AI EDGE COMPUTER

JCO-1000-ORN-A

Entry Level AI Edge Computer with NVIDIA Jetson Orin™ Nano

Features

- NVIDIA® Jetson Orin™ Nano 8GB/4GB Module
- 6-core Arm® Cortex®-A78AE v8.2 64-bit CPU and 16/32 Tensor GPU 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)
- 2x 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 -25°C to 60°C (15W, Nano Module)

Specifications

System	
Processor - NVIDIA® Jetson Orin™ Nano 8G/4G GPU with 32 Tensor Cores • 8GB: 1024-core NVIDIA Ampere architecture GPU (15W/40 TOPS) • 4GB: 12-core NVIDIA Ampere architecture GPU (10W/20 TOPS)	
LAN Chipset	GbE1: RGMII
Watchdog	Software Programmable Supports 1~255 sec. System Reset

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 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 A
COM	2x RS-232/422/485
DIO	4 in / 4 out (Isolated)
LAN	1x 2.5GbE RJ45
USB	2x USB 3.2 Gen 2 (10 Gbps) 2x USB 2.0 1x USB Type-C (For OS Flash)
LED	3x Programable LED LED 1: Blue Color LED 2: Blue Color LED 3: Red Color
Others	6x WiFi Antenna Holes 1x Power Switch, 1x Reset Switch 1x CMOS Battery Cable 1x 4-Pin FAN Connector 1x 4-Pin Debug Port header (internal) 2x MIPI CSI-2 22-Pin Connectors (internal)

Operating System	
Linux	Linux Ubuntu

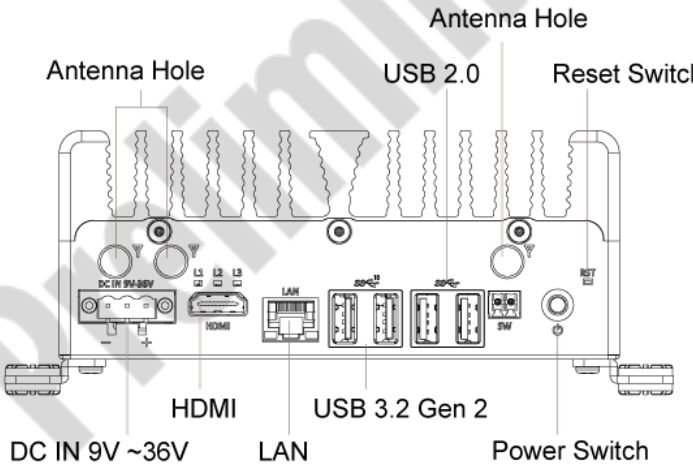
Power	
Power Adapter	Optional AC/DC 12V/5A, 60W
Power Mode	AT, ATX
Power Supply Voltage	DC IN 9~36V
Power Connector	3-pin Terminal Block
Power Protection	OVP (Over Voltage Protection); OCP (Over Current Protection) Reverse Protection

Environment	
Operating Temperature	-25°C to 60°C (15W, Nano Module)
Storage Temperature	-30°C to 85°C
Relative Humidity	10% to 95% (non-condensing)
Certification	CE, FCC Class A, 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

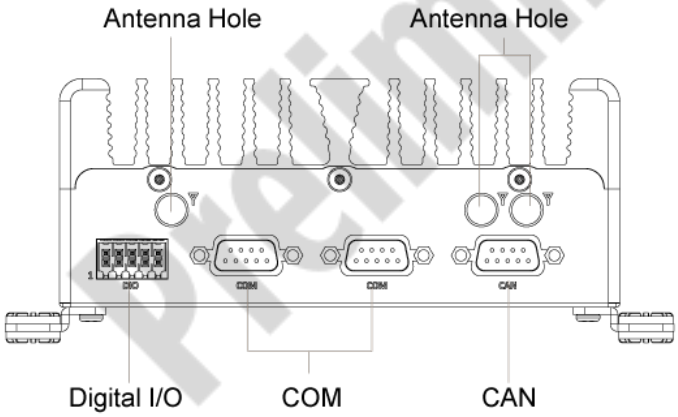
Physical	
Dimensions	150 (W) x 105 (D) x 61 (H) mm
Construction	Extruded Aluminum with Heavy Duty Metal
Mounting Options	Wall Mounting/DIN rail (Optional)

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

External I/O Mechanical Layout



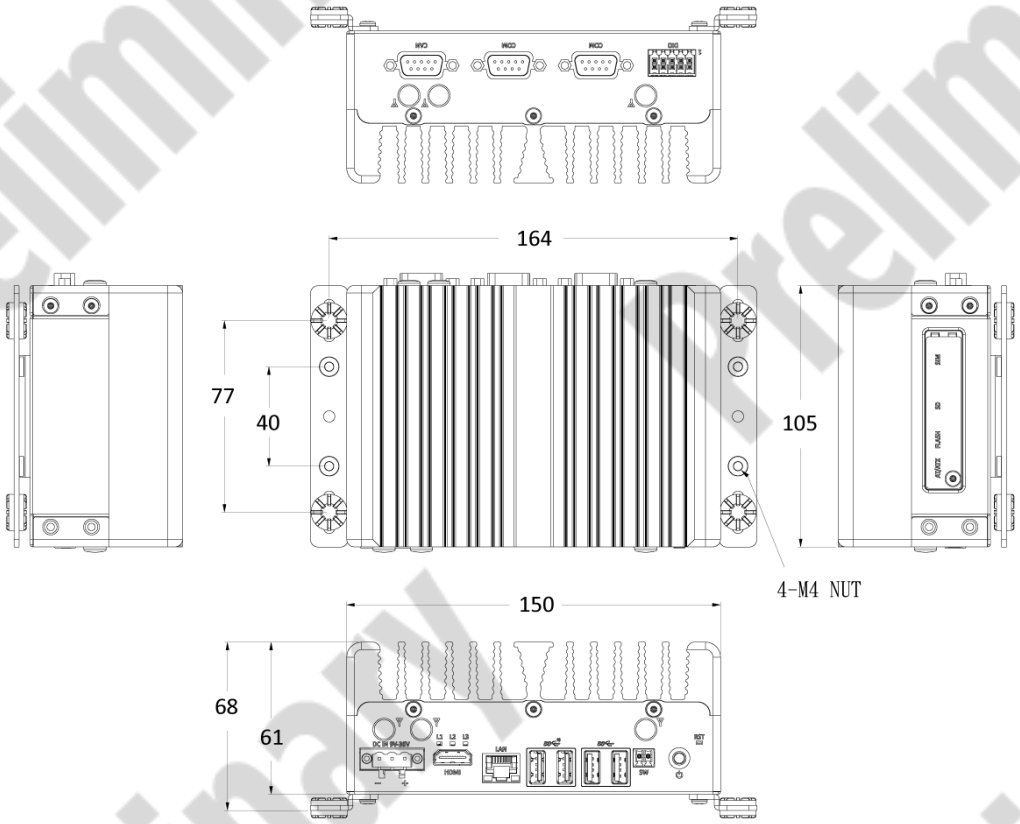
Front Panel



Rear Panel

Dimension

Unit: mm



Available Models

Model No.	Description
TBD	To Be Determined

Optional Accessories

Model No.	Description
1-E09A06008	Adapter AC/DC 12V 5A 60W with 3pin Terminal Block Plug 5.0mm Pitch
SFICBL022	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	-25°C to 60°C (15W, Nano Module) 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)
EMI	• CE • FCC Class B • FCC Class A (47 CFR part 15.109 and part 15.107) • ICES-003 • UKCA
Safety	• UL Safety: UL62368-1, 3rd Ed., (cULus) • Test procedure: CB Scheme • Standard: IEC 62368-1:2018
Green Product	• RoHS 3.0 (Directive 2015/863/EU) • REACH

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