

AI Inference / DeviceEdge

Jetson System AIE-KO21/AIE-KO31 AIE-KN31/AIE-KN41



Features

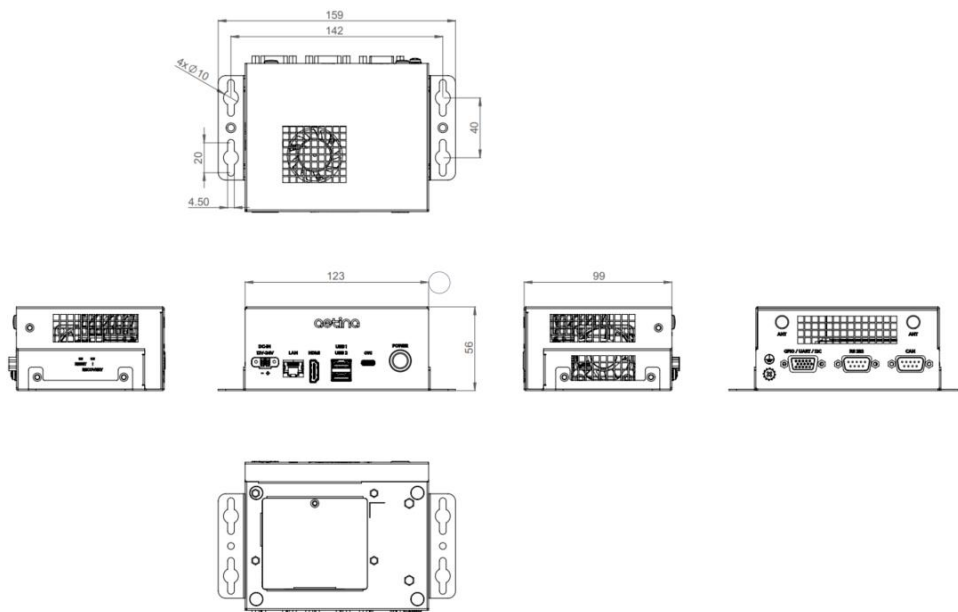
- Supports NVIDIA Jetson Orin Nano/NX Series
- 1 x M.2 E-Key/M-Key (128GB built-in)
- 1 x RJ-45 GbE Port
- Wide Power Input Range 12 to 24 VDC
- Operating temperature -25°C ~ +70°C



Specifications

Model Number	AIE-KO21	AIE-KO31	AIE-KN31	AIE-KN41
Module Compatibility	NVIDIA Jetson Orin Nano 4GB	NVIDIA Jetson Orin Nano 8GB	NVIDIA Jetson Orin NX 8GB	NVIDIA Jetson Orin NX 16GB
AI Performance	20 TOPS	40 TOPS	70 TOPS	100 TOPS
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	
CPU	6-core Arm® Cortex®-A78AE v8.2 64-bit 1.5MB L2 + 4MB L3		6-core Arm® Cortex®-A78AE v8.2 64-bit 1.5MB L2 + 4MB L3	8-core Arm® Cortex®-A78AE v8.2 64-bit 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 built-in)			
Display	1 x HDMI 2.0 Type A			
Audio	LINE IN/OUT, Microphone (optional with daughter board)			
LAN	1 x RJ-45 GbE Port			
USB	2 x USB 3.2 Gen2 Type A (supports up to 10Gbps shared) 1 x OTG Type-C			
I/O Interfaces	5 x GPIO, 1 x I2C, 1 x RS-232, 1 x UART, 1 x CAN (Isolation)			
Expansion	1 x M.2 E-Key 2230 (WiFi/BT) 1 x M.2 M-Key 2242 (128GB built-in; PCIe x4 Gen3)		1 x M.2 E-Key 2230 (WiFi/BT) 1 x M.2 M-Key 2242 (128GB built-in; PCIe x4 Gen4)	
MISC. Function	1 x Power Button, 1 x Recovery Button, 1 x Reset Button			
Power Input / Connector	DC-in 12-24VDC / 2-Pin Terminal Block			
Power consumption	Idle: 8.5 W Full Loading: 30.25* W		Idle: 7.6 W Full Loading: 40.25* W	
	*For more test condition information, please refer to user manual			
Dimension (W x D x H)	123 x 99 x 56 mm (48.4 x 38.9 x 22 in)			
Mounting	Wall Mount (optional) / Din Rail (optional)			
Net Weight	0.54 kg (1.2 lb)			
Vibration	1 Grms, IEC 60068-2-64, random, 5 ~ 500 Hz, 1 hr/axis			
Shock	10 G, IEC 60068-2-27, half sine, 11 ms duration			
Temperature	Operating Temp.: -25°C ~ +70°C (-13°F ~ +158°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	Ubuntu 20.04			
Certification	CE / FCC Class A / UKCA			

System & Mounting Dimensions



I/O Mechanical Layout



Ordering Information

Model name	Description
AIE-KO21-1-A1	Orin Nano 4G, 1 x HDMI, 1 x GbE, 2 x USB, 128GB SSD, E/M Key, 12 to 24 VDC input, -25°C ~ +70°C
AIE-KO31-1-A1	Orin Nano 8G, 1 x HDMI, 1 x GbE, 2 x USB, 128GB SSD, E/M Key, 12 to 24 VDC input, -25°C ~ +70°C
AIE-KN31-1-A1	Orin NX 8G, 1 x HDMI, 1 x GbE, 2 x USB, 128GB SSD, E/M Key, 12 to 24 VDC input, -25°C ~ +70°C
AIE-KN41-1-A1	Orin NX 16G, 1 x HDMI, 1 x GbE, 2 x USB, 128GB SSD, E/M Key, 12 to 24 VDC input, -25°C ~ +70°C

Packing List

Item/Part Number	Description
92-CEKO21-J001	AIE-KO21 system w/ Orin Nano 4GB
92-CEKO31-J001	AIE-KO31 system w/ Orin Nano 8GB
92-CEKN31-J001	AIE-KN31 system w/ Orin NX 8GB
92-CEKN41-J001	AIE-KN41 system w/ Orin NX 16GB
53-0F0000-0002	100-240V 60W 12V 5A power adaptor

Accessories (Optional)

Part Number	Description
32-010000-0005	US power cord
32-010000-0006	EU power cord
32-010000-0008	JP power cord
3102000037N000	UK power cord
55-BEKN31-Z000	Wall Mount Kit
55-AEKN31-Z000	Din Rail Kit

Peripheral (Optional)

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