



RUGGED EMBEDDED COMPUTER

RCO-1000-ASL-20

Fanless Mini Computer with Intel® Atom® x7433RE/x7835RE Processors, 1x DP, 1x HDMI, 4x USB, 1x 2.5" SATA HDD Bay



Features

- Support Intel® Atom® x7433RE/x7835RE Processors
- 1x 262-pin DDR5 SO-DIMM. Max. up to 16GB
- 2x 2.5GbE (Wake-on-LAN and PXE)
- 1x 2.5" SATA HDD Bay
- 1x M.2 (B Key, 2242 / 3042 / 3052) for storage/4G/5G Module
- 2x RS-232/422/485, 3x USB 3.2 Gen2, 1x USB 2.0
- 9 to 36VDC Wide Range Power Input Supporting AT/ATX Mode
- Wide Operating Temperature -40°C to 70°C
- TPM 2.0 Supported
- With 2x Universal Expansion Slots
- UL Listed

Specifications

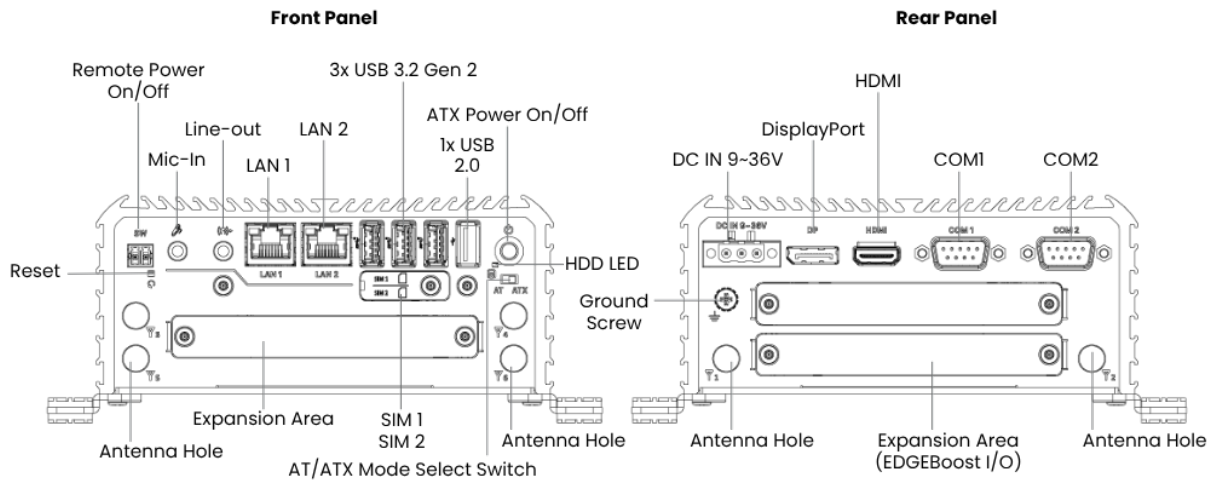
System	
Processor	- Intel Atom® x7433RE Processor 6M Cache, up to 3.40 GHz 4 core 9W (Default) - Intel Atom® x7835RE Processor 6M Cache, up to 3.60 GHz 8 core 12W
System Chipset	SoC integrated
LAN Chipset	2.5 GbE1: Intel I226 (Support Wake-on-LAN and PXE) 2.5 GbE2: Intel I226 (Support Wake-on-LAN and PXE)
Audio Codec	Realtek ALC888C
System Memory	1x 262-Pin DDR5 4800MT/s SODIMM. Max. up to 16GB (In-Band ECC Supported)
Graphics	Intel® UHD Graphics
BIOS	AMI 256Mbit SPI BIOS
Watchdog	Software Programmable Supports 1~255 sec. System Reset
TPM	TPM 2.0
Display	
Display Port	1x DisplayPort (3840 x 2160@60Hz)
HDMI	1x HDMI 1.4b (Resolution up to 3840x2160 @ 30 Hz)
Multiple Display	Dual Display
Storage	
M.2	1x M.2 (B-Key, 2242/3042/3052, USB 3.2/PCIe x1/SATA, Supports 4G/5G/AI/SATA Module)
SIM Socket	2x External SIM socket
SSD/HDD	1x Internal 2.5" SATA HDD Bay (support H=9.5 mm)
Expansion	
M.2	1x M.2 (E-Key, 2230, PCIe x1 & USB2.0)
Expansion Modules	Optional:
	• 2-Port COM module with Super I/O Chipset • 4-Port USB module with USB hub • 1-Port DP 1.4 and DIO (4 in / 4 out, Isolated) • 1-Port HDMI 2.0 and DIO (4 in / 4 out, Isolated)
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
EDGEBoost I/O Bracket	2x EDGEBoost I/O Bracket
LAN	2x RJ45 (2.5 GbE)
USB	3x USB 3.2 Gen 2 (10 Gbps) 1x USB 2.0
Others	6x WiFi Antenna Holes 1x Power Switch, 1x AT/ATX Switch, 1x Remote Power On/Off 1x Internal CMOS Battery Cable 1x 4-PIN FAN Connector 1x Ground Screw 1x HDD LED, 1x Reset
Operating System	
Windows	Windows 10, 11
Linux	Linux Ubuntu 22.04
Power	
Power Adapter	Optional AC/DC 12V/5A, 60W
Power Mode	AT, ATX
Power Ignition Sensing	Adjustable power ignition management (Optional IGN Module, via BIOS setting)
Power Supply Voltage	9~36VDC
Power Connector	3-pin Terminal Block

Power Protection	OVP (Over Voltage Protection); OCP (Over Current Protection) Reverse Protection
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Environment	
Operating Temperature	-40°C to 70°C
Storage Temperature	-40°C to 85°C
Relative Humidity	10% to 95% (non-condensing)
Certification	UL 62368-1 4th Ed., 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
Physical	
Dimensions	150 (W) x 105 (D) x 65 (H) mm
Weights	1 kg
Construction	Extruded Aluminum with Heavy Duty Metal
Mounting Options	Wall Mounting SIDE / VESA / DIN-Rail Mounting (Optional)

- For Intel® Atom® Processor x7433RE operating temperature limited -40°C to 70°C
- Intel 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 8 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

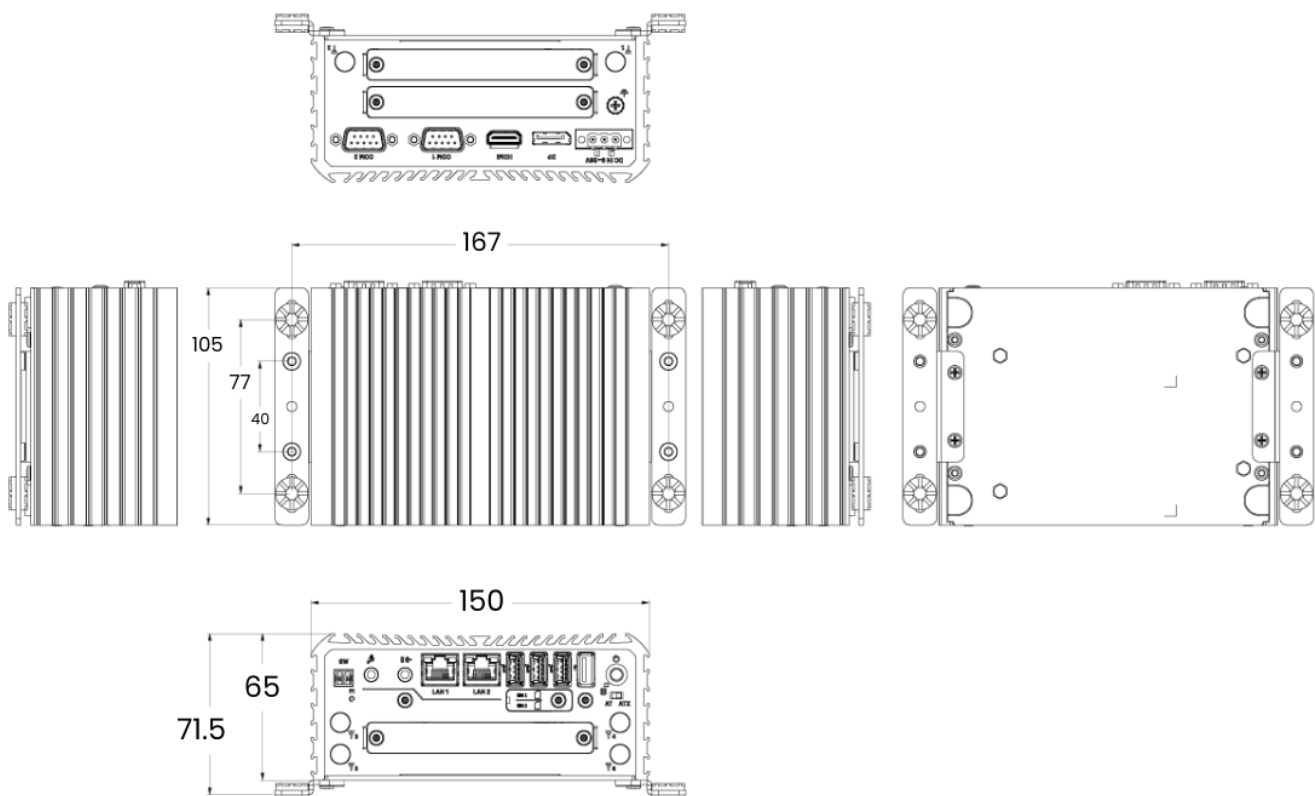


Expansion EDGEBoost I/O (Configuration Types)

EDGEBoost I/O for Rear Panel	Types	COM 2x COM Ports (RS232/422/485)	USB 4x USB 2.0	DP 1x DP Port and 1x DIO (4 in / 4 out, Isolated)	HDMI 1x HDMI Port and 1x DIO (4 in / 4 out, Isolated)
RCO-1000-ASL-20 (Two Slot Height)	1.	• •			
	2.	•		•	
	3.	•	•		
	4.	•			•
	5.		•	•	
	6.		•		•

Dimension

Unit: mm



Compliances and Standards

Shock	With SSD: 50G, half sine, 11ms IEC60068-2-27:2008 Designed to comply with MIL-STD-810H Method 516.8 Procedure I
Vibration	With SSD: 5 Grms, 5 - 500 Hz, 0.5 hr/axis With HDD: 1 Grms, 5 - 500 Hz, 0.5 hr/axis IEC60068-2-64:2008 Designed to comply with MIL-STD-810H Method 514.8 Procedure I
Operating Temperature	-40°C to 70°C 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 - Industrial EMC Compliance - EN 61000-4-2: 2009 - EN IEC 61000-4-3: 2020 - EN 61000-4-4: 2012 - EN 61000-4-5: 2014 +A1: 2017 - EN 61000-4-6: 2014
Safety	- UL Safety: UL62368-1, 4th Edition - Test procedure: CB Scheme - Standard: IEC 62368-1:2024

Available Models

Model No.	Description
RCO-1000-ASL-X7433RE-20-P	Fanless Mini Computer with Intel® x7433RE Processor, 2x EBIO, w/ Power Adapter
RCO-1000-ASL-X7835RE-20-P	Fanless Mini Computer with Intel® x7835RE Processor, 2x EBIO, w/ Power Adapter
RCO-1000-ASL-X7433RE-20	Fanless Mini Computer with Intel® x7433RE Processor, 2x EBIO
RCO-1000-ASL-X7835RE-20	Fanless Mini Computer with Intel® x7835RE Processor, 2x EBIO

Optional Accessories

Model No.	Description
1-E09A06008	Adapter AC/DC 12V 5A 60W with 3pin Terminal Block Plug 5.0mm Pitch
1-TPCD00001	Power Cord, 3-pin UK Type, 180cm
1-TPCD00002	Power Cord, European Type, 180cm
1-TPCD00003	Power Cord, 3-pin JAP Type, 180cm
1-TPCD00005	Power Cord, 3-pin US Type, 180cm
1-TPCD00018	Power Cord, 3-pin AS/NZS Type, 180cm
3-SIDE-0003	RCO-1000-20 Series Side Mount Kit
3-DINR-0005	RCO-1000 Series DIN-Rail Mount Kit
3-VESA-0003	RCO-1000 Series VESA Mount Kit

Packing List

1x RCO-1000-ASL-20 Series Embedded System
1x Wall Mount Kit

US Exports And Tariff Codes

ECCN	5A992.c
HTS	8471.50.0150
ScheduleB	84.71

Premio Inc.

918 Radecki Ct., City of Industry
CA 91748, United States
Toll Free: 800.977.3646

Premio Taiwan Inc.

18F, No.176, Jianyi Road, Zhonghe District,
New Taipei City 235603, Taiwan
Toll Free: 886.2.7731.7888

Email: sales@premioinc.com
Website: <https://premioinc.com>