

ADM-AL30

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



**AUTOWARE
REFERENCE HW**

Features

- Intel® 12th Gen Core™ i9 processor (LGA 1700)
- NVIDIA Qualified: NVIDIA RTX 4000 SFF Ada
- 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

Model Name	Description
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

Note: Gen 12 with the SKUs mentioned above has completed validation. Gen 13 and Gen 14 are pin-to-pin compatible which will be released in near future. Please contact ADLINK representative for details.

Optional Accessories

PN Number	Description
31-62192-0000-A0	AC/DC Adapter, 450W
30-01322-0020-A0	M12 to RJ45 cable for 10G Ethernet

Specifications

ADM-AL30		
System Core	CPU	Intel® 12th Gen Core™ i9 processor
	GPU	1x NVIDIA RTX 4000 SFF Ada
	Memory	4x 32G DDR5 SO-DIMM, up to 128G, with 2 channel ECC
	Storage	1x 512G M.2 2280 NVME SSD 1x 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 connector) 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
Mechanical	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
Software	OS	Ubuntu 22.04.03 supported
	TPM	TPM 2.0

I/O View

