

ITA-560AGX

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



Features

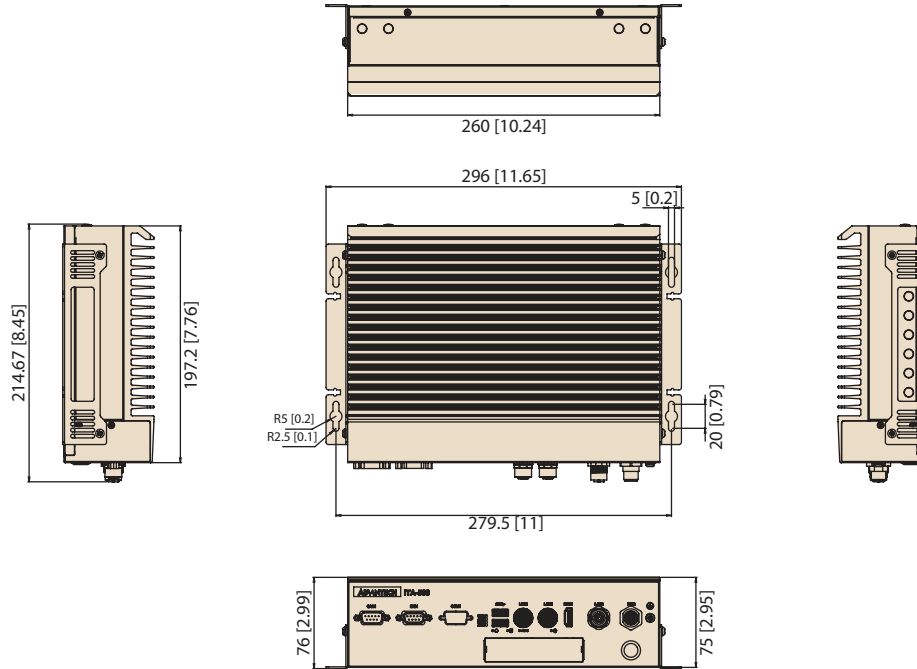
- Fanless box computer designed for AI inference
- Embedded NVIDIA® Jetson AGX Orin™ platform
- Compliant with EN 50155 OT1 and EN 50121-3-2 EMC standards
- Rugged M12 connectors suitable for harsh, industrial environments
- 1 x Mini PCIe, 1 x M.2 (M-key) for easy expansion
- Bundled with Linux Ubuntu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

Specifications

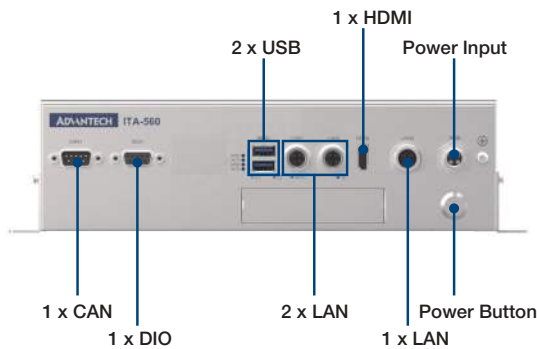
| | | | |
|--------------------|------------------------|---|---|
| System | GPU | NVIDIA® Ampere® GPU 1792 NVIDIA CUDA cores and 56 Tensorcores Ray-Tracing cores | NVIDIA® Ampere® GPU 2048 NVIDIA CUDA cores and 64 Tensorcores Ray-Tracing cores |
| | CPU | 8-core NVIDIA Arm® Cortex A78AE v8.2 64-bit 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 | |

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 |