

Fanless Scalable Railway Edge AI Platform  
**AVA-7200**

Datasheet

Preliminary



**Features**

- EN50155 certified Edge AI platform
- NVIDIA Ampere architecture GPGPU A2000/A4500
- Intel 13th Gen mobile processor (Raptor Lake)
- Wide range DC 24-110V/72-110V power input (BOM option)
- Fanless extended temperature support TPM 2.0
- 8x M12 x-coded 10G/2.5G ports, 5x USB, 4x SATA storage slots, 4DI/4DO, 2x Serial ports
- Internal NVME M.2 slot, 5G M.2 slot, mPCIe slot for expansion

**Specifications**

System	Processor	13th Gen Intel® Core™ mobile processors (formerly Raptor Lake-P) Core™ i5-13600HRE 4P+8E Core/16T 18MB Cache, 45W(35W cTDP) Other CPU upon request
	AI Accelerator	GPGPU by option EGX-MXM-A2000 Embedded NVIDIA® RTX™ A2000, MXM 3.1 type A, 82 x 70mm, PCIe Gen4 x8 EGX-MXM-A4500 Embedded NVIDIA® RTX™ A4500, MXM 3.1 type B, 82 x 70mm, PCIe Gen4 x8
	Memory	32GB/64GB DDR5, IB ECC (selected SKUs), SO-DIMM memory, max. 4800MT/s 2 memory channels with 1DPC design
	BIOS	AMI UEFI with CMOS backup in 32 SPI BIOS (dual BIOS opt.)
	Display	One Display Port from CPU
Storage	NVME	1x PCIe Gen3 4x M.2 M-key 2280 NVME slot
	SATA	4x removable 2.5" SATA drive tray with lock (optional)
Connectivity	Ethernet	Max. 8x M12 X-coded Ethernet ports including 2x 10G + 6x 2.5G 4x M12 X-coded Ethernet ports support POE when Type A MXM is selected
	USB	4x USB 3.2 Gen2 Type-A ports 1x USB 2.0 Type-A port
	Digital I/O	1x terminal block 4 input/4 output for DC 24 - 110V with isolation 1.5kVDC
	Serial Ports	2x DB-9 Serial ports supporting RS-232/422/485
	CAN/MVB	2x DB-9 ports reserved for CAN/MVB with optional mPCIe module selected

## Specifications

Connectivity	Audio	Mic in/Line out												
	Wireless	1x PCIE Gen3 x1 M.2 B-key-3042/3050/3052 slot with optional 5G/LTE module selected 1x PCIE Gen3 1x M.2 E-key slot with optional Wi-Fi module selected												
	Antenna	4+3 QMA antennas on rear panel												
	SIM	Dual external accessible SIM slots on rear												
	Internal Expansion	1x mPCIE slot expansion												
Miscellaneous	TPM	TPM 2.0 with 2048-bit RSA												
	LED	1x Power (G), 1x Storage (Y), 1x WDT (Y) on front panel												
	Power Connector	IEC 61076 M12 K-coded connector												
	Power	<table border="1"> <tr> <td></td> <td>A2000</td> <td>A4500</td> </tr> <tr> <td>Power capability</td> <td>200W</td> <td>300W</td> </tr> <tr> <td>Power input</td> <td>DC +24-110V</td> <td>DC +72-110V</td> </tr> <tr> <td>Ignition support</td> <td>Yes</td> <td>Optional</td> </tr> </table>		A2000	A4500	Power capability	200W	300W	Power input	DC +24-110V	DC +72-110V	Ignition support	Yes	Optional
		A2000	A4500											
	Power capability	200W	300W											
	Power input	DC +24-110V	DC +72-110V											
	Ignition support	Yes	Optional											
	GND	M6 threaded stainless steel stud												
	Battery	CR2032X coin cell battery by default Gold capacitor (optional)												
Coating	Conformal coating by default													
MTBF	Target 200,000 hrs. by Telcordia issue 3, GC, GB, 40°C													
Mechanical	Dimensions	360 mm (W) x 255.7 mm (D) x 99.1 mm (H)												
	Weight	Est. approx. 9.4kg with wall mount brackets												
	Mounting	Rack mount Wall mount												
	Cooling	Fanless design with passive cooling Suggest air convection air flow 1.0m/s												
	Ingress Protection	EN60529 IP20												
Environmental	Operating Temperature	OT1: -25°C - 55°C (EN50155:2021 OT1 Class, ST1 +15C for 10mins) OT3: -25°C - 70°C (EN50155:2021 OT3 Class, ST1 +15C for 10mins) Depending on CPU & MXM module selection. min. ambient airflow required												
	Storage Temperature	-40°C to +85°C												
	Humidity	Operating: 10% to 95% relative humidity (non-condensing) Non-Operating: 5% to 95% relative humidity (non-condensing)												
	Vibration	EN50155:2021 13.4.10 (Ref. to EN 61373:2010 category 1 class B)												
	Shock	EN50155:2021 13.4.10 (Ref. to EN 61373:2010 category 1 class B)												
	Safety	EN50124-1:2017 Compliant EN50153 Compliant												
	EMC	EN50155:2021 Clause 13.4.9 With reference to EN50121-1:2017; EN50121-3-2:2016 EN50121-4:2016 (upon request) EN61000-4-2:2009; EN61000-4-3:2006 + A1:2008 + A2:2010 EN61000-4-4:2012; EN61000-4-5:2014 + A1: 2017 EN61000-4-6:2014 + AC: 2015												
	Fire Protection	EN45545-2:201320+A1:2015 (HL 1-3) EL9 for PCB (R24 / R25)												
	Operating System	Ubuntu 22.04, 64-bit Windows 10 IoT Enterprise LTSC Other OS upon request												

## Ordering Information

AVA-7200/5136/32G/A2000	Fanless AI box with Intel Core i5-13600HRE. 32GB and NVIDIA RTX A2000, supporting 8x M12 Ethernet ports, 5x USB, 4x SATA
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## Optional Accessories

AVA-7200 AC-DC Power Supply	300W AC-DC power adapter for AVA-7200 with phoenix connector
AVA-7200 Cable Kit	1x M12 K-coded power cord, 8x M12 X-coded Ethernet cable
AVA-7200 Rack Mount Kit	19" Rack mount kit for AVA-7200

## Dimensions

