



AI EDGE COMPUTER

JCO-1000-ORN-C_2M12

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, 3840 x 2160 @ 60Hz
- 2x M12 LAN
- 1x External Dual Nano SIM socket
- 1x M.2 (M Key, 2242/2280, PCIe 4, 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

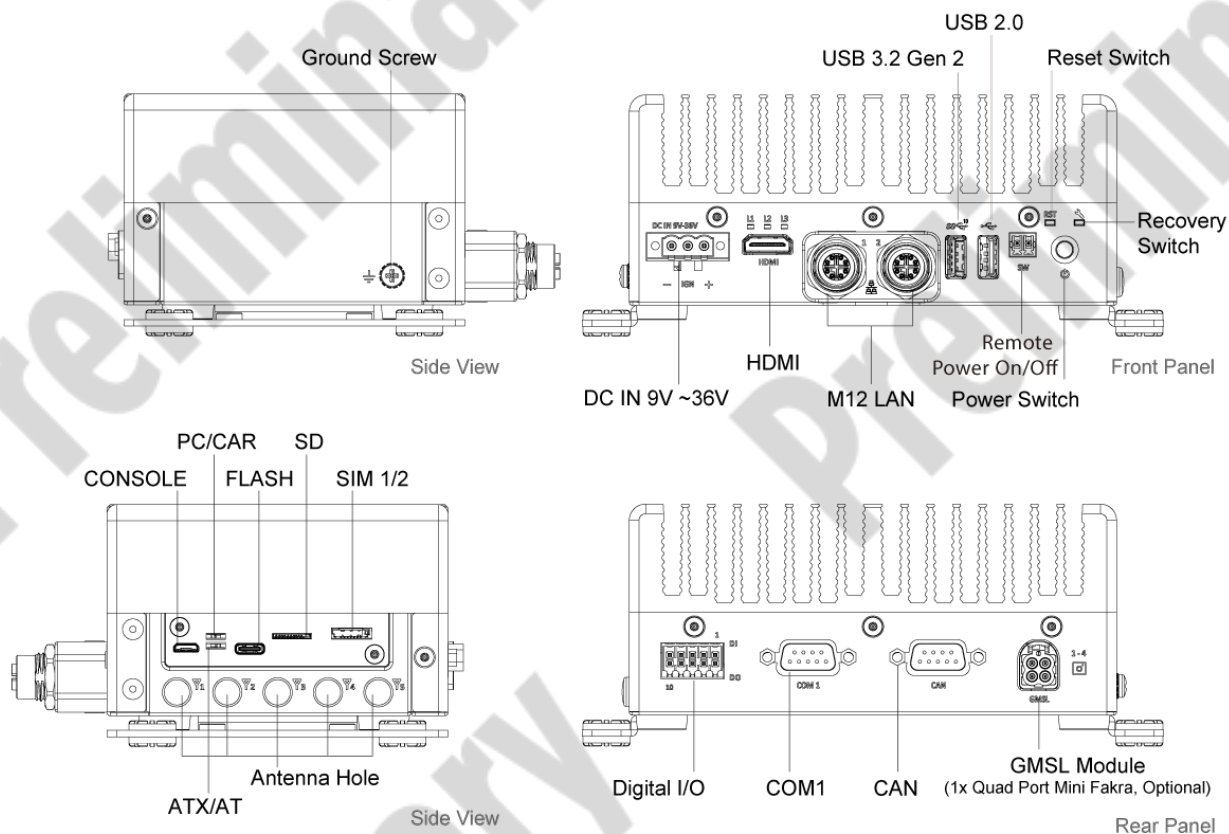
Specifications

System	
Processor	- NVIDIA® Jetson Orin™ NX Super/Nano Super GPU with 32 Tensor Cores • 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	GbE1: RGMII GbE2: INTEL LAN Chip
Audio Codec	ALC5640
Watchdog	Software Programmable Supports 1~110 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 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	2x M12 LAN
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 : System Status (Blue Color) LED 2 : Programmable LED (Blue Color) LED 3 : Programmable LED (Red Color)
Others	5x WiFi Antenna Holes Service Panel: 1x Micro USB (For Console) 1x USB Type-C (For OS Flash) 1x PC/CAR Mode SW 1x AT/ATX SW 1x Micro SD Slot 1x Dual SIM Slot 1x Power Switch, 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 22.04 with JetPack 6.2
Power	
Power Adapter	Optional AC/DC 24/5A, 120W
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 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	CE, FCC Class B, E-mark, UL 62368-1 3rd Ed., EN50155 EMC, 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

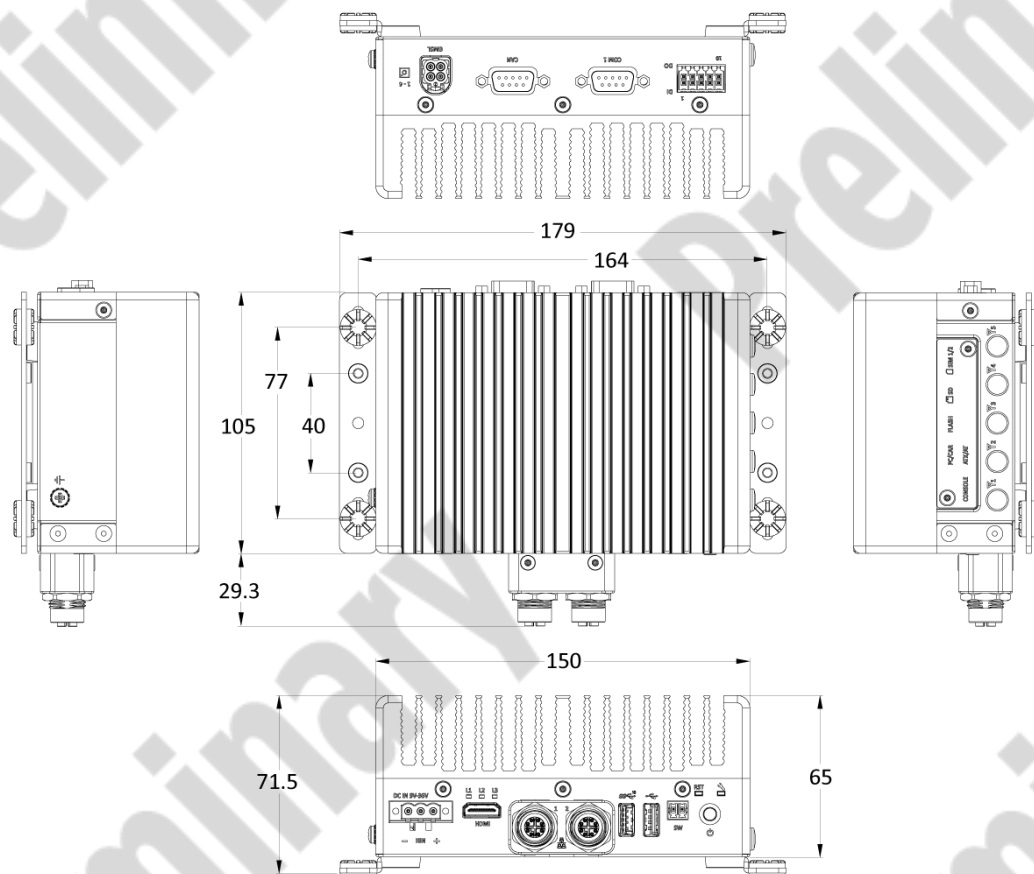
* All specifications and photos are subject to change without notice.

External I/O Mechanical Layout



Dimension

Unit: mm



Available Models

Model No.	Description
JCO-1000-ORN-C-NX16	Basic Fanless Edge AI Embedded Computer with NVIDIA® Jetson Orin™ NX Super 16G, 1x HDMI, 2x M12 LAN, 2x USB, 1x CAN
JCO-1000-ORN-C-NX8	Basic Fanless Edge AI Embedded Computer with NVIDIA® Jetson Orin™ NX Super 8G, 1x HDMI, 2x M12 LAN, 2x USB, 1x CAN
JCO-1000-ORN-C-NN8	Basic Fanless Edge AI Embedded Computer with NVIDIA® Jetson Orin™ Nano Super 8G, 1x HDMI, 2x M12 LAN, 2x USB, 1x CAN
JCO-1000-ORN-C-NN4	Basic Fanless Edge AI Embedded Computer with NVIDIA® Jetson Orin™ Nano Super 4G, 1x HDMI, 2x M12 LAN, 2x USB, 1x CAN
JCO-1000-ORN-C-NX16-4GML	Basic Fanless Edge AI Embedded Computer with NVIDIA® Jetson Orin™ NX Super 16G, 1x HDMI, 2x M12 LAN, 2x USB, 1x CAN, 4x GMSL
JCO-1000-ORN-C-NX8-4GML	Basic Fanless Edge AI Embedded Computer with NVIDIA® Jetson Orin™ NX Super 8G, 1x HDMI, 2x M12 LAN, 2x USB, 1x CAN, 4x GMSL
JCO-1000-ORN-C-NN8-4GML	Basic Fanless Edge AI Embedded Computer with NVIDIA® Jetson Orin™ Nano Super 8G, 1x HDMI, 2x M12 LAN, 2x USB, 1x CAN, 4x GMSL
JCO-1000-ORN-C-NN4-4GML	Basic Fanless Edge AI Embedded Computer with NVIDIA® Jetson Orin™ Nano Super 4G, 1x HDMI, 2x M12 LAN, 2x USB, 1x CAN, 4x GMSL

Optional Accessories

Model No.	Description
1-E09A12002	Adapter AC/DC 24V 5A 120W with 3pin Terminal Block Plug 5.0mm Pitch
1-TPCD00001	Power Cord, UK Type, 180cm
1-TPCD00002	Power Cord, European Type, 180cm
1-TPCD00003	Power Cord, Japanese Type, 180cm
1-TPCD00005	Power Cord, 3-pin US Type, 180cm
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-C 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 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
Safety	- UL Safety: UL 62368-1, 3rd Ed., (cULus) - Test procedure: CB Scheme - Standard: IEC 62368-1:2018 - E-mark (24) - Railway - EN50155 EMC