AI EDGE COMPUTER

JCO-6000-ORN-A_2EBIO

High Performance AI Edge Computer with NVIDIA Jetson AGX Orin™, 2x EDGEBoost I/O Support



Features

- NVIDIA® Jetson AGX Orin™ 32GB Super Mode or 64GB
- 1x HDMI, 3840 x 2160 @ 60Hz
- 1x GbE, 1x 10 GbE (Wake-on-LAN and PXE)
- 2x External SIM Socket, 1x Micro SD Socket
- 1x eMMC 5.1 Storage, 64 GB
- 1x M.2 (M-Key, 2280, PCIe x4, Support NVMe)
- 1x USB 3.2 Gen 2, 1x USB Type-C, 1x USB 2.0
- 8x DI + 8x DO with isolation
- 9 to 48VDC Wide Range Power Input Supporting AT/ATX Mode
- Wide Operating Temperature -20°C to 55°C (60W CPU)
- Support 8x GMSL2 Cameras by 2x Quad-port Mini-FAKRA | 1280x720 @30FPS (optional)
- Up to 2x EDGEBoost I/O Support

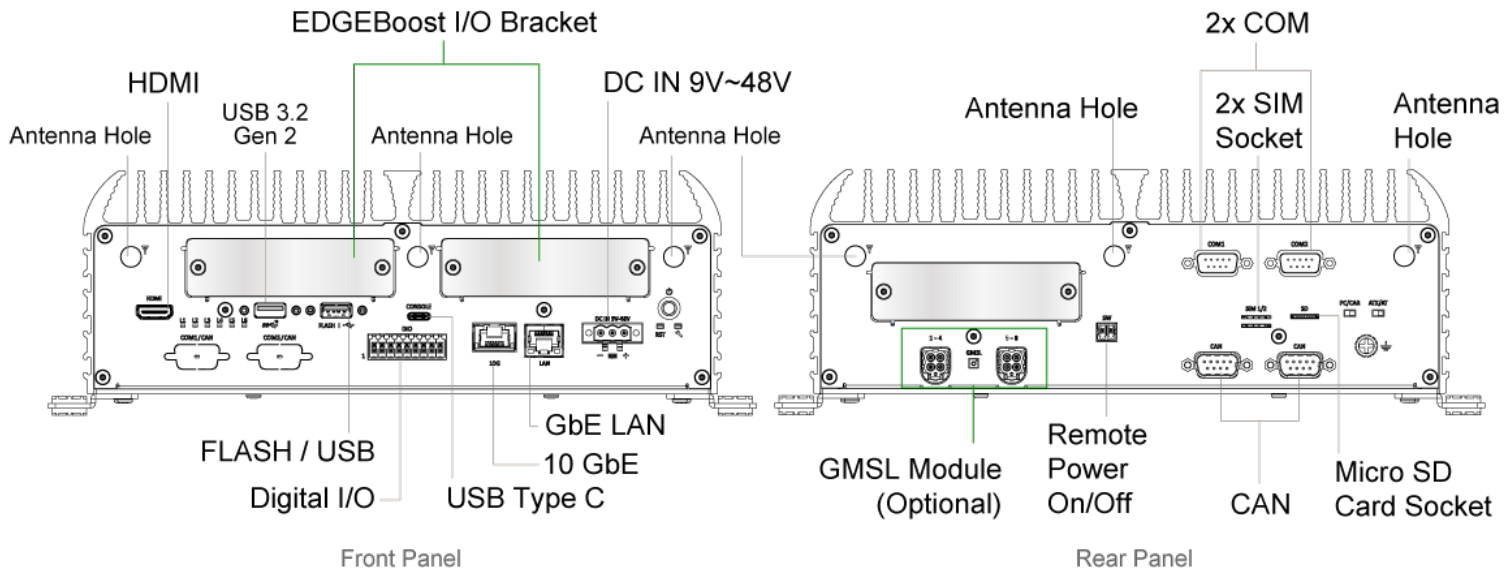
Specifications

System	
Processor	NVIDIA® Jetson AGX Orin™ 64GB/32GB Super Mode (12-core/8-core Arm® Cortex®--A78AE 64-bit) • 64 GB: 2048-core NVIDIA Ampere architecture GPU with 64 Tensor Cores (60W/275 TOPS) • 32 GB Super Mode: 1792-core NVIDIA Ampere architecture GPU with 56 Tensor Cores (60W/241 TOPS)
LAN Chipset	GbE1: Marvell 88e1512 (right) 10 GbE2: Marvell AQC113 (left)
System Memory	AGX Orin 32 GB/64 GB LPDDR5 @ 3200 MHz on SOM
TPM	TPM 2.0
Display	
HDMI	1x HDMI, 3840 x 2160 @ 60Hz
Storage	
eMMC	1x eMMC 5.1, 64 GB
M.2	1x M.2 (M-Key, 2280, PCIe x4, Support NVMe) (Default 128GB)
SD	1x Micro SD Socket
SIM Socket	2x Micro SIM Socket (M.2 B-Key attached)
Expansion	
M.2	1x M.2 (B-Key, 3042/3052, USB 3.2 Gen 2, Support 4G/5G Module) 1x M.2 (E-Key, 2230, PCIe x1, USB 2.0, Support Wi-Fi/Bluetooth)
Expansion Modules	Support EDGEBoost I/O Modules: • 4x GbE module with Intel® I350 Chipset, RJ45/M12 connector (PoE optional) • 2x RJ45 10GbE with Intel X710 Chipset • 4x USB 3.0 Locking Type with 2x screw hole • 4x USB 3.0 (share PCIe Gen2 x1 bandwidth) • 1x M.2 M-Key, PCIe x4 Lane, 2242/2260 for NVMe Storage *The left EBIO Bracket on the front panel don't support PoE Module
I/O	
CAN	2x CAN 2.0 B
COM	2x RS-232/422/485 (Switch by MCU)
DIO	8 in / 8 out (Isolated)
EDGEBoost I/O Bracket	2x EDGEBoost I/O Bracket
GMSL Camera	8x GMSL2 Cameras Support by 2x Quad-port Mini Fakra, 1280x720 @ 30 FPS (Optional)
LAN	1x GbE RJ45 1x 10GbE RJ45
OOB	1x RJ45 (Optional OOB Management Module through 1x EDGEBoost I/O bracket and 1x COM & 1x USB Type-C Console Port)
PoE	Support 4x RJ45/M12 PoE (@25W) through 1x EDGEBoost I/O bracket (optional)
USB	1x USB 3.2 Gen 2 (10 Gbps) 1x USB Type-C (Console) 1x USB 2.0 (OS Flash)
LED	LED 1 : System Status (Blue) LED 2 : Programmable LED (Blue) LED 3 : Programmable LED (Blue) LED 4 : Programmable LED (Blue) LED 5 : Programmable LED (Blue) LED 6 : Programmable LED (Red)
Others	6x Antenna Holes 1x Power Switch, 1x Reset Switch, 1x Force Recovery Switch 1x AT/ATX Switch, 1x Remote Power On/Off 1x PC/CAR Mode Switch

Operating System	
Linux	Linux Ubuntu 24.04 with JetPack 7.2.1 Linux Ubuntu 22.04 with JetPack 6.2
Power	
Power Adapter	Optional AC/DC 24V/5A, 120W Optional AC/DC 24V/9.2A, 220W Optional AC/DC 24V/11.67V, 280W
Power Mode	AT, ATX
Power Ignition Sensing	Adjustable Power Ignition Management
Power Supply Voltage	DC IN 9~48V DC IN 48~110V (Optional, via 1x EBIO Bracket) 12V: PoE Power Budget Supports Up to 40~60W 24V: PoE Power Budget Supports Up to 120W
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 (AGX 64G, MaxN Mode at 68 Watt, Non-Throttling) -20°C to 50°C (AGX 64G, MaxN Mode at 68 Watt, Non-Throttling, With PoE/10G/4U3V Module, full CPU+GPU stressing) -20°C to 40°C (AGX 32G, MaxN Super Mode at 77 Watt, Non-Throttling, With PoE/10G/4U3V Module, full CPU+GPU stressing) with 0.6 m/s airflow
Storage Temperature	-40°C to 85°C
Relative Humidity	10% to 95% (non-condensing)
Certification	CE, FCC Class A, UL 62368-1 , E-Mark, EMC Conformity with EN50155 & EN50121-3-2
Vibration	IEC60068-2-64:2008 With SSD: 5 Grms (5 - 500 Hz, 0.5 hr/axis) Designed to comply with MIL-STD-810H Method 514.8 Procedure I
Shock	IEC60068-2-27:2008 With SSD: 50G half-sin 11ms Designed to comply with MIL-STD-810H Method 516.8 Procedure I Package Drop Test: ISTA 2A
Physical	
Dimensions	270 (W) x 190 (D) x 95 (H) mm
Weights	6~7 kg
Construction	Extruded Aluminum with Heavy Duty Metal
Mounting Options	Wall Mounting (Default) DIN-Rail (Optional)

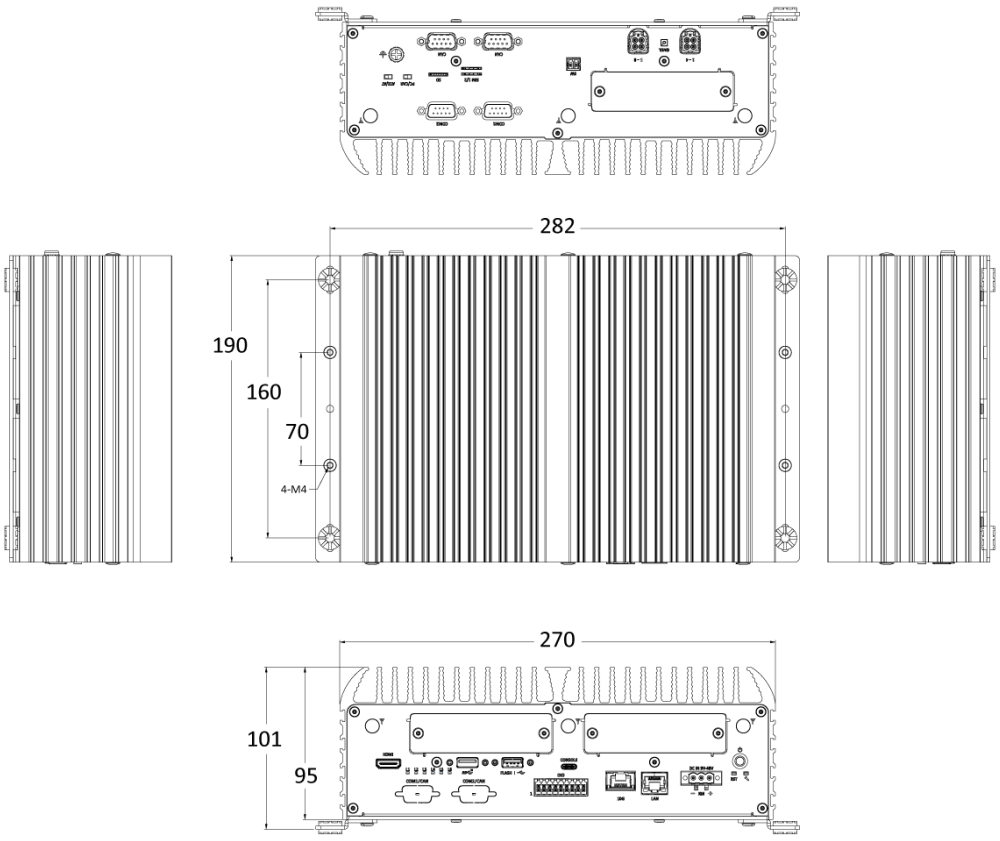
* All specifications and photos are subject to change without notice.

External I/O Mechanical Layout

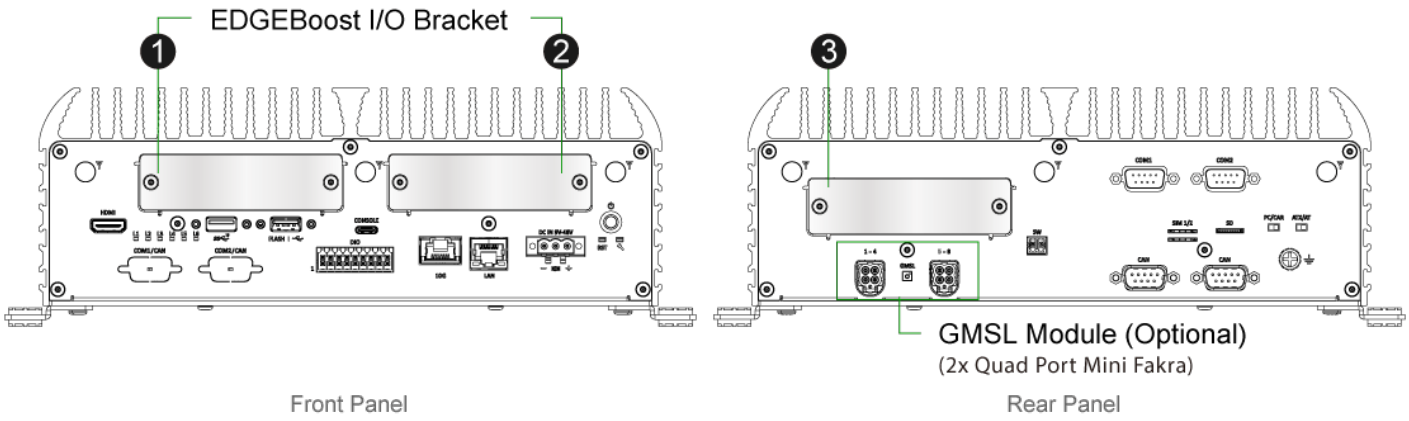


Dimension

Unit: mm



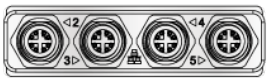
Expansion



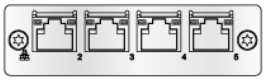
Available EDGEBoost I/O & Expansion

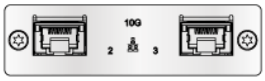

1x M.2 M-Key (4-Lane)


4x USB 3.0 (Locking Ports)

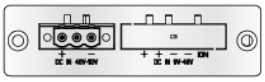

4x M12 LAN/POE Ports


4x USB 3.0 Ports


4x RJ45 LAN/POE Ports


2x 10 GbE Ports


1x RJ45
Remote Management


1x 110V Power Module

Optional Configurations for Additional Features

Available Model \ EDGEBoost I/O No.	1	2	3	Optional	Support Q'ty
4x M12/RJ45 LAN Ports	✓	✓			2
4x M12/RJ45 POE Ports		✓			1
2x 10 GbE Ports	✓	✓			1
4x USB 3.0 Ports	✓	✓			2
4x USB 3.0 (Locking Ports)	✓	✓			2
1x M.2 M-Key (4-Lane)	✓				1
110V Power Module		✓			1
1x RJ45 Remote Management	✓	✓	✓ (Default)		1
1x GMSL Module				✓	1

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 -20°C to 50°C (With PoE/10G/4U3V Module, full CPU+GPU stressing) -20°C to 40°C (AGX 32GB, MaxN Super Mode, with PoE/10G/4U3V Module, full CPU+GPU stressing) 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 A • 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 (E24)

Available Models

Model No.	Description
JCO-6000-ORN-A-2EBIO	High Performance AI Edge Computer With NVIDIA Jetson AGX Orin™, 2x EDGEBoost I/O
JCO-6000-ORN-A-2EBIO-P	High Performance AI Edge Computer With NVIDIA Jetson AGX Orin™, 2x EDGEBoost I/O, w/ Power Adapter

Optional Accessories

Model No.	Description
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-E09A22801	Adapter AC/DC 24V/11.67A 280W with 3pin Terminal Block Plug 5.0mm Pitch
1-TPCD00005	Power Cord, 3-pin US Type, 180cm (120W)
1-TPCD00002	Power Cord, European Type, 180cm (120W)
1-TPCD00001	Power Cord, UK Type, 180cm (120W)

Packing List

1x JCO-6000-ORN-A_2EBIO High-Performance AI Edge 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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