

RCO-3000-RPL

Small Form Factor Computer with LGA 1700 for 12/13/14th Gen Intel CPU & Q670 PCH, 2x LAN

Features

- Support 12/13/14th Gen Intel® RPL S / ADL Processor (LGA 1200, 35W TDP)
- Intel® Q670 Express Chipset
- 4x Independent Displays by 4x DisplayPort
- 2x Intel® GbE supporting Wake-on-LAN and PXE
- 3x External SIM socket
- 2x 2.5" SATA HDD Bay (1x Internal) and 1x mSATA, with RAID 0, 1, 5 support
- 1x M.2 (E Key, PCIe x1, USB 2.0, 2230)
- 2x M.2 (B Key, 2242, Support NVMe or SATA Storage)
- 3x RS-232/422/485
- 6x USB 3.2 Gen 2 (10 Gbps)
- 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)
- TPM 2.0 Supported



Specifications

System

- Processor**
- Support 12/13/14th Gen Intel® ADL & RPL S Processor (LGA 1200, 35W TDP)
 - Intel® Core™ i9-14900T/i9-13900TE/i9-12900TE, up to 24 Cores, 36MB Cache, up to 5.5 GHz
 - Intel® Core™ i7-14700T, up to 20 Cores, 33MB Cache, up to 5.2 GHz
 - Intel® Core™ i7-13700TE/i7-12700TE, up to 16 Cores, 30MB cache, up to 4.8 GHz
 - Intel® Core™ i5-14500T/i5-13500TE/i5-12500TE, up to 14 Core, 24MB Cache, up to 4.8 GHz
 - Intel® Core™ i3-14100T/i3-13100TE/i3-12100TE, up to 4 Cores, 12MB Cache, up to 4.4 GHz
 - Intel® Core™ 300T, up to 2 Cores, 6MB Cache, up to 3.4 GHz
 - Intel® Pentium® G7400TE, 2 Cores, 6MB Cache, 3.0 GHz
 - Intel® Celeron® G6900TE, 2 Cores, 4MB Cache, 2.4 GHz

System Chipset	Intel® Q670 Express Chipset
LAN Chipset	2.5 GbE1: Intel I226 (Support Wake-on-LAN and PXE, Support TSN) 2.5 GbE2: Intel I226 (Support Wake-on-LAN and PXE, Support TSN)
Audio Codec	Realtek ALC888S
System Memory	1x DDR5 4800/5600MHz SODIMM. Max. up to 32GB
Graphics	Integrated Intel® UHD Graphics 770/730
BIOS	AMI 256Mbit SPI BIOS
Watchdog	Software Programmable Supports 1~255 sec. System Reset
TPM	TPM 2.0

Display

Display Port	4x DisplayPort, support resolution 4096 x 2304, Up to 7680 x 4320 (1x DP Port Co-layout HDMI Connector)
HDMI	Yes, Shared by 1x DP port
Multiple Display	4x Independent Displays

Storage

M.2	1x M.2 (B Key, 2242, NVMe Storage) 1x M.2 (B Key, 2242, NVMe or SATA Storage)
SSD/HDD	1x Internal 2.5" SATA HDD Bay (support H=9mm) 1x Removable 2.5" SATA HDD Bay (support H=7mm, hot-swappable) Support RAID 0, 1, 5

Expansion

M.2	<ul style="list-style-type: none"> • 1x M.2 (E Key, PCIe x1, USB 2.0, 2230, Support Wifi Module) • 1x M.2 B Key, 2242/3042/3052 (PCIex2, Support AI Module/NVMe Storage) (PCIex1&USB 3.2 Gen1, Support 4G/5G) • 1x M.2 B Key, 2242/3042/3052 (PCIe x2/SATA, Support AI Module/NVMe/SATA Storage)
SIM Socket	1x External Standard SIM socket 1x External Dual Nano SIM socket

Expansion Modules

Occupied One Universal I/O Slot:

- 4-port 1GbE module with Intel® I350 Chipset, RJ-45 or M12 connector (PoE optional)
- 2-Port 10GbE RJ45 with Intel X710 Chipset
- 4-Port USB with Renesas uPD720201K8 host controller (share PCIe Gen2 x1 bandwidth)
- 1x M.2 M-Key (PCIe x4 Lane, 2242/2260) for NVMe/AI Module
- 2x M.2 B-Key 2242/3042/3052:
 - 2x M.2 (PCIe x2 Lane) for NVMe/AI Module
 - 1x M.2 (PCIe x2 Lane) for NVMe/AI Module and 1x M.2 (PCIe x1 Lane + USB 3.2 Gen 1) for 4G/5G Module, 1x External SIM socket (M.2 attached)

I/O

Audio	1x Line-out
CAN	2x CAN 2.0 A/B 2-pin Internal header
COM	3x RS-232/422/485 (Optional Isolation)
DIO	8 in / 8 out (Isolated)
LAN	2x RJ45
USB	6x USB 3.2 Gen 2 (10Gbps)
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 Clear CMOS Switch 1x Mic In Header (Internal)

Operating System

Windows	Windows 10
Linux	Linux kernel 5.x

Power

Power Adapter	Optional AC/DC 24V/9.2A, 220W Optional AC/DC 24V/11.67A, 280W
Power Mode	AT, ATX
Power Ignition Sensing	Power Ignition Management
Power Supply Voltage	9~48VDC
Power Connector	3-pin Terminal Block
Power Protection	OVP (Over Voltage Protection) OCP (Over Current Protection) Reverse Protection

Environment

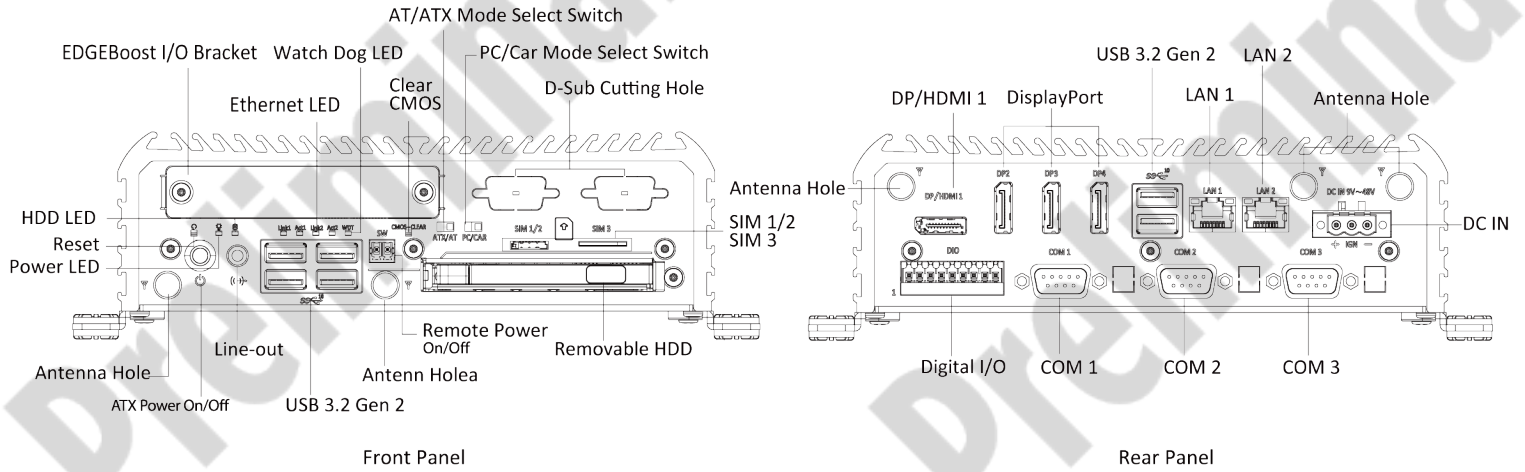
Operating Temperature	-25°C to 60°C (35W CPU)
Storage Temperature	-30°C to 85°C
Relative Humidity	10% to 95% (non-condensing)
Certification	CE, FCC Class A, EMC Conformity with EN50155 & EN50121-3-2
Vibration	With SSD: 5 Grms, 5 - 500 Hz, 0.5 hr/axis With HDD: 1 Grms, 5 - 500 Hz, 0.5 hr/axis
Shock	With SSD: 50G, half sine, 11ms

Physical

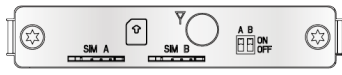
Dimensions	192 (W) x 227 (D) x 60.3 (H) mm
Weights	2.8kg - 3.6 kg
Construction	Extruded Aluminum with Heavy Duty Metal
Mounting Options	Wall Mounting,

- For 14th CPUs configured to run at 35W, operating temperatures will be limited to 60°C.
- 35W 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. 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



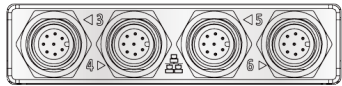
2x 5G SIM Slots



2x M.2 B-Key (1x 5G SIM)
(Right Universal Slot Only)



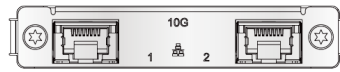
1x M.2 M-Key (4-Lane)



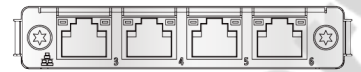
4x M12 LAN/POE Ports



4x USB 3.0 Ports



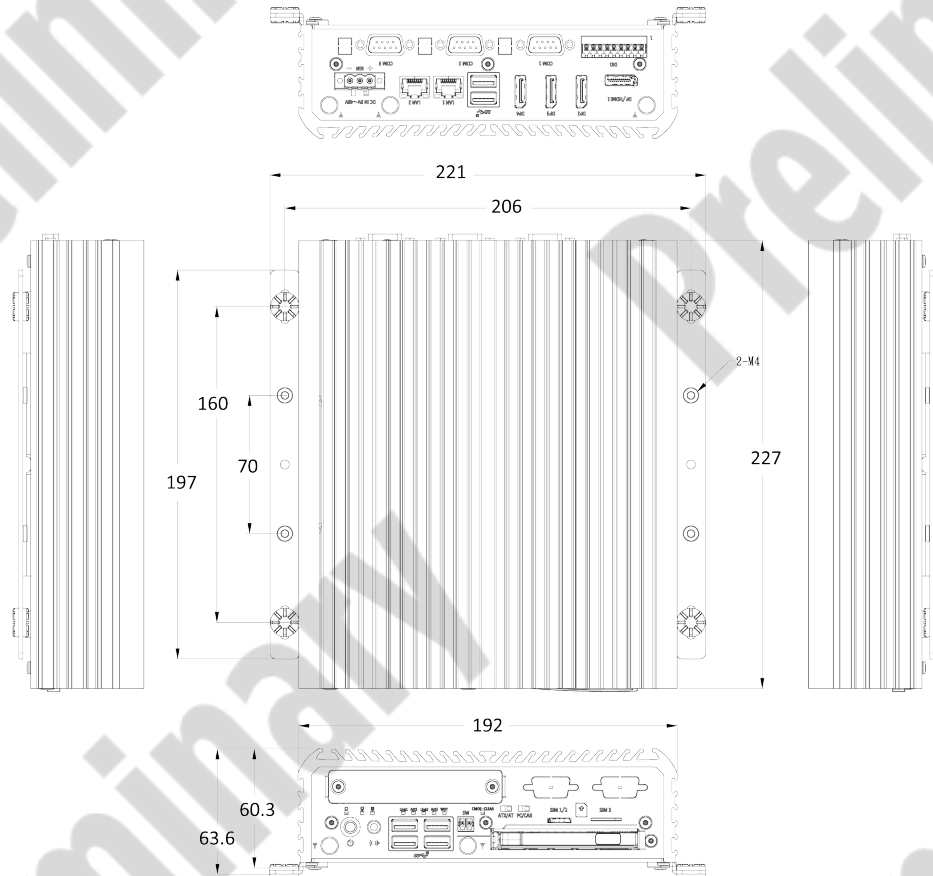
2x 10Gb Ports



4x RJ45 LAN/POE Ports

Dimension

Unit: mm



Available Models

Model No.	Description
RCO-3000-RPL	Small Form Factor Computer with LGA 1700 for 12/13/14th Gen Intel CPU & Q670 PCH, 2x LAN
RCO-3000-RPL-4L	Small Form Factor Computer with LGA 1700 for 12/13/14th Gen Intel CPU & Q670 PCH, 6x LAN
RCO-3000-RPL-4LM12	Small Form Factor Computer with LGA 1700 for 12/13/14th Gen Intel CPU & Q670 PCH, 2x LAN, 4x M12 LAN
RCO-3000-RPL-4P	Small Form Factor Computer with LGA 1700 for 12/13/14th Gen Intel CPU & Q670 PCH, 2x LAN, 4x PoE
RCO-3000-RPL-4PM12	Small Form Factor Computer with LGA 1700 for 12/13/14th Gen Intel CPU & Q670 PCH, 2x LAN, 4x M12 PoE
RCO-3000-RPL-D10G	Small Form Factor Computer with LGA 1700 for 12/13/14th Gen Intel CPU & Q670 PCH, 2x LAN, 2x 10G LAN
RCO-3000-RPL-4U3	Small Form Factor Computer with LGA 1700 for 12/13/14th Gen Intel CPU & Q670 PCH, 2x LAN, 10x USB
RCO-3000-RPL-2M2BK	Small Form Factor Computer with LGA 1700 for 12/13/14th Gen Intel CPU & Q670 PCH, 2x LAN, 3x M.2 B-Key
RCO-3000-RPL-M2MK	Small Form Factor Computer with LGA 1700 for 12/13/14th Gen Intel CPU & Q670 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 11.6A 280W 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

Packing List

- 1x RCO-3000-RPL
- 1x Wall Mount Kit
- 1x Accessory Kit