



RUGGED EMBEDDED COMPUTER

# RCO-1000-ASL-10

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 4G/SATA 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 1x Universal Expansion Slots
- UL Listed

## Specifications

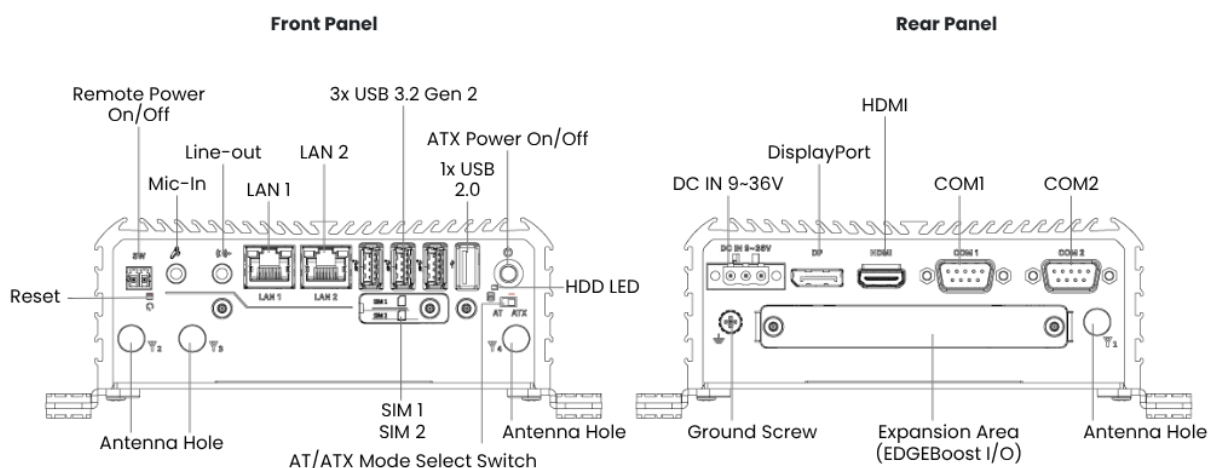
| System                 |                                                                                                                                                                                           |
|------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Processor              | - Intel Atom® x7433RE Processor 6M Cache, up to 3.40 GHz 4 core 9W (Default)<br>- 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)<br>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/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<br>• 4-Port USB module with USB hub<br>• 1-Port DP 1.4 and DIO (4 in / 4 out, Isolated)<br>• 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  | 1x EDGEBoost I/O Bracket                                                                                                                                                                  |
| LAN                    | 2x RJ45 (2.5 GbE)                                                                                                                                                                         |
| USB                    | 3x USB 3.2 Gen 2 (10 Gbps)<br>1x USB 2.0                                                                                                                                                  |
| Others                 | 4x WiFi Antenna Holes<br>1x Power Switch, 1x AT/ATX Switch, 1x Remote Power On/Off<br>1x Internal CMOS Battery Cable<br>1x 4-PIN FAN Connector<br>1x Ground Screw<br>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)<br>OCP (Over Current Protection)<br>Reverse Protection |
|------------------|--------------------------------------------------------------------------------------|

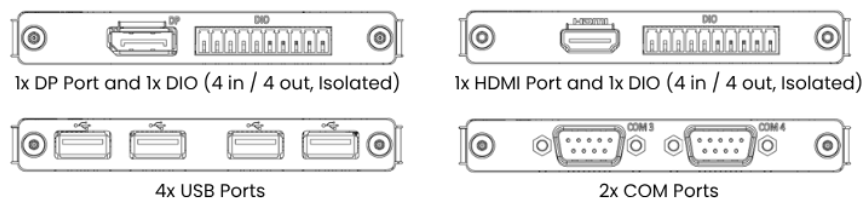
| Environment           |                                                                                        |
|-----------------------|----------------------------------------------------------------------------------------|
| Operating Temperature | -40°C to 70°C                                                                          |
| Storage Temperature   | -40°C to 85°C                                                                          |
| Relative Humidity     | 10% to 95% (non-condensing)                                                            |
| Certification         | UL 62368-1 4th Ed., CE, FCC Class A                                                    |
| Vibration             | With SSD: 5 Grms, 5 - 500 Hz, 0.5 hr/axis<br>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 56 (H) mm                                                          |
| Weights               | 0.9 kg                                                                                 |
| Construction          | Extruded Aluminum with Heavy Duty Metal                                                |
| Mounting Options      | Wall Mounting<br>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

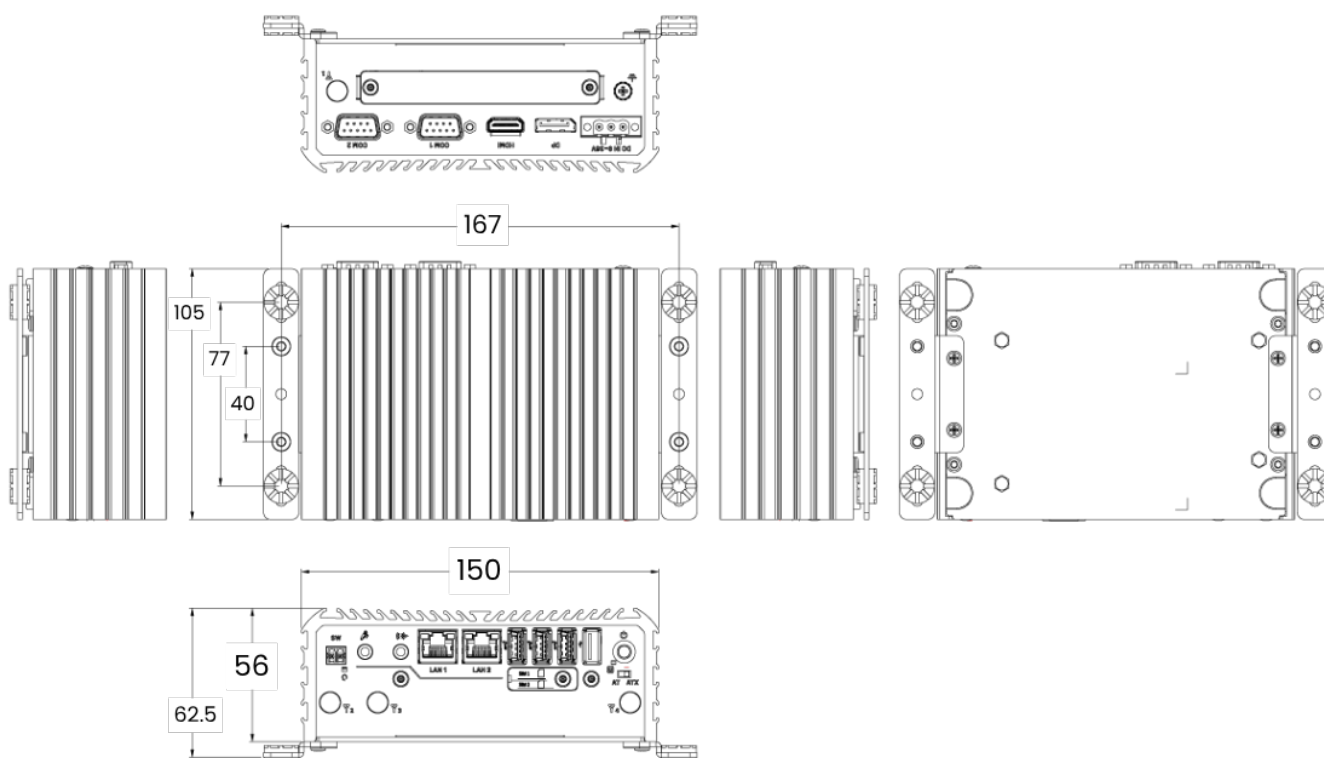


### Available EDGEBoost I/O for Rear Panel



## Dimension

Unit: mm



## Compliances and Standards

|                       |                                                                                                                                                                                                                                                                                                                  |
|-----------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Shock                 | With SSD: 50G, half sine, 11ms IEC60068-2-27:2008<br>Designed to comply with MIL-STD-810H Method 516.8 Procedure I                                                                                                                                                                                               |
| Vibration             | With SSD: 5 Grms, 5 - 500 Hz, 0.5 hr/axis<br>With HDD: 1 Grms, 5 - 500 Hz, 0.5 hr/axis<br>IEC60068-2-64:2008<br>Designed to comply with MIL-STD-810H Method 514.8 Procedure I                                                                                                                                    |
| Operating Temperature | -40°C to 70°C<br>IEC60068-2-1:2007 (Cold test procedure)<br>IEC60068-2-2:2007 (Dry heat test procedure)<br>IEC60068-2-3:2007 (Damp heat, steady state, test procedure)<br>IEC60068-2-14:2009 (Wide temperature range thermal shock)                                                                              |
| EMC                   | <ul style="list-style-type: none"> <li>FCC Class A</li> <li>CE</li> <li>ICES-003</li> <li>UKCA</li> <li>Industrial EMC Compliance</li> <li>- EN 61000-4-2: 2009</li> <li>- EN IEC 61000-4-3: 2020</li> <li>- EN 61000-4-4: 2012</li> <li>- EN 61000-4-5: 2014 +A1: 2017</li> <li>- EN 61000-4-6: 2014</li> </ul> |
| Safety                | <ul style="list-style-type: none"> <li>UL Safety: UL62368-1, 4th Edition</li> <li>Test procedure: CB Scheme</li> <li>Standard: IEC 62368-1:2024</li> </ul>                                                                                                                                                       |

## Available Models

| Model No.                 | Description                                                                    |
|---------------------------|--------------------------------------------------------------------------------|
| RCO-1000-ASL-X7433RE-10-P | Fanless Mini Computer with Intel® x7433RE Processor, 1x EBIO, w/ Power Adapter |
| RCO-1000-ASL-X7835RE-10-P | Fanless Mini Computer with Intel® x7835RE Processor, 1x EBIO, w/ Power Adapter |
| RCO-1000-ASL-X7433RE-10   | Fanless Mini Computer with Intel® x7433RE Processor, 1x EBIO                   |
| RCO-1000-ASL-X7835RE-10   | Fanless Mini Computer with Intel® x7835RE Processor, 1x 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-10 Series Embedded System |
| 1x Wall Mount Kit                         |

## US Exports And Tariff Codes

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

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