



AI EDGE INFERENCE COMPUTER

RCO-6000-ADL

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



Features

- LGA 1700 socket for 12/13th Gen. Intel® ALD-S & RPL-S Processor (65W/35W TDP)
- Intel® R680E Chipset
- 2x DDR5 4800/5600MHz SODIMM. Max. up to 64GB
- Triple Independent Display by 1x DVI-I and 2x DisplayPort
- 2x Intel® 2.5 GbE supporting Wake-on-LAN and PXE
- 2x Full-size Mini PCIe for communication or expansion modules, 2x SIM socket
- 2x 2.5" SATA HDD Bay (1x Internal) and with RAID 0, 1 support
- 1x M.2 (E Key, PCIe x1, USB 2.0, 2230, Support CNVi)
- 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); -25°C to 60°C (65W CPU)
- TPM 2.0 Supported

Specifications

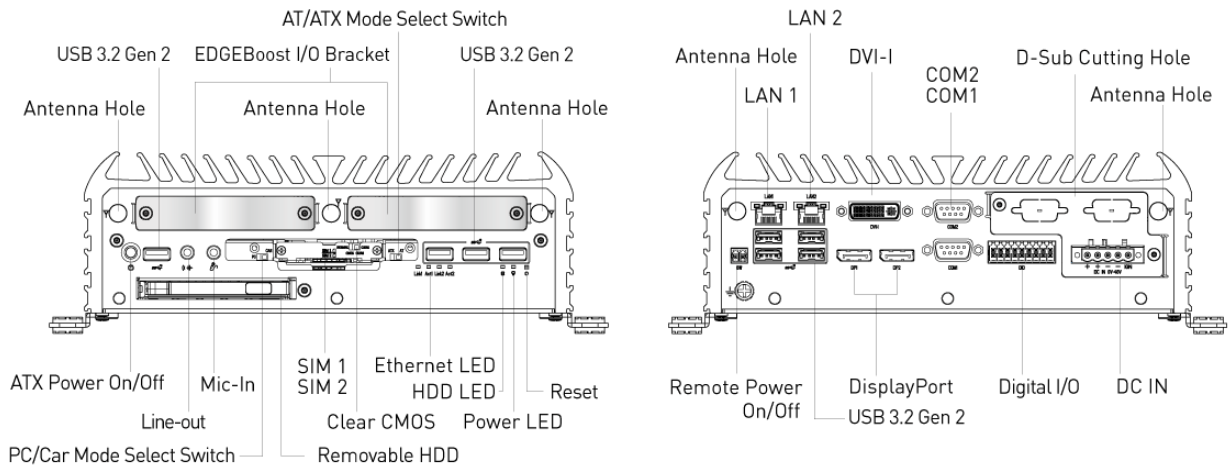
System		I/O	
Processor Support 12/13th Gen Intel® ADL-S & RPL-S Processor (LGA 1700, 65W/35W TDP) - Intel® Core™ i9-13900E/i9-12900E, up to 24 Cores, 36MB Cache, up to 5.2 GHz, 65W - Intel® Core™ i9-13900TE/i9-12900TE, up to 24 Cores, 36MB Cache, up to 5 GHz, 35W - Intel® Core™ i7-13700E/i7-12700E, up to 16 Core, 30MB Cache, up to 5.1 GHz, 65W - Intel® Core™ i7-13700TE/i7-12700TE, up to 16 Cores, 30MB cache, up to 4.8 GHz, 35W - Intel® Core™ i5-13500E/i5-12500E, up to 14 Cores, 24MB Cache, up to 4.6 GHz, 65 W - Intel® Core™ i5-13500TE/i5-12500TE, up to 14 Core, 24MB Cache, up to 4.5 GHz, 35W - Intel® Core™ i3-13100E/i3-12100E, up to 8 Cores, 12MB cache, up to 4.4 GHz, 60W - Intel® Core™ i3-12100TE/i3-12100TE, up to 4 Cores, 12MB Cache, up to 4.1 GHz, 35W - Intel® Pentium® G7400E, 2 Cores, 6MB Cache, 3.6 GHz, 46W - Intel® Pentium® G7400TE, 2 Cores, 6MB Cache, 3.0 GHz, 35W - Intel® Celeron® G6900E, 2 Cores, 4MB Cache, 3.0 GHz, 46W - Intel® Celeron® G6900TE, 2 Cores, 4MB Cache, 2.4 GHz, 35W		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	
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 TPM TPM 2.0		Operating System Windows Windows 10 Linux Linux kernel	
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 VGA Yes (by optional split cable)		Power Power Adapter Optional AC/DC 24V/9.2A, 220W Optional AC/DC 24V/11.67A, 280W (GPU/Card Expansion) 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	
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 Internal 2.5" SATA/SSD HDD Bay (support H=9mm) 1x Removable 2.5" SATA HDD Bay (support H=7mm, Hot-swappable) Support RAID 0, 1		Environment Operating Temperature -25°C to 70°C (35W CPU) -25°C to 60°C (65W CPU, i9 CPU Requires an External FAN Kit) Storage Temperature -30°C to 85°C Relative Humidity 10% to 95% (non-condensing) Certification CE, FCC Class A Vibration With SSD: 5 Grms, 5 - 500 Hz, 0.5 hr/axis With HDD: 1 Grms, 5 - 500 Hz, 0.5 hr/axis Shock With SSD: 50G, half sine, 11ms	
Expansion Mini PCIe 1x Full-size Mini PCIe (1x shared by 1x mSATA)		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	
Expansion Modules Occupied One EDGEBoost 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 EDGEBoost I/O Slot Only) • 1x M.2 B-Key, 2242 for AI/NVMe Module, 1x M.2 B-Key, 3042/3052 for 5G/AI/NVMe Module (1x EDGEBoost I/O Slot Only) • 1x M.2 M-Key, PCIe x4 Lane, 2242/2260 for AI Module and NVMe Storage			

* For 12/13th Gen Intel CPUs configured to run at 65W, operating temperatures will be limited to 60°C.

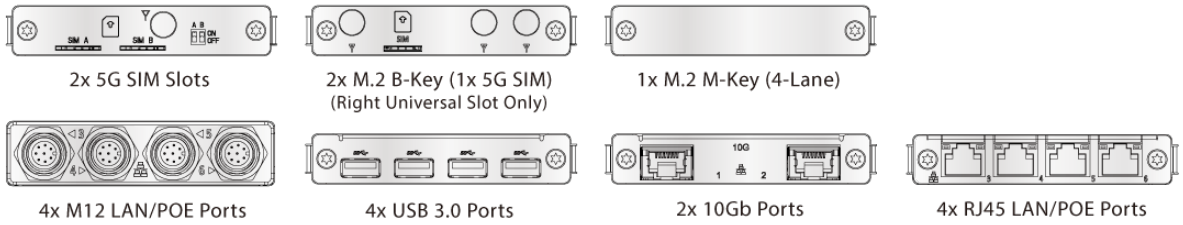
** 65W CPUS may experience thermal throttling depending on extreme application workloads; this is also due to an increase in the physical CPU cores from the Intel silicon (up to 24 cores). Please note, this does not indicate system malfunction or problems in the fanless design. Please consult our embedded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

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

External I/O Mechanical Layout

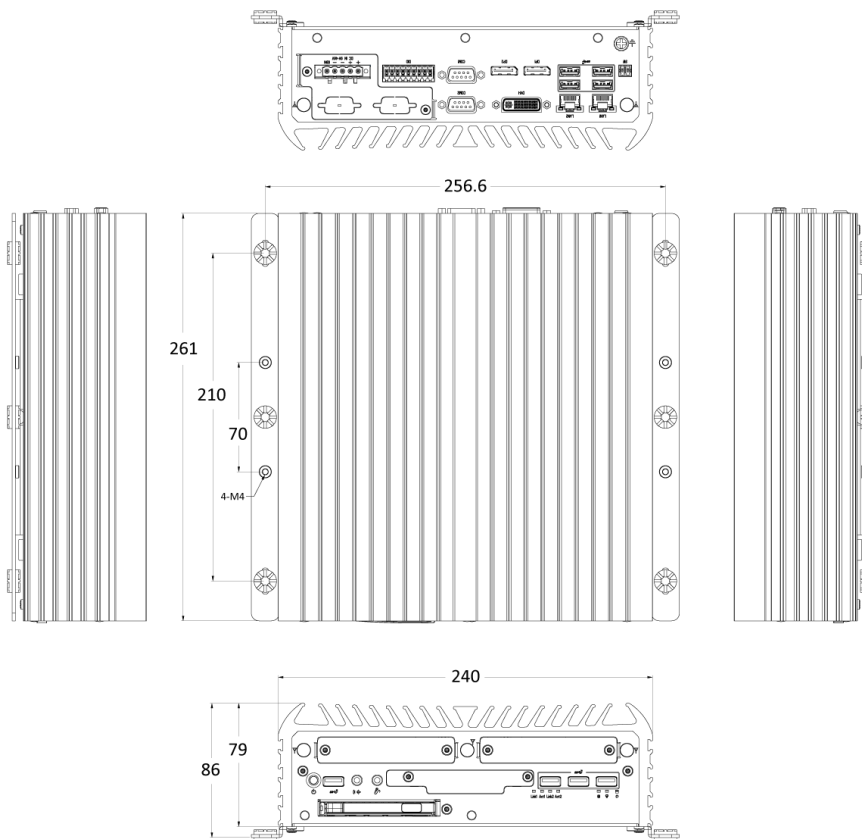


Available EDGEBoost I/O



Dimension

Unit: mm



Available Models

Model No.	Description
RCO-6000-ADL	Superior Fanless Embedded System w/ LGA 1700 for Intel® 12/13th Gen CPU & R680E PCH, 2x LAN
RCO-6000-ADL-4L	Superior Fanless Embedded System w/ LGA 1700 for Intel® 12/13th Gen CPU & R680E PCH, 6x LAN
RCO-6000-ADL-4LM12	Superior Fanless Embedded System w/ LGA 1700 for Intel® 12/13th Gen CPU & R680E PCH, 2x LAN, 4x M12 LAN
RCO-6000-ADL-4P	Superior Fanless Embedded System w/ LGA 1700 for Intel® 12/13th Gen CPU & R680E PCH, 2x LAN, 4x PoE
RCO-6000-ADL-4PM12	Superior Fanless Embedded System w/ LGA 1700 for Intel® 12/13th Gen CPU & R680E PCH, 2x LAN, 4x M12 PoE
RCO-6000-ADL-8L	Superior Fanless Embedded System w/ LGA 1700 for Intel® 12/13th Gen CPU & R680E PCH, 10x LAN
RCO-6000-ADL-8LM12	Superior Fanless Embedded System w/ LGA 1700 for Intel® 12/13th Gen CPU & R680E PCH, 2x LAN, 8x M12 LAN
RCO-6000-ADL-8P	Superior Fanless Embedded System w/ LGA 1700 for Intel® 12/13th Gen CPU & R680E PCH, 2x LAN, 8x PoE
RCO-6000-ADL-8PM12	Superior Fanless Embedded System w/ LGA 1700 for Intel® 12/13th Gen CPU & R680E PCH, 2x LAN, 8x M12 PoE
RCO-6000-ADL-D10G	Superior Fanless Embedded System w/ LGA 1700 for Intel® 12/13th Gen CPU & R680E PCH, 2x LAN, 2x 10G LAN
RCO-6000-ADL-4U3	Superior Fanless Embedded System w/ LGA 1700 for Intel® 12/13th Gen CPU & R680E PCH, 2x LAN, 12x USB
RCO-6000-ADL-8U3	Superior Fanless Embedded System w/ LGA 1700 for Intel® 12/13th Gen CPU & R680E PCH, 2x LAN, 16x USB
RCO-6000-ADL-5G	Superior Fanless Embedded System w/ LGA 1700 for Intel® 12/13th Gen CPU & R680E PCH, 2x LAN, 5G Module
RCO-6000-ADL-2M2BK	Superior Fanless Embedded System w/ LGA 1700 for Intel® 12/13th Gen CPU & R680E PCH, 2x LAN, 3x M.2 B-Key
RCO-6000-ADL-M2MK	Superior Fanless Embedded System w/ LGA 1700 for Intel® 12/13th Gen CPU & R680E PCH, 2x LAN, 1x M.2 M-Key

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
SFICBL022	Power Cord, 3-pin US Type, 180cm
1-TPCD00002	Power Cord, European Type, 180cm
1-TPCD00001	Power Cord, 3-pin UK Type, 180cm
3-RC6300EXFAN	External Double FAN KIT

Packing List

1x RCO-6000-ADL Series Embedded System
 1x Wall Mount Kit
 1x Accessory Kit
 1x DVI to VGA Adapter