



AI EDGE INFERENCE COMPUTER

RCO-6000-RPL-4NA2000

AI Edge Inference Computer w/ LGA 1700 for Intel 12/13/14th Gen CPU & R680E PCH, 4 Bay U.2 7mm, RTX A2000 integrated

Features

- LGA 1700 socket for 12/13/14th Gen. Intel® ADL & RPL Processor (65W/35W TDP)
- Intel® R680E Chipset
- NVIDIA RTX A2000 12GB Graphics based on NVIDIA Ampere Architecture-Based CUDA Cores
- 2x DDR5 4800/5600MHz SODIMM. Max. up to 64GB
- 7 Display interface supported by 1x DVI-I, 2x DisplayPort, 4x Mini DisplayPort
- 2x Intel® 2.5 GbE supporting Wake-on-LAN and PXE
- 1x Full-size Mini PCIe for communication or expansion modules, 2x SIM socket
- 4x 7mm Hot-swappable NVMe SSD, Support RAID 0, 1, 5
- 1x 9mm 2.5" SATA SSD (Internal), 1x 7mm 2.5" SATA SSD (Hot-swap)
- 1x M.2 (E Key, PCIe x1, USB 2.0, 2230)
- 1x M.2 (B Key, 2242/3042/3052, PCIe x2, Support AI Module/NVMe Storage, PCIe x1 & USB 3.2 Gen1, Support 4G/5G)
- 6x RS-232/422/485 (4x internal), 8x USB 3.2 Gen 2, 1x USB 3.2 Gen 1 (internal)
- 9 to 48VDC Wide Range Power Input Supporting AT/ATX Mode
- Wide Operating Temperature -25°C to 45°C (35W/65W CPU)
- TPM 2.0 Supported



Specifications

System

Processor
Support 12/13th/14th(Non-vPRO) Gen Intel® ADL & RPL Processor (LGA 1700, 65W/35W TDP)
- Intel® Core™ i9-14900/i9-13900E/i9-12900E, 65W
- Intel® Core™ i9-14900T/i9-13900TE/i9-12900TE, 35W
- Intel® Core™ i7-14700/i7-13700E/i7-12700E, 65W
- Intel® Core™ i7-14700T/i7-13700TE/i7-12700TE, 35W
- Intel® Core™ i5-14500/i5-13500E/i5-12500E, 65 W
- Intel® Core™ i5-14500T/i5-13500TE/i5-12500TE, 35W
- Intel® Core™ i3-13100E/i3-12100E, 60W
- Intel® Core™ i3-14100T/i3-13100TE/i3-12100TE, 35W
- Intel® Core™ 300T, 35W
- Intel® Pentium® G7400E, 46W / G7400TE, 35W
- Intel® Celeron® G6900E, 46W / G6900TE, 35W

System Chipset Intel® R680E Express Chipset

LAN Chipset 2.5 GbE1: Intel I226, 2.5 GbE2: Intel I226

Support Wake-on-LAN and PXE, Support TSN

Audio Codec Realtek ALC888S

System Memory 2x 262-Pin DDR5 4800/5600MHz SODIMM.

Max. up to 64GB (ECC and Non-ECC)

Graphics Intel® UHD Graphics 770/710 or NVIDIA RTX A2000 12GB integrated

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 5120 x 3200,

Up to 7680 x 4320

DVI 1x DVI-I, support resolution 1920 x 1200

Mini DisplayPort 4x Mini DisplayPort, Support resolution 5120 x 2880,

Up to 7680 x 4320

Multiple Display 7 Display interfaces

Storage

M.2 1x M.2 B Key, 2242/3042/3052

(PCIe x2, Support AI Module/NVMe Storage)

(PCIe x1 & USB 3.2 Gen1, Support 4G/5G)

mSATA 1x mSATA (Shared by 1x Mini PCI Express)

NVMe 1x Removable Cannister Brick with 2.5" 4 Bay U.2 NVMe SSD

(Support H=7mm)

SIM Socket 2x External SIM socket (Mini PCIe/M.2 B Key attached)

SSD/HDD 1x 9mm 2.5" SATA HDD Bay (Internal)

1x 7mm 2.5" SATA HDD Bay (Hot-swappable)

4x 7mm 2.5" NVMe SSD Bay (Hot-swappable)

Support RAID 0, 1, 5

Expansion

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

Mini PCIe 1x Full-size Mini PCIe (1x shared by 1x mSATA)

Expansion Modules

2x EDGEBoost I/O Brackets:

- 4-port GbE module with Intel® I350 Chipset, RJ-45/M12 connector (PoE optional)
- 2-Port RJ45 10GbE with Intel X710 Chipset
- 4-Port USB 3.0 (share PCIe Gen2 x1 bandwidth)
- 1x M.2 B-Key, 2242 for AI/NVMe, 1x M.2 B-Key, 3042/3052 for 5G/AI/NVMe
- 1x M.2 M-Key, PCIe x4 Lane, 2242/2260 for AI Module/NVMe
- 1x M.2 for 5G (B Key, PCIe x1, USB 3.0, 3042/3052), 2x SIM socket, 1x SIM switch

GPU Card Dimension Please ensure the card dimensions do not exceed the following specifications to avoid potential installation issues.
189 (L) x 111 (W) mm (Height: Single GPU 20 mm)

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 ; 4x RS-232/422/485 (Internal)

DIO 8 in / 8 out (Isolated)

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

LAN 2x RJ45

USB 8x USB 3.2 Gen 2 (10 Gbps)

1x USB 3.2 Gen 1 (5 Gbps, 1x Internal), 2x USB 2.0 (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

Operating System

Windows Windows 10/11

Linux Linux kernel

Power

Power Adapter Optional AC/DC 24V/9.2A, 220W

Optional AC/DC 24V/11.67A, 280W

Optional AC/DC 24V/15A, 360W (i7/i9 CPU/GPU/Card Expansion)

Power Mode AT, ATX

Power Ignition Sensing Power Ignition Management

Power Supply Voltage 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 45°C (35W/65W CPU)

(Optional External Fan Kit: Recommended for i9 CPU/65W)

Storage Temperature -30°C to 85°C

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

Certification UL 62368 Ed. 3, CE, FCC Class A

Vibration IEC60068-2-64:2008

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

With SSD: 3 Grms (5 - 500 Hz, 0.5 hr/axis)

Designed to comply with MIL-STD-810G Method 514.7

Procedure I

Shock IEC60068-2-27:2008

With SSD: 20G half-sin 11ms

Designed to comply with MIL-STD-810G Method 516.7

Procedure I

Physical

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

Weights 11 ~ 12 kg

Construction Extruded Aluminum with Heavy Duty Metal

Mounting Options Wall Mounting

* For 12/13/14th Gen Intel CPUs configured to run at 65W, operating temperatures will be limited to 45°C.

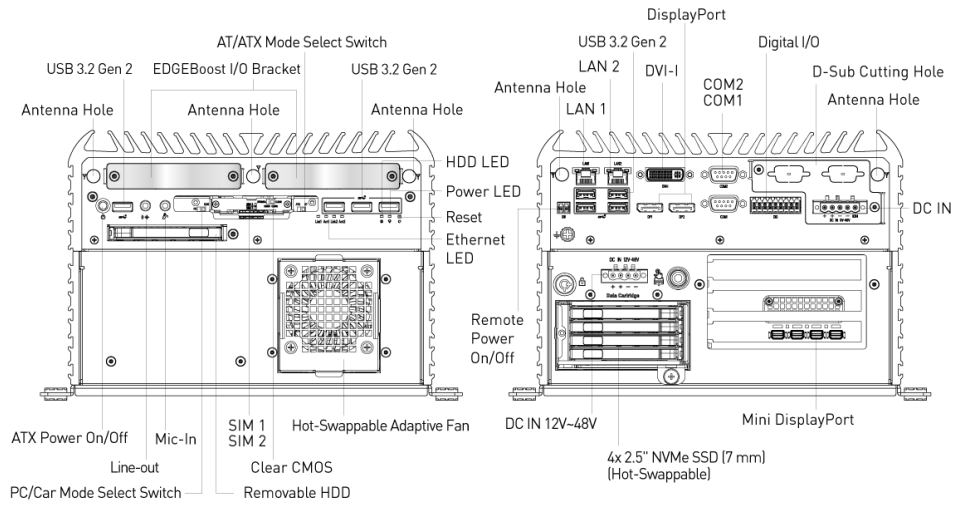
** 65W CPUs may experience thermal throttling depending on extreme application workloads; this is also due to an increase in the physical CPU cores from the Intel silicon (up to 24 cores). Please note, this does not indicate system malfunction or problems in the fanless design. Please consult our embedded engineers for the best configuration to match your application requirements.

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

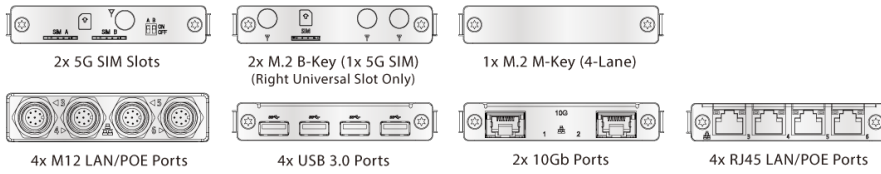


RCO-6000-RPL-4NA2000

External I/O Mechanical Layout

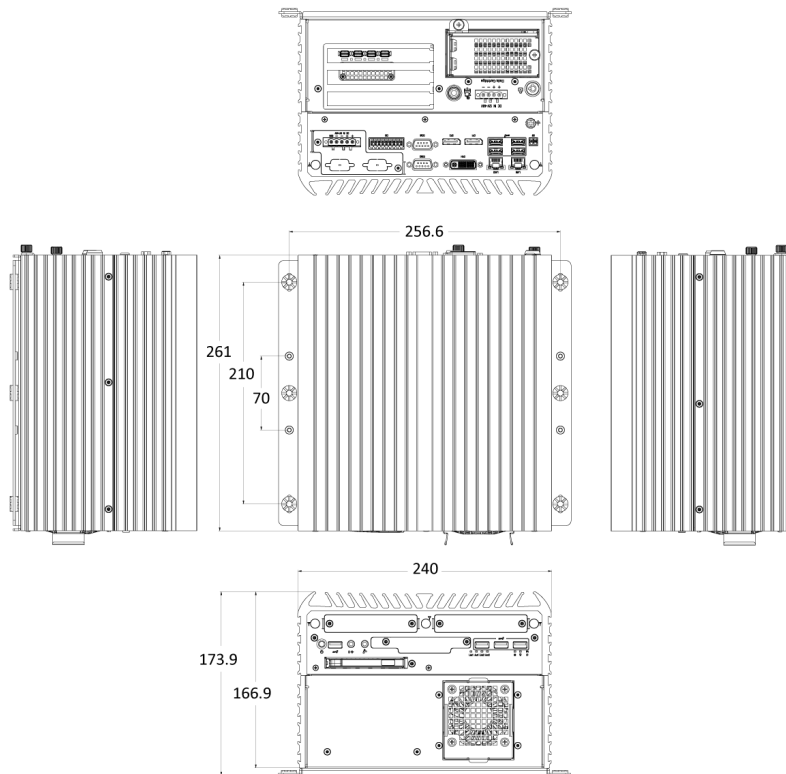


Available EDGEBoost I/O



Dimension

Unit: mm





RCO-6000-RPL-4NA2000

Available Models

Model No.	Description
RCO-6000-RPL-4NA2000	AI Edge Inference Computer w/ LGA 1700 for Intel® 12/13/14th Gen CPU & R680E PCH, 2x LAN, 4 Bay U.2 7mm, RTX A2000 integrated

Optional Accessories

Model No.	Description
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-E09A36002	Adapter AC/DC 48V/7.5A 360W 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
3-EXFANK01S10-S0	External Double Fan Module Kit (for Product shipment)
3-EXFANK01S10-S1	External Double Fan Module Kit (for system assembly)
1-TFAN00005	FAN Extension Cable

Packing List

1x RCO-6000-RPL-4NA2000
 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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