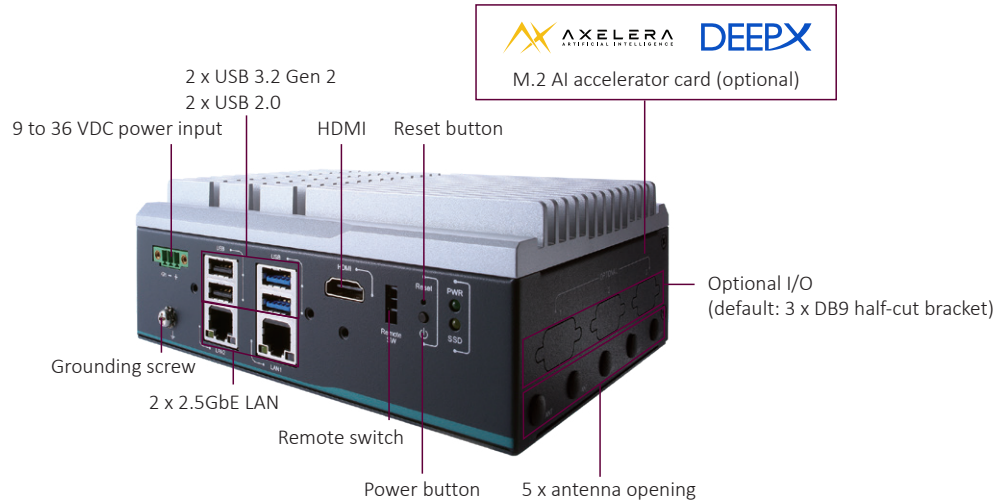


AIM101 NEW

Fanless Edge AI System with Intel® N-series Processor, featuring a PCIe Gen 3 x4 M.2 Slot to Run AI Accelerator at Full Performance Capability, Suitable for Computer Vision Inference at the Edge



Features

- Powered by Intel® Quad-core Processor N150 (Twin Lake)
- Optional M.2 AI accelerator cards
- Qualified Intel® ESQ for Metro AI Suite Device
- Patented thermal design for superior cooling efficiency*
- Intelligent power management - USB power on/off control
- Seamless connectivity with Wi-Fi 6E, LTE, and 2.5GbE combined
- 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

*This product is protected by one or more of the following patent No. M676919 and M680341 granted in Taiwan.

Specifications

Standard Color	Silver/Navy blue
Construction	Aluminum extrusion and heavy-duty steel, IP40
AI Accelerator	Optional, M.2 AI accelerator card <ul style="list-style-type: none"> • Axelera Metis M.2 module (214 TOPS at INT8) • DeepX DX-M1 M.2 module (25 TOPS at INT8) • Hailo-8 M.2 module (26 TOPS at INT8), by project • MemoryX MX3 M.2 module (20 TOPS at BF16), by project
CPU	Intel® N-series Processor N150 Quad-core up to 3.6 GHz (Twin Lake)
System Memory	8GB LPDDR5 SDRAM onboard *16GB (2 x 8GB) LPDDR5 SDRAM onboard, by project
Chipset	SoC integration
BIOS	AMI

Specifications

System I/O Outlet	Front side 1 x HDMI 1.4 ¹ 2 x 2.5GbE LAN (Intel® I226-V) 2 x USB 3.2 Gen 2 ¹ 2 x USB 2.0 ¹ 1 x reset button, 1 x power button, 1 x remote power switch 1 x terminal block for power input ¹ Optional lockable kit for 4 USB and 1 HDMI	Right side Optional I/O (default: 3 x DB9 half-cut bracket) 5 x antenna opening for Wi-Fi/LTE/GPS
Watchdog Timer	255 levels, 1 to 255 sec.	
Storage	Optional, storage options are as followed <ul style="list-style-type: none"> • 1 x 2.5" SATA SSD/HDD • 1 x M.2 Key M 2280 NVMe SSD² • 1 x mSATA SSD³ ² Please note that AI accelerator card and NVMe SSD cannot be used simultaneously. ³ Please note that mPCIe module and mSATA cannot be used simultaneously.	
Expansion Interface	1 x M.2 Key M 2280 slot (PCIe Gen 3 x4) for AI accelerator card or NVMe SSD ² 1 x M.2 Key E 2230 slot for Wi-Fi 6E 1 x full-size PCI Express Mini Card slot (USB + PCIe/SATA) for Wi-Fi/LTE/GPS or mSATA ³ 1 x Nano SIM 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) with smart ignition control Inrush current: 0.37A/1.93A	
Operating Temperature	-40°C to +70°C (-40°F to +158°F) (with W.T. AI accelerator card and SSD)	
Relative Humidity	10% to 95% relative humidity, non-condensing	
Vibration (operating)	IEC 60068-2-64 (with SSD: 3Grms, random, and 5 to 500 Hz) MIL-STD-810H, Method 514.8, Category 20, and Figure 514.8C-2	
Shock (operating)	IEC 60068-2-27 2008 Table A.1 (with SSD: 50G, half-sine, and 11 ms duration) MIL-STD-810H, Method 516.8, and Procedure I (with SSD: 40G, TP sawtooth, and 11 ms duration)	
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 lbs)/1.86 kg (4.1 lbs)	
Certifications	CE, FCC Class A, and UKCA	
OS Support	Linux Ubuntu 24.04 LTS Win 11 IoT	

Ordering Information

Standard

AIM101-N150-8R (P/N: E27Y101101)	Fanless edge AI system with Intel® Processor N150, onboard 8GB LPDDR5, 2 2.5GbE LAN, 4 USB, and 1 HDMI, featuring a PCIe Gen 3 x4 M.2 slot
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Optional

ACC155-AXK-M101 (P/N: E29R155106)	AI accelerator card-Axelera Metis M.2 module and thermal kit ^{2,4} ² Please note that AI accelerator card and NVMe SSD cannot be used simultaneously. ⁴ Please note that AIM101 with Axelera Metis M.2 module supports an operating temperature of -20°C to +70°C (-4°F to +158°F).
ACC155-TM2-M101 (P/N: E29R155103)	M.2 NVMe thermal kit ²
ACC155-25CK-M101 (P/N: E29R155105)	2.5" SATA cable kit (excluding 2.5" SATA SSD/HDD)
ACC155-TMS-M101 (P/N: E29R155102)	mPCIe/mSATA thermal kit ³ ³ Please note that mPCIe module and mSATA cannot be used simultaneously.
Storage	M.2 NVMe SSD/mSATA SSD/2.5" SATA SSD/HDD (128GB or above); please order SSD thermal kit or 2.5" SATA cable kit separately.
ACC155-WM-M101 (P/N: E29R155100)	Wall mount kit
ACC155-DR-M101 (P/N: E29R155101)	DIN-rail kit
594K6220210E	Remote power switch cable
509000005500	24V 60W power adapter

Ordering Information

Optional

590000053600	COM cable, for optional COM(RS232/ 422/ 485) on optional I/O (up to 2 DB9 ports)
592000000400	1st DIO cable, for optional 8-CH TTL DIO 0-7 port on optional I/O (up to 1 DB9 port)
590000101500	2nd DIO cable, for optional 8-CH TTL DIO 8-15 port on optional I/O (up to 1 DB9 port)
MIO108-2CAN-mPC 90D (P/N: E39Q108103)	mPCIe module with dual CAN bus, for optional dual CAN bus 2.0A/B on optional I/O (up to 2 DB9 ports) ^{*3} ^{*3} Please note that mPCIe module and mSATA cannot be used simultaneously.
Power cord	
Wi-Fi module	
LTE module	

* Specifications and certifications may vary based on different requirements.

Packing List

- 1 x AIM101 system unit
- 1 x 3-pin terminal block connector for power
- 1 x screw pack

Power Protection

DC Version

- OVP (over voltage protection)
- UVP (under voltage protection)
- OCP (over current protection)
- SCP (short circuit protection)
- Reverse protection

Dimensions

