



AI EDGE COMPUTER

JCO-3000-ORN-B

Mid-Range AI Computer with NVIDIA Jetson Orin™ NX 8G/16G or Nano 8G/4G GPU with 32 Tensor Cores, 4x LAN



Features

- NVIDIA® Jetson Orin™ NX 8 GB/16 GB or Nano 8 GB/4 GB GPU with 32 Tensor Cores
- 1x HDMI 2.0, 3840 x 2160 @ 60Hz
- 4x GbE RJ45 LAN with Optional PoE option
- 1x External Dual Nano SIM socket
- 1x M.2 (M Key, 2242/2280, PCIe 4, Support NVMe)
- 4x USB 3.2 Gen 2, 1x USB Type-C
- 8x DI + 8x DO with isolation
- 9 to 36VDC Wide Range Power Input Supporting AT/ATX Mode
- Wide Operating Temperature -20°C to 55°C (25W, NX Module)

Specifications



Certification

EMI:

- CE
- FCC Class A (47 CFR part 15.109 and part 15.107)
- ICES-003
- UKCA

EMC Compliance:

- Railway EMC: EN 50155: 2017, EN 50121-1: 2017, EN 50121-3-2: 2016
- Industrial EMC: 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
- E-Mark (E13)

Safety:

- UL Safety Pending: UL62368-1, 3rd Ed., (cULus)
- Test procedure: CB Scheme
- Standard: IEC 62368-1:2018

Green Product:

- RoHS 3.0 (Directive 2015/863/EU)
- REACH

Vibration

IEC60068-2-64:2008
With SSD: 5 Grms (5 - 500 Hz, 0.5 hr/axis)
Designed to comply with MIL-STD-810G Method 514.7 Procedure I

Shock

IEC60068-2-27:2008
With SSD: 50G half-sin 11ms
Designed to comply with MIL-STD-810G Method 516.7 Procedure I
Package Drop Test: ISTA 2A

Physical

Dimensions	192 (W) x 140(D) x 58(H) mm
Weights	2.8 ~ 3.6 kg
Construction	Extruded Aluminum with Heavy Duty Metal
Mounting Options	Wall Mounting/DIN rail (Optional)

System

- Processor
- NVIDIA® Jetson Orin™ NX/Nano GPU with 32 Tensor Cores
 - 16 GB: 1024-core NVIDIA Ampere architecture GPU (25W/100 TOPS)
 - 8 GB: 1024-core NVIDIA Ampere architecture GPU (20W/70 TOPS)
 - 8 GB: 1024-core NVIDIA Ampere architecture GPU (15W/40 TOPS)
 - 4 GB: 512-core NVIDIA Ampere architecture GPU (10W/20 TOPS)

LAN Chipset	GbE1: RGMII GbE2-4: Intel LAN Chip
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Display

HDMI	1x HDMI 2K (2560*1440) 60Hz
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Storage

M.2	1x M.2 (M Key, 2242/2280, PCIe x4, NVMe) (Default 128GB)
SIM Socket	1x External Dual Nano SIM socket (M.2 B Key attached)

Expansion

M.2	1x M.2 (B Key, 3042/3052, USB 3.2 Gen1, Support 4G/5G/Storage) 1x M.2 (E Key, 2230, PCIe x1, USB 2.0, Support Wi-Fi/Bluetooth)
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I/O

CAN	CAN 2.0 B
COM	2x RS-232/422/485 (Switch by MCU)
DIO	8 in / 8 out (Isolated)
LAN	4x RJ45 LAN
OOB	1x RJ45 (Optional OOB Management Module, Optional, Occupied 1x COM)
PoE	4x RJ45 (Optional, PoE+ 120W Module (Type 2, Max 25W per Port))
USB	4x USB 3.2 Gen 2 (10 Gbps, Shared with USB 3 Hub) 1x USB Type-C
Others	6x WiFi Antenna Holes 1x Power Switch 1x CMOS Battery Cable 1x 4-Pin FAN Connector

Operating System

Linux	Linux Ubuntu 20.04 with JetPack
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Power

Power Adapter	Optional AC/DC 12V/5A, 60W (Optional) Optional AC/DC 24V/9.2A, 220W (For PoE Model)
Power Mode	AT, ATX
Power Ignition Sensing	Adjustable Power Ignition Management
Power Supply Voltage	9~36VDC 12~36VDC (PoE Model)
Power Connector	3-pin Terminal Block
Power Protection	OVP (Over Voltage Protection); OCP (Over Current Protection) Reverse Protection

Environment

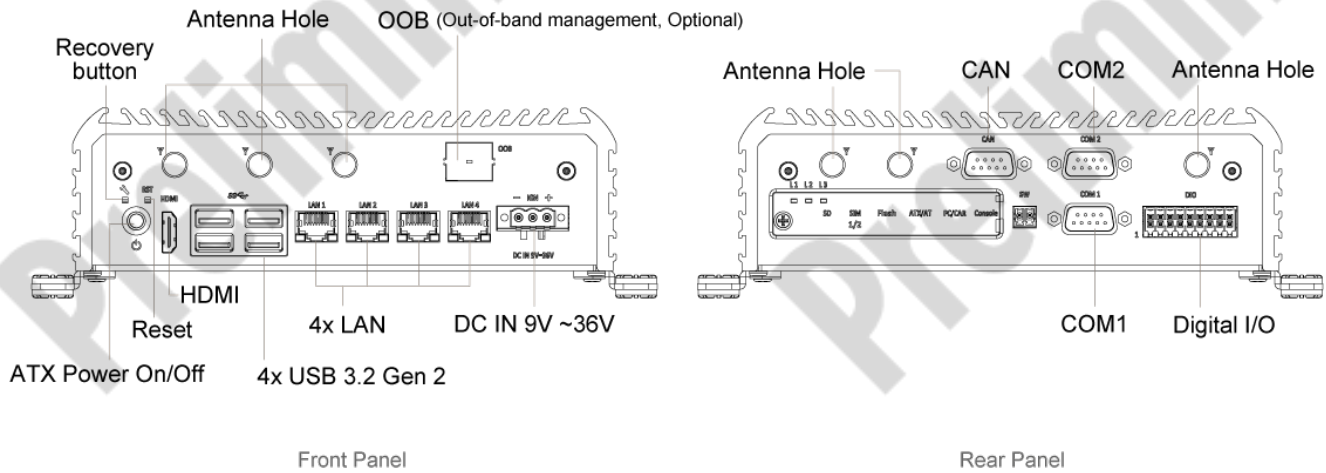
Operating Temperature	-20°C to 55°C (25W, NX Module) -20°C to 60°C (15W, Nano Module)
Storage Temperature	-30°C to 85°C
Relative Humidity	10% to 95% (non-condensing)

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



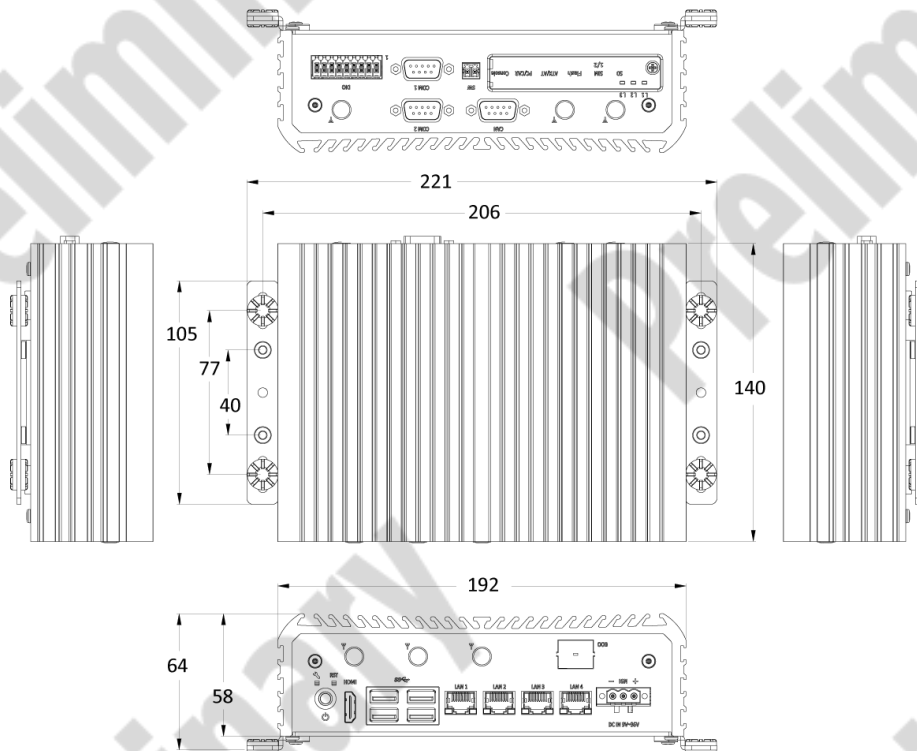
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External I/O Mechanical Layout



Dimension

Unit: mm





JCO-3000-ORN-B

Available Models

Model No.	Description
JCO-3000-ORN-B-NX16	Mid-Range AI Computer with NVIDIA® Jetson Orin™ NX 16G, M.2 128G, 1x HDMI, 2x COM, 4x USB, 1x CAN, 4x LAN
JCO-3000-ORN-B-NX8	Mid-Range AI Computer with NVIDIA® Jetson Orin™ NX 8G, M.2 128G, 1x HDMI, 2x COM, 4x USB, 1x CAN, 4x LAN
JCO-3000-ORN-B-NN8	Mid-Range AI Computer with NVIDIA® Jetson Orin™ Nano 8G, M.2 128G, 1x HDMI, 2x COM, 4x USB, 1x CAN, 4x LAN
JCO-3000-ORN-B-NN4	Mid-Range AI Computer with NVIDIA® Jetson Orin™ Nano 4G, M.2 128G, 1x HDMI, 2x COM, 4x USB, 1x CAN, 4x LAN
JCO-3000-ORN-B-NX16-4P	Mid-Range AI Computer with NVIDIA® Jetson Orin™ NX 16G, M.2 128G, 1x HDMI, 2x COM, 4x USB, 1x CAN, 4x PoE RJ45
JCO-3000-ORN-B-NX8-4P	Mid-Range AI Computer with NVIDIA® Jetson Orin™ NX 8G, M.2 128G, 1x HDMI, 2x COM, 4x USB, 1x CAN, 4x PoE RJ45
JCO-3000-ORN-B-NN8-4P	Mid-Range AI Computer with NVIDIA® Jetson Orin™ Nano 8G, M.2 128G, 1x HDMI, 2x COM, 4x USB, 1x CAN, 4x PoE RJ45
JCO-3000-ORN-B-NN4-4P	Mid-Range AI Computer with NVIDIA® Jetson Orin™ Nano 4G, M.2 128G, 1x HDMI, 2x COM, 4x USB, 1x CAN, 4x PoE RJ45

Optional Accessories

Model No.	Description
1-E09A06008	Adapter AC/DC 12V 5A 60W with 3pin Terminal Block Plug 5.0mm Pitch
1-E09A12002	Adapter AC/DC 24V 5A 120W with 3pin Terminal Block Plug 5.0mm Pitch
1-E09A22102	Adapter AC/DC 24V 9.2A 220W with 3pin Terminal Block Plug 5.0mm Pitch
1-TPCD00005	Power Cord, 3-pin US Type, 180cm
1-TPCD00002	Power Cord, European Type, 180cm
1-TPCD00001	Power Cord, 3-pin UK Type, 180cm

Packing List

1x JCO-3000-ORN-B_4LAN Mid-Range AI Computer
1x Wall Mount Kit
1x Accessory Kit



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Assured Systems

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