

Fanless Scalable Railway Edge AI Platform

AVA-7200

Datasheet



Features

- EN50155:2021 certified Edge AI platform
- NVIDIA Ampere architecture GPGPU A2000/A4500
- Intel® 13th Gen Raptor Lake mobile processor
- Wide range isolated DC 24-110V 200W/ 110V 300W power input by BOM option
- Operates at -25°C to 55°C (OT1, ST1) or -25°C to 70°C (OT3, ST1)
- 8x 10GbE/2.5GbE M12 X-coded Ethernet, 5x USB, 4x SATA, 4x DI/DO, 2x Serial ports, audio, and DP
- Internal expansion for 1x NVME M.2 slot, 1x 5G M.2 slot with 2x SIM slots, 1x Wifi/BT M.2 slot, 1x mPCIe, accessible by lid opening
- QMA antenna on the rear side
- Fanless rugged design, conformal-coated for durability, flexibility, and longevity support

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) Core™ i7-13800HRE 6P+8E Core 20T 24MB 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, IBEC (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 x4 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 POE upon BoM request
	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

Specifications

Connectivity	CAN/MVB	2x DB-9 ports reserved for CAN/MVB with optional mPCIe module selected
	Audio	Mic-in/Line-out
	Wireless	1x PCIe Gen3 x1 M.2 B-key-3040/3050/3052 slot with optional 5G/LTE module selected 1x PCIe Gen3 x1 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), 1 x Storage (Y), 1 x WDT (Y) on front panel
	Power Connector	IEC 61076 M12 K-coded connector
	Power	A2000 Power capability:200W; Power input:DC +24-110V; Ignition support:Yes
		A4500 Power capability:300W; Power input:DC 110V; Ignition support:Optional
	GND	M6 threaded stainless steel stud
	Battery	CR2032X coinell battery by default Gold capacitor (optional)
	Coating	The conformal coating on AVA-7200 boards is applied by default. Coating on add-on cards is available upon request
	MTBF	216,865 hrs. by Telcordia issue 4 GB, GC
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 the CPU and GPU MXM module selection and combination. Min. convection air flow 1.0m/s is required to take the heat away, or the CPU and GPU might got throttling and even damage.
	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	EN 50124-1:2017 Compliant EN 50153 Compliant
	EMC	EN 50155:2021 Clause 13.4.9 With reference to EN 50121-1:2017; EN 50121-3-2:2016 EN 50121-4:2016 (upon request) EN 61000-4-2:2009; EN 61000-4-3:2006 + A1:2008 + A2:2010 EN 61000-4-4:2012; EN 61000-4-5:2014 + A1: 2017 EN 61000-4-6:2014 + AC: 2015
	Fire Protection	EN45545-2:201320+A1:2015 (HL 1-3) EL9 for PCB (R24 / R25)
	Compliance	ROHS & REACH Compliance
Operating System		Ubuntu 22.04, 64-bit Windows 10 IoT Enterprise LTSC Other OS upon request

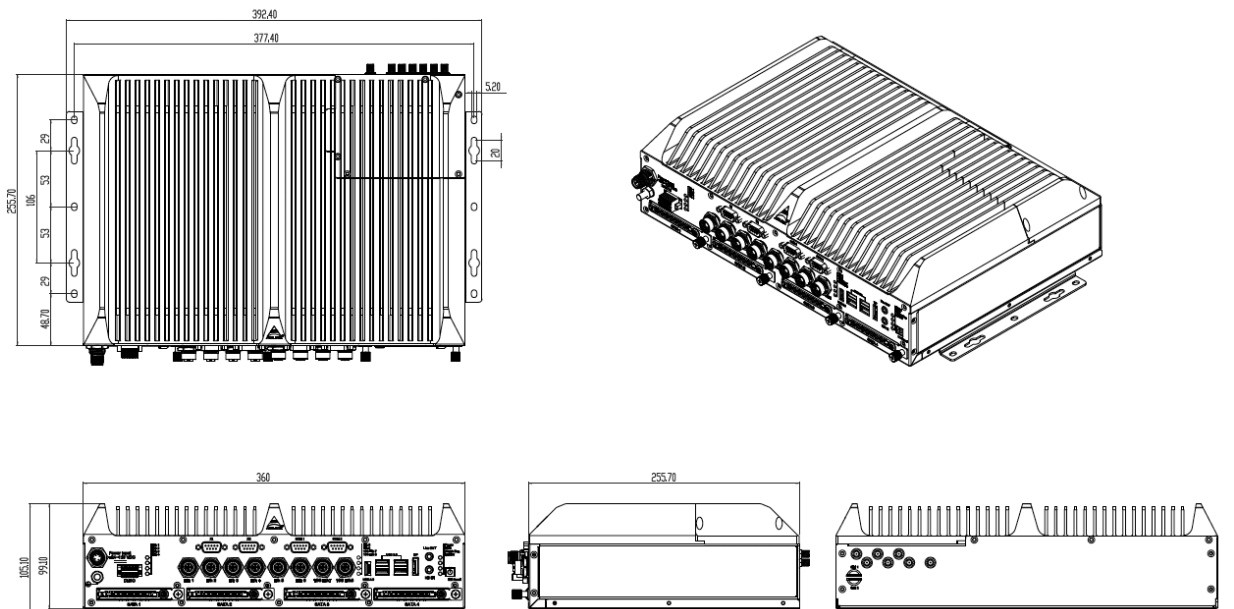
Ordering Information

AVA-7200/5136/64G, CC	Fanless AI box with Intel® Core™ i5-13600HRE. 64GB DDR5, supporting 8x M12 Ethernet ports, 5x USB, 4x SATA, 200W power, w/conformal coating, w/o GPGPU
AVA-7200/5136/32G/A20, CC	Fanless AI box with Intel® Core™ i5-13600HRE, 32GB DDR5, A2000 MXM, supporting 8x M12 Ethernet ports, 5x USB, 4x SATA, 200W power, w/conformal coating
AVA-7200/5136/64G/A20, CC	Fanless AI box with Intel® Core™ i5-13600HRE, 64GB DDR5, A2000 MXM, supporting 8x M12 Ethernet ports, 5x USB, 4x SATA, 200W power, w/conformal coating
AVA-7200/7138/64G, CC	Fanless AI box with Intel® Core™ i7-13800HRE, 64GB DDR5, supporting 8x M12 Ethernet ports, 5x USB, 4x SATA, 200W power, w/conformal coating, w/o GPGPU
AVA-7200/H7138/32G/A45, CC	Fanless AI box with Intel® Core™ i7-13800HRE, 32GB DDR5, A4500 MXM, supporting 8x M12 Ethernet ports, 5x USB, 4x SATA, 300W power, w/conformal coating
AVA-7200/H7138/64G/A45, CC	Fanless AI box with Intel® Core™ i7-13800HRE, 64GB DDR5, A4500 MXM, supporting 8x M12 Ethernet ports, 5x USB, 4x SATA, 300W power, w/conformal coating

Optional Accessories

AVA-7200 AC-DC Power Supply	200W AC-DC power adapter with phoenix connector for AV-7200 200W power
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



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