



AI EDGE COMPUTER

# JCO-3000-ORN-B

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



## Features

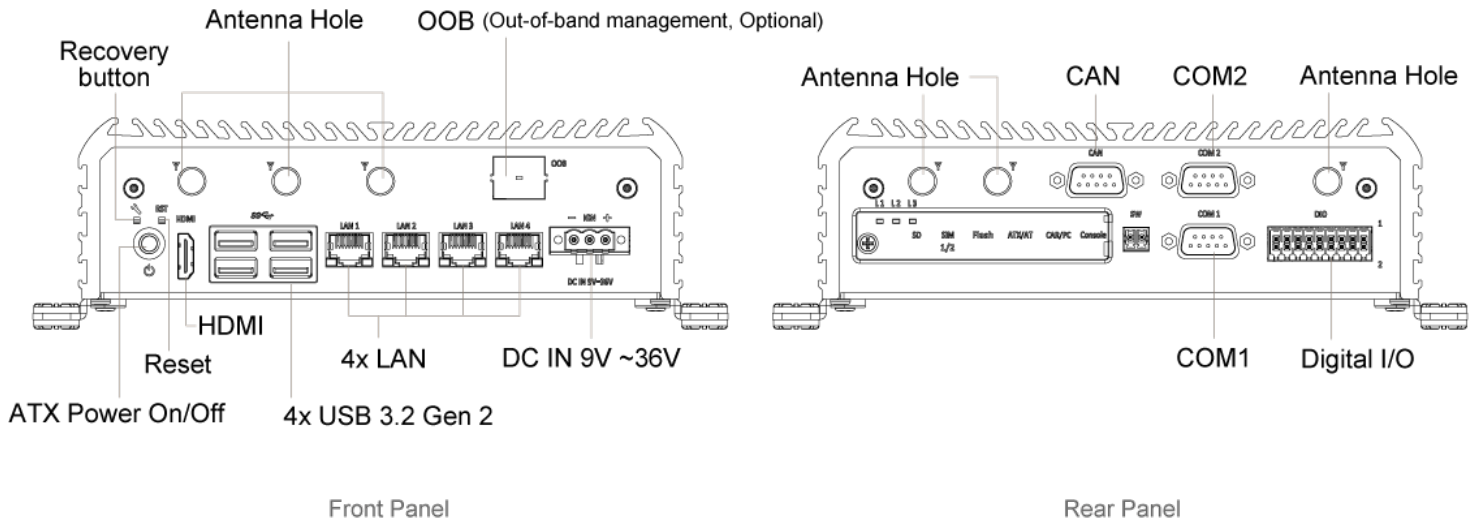
- NVIDIA® Jetson Orin™ NX 8GB/16GB or Orin Nano Super 8GB/4GB
- 1x HDMI 4K, 3840 x 2160 @ 60Hz
- 4x GbE RJ45 LAN with Optional PoE option
- 1x External Dual Nano SIM socket
- 1x M.2 (M Key, 2242/2280, PCIe 4, Support NVMe)
- 4x USB 3.2 Gen 2, 1x USB Type-C
- 8x DI + 8x DO with isolation
- 9 to 36VDC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

## Specifications

| System  |  |
|---|--|
| Processor   |  |
| - NVIDIA® Jetson Orin™ NX GPU or Orin™ Nano Super GPU                   |  |
| • NX 16G: 1024-core NVIDIA Ampere architecture GPU (25W/100 TOPS)       |  |
| • NX 8G: 1024-core NVIDIA Ampere architecture GPU (20W/ 70 TOPS)        |  |
| • Nano Super 8G: 1024-core NVIDIA Ampere architecture GPU (25W/67 TOPS) |  |
| • 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 block 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  |

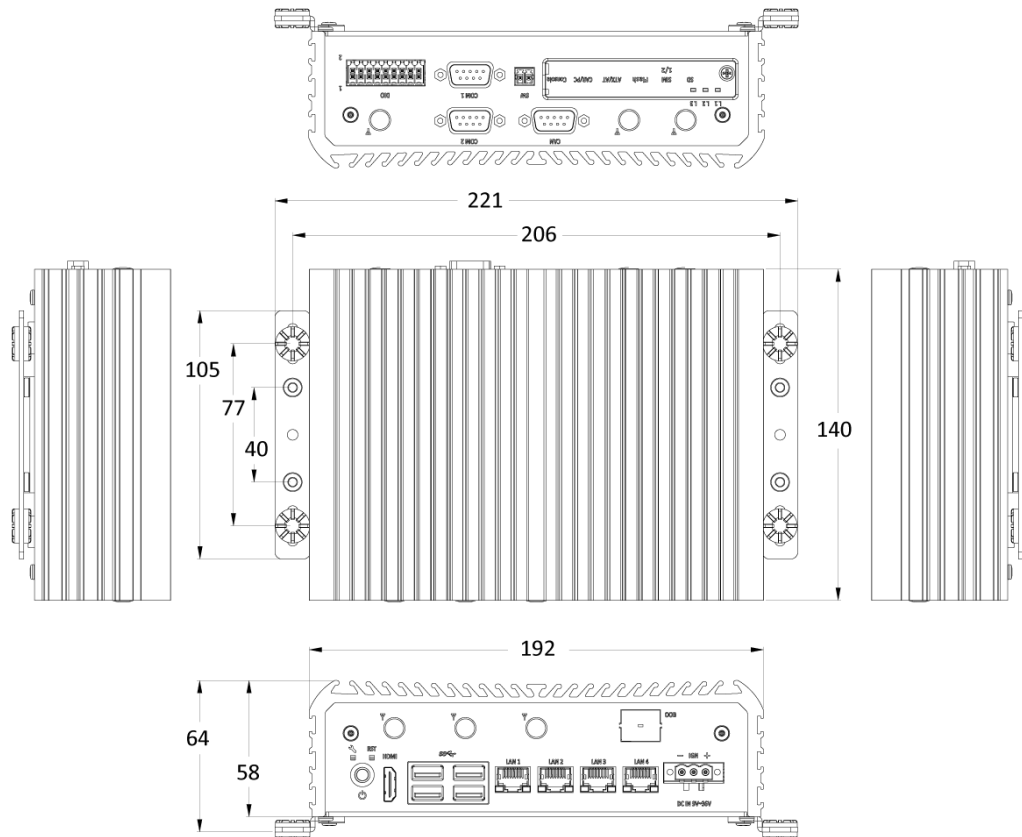
| Relative Humidity | 10% to 95% (non-condensing)   |
|-------------------|---|
| Certification     | <ul style="list-style-type: none"> <li>• CE, FCC Class A</li> <li>• UL 62368-1, 3rd Ed.</li> <li>• E-mark (E24)</li> <li>• RoHS 3.0, REACH</li> </ul> |
| Vibration         | With SSD: 5 Grms (5 - 500 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/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-NX16-00B | Mid-Range AI Computer with NVIDIA® Jetson Orin™ NX 16G, M.2 128G, 1x HDMI, 2x COM, 4x USB, 1x CAN, 4x LAN, 1x RJ45 00B  |
| JCO-3000-ORN-B-NX8-00B  | Mid-Range AI Computer with NVIDIA® Jetson Orin™ NX 8G, M.2 128G, 1x HDMI, 2x COM, 4x USB, 1x CAN, 4x LAN, 1x RJ45 00B   |
| JCO-3000-ORN-B-NN8-00B  | Mid-Range AI Computer with NVIDIA® Jetson Orin™ Nano 8G, M.2 128G, 1x HDMI, 2x COM, 4x USB, 1x CAN, 4x LAN, 1x RJ45 00B |
| JCO-3000-ORN-B-NN4-00B  | Mid-Range AI Computer with NVIDIA® Jetson Orin™ Nano 4G, M.2 128G, 1x HDMI, 2x COM, 4x USB, 1x CAN, 4x LAN, 1x RJ45 00B |
| 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

## Compliances and Standards

|                       |  |
|-----------------------|--|
| Shock                 | With SSD: 50G half-sin 11ms<br>IEC60068-2-27:2008<br>Designed to comply with MIL-STD-810G Method 516.7 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-810G Method 514.7 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                   | <ul style="list-style-type: none"> <li>• FCC Class A</li> <li>• CE</li> <li>• ICES-003</li> <li>• UKCA</li> <li>• Industrial EMC Compliance</li> <li>- EN 61000-4-2: 2009</li> <li>- EN IEC 61000-4-3: 2020</li> <li>- EN 61000-4-4: 2012</li> <li>- EN 61000-4-5: 2014 +A1: 2017</li> <li>- EN 61000-4-6: 2014</li> </ul> |
| Safety                | <ul style="list-style-type: none"> <li>• UL Safety: UL 62368-1, 3rd Ed., (cULus)</li> <li>• Test procedure: CB Scheme</li> <li>• Standard: IEC 62368-1:2018</li> <li>• E-mark (E24)</li> </ul>   |