AI EDGE COMPUTER

JCO-1000-ORN-A_1L

Entry-Level AI Edge Computer with NVIDIA Jetson Orin™ NX Super/Nano Super

Features

- NVIDIA® Jetson Orin™ NX Super 8GB/16GB or Nano Super 8GB/4GB GPU with 32 Tensor Cores
- 1x HDMI 2.0, Up to 3840 x 2160 @ 60Hz
- 1x GbE LAN
- 1x External Dual Nano SIM socket
- 1x M.2 (M Key, 2242/2280, PCIex 4, NVMe Storage) (128GB Default)
- 4x USB 3.2 Gen 2, 1x USB Type-C (For OS Flash)
- 4x DI + 4x DO with isolation
- 9 to 36VDC Wide Range Power Input Supporting AT/ATX Mode
- Wide Operating Temperature -20°C up to 55°C

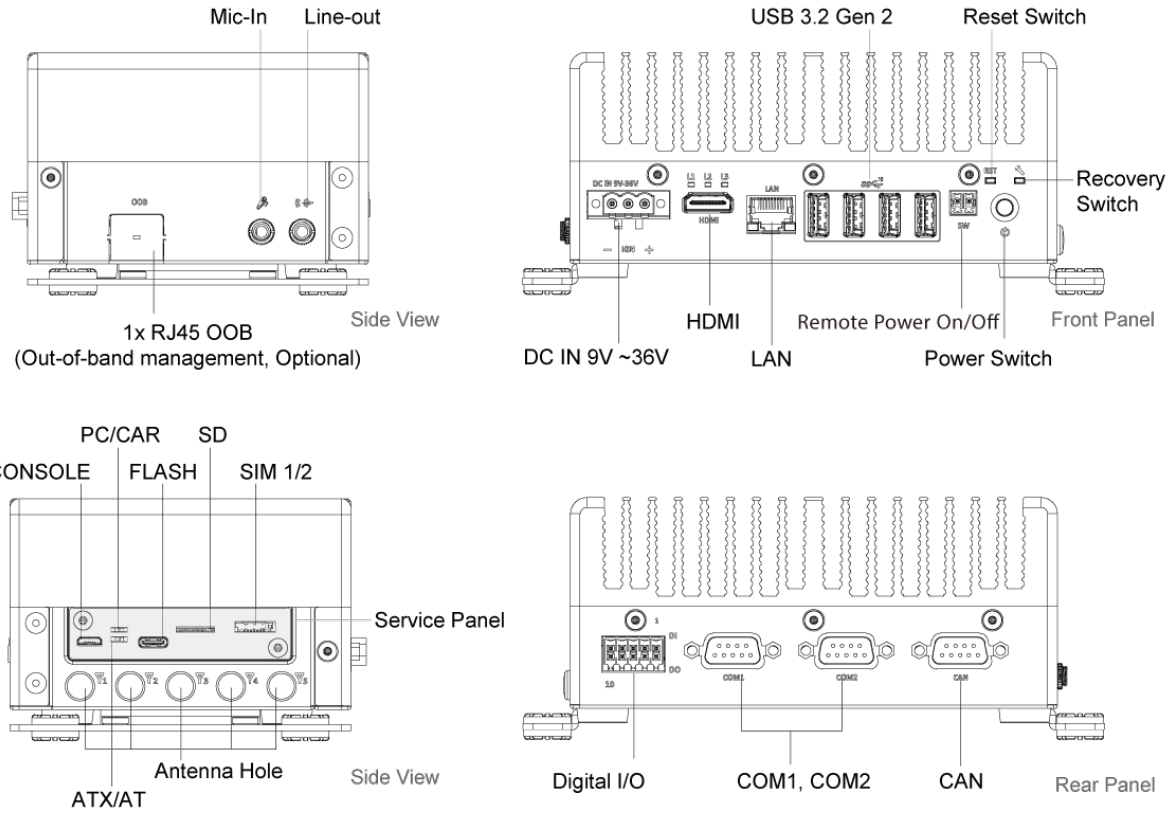
Specifications

System	
Processor	
- NVIDIA® Jetson Orin™ NX Super/Nano Super GPU with 32 Tensor Cores • NX 16 GB: 1024-core NVIDIA Ampere architecture GPU (40W/157 TOPS) • NX 8 GB: 1024-core NVIDIA Ampere architecture GPU (40W/117 TOPS) • Nano 8 GB: 1024-core NVIDIA Ampere architecture GPU (25W/67 TOPS) • Nano 4 GB: 512-core NVIDIA Ampere architecture GPU (25W/34 TOPS)	
LAN Chipset	RJ45 GbE: RGMII
Audio Codec	ALC5640
Watchdog	Software Programmable Supports 1~110 sec. System Reset
TPM	TPM 2.0
Display	
HDMI	• NX Series 1x HDMI 2.0, 3840 x 2160 @ 60Hz • Nano Series 1x HDMI 1.4, 3840 x 2160 @ 30Hz
Storage	
M.2	1x M.2 (M Key, 2242/2280, PCIe x4, NVMe) (Default 128GB)
SD	1x Micro SD 2.0 Slot
SIM Socket	1x External Dual Nano SIM socket (Attached to M.2 B Key)
Expansion	
M.2	1x M.2 (B Key, 2242/3042/3052, PCIe x1, USB 3.2 Gen2, Support 4G/5G Module) 1x M.2 (E Key, 2230, PCIe x1, USB 2.0, Support Wi-Fi/Bluetooth)
I/O	
CAN	CAN 2.0 B
COM	2x RS-232/422/485 (Switchable by Software)
DIO	4 in / 4 out (Isolated)
LAN	1x GbE RJ45
OOB	1x RJ45 (Optional OOB Management Module, Occupied 1x COM & Micro USB Console Port)
USB	4x USB 3.2 Gen 2 (10 Gbps) 1x USB Type-C (For OS Flash) 1x Micro USB (Console)
LED	3x LED LED 1 : Programmable LED (Blue Color) LED 2 : Programmable LED (Blue Color) LED 3 : Programmable LED (Red Color)
Others	Service Panel: • 1x Micro USB (For Console) • 1x USB Type-C (For OS Flash) • 1x PC/CAR Mode Switch • 1x AT/ATX SW • 1x Micro SD Slot • 1x Dual SIM Slot 5x WiFi Antenna Holes 1x Power Switch and 1x Reset Switch, 1x 2P Terminal Block for Remote SW 1x CMOS Battery Cable 1x 4-Pin FAN Connector 1x MIPI CSI-2 22-Pin Connector 1x MIPI CSI-2 15-Pin Connector Intregated RTC
Audio	1x Mic-in, 1x Line-out
Operating System	
Linux	Linux Ubuntu 22.04 with JetPack 6.2

Power	
Power Adapter	Optional AC/DC 24V/5A, 120W Optional AC/DC 20/7.5A, 150W
Power Mode	AT, ATX
Power Ignition Sensing	Adjustable Power Ignition Management
Power Supply Voltage	DC IN 9~36V
Power Connector	3-pin Terminal Block
Power Protection	OVP (Over Voltage Protection); OCP (Over Current Protection) Reverse Protection
Environment	
Operating Temperature	-20°C to 55°C (15W, 25W) -20°C to 35°C (40W)
Storage Temperature	-30°C to 85°C
Relative Humidity	10% to 95% (non-condensing)
Certification	CE, FCC Class B, UL 62368-1, 3rd Ed., RoHS 3.0, REACH
Vibration	With SSD: 5 Grms (5 - 500 Hz, 0.5 hr/axis)
Shock	With SSD: 50G half-sin 11ms
Physical	
Dimensions	150 (W) x 105 (D) x 65 (H) mm
Weights	1.1kg
Construction	Extruded Aluminum with Heavy Duty Metal
Mounting Options	Wall Mounting/DIN-Rail

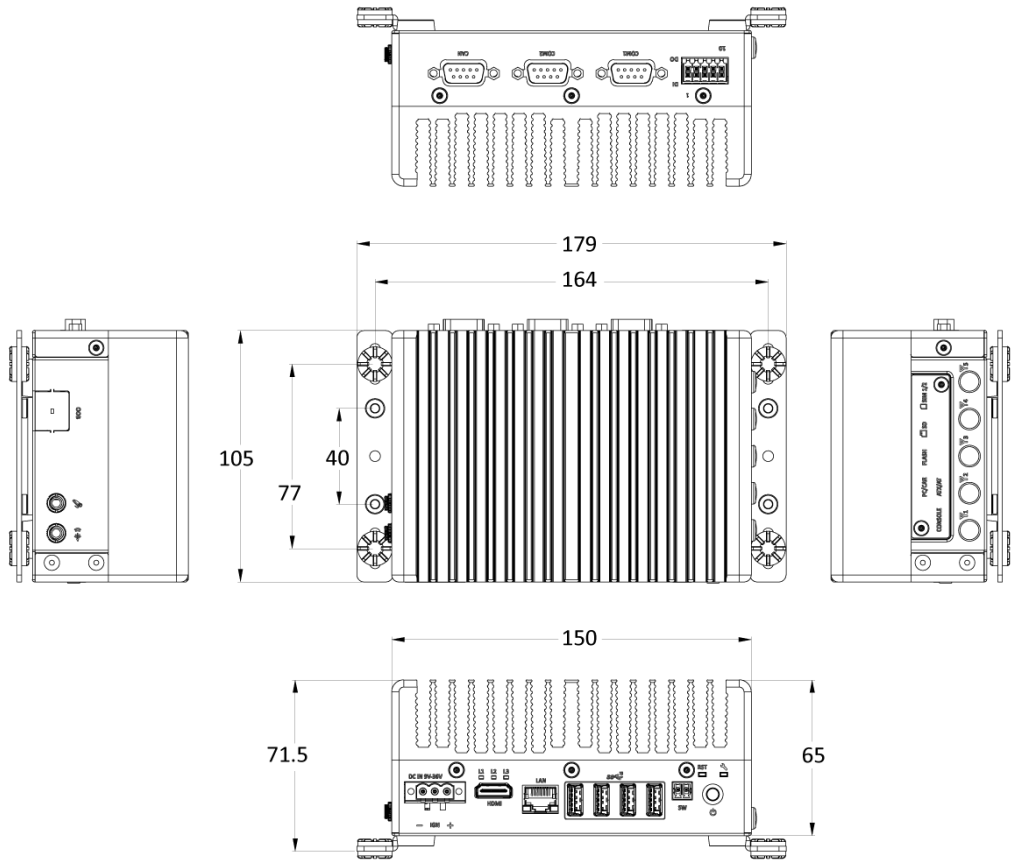
* All specifications and photos are subject to change without notice.

External I/O Mechanical Layout



Dimension

Unit: mm



Available Models

Model No.	Description
JCO-1000-ORN-A-NX16-P	Compact Fanless Edge AI Embedded Computer with NVIDIA® Jetson Orin™ NX Super 16G, 1x HDMI, 1x LAN, 4x USB, 1x CAN
JCO-1000-ORN-A-NX8-P	Compact Fanless Edge AI Embedded Computer with NVIDIA® Jetson Orin™ NX Super 8G, 1x HDMI, 1x LAN, 4x USB, 1x CAN
JCO-1000-ORN-A-NN8-P	Compact Fanless Edge AI Embedded Computer with NVIDIA® Jetson Orin™ Nano Super 8G, 1x HDMI, 1x LAN, 4x USB, 1x CAN
JCO-1000-ORN-A-NN4-P	Compact Fanless Edge AI Embedded Computer with NVIDIA® Jetson Orin™ Nano Super 4G, 1x HDMI, 1x LAN, 4x USB, 1x CAN
JCO-1000-ORN-A-NX16-OOB-P	Compact Fanless Edge AI Embedded Computer with NVIDIA® Jetson Orin™ NX Super 16G, 1x HDMI, 1x LAN, 4x USB, 1x CAN, 1x RJ45 OOB
JCO-1000-ORN-A-NX8-OOB-P	Compact Fanless Edge AI Embedded Computer with NVIDIA® Jetson Orin™ NX Super 8G, 1x HDMI, 1x LAN, 4x USB, 1x CAN, 1x RJ45 OOB
JCO-1000-ORN-A-NN8-OOB-P	Compact Fanless Edge AI Embedded Computer with NVIDIA® Jetson Orin™ Nano Super 8G, 1x HDMI, 1x LAN, 4x USB, 1x CAN, 1x RJ45 OOB
JCO-1000-ORN-A-NN4-OOB-P	Compact Fanless Edge AI Embedded Computer with NVIDIA® Jetson Orin™ Nano Super 4G, 1x HDMI, 1x LAN, 4x USB, 1x CAN, 1x RJ45 OOB

Optional Accessories

Model No.	Description
1-E09A12002	Adapter AC/DC 24V 5A 120W with 3pin Terminal Block Plug 5.0mm Pitch
1-TPCD00001	Power Cord, UK Type, 180cm (120W)
1-TPCD00002	Power Cord, European Type, 180cm (120W)
1-TPCD00003	Power Cord, Japanese Type, 180cm (120W)
1-TPCD00005	Power Cord, 3-pin US Type, 180cm (120W)
1-E09A15002	Adapter AC/DC 20V 7.5A 150W with 3-pin Terminal Block Plug 5.0mm Pitch
1-TPCD00011	Power Cord, 3-pin UK Type, 180cm (150W)
1-TPCD00008	Power Cord, 3-pin US Type, 180cm (150W)
1-TPCD00009	Power Cord, 3-pin European Type, 180cm (150W)
1-TPCD00013	Power Cord, 3-pin Austria Type, 180cm (150W)
1-TPCD00014	Power Cord, 3-pin Japanese Type, 180cm (150W)

Packing List

1x JCO-1000-ORN-A Lite-Range AI Computer
1x Wall Mount Kit
1x DIN-Rail Mount Kit
1x Accessory Kit

Compliances and Standards

Shock	With SSD: 50G half-sin 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) IEC60068-2-64:2008 Designed to comply with MIL-STD-810H Method 514.8 Procedure I
Operating Temperature	-20°C to 55°C (15W, 25W) -20°C to 35°C (40W) 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 B • 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: UL 62368-1, 3rd Ed., (cULus) • Test procedure: CB Scheme • Standard: IEC 62368-1:2018
Environmental Compliance	• RoHS 3 (2015/863/EU) • REACH

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