



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

Processor

Support 12/13th/14th(Non-vPRO) Gen Intel® ADL & RPL Processor (LGA 1700, 65W/35W TDP)

- Intel® Core™ i9-14900/i9-13900E/i9-12900E, 65W
- Intel® Core™ i9-14900T/i9-13900TE/i9-12900TE, 35W
- Intel® Core™ i7-14700/i7-13700E/i7-12700E, 65W
- Intel® Core™ i7-14700T/i7-13700TE/i7-12700TE, 35W
- Intel® Core™ i5-14500/i5-13500E/i5-12500E, 65 W
- Intel® Core™ i5-14500T/i5-13500TE/i5-12500TE, 35W
- Intel® Core™ i3-13100E/i3-12100E, 60W
- Intel® Core™ i3-14100T/i3-13100TE/i3-12100TE, 35W
- Intel® Core™ 300T, 35W
- Intel® Pentium® G7400E, 46W / G7400TE, 35W
- Intel® Celeron® G6900E, 46W / G6900TE, 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

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)

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)

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

Card Dimension 235 (L) x 112 (H) mm

GPU Card Dimension

Please ensure the card dimensions do not exceed the following specifications to avoid potential installation issues.

189 (L) x 111 (W) mm (Height: Single GPU 20 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)

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 GPU/Card Expansion

Power Connector 5-pin Terminal Block; 4-pin Terminal Block for GPU Expansion

Power Protection OVP (Over Voltage Protection); OCP (Over Current Protection)
Reverse Protection

Environment

Operating Temperature -25°C to 60°C (35W/65W CPU)
(Optional External Fan Kit: Recommended for i9 CPU/65W)

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: 50G half-sin 11ms
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

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

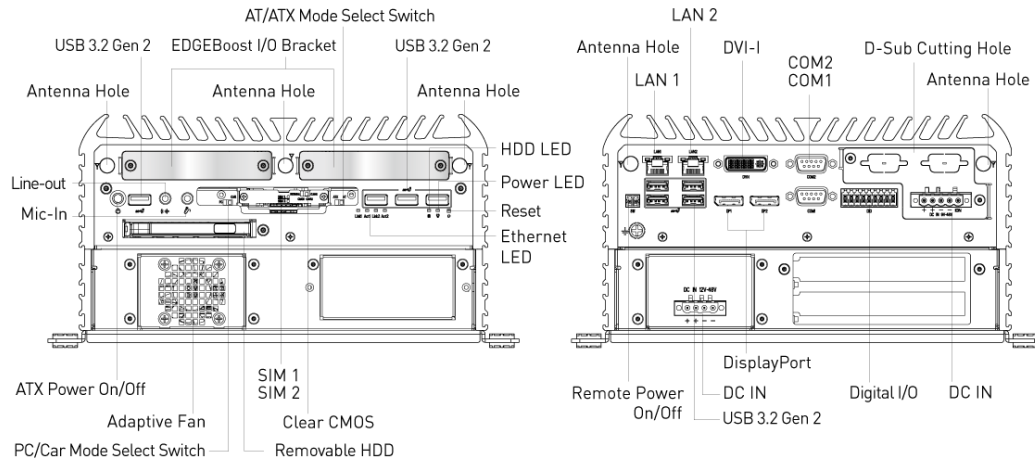
** 65W CPUs may experience thermal throttling depending on extreme application workloads; this is also due to an increase in the physical CPU cores from the Intel silicon (up to 24 cores). Please note, this does not indicate system malfunction or problems in the fanless design. Please consult our embedded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

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

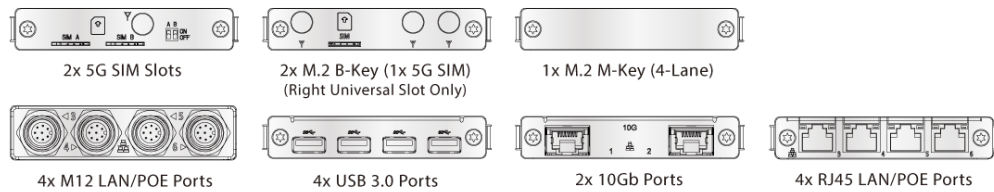


RCO-6000-RPL-2E16-2PWR

External I/O Mechanical Layout

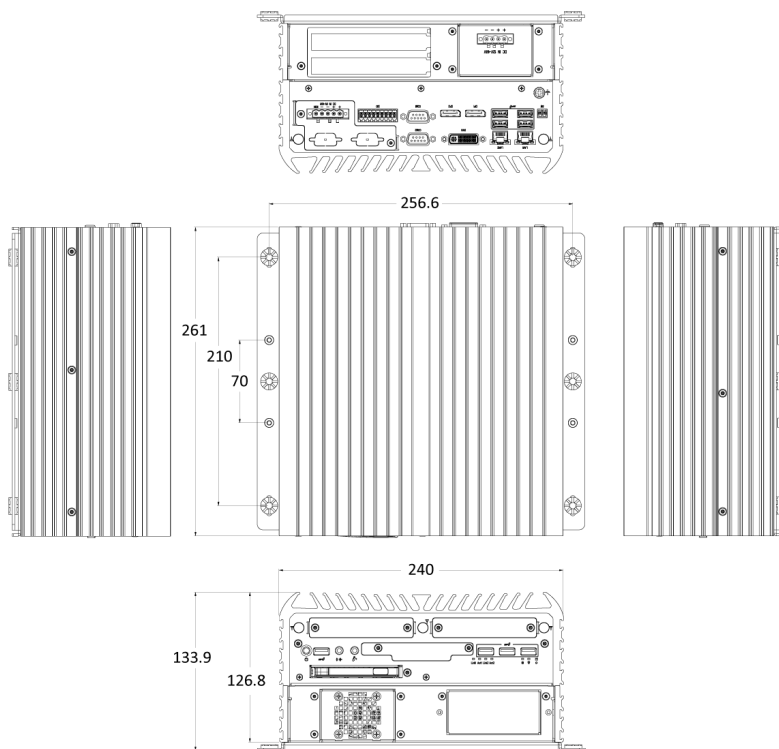


Available EDGEBoost I/O



Dimension

Unit: mm





RCO-6000-RPL-2E16-2PWR

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
1-TPCD00005	Power Cord, 3-pin US Type, 180cm
1-TPCD00002	Power Cord, European Type, 180cm
1-TPCD00001	Power Cord, 3-pin UK Type, 180cm
3-EXFANK01S10-S0	External Double Fan Module Kit (for Product shipment)
3-EXFANK01S10-S1	External Double Fan Module Kit (for system assembly)
1-TFAN00005	FAN Extension Cable

Packing List

1x RCO-6000-RPL-2E-2PWR Series Embedded System
 1x Wall Mount Kit
 1x Accessory Kit
 1x DVI to VGA Adapter



C&T Solution Inc.

18F, No.176, Jianyi Road, Zhonghe Dist., New Taipei City 235603, Taiwan (R.O.C.)

Toll Free: +886-2-7731-7888 Fax: +886-2-7731-7855

Email: info@candtsolution.com

<https://www.candtsolution.com>

Assured Systems

Assured Systems is a leading technology company with over 1,500 regular clients in 80 countries, deploying over 85,000 systems to a diverse customer base in 12 years of business. We offer high-quality and innovative rugged computing, display, networking and data collection solutions to the embedded, industrial, and digital-out-of-home market sectors.

US

sales@assured-systems.com

Sales: +1 347 719 4508

Support: +1 347 719 4508

1309 Coffeen Ave
Ste 1200
Sheridan
WY 82801
USA

EMEA

sales@assured-systems.com

Sales: +44 (0)1785 879 050

Support: +44 (0)1785 879 050

Unit A5 Douglas Park
Stone Business Park
Stone
ST15 0YJ
United Kingdom

VAT Number: 120 9546 28

Business Registration Number: 07699660