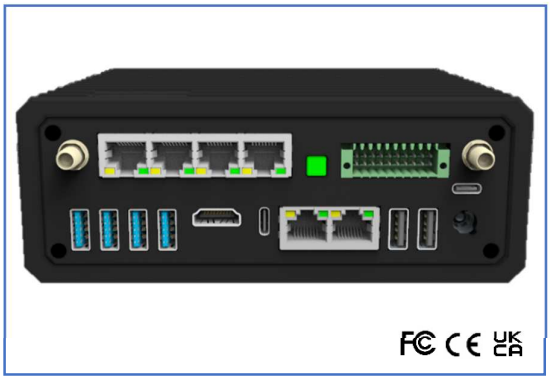
EdgeAI-ORN

Edge-AI computer with Jetson Orin NX/Nano



Features

- NVIDIA® Jetson Orin™ NX/Nano
- MIL-STD-810G
- RS-232/RS-485 + CAN + GPIOs
- 4x USB 3.2 for camera input
- 4x PoE 2.5GbE optional camera input
- 4x GMSL2 optional camera input
- 4x FPD Link IV optional camera input
- Optional Out-Of-Band management
- 9V – 36V DC power input

Specifications

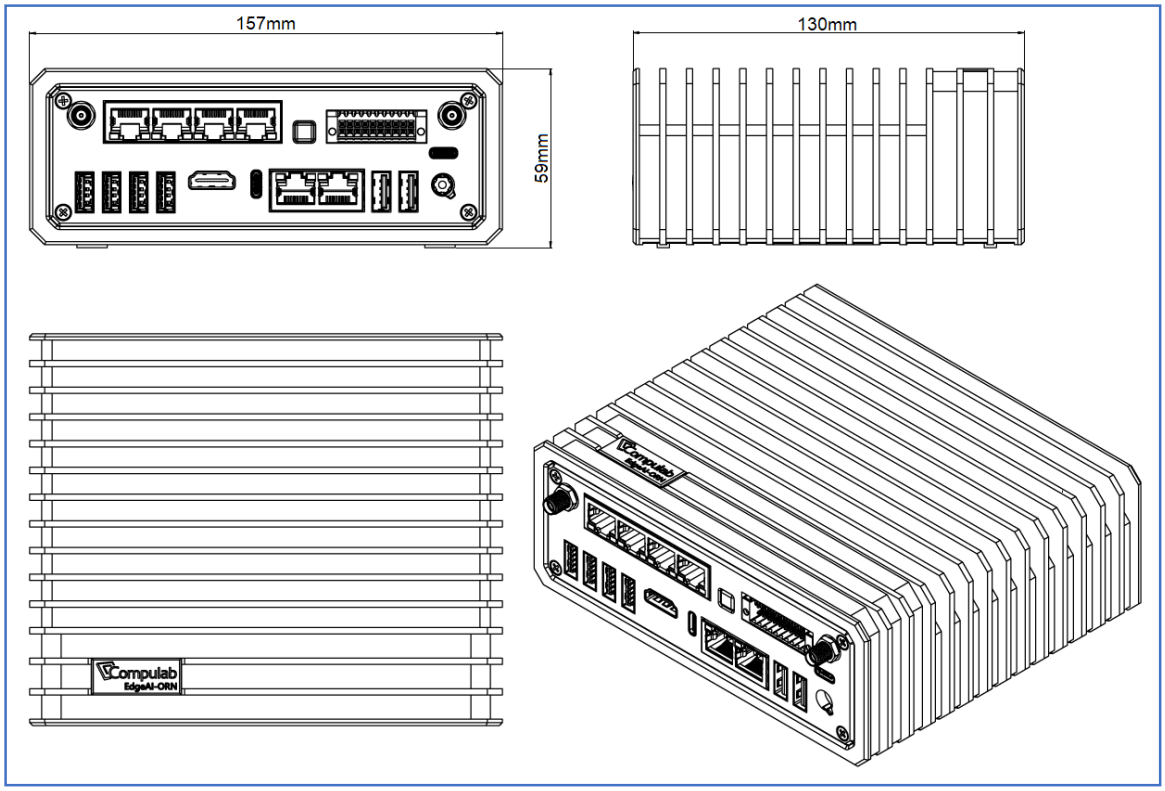
Computation module	Jetson Orin™ NX 16GB	Up to 157 TOPS | 16GB LPDDR5 | 10W / 15W / 25W / 40W
	Jetson Orin™ NX 8GB	Up to 117 TOPS | 8GB LPDDR5 | 10W / 15W / 25W / 40W
	Jetson Orin™ Nano 8GB	Up to 67 TOPS | 8GB LPDDR5 | 7W / 15W / 25W
	Jetson Orin™ Nano 4GB	Up to 34 TOPS | 4GB LPDDR5 | 7W / 10W / 25W
Storage	M.2 Key-M	PCIe Gen. 4[1] x4, size up to 2280 for NVMe
Serial/GPIO	Serial port	Isolated RS-232/422/485 on terminal block
	CAN bus	Isolated CAN bus on terminal block
	GPIO	2x GPI + 2x GPO
Display	HDMI	HDMI 2.1, up to 8K @ 30Hz
Wireless Connectivity	M.2 Key-E	For Wi-Fi/BT M.2 2230 module
	M.2 Key-B	For M.2 LTE/5G modem
Ethernet, standard	1x 2.5 GbE	2.5Gbps Ethernet from Intel® i226 on RJ45
	1x 1 GbE	1 Gbps Ethernet from Jetson module on RJ45
USB	USB 2.0	2x USB 2.0 on Type-A
	USB 3.2	4x USB 3.2 10Gbps (20Gbps in total)
PoE input expansion	4x 2.5 GbE	4x 2.5Gbps PoE Ethernet from Intel® i226 on RJ45
	PoE power capability	4x 15.4W PoE power delivery[2]
SerDes GMSL2 input expansion	4x GMSL2	4x GMSL2 deserializer input on FAKRA Z
	PoC power capability	4x Power over Coax, 12V up to 1A
SerDes FPD Link IV input expansion	4x FPD Link IV	4x FPD Link IV deserializer input on FAKRA Z
	PoC power capability	4x Power over Coax, 12V up to 1A
MIPI-CSI input expansion	4x MIPI-DSI	4-lane MIPI-CSI, 2.5Gbps per pair, on 2 FFC connectors
	Pin-out	2x 22-position, Jetson Orin standard pin-out
TPM	TPM 2.0	TPM 2.0, SLB9670
Optional OOB	Out-of-band module	Optional Allxon Bolt OOB enabler w/ dedicated Ethernet/modem
Debug and recovery ports	Recovery port	USB recovery port on USB Type-C
	Debug console port	Serial debug console w/ UART-to-USB on USB Type-C
OS support	Nvidia Jetpack 6.2	NVIDIA Jetson Linux 36.4.3 (Jetpack 6.2 on Ubuntu 22.04)
Power input	DC input	9V – 36V DC power input[2] on a power jack with twist-locking
Operating Environment	Operation temperature	-25°C to 70°C
	Humidity	5% - 95% non-condensing
Heat dissipation	Cooling	Passive / active cooling
	Optional external fan	Optional, external speed-controlled fan for enhanced heat dissipation
Physical Characteristics	Dimensions	Fanless: 59 mm X 157 mm X 130 mm
	Weight	~ 950 gr.
	Mounting	Side / bottom VESA / DIN Rail mount

Notes:

1. The NVMe interface of Orin Nano modules is limited to Gen. 3
2. PoE input expansion requires 12V or more DC input

Note: All specifications are subject to change without notice.

Dimensions



Interfaces

Location	Interface	Connector
Front Panel	4x USB 3.2 Gen. 2	4x USB Type-A
	HDMI 2.0	HDMI
	Recovery port	USB Type-C
	2 x 2.5/1Gb Ethernet ports	2 x RJ45
	2x USB 2.0	2x USB Type-A
	9V – 36V DC power input[2]	1x 5.5 mm power jack with twist-locking
	Console port	USB Type-C
	Isolated RS-232/422/485	Terminal block
	Isolated CAN bus	Terminal block
	Isolated 2x GPI + 2x GPO	Terminal block
	Power button	On/Off push button with power LED
	2x antennas for Wi-Fi/BT or modem	2x SMA
	Optional Camera input expansion 4x PoE	4x RJ45
	Optional Camera input expansion 4x GMSL2	4x FAKRA Z
	Optional Camera input expansion 4x FPD Link IV	4x FAKRA Z
Rear Panel	Micro-SIM Tray for M.2 LTE/5G modem	Micro-SIM Tray
	4x antennas for Wi-Fi/BT or modem	4x SMA
	Optional OOB management module	RJ45, Micro-SIM slot, LEDs + buttons

Location	Form factor	Usage	Interface
Internal Bottom	M.2 Key-M up to 2280	NVMe storage	PCIe Gen 4[1] x4
	M.2 Key-B up to 3042 or 3052	LTE/5G modem	USB 3.2 + 2.0
	M.2 Key-E 2230	Wi-Fi/BT module	PCIe + UART + I2S + USB 2.0

Notes:

1. The NVMe interface of Orin Nano modules is limited to Gen. 3
2. PoE input expansion requires 12V or more DC input

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Expansion boards

Name	PN	Description
EB-EDGEPOE	FPOE	4x 2.5GbE on RJ45 with PoE PSE power delivery Type 1 (15.4W per port)
EB-EDGEDES-F	FFPD	4x FPD Link IV deserializer on FAKRA Z with PoC power delivery
EB-EDGEDES-G	FGMSL	4x GMSL2 deserializer on FAKRA Z with PoC power delivery
EB-EDGEMIPI[1]	FCSI	2x 22-pin flex connectors MIPI-CSI lanes: 1x/2x/4x + 1x/2x (Jetson Orin dev. kit pin-out)
Bolt OOB enabler	FOB	Allxon Bolt Out of Band enabler with Ethernet and optional Modem

Notes:

1. EB-EDGEMIPI is intended to be used without the standard enclosure.

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