



SMALL FORM FACTOR INDUSTRIAL COMPUTER

RCO-3000-RPL

Small Form Factor Computer with LGA 1700 for 12/13/14th Gen Intel CPU & Q670E PCH, 2x LAN

Features

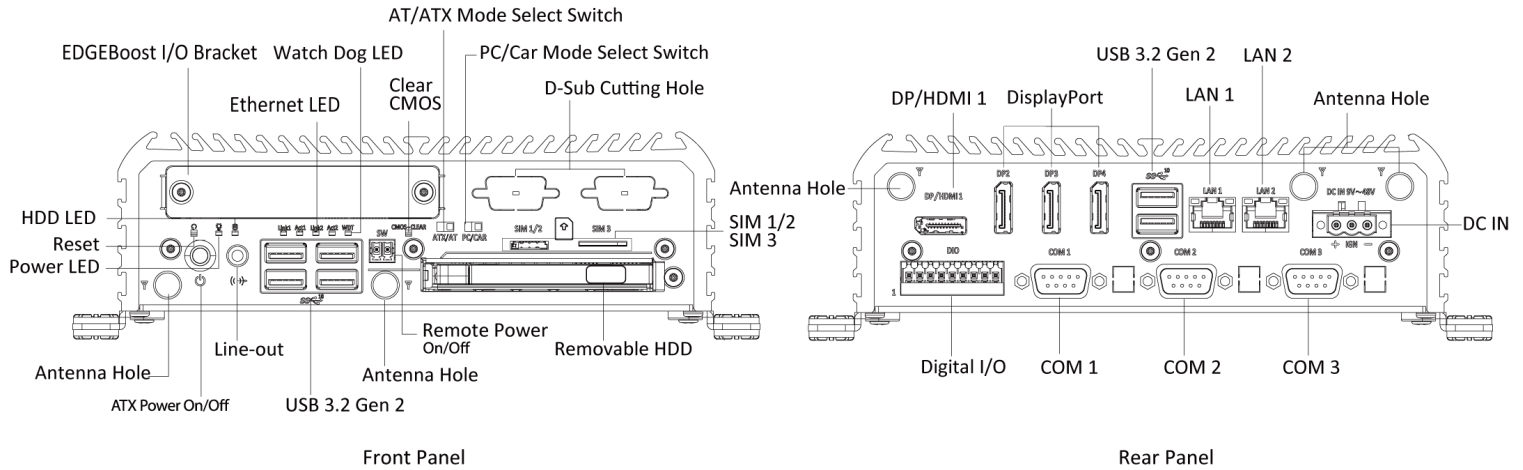
- Support 12/13/14th Gen Intel® RPL S / ADL Processor (LGA 1700, 35W TDP)
- Intel® Q670E Express Chipset
- 4x Independent Displays
- 2x Intel® 2.5GbE supporting Wake-on-LAN and PXE, 3x External SIM socket
- 2x 2.5" SATA SSD Bay (1x Internal) with RAID 0, 1, 5 support
- 1x M.2 E Key, 2230 (PCIe x1, USB 2.0)
- 1x M.2 B Key, 2242/3042/3052 (PCIe x2, or PCIe x1 & USB 3.2 Gen1; Support AI Module/NVMe Storage/4G/5G)
- 1x M.2 B Key, 2242/3042/3052 (PCIe x2 or SATA; Support AI Module/NVMe/SATA Storage/4G/5G)
- 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 70°C)
- TPM 2.0 Supported



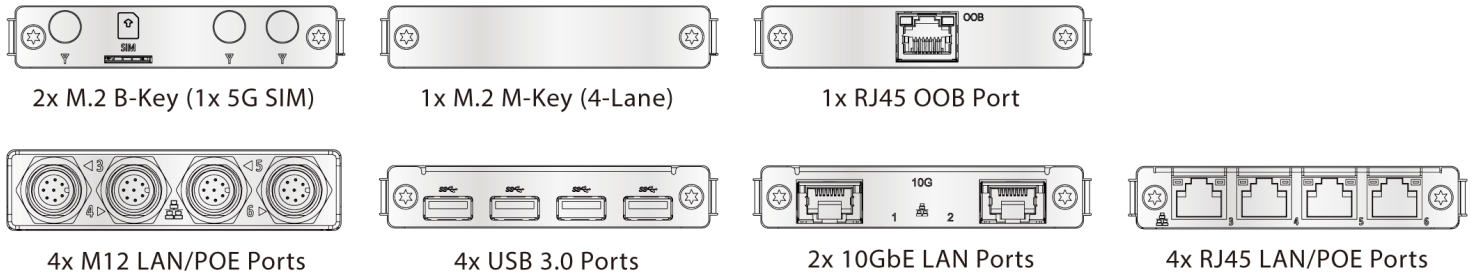
Specifications

System		I/O	
Processor		Audio	1x Line-out
Support 12/13/14th Gen Intel® ADL & RPL S Processor (LGA 1700, 35W TDP)		CAN	2x CAN 2.0 A/B 2-pin Internal header
- Intel® Core™ i9-14900T/i9-13900TE/i9-12900TE, up to 24 Cores, up to 5.5 GHz		COM	3x RS-232/422/485 (Optional Isolation)
- Intel® Core™ i7-14700T, up to 20 Cores, up to 5.2 GHz		DIO	8 in / 8 out (Isolated)
- Intel® Core™ i7-13700TE/i7-12700TE, up to 16 Cores, up to 4.8 GHz		LAN	2x 2.5GbE RJ45
- Intel® Core™ i5-14500T/i5-13500TE/i5-12500TE, up to 14 Core, up to 4.8 GHz		USB	6x USB 3.2 Gen 2 (10Gbps)
- Intel® Core™ i3-14100T/i3-13100TE/i3-12100TE, up to 4 Cores, up to 4.4 GHz		Others	5x WiFi Antenna Holes
- Intel® Core™ 300T, up to 2 Cores, up to 3.4 GHz			1x Power Switch, 1x AT/ATX Switch, 1x Remote Power On/Off
- Intel® Pentium® G7400TE, 2 Cores, 3.0 GHz			1x PC/Car Mode Switch, 1x Delay Time Switch
- Intel® Celeron® G6900TE, 2 Cores, 2.4 GHz			1x Clear CMOS Switch
System Chipset	Intel® Q670E Express Chipset		1x Mic In Header (Internal)
LAN Chipset	2.5 GbE1: Intel I226 (Support Wake-on-LAN and PXE, Support TSN)	Operating System	
	2.5 GbE2: Intel I226 (Support Wake-on-LAN and PXE, Support TSN)	Windows	Windows 10/11
Audio Codec	Realtek ALC888S	Linux	Linux kernel 5.x
System Memory	1x DDR5 4800/5600MHz SODIMM. Max. up to 32GB	Power	
Graphics	Integrated Intel® UHD Graphics 770/730	Power Adapter	Optional AC/DC 24V/9.2A, 220W
BIOS	AMI 256Mbit SPI BIOS		Optional AC/DC 24V/11.67A, 280W
Watchdog	Software Programmable Supports 1~255 sec. System Reset	Power Mode	AT, ATX
AI Accelerator	Supports up to 4x Hailo-8™ modules	Power Ignition Sensing	Power Ignition Management
TPM	TPM 2.0	Power Supply Voltage	9~48VDC
Display		Power Connector	3-pin Terminal Block
Display Port	4x DisplayPort, support resolution 4096 x 2304, Up to 7680 x 4320 (1x DP Port Co-layout HDMI Connector)	Power Protection	OVP (Over Voltage Protection) OCP (Over Current Protection) Reverse Protection
HDMI	Yes, Shared by 1x DP port	Environment	
Multiple Display	4x Independent Displays	Operating Temperature	UL: -25°C to 50°C (35W CPU) CE/FCC/IC: -25°C to 70°C (35W CPU)
Storage		Storage Temperature	-30°C to 85°C
SSD/HDD	1x 9mm 2.5" SATA SSD Bay (Internal) 1x 7mm 2.5" SATA SSD Bay (Hot-swappable) Support RAID 0, 1, 5	Relative Humidity	10% to 95% (non-condensing)
Expansion		Certification	UL 61010-1, UL 61010-2-201 CE, FCC Class A, EMC Conformity with EN50155 & EN50121-3-2
M.2 B-Key	1x M.2 B key Type: 2242/3042/3052	Vibration	With HDD: 1 Grms (5 - 500 Hz, 0.5 hr/axis) With SSD: 5 Grms (5 - 500 Hz, 0.5 hr/axis)
	• Support PCIe x2/PCIe x1 & USB 3.2 Gen1 • Support NVMe Storage/Hailo AI Module/4G/5G	Shock	With SSD: 50G half-sin 11ms
M.2 E-Key	1x M.2 B key Type: 2242/3042/3052	Physical	
	• Support PCIe x2/SATA signal • Support NVMe/SATA Storage/Hailo AI Module/4G/5G	Dimensions	192 (W) x 227 (D) x 60.3 (H) mm
SIM Socket	1x M.2 E key slot (2230)	Weights	2.8kg - 3.6 kg
	• Support PCIe x1 & USB 2.0; Support CNVi • Support Wifi Module	Construction	Extruded Aluminum with Heavy Duty Metal
	1x External Mini (Standard) SIM socket 1x External Dual Nano SIM socket	Mounting Options	Wall Mounting kit with Vibration Isolation DIN Rail Mounting (optional)
Expansion Modules		• 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.	
EDGEBoost I/O Bracket:			
• 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 RJ45 port for OOB Management Module			
• 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 or			
- 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)			

External I/O Mechanical Layout

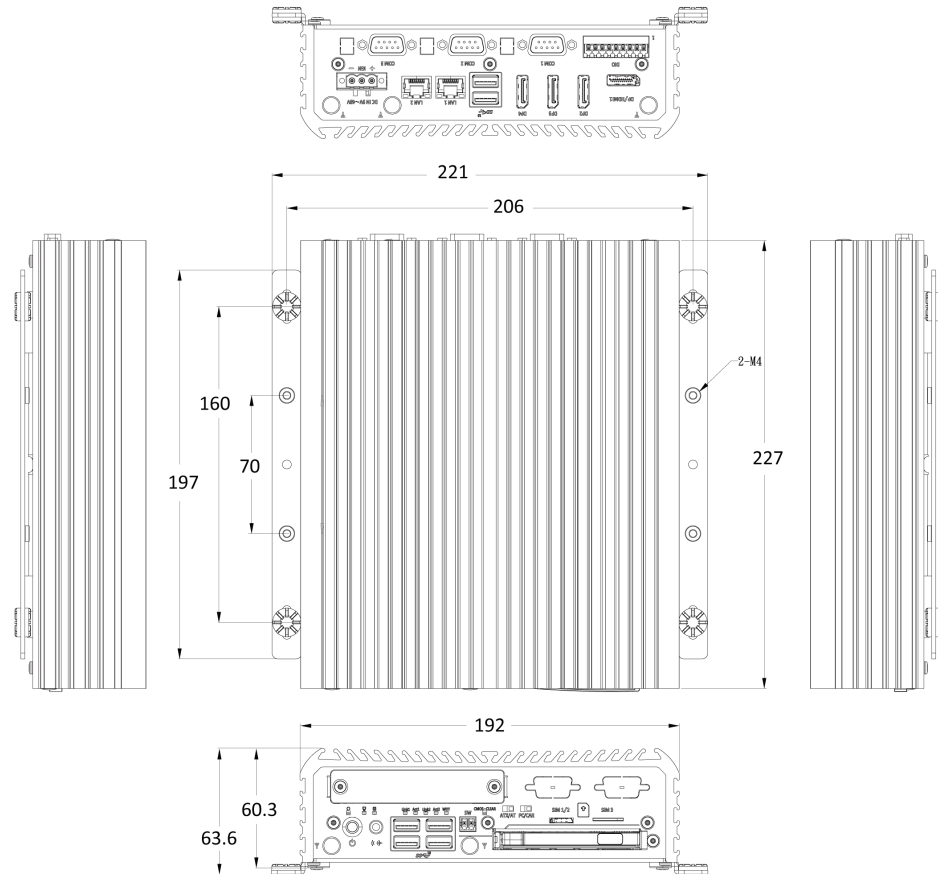


Available EDGEBoost I/O



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 & Q670E PCH, 2x LAN
RCO-3000-RPL-4L	Small Form Factor Computer with LGA 1700 for 12/13/14th Gen Intel CPU & Q670E PCH, 6x LAN
RCO-3000-RPL-4LM12	Small Form Factor Computer with LGA 1700 for 12/13/14th Gen Intel CPU & Q670E PCH, 2x LAN, 4x M12 LAN
RCO-3000-RPL-4P	Small Form Factor Computer with LGA 1700 for 12/13/14th Gen Intel CPU & Q670E PCH, 2x LAN, 4x PoE
RCO-3000-RPL-4PM12	Small Form Factor Computer with LGA 1700 for 12/13/14th Gen Intel CPU & Q670E PCH, 2x LAN, 4x M12 PoE
RCO-3000-RPL-D10G	Small Form Factor Computer with LGA 1700 for 12/13/14th Gen Intel CPU & Q670E PCH, 2x LAN, 2x 10G LAN
RCO-3000-RPL-4U3	Small Form Factor Computer with LGA 1700 for 12/13/14th Gen Intel CPU & Q670E PCH, 2x LAN, 10x USB
RCO-3000-RPL-2M2BK	Small Form Factor Computer with LGA 1700 for 12/13/14th Gen Intel CPU & Q670E 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 & Q670E 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
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-DINR-0004	DinRail-2MountingKit

Packing List

- 1x RCO-3000-RPL
- 1x Wall Mounting kit with Vibration Isolation
- 1x Accessory Kit

Compliances and Standards

Vibration	With HDD: 1 Grms (5 - 500 Hz, 0.5 hr/axis) With SSD: 5 Grms (5 - 500 Hz, 0.5 hr/axis) IEC60068-2-64:2008 Designed to comply with MIL-STD-810G Method 514.7 Procedure I
Shock	With SSD: 50G half-sin 11ms IEC60068-2-27:2008 Designed to comply with MIL-STD-810G Method 516.7 Procedure I
Operating Temperature	UL: -25°C to 50°C (35W CPU) CE/FCC/IC: -25°C to 70°C (35W CPU) IEC60068-2-1:2007 (Cold test procedure) IEC60068-2-2:2007 (Dry heat test procedure) IEC60068-2-3:2007 (Damp heat, steady state, test procedure) IEC60068-2-14:2009 (Wide temperature range thermal shock)
EMC	• FCC Class A • CE • ICES-003 • UKCA • Railway EMC Compliance - EN 50155: 2017 - EN 50121-1: 2017 - EN 50121-3-2: 2016 • Industrial EMC Compliance - EN 61000-4-2: 2009 - EN 61000-4-3: 2020 - EN 61000-4-4: 2012 - EN 61000-4-5: 2014 +A1: 2017 - EN 61000-4-6: 2014
Safety	cULus • UL 61010-1, 3rd Ed. • UL 61010-2-201, 2nd Ed. • CAN/CSA-C22.2 No. 61010-1-12, 3rd Ed. • CSA C22.2 No. 61010-2-201:18, 2nd Ed.
Environmental Compliance	• RoHS 3 (2015/863/EU) • REACH