



AI EDGE INFERENCE COMPUTER

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 (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 CPU)
- TPM 2.0 Supported
- Edge AI Ready with Hailo-8™ (26 TOPS / 2.5W)
- UL Listed



Specifications

System

Processor

Support 10th Gen Intel® CML S Processor (LGA 1200, 35W TDP)

- Intel® Xeon® W-1290TE, 10 Cores, 20MB Cache, up to 4.5 GHz
- Intel® Core™ i9-10900TE, 10 Cores, 20MB Cache, up to 4.5 GHz
- Intel® Core™ i7-10700TE, 8 Cores, 16MB cache, up to 4.4 GHz
- Intel® Core™ i5-10500TE, 6 Core, 12MB Cache, 3.7 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

AI Accelerator Supports 4x Hailo-8™ modules

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 10/11

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 CPU)

Storage Temperature -30°C to 85°C

Relative Humidity 10% to 95% (non-condensing)

Certification UL 62368 Ed. 3, 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

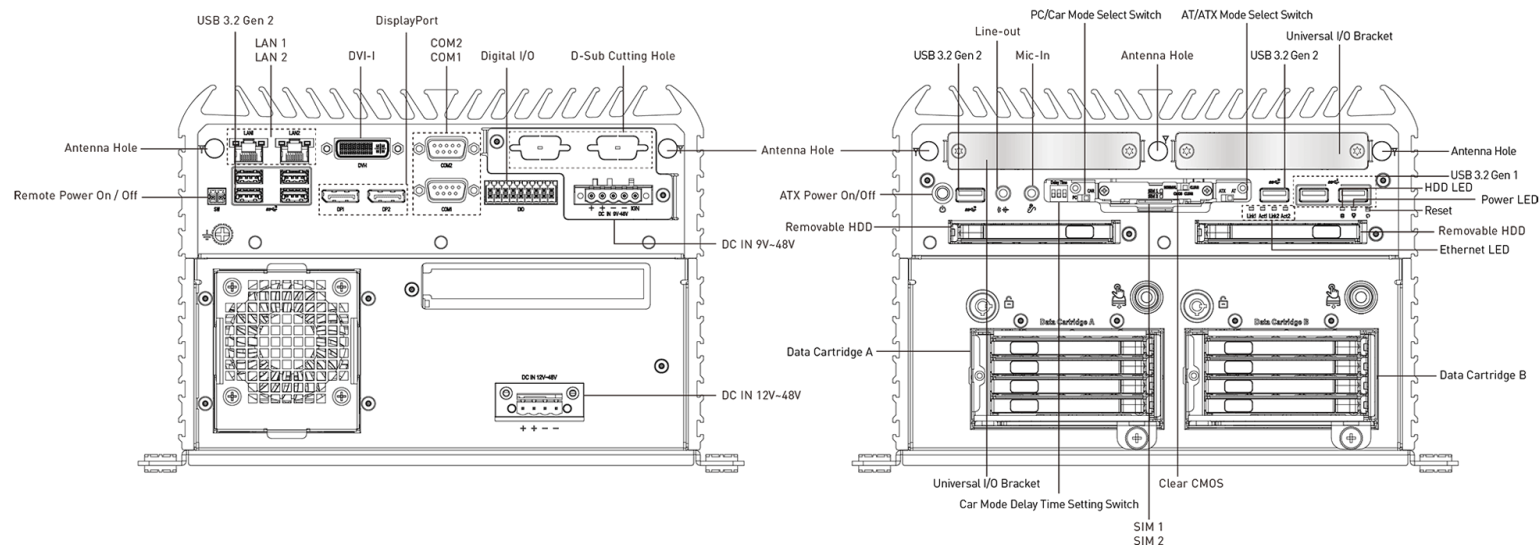
Weights 10.1 kg

Construction Extruded Aluminum with Heavy Duty Metal

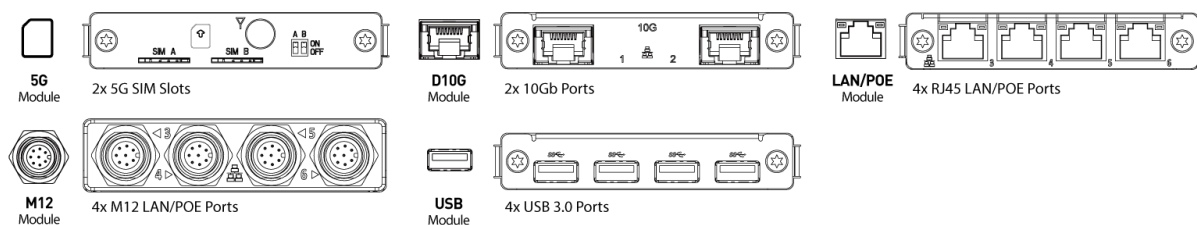
Mounting Options Wall Mounting

- 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.

External I/O Mechanical Layout

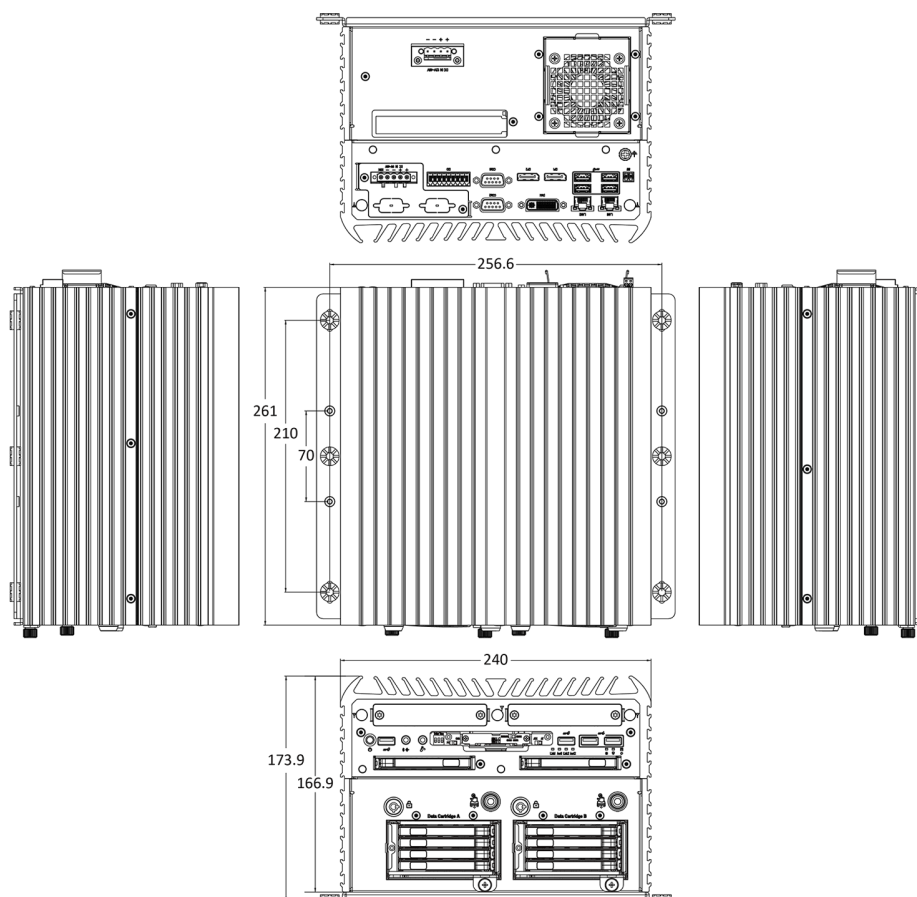


Available Modules



Dimension

Unit: mm



Compatible GPU AVL

Model	GPU Memory	Memory Bandwidth	CUDA Cores	Tensor Cores	RT Cores	AI TOPS	Dimensions	Power & Thermal
RTX 4000 SFF Ada Generation	20GB GDDR6 ECC	320 GB/s	6144	192	48	307	2.7" x 6.6" LP DS	70 W
NVIDIA RTX 2000 Ada Generation	16 GB GDDR6 with ECC	224 GB/s	2816	88	22	192	2.7" x 6.6" LP DS	70 W
NVIDIA RTX A1000	8GB GDDR6	192 GB/s	2304	72	18	108	2.7" H x 6.4" LP SS	50 W

Compliances and Standards

Vibration	With SSD: 3 Grms, 5 - 500 Hz, 0.5 hr/axis With HDD: 1 Grms, 5 - 500 Hz, 0.5 hr/axis IEC60068-2-64:2008 Designed to comply with MIL-STD-810H Method 514.8 Procedure I
Shock	With SSD: 20G, half sine, 11ms IEC60068-2-27:2008 Designed to comply with MIL-STD-810H Method 516.8 Procedure I
Operating Temperature	-25°C to 60°C (35W CPU) IEC60068-2-1:2007 (Cold test procedure) IEC60068-2-2:2007 (Dry heat test procedure) IEC60068-2-3:2007 (Damp heat, steady state, test procedure) IEC60068-2-14:2009 (Wide temperature range thermal shock)
EMC	• FCC Class A • CE • ICES-003 • UKCA • Industrial EMC Compliance - EN 61000-4-2: 2009 - EN IEC 61000-4-3: 2020 - EN 61000-4-4: 2012 - EN 61000-4-5: 2014 +A1: 2017 - EN 61000-4-6: 2014
Safety	• UL Safety: UL62368-1, 3rd Ed., (cULus) • Test procedure: CB Scheme • Standard: IEC 62368-1:2018

Available Models

Model No.	Description
RCO-6000-CML-8NS-P	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, w/ Power Adapter

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
999930	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 DVI to VGA Adapter

US Exports And Tariff Codes

ECCN	5A992.c
HTS	8471.50.0150
ScheduleB	84.71

Premio Inc.

918 Radecki Ct., City of Industry
CA 91748, United States
Toll Free: 800.977.3646

Premio Taiwan Inc.

18F, No.176, Jianyi Road, Zhonghe District,
New Taipei City 235603, Taiwan
Toll Free: 886.2.7731.7888

Email: sales@premioinc.com
Website: <https://premioinc.com>