

# AIR-427A

Edge AI system powered  
by NVIDIA® IGX Thor™

Preliminary



## Features

- Powered by NVIDIA IGX T7000™, delivering up to 2070 TFLOPS (FP4-Sparse) inference performance
- Powered by the NVIDIA Blackwell architecture iGPU and an optional NVIDIA RTX PRO™ 6000 Blackwell Max-Q Workstation Edition to deliver up to 5,581 TFLOPS (FP4-Sparse)
- Functional safety & system reliability
- Multiple I/O Expansion: 2x PCIe Gen 5, 1 x M.2 M Key (NVME) 1x M.2 B Key (5G/LTE), and 1x M.2 E Key (WiFi).
- Supports 2x 200 GbE with QSFP28
- Supports CAN, COM, GPIO with Header
- Enterprise / medical-grade lifecycle & validation

## Specifications

Processor Module	NVIDIA Module	NVIDIA IGX T7000
	CPU	14-core Arm® Neoverse®-V3AE 64-bit CPU 64 KB I-Cache, 64 KB D-Cache 1 MB L2 Cache per core 16 MB Shared System L3 Cache
	iGPU	2560-core NVIDIA Blackwell architecture GPU with 5th-generation Tensor Cores Multi Instance GPU with 10 TPCs
	AI Performance Reference	Up to 2070 TFLOPS (FP4-Sparse) or 5581 TFLOPS (FP4-Sparse) with an optional NVIDIA RTX PRO 6000 Blackwell Max-Q Workstation Edition
	TDP	130W
	Memory	128GB 256-bit LPDDR5X, 273GB/s 96GB dGPU memory, 1,792GB/s
Ethernet	Interface	2x RJ-45 / 2x QSFP28
	PHY	BMC / NVIDIA ConnectX®-7
	Speed	2x RJ45 (1GbE each) / 2x QSFP28 (200GbE Each)
Display	Display Port	1x VESA DisplayPort 1.4a
IO Ports	USB	1x USB 3.2 Gen2 Type C 4x USB 3.2 Gen2 Type A
	Audio	Line-out, Mic-in
Expansion	M.2	1x M.2 B Key(5G/LTE) / 1x M.2 E Key(WIFI/BT)
	PCIe	2x PCIe Gen5 (x8, x16)
	CANBus	1x CAN Header(20-pin)
	COM	4x COM Header (20-pin)
	GPIO	1x GPIO Header (20-pin)
Others	TPM	TPM2.0 (Optional)
Storage	M.2	1 x M.2 M Key NVME (PCIe Gen5)
Power	Power Supply voltage	100-240V AC
	Power Type	ATX/AT mode (Default ATX)
Environment	Operational Temperature	0 – 45 °C (w/o PCIe Card), / 0~ 40 °C (w/ PCIe Card)
	Operating Humidity	95% @ 40 °C (non-condensing)
	Vibration	3 Grms @ 5 – 500 Hz, random, 1 hr/axis
Mechanical	Dimensions (W x D x H)	260.3 x 380.75 x 190 mm
	Weight	TBD
	Mounting Support	Wall mounting
Operating System		Ubuntu 24.04 LTS with IGX OS 2.0
Software Support	Software API	Advantech Edge AI SDK compatible
Certifications	EMC/Safety	CE/FCC Class B, CB, UL, CCC and BSMI (No RED Certificate)

#1 Devices with graphics cards are not suitable for use in high-vibration environments.

#2 Operating temperature varies by PCIe card; no universal guarantee applies.

#3 The graphics card models listed above have only been partially tested. Please verify physical fitment as not all dimensions are guaranteed.

## Dimensions

Unit: mm

