



RUGGED EMBEDDED COMPUTER

RCO-1000-ASL-30

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 32GB
- 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 5x 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 4800/5600 MT/s SO-DIMM. Max. up to 32GB Non-ECC |
| Graphics | Intel® UHD Graphics |
| BIOS | AMI 256Mbit SPI BIOS |
| Watchdog | Software Programmable Supports 1~255 sec. System Reset |
| TPM | TPM 2.0 |

Display

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|------------------|---|
| Display Port | 1x DisplayPort (4096 x 2304@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) for storage/4G/5G Module |
| SIM Socket | 2x External SIM socket |
| SSD/HDD | 1x Internal 2.5" SATA HDD Bay (support H=9.5 mm) |

Expansion

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|-----|---|
| M.2 | 1x M.2 E key Type: 2230 (Support PCIe x1 + USB 2.0 signal for WiFi and Bluetooth) |
|-----|---|

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 | 5x EDGEBoost I/O Bracket (By mini PCIe interface, Proprietary Module) |
| 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 can be achieved through BIOS and optional daughter board. |
| Power Supply Voltage | 9~36VDC |
| Power Connector | 3-pin Terminal Block |

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

Environment

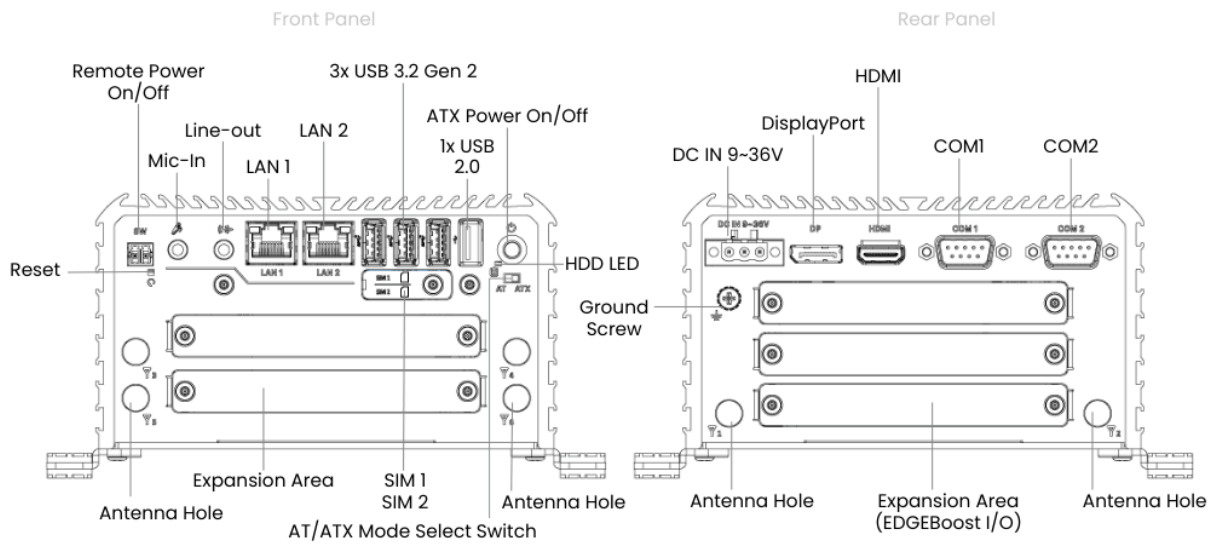
| | |
|-----------------------|--|
| Operating Temperature | -40°C to 70°C |
| Storage Temperature | -40°C to 85°C |
| Relative Humidity | 10% to 95% (non-condensing) |
| Certification | UL, CE, FCC Class A |
| Vibration | With SSD: 5 Grms, 5 - 500 Hz, 0.5 hr/axis With HDD: 1 Grms, 5 - 500 Hz, 0.5 hr/axis |
| Shock | With SSD: 50G, half sine, 11ms |

Physical

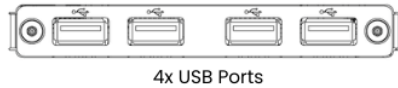
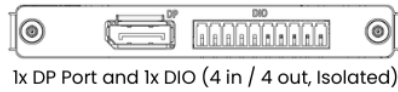
| | |
|------------------|---|
| Dimensions | 150 (W) x 105 (D) x 83 (H) mm |
| Weights | 1.2 kg |
| Construction | Extruded Aluminum with Heavy Duty Metal |
| Mounting Options | Wall Mounting SIDE / VESA / DIN-Rail Mounting (Optional) |

- 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

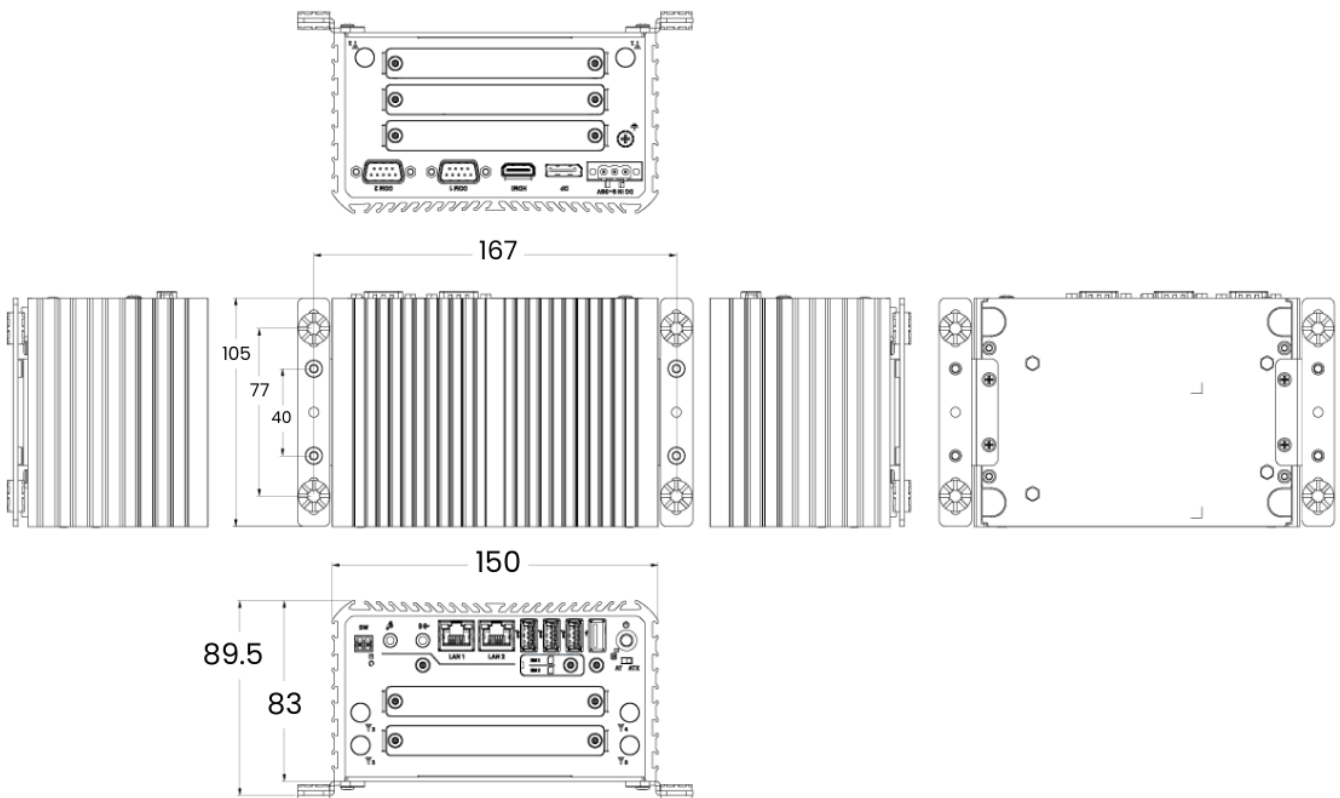


Available EDGEBoost I/O for Rear Panel



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 | <ul style="list-style-type: none"> 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 style="list-style-type: none"> UL Safety: UL62368-1, 3rd Ed., (cULus) Test procedure: CB Scheme Standard: IEC 62368-1:2018 |

Available Models

| Model No. | Description |
|-----------------------------|---|
| RCO-1000-ASL-x7433RE-30 | Fanless Mini PC with Intel® Atom® x7433RE Processor, 3x EDGEBoost IO |
| RCO-1000-ASL-x7835RE-30 | Fanless Mini PC with Intel® Atom® x7835RE Processor, 3x EDGEBoost IO |
| RCO-1000-ASL-x7433RE-30-OOB | Fanless Mini PC with Intel® Atom® x7433RE Processor, 1x RJ45 OOB, 3x EDGEBoost IO |
| RCO-1000-ASL-x7835RE-30-OOB | Fanless Mini PC with Intel® Atom® x7835RE Processor, 1x RJ45 OOB, 3x EDGEBoost IO |

Optional Accessories

| Model No. | Description |
|---------------|---|
| 1-TPCD00002 | Power Cord, European Type, 180cm |
| 1-TPCD00001 | Power Cord, 3-pin UK Type, 180cm |
| 1-TPCD00005 | Power Cord, 3-pin US Type, 180cm |
| 3-SIDE-0004 | RCO-1000-ASL-30 Series Side Mount Kit |
| 3-VESA-0003 | RCO-1000 Series VESA Mount Kit |
| 3-DINR-0004 | DIN-Rail Mount Kit |
| 3-RC1200IGKIT | MOD, PWR IGNITION, KIT, 1000-ASL |
| 3-RC12002SKIT | MOD, EBIO, 2XCOM, 3, 4, 1000-ASL |
| 3-RC12002S1IT | MOD, EBIO, 2XCOM, 5, 6, 1000-ASL |
| 3-RC12004UKIT | MOD, EBIO, 4XUSB2.0, 1000-ASL |
| 3-RC1200DDKIT | MOD, EBIO, DP, DIO, 4IN, 4OUT, 1000-ASL |
| 3-RC1200HOKIT | MOD, EBIO, HDMI, DIO, 4IN, 4OUT, 1000-ASL |

Packing List

1x RCO-1000-ASL-30 Series Embedded System
1x Wall Mount Kit
1x Accessory Kit

Exports And Tariff Codes

| | |
|-----------|--------------|
| ECCN | 5A992.c |
| HTS | 8471.50.0150 |
| ScheduleB | 84.71 |