



AI EDGE INFERENCE COMPUTER

RCO-6000-RPL

Industrial Computer w/ LGA 1700 for Intel 12/13th Gen CPU & R680E PCH



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), Support RAID 0, 1
- 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

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 |
| 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 HDD Bay (Internal) 1x 7mm 2.5" SATA HDD 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) |
| 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) |

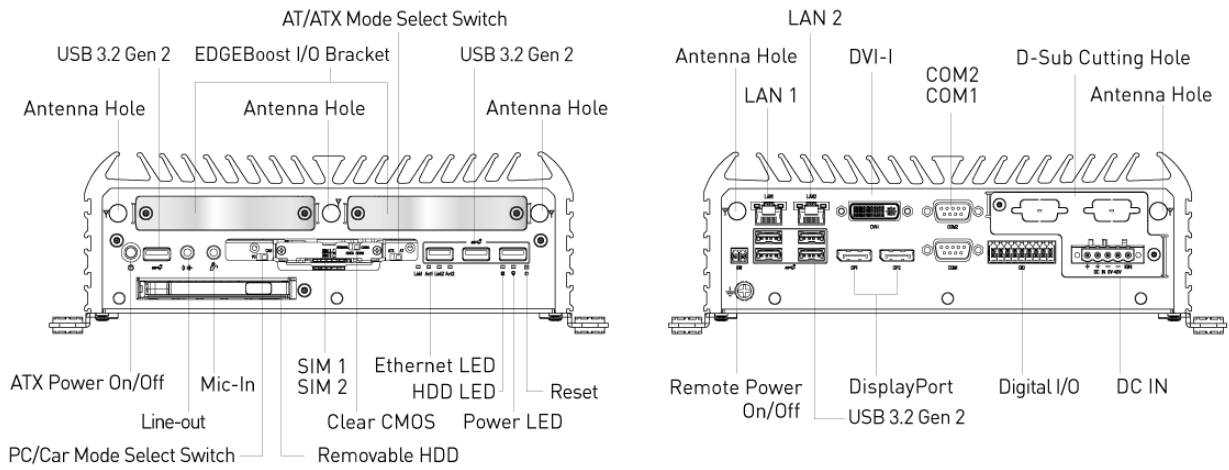
| | |
|--------|--|
| Others | 5x WiFi Antenna Holes 1x Power Switch, 1x AT/ATX Switch, 1x Remote Power On/Off 1x PC/Car Mode Switch, 1x Delay Time Switch 1x Removable CMOS Battery |
|--------|--|

| Operating System | |
|------------------------|--|
| Windows | Windows 10/11 |
| Linux | Linux kernel |
| Power | |
| Power Adapter | Optional AC/DC 24V/9.2A, 220W Optional AC/DC 24V/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) OCP (Over Current Protection) Reverse Protection |

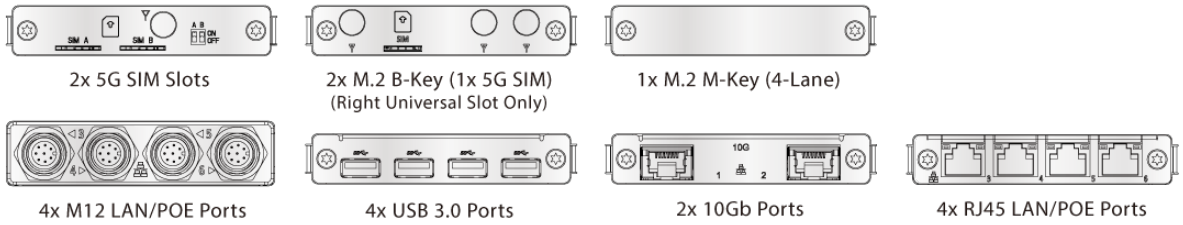
| Environment | |
|-----------------------|---|
| Operating Temperature | -25°C to 70°C (35W CPU) |
| Storage Temperature | -30°C to 85°C |
| Relative Humidity | 10% to 95% (non-condensing) |
| Certification | UL 62368 Ed. 3, CE, FCC Class A |
| Vibration | IEC60068-2-64:2008 With HDD: 1 Grms (5 - 500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

| Physical | |
|------------------|---|
| Dimensions | 240 (W) x 261 (D) x 79 (H) mm |
| Weights | 4.5 kg |
| Construction | Extruded Aluminum with Heavy Duty Metal |
| Mounting Options | Wall Mounting |

External I/O Mechanical Layout

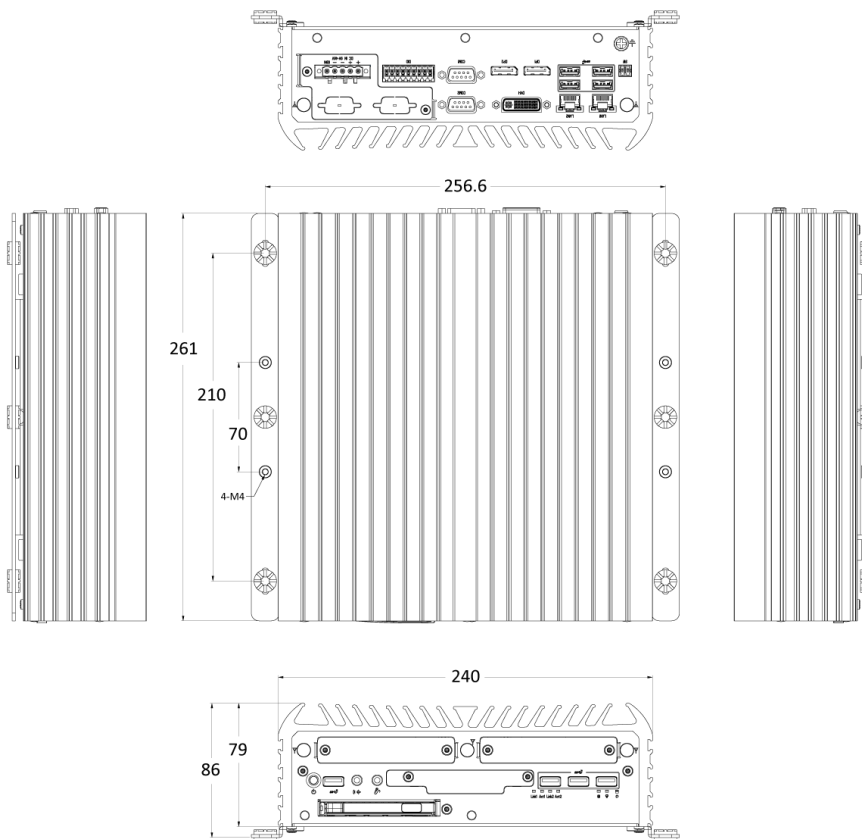


Available EDGEBoost I/O



Dimension

Unit: mm



Available Models

| Model No. | Description |
|----------------|---|
| RCO-6000-RPL-P | Industrial Computer w/ LGA 1700 for Intel 12/13th Gen CPU & R680E PCH |

Optional Accessories

| Model No. | Description |
|-------------|---|
| 1-E09A22801 | Adapter AC/DC 24V/11.67A 280W 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-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 |