AI EDGE COMPUTER

# JCO-3000-ORN-B_4L

## Mid-Range AI Edge Computer with NVIDIA Jetson Orin™ NX or Nano Super

### Features

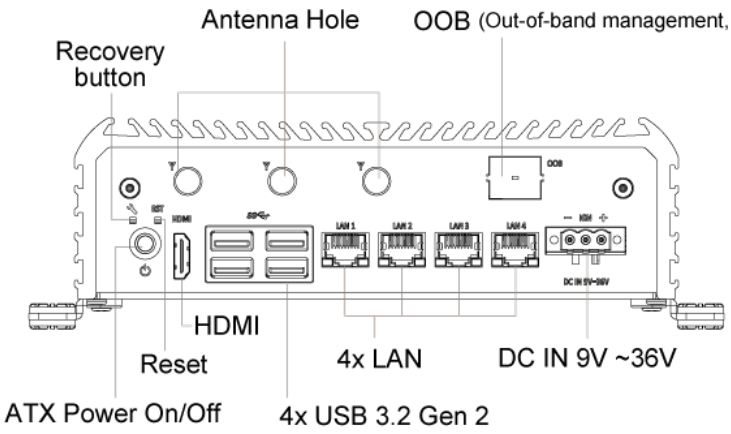
- NVIDIA® Jetson Orin™ NX 8GB/16GB or Orin Nano Super 8GB/4GB
- 1x HDMI 4K, 3840 x 2160 @ 60Hz
- 4x GbE RJ45 LAN with Optional PoE option
- 1x External Dual Nano SIM socket
- 1x M.2 (M Key, 2242/2280, PCIex 4,Support NVMe)
- 4x USB 3.2 Gen 2, 1x USB Type-C
- 8x DI + 8x DO with isolation
- 9 to 36VDC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

### Specifications

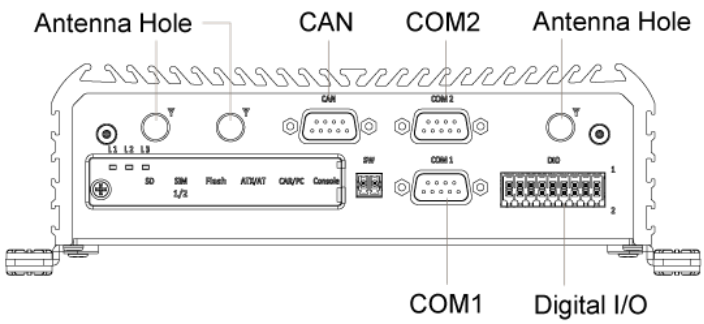
| | |
|---|---|
| **System** | |
| Processor<br>- NVIDIA® Jetson Orin™ NX GPU or Orin™ Nano Super GPU<br>• NX 16G: 1024-core NVIDIA Ampere architecture GPU (25W/100 TOPS)<br>• NX 8G: 1024-core NVIDIA Ampere architecture GPU (20W/ 70 TOPS)<br>• Nano Super 8G: 1024-core NVIDIA Ampere architecture GPU (25W/67 TOPS)<br>• Nano Super 4G: 512-core NVIDIA Ampere architecture GPU (25W/34 TOPS) | |
| LAN Chipset | GbE1: RGMII<br>GbE2~4: Intel LAN IC |
| System Memory | 8G/16G LPDDR5 @ 3200 MHz on SOM |
| TPM | TPM 2.0 |
| **Display** | |
| HDMI | 1x HDMI 4K (3840*2160) 60Hz |
| **Storage** | |
| M.2 | 1x M.2 (M Key, 2242/2280, PCIe x4, NVMe) (Default 128GB) |
| SD | 1x Micro SD Slot |
| SIM Socket | 1x External Dual Nano SIM socket (M.2 B Key attached) |
| **Expansion** | |
| M.2 | 1x M.2 (B Key, 2242/3042/3052, USB 3.2 Gen1, Support 4G/5G)<br>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)<br>1x Micro USB (Console)<br>1x USB Type-C (USB 2.0, For Flash OS) |
| Others | 6x WiFi Antenna Holes<br>1x Power Switch, 1x Reset Switch, 1x Force Recovery Switch<br>1x 2P Terminal blcok for Remote Power SW<br>1x CMOS Battery Cable<br>1x 4-Pin FAN Connector |
| **Operating System** | |
| Linux | Linux Ubuntu 22.04 with JetPack 6.2 |
| **Power** | |
| Power Adapter | Optional AC/DC 12V/5A, 60W<br>Optional AC/DC 24V/5A, 120W (For PoE Model)<br>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<br>12V: PoE Power Budget Supports Up to 60W<br>24V: PoE Power Budget Supports Up to 120W |
| Power Connector | 3-pin Terminal Block |
| Power Protection | OVP (Over Voltage Protection);<br>OCP (Over Current Protection)<br>Reverse Protection |
| **Environment** | |
| Operating Temperature | -20°C to 60°C (15W)<br>-20°C to 55°C (25W) |
| Storage Temperature | -30°C to 85°C |
| Relative Humidity | 10% to 95% (non-condensing) |
| Certification | • CE, FCC Class A<br>• UL 62368-1, 3rd Ed.<br>• E-mark (E24)<br>• 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 | 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 (Default)<br>DIN-Rail (Optional) |

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

## External I/O Mechanical Layout



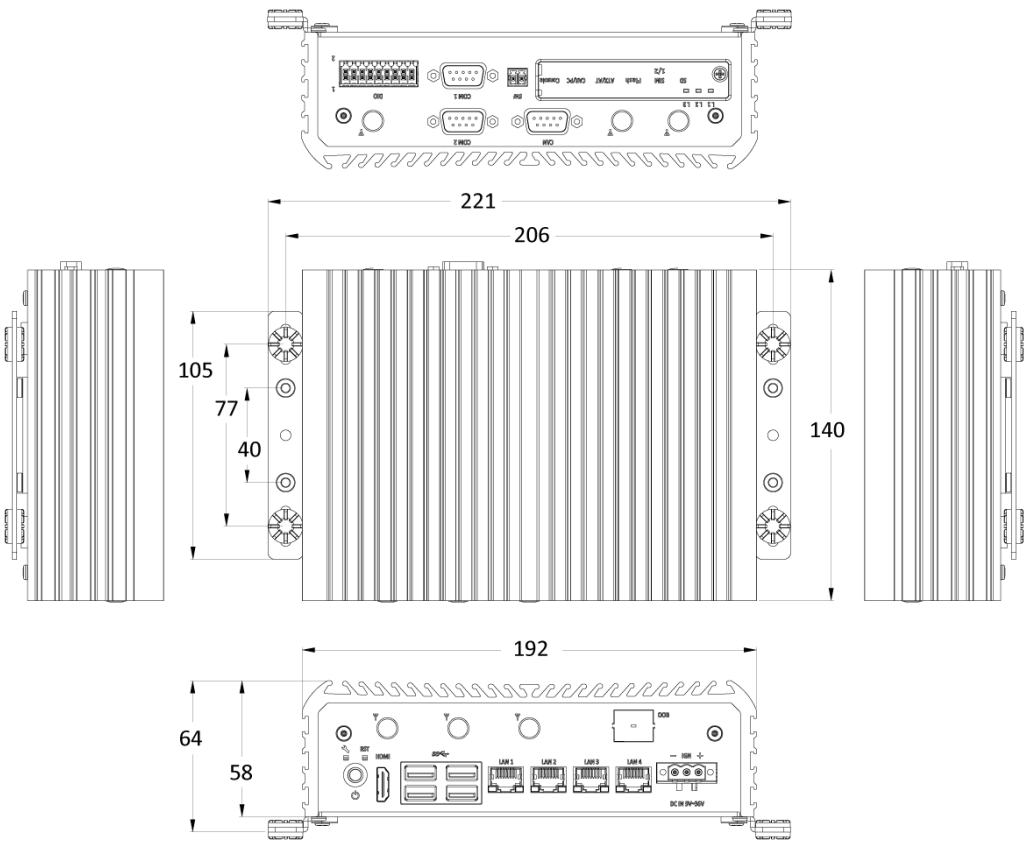

Front Panel




Rear Panel

## Dimension

Unit: mm



## Compliances and Standards

| | |
|---|---|
| Shock | With SSD: 50G half-sin 11ms<br>IEC60068-2-27:2008<br>Designed to comply with MIL-STD-810H Method 516.8 Procedure I |
| Vibration | With SSD: 5 Grms (5 - 500 Hz, 0.5 hr/axis)<br>IEC60068-2-64:2008<br>Designed to comply with MIL-STD-810H Method 514.8 Procedure I |
| Operating Temperature | -20°C to 60°C (15W)<br>-20°C to 55°C (25W)<br>IEC60068-2-1:2007 (Cold test procedure)<br>IEC60068-2-2:2007 (Dry heat test procedure)<br>IEC60068-2-3:2007 (Damp heat, steady state, test procedure)<br>IEC60068-2-14:2009 (Wide temperature range thermal shock) |
| EMC | • FCC Class A<br>• CE<br>• ICES-003<br>• UKCA<br>• Industrial EMC Compliance<br>- EN 61000-4-2: 2009<br>- EN IEC 61000-4-3: 2020<br>- EN 61000-4-4: 2012<br>- EN 61000-4-5: 2014 +A1: 2017<br>- EN 61000-4-6: 2014 |
| Safety | • UL Safety: UL 62368-1, 3rd Ed., (cULus)<br>• Test procedure: CB Scheme<br>• Standard: IEC 62368-1:2018<br>• E-mark (E24) |
| Environmental Compliance | • RoHS 3 (2015/863/EU)<br>• REACH |

## Available Models

| Model No. | Description |
|---|---|
| JCO-3000-ORN-B-4L | Mid-Range AI Edge Computer With NVIDIA Jetson Orin™ NX/Nano Super, 4x LAN |
| JCO-3000-ORN-B-4P | Mid-Range AI Edge Computer With NVIDIA Jetson Orin™ NX/Nano Super, 4x PoE |
| JCO-3000-ORN-B-4L-P | Mid-Range AI Edge Computer With NVIDIA Jetson Orin™ NX/Nano Super, 4x LAN, w/ Power Adapter |
| JCO-3000-ORN-B-4P-P | Mid-Range AI Edge Computer With NVIDIA Jetson Orin™ NX/Nano Super, 4x PoE, w/ Power Adapter |

## 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 (120W) |
| 1-TPCD00002 | Power Cord, European Type, 180cm (120W) |
| 1-TPCD00001 | Power Cord, UK Type, 180cm (120W) |

## Packing List

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

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