ITA-560AGX

AI Inference Box Computer Powered by NVIDIA® Jetson AGX Orin™ for Railway Applications



Features

- Fanless box computer designed for AI inference
- Embedded NVIDIA® Jetson AGX Orin™ platform
- Compliant with EN 50155 OT1 and EN 50121-3-2 EMC standards
- Rugged M12 connectors suitable for harsh, industrial environments
- 1 x Mini PCIe, 1 x M.2 (M-key)for easy expansion
- Bundled with Linux Ubuntu 20.04/22.04 operating system

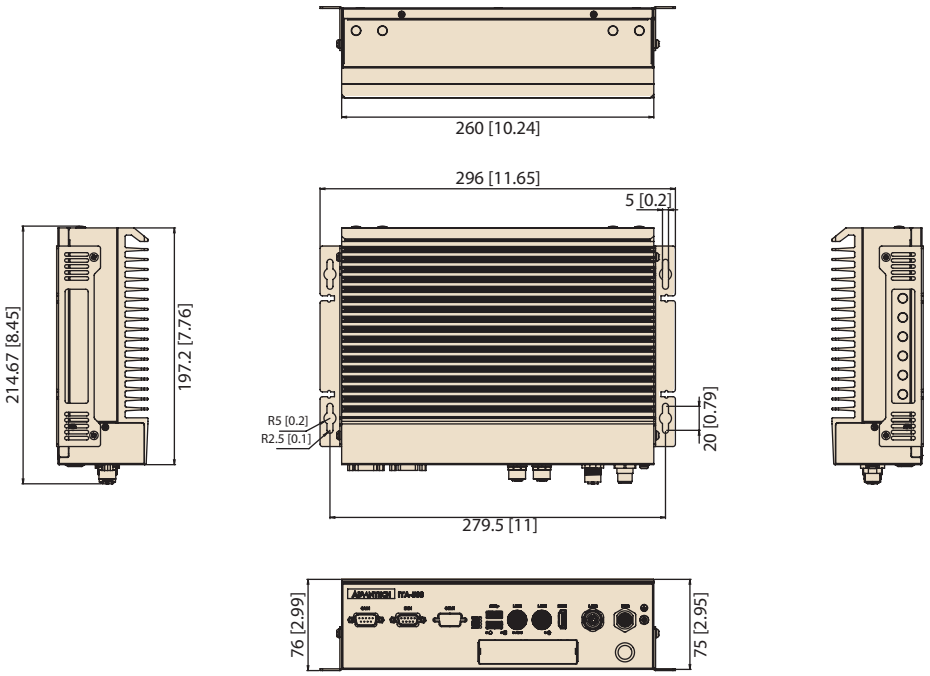
Specifications

System	GPU	NVIDIA® Ampere® GPU 1792 NVIDIA CUDA cores and 56 Tensorcores Ray-Tracing cores	NVIDIA® Ampere® GPU 2048 NVIDIA CUDA cores and 64 Tensorcores Ray-Tracing cores
	CPU	8-core NVIDIA Arm® Cortex A78AE v8.2 64-bit CPU 2MB L2 + 4MB L3	12-core NVIDIA Arm® Cortex A78AE v8.2 64-bit CPU 3MB L2 + 6MB L3
	AI Performance	Up to 200 Sparse TOPs (INT8)	Up to 275 Sparse TOPs (INT8)
Memory	Max. Capacity	32GB 256-bit LPDDR5/LPDDR5X DRAM	64GB 256-bit LPDDR5/LPDDR5X DRAM
	Flash	64GB eMMC 5.1 Flash Storage	
I/O - External	Display	1 x HDMI	
	CAN	1 x CAN, DB9	
	USB	2 x USB 3.0 type A	
	DI/O	1 x 8bit (4in/4out), DB9	
Ethernet	Controller	Intel i226-IT/MARVELL_88E1512	
	Interface	10/100/1000 Mbps	
	Connector	3 x M12 (X-coded)	
Expansion	Mini PCIe	1 x Mini PCIe slot	
	M.2	1 x M.2 (M-key) 2242 for storage	
Power	Input Range	24/110V_{DC}	
	Connector	1 x M12 (S-coded)	
Environmental	Operating Temperature	-25 ~ 55 °C/-13 ~ 131 °F	
	Storage Temperature	-40 ~ 85 °C/-40 ~ 185 °F	
	Humidity	5% ~ 95% @ 40 °C/104 °F (non-condensing)	
Mechanical	Dimensions (W x H x D)	260 x 75 x 197.2 mm/10.23 x 2.95 x 7.76 in	
	Mount Options	Wall mount	
Certification	EMC	CE, FCC, BSMI, CCC	
	Safety	CE, FCC, BSMI, CCC	
EN50155 Compliance	Ambient Temperature	-25 ~ 55 °C/-13 ~ 131 °F (EN 50155 OT1)	
	Shock and Vibration	IEC 61373 body mount class B	
	Voltage Interruptions	Class S2	
	Supply Change Over	Class C1	
	EMC	EN 50121-3-2	

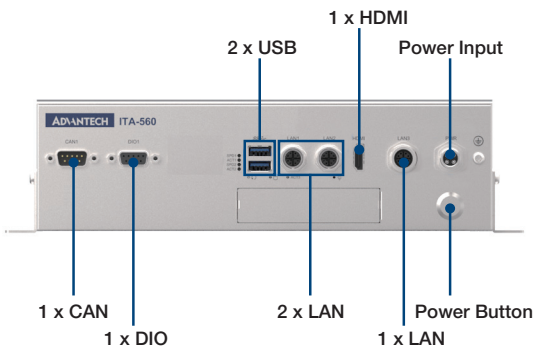
All product specifications are subject to change without notice.

Dimensions

Unit: mm [inch]



I/O Layout



Ordering Information

Part Number	Processor	Voltage (M12-S-Male)	Ethernet GbE (M12-X-F)	USB 3.0 (Type A)	Mini PCIe	M.2 (M-key)	CAN	DI/O	HDMI
ITA-560AGX-LOA1	AGX Orin 32GB	$24V_{DC}$	3	2	1	1	1	1	1
ITA-560AGX-SOA1	AGX Orin 32GB	$110V_{DC}$	3	2	1	1	1	1	1
ITA-560AGX-LOA2	AGX Orin 64GB	$24V_{DC}$	3	2	1	1	1	1	1
ITA-560AGX-SOA2	AGX Orin 64GB	$110V_{DC}$	3	2	1	1	1	1	1

External Cables and Connectors

Part Number	Description
FRU-ITAPWR-0001	External cable - Power to M12
FRU-ITALAN-0003	External cable - RJ45 to M12