

AI Inference / DeviceEdge

Jetson Platform AIB-SO21/AIB-SO31



Features

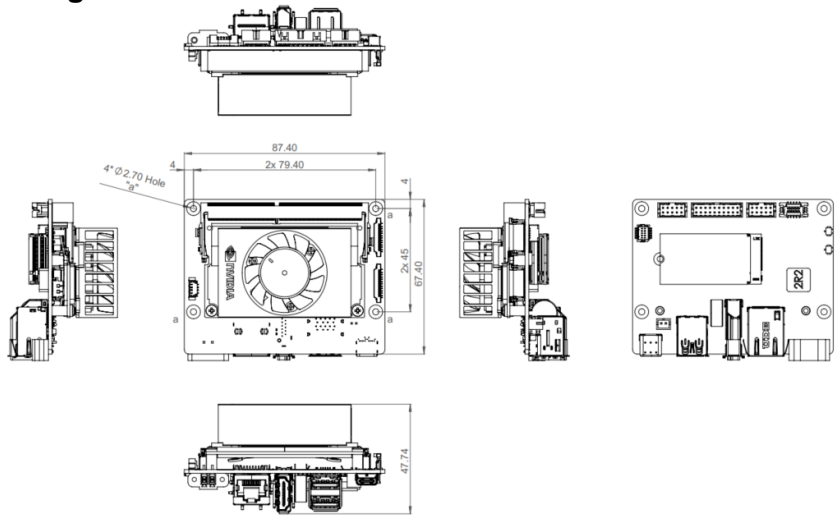
- Supports NVIDIA Jetson Orin Nano Super mode
- 1 x M.2 E-Key/M-Key (NVMe 128GB built-in)
- Wide Input Voltage Range 12 to 24 VDC
- Operating Temperature -25°C ~ +80°C
- Supports OOB (out-of-band) powered by Innodisk (optional)



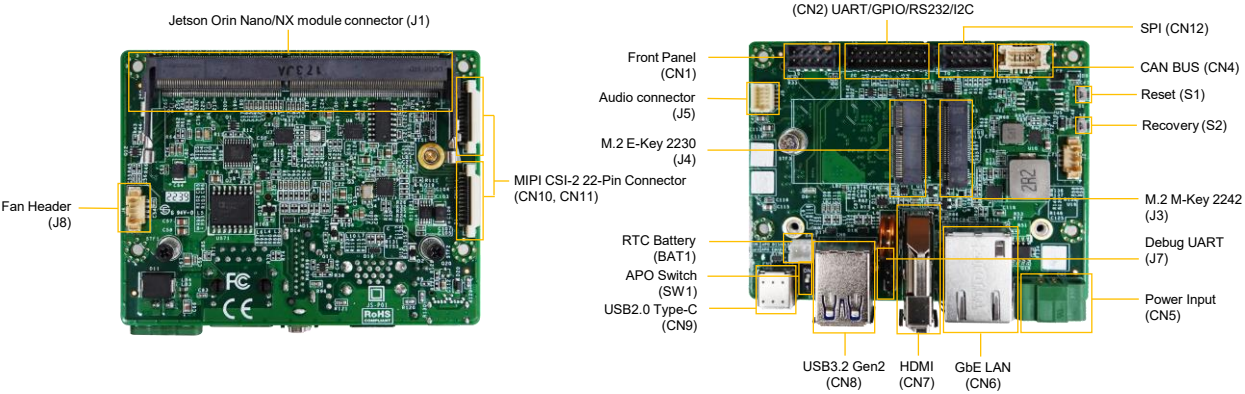
Specifications

Model Number	AIB-SO21-1-S1	AIB-SO31-1-S1
Module Compatibility	NVIDIA Jetson Orin Nano 4GB	NVIDIA Jetson Orin Nano 8GB
AI Performance	34 TOPS	67 TOPS
GPU	512 Core NVIDIA Ampere, with 16 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	
Memory	4GB 64-bit LPDDR5 51 GB/s	8GB 128-bit LPDDR5 68 GB/s
Storage	1 x M.2 M-Key 2242 (NVMe 128GB built-in)	
Display	1 x HDMI 2.0 Type A	
Audio	Line-out / Line-in / Mic (optional with daughter board)	
RTC	With super capacitor, battery (optional)	
MIPI Camera Input	2 x 4-Lane MIPI CSI-2 22-Pin Connector	
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 I²S, 1 x RS-232, 1 x UART, 1 x UART (Debug Only), 1 x SPI, 1 x CAN (Isolation; support CAN FD)	
Expansion	1 x M.2 E-Key 2230 (WiFi/BT) 1 x M.2 M-Key 2242 (NVMe 128GB built-in)	
MISC. Function	1 x Power / 1 x Recovery / 1 x Reset Button	
Power Consumption	Idle: 6.4 W Full Loading: 40* W	
	*For more test condition information, please refer to user manual	
Power Input / Connector	DC-in 12-24VDC / 2-Pin Terminal Block	
Dimension (W x D x H)	87.4 x 67.4 x 28.45 mm (3.44 x 2.65 x 1.12 in)	
Net Weight	0.144 kg (0.32 lb) w/ Fansink	
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 ~ +80°C (-13°F ~ +176°F) Storage Temp.: -40°C ~ +85°C (-40°F ~ +185°F) *With full CPU+GPU stressing: System non-throttling at 60C with 40W TDP mode (MAXN)	
Humidity	95% @ 40°C (104°F) (non-condensing)	
Software Support	Linux (Support Jetpack 5.0 above)	
Certification	CE / FCC Class A / UKCA	

System & Mounting Dimensions



Carrier Board Layout



Ordering Information

Model name	Description
AIB-SO21-1-S1	Orin Nano 4GB, 1 x HDMI, 1 x GbE, 2 x USB, 2 x 4 lane MIPI 22 pins, 128GB SSD, E/M Key, 12 to 24 VDC input, -25°C ~ +80°C
AIB-SO31-1-S1	Orin Nano 8GB, 1 x HDMI, 1 x GbE, 2 x USB, 2 x 4 lane MIPI 22 pins, 128GB SSD, E/M Key, 12 to 24 VDC input, -25°C ~ +80°C

Packing List

Item/Part Number	Description
92-6BSO21-4004	AIB-SO21 carrier board w/ Orin Nano 4GB
92-6BSO31-4008	AIB-SO31 carrier board w/ Orin Nano 8GB
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
20-100000-0000	Battery wire Panasonic CR2032 3V/225mA L=45mm