Embedded System w/ LGA 1200 for Intel® 10th Gen CPU & W480E PCH, 2x LAN, 4x M12 PoE
RCO-6000-CML-8L	Superior Fanless Embedded System w/ LGA 1200 for Intel® 10th Gen CPU & W480E PCH, 10x LAN
RCO-6000-CML-8LM12	Superior Fanless Embedded System w/ LGA 1200 for Intel® 10th Gen CPU & W480E PCH, 2x LAN, 8x M12 LAN
RCO-6000-CML-8P	Superior Fanless Embedded System w/ LGA 1200 for Intel® 10th Gen CPU & W480E PCH, 2x LAN, 8x PoE
RCO-6000-CML-8PM12	Superior Fanless Embedded System w/ LGA 1200 for Intel® 10th Gen CPU & W480E PCH, 2x LAN, 8x M12 PoE
RCO-6000-CML-D10G	Superior Fanless Embedded System w/ LGA 1200 for Intel® 10th Gen CPU & W480E PCH, 2x LAN, 2x 10G LAN
RCO-6000-CML-4U3	Superior Fanless Embedded System w/ LGA 1200 for Intel® 10th Gen CPU & W480E PCH, 2x LAN, 12x USB
RCO-6000-CML-8U3	Superior Fanless Embedded System w/ LGA 1200 for Intel® 10th Gen CPU & W480E PCH, 2x LAN, 16x USB
RCO-6000-CML-5G	Superior Fanless Embedded System w/ LGA 1200 for Intel® 10th Gen CPU & W480E PCH, 2x LAN, 5G Module

Optional Accessories

Model No.	Description
1-E09A12002	Adapter AC/DC 24V 5A 120W with 3pin Terminal Block Plug 5.0mm Pitch
1-E09A22102	Adapter AC/DC 24V 9.2A 220W with 3pin Terminal Block Plug 5.0mm Pitch
1-TPCD00005	Power Cord, 3-pin US Type, 180cm
1-TPCD00002	Power Cord, European Type, 180cm
1-TPCD00001	Power Cord, 3-pin UK Type, 180cm

Packing List

1x RCO-6000-CML Series Embedded System
 1x Wall Mount Kit
 1x Accessory Kit
 1x DVI to VGA Adapter



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Assured Systems

Assured Systems is a leading technology company with over 1,500 regular clients in 80 countries, deploying over 85,000 systems to a diverse customer base in 12 years of business. We offer high-quality and innovative rugged computing, display, networking and data collection solutions to the embedded, industrial, and digital-out-of-home market sectors.

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