AI EDGE COMPUTER

JCO-1000-ORN-B_2L

Entry-Level AI Edge Computer with NVIDIA Jetson Orin™ NX Super/Nano Super



Features

- NVIDIA® Jetson Orin™ NX Super 8GB/16GB or Nano Super 8GB/4GB GPU with 32 Tensor Cores
- 1x HDMI 2.0, Up to 3840 x 2160 @ 60Hz
- 2x RJ45 LAN (1x GbE, 1x 2.5 GbE)
- 1x External Dual Nano SIM socket
- 1x M.2 (M-Key, 2242/2280, PCIe x4, NVMe Storage) (128GB Default)
- 1x USB 3.2 Gen 2, 1x USB 2.0
- 4x DI + 4x DO with isolation
- Support 4x GMSL Camera
- 9 to 36VDC Wide Range Power Input Supporting AT/ATX Mode
- Wide Operating Temperature -20°C up to 55°C

Specifications

System	
Processor - NVIDIA® Jetson Orin™ NX Super/Nano Super (8-core/6-core Arm® Cortex®-A78AE 64-bit) • NX 16 GB: 1024-core NVIDIA Ampere architecture GPU (40W/157 TOPS) • NX 8 GB: 1024-core NVIDIA Ampere architecture GPU (40W/117 TOPS) • Nano 8 GB: 1024-core NVIDIA Ampere architecture GPU (25W/67 TOPS) • Nano 4 GB: 512-core NVIDIA Ampere architecture GPU (25W/34 TOPS)	
LAN Chipset	RJ45 GbE1: RGMII 2.5 RJ45 GbE2: INTEL LAN Chip
Audio Codec	ALC5640
Watchdog	Software Programmable Supports 1~110 sec. System Reset
TPM	TPM 2.0

Display	
HDMI	• NX Series 1x HDMI 2.0, 3840 x 2160 @ 60Hz • Nano Series 1x HDMI 1.4, 3840 x 2160 @ 30Hz

Storage	
M.2	1x M.2 (M-Key, 2242/2280, PCIe x4, NVMe) (Default 128GB)
SD	1x Micro SD 2.0 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 Gen2, 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	1x RS-232/422/485 (Switchable by Software) 1x RS-232/422/485 (Internal)
DIO	4 in / 4 out (Isolated)
GMSL Camera	Support 4x GMSL 2 Camera Support by 1x Quad Port Mini Fakra (Optional)
LAN	1x GbE RJ45 1x 2.5 GbE RJ45
USB	1x USB 3.2 Gen 2 (10 Gbps), 1x USB 2.0 1x USB Type-C (For OS Flash) 1x Micro USB (For Console)
LED	3x LED LED 1 : Programmable LED (Blue Color) LED 2 : Programmable LED (Blue Color) LED 3 : Programmable LED (Red Color)
Others	Service Panel: • 1x Micro USB (For Console) • 1x USB Type-C (For OS Flash) • 1x PC/CAR Mode Switch • 1x AT/ATX SW • 1x Micro SD Slot • 1x Dual SIM Slot 5x WiFi Antenna Holes 1x Power Switch and 1x Reset Switch 1x 2P Terminal Block for Remote SW 1x CMOS Battery Cable 1x 1x7-Pin Connector for MIC-IN & Line Out Intregated RTC Intregated G sensor & Gyroscope 1x M4 Gounding Screw

Operating System	
Linux	Linux Ubuntu 24.04 with JetPack 7.2 Linux Ubuntu 22.04 with JetPack 6.2

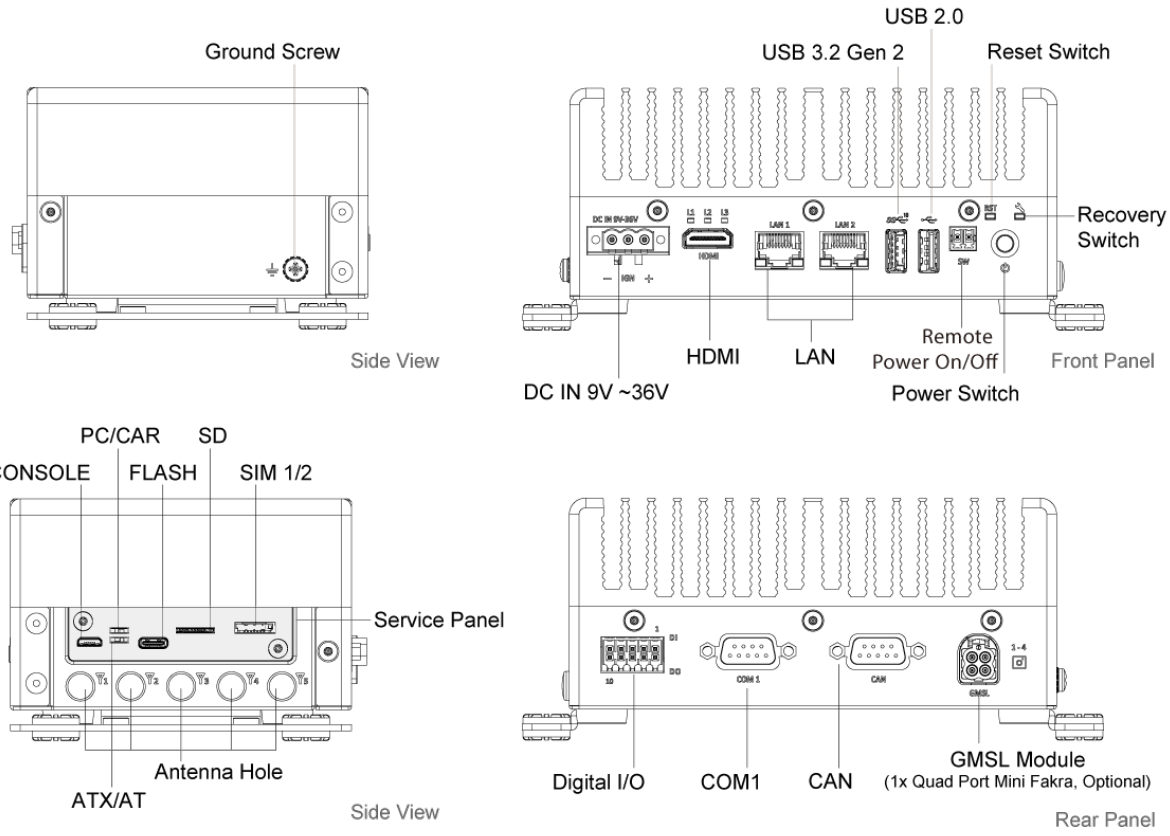
Power	
Power Adapter	Optional AC/DC, 24V/6.3A 150W
Power Mode	AT, ATX
Power Ignition Sensing	Adjustable Power Ignition Management
Power Supply Voltage	DC IN 9~36V
Power Connector	3-pin Terminal Block
Power Protection	OVP (Over Voltage Protection); OCP (Over Current Protection) Reverse Protection

Environment	
Operating Temperature	-20°C to 55°C (15W, 25W) -20°C to 35°C (40W)
Storage Temperature	-30°C to 85°C
Relative Humidity	10% to 95% (non-condensing)
Certification	UL 62368-1 3rd Ed. CE, FCC Class B E-mark (24) EMC Conformity with EN50121-3-2 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

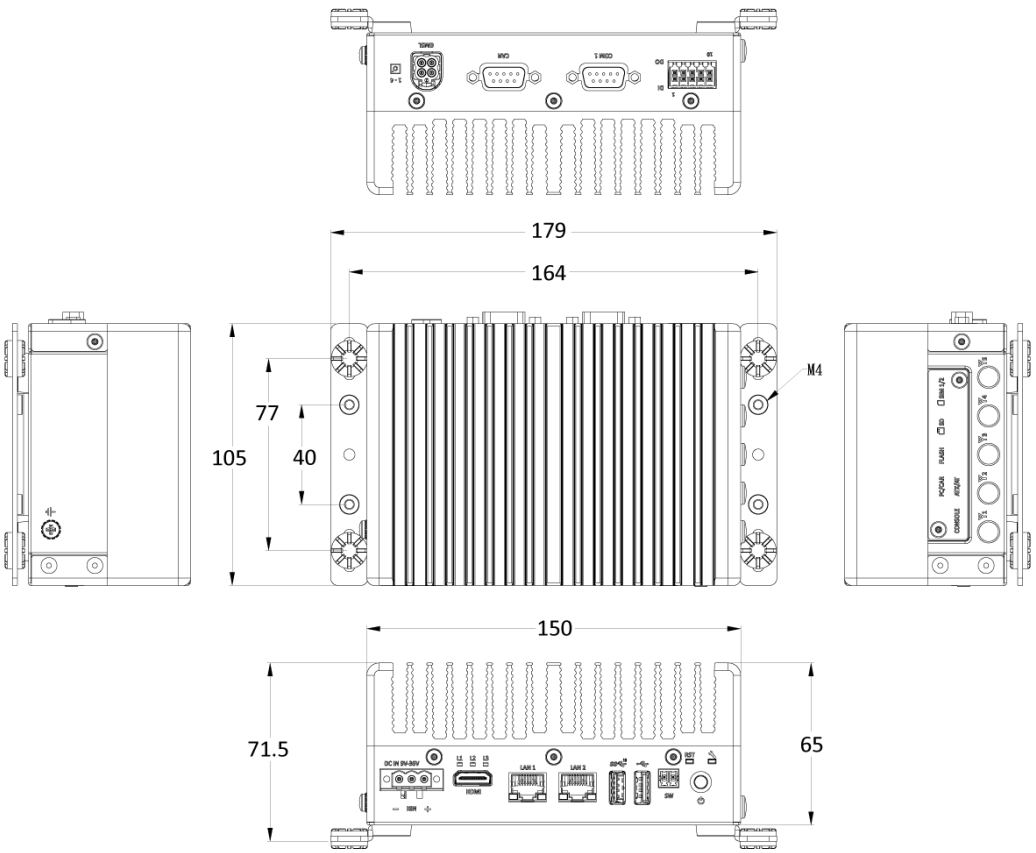
* All specifications and photos are subject to change without notice.

External I/O Mechanical Layout



Dimension

Unit: mm



Compliances and Standards

Shock	With SSD: 50G half-sin 11ms IEC60068-2-27:2008 Designed to comply with MIL-STD-810H Method 516.8 Procedure I
Vibration	With SSD: 5 Grms (5 - 500 Hz, 0.5 hr/axis) IEC60068-2-64:2008 Designed to comply with MIL-STD-810H Method 514.8 Procedure I
Operating Temperature	-20°C to 55°C (15W, 25W) -20°C to 35°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 (47 CFR part 15.109 and part 15.107) • CE • ICES-003 • UKCA • Railway EMC Compliance - EN 50155: 2017 - EN 50121-1: 2017 - EN 50121-3-2: 2016 • 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 • E-mark (24)
Environmental Compliance	• RoHS 3 (2015/863/EU) • REACH

Available Models

Model No.	Description
JCO-1000-ORN-B-2L	Entry-Level AI Edge Computer with NVIDIA Jetson Orin™ NX Super/Nano Super, 2x LAN
JCO-1000-ORN-B-2L-P	Entry Level AI Edge Computer with NVIDIA Jetson Orin™ NX Super/Nano Super, 2x LAN, w/ Power Adapter

Optional Accessories

Model No.	Description
1-E09A15002	Adapter AC/DC 20V 7.5A 150W with 3-pin Terminal Block Plug 5.0mm Pitch
1-TPCD00008	Power Cord, 3-pin US Type, 180cm (150W)
1-TPCD00011	Power Cord, 3-pin UK Type, 180cm (150W)
1-TPCD00009	Power Cord, 3-pin European Type, 180cm (150W)
1-TPCD00013	Power Cord, 3-pin Austria Type, 180cm (150W)
1-TPCD00014	Power Cord, 3-pin Japanese Type, 180cm (150W)
1-TFAK00003	Fakra-Z Extension Cable, 100cm
1-TFAK00002	Fakra-Z Extension Cable, 300cm
1-TFAK00004	Fakra-Z Extension Cable, 500cm
1-TFAK00005	Fakra-Z Extension Cable, 1000cm
1-TFAK00006	Fakra-Z Extension Cable, 1500cm

Packing List

1x JCO-1000-ORN-B Lite-Range AI Computer
1x Wall Mount Kit

US Exports And Tariff Codes

ECCN	5A992.c
HTS	8471.50.0150
Schedule B	84.71

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