

AI Inference / DeviceEdge

Jetson System (Compact In-Vehicle Edge AI System) AIE-VO24/VO34-128-S1 AIE-VN34/VN44-128-A1



Features

- Supports NVIDIA® Jetson Orin™ NX / Orin Nano™ with Super Mode
- Supports 4 x GMSL cameras
- Supports M.2 M-Key, M.2 E-Key
- 1 x RJ-45 1GbE port
- Wide power input range 9 to 36 VDC
- -25°C ~ +55°C (-13°F ~ +131°F) operating temperature
- E-Mark certified

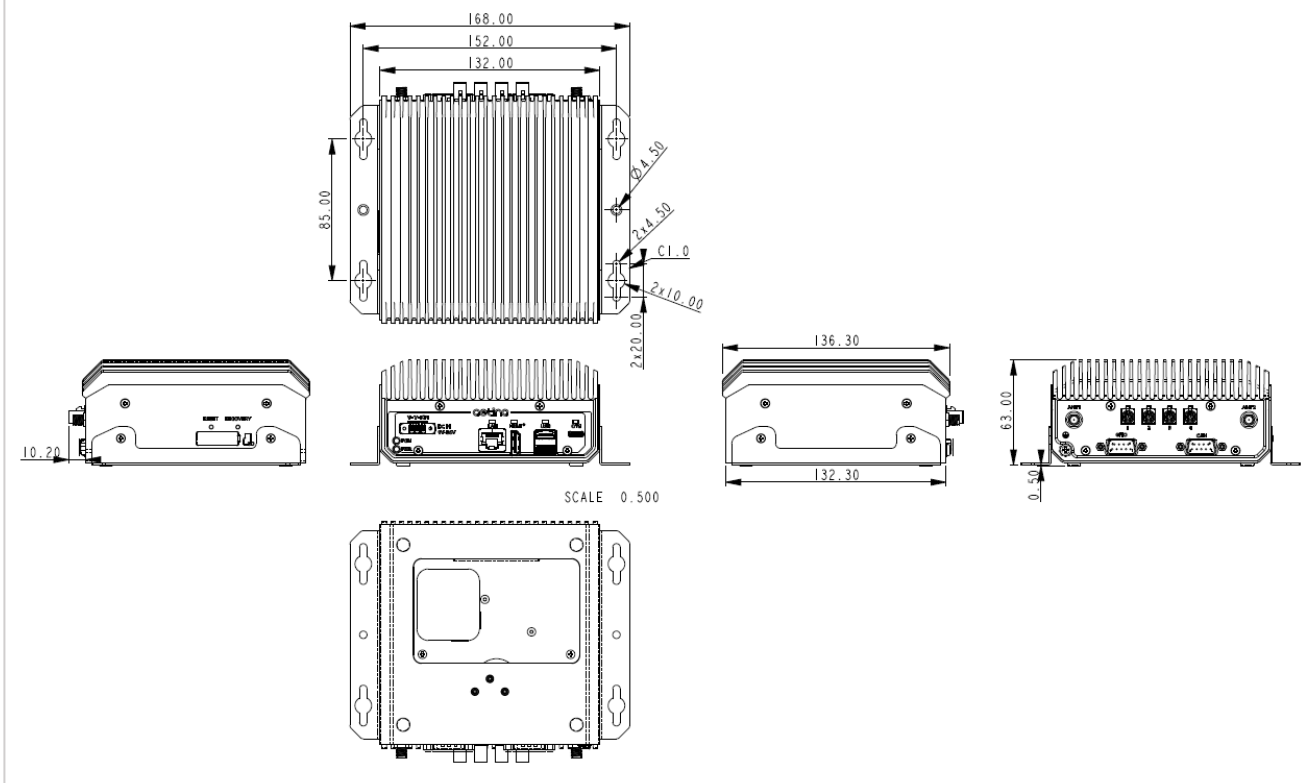


Specifications

Model Number	AIE-VO24-128-S1	AIE-VO34-128-S1	AIE-VN34-128-A1	AIE-VN44-128-A1
Module Compatibility	NVIDIA Jetson Orin Nano with Super Mode 4GB	NVIDIA Jetson Orin Nano with Super Mode 8GB	NVIDIA Jetson Orin NX 8GB	NVIDIA Jetson Orin NX 16GB
AI Performance	34 TOPS	67 TOPS	70 TOPS	100 TOPS
GMSL	4 x GMSL2 via FAKRA Z			
GPU	512 Core NVIDIA Ampere, with 16 Tensor Cores	1024 Core NVIDIA Ampere, with 32 Tensor Cores	1024 Core NVIDIA Ampere, with 32 Tensor Cores	1024 Core NVIDIA Ampere, with 32 Tensor Cores
CPU	6-core Arm® Cortex®-A78AE v8.2 64-bit CPU 1.5MB L2 + 4MB L3	6-core Arm® Cortex®-A78AE v8.2 64-bit CPU 1.5MB L2 + 4MB L3	6-core Arm® Cortex®-A78AE v8.2 64-bit CPU 1.5MB L2 + 4MB L3	8-core Arm® Cortex®-A78AE v8.2 64-bit CPU 2MB L2 + 4MB L3
Memory	4GB 64-bit LPDDR5 34 GB/s	8GB 128-bit LPDDR5 68 GB/s	8GB 128-bit LPDDR5 102.4 GB/s	16GB 128-bit LPDDR5 102.4 GB/s
Storage	1 x M.2 M-Key 2242 (128GB build-in)			
Display	1 x HDMI 2.0b Type-A			
RTC	With super capacitor (RTC battery CR2032, optional)			
LAN	1 x RJ-45, 1GbE			
USB	2 x USB 3.2 Gen 2, Type-A (supports up to 10Gbps shared) 1 x OTG, USB 2.0, Type-C			
I/O Interfaces	1 x DB9, GPIO (2 x Digital Input, 3 x Digital Output, default) / RS-232 ^{*by request} 1 x DB9, isolated CAN (supports CAN FD) 2 x Wi-Fi antenna hole			
Expansion	1 x M.2 M-Key 2242 slot (supports NVMe, PCIe Gen3 x4, 128GB build-in) 1 x M.2 E-Key 2230 slot (supports Wi-Fi/Bluetooth, PCIe Gen3 x1, USB 2.0) 1 x microSD card socket (occupy M.2 E-Key slot, optional)		1 x M.2 M-Key 2242 slot (supports NVMe, PCIe Gen4 x4, 128GB build-in) 1 x M.2 E-Key 2230 slot (supports Wi-Fi/Bluetooth, PCIe Gen4 x1, USB 2.0) 1 x microSD card socket (occupy M.2 E-Key slot, optional)	
MISC. Function	1 x Recovery button, 1 x Reset button			
Power Input / Connector	DC-in 9-36 VDC, 3-Pin (V+/V-/IGN) Terminal Block NOTES: Voltage below 9V may cause the device to shut down or function abnormally.			
LED Indicator	1 x PWR (w/ IGN), 1 x PGM (user-configurable)			
Power consumption	Idle: 9.34 W Full Loading: 51.6 W		Idle: 9.7 W Full Loading: 51.6 W	
	*For more test condition information, please refer to user manual			
Dimension (W x D x H)	136.3 x 132 x 63 mm (5.37 x 5.20 x 2.48 in)			
Mounting	Wall Mount / DIN Rail (optional)			
Net / Gross Weight	1.36 kg (2.99 lb) / 2.07 kg (4.56 lb)			
Vibration	Operating, MIL-STD-810H, Method 514.8, Category 4			
Shock	Operating, MIL-STD-810H, Method 516.8, Procedure I, 20G / 11 ms			
Temperature	Operating Temp.: -25°C ~ +55°C (-13°F ~ +131°F) with 0.5 m/s air flow Storage Temp.: -40°C ~ +85°C (-40°F ~ +185°F)			
Humidity	95% @ 40°C (104°F) (non-condensing)			
OS Support	Linux (supports NVIDIA JetPack™ 6.2 and above)			
Certification	CE, FCC Class A, E-Mark (E24), UKCA			

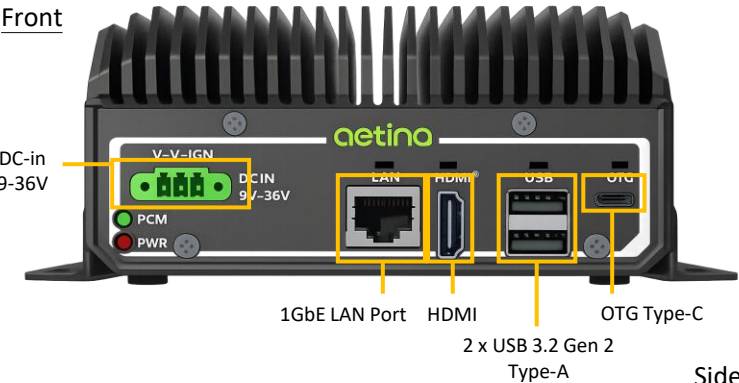
^{*by request:} By default, the DB9 port is configured as GPIO. RS-232 is available by request and must be specified before placing an order. The requested interface will be configured during product assembly before shipment.

System & Mounting Dimensions

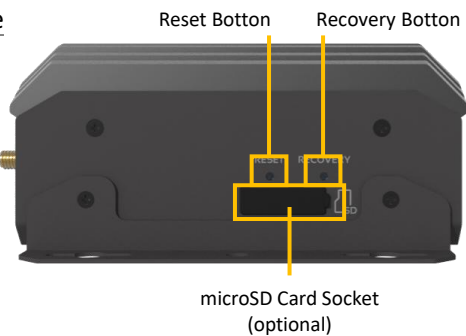


I/O Mechanical Layout

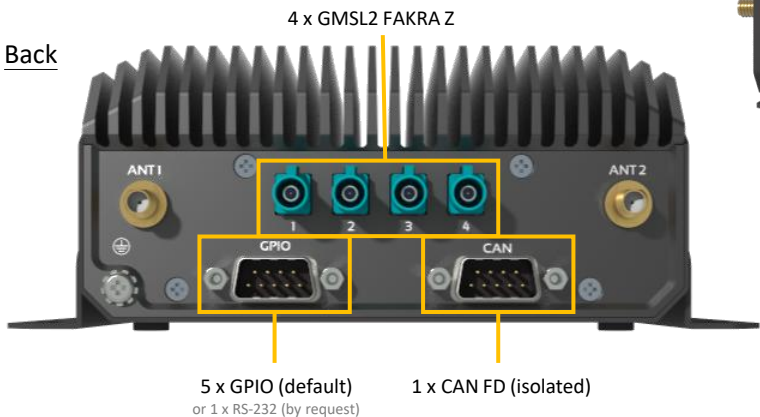
Front



Side



Back



Ordering Information

Model name	Description
AIE-VN44-128-A1	ORIN NX 16GB, 1 x HDMI, 1 x 1GbE, 2 x USB-A, E/M Key, 9 to 36 VDC input, 3TE4 128GB, FAKRA x4, -25°C ~ +55°C
AIE-VN34-128-A1	ORIN NX 8GB, 1 x HDMI, 1 x 1GbE, 2 x USB-A, E/M Key, 9 to 36 VDC input, 3TE4 128GB, FAKRA x4, -25°C ~ +55°C
AIE-VO34-128-S1	ORIN Nano 8GB-S, 1 x HDMI, 1 x 1GbE, 2 x USB-A, E/M Key, 9 to 36 VDC input, 3TE4 128GB, FAKRA, x4, -25°C ~ +55°C
AIE-VO24-128-S1	ORIN Nano 4GB-S, 1 x HDMI, 1 x 1GbE, 2 x USB-A, E/M Key, 9 to 36 VDC input, 3TE4 128GB, FAKRA x4, -25°C ~ +55°C

Packing List

Item/Part Number	Description
92-CEVN44-R000	AIE-VN44-128-A1 system w/ ORIN NX 16GB
92-CEVN34-R000	AIE-VN34-128-A1 system w/ ORIN NX 8GB
92-CEVO34-R000	AIE-VO34-128-S1 system w/ ORIN Nano 8GB Super Mode
92-CEVO24-R000	AIE-VO24-128-S1 system w/ ORIN Nano 4GB Super Mode
330100000PN000	Wall Mount Kit

Accessories (optional)

Part Number	Description
55-AEVN44-Z000	AIE-VN44/VN34/VO34/VO24 DIN RAIL KIT
53-0FGSEC-0000	POWER ADAPTER MW:GST60A12-ECHA(UL) (HF) 90~264V 60W 12V 5A BLACK -30~70°C
3102000271N000	POWER DIN 4P FEMALE SOLDER TYPE TO MC421-35003Z-1 W/SWITCH JS-606A-BQ UL2464#16AWG 200mm <i>Note: This power cable should be used together with the power adapter.</i>
53-0DSG3S-0000	GMSL CAMERA with cable, SENSING:SG3S-ISX031C-GMSL2F-H120UA
53-0GA210-0003	M.2 E-Key 2230, Intel AX210, Wi-Fi 6E/Bluetooth module*
52-7JSP03-M403	M.2 E-Key USB adapter for microSD card expansion

*Certification by request