COMPACT FANLESS EMBEDDED SYSTEMS

DCO-1000-ASL

DIN-Rail Fanless Embedded Computer with Intel® Atom® x7433RE/x7835RE CPU, 2x DP, 2x COM, 4x USB, 4x LAN



Features

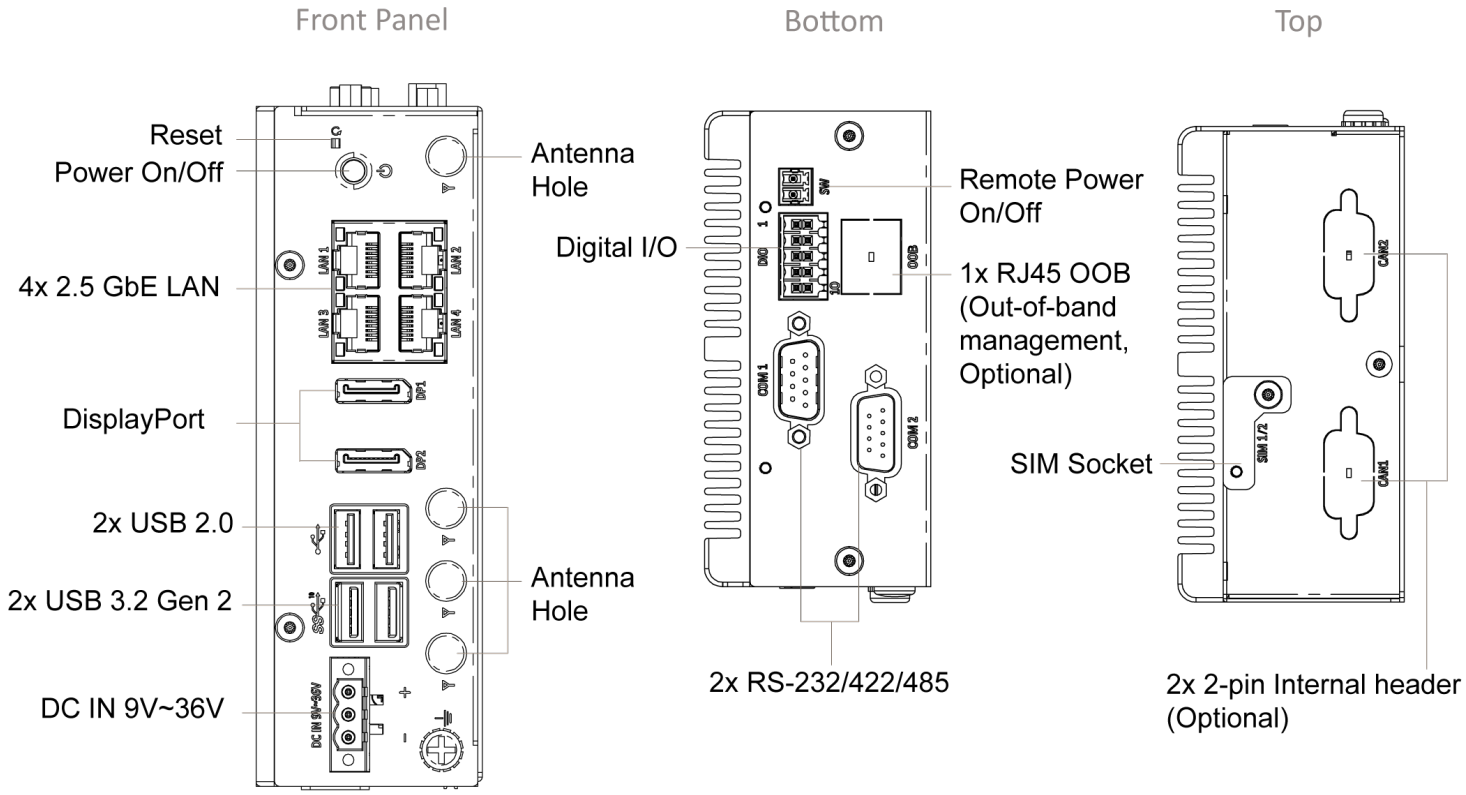
- Support Intel® Atom® x7433RE/x7835RE Processor
- 1x 262-Pin DDR5 4800 MT/s SODIMM. Max. up to 16GB
- Dual Independent Display by 2x Display Port
- 4x 2.5GbE LAN
- 1x M.2 (B-Key, 2242, PCIe x2, support NVMe)
- 1x M.2 (B-Key, 3042/3052, USB 3.2 Gen2 & USB2.0, support 4G/5G Module)
- 2x RS-232/422/485, 2x USB 3.2 Gen2, 2x USB 2.0
- 9 to 36VDC Wide Range Power Input Supporting AT/ATX Mode
- Wide Operating Temperature -40°C to 55°C
- TPM 2.0 Supported
- UL 61010-1, UL 61010-2-201, CE, FCC Class A, UKCA, ICES-003

Specifications

System	
Processor	Support Intel® Atom® Processor (Up to 12W TDP) -Intel® Atom® Processor x7433RE, Quad Core, CPU HFM 1.5 GHz/1C Turbo 3.2GHz, GPU 32EU, TDP 9W -Intel® Atom® Processor x7835RE, Eight Core, CPU HFM 1.0 GHz/1C Turbo 3.6GHz, GPU 32EU, TDP 12W
System Chipset	SoC integrated
LAN Chipset	2.5 GbE1: Intel I226 2.5 GbE2: Intel I226 2.5 GbE3: Intel I226 2.5 GbE4: Intel I226 (Support TSN) (LAN #1-2 Shared PCIe Gen 2 x1 Lane bandwidth)
System Memory	1x 262-Pin DDR5 4800 MT/s SO-DIMM. Max. up to 16GB (In-Band ECC Supported)
Graphics	Intel® UHD Graphics
BIOS	AMI SPI BIOS
Watchdog	Software Programmable Supports 1~255 sec. System Reset
TPM	TPM 2.0
Display	
Display Port	2x DisplayPort 1.4, DP (4096 x 2160@60Hz)
Multiple Display	Dual Display
Storage	
M.2	1x M.2 (B-Key, 2242, PCIe x2, support NVMe), Default 128G SSD
SIM Socket	1x Dual Nano SIM Socket
Expansion	
M.2	1x M.2 (B-Key, 3042/3052, USB 3.2 Gen2 & USB2.0, support 4G/5G Module) 1x M.2 (E-Key, 2230, PCIe x1 & USB2.0, support Wifi/Bluetooth)
I/O	
CAN	2x 2-pin Internal header (Optional)
COM	2x RS-232/422/485
DIO	4 in / 4 out (Isolated)
LAN	4x RJ45
OOB	1x RJ45 (Optional)
USB	2x USB 3.2 Gen 2 (10 Gbps) 2x USB 2.0
Others	4x WiFi Antenna Holes 1x Power Switch, 1x Reset Switch 1x AT/ATX Internal Switch Jumper 1x 2-PIN Remote Power On/Off 1x Internal CMOS Battery Cable
Operating System	
Windows	Windows 10/Windows 11
Linux	Linux kernel 6.2
Power	
Power Adapter	Optional AC/DC 12V/5A, 60W
Power Mode	AT, ATX
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 55°C
Storage Temperature	-40°C to 85°C
Relative Humidity	10% to 95% (non-condensing)
Certification	UL 61010-1, UL 61010-2-201 CE, FCC Class A, UKCA, ICES-003
Vibration	DIN-Rail Wall Mount with NVMe SSD: 5 Grms, 5 - 500 Hz, 0.5 hr/axis DIN-Rail Mount with NVMe SSD: 5 Grms, 5 - 500 Hz, 0.5 hr/axis
Shock	With SSD: 20G, half sine, 11ms
Physical	
Dimensions (W x D x H)	150 x 105 x 50 mm
Weights	0.85 kg
Construction	Extruded Aluminum with Heavy Duty Metal
Mounting Options	DIN-Rail Mounting Wall Mounting

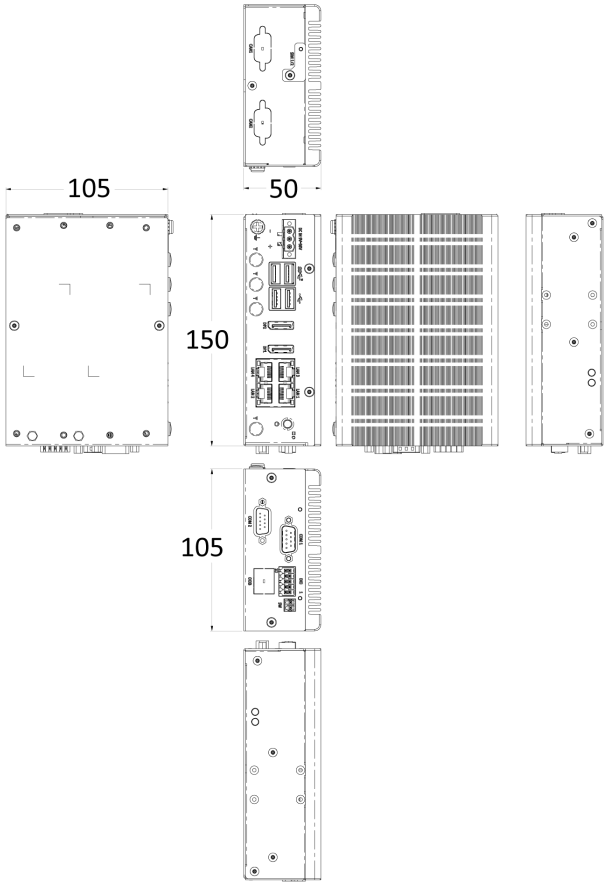
- For configured to run at 12W, operating temperatures will be limited to 55°C.
- 12W CPUS may experience thermal throttling depending on extreme application workloads; this is also due to an increase in the physical CPU cores from the Intel silicon (up to 8 cores). Please note, this does not indicate 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



Dimension

Unit: mm



Compliances and Standards

Shock	With SSD: 20G, half sine, 11ms IEC60068-2-27:2008 Designed to comply with MIL-STD-810H Method 516.8 Procedure I
Vibration	DIN-Rail Wall Mount with NVMe SSD: 5 Grms, 5 - 500 Hz, 0.5 hr/axis DIN-Rail Mount with NVMe SSD: 5 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 55°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 (47 CFR part 15.109 and part 15.107) • 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	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

Available Models

Model No.	Description
DCO-1000-ASL-X7433RE-P	DIN-Rail Fanless Embedded Computer with Intel® Atom® x7433RE CPU, 2x DP, 2x COM, 4x USB, 4x LAN, w/ Power Adapter
DCO-1000-ASL-X7433RE	DIN-Rail Fanless Embedded Computer with Intel® Atom® x7433RE CPU, 2x DP, 2x COM, 4x USB, 4x LAN
DCO-1000-ASL-X7835RE-P	DIN-Rail Fanless Embedded Computer with Intel® Atom® x7835RE CPU, 2x DP, 2x COM, 4x USB, 4x LAN, w/ Power Adapter
DCO-1000-ASL-X7835RE	DIN-Rail Fanless Embedded Computer with Intel® Atom® x7835RE CPU, 2x DP, 2x COM, 4x USB, 4x LAN

Optional Accessories

Model No.	Description
1-E09A06008	Adapter AC/DC 12V 5A 60W with 3pin Terminal Block Plug 5.0mm Pitch
1-TPCD00005	Power Cord, 3-pin US Type, 180cm
1-TPCD00002	Power Cord, European Type
1-TPCD00001	Power Cord, 3-pin UK Type, 180cm

Packing List

1x DCO-1000-ASL Series Embedded System
1x DIN-Rail Mount Kit
1x Wall Mounting Kit

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