

# AI Inference / DeviceEdge

## Jetson System AIE-KX11/AIE-KX12 AIE-KX21/AIE-KX22-1-A2



### Features

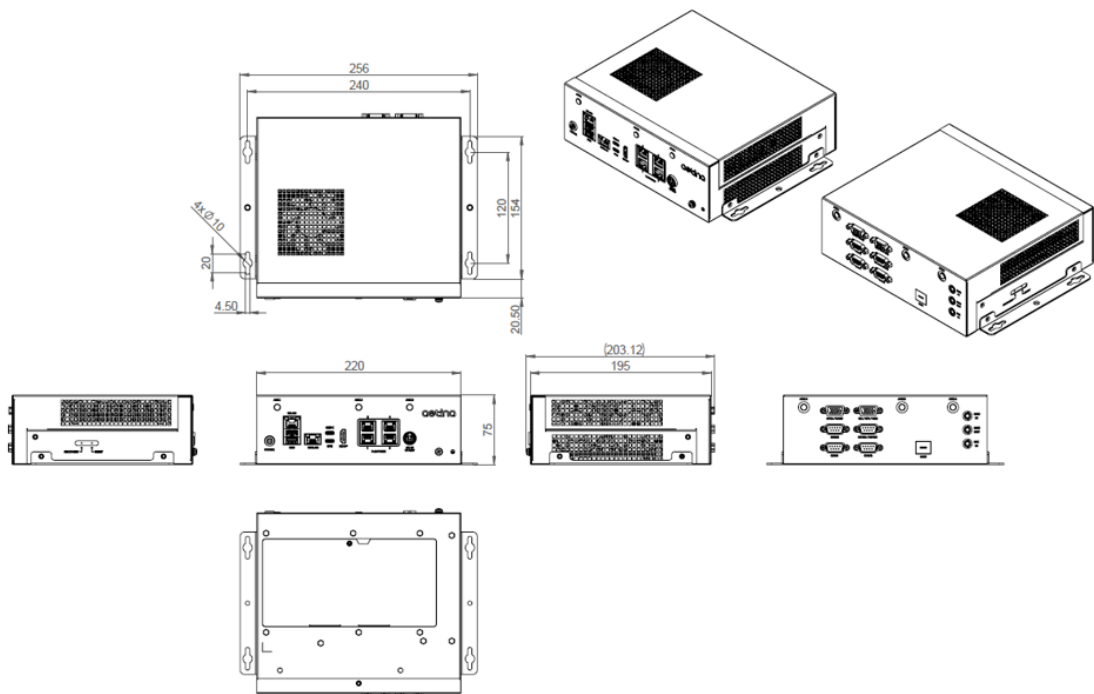
- Supports NVIDIA® Jetson AGX Orin™ 32GB/64GB
- 2/4 x IEEE 802.3af GbE PSE ports
- 1 x GbE/1 x 10GbE LAN port
- 1 x M.2 B-Key/1 x M.2 E-Key/1 x M.2 M-Key slot
- Wide Input Voltage Range 9 to 36 VDC
- Operating Temperature -25°C ~ +70°C



### Specifications

| Model Number           | AIE-KX11                                                                                                                                                             |  | AIE-KX12                                                                |  | AIE-KX21                                                                |  | AIE-KX22                                                                |  |
|------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|-------------------------------------------------------------------------|--|-------------------------------------------------------------------------|--|-------------------------------------------------------------------------|--|
| Module Compatibility   | NVIDIA Jetson AGX Orin 32GB                                                                                                                                          |  |                                                                         |  | NVIDIA Jetson AGX Orin 64GB                                             |  |                                                                         |  |
| AI Performance         | 200 TOPS                                                                                                                                                             |  |                                                                         |  | 275 TOPS                                                                |  |                                                                         |  |
| GPU                    | 1792-core NVIDIA Ampere GPU with 56 Tensor Cores                                                                                                                     |  |                                                                         |  | 2048-core NVIDIA Ampere GPU with 64 Tensor Cores                        |  |                                                                         |  |
| CPU                    | 8-core Arm® Cortex®-A78AE<br>v8.2 64-bit CPU 2MB L2 + 4MB L3                                                                                                         |  |                                                                         |  | 12-core Arm® Cortex®-A78AE<br>v8.2 64-bit CPU 3MB L2 + 6MB L3           |  |                                                                         |  |
| Memory                 | 32GB 256-bit LPDDR5 204.8 GB/s                                                                                                                                       |  |                                                                         |  | 64GB 256-bit LPDDR5 204.8 GB/s                                          |  |                                                                         |  |
| Storage                | 64GB eMMC 5.1                                                                                                                                                        |  |                                                                         |  |                                                                         |  |                                                                         |  |
| Display                | 1 x HDMI 2.0 Type A                                                                                                                                                  |  |                                                                         |  |                                                                         |  |                                                                         |  |
| Audio                  | Line-out / Line-in / Mic (optional with daughter board)                                                                                                              |  |                                                                         |  |                                                                         |  |                                                                         |  |
| TPM                    | TPM v2.0                                                                                                                                                             |  |                                                                         |  |                                                                         |  |                                                                         |  |
| LAN                    | 1 x RJ-45 GbE port, 1 x RJ-45 10GbE port                                                                                                                             |  |                                                                         |  |                                                                         |  |                                                                         |  |
| PoE Interface          | 2 x RJ-45 GbE PSE<br>(IEEE 802.3af compliant,<br>Power Output 15W/Port)                                                                                              |  | 4 x RJ-45 GbE PSE<br>(IEEE 802.3af compliant,<br>Power Output 15W/Port) |  | 2 x RJ-45 GbE PSE<br>(IEEE 802.3af compliant,<br>Power Output 15W/Port) |  | 4 x RJ-45 GbE PSE<br>(IEEE 802.3af compliant,<br>Power Output 15W/Port) |  |
|                        | *PSE Port 1 & Port 2 support IEEE 802.3at compliant; Total PSE ports support up to 60W                                                                               |  |                                                                         |  |                                                                         |  |                                                                         |  |
| USB                    | 2 x USB 3.2 Gen1 Type A, 1 x OTG Type-C, 1 x USB 3.2 Gen2 Type-C, 1 x DB-15 USB 2.0                                                                                  |  |                                                                         |  |                                                                         |  |                                                                         |  |
| I/O Interfaces         | 2 x I <sup>2</sup> C, 1 x SPI, 5 x GPIO<br>1 x RS-232, 1 x RS-422 / RS-485 (2-in-1)<br>2 x CAN 2.0b (isolation; support CAN FD) / 2 x UART<br>1 x microSIM Card Slot |  |                                                                         |  |                                                                         |  |                                                                         |  |
| Expansion              | 1 x M.2 B-Key 3042/3052 (LTE/4G/5G)<br>1 x M.2 E-Key 2230 (WiFi/BT)<br>1 x M.2 M-Key 2280 (supports NVMe; PCIe x2 Gen3)<br>1 x microSD Card Slot                     |  |                                                                         |  |                                                                         |  |                                                                         |  |
| MISC. Function         | 1 x Power / 1 x Recovery / 1 x Reset button                                                                                                                          |  |                                                                         |  |                                                                         |  |                                                                         |  |
| Power Input /Connector | DC-in 9 to 36 VDC / 4-Pin DC Jack Power Connector                                                                                                                    |  |                                                                         |  |                                                                         |  |                                                                         |  |
| Power Consumption      | Idle: 14.3 W<br>Full Loading: 130* W                                                                                                                                 |  |                                                                         |  | Idle: 14.8 W<br>Full Loading: 150* W                                    |  |                                                                         |  |
|                        | *For more test condition information, please refer to user manual                                                                                                    |  |                                                                         |  |                                                                         |  |                                                                         |  |
| Dimension (W x D x H)  | 220 x 195 x 75 mm (8.66 x 7.68 x 2.95 in)                                                                                                                            |  |                                                                         |  |                                                                         |  |                                                                         |  |
| Mounting               | Wall Mount (optional) / Din Rail (optional)                                                                                                                          |  |                                                                         |  |                                                                         |  |                                                                         |  |
| Net Weight             | 1.852 kg (4 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<br>Storage Temp.: -40°C ~ +85°C (-40°F ~ +185°F)                                               |  |                                                                         |  |                                                                         |  |                                                                         |  |
| Humidity               | 95% @ 40°C (104°F) (non-condensing)                                                                                                                                  |  |                                                                         |  |                                                                         |  |                                                                         |  |
| Software Support       | Linux (Support Jetpack 6.2)                                                                                                                                          |  |                                                                         |  |                                                                         |  |                                                                         |  |
| Certification          | CE / FCC Class A / UKCA                                                                                                                                              |  |                                                                         |  |                                                                         |  |                                                                         |  |

System & Mounting Dimensions



I/O Mechanical Layout



Ordering Information

| Model name    | Description                                                                                                |
|---------------|------------------------------------------------------------------------------------------------------------|
| AIE-KX11-1-A2 | AGX ORIN 32GB, 1 x HDMI, 1 x GbE, 1 x 10GbE, 2 x PoE, 3 x USB, B/E/M Key, 9 to 36 VDC input, -25°C ~ +70°C |
| AIE-KX12-1-A2 | AGX ORIN 32GB, 1 x HDMI, 1 x GbE, 1 x 10GbE, 4 x PoE, 3 x USB, B/E/M Key, 9 to 36 VDC input, -25°C ~ +70°C |
| AIE-KX21-1-A2 | AGX ORIN 64GB, 1 x HDMI, 1 x GbE, 1 x 10GbE, 2 x PoE, 3 x USB, B/E/M Key, 9 to 36 VDC input, -25°C ~ +70°C |
| AIE-KX22-1-A2 | AGX ORIN 64GB, 1 x HDMI, 1 x GbE, 1 x 10GbE, 4 x PoE, 3 x USB, B/E/M Key, 9 to 36 VDC input, -25°C ~ +70°C |

Packing List

| Item/Part Number | Description                         |
|------------------|-------------------------------------|
| 92-CEKX11-J000   | AIE-KX12 system w/ AGX Orin 32GB    |
| 92-CEKX12-J001   | AIE-KX12 system w/ AGX Orin 32GB    |
| 92-CEKX21-J000   | AIE-KX21 system w/ AGX Orin 64GB    |
| 92-CEKX22-J001   | AIE-KX22 system w/ AGX Orin 64GB    |
| 53-0F0000-0008   | 85~264V 221W 24V 9.2A 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-BEKX11-Z000 | Wall Mount Kit |
| 55-AEKX11-Z000 | Din Rail Kit   |

Peripheral (Optional)

[Download the List](#)

