C&T SOLUTION INC.

AI EDGE COMPUTER

JCO-1000-ORN-A

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

Features

- NVIDIA® Jetson Orin™ NX Super 8GB/16GB or Nano Super 8GB/4GB GPU with 32 Tensor Cores
- 1x HDMI 2.0, 3840 x 2160 @ 60Hz
- 1x 2.5 GbE LAN
- 1x External Dual Nano SIM socket
- 1x M.2 (M Key, 2242/2280, PCIex 4, NVMe Storage) (128GB Default)
- 4x USB 3.2 Gen 2, 1x USB Type-C (For OS Flash)
- 4x DI + 4x DO with isolation
- 9 to 36VDC Wide Range Power Input Supporting AT/ATX Mode
- Wide Operating Temperature -20°C up to 60°C

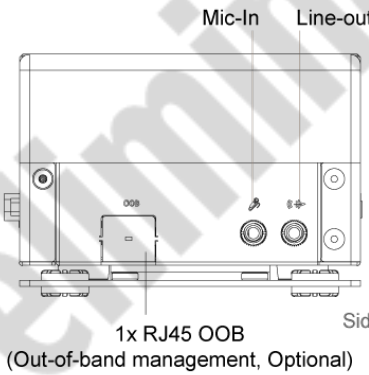
Specifications

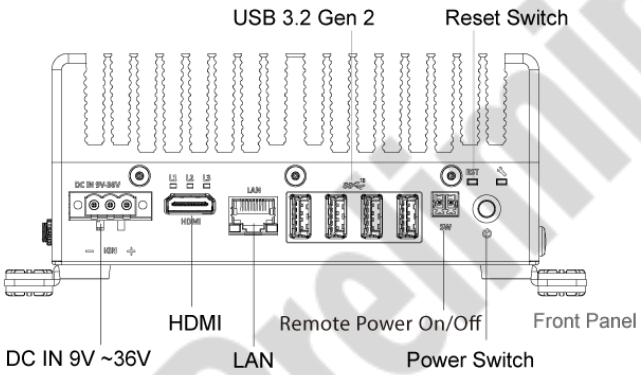
System	
Processor - NVIDIA® Jetson Orin™ NX Super/Nano Super GPU with 32 Tensor Cores • 16 GB: 1024-core NVIDIA Ampere architecture GPU (40W/157 TOPS) • 8 GB: 1024-core NVIDIA Ampere architecture GPU (40W/117 TOPS) • 8 GB: 1024-core NVIDIA Ampere architecture GPU (25W/67 TOPS) • 4 GB: 512-core NVIDIA Ampere architecture GPU (25W/34 TOPS)	
LAN Chipset	GbE1: RGMII
Watchdog	Software Programmable Supports 1~255 sec. System Reset
TPM	TPM 2.0
Display	
HDMI	1x HDMI 2.0, 3840 x 2160 @ 60Hz
Storage	
M.2	1x M.2 (M Key, 2242/2280, PCIe x4, NVMe) (Default 128GB)
SD	1x Micro 2.0 SD Slot
SIM Socket	1x External Dual Nano SIM socket (Attached to M.2 B Key)
Expansion	
M.2	1x M.2 (B Key, 2242/3042/3052, PCIe x1, USB 3.2 Gen1, Support 4G/5G Module) 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
DIO	4 in / 4 out (Isolated)
LAN	1x 2.5GbE RJ45
OOB	1x RJ45 (Optional OOB Management Module, Occupied 1x COM & Micro USB Console Port)
USB	4x USB 3.2 Gen 2 (10 Gbps) 1x USB Type-C (For OS Flash) 1x Micro USB (Console)
LED	4x LED LED 1 : Systen Status (Blue Color) LED 2 : Programmable LED (Blue Color) LED 3 : Programmable LED (Blue Color) LED 4 : Programmable LED (Red Color)
Others	5x WiFi Antenna Holes 1x Power Switch, 1x Reset Switch, 1x 2P Terminal Block for Remote SW 1x CMOS Battery Cable 1x 4-Pin FAN Connector 1x 1.5 Pitch 3-Pin Debug Port header for OOB 1x MIPI CSI-2 22-Pin Connectors
Audio	1x Mic-in, 1x Line-out
Operating System	
Linux	Linux Ubuntu 22.04 with JetPack 6.2
Power	
Power Adapter	Optional AC/DC 12V/5A, 60W
Power Mode	AT, ATX
Power Supply Voltage	DC IN 9~36V
Power Connector	3-pin Terminal Block
Power Protection	OVP (Over Voltage Protection); OCP (Over Current Protection) Reverse Protection

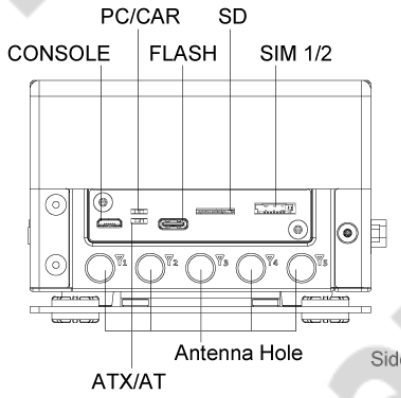
Environment	
Operating Temperature	-20°C to 60°C (15W) -20°C to 55°C (25W) -20°C to 40°C (40W)
Storage Temperature	-30°C to 85°C
Relative Humidity	10% to 95% (non-condensing)
Certification	CE, FCC Class B, UL 62368-1, 3rd Ed., RoHS 3.0, REACH
Vibration	With SSD: 5 Grms (5 - 500 Hz, 0.5 hr/axis)
Shock	With SSD: 50G half-sin 11ms
Physical	
Dimensions	150 (W) x 105 (D) x 65 (H) mm
Weights	1.1kg
Construction	Extruded Aluminum with Heavy Duty Metal
Mounting Options	Wall Mounting

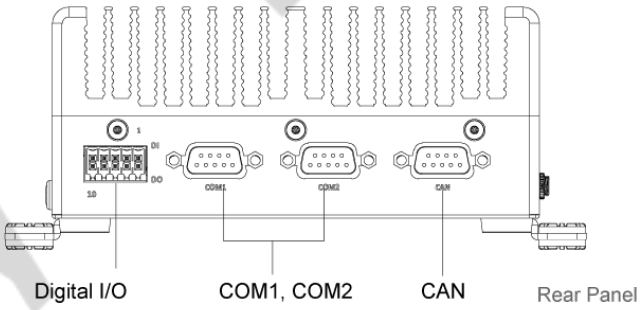
* All specifications and photos are subject to change without notice.

External I/O Mechanical Layout



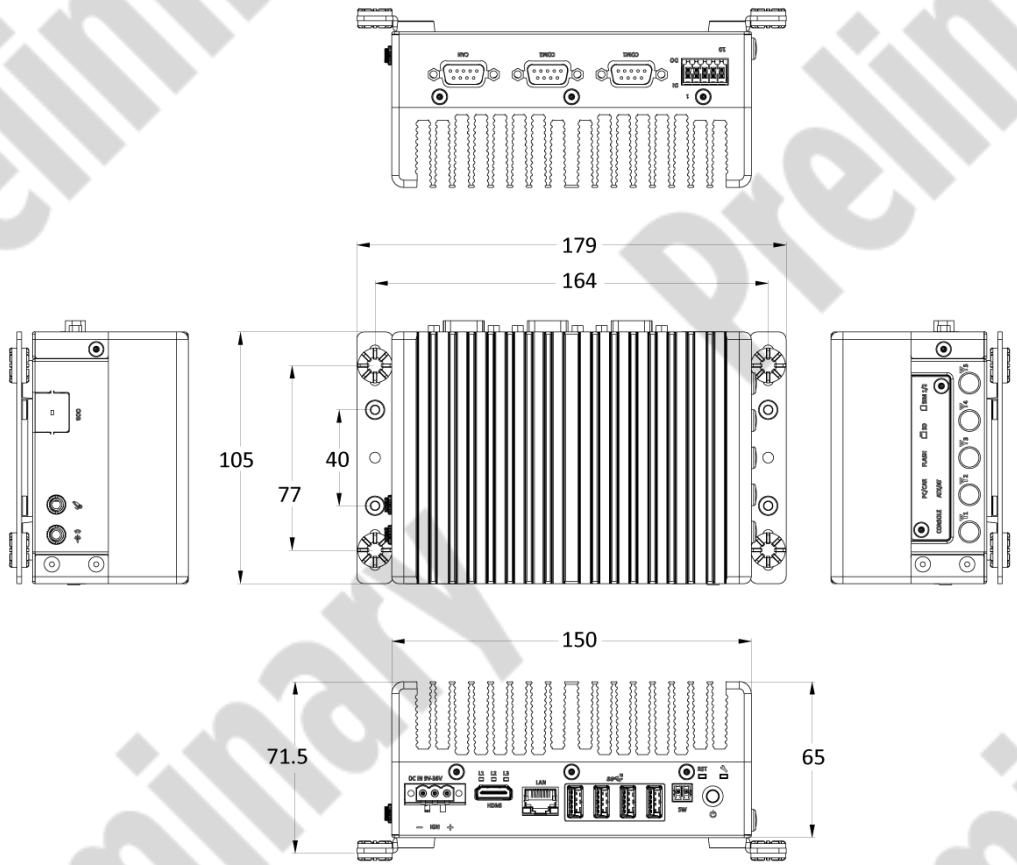






Dimension

Unit: mm



JCO-1000-ORN-A

Available Models

Model No.	Description
JCO-1000-ORN-A-NX16	Basic Fanless Edge AI Embedded Computer with NVIDIA® Jetson Orin™ NX Super 16G, 1x HDMI, 1x LAN, 4x USB, 1x CAN
JCO-1000-ORN-A-NX8	Basic Fanless Edge AI Embedded Computer with NVIDIA® Jetson Orin™ NX Super 8G, 1x HDMI, 1x LAN, 4x USB, 1x CAN
JCO-1000-ORN-A-NN8	Basic Fanless Edge AI Embedded Computer with NVIDIA® Jetson Orin™ Nano Super 8G, 1x HDMI, 1x LAN, 4x USB, 1x CAN
JCO-1000-ORN-A-NN4	Basic Fanless Edge AI Embedded Computer with NVIDIA® Jetson Orin™ Nano Super 4G, 1x HDMI, 1x LAN, 4x USB, 1x CAN

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-1000-ORN-A Lite-Range AI Computer
1x Wall Mount Kit
1x Accessory Kit

Compliances and Standards

Shock	With SSD: 50G half-sin 11ms IEC60068-2-27:2008 Designed to comply with MIL-STD-810G Method 516.7 Procedure I
Vibration	With SSD: 5 Grms (5 - 500 Hz, 0.5 hr/axis) IEC60068-2-64:2008 Designed to comply with MIL-STD-810G Method 514.7 Procedure I
Operating Temperature	-20°C to 60°C (15W) -20°C to 55°C (25W) -20°C to 40°C (40W) IEC60068-2-1:2007 (Cold test procedure) IEC60068-2-2:2007 (Dry heat test procedure) IEC60068-2-3:2007 (Damp heat, steady state, test procedure) IEC60068-2-14:2009 (Wide temperature range thermal shock)"
EMC	• FCC Class B • CE • ICES-003 • UKCA • Industrial EMC Compliance - 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 "
Safety	• UL Safety: UL 62368-1, 3rd Ed., (cULus) • Test procedure: CB Scheme • Standard: IEC 62368-1:2018

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