

AIE510-ONX NEW

Fanless Edge AI System with NVIDIA® Jetson Orin™ NX 16GB, 1 HDMI, 1 GbE PoE, 1 2.5 GbE PoE, 2 USB, 1 COM/CAN, and 8-CH DIO for AMR & Robotics



▲ Front view



▲ Rear view

Features

- NVIDIA® Jetson Orin™ NX (100 TOPS)
- Seamless speed: 5G, Wi-Fi 6E, and 2.5 GbE combined
- Easily manage: USB and PoE device power control
- Supports dual PoE for camera & sensor connectivity
- -25°C to +60°C operating temperature range
- Supports 24/7 secure remote monitoring, control, and OTA deployment empowered by Allxon

NVIDIA® Jetson Orin™ NX available through to 2030*
The official end of life notice will be sent for at least 8 months before the last shipment.



Specifications

Standard Color	Silver
Construction	Aluminum extrusion and heavy-duty steel, IP40
AI Accelerator	NVIDIA® Jetson Orin™ NX 16GB (100 TOPS)
CPU	8-core NVIDIA Arm® Cortex A78AE v8.2 64-bit CPU 2MB L2 + 4MB L3
GPU	1024-core NVIDIA Ampere GPU with 32 Tensor Cores
System Memory	16GB 128-bit LPDDR5 onboard
Carrier Board	PSB907
System I/O Outlet	1 x HDMI 2.1 with 4K2K supported 1 x 10/100/1000 Mbps PoE (via Orin™ NX) 1 x 10/100/1000/2500 Mbps PoE (Intel® I226-IT) 2 x USB 3.2 Gen2 1 x 8-CH DIO 1 x Debug port 1 x DB9 for COM & CAN 1 x Recovery switch (for image update) 1 x Remote switch 1 x AT/ATX switch 1 x Reset button 1 x Power button 1 x 24 VDC power input connector 5 x SMA-type antenna connector
Watchdog Timer	Built-in Orin NX
Storage	1 x M.2 Key M 2280 with PCIe x4 NVMe SSD slot *Orin NX no longer has built-in eMMC and only supports SSD for the bootable device. *The AIE510-ONX requires an SSD for image installation. Kindly order the SSD if you need image installation service.
Expansion Interface	1 x M.2 Key E 2230 slot for Wi-Fi 6(E) 1 x Full-size PCI Express Mini Card slot (USB + PCI Express signal) for Wi-Fi/LTE *Please refrain from using both the PCI Express Mini Card slot and the M.2 E-Key slot at the same time. 1 x M.2 Key B 3042/3052 slot for 5G/LTE 1 x Nano SIM slot
System Indicator	1 x Green LED for system power-on 1 x Yellow LED for M.2 storage

Specifications

Power Supply	24 VDC screw type
Operating Temperature	-25°C to +60°C (-13°F to +140°F)
Humidity	10% - 95%, non-condensing
Vibration Endurance	3 Grms with M.2 (5 to 500Hz, X, Y, Z directions)
Dimensions	TBC
Weight (net/gross)	TBC
Certifications	CE, FCC Class A, UKCA
OS Support	Linux Ubuntu 20.04 or later

Remote Management Enrollment

Allxon Portal – Enroll in 24/7 secure service to get the full feature of remote device management on one centralized cloud portal

*Enrollment Page: https://allxon.com/jetson/device_enroll/

Packing List

- 1 x Terminal block connector
- 1 x Screw pack
- 4 x Foot pad
- 1 x M.2 SSD thermal kit
- 1 x 5G module thermal kit

Power Protection

DC Adapter

OVP (over voltage protection)

OCP (over current protection)

SCP (short circuit protection)

Ordering Information

Standard

AIE510-ONX-16GB (P/N: TBC)	Fanless edge AI system with NVIDIA® Jetson Orin™ NX 16GB, 1 HDMI, 1 GbE PoE, 1 2.5 GbE PoE, 2 USB, 1 COM/CAN, and 8-CH DIO
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Optional

	Wall mount kit
	DIN-rail kit
	VESA mount kit

M.2 NVMe SSD 128GB or above

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LTE module

Wi-Fi module

Power cord

509000001500	24V/120W adapter
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* Specifications and certifications may vary based on different requirements.