

# AI Inference / DeviceEdge

# Jetson Platform AIB-SO21/AIB-SO31 AIB-SN31/AIB-SN41



## Features

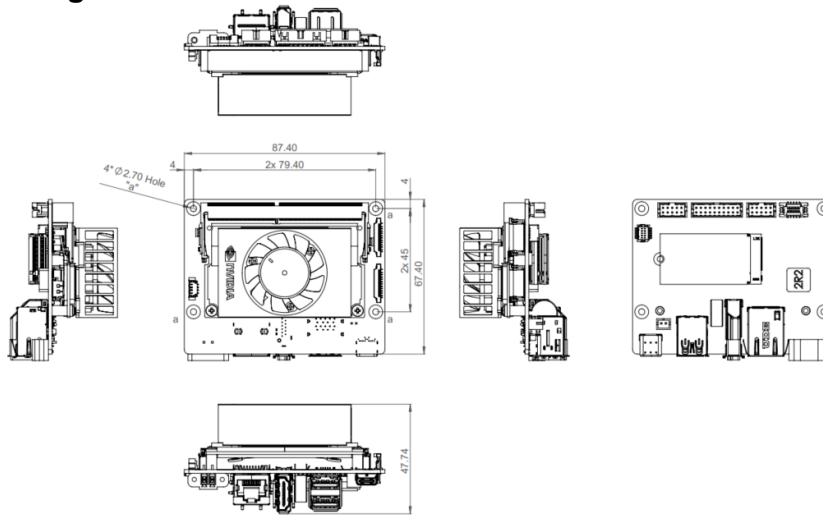
- Support NVIDIA Jetson Orin Nano / NX Series
- Storage supports M.2 2242 NVMe (128GB built-in)
- 1 x M.2 E-Key 2230 slot, 1 x GbE Port
- Wide Power Input Range 12 to 24 VDC
- Operating Temperature -25° C ~ 80° C
- Support OOB (out-of-band) powered by Innodisk (optional)



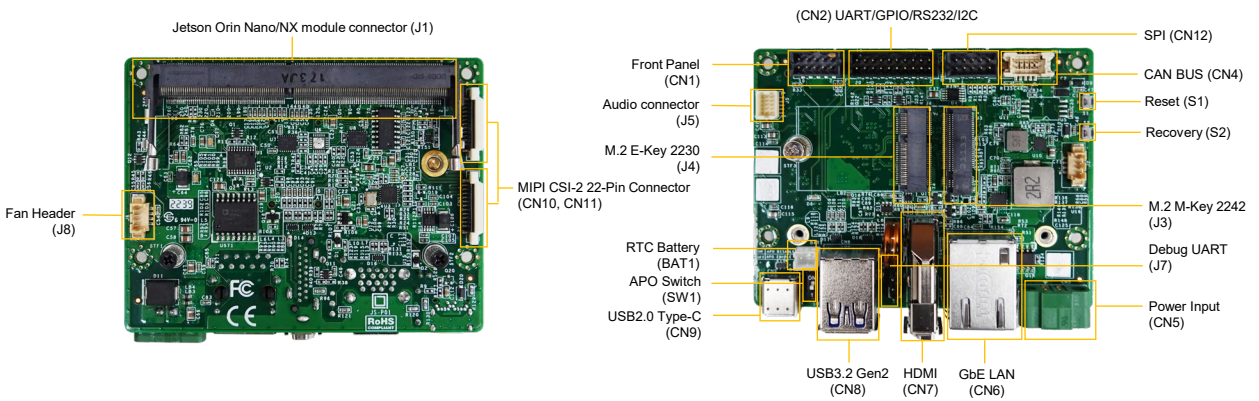
## Specifications

| Model Number            | AIB-SO21/SO31   | AIB-SN31/SN41  |
|-------------------------|---|--|
| Module Compatibility    | NVIDIA Jetson Orin Nano 4/8G  | NVIDIA Jetson Orin NX 8/16G  |
| AI Performance          | 20/40 TOPS  | 70/100 TOPS  |
| GPU                     | 512 Core NVIDIA Ampere, with 16 Tensor Cores<br>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<br>1.5MB L2 + 4MB L3  | 6-core Arm® Cortex®-A78AE v8.2 64-bit CPU<br>1.5MB L2 + 4MB L3<br>8-core Arm® Cortex®-A78AE v8.2 64-bit CPU<br>2MB L2 + 4MB L3 |
| Memory                  | 4GB 64-bit LPDDR5 34 GB/s<br>8GB 128-bit LPDDR5 68 GB/s   | 8GB 128-bit LPDDR5 102.4 GB/s<br>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-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<br>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) |  |
| Expansion               | 1 x M.2 E-Key 2230 (support PCIe x1 Gen3, USB 2.0)<br>1 x M.2 M-Key 2242 (128GB built-in)             | 1 x M.2 E-Key 2230 (support PCIe x1 Gen3, USB 2.0)<br>1 x M.2 M-Key 2242 (128GB built-in)                                      |
| MISC. Function          | 1 x Power / Recovery / Reset Button   |  |
| Power Consumption       | Idle: 5.5 W<br>Full Loading: 27.25* W   | Idle: 4.6 W<br>Full Loading: 37.25* 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)   |  |
| Humidity                | 95% @ 40°C Related Humidity, Non-condensing   |  |
| OS Support              | Ubuntu 20.04  |  |
| Certification           | CE/FCC Class A, IEC 62368   |  |

## System & Mounting Dimensions



## Carrier Board Layout



## Ordering Information

| Model name    | Description   |
|---------------|---|
| AIB-SO21-1-A1 | With Orin Nano 4G, 1 x HDMI, 2 x USB-A, 1 x USB-C (OTG only), 1 x RJ-45 GbE, 12 to 24 VDC input, -20° C ~ 80° C |
| AIB-SO31-1-A1 | With Orin Nano 8G, 1 x HDMI, 2 x USB-A, 1 x USB-C (OTG only), 1 x RJ-45 GbE, 12 to 24 VDC input, -20° C ~ 80° C |
| AIB-SN31-1-A1 | With Orin NX 8G, 1 x HDMI, 2 x USB-A, 1 x USB-C (OTG only), 1 x RJ-45 GbE, 12 to 24 VDC input, -20° C ~ 80° C   |
| AIB-SN41-1-A1 | With Orin NX 16G, 1 x HDMI, 2 x USB-A, 1 x USB-C (OTG only), 1 x RJ-45 GbE, 12 to 24 VDC input, -20° C ~ 80° C  |

## Packing List

| Item/Part Number | Description                             |
|------------------|---|
| AIB-SO21         | AIB-SO21 carrier board w/ Orin Nano 4GB |
| AIB-SO31         | AIB-SO31 carrier board w/ Orin Nano 8GB |
| AIB-SN31         | AIB-SN31 carrier board w/ Orin NX 8GB   |
| AIB-SN41         | AIB-SN41 carrier board w/ Orin NX 16GB  |
| 53-0FG160-1200   | 85~264V 138W 12V 11.5A 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 |

## Peripheral (Optional)

[Download the List](#)

