



FLASH STORAGE COMPUTING SYSTEM

# RCO-6000-CML-8NS

AI Edge Inference Computer w/ LGA 1200 for Intel 10th Gen CPU & W480E PCH, Flash Storage 8x U.2 NVMe Bay, 1x PCIe x4 (1-lane) Expansion

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
- 2x Removable 4 Bay NVMe SSD Module with RAID 0, 1, 5, 10 support (Support H=7mm)
- 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)
- 9 to 48VDC Wide Range Power Input Supporting AT/ATX Mode
- Wide Operating Temperature -25°C to 60°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**

NVMe

2x Removable Cannister Bricks with 2.5" 8 Bay U.2 NVMe SSD (Support H=7mm)

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

PCIe

1x PCIe x4 (1 Lane)

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  
Optional AC/DC 24V/11.67A, 280W (For GPU/Card Expansion)

Power Mode

AT, ATX

Power Ignition Sensing

Power Ignition Management

Power Supply Voltage

2x Power Input  
9~48VDC  
12~48VDC for NVMe EDGEboost Node

Power Connector

5-pin Terminal Block  
4-pin Terminal Block for NVMe EDGEBoost Node (12V requires 4-pin terminal block)

Power Protection

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

**Environment**

Operating Temperature

-25°C to 60°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: 3 Grms, 5 - 500 Hz, 0.5 hr/axis  
With HDD: 1 Grms, 5 - 500 Hz, 0.5 hr/axis

Shock

With SSD: 20G, half sine, 11ms

**Physical**

Dimensions

240 (W) x 261 (D) x 166.9 (H) mm

Weights

10.1 kg

Construction

Extruded Aluminum with Heavy Duty Metal

Mounting Options

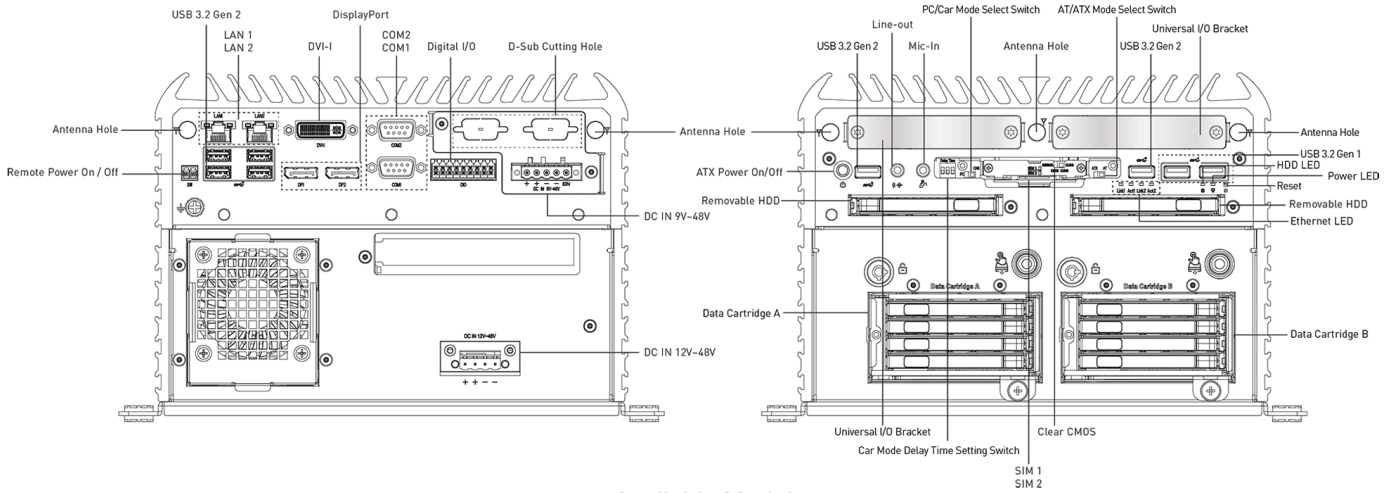
Wall Mounting

• For 10th Gen Intel CPUs configured to run at 65W, operating temperatures will be limited to 60°C.  
• 65W CPUs may experience thermal throttling depending on extreme application workloads; this is also due to an increase in the physical CPU cores from the Intel silicon (up to 10 cores). Please note, this does not indicate system malfunction or problems in the fanless design. Please consult our embedded engineers for the best configuration to match your application requirements.  
• All specifications and photos are subject to change without notice.

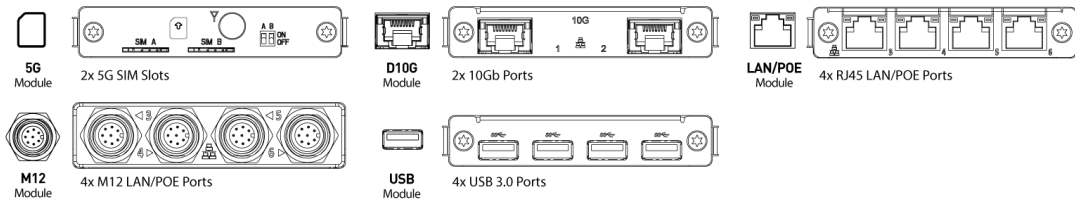


# RCO-6000-CML-8NS

## External I/O Mechanical Layout

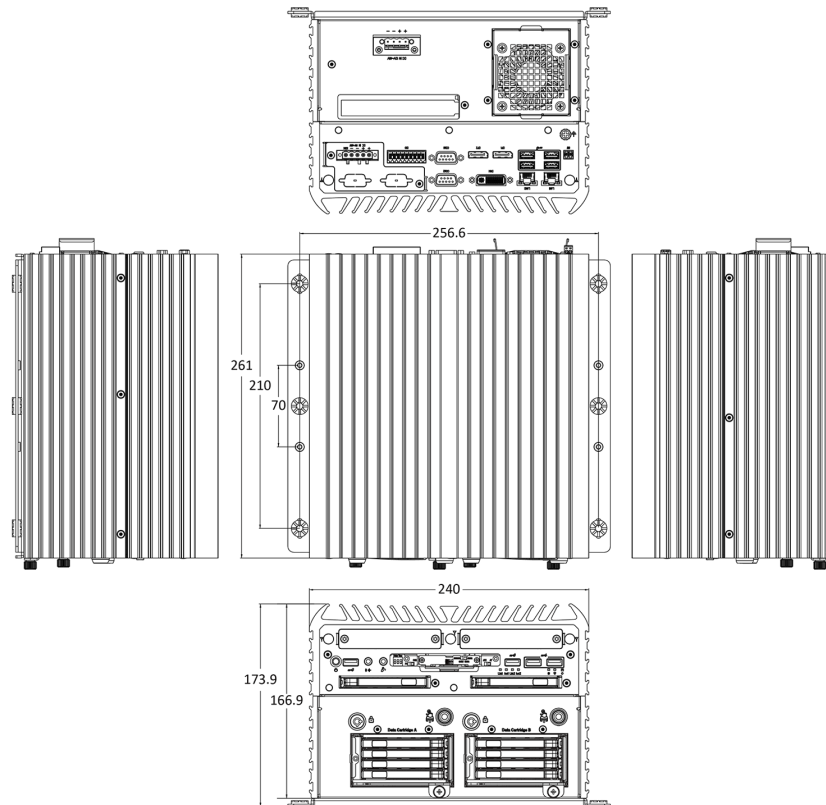


## Available Modules



## Dimension

Unit: mm





## RCO-6000-CML-8NS

### Available Models

Model No.	Description
RCO-6000-CML-8NS	AI Edge Inference Computer w/ LGA 1200 for Intel 10th Gen Processor and W480E PCH, Flash Storage 8x U.2 NVMe Bay, 1x PCIe x4 (1-lane) Expansion

### 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-E09A22801	Adapter AC/DC 24V/11.67A 280W 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-8NS  
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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