

ADM-AL30

Intel® 12th Gen Core i9/i7
and NVIDIA GPU Autonomous
Driving AI Decision Making ECU



Features

- Intel® 12th Gen Core i9 (i9-12900E) or i7 (i7-12700E)
- NVIDIA RTX 4000 SFF
- Automotive Ethernet: 8x 1G Base-T1
- 4x CAN 2.0; 8x CAN FD (optional with M.2 CAN module)
- Automotive Connectors
- E-mark, ISO 7637-2 and ISO-16750 (Design compliance)

Ordering Information

PN Number	Model Name	Description
93-41056-000E	ADM-AL30/i9-12900E/ RTX 4000 SFF/128G	ADM-AL30 with top Fan, Alder Lake i9-12900E, DDR5 128G ECC, RTX 4000 SFF, M.2 512G x1, SATA 2T x1, CAN 2.0 x 4, CAN FD x 8 (optional), Ignition, DC 9-36V
93-41056-100E	ADM-AL30/i7-12700E/ RTX 4000 SFF/128G	ADM-AL30 with top Fan, Alder Lake i7-12700E, DDR5 128G ECC, RTX 4000 SFF, M.2 512G x1, SATA 2T x1, CAN 2.0 x 4, CAN FD x 8 (optional), Ignition, DC 9-36V

Optional Accessories

PN Number	Description
31-62192-0000-A0	AC/DC Adapter, 450W

Specifications

ADM-AL30		
System Core	CPU	Intel® 12th Gen Core i9 (i9-12900E) or i7 (i7-12700E)
	GPU	1x NVIDIA RTX 4000 SFF
	Memory	4x 32G DDR5 SO-DIMM, up to 128G, with 2 channel ECC
	Storage	1x 512G M.2 2280 NVME SSD 1 x 2T 2.5" SATA SSD
I/O Ports	Display	1x HDMI, 1x DP
	Ethernet	2x 10G BASE-T (M12 connector) 8x 1G Base-T1 (TE MATEnet Connector)
	CAN	4x CAN 2.0 (Molex CMC connctor) 8x CAN FD (optional, Molex CMC connector)
	USB 3.0	4x USB 3.2 Gen2, type A
	Serial Port	2x RS-232
Extension Slot	M.2	1x M.2 2230, E-key, PCIe gen3 x1 (for WiFi/BT module) 2x M.2 2280, M-key, PCIe gen3 x2 (for optional CAN FD modules)
Power Requirements	DC Power Input	9-36 VDC
	Ignition Control	Built-in ignition power control
	AC/DC Power Adapter	450W adapter (optional)
	Power Button	1x Power On/Off button
Mechanical	Fail Reset	1x Hardware reset button
	Dimensions	325mm x 258mm x 145mm
	IP	IP20
Environmental	Operating Temperature	-20°C to 60°C (without GPGPU card) 0°C to 45°C (with GPGPU card)
	Operating Humidity	~95% @ 40°C (non-condensing)
	Storage Temperature	-40°C to 85°C
	Vibration	3Grms, random, 5-500 Hz, 3 axes / 1hr (w/SSD) 5Grms, random, 5-500Hz, 3 axes / 30 mins (w/SSD)
	Shock	50 G, half sine 11ms duration (w/SSD)
	ESD	Contact +/- 4KV, Air +/- 8KV
	EMC	CE/FCC, class A, EN 55032/35 ; ISO 7637-2: 2011, Level 3, E-Mark, RCM
Software	Deisgn Compliance	ISO 16750-2
	OS	Ubuntu 22.04 supported
	TPM	TPM 2.0