



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 4K, 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

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 IC
Display	
HDMI	1x HDMI 4K (3840*2160) 60Hz
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) 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 (Switch by MCU)
DIO	8 in / 8 out (Isolated)
LAN	4x RJ45 LAN
OOB	1x RJ45 (Optional OOB Management Module, Occupied 1x COM & Micro USB Console Port)
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 Micro USB (Console) 1x USB Type-C (USB 2.0, For Flash OS)
Others	6x WiFi Antenna Holes 1x Power Switch, 1x Reset Switch, 1x Force Recovery Switch 1x 2P Terminal block for Remote Power SW 1x CMOS Battery Cable 1x 4-Pin FAN Connector
Operating System	
Linux	Linux Ubuntu 20.04 with JetPack 5.1.2 SDK
Power	
Power Adapter	Optional AC/DC 12V/5A, 60W Optional AC/DC 12V/5A, 120W (For PoE Model) 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 12V: PoE Power Budget Supports Up to 60W 24V: PoE Power Budget Supports Up to 120W
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

### EMI:

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

### Safety:

- UL Safety: UL 62368-1, 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

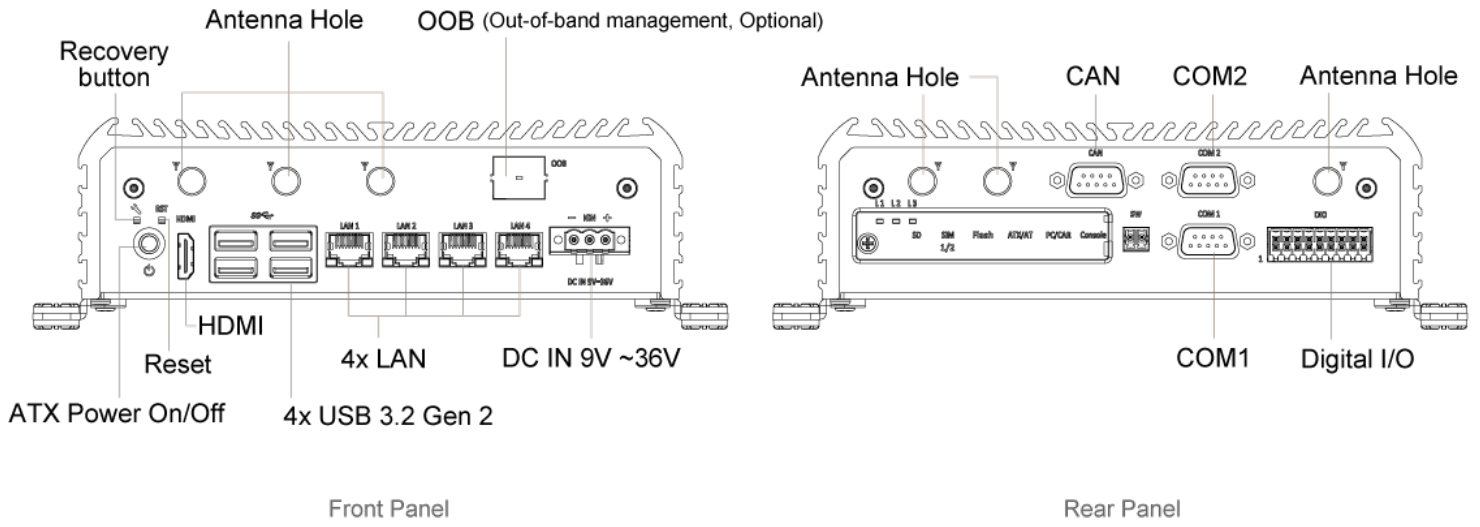
### Construction

Extruded Aluminum with Heavy Duty Metal

### Mounting Options

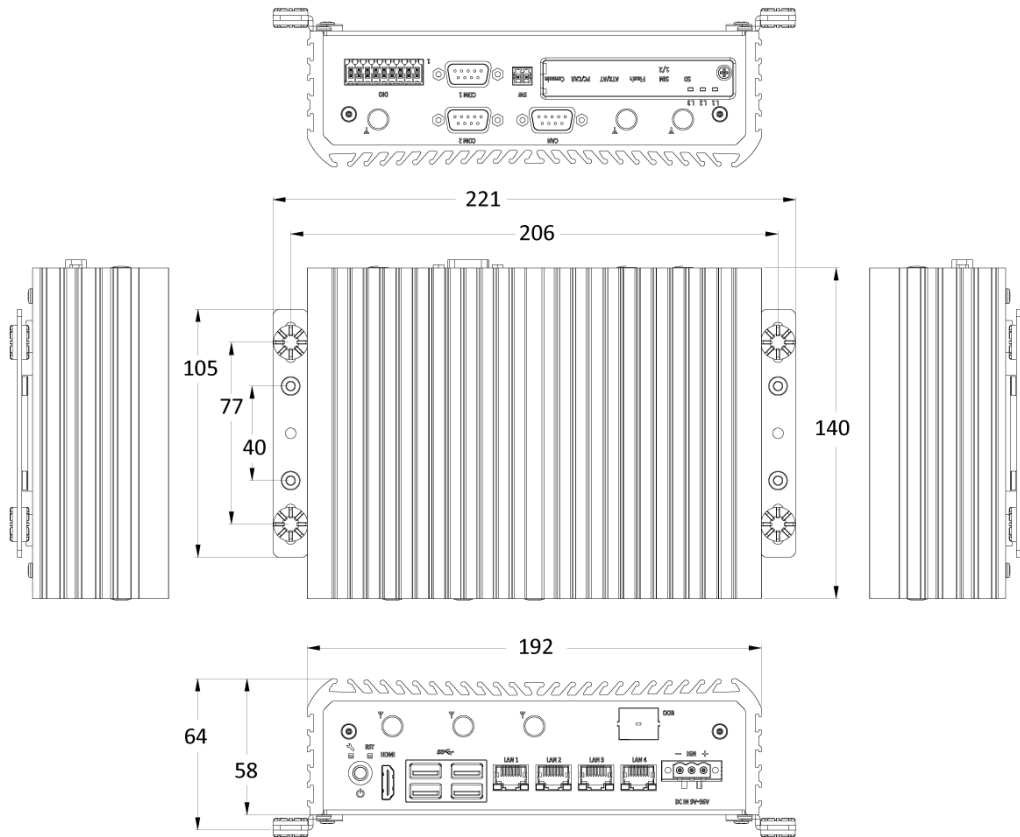
Wall Mounting/DIN rail (Optional)

## External I/O Mechanical Layout



## Dimension

Unit: mm



## 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