



AI EDGE INFERENCE COMPUTER

# RCO-6000-RPL-2-4B7M

AI Edge Inference Computer W/ LGA 1700 for Intel 12/13th Gen CPU & R680E PCH, 2x LAN, 6x SDD, 2x PCIe

## 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
- Triple Independent Display: 2x DisplayPort, 1x DVI-I
- 2x Intel® 2.5 GbE supporting Wake-on-LAN and PXE
- 2x Full-size Mini PCIe for communication or expansion modules, 2x SIM socket
- 1x 9mm 2.5" SATA SSD (Internal), 1x 7mm 2.5" SATA SSD (Hot-swap)
- 4x 7mm Hot-swappable 2.5" SATA SSD Bay, Support RAID 0, 1, 5, 10
- 1x M.2 (E Key, PCIe x1, USB 2.0, 2230)
- 6x RS-232/422/485 (4x internal), 8x USB 3.2 Gen 2, 1x USB 3.2 Gen 1 (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 CPU)
- TPM 2.0 Supported
- EDGEBoost Options: 1x PCIe x16 (Gen 4), 1x PCIe x1 (Gen3) or 1x PCIe x16 (8-lane, Gen 4), 1x PCIe x8 (8-lane, Gen 4)



## Specifications

| System  |  |
|---|--|
| Processor   | Support 12/13th Gen Intel® ADL & RPL Processor (LGA 1700, 35W TDP)<br>- Intel® Core™ i9-13900TE/i9-12900TE, up to 24 Cores, 36MB Cache, up to 5 GHz, 35W<br>- Intel® Core™ i7-13700TE/i7-12700TE, up to 16 Cores, 30MB cache, up to 4.8 GHz, 35W<br>- Intel® Core™ i5-13500TE/i5-12500TE, up to 14 Core, 24MB Cache, up to 4.5 GHz, 35W<br>- 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<br>Support Wake-on-LAN and PXE, Support TSN   |
| Audio Codec   | Realtek ALC888S  |
| System Memory   | 2x 262-Pin DDR5 4800/5600MHz SODIMM.<br>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   |
| VGA   | Yes (by optional split cable)  |
| 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)   |
| SIM Socket  | 2x External SIM socket (Mini PCIe/M.2 B Key attached)  |
| SSD/HDD   | 1x 9mm 2.5" SATA/SSD HDD Bay (Internal)<br>1x 7mm 2.5" SATA HDD/SSD Bay (Hot-swappable)<br><br>EDGEBoost Node Options:<br>• SATA: 4x 7mm 2.5" SATA SSD Bay (Hot-swappable)<br>Support RAID 0, 1, 5, 10   |
| 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  | EDGEBoost Node Options:<br>• 1x PCIe x16 (Gen 4), 1x PCIe x1 (Gen 3)<br>• 1x PCIe x16 (8-lane, Gen 4), 1x PCIe x8 (8-lane, Gen 4)  |
| Expansion Modules<br>2x EDGEBoost I/O Brackets:<br>• 4-port GbE module with Intel® I350 Chipset, RJ-45/M12 connector (PoE optional)<br>• 2-Port RJ45 10GbE with Intel X710 Chipset<br>• 4-Port USB 3.0 (share PCIe Gen2 x1 bandwidth)<br>• 1x M.2 B-Key, 2242 for AI/NVMe, 1x M.2 B-Key, 3042/3052 for 5G/AI/NVMe<br>• 1x M.2 M-Key, PCIe x4 Lane, 2242/2260 for AI Module/NVMe<br>• 1x M.2 for 5G (B Key, PCIe x1, USB 3.0, 3042/3052), 2x SIM socket, 1x SIM switch |  |
| Card Dimension  | 235 (L) x 112 (H) 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)<br>1x USB 3.2 Gen 1 (5 Gbps, 1x Internal), 2x USB 2.0 (Internal)  |
| Others                | 5x WiFi Antenna Holes<br>1x Power Switch, 1x AT/ATX Switch, 1x Remote Power On/Off<br>1x PC/Car Mode Switch, 1x Delay Time Switch<br>1x Removable CMOS Battery |

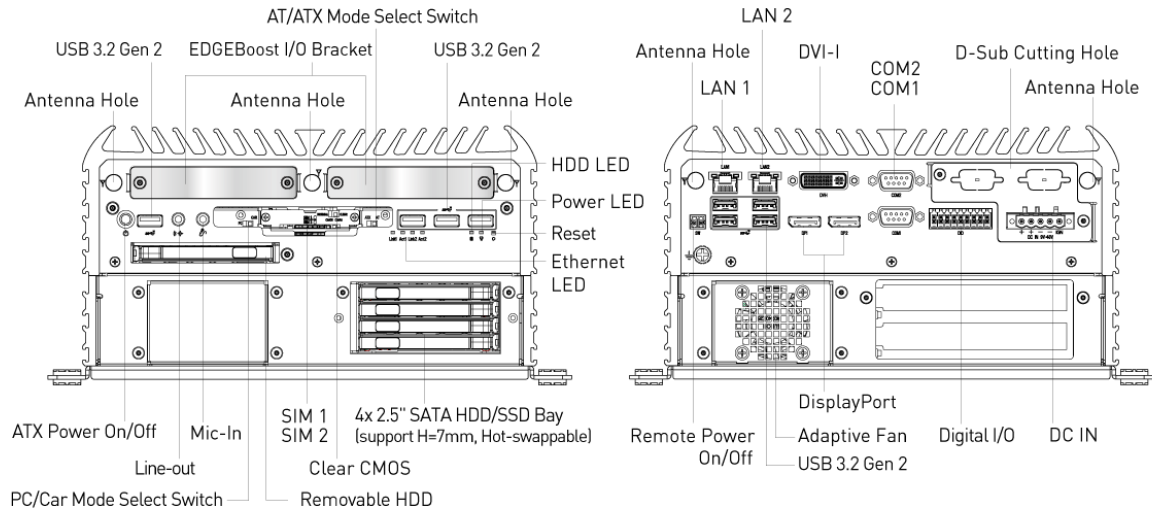
| Operating System |               |
|------------------|---------------|
| Windows          | Windows 10/11 |
| Linux            | Linux kernel  |

| Power                  |  |
|------------------------|--|
| Power Adapter          | Optional AC/DC 24V/9.2A, 220W<br>Optional AC/DC 24V/15A, 360W (i7/i9 CPU)            |
| 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)<br>OCP (Over Current Protection)<br>Reverse Protection |

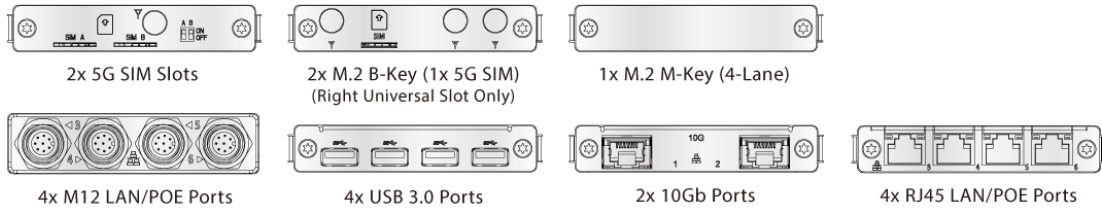
| Environment           |   |
|-----------------------|---|
| Operating Temperature | -25°C to 70°C (35W CPU)   |
| Storage Temperature   | -30°C to 85°C   |
| Relative Humidity     | 10% to 95% (non-condensing)   |
| Certification         | UL 62368 Ed. 3, CE, FCC Class A   |
| Vibration             | IEC60068-2-64:2008<br>With HDD: 1 Grms (5 - 500 Hz, 0.5 hr/axis)<br>With SSD: 5 Grms (5 - 500 Hz, 0.5 hr/axis)<br>Designed to comply with MIL-STD-810G Method 514.7 Procedure I |
| Shock                 | IEC60068-2-27:2008<br>With SSD: 50G half-sin 11ms<br>Designed to comply with MIL-STD-810G Method 516.7 Procedure I  |

| Physical         |   |
|------------------|---|
| Dimensions       | 240 (W) x 261 (D) x 126.8 (H) mm        |
| Weights          | 6.5 ~ 7.5 kg                            |
| Construction     | Extruded Aluminum with Heavy Duty Metal |
| Mounting Options | Wall Mounting                           |

## External I/O Mechanical Layout

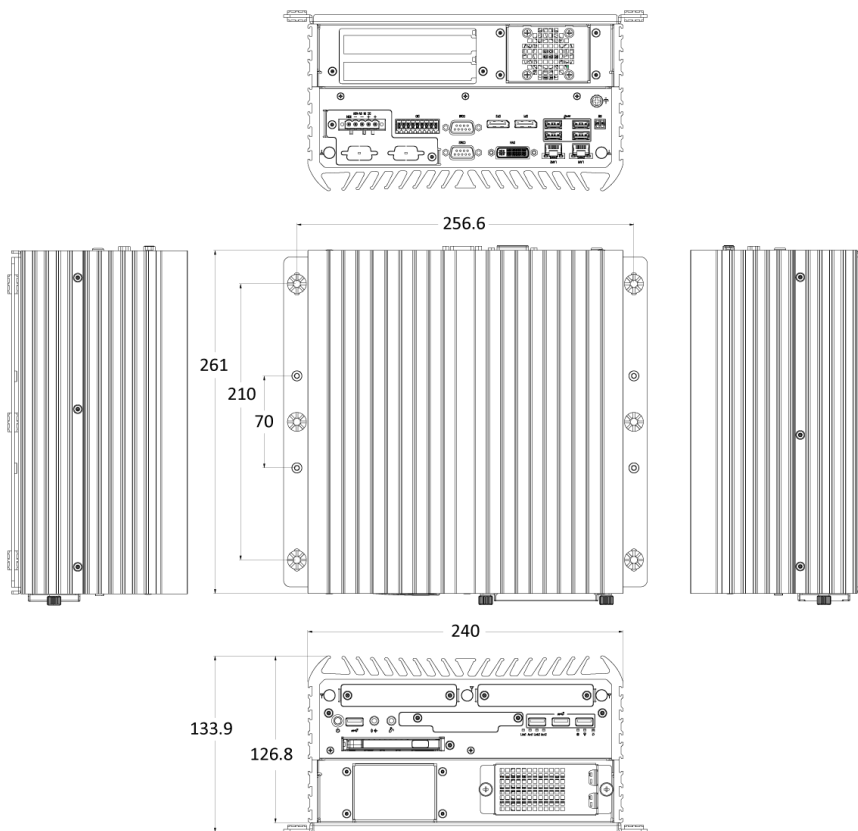


### Available EDGEBoost I/O



## Dimension

Unit: mm



### Available Models

| Model No.                | Description   |
|--------------------------|---|
| RCO-6000-RPL-2E16-4B7M-P | Flash Storage Computing System w/ LGA 1700 for Intel® 12/13th Gen CPU & R680E PCH, 2x LAN, 1x PCIe x16 & x1, 4 Bay 7mm SATA |
| RCO-6000-RPL-2E8-4B7M-P  | Flash Storage Computing System w/ LGA 1700 for Intel® 12/13th Gen CPU & R680E PCH, 2x LAN, 2x PCIe (8-lane), 4 Bay 7mm SATA |

### 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 Embedded System  
 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        |