



AI EDGE COMPUTER

JCO-3000-ORN-A

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



Features

- NVIDIA® Jetson Orin™ NX 8GB/16GB or Nano 8GB/4GB GPU with 32 Tensor Cores
- 1x HDMI 2K (2560 x 1440) 60Hz
- 2x GbE LAN
- 1x External Micro SIM socket
- 1x M.2 (M Key, 2242/2280, PCIe 4, Support NVMe)
- 4x USB 3.0, 1x Micro USB (OTG)
- 4x DI + 4x DO with Isolation
- 12 to 24VDC Wide Range Power Input Supporting AT Mode
- Wide Operating Temperature -20°C to 55°C (25W, NX/Nano Module)

Specifications



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: Intel LAN Chip

Display

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

Storage

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

Expansion

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

I/O

CAN CAN 2.0 A
COM 2x RS-232/485 (Internal, switch by Jumper)
DIO 4 in / 4 out (Isolated)
LAN 2x RJ45
OOB 1x RJ45 (Optional OOB Management Module, Optional, Occupied 1x COM)
USB 4x USB 3.0 (Shared with USB 3.2 Gen 2 Hub)
1x Micro USB (OTG)
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

Power

Power Adapter AC/DC 12V/5A, 60W (Optional)
Power Mode AT
Power Supply Voltage 12~24V
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)

Certification

EMC:

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

Safety:

- UL Safety Pending: UL62368-1, 3rd Ed., (cULus)
- Test prcedure: 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

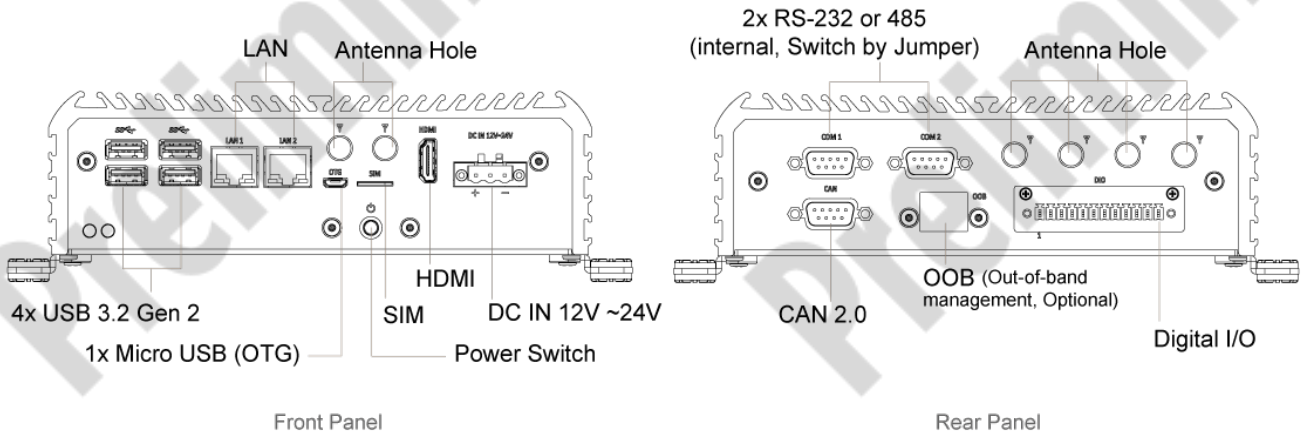
Shock

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

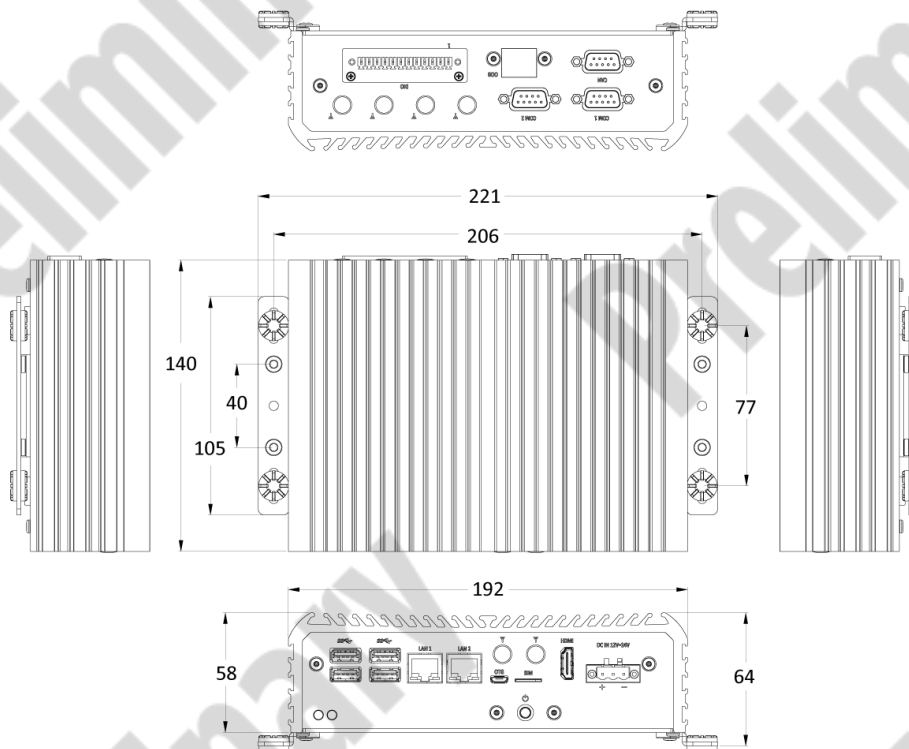
Dimensions 192 (W) x 140(D) x 58(H) mm
Weights 2.8 ~ 3.6 kg
Construction Extruded Aluminum with Heavy Duty Metal
Mounting Options Wall Mounting/DIN rail (Optional)

External I/O Mechanical Layout



Dimension

Unit: mm





JCO-3000-ORN-A

Available Models

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

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, 180cm
1-TPCD00001	Power Cord, 3-pin UK Type, 180cm

Packing List

1x JCO-3000-ORN-A_2LAN Mid-Range AI Computer
1x Wall Mount Kit
1x Accessory Kit



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Assured Systems

Assured Systems is a leading technology company with over 1,500 regular clients in 80 countries, deploying over 85,000 systems to a diverse customer base in 12 years of business. We offer high-quality and innovative rugged computing, display, networking and data collection solutions to the embedded, industrial, and digital-out-of-home market sectors.

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