



AI EDGE INFERENCE COMPUTER

RCO-6000-RPL-2E16-2PWR

AI Edge Inference Computer with LGA 1700 for Intel 12/13/14th Gen Processor and R680E PCH, 2x PCIe, 2x Power input

Features

- LGA 1700 socket for 12/13/14th Gen. Intel® ADL & RPL Processor (65W/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
- 1x 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)
- 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)
- 8x DI + 8x DO with isolation
- 9 to 48VDC Wide Range Power Input Supporting AT/ATX Mode
- Wide Operating Temperature -25°C to 60°C (35W/65W CPU)
- TPM 2.0 Supported



Specifications

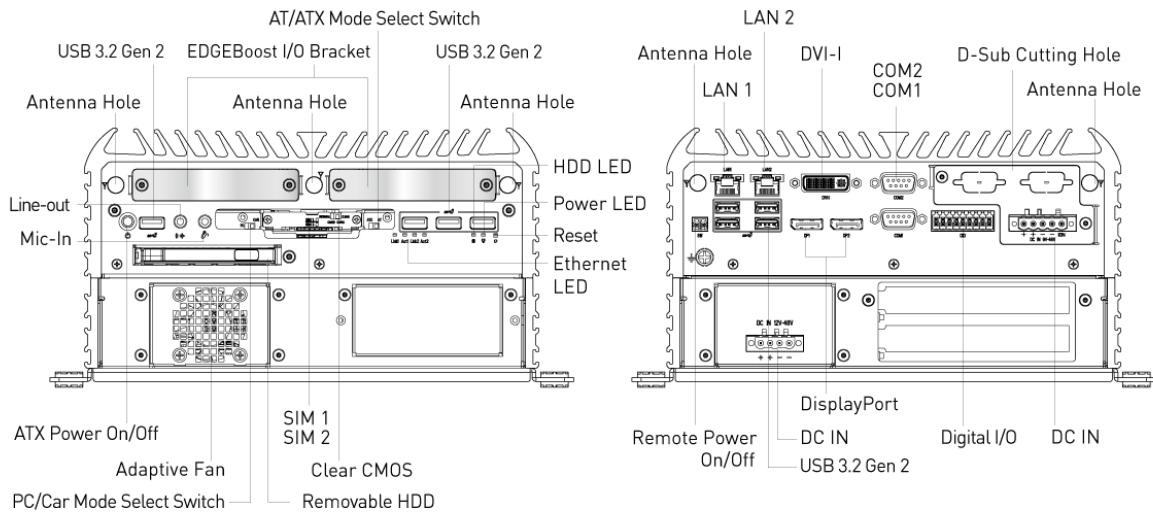
System		I/O	
Processor		Audio	1x Mic-in, 1x Line-out
Support 12/13th/14th(Non-vPRO) Gen Intel® ADL & RPL Processor (LGA 1700, 65W/35W TDP)		CAN	2x CAN 2.0 A/B 2-pin Internal header
- Intel® Core™ i9-14900/i9-13900E/i9-12900E, 65W		COM	2x RS-232/422/485 ; 4x RS-232/422/485 (Internal)
- Intel® Core™ i9-14900T/i9-13900TE/i9-12900TE, 35W		DIO	8 in / 8 out (Isolated)
- Intel® Core™ i7-14700/i7-13700E/i7-12700E, 65W		EDGEBoost I/O Bracket	2x EDGEBoost I/O Bracket (By mini PCIe interface)
- Intel® Core™ i7-14700T/i7-13700TE/i7-12700TE, 35W		LAN	2x RJ45
- Intel® Core™ i5-14500/i5-13500E/i5-12500E, 65 W		USB	8x USB 3.2 Gen 2 (10 Gbps)
- Intel® Core™ i5-14500T/i5-13500TE/i5-12500TE, 35W			1x USB 3.2 Gen 1 (5 Gbps, 1x Internal), 2x USB 2.0 (Internal)
- Intel® Core™ i3-13100E/i3-12100E, 60W		Others	5x WiFi Antenna Holes
- Intel® Core™ i3-14100T/i3-13100TE/i3-12100TE, 35W			1x Power Switch, 1x AT/ATX Switch, 1x Remote Power On/Off
- Intel® Core™ 300T, 35W			1x PC/Car Mode Switch, 1x Delay Time Switch
- Intel® Pentium® G7400E, 46W / G7400TE, 35W			1x Removable CMOS Battery
- Intel® Celeron® G6900E, 46W / G6900TE, 35W		Operating System	
System Chipset	Intel® R680E Express Chipset	Windows	Windows 10/11
LAN Chipset	2.5 GbE1: Intel I226, 2.5 GbE2: Intel I226	Linux	Linux kernel
	Support Wake-on-LAN and PXE, Support TSN	Power	
Audio Codec	Realtek ALC888S	Power Adapter	Optional AC/DC 24V/9.2A, 220W
System Memory	2x 262-Pin DDR5 4800/5600MHz SODIMM.		Optional AC/DC 24V/11.67A, 280W
	Max. up to 64GB (ECC and Non-ECC)		Optional AC/DC 24V/15A, 360W (i7/i9 CPU/GPU/Card Expansion)
Graphics	Intel® UHD Graphics 770/710	Power Mode	AT, ATX
BIOS	AMI 256Mbit SPI BIOS	Power Ignition Sensing	Power Ignition Management
Watchdog	Software Programmable Supports 1~255 sec. System Reset	Power Supply Voltage	9~48VDC, 12~48VDC for GPU/Card Expansion
TPM	TPM 2.0	Power Connector	5-pin Terminal Block; 4-pin Terminal Block for GPU Expansion
Display		Power Protection	OVP (Over Voltage Protection); OCP (Over Current Protection)
Display Port	2x DisplayPort, Support resolution 5120 x 3200, Up to 7680 x 4320		Reverse Protection
DVI	1x DVI-I, support resolution 1920 x 1200	Environment	
VGA	Yes (by optional split cable)	Operating Temperature	-25°C to 60°C (35W/65W CPU)
Multiple Display	Triple Display		(Optional External Fan Kit: Recommended for i9 CPU/65W)
Storage		Storage Temperature	-30°C to 85°C
M.2	1x M.2 B Key, 2242/3042/3052	Relative Humidity	10% to 95% (non-condensing)
	(PCIe x2, Support AI Module/NVMe Storage)	Certification	UL 62368 Ed. 3, CE, FCC Class A
	(PCIe x1 & USB 3.2 Gen1, Support 4G/5G)	Vibration	IEC60068-2-64:2008
mSATA	1x mSATA (Shared by 1x Mini PCI Express)		With HDD: 1 Grms (5 - 500 Hz, 0.5 hr/axis)
SIM Socket	2x External SIM socket (Mini PCIe/M.2 B Key attached)		With SSD: 3 Grms (5 - 500 Hz, 0.5 hr/axis)
SSD/HDD	1x 9mm 2.5" SATA HDD Bay (Internal)		Designed to comply with MIL-STD-810G Method 514.7 Procedure I
	1x 7mm 2.5" SATA HDD Bay (Hot-swappable)	Shock	IEC60068-2-27:2008
	Support RAID 0, 1		With SSD: 50G half-sin 11ms
Expansion			Designed to comply with MIL-STD-810G Method 516.7 Procedure I
M.2	1x M.2 (E Key, PCIe x1, USB 2.0, 2230)	Physical	
Mini PCIe	1x Full-size Mini PCIe (1x shared by 1x mSATA)	Dimensions	240 (W) x 261 (D) x 126.8 (H) mm
PCIe	• RCO-6000-RPL-2E16-2PWR : 1x PCIe x16 (Gen4), 1x PCIe x1 (Gen3) • RCO-6000-RPL-2E8-2PWR (Optional) : 1x PCIe x16 (8-lane, Gen4), 1x PCIe x8 (8-lane, Gen4)	Weights	6.5 ~ 7.5 kg
Expansion Modules		Construction	Extruded Aluminum with Heavy Duty Metal
2x EDGEBoost I/O Brackets:		Mounting Options	Wall Mounting
• 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			
Card Dimension	235 (L) x 112 (H) mm		

* For 12/13/14th Gen Intel CPUs configured to run at 65W, operating temperatures will be limited to 60°C.

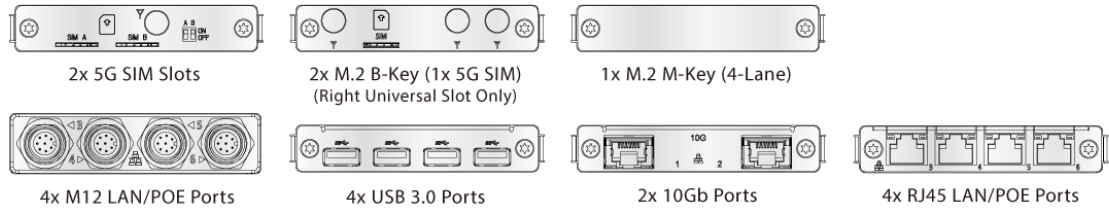
** 65W CPUS may experience thermal throttling depending on extreme application workloads; this is also due to an increase in the physical CPU cores from the Intel silicon (up to 24 cores). Please note, this does not indicate system malfunction or problems in the fanless design. Please consult our embedded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

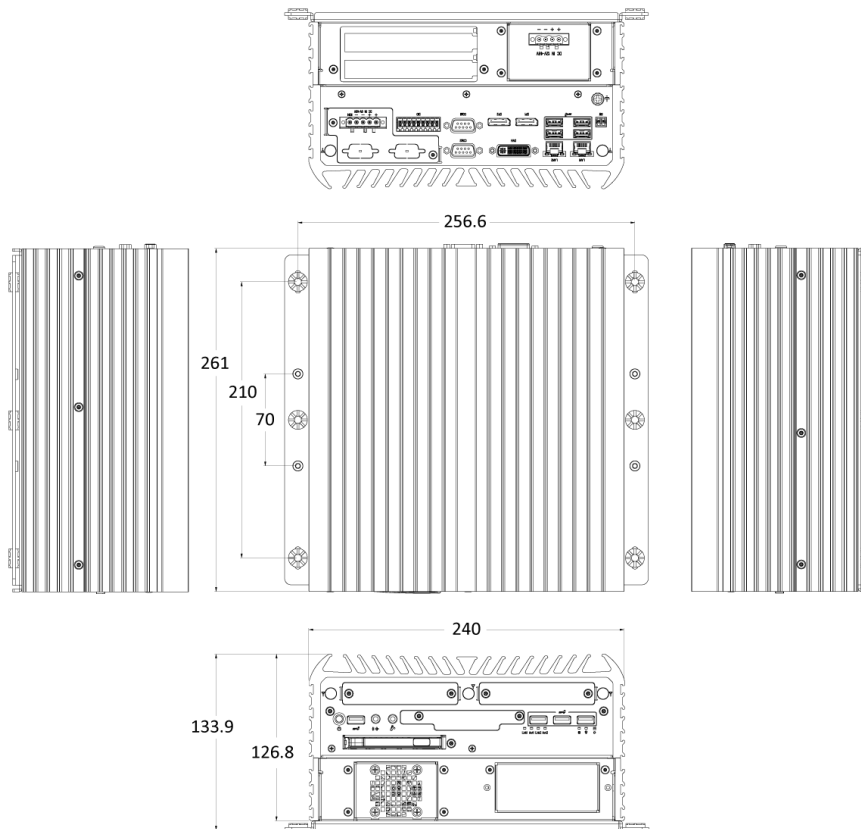


Available EDGEBoost I/O



Dimension

Unit: mm



Available Models

Model No.	Description
RCO-6000-RPL-2E16-2PWR	GPU Computing System w/ LGA 1700 for Intel® 12/13/14th Gen CPU & R680E PCH, 2x LAN, 1x PCIe x16 & x1, 2x Power input
RCO-6000-RPL-2E8-2PWR	GPU Computing System w/ LGA 1700 for Intel® 12/13/14th Gen CPU & R680E PCH, 2x LAN, 2x PCIe (8-lane), 2x Power input

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-RPL-2E-2PWR 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