



AI EDGE INFERENCE COMPUTER

# RCO-6000-RPL-2N-1E

AI Edge Inference Computer w/ LGA 1700 for Intel 12/13th Gen CPU & R680E PCH, 2 Bay U.2 15mm NVMe, 1x PCIe Expansion

## Features

- LGA 1700 socket for 12/13th Gen. Intel® ADL & RPL Processor (35W TDP)
- Intel® R680E Chipset
- 2x DDR5 4800/5600MHz SODIMM. Max. up to 64GB
- 3x Independent Displays: 1x DVI-I, 2x DisplayPort
- 2x Intel® 2.5 GbE supporting Wake-on-LAN and PXE
- 1x PCIe x16 (8-lane) to support dedicated GPU
- 1x Full-size Mini PCIe for communication or expansion modules, 2x SIM socket
- 2x 15mm Hot-swappable NVMe SSD, Support RAID 0, 1
- 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 CPU, with GPU)
- TPM 2.0 Supported



## Specifications

### System

Processor  
Support 12/13th Gen Intel® ADL & RPL Processor (LGA 1700, 35W TDP)  
- Intel® Core™ i9-13900TE/i9-12900TE, up to 24 Cores, 36MB Cache, up to 5 GHz, 35W  
- Intel® Core™ i7-13700TE/i7-12700TE, up to 16 Cores, 30MB cache, up to 4.8 GHz, 35W  
- Intel® Core™ i5-13500TE/i5-12500TE, up to 14 Core, 24MB Cache, up to 4.5 GHz, 35W  
- Intel® Core™ i3-13100TE/i3-12100TE, up to 4 Cores, 12MB Cache, up to 4.1 GHz, 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
BIOS	AMI 256Mbit SPI BIOS
Watchdog	Software Programmable Supports 1~255 sec. System Reset
AI Accelerator	Supports 3x Hailo-8™ modules
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
Multiple Display	Triple Display

### 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" 2 Bay U.2 NVMe SSD (Support H=15mm)
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) 2x 15mm 2.5" NVMe SSD Bay (Hot-swappable) Support RAID 0, 1

### 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)
PCIe	1x PCIe x16 (8-lane, Gen 3) 1x PCIe x4 (1-lane, Gen 3)

### 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

### 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/GPU EDGEboost Node
Power Connector	5-pin Terminal Block 4-pin Terminal Block for GPU and NVMe EDGEBoost Node (12V requires 4-pin terminal block)
Power Protection	OVP (Over Voltage Protection) OCP (Over Current Protection) Reverse Protection

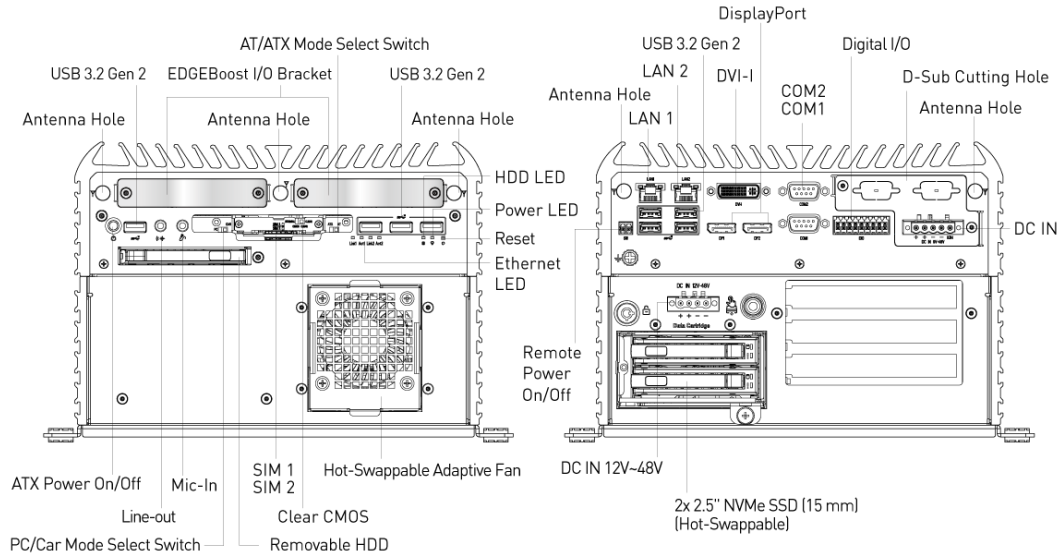
### Environment

Operating Temperature	-25°C to 45°C (35W CPU, with GPU)
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

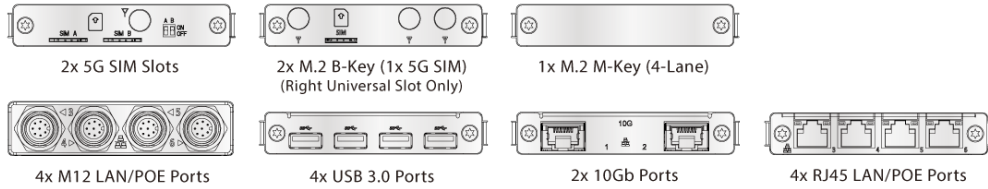
### Physical

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

## External I/O Mechanical Layout

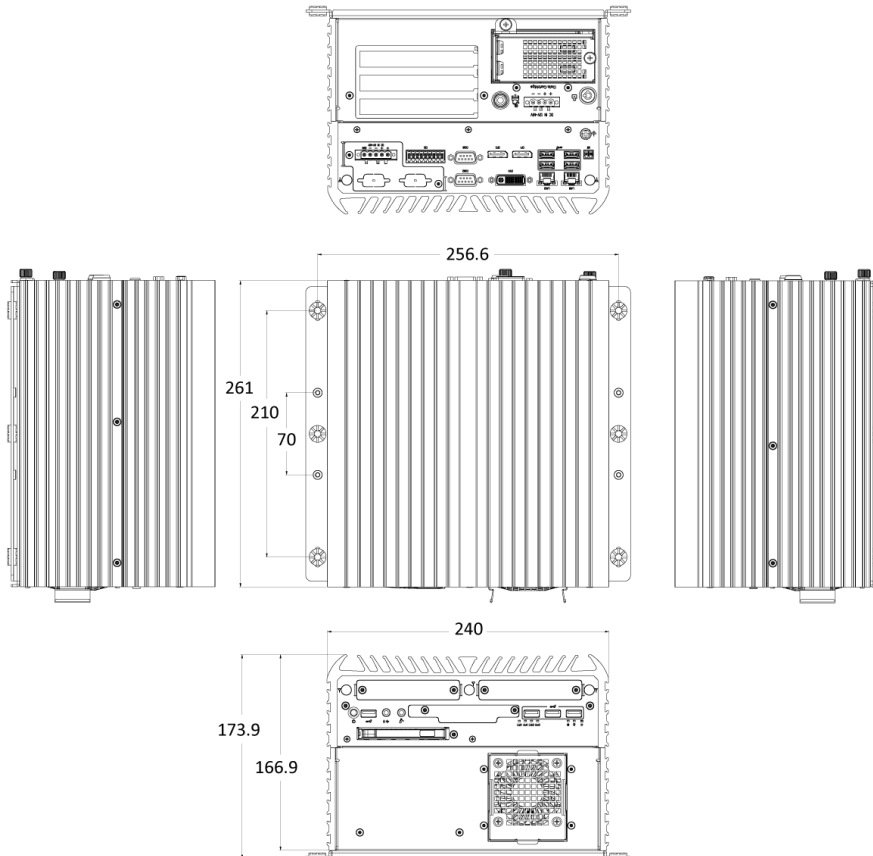


### Available EDGEBoost I/O



## Dimension

Unit: mm



### Available Models

Model No.	Description
RCO-6000-RPL-2N-P	AI Edge Inference Computer w/ LGA 1700 for Intel 12/13th Gen CPU & R680E PCH, 2 Bay U.2 15mm NVMe, 1x PCIe Expansion

### 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
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-RPL Series AI Edge Inference Computer  
 1x Wall Mount Kit  
 1x Accessory Kit  
 1x DVI to VGA Adapter

### Compatible GPU AVL

Model Name	RAM	CUDA Cores	TDP	Display	Interface	Active Cooling	Slots
NVIDIA T1000	8G	896	50	4x mDP	PCIe 3.0 x16	Yes	1
NVIDIA RTX A2000	12G	3328	70	4x mDP	PCIe 4.0 x16	Yes	2
NVIDIA RTX 4000 SFF	20G	6144	70	4x mDP	PCIe 4.0 x16	Yes	2

### Exports And Tariff Codes

ECCN	5A992.c
HTS	8471.50.0150
ScheduleB	84.71