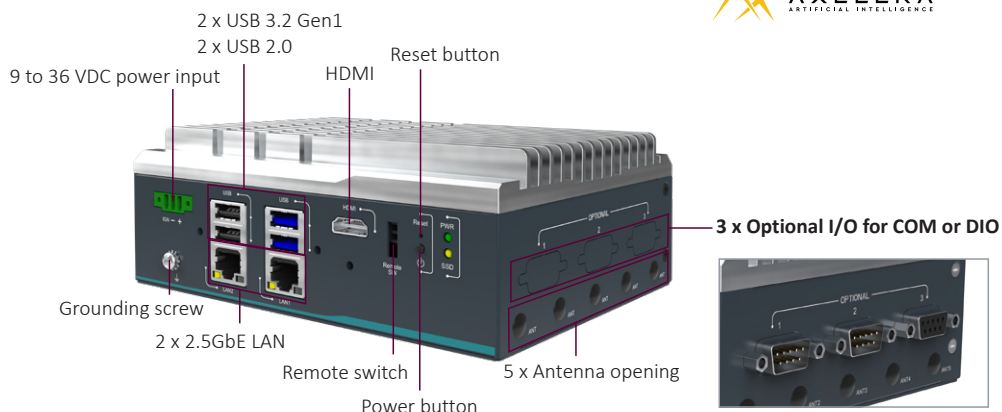


AIM101 Preliminary

Fanless Edge AI System with Intel® Processor N150, featuring a PCIe Gen3 x4 M.2 Slot to Run AI Accelerator at Full Performance Capability, Suitable for Computer Vision Inference at the Edge



Features

- Powered by Intel® processor N150 (Twin Lake)
- Optional Axelera/DeepX AI accelerator cards (up to 100 TOPS)
- Seamless connectivity with Wi-Fi 6E, LTE and 2.5 GbE combined
- Effortless management with USB and LTE device power control
- Wide power input range of 9 to 36 VDC with smart ignition control
- Ideal for edge AI object detection, image classification and video analytics applications

Specifications

Standard Color	Silver
Construction	Aluminum extrusion and heavy-duty steel, IP40
AI Accelerator	Optional, M.2 Key M AI accelerator card (up to 100 TOPS) • Axelera Metis M.2 module (100 TOPS) • DeepX DX-M1 M.2 module (25 TOPS) • Hailo-8 M.2 module (26 TOPS), by project • MemryX MX3 M.2 module (20 TOPS), by project
CPU	Intel® processor N-series N150 Quad-core up to 3.6 GHz (Twin Lake)
System Memory	8GB LPDDR5 SDRAM onboard *2 x 8GB LPDDR5 SDRAM onboard by option
Chipset	SoC integration
BIOS	AMI

Specifications

System I/O Outlet	Front side 1 x HDMI 1.4b with FHD supported 2 x 2.5 GbE LAN (Intel® I226-V) 2 x USB 3.2 Gen1 2 x USB 2.0 1 x reset button 1 x power button 1 x remote power switch 1 x terminal block for power input	Right side 3 x optional I/O opening from below • 2 x 8-CH DIO programmable (optional) • 2 x COM (RS-232/422/485) (optional) 5 x antenna opening for Wi-Fi/Bluetooth/LTE/GPS connectivity
Watchdog Timer	255 levels, 1 to 255 sec.	
Storage	Optional, storage options are as followed • 1 x 2.5" SATA HDD/SSD • 1 x M.2 Key M 2280 NVMe SSD^{*1} • 1 x mSATA SSD^{*2} ^{*1} Available only when the M.2 Key M 2280 slot for expansion is unoccupied; Please note that AI accelerator card and NVMe SSD cannot be used simultaneously. ^{*2} Available only when the full-size PCI Express Mini card slot is unoccupied	
Expansion Interface	1 x M.2 Key M 2280 slot (PCIe Gen3 x4) for AI accelerator card or NVMe SSD connectivity 1 x M.2 Key E 2230 slot (PCIe Gen3 x1+USB 2.0) for Wi-Fi 6E 1 x full-size PCI Express Mini Card slot (USB 2.0 + PCIe Gen2 x1/SATA) for Wi-Fi/Bluetooth/LTE/GPS or mSATA SSD connectivity 1 x internal Nano SIM slot for PCIe Mini card slot	
TPM	TPM 2.0	
System Indicator	1 x green LED for system power-on 1 x orange LED for SSD	
Power Supply	Input: 9 to 36 VDC (typical 12/24 VDC) smart ignition control	
Operating Temperature	-20°C to +60°C (-4°F to +140°F) with 0.7 m/s air flow	
Relative Humidity	10% to 95% relative humidity, non-condensing	
Vibration	IEC 60068-2-64 (with SSD: 3Grms, random, and 5 to 500 Hz) MIL-STD-810H, Method 514.8, and Category 20	
Shock	IEC 60068-2-27 (with SSD: 50G, half sine, and 11 ms duration) MIL-STD-810H, Method 516.8, and Procedure I	
Dimensions (W x D x H)	167 x 119 x 62.6 mm (6.57" x 4.69" x 2.46")	
Weight (net/gross)	1.1 kg (2.43 lb)/1.86 kg (4.1 lb)	
Certifications	CE, FCC Class A, and UKCA	
OS Support	Linux Ubuntu 24.04 LTS Win 11	

Ordering Information

Standard

AIM101 (P/N: TBD)	Fanless edge AI system with Intel® processor N150, 2 2.5GbE LAN, 4 USB, and 1 HDMI, featuring a PCIe Gen3 x4 M.2 slot
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Optional

TBD	Axelera Metis M.2 module kit (100 TOPS)
TBD	DeepX DX-M1 M.2 module kit (25 TOPS)
TBD	Wall mount kit
TBD	DIN-rail kit
TBD	System anti-vibration kit
TBD	Front I/O cable-lock kit
2.5" SATA SSD	
mSATA SSD	
M.2 Key M 2280 NVMe SSD	
LTE module	
Wi-Fi module	
Power cord	
Power adapter	

* Specifications and certifications may vary based on different requirements.

Dimensions

