

DeviceEdge ARM-Based Edge AI Solution

Supercharge Vision AI and Real-Time Edge Intelligence

DeviceEdge ARM-based Edge AI Solution

NVIDIA® Jetson™ Series

Powered by NVIDIA Jetson Thor™ / Jetson Orin™

AI on ARM Series

Powered by SoC

Supercharge Vision AI and Real-Time Edge Intelligence



Aetina DeviceEdge delivers powerful, compact edge AI systems built on ARM architecture, spanning SoM and SoC platforms. From platform to fanless, fan-based, and vertical systems powered by NVIDIA® Jetson™, Rockchip and Texas Instruments (TI), our solutions are purpose-engineered for high-performance AI inference at the edge. Industrial-grade I/O, rich peripheral expansion, and NVIDIA JetPack™ SDK acceleration ensure optimal efficiency across diverse vision AI and real-time workloads.

Supercomputing-Class Performance for Next-Gen Robotics

Aetina unveils a new series powered by NVIDIA Jetson Thor™, delivering 7.5x the performance of Jetson AGX Orin™ to drive next-generation robotic intelligence, advanced autonomy, and smarter decision-making. Moreover, with Super Mode for NVIDIA Jetson Orin™ NX and Orin Nano™, generative AI inference performance doubles, taking edge AI capabilities to the next level.

NVIDIA Elite Partner for Accelerated Deployment and Scale

As an Elite Partner of the NVIDIA Partner Network, Aetina provides early access to the latest Jetson technologies and works closely with the NVIDIA Jetson Ecosystem to accelerate development, simplify deployment, and scale AI solutions with confidence.

◆ Portfolios — Broad Product Line

From high-performance to entry-level, Aetina provides comprehensive AI inference systems powered by NVIDIA Jetson, including Jetson AGX Orin™, Orin™ NX, Orin Nano™ modules, along with flexible SoC-powered systems, designed to meet the full spectrum of your AI application needs.

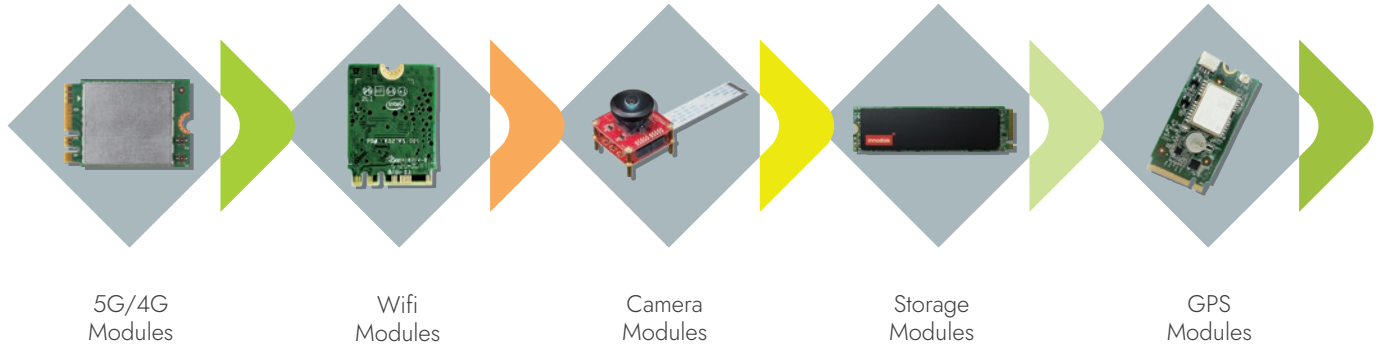
◆ Customization — Comprehensive Tailored Service

Aetina also offers comprehensive customization service, tailoring exclusive specifications for specific applications that might not be fulfilled with the standard products. Our customization services including:

- Customized I/O interfaces and form factor
- BSP customization for 3rd party devices
- 3rd party software pre-installation & device integration
- Thermal or housing design
- NVIDIA Jetpack version upgrade
- Compliance test service

◆▶ Peripherals — Rich Set Of Validated Choices

Aetina accelerates AI project development with Jetson platforms offering rich I/Os, high expandability, and validated peripherals (4G/5G, Wi-Fi, cameras, storage, GPS), reducing testing time and cost while speeding time to market.



◆▶ Collaboration — Value-Added Ecosystem

AI is driving competitive advantage, Aetina is dedicated to building a collaborative ecosystem that helps you speed up development and get to market faster. Our robust partner ecosystem is ready to support your AI projects.



Industries

Smart Retail Smart Transportation Smart Factory Smart Security Smart Medical Smart Logistics



Performance Series — NVIDIA Jetson Thor / AGX Orin



Model Number	AIB-AT78	AIB-AT68	AIB-MX11-A2 AIB-MX12-A2	AIB-MX21-A2 AIB-MX22-A2	AIB-MX13-A2	AIB-MX23-A2
Module Compatibility	NVIDIA Jetson T5000™	NVIDIA Jetson T4000™	NVIDIA Jetson AGX Orin 32GB NVIDIA Jetson AGX Orin 64GB		NVIDIA Jetson AGX Orin 32GB NVIDIA Jetson AGX Orin 64GB	
AI Performance	2070 FP4 TFLOPS/ 1035 FP8 TFLOPS	1200 FP4 TFLOPS	200 TOPS 275 TOPS		200 TOPS 275 TOPS	
CPU	14-Core ARM Neoverse V3AE (64-bit)	12-Core ARM Neoverse V3AE (64-bit)	8-core Arm® Cortex® - A78AE v8.2 64-bit CPU 2MB L2 + 4MB L3	12-core Arm® Cortex® - A78AE v8.2 64-bit CPU 3MB L2 + 6MB L3	8-core Arm® Cortex® - A78AE v8.2 64-bit CPU 2MB L2 + 4MB L3	12-core Arm® Cortex® - A78AE v8.2 64-bit CPU 3MB L2 + 6MB L3
Memory	128GB 256-bit LPDDR5X	64GB 256-bit LPDDR5X	32GB 256-bit LPDDR5 204.8 GB/s	64GB 256-bit LPDDR5 204.8 GB/s	32GB 256-bit LPDDR5 204.8 GB/s	64GB 256-bit LPDDR5 204.8 GB/s
Storage	NVMe 1TB		64GB eMMC 5.1		64GB eMMC 5.1	
Display	1 x HDMI 2.0b 1 x DP 1.4a		1 x HDMI 2.0 Type-A		1 x HDMI 2.0 Type-A	
TPM	TPM v2.0		TPM v2.0		TPM v2.0	
RTC	RTC Battery		RTC Battery		RTC Battery	
Audio	1 x HD Audio-in/out		Line-out / Line-in / Mic (optional, requires daughter board)		Line-out / Line-in / Mic (optional, requires daughter board)	
MIPI Camera	1 x 120pin MIPI		1 x 16-Lane MIPI Expansion Connector (120-Pin)		1 x 16-Lane MIPI Expansion Connector (120-Pin)	
LAN	2 x RJ45 10 GbE ports 1 x RJ45 GbE EtherCAT port		1 x RJ-45 GbE port 1 x RJ-45 10 GbE port		1 x RJ-45 GbE port 1 x RJ-45 10 GbE port	
PoE Interface	Not Supported		2 or 4 x RJ-45 GbE PSE (IEEE 802.3af compliant, 15 W per port)**PSE ports 1 & 2 support IEEE 802.3at; total PSE power up to 60 W		Not Supported	
USB	1 x USB 3.2 Gen 2 Type-C 4 x USB 3.2 Gen 2 Type-A		2 x USB 3.2 Gen 1 Type-A 1 x USB 3.2 Gen 2 Type-C 1 x OTG Type-C		2 x USB 3.2 Gen 1 Type-A 1 x USB 3.2 Gen 2 Type-C 1 x OTG Type-C	
I/O Interfaces	1 x QSFP28 slot 1 x HD audio in/out 2 x RS-232/422/485 4 x CAN FD (isolated) 4 x DI/DO @ 3.3 V (isolated) 2 x UART @ 3.3 V 2 x I²C @ 3.3 V 1 x SPI @ 3.3 V or TPM 1 x OOB (by request)		2 x UART 1 x UART (debug only) 1 x RS-232 1 x RS-422/485 (2-in-1) 2 x CAN 2.0b (isolated) 2 x I²C 1 x I²S 1 x SPI 5 x GPIO 2 x 3.3 V DC / 0.5 A 3 x 5 V DC / 0.5 A 1 x 12 V DC / 0.5 A 1 x USB 2.0 1 x microSIM card slot		1 x USB 2.0 2 x UART 1 x UART (debug only) 1 x RS-232 1 x RS-422/485 (2-in-1) 2 x CAN 2.0b (isolated) 2 x I²C 1 x I²S 1 x SPI 5 x GPIO 1 x 3.3 V DC / 0.5 A 2 x 5 V DC / 0.5 A 1 x 12 V DC / 0.5 A	
Expansion	1 x M.2 M-Key 2280 (NVMe, PCIe Gen 5) 1 x M.2 E-Key (Wi-Fi/BT) 1 x M.2 B-Key 1 x Micro SIM card slot		1 x M.2 B-Key 3042/3052 (LTE/4G/5G) 1 x M.2 E-Key 2230 (Wi-Fi/BT) 1 x M.2 M-Key 2280 (NVMe, PCIe Gen 3 x2) 1 x microSD card slot		1 x M.2 B-Key 3042/3052 (LTE/4G/5G) 1 x M.2 E-Key 2230 (Wi-Fi/BT) 1 x M.2 M-Key 2280 (NVMe, PCIe Gen 4 x4) 1 x microSD card slot	
MISC. Function	1 x Power button, 1 x Recovery button, 1 x Reset button		1 x Power button, 1 x Recovery button, 1 x Reset button		1 x Power button, 1 x Recovery button, 1 x Reset button	
Power Consumption	TBD		Idle: 10.5 W/Full Loading: 111* W Idle: 12 W/Full Loading: 132* W		Idle: 6.655 W/Full Loading: 52.25* W Idle: 6.9 W/Full Loading: 72.25* W	
Power Input / Connector	9–48V		DC-in 9–36 VDC, 4-pin DC jack power connector		DC-in 9–36 VDC, 4-pin DC jack power connector	
Dimension (W x D x H)	165 x 140 x 42.8 mm (w/o heatsink) (6.50 x 5.51 x 1.69 in) 199 x 151.7 x 90.9 mm (with heatsink) (7.83 x 5.97 x 3.58 in)		176 x 132 x 57.32 mm (6.93 x 5.19 x 2.26 in)		131 x 120 x 62.9 mm (5.16 x 4.72 x 2.47 in)	
Net Weight	TBD kg		0.980 kg (2.161 lb) w/ Fansink		0.701 kg (1.54 lb) w/ Fansink	
Vibration	TBD		1 Grms, IEC 60068-2-64, random, 5 ~ 500 Hz, 1 hr/axis		1 Grms, IEC 60068-2-64, random, 5 ~ 500 Hz, 1 hr/axis	
Shock	TBD		10 G, IEC 60068-2-27, half sine, 11 ms duration		10 G, IEC 60068-2-27, half sine, 11 ms duration	
Temperature	Operating Temp.: -25°C ~ +80°C (-13°F ~ +176°F) (TBD) Storage Temp.: -40°C ~ +85°C (-40°F ~ +185°F)		*Operating Temp.: -25°C ~ +80°C Storage Temp.: -40°C ~ +85°C		*Operating Temp.: -25°C ~ +80°C Storage Temp.: -40°C ~ +85°C	
Humidity	95% (non-condensing)		95% @ 40°C (104°F) (non-condensing)		95% @ 40°C (104°F) (non-condensing)	
OS Support	Linux (supports NVIDIA Jetpack™ 7.0 and above)		Linux (supports NVIDIA Jetpack™ 6.2 and above)		Linux (support NVIDIA Jetpack™ 6.2 and above)	
Certification	CE / FCC Class A / UKCA		CE / FCC Class A / UKCA		CE / FCC Class A / UKCA	

*For more test condition information, please refer to user manual

**In high-temperature environments (70+°C), the system dynamically adjusts performance to ensure stability, and adequate heat dissipation is recommended for optimal operation.



Model Number	AIE-PX11-A2 AIE-PX12-A2		AIE-PX13-A2	AIE-PX23-A2	AIE-KX11-A2 AIE-KX12-A2		AIE-KX13-A2	AIE-KX23-A2
Module Compatibility	NVIDIA Jetson AGX Orin 32GB		NVIDIA Jetson AGX Orin 32GB	NVIDIA Jetson AGX Orin 64GB	NVIDIA Jetson AGX Orin 32GB		NVIDIA Jetson AGX Orin 32GB	NVIDIA Jetson AGX Orin 64GB
AI Performance	200 TOPS 275 TOPS		200 TOPS	275 TOPS	200 TOPS 275 TOPS		200 TOPS	275 TOPS
Storage	64GB eMMC 5.1		64GB eMMC 5.1		64GB eMMC 5.1		64GB eMMC 5.1	
Display	1 x HDMI 2.0 Type-A		1 x HDMI 2.0 Type-A		1 x HDMI 2.0 Type-A		1 x HDMI 2.0 Type-A	
TPM	TPM v2.0 (optional)		Not supported		TPM v2.0 (optional)		Not supported	
RTC	Not supported		Not supported		Not supported		Not supported	
Audio	Not supported		Line-out / Line-in / Mic (optional, requires daughter board)		Line-out / Line-in / Mic (optional, requires daughter board)		Line-out/Line-in/Mic (optional, requires daughter board)	
MIPI Camera	Not supported		Not supported		Not supported		Not supported	
LAN	1 x RJ-45 GbE port 1 x RJ-45 10 GbE port		1 x RJ-45 GbE port 1 x RJ-45 10 GbE port		1 x RJ-45 GbE port, 1 x RJ-45 10 GbE port		1 x RJ-45 GbE port 1 x RJ-45 10 GbE port	
PoE Interface	2 or 4 x RJ-45 GbE PSE (IEEE 802.3af compliant, 15 W per port)*		Not supported		2 or 4 x RJ-45 GbE PSE (IEEE 802.3af compliant, 15 W per port)*		Not supported	
USB	2 x USB 3.2 Gen 1 Type-A 1 x USB 3.2 Gen 2 Type-C 1 x USB 2.0 (DB-15) 1 x USB OTG Type-C		2 x USB 3.2 Gen 1 Type-A 1 x USB 3.2 Gen 2 Type-C 1 x USB 2.0 (DB-15) 1 x USB OTG Type-C		2 x USB 3.2 Gen 1 Type-A 1 x USB 3.2 Gen 2 Type-C 1 x USB 2.0 (DB-15) 1 x USB OTG Type-C		2 x USB 3.2 Gen 1 Type-A 1 x USB 3.2 Gen 2 Type-C 1 x USB 2.0 (DB-15) 1 x USB 2.0 Type-C (OTG only)	
I/O Interfaces	2 x I ² C 1 x SPI 5 x GPIO 2 x UART 1 x RS-232 1 x RS-422/485 (2-in-1) 2 x CAN 2.0b (isolated, CAN FD supported) 1 x OOB (optional) 1 x microSIM card slot		2 x I ² C 1 x SPI 5 x GPIO 2 x UART 1 x RS-232 1 x RS-422/485 (2-in-1) 2 x CAN 2.0b (isolated, CAN FD supported) 1 x microSIM card slot		2 x I ² C 1 x SPI 5 x GPIO 1 x RS-232 1 x RS-422/485 (2-in-1) 2 x CAN 2.0b (isolated, CAN FD supported) 2 x UART 1 x microSIM card slot		2 x I ² C 1 x SPI 5 x GPIO 1 x RS-232 1 x RS-422/485 2 x CAN 2.0b (isolated, CAN FD supported) 1 x microSIM card slot	
Expansion	1 x M.2 B-Key 3042/3052 (LTE/4G/5G) 1 x M.2 E-Key 2230 (Wi-Fi/BT) 1 x M.2 M-Key 2280 (NVMe, PCIe Gen 3 x2) 1 x microSD card slot		1 x M.2 B-Key 3042/3052 (LTE/4G/5G) 1 x M.2 E-Key 2230 (Wi-Fi/BT) 1 x M.2 M-Key 2280 (NVMe, PCIe Gen 4 x4) 1 x microSD card slot		1 x M.2 B-Key 3042/3052 (LTE/4G/5G) 1 x M.2 E-Key 2230 (Wi-Fi/BT) 1 x M.2 M-Key 2280 (NVMe, PCIe Gen 3 x2) 1 x microSD card slot		1 x M.2 B-Key 3042/3052 (USB 3.2 Gen 1, USB 2.0) 1 x M.2 E-Key 2230 (PCIe Gen 4 x1, USB 2.0) 1 x M.2 M-Key 2280 (NVMe, PCIe Gen 4 x4) 1 x microSD card slot	
MISC. Function	1 x Power button, 1 x Recovery button, 1 x Reset button		1 x Power button, 1 x Recovery button, 1 x Reset button		1 x Power button, 1 x Recovery button, 1 x Reset button		1 x Power button, 1 x Recovery button, 1 x Reset button	
Power Consumption	Idle: 7.5 W Full Loading: 109* W	Idle: 8 W Full Loading: 130* W	Idle: 5.5 W Full Loading: 51.08* W	Idle: 5.9 W Full Loading: 71* W	Idle: 14.3 W Full Loading: 115.8* W	Idle: 14.8 W Full Loading: 136.8* W	Idle: 9.655 W Full Loading: 55.25 W	Idle: 9.9 W Full Loading: 75.25 W
Power Input / Connector	DC-in 9–36 VDC, 4-pin DC jack power connector		DC-in 9–36 VDC, 4-pin DC jack power connector		DC-in 9–36 VDC, 4-pin DC jack power connector		DC-in 9–36 VDC, 4-pin DC jack power connector	
Dimension (W x D x H)	270 x 195 x 80 mm (10.63 x 7.67 x 3.15 in)		270 x 195 x 80 mm (10.63 x 7.67 x 3.15 in)		220 x 170 x 79 mm (8.66 x 6.69 x 3.11 in)		210 x 124.7 x 79 mm (8.3 x 4.91 x 3.11 in)	
Mounting	Wall Mount (optional) / Din Rail (optional)		Wall Mount (optional) / Din Rail (optional)		Wall Mount (optional) / Din Rail (optional)		Wall Mount (optional) / Din Rail (optional)	
Net Weight	4.3 kg (9.48 lb)		4.2 kg (9.7 lb)		1.852 kg (4 lb)		1.969 kg (4.34 lb)	
Vibration	1 Grms, IEC 60068-2-64, random, 5 ~ 500 Hz, 1 hr/axis		1 Grms, IEC 60068-2-64, random, 5 ~ 500 Hz, 1 hr/axis		1 Grms, IEC 60068-2-64, random, 5 ~ 500 Hz, 1 hr/axis		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		10 G, IEC 60068-2-27, half sine, 11 ms duration		10 G, IEC 60068-2-27, half sine, 11 ms duration		10 G, IEC 60068-2-27, half sine, 11 ms duration	
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)		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)		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)		Operating Temp. : -25°C ~ +70°C (-13°F ~ +158°F) Storage Temp. : -40°C ~ +85°C (-40°F ~ +185°F)	
Humidity	95% @ 40°C (104°F) (non-condensing)		95% @ 40°C (104°F) (non-condensing)		95% @ 40°C (104°F) (non-condensing)		95% @ 40°C (104°F) (non-condensing)	
OS Support	Linux (supports NVIDIA Jetpack™ 6.2 and above)		Linux (supports NVIDIA Jetpack™ 6.2 and above)		Linux (supports NVIDIA Jetpack™ 6.2 and above)		Linux (supports NVIDIA Jetpack™ 6.2 and above)	
Certification	CE / FCC Class A / UKCA		CE / FCC Class A / UKCA		CE / FCC Class A / UKCA		CE / FCC Class A / UKCA	

*For more test condition information, please refer to user manual

**In high-temperature environments (70+°C), the system dynamically adjusts performance to ensure stability, and adequate heat dissipation is recommended for optimal operation.

Mainstream Series — NVIDIA Jetson Orin NX / Orin Nano



Model Number	AIB-MO22-S2 AIB-MO32-S2	AIB-MN32-S2 AIB-MN42-S2	AIE-PO22-S1 AIE-PO32-S1	AIE-PN32-A2 AIE-PN42-A2	AIE-PO22-S2 AIE-PO32-S2	AIE-PN32-S2 AIE-PN42-S2	AIE-PN33-2PSE-A1 AIE-PN33-4PSE-A1	AIE-PN43-2PSE-A1 AIE-PN43-4PSE-A1
Module Compatibility	NVIDIA Jetson Orin Nano with Super Mode 4GB / 8GB	NVIDIA Jetson Orin NX with Super Mode 8GB / 16GB	NVIDIA Jetson Orin Nano with Super Mode 4GB / 8GB	NVIDIA Jetson Orin NX 8GB / 16GB	NVIDIA Jetson Orin Nano with Super Mode 4GB / 8GB	NVIDIA Jetson Orin NX with Super Mode 8GB / 16GB	NVIDIA Jetson Orin NX 8GB	NVIDIA Jetson Orin NX 16GB
AI Performance	34 TOPS 67 TOPS	117 TOPS 157 TOPS	34 TOPS 67 TOPS	70 TOPS 100 TOPS	34 TOPS 67 TOPS	117 TOPS 157 TOPS	70 TOPS	100 TOPS
Storage	1 x M.2 M-Key 2242 (NVMe, 128GB built-in)		1 x M.2 M-Key 2242 (NVMe, 128GB built-in)		1 x M.2 M-Key 2242 (NVMe, 128GB built-in)		1 x M.2 M-Key 2242 (NVMe, 128GB built-in)	
Display	1 x HDMI 2.0 Type-A		1 x HDMI 2.0 Type-A		1 x HDMI 2.0 Type-A		1 x HDMI 2.0 Type-A	
TPM	TPM		Not supported		Not supported		Not supported	
RTC	RTC Battery		RTC Battery		RTC Battery		Not supported	
Audio	Line-out / Line-in / Mic (optional, requires daughter board)		Not supported		Not supported		Not supported	
MIPI Camera	1 x 8-lane MIPI expansion connector (120-pin), Supports GMSL & MIPI cameras (pre-built drivers required) *Refer to peripheral list		N/A		Not supported		Not supported	
LAN	2 x RJ-45 GbE ports		2 x RJ-45 GbE ports		2 x RJ-45 GbE ports		2 x RJ-45 GbE ports	
PoE Interface	Not supported		Not supported		Not supported		2/4 x RJ-45 GbE PSE (IEEE 802.3af compliant, up to 15 W per port)	
USB	2 x USB 3.2 Gen 2 Type-A (up to 10 Gbps, shared) 1 x USB OTG Type-C		2 x USB 3.2 Gen 2 Type-A (up to 10 Gbps, shared) 1 x USB OTG Type-C		2 x USB 3.2 Gen2 Type A (up to 10Gbps, shared) 1 x OTG Type-C		2 x USB 3.2 Gen2 Type (up to 10Gbps, shared) 1 x OTG Type-C	
I/O Interfaces	5 x GPIO 1 x SPI 1 x I ² S 3 x I ² C 1 x UART 1 x UART (debug only) 1 x RS-232 1 x CAN (isolated) 1 x RS-422/485 (2-in-1) 1 x microSIM card slot		5 x GPIO 1 x UART 1 x I ² C 1 x RS-232 1 x RS-422/485 (2-in-1) 1 x CAN (isolated, CAN FD supported) 1 x microSIM card slot		5 x GPIO 1 x UART 1 x I ² C 1 x RS-232 1 x RS-422/485 (2-in-1) 1 x CAN (Isolated, CAN FD supported)		5 x GPIO 1 x UART 1 x I ² C 1 x RS-232 1 x RS-422/485 1 x CAN (Isolated, CAN FD supported)	
Expansion	1 x M.2 B-Key 3042/3052 (LTE/4G/5G with 1PPS support, 1.8 V / 3.3 V) 1 x M.2 E-Key 2230 (Wi-Fi/BT) 1 x M.2 M-Key 2242 (NVMe, PCIe Gen 3 x4, 128 GB built-in)		1 x M.2 B-Key 3042/3052 (LTE/4G/5G) 1 x M.2 E-Key 2230 (Wi-Fi/BT) 1 x M.2 M-Key 2242 (NVMe, 128GB built-in)		1 x M.2 B-Key 3042/3052 (LTE/4G/5G) 1 x M.2 E-Key 2230 (Wi-Fi/BT) 1 x M.2 M-Key 2242 (NVMe, 128GB built-in)		1 x M.2 B-Key 3042/3052 (LTE/5G) 1 x M.2 E-Key 2230 (Wifi/BT) 1 x M.2 M-Key 2242 (NVMe, 128GB built-in)	
MISC. Function	1 x Recovery button, 1 x Reset button		1 x Power button, 1 x Recovery button, 1 x Reset button		1 x Power button, 1 x Recovery button, 1 x Reset button		1 x Power button, 1 x Recovery button, 1 x Reset button	
Power Consumption	Idle: TBD W Full Loading: TBD* W	Idle: TBD W Full Loading: TBD* W	Idle: 6.4 W Full Loading: 40* W	Idle: 6.413 W Full Loading: 43.13* W	Idle: 6.413 W Full Loading: 43.13* W		Idle: 6.413 W Full Loading: 89.13* W	Idle: 6.413 W Full Loading: 89.13* W
Power Input / Connector	DC-in 12–24 VDC, 4-pin DC jack power connector		DC-in 12–24 VDC, 4-pin DC jack power connector		DC-in 12–24 VDC, 4-pin DC jack power connector		DC-in 12–24 VDC, 4-pin DC jack power connector	
Dimension (W x D x H)	120 x 100 x 57.54 mm (4.73 x 3.94 x 2.27 in)		137.6 x 125 x 71.5 mm (5.41 x 4.92 x 2.81 in)		270 x 195 x 80 mm (10.63 x 7.67 x 3.15 in)		270 x 195 x 80 mm (10.63 x 7.67 x 3.15 in)	
Mounting	Not supported		Wall Mount (optional) / Din Rail (optional)		Wall Mount (optional) / Din Rail (optional)		Wall Mount (optional) / Din Rail (optional)	
Net Weight	TBD kg (TBD lb)		1.36 kg (3 lb)		4.2 kg (9.7 lb)		TBC kg (TBC lb)	
Vibration	1 Grms, IEC 60068-2-64, random, 5 ~ 500 Hz, 1 hr/axis		1 Grms, IEC 60068-2-64, random, 5 ~ 500 Hz, 1 hr/axis		1 Grms, IEC 60068-2-64, random, 5 ~ 500 Hz, 1 hr/axis		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		10 G, IEC 60068-2-27, half sine, 11 ms duration		10 G, IEC 60068-2-27, half sine, 11 ms duration		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)		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)		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)		Operating Temp.: -25°C ~ +55°C (-13°F ~ +131°F) with 0.5 m/s air flow Storage Temp.: -25°C ~ +85°C (-40°F ~ +185°F)	
Humidity	95% @ 40°C (104°F) (non-condensing)		95% @ 40°C (104°F) (non-condensing)		95% @ 40°C (104°F) (non-condensing)		95% @ 40°C (104°F) (non-condensing)	
OS Support	Linux (supports NVIDIA JetPack™ 6.2 and above)		Linux (supports NVIDIA JetPack™ 5.1.2 above)		Linux (supports NVIDIA JetPack™ 6.2 and above)		Linux (supports JetPack™ 5.0 and above)	
Certification	CE / FCC Class A / UKCA		CE / FCC Class A / UKCA		CE / FCC Class A / UKCA		CE / FCC Class A / UKCA	

*For more test condition information, please refer to user manual

**In high-temperature environments (70+°C), the system dynamically adjusts performance to ensure stability, and adequate heat dissipation is recommended for optimal operation.



Model Number	AIE-PO23-6USB-A1 AIE-PO33-6USB-A1	AIE-PN33-6USB-A1 AIE-PN43-6USB-A1	AIE-PO23-3M-A1 AIE-PO33-3M-A1	AIE-PN33-3M-A1 AIE-PN43-3M-A1	AIE-KO22-S2 AIE-KO32-S2	AIE-KN32-S2 AIE-KN42-S2
Module Compatibility	NVIDIA Jetson Orin Nano 4GB / 8GB	NVIDIA Jetson Orin NX 8GB / 16GB	NVIDIA Jetson Orin Nano 4GB / 8GB	NVIDIA Jetson Orin NX 8GB / 16GB	NVIDIA Jetson Orin Nano with Super Mode 4GB / 8GB	NVIDIA Jetson Orin NX with Super Mode 8GB / 16GB
AI Performance	20 TOPS 40 TOPS	70 TOPS 100 TOPS	20 TOPS 40 TOPS	70 TOPS 100 TOPS	34 TOPS 67 TOPS	117 TOPS 157 TOPS
Storage	1 x M.2 M-Key 2242 (NVMe, 128GB built-in)		1 x M.2 M-Key 2242 (NVMe, 128GB built-in)		1 x M.2 M-Key 2242 (NVMe, 128GB built-in)	
Display	1 x HDMI 2.0 Type-A		1 x HDMI 2.0 Type-A		1 x HDMI 2.0 Type-A	
TPM	Not supported		Not supported		Not supported	
RTC	Not supported		Not supported		RTC Battery	
Audio	Not supported		Not supported		Line-out / Line-in / Mic (optional, requires daughter board)	
Camera Input	Not supported		Not supported		Not supported	
LAN	2 x RJ-45 GbE ports		2 x RJ-45 GbE ports		2 x RJ-45 GbE ports	
PoE Interface	Not supported		Not supported		Not supported	
USB	4 x USB 3.2 Gen 1 Type-A 2 x USB 3.2 Gen 2 Type-A (up to 10 Gbps, shared) 1 x USB OTG Type-C		2 x USB 3.2 Gen 2 Type-A (up to 10 Gbps, shared) 1 x USB OTG Type-C		2 x USB 3.2 Gen 2 Type-A (up to 10 Gbps, shared) 1 x USB OTG Type-C	
I/O Interfaces	5 x GPIO 1 x UART 1 x I ² C 1 x RS-232 1 x RS-422/485 1 x CAN (Isolated, CAN FD supported)		5 x GPIO 1 x UART 1 x I ² C 1 x RS-232 1 x RS-422/485 1 x CAN (Isolated, CAN FD supported)		5 x GPIO 1 x UART 1 x I ² C 1 x RS-232 1 x RS-422/485 (2-in-1) 1 x CAN (Isolated) 1 x OOB (optional) 1 x microSIM card slot	
Expansion	1 x M.2 B-Key 3042/3052 (LTE/5G) 1 x M.2 E-Key 2230 (Wi-Fi/BT) 1 x M.2 M-Key 2242 (NVMe, 128GB built-in)		1 x M.2 B-Key 3042/3052 (LTE/5G) 1 x M.2 E-Key 2230 (Wi-Fi/BT) 1 x M.2 M-Key 2242 (NVMe, 128 GB built-in) 2 x M.2 M-Key 2280 (PCIe)		1 x M.2 B-Key 3042/3052 (LTE/4G/5G \with 1PPS support, 1.8 V / 3.3 V) 1 x M.2 E-Key 2230 (Wi-Fi/BT) 1 x M.2 M-Key 2242 (NVMe, 128 GB built-in)	
MISC. Function	1 x Power button, 1 x Recovery button, 1 x Reset button		1 x Power button, 1 x Recovery button, 1 x Reset button		1 x Power button, 1 x Recovery button, 1 x Reset button	
Power Consumption	Idle: 6.413 W Full Loading: 47.13* W		Idle: 6.413 W Full Loading: 43.13* W		Idle: 6.413 W Full Loading: 43.13* W	
Power Input / Connector	DC-in 12–24 VDC, 4-pin DC jack power connector		DC-in 12–24 VDC, 4-pin DC jack power connector		DC-in 12–24 VDC, 4-pin DC jack power connector	
Dimension (W x D x H)	270 x 195 x 80 mm (10.63 x 7.67 x 3.15 in)		270 x 195 x 80 mm (10.63 x 7.67 x 3.15 in)		196.5 x 124 x 68 mm (7.73 x 4.88 x 2.67 in)	
Mounting	Wall Mount (optional) / Din Rail (optional)		Wall Mount (optional) / Din Rail (optional)		Wall Mount (optional) / Din Rail (optional)	
Net Weight	TBD kg (TBD lb)		TBD kg (TBD lb)		1.102 kg (2 lb)	
Vibration	1 Grms, IEC 60068-2-64, random, 5 ~ 500 Hz, 1 hr/axis		1 Grms, IEC 60068-2-64, random, 5 ~ 500 Hz, 1 hr/axis		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		10 G, IEC 60068-2-27, half sine, 11 ms duration		10 G, IEC 60068-2-27, half sine, 11 ms duration	
Temperature	Operating Temp.: -25°C ~ +55°C (-13°F ~ +131°F) with 0.5 m/s air flow Storage Temp.: -25°C ~ +85°C (-40°F ~ +185°F)		Operating Temp.: -25°C ~ +55°C (-13°F ~ +131°F) with 0.5 m/s air flow Storage Temp.: -25°C ~ +85°C (-40°F ~ +185°F)		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)		95% @ 40°C (104°F) (non-condensing)		95% @ 40°C (104°F) (non-condensing)	
OS Support	Linux (supports NVIDIA JetPack™ 5.1.2 and above)		Linux (supports NVIDIA JetPack™ 5.1.2 and above)		Linux (supports NVIDIA JetPack™ 6.2 and above)	
Certification	CE / FCC Class A / UKCA		CE / FCC Class A / UKCA		CE / FCC Class A / UKCA	

*For more test condition information, please refer to user manual

**In high-temperature environments (70+°C), the system dynamically adjusts performance to ensure stability, and adequate heat dissipation is recommended for optimal operation.

Compact Series



Model Number	AIB-SO21-S1 AIB-SO31-S1	AIB-SN31-A1 AIB-SN41-A1	AIB-MO23-S1 AIB-MO33-S1	AIB-MN33-S1 AIB-MN43-S1
Module Compatibility	NVIDIA Jetson Orin Nano with Super Mode 4GB / 8GB		NVIDIA Jetson Orin Nano with Super Mode 4GB / 8GB	
AI Performance	34 TOPS 67 TOPS		34 TOPS 67 TOPS	
Storage	1 x M.2 M-Key 2242 (NVMe, 128GB built-in)		1 x M.2 M-Key 2242 (NVMe, 128GB built-in)	
Display	1 x HDMI 2.0 Type-A		1 x HDMI 2.0 Type-A	
TPM	Not supported		TPM	
RTC	RTC Battery		RTC Battery	
Audio	Line-out / Line-in / Mic (optional, requires daughter board)		Not supported	
MIPI Camera	2 x 4-lane MIPI CSI-2 22-pin connector		2 x 4-lane MIPI CSI-2 22-pin FPC connector	
LAN	1 x RJ-45 GbE ports		1 x RJ-45 GbE ports	
PoE Interface	Not supported		2 x RJ-45 GbE PSE (IEEE 802.3af compliant, 15 W per port, total PSE ports up to 30 W)	
USB	2 x USB 3.2 Gen 2 Type-A (up to 10 Gbps, shared) 1 x USB OTG Type-C		2 x USB 3.2 Gen 2 Type-A (up to 10 Gbps, shared) 1 x USB 2.0 Gen 2 Type-A 1 x USB OTG Type-C	
I/O Interfaces	5 x GPIO 1 x I ² C 1 x I ² S 1 x RS-232 1 x UART 1 x UART (debug only) 1 x SPI 1 x CAN (Isolated, CAN FD supported)		7 x GPIO 1 x SPI 3 x I ² C 1 x UART 1 x UART (debug only) 1 x CAN (Isolated, CAN FD supported) 1 x RS-422/485/232 (switch 3-in1)	
Expansion	1 x M.2 E-Key 2230 (Wi-Fi/BT) 1 x M.2 M-Key 2242 (NVMe, PCIe Gen3 x4, 128GB built-in)	1 x M.2 E-Key 2230 (Wi-Fi/BT) 1 x M.2 M-Key 2242 (NVMe, PCIe Gen 4 x4, 128GB built-in)	1 x M.2 B-Key 3052 (LTE/4G/5G) 1 x M.2 E-Key 2230 (Wi-Fi/BT) 1 x M.2 M-Key 2242 (NVMe, 128GB built-in)	
MISC. Function	1 x Power button, 1 x Recovery button, 1 x Reset button		1 x Recovery button, 1 x Reset button	
Power Consumption	Idle: 5.4 W Full Loading: 27.08* W	Idle: 5.7 W Full Loading: 37.5* W	Idle: TBD W Full Loading: TBD* W	Idle: TBD W Full Loading: TBD* W
Power Input / Connector	DC-in 12–24 VDC, 2-pin terminal block		DC-in 12–24 VDC, 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)		127 x 85.75 x 28.45 mm (5.00 x 3.38 x 1.12 in)	
Mounting	N/A		N/A	
Net Weight	0.144 kg (0.32 lb) w/ Fansink		TBD kg (TBD lb)	
Vibration	1 Grms, IEC 60068-2-64, random, 5 ~ 500 Hz, 1 hr/axis		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		10 G, IEC 60068-2-27, half sine, 11 ms duration	
Temperature	Operating Temp.: -25°C ~ +80°C Storage Temp.: -40°C ~ +85°C		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 70°C with 40W (MAXN Mode)	
Humidity	95% @ 40°C (104°F) (non-condensing)		95% @ 40°C (104°F) (non-condensing)	
OS Support	Linux (supports NVIDIA JetPack™ 5.1.2 and above)		Linux (support NVIDIA JetPack™ 6.2 above)	
Certification	CE / FCC Class A / UKCA		CE / FCC Class A / UKCA	

*For more test condition information, please refer to user manual

**In high-temperature environments (70+°C), the system dynamically adjusts performance to ensure stability, and adequate heat dissipation is recommended for optimal operation.



Model Number	AIE-CO21-S1 AIE-CO31-S1	AIE-CN31-A1 AIE-CN41-A1	AIE-CO23-S1 AIE-CO33-S1	AIE-CN33-A1 AIE-CN43-A1	AIE-KO21-S1 AIE-KO31-S1	AIE-KN31-A1 AIE-KN41-A1
Module Compatibility	NVIDIA Jetson Orin Nano with Super Mode 4GB / 8GB		NVIDIA Jetson Orin Nano with Super Mode 4GB / 8GB		NVIDIA Jetson Orin Nano with Super Mode 4GB / 8GB	
AI Performance	34 TOPS 67 TOPS		34 TOPS 67 TOPS		34 TOPS 67 TOPS	
Storage	1 x M.2 M-Key 2242 (NVMe, 128GB built-in)		1 x M.2 M-Key 2242 (NVMe, 128GB built-in)		1 x M.2 M-Key 2242 (NVMe, 128GB built-in)	
Display	1 x HDMI 2.0 Type-A		1 x HDMI 2.0 Type-A		1 x HDMI 2.0 Type-A	
TPM	Not supported		TPM		Not supported	
RTC	With super capacitor, battery (optional)		RTC Battery		With super capacitor, battery (optional)	
Audio	Not supported		Not supported		Line-out / Line-in / Mic (optional, requires daughter board)	
MIPI Camera	Not supported		Not supported		Not supported	
LAN	1 x RJ-45 GbE ports		1 x RJ-45 GbE ports		1 x RJ-45 GbE ports	
PoE Interface	Not supported		2 x RJ-45 GbE PSE (IEEE 802.3af compliant, 15 W per port, total PSE ports up to 30 W)		Not supported	
USB	2 x USB 3.2 Gen 2 Type-A (up to 10 Gbps, shared) 1 x USB OTG Type-C		2 x USB 3.2 Gen 2 Type-A (up to 10 Gbps, shared) 1 x USB 2.0 Gen 2 Type-A 1 x USB OTG Type-C		2 x USB 3.2 Gen 2 Type-A (up to 10 Gbps, shared) 1 x USB OTG Type-C	
I/O Interfaces	5 x GPIO 1 x UART 1 x I ² C 1 x CAN (isolated)		4 x GPIO 1 x SPI 2 x I ² C 1 x UART 1 x CAN (isolated, CAN FD supported) 1 x RS-422/485/232 (switch 3-in1)		5 x GPIO 1 x I ² C 1 x RS-232 1 x UART 1 x CAN (isolated)	
Expansion	1 x M.2 E-Key 2230 (Wi-Fi/BT) 1 x M.2 M-Key 2242 (NVMe, 128GB built-in)		1 x M.2 B-Key 3052 (LTE) 1 x M.2 E-Key 2230 (Wi-Fi/BT) 1 x M.2 M-Key 2242 (NVMe, 128GB built-in)		1 x M.2 E-Key 2230 (Wi-Fi/BT) 1 x M.2 M-Key 2242 (PCIe Gen 3 x4, 128 GB built-in)	
MISC. Function	1 x Power button, 1 x Recovery button, 1 x Reset button 1 x CAN 2.0b (isolated)		1 x Recovery, 1 x Reset Button		1 x Power button, 1 x Recovery button, 1 x Reset button	
Power Consumption	Idle: 3.4 W Full Loading: 25.08* W	Idle: 3.7 W Full Loading: 35.5* W	Idle: TBD W Full Loading: TBD * W	Idle: TBD W Full Loading: TBD* W	Idle: 8.5 W Full Loading: 30.25* W	Idle: 7.6 W Full Loading: 40.25* W
Power Input / Connector	DC-in 12–24 VDC, 2-pin terminal block		DC-in 12–24 VDC, 2-pin terminal block		DC-in 12–24 VDC, 2-pin terminal block	
Dimension (W x D x H)	130 x 90.2 x 72 mm (5.11 x 3.55 x 2.83 in)		132 x 91.5 x 68.5 mm (5.20 x 3.60 x 2.70 in)		123 x 99 x 56 mm (48.4 x 38.9 x 22 in)	
Mounting	Wall Mount (optional) / Din Rail (optional)		Wall Mount (optional) / Din Rail (optional)		Wall Mount (optional) / Din Rail (optional)	
Net Weight	0.927 kg (2.044 lb)		TBD kg (TBD lb)		0.54 kg (1.2 lb)	
Vibration	1 Grms, IEC 60068-2-64, random, 5 ~ 500 Hz, 1 hr/axis		1 Grms, IEC 60068-2-64, random, 5 ~ 500 Hz, 1 hr/axis		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		10 G, IEC 60068-2-27, half sine, 11 ms duration		10 G, IEC 60068-2-27, half sine, 11 ms duration	
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)		Operating Temp.: -25°C ~ +55°C (-13°F ~ +131°F) Storage Temp.: -40°C ~ +85°C (-40°F ~ +185°F)		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)		95% @ 40°C (104°F) (non-condensing)		95% @ 40°C (104°F) (non-condensing)	
OS Support	Linux (supports NVIDIA JetPack™ 5.1.2 and above)		Linux (supports NVIDIA Jetpack™ 6.2 and above)		Linux (supports NVIDIA JetPack™ 5.1.2 and above)	
Certification	CE / FCC Class A / UKCA		CE / FCC Class A / UKCA		CE / FCC Class A / UKCA	

*For more test condition information, please refer to user manual

**In high-temperature environments (70+°C), the system dynamically adjusts performance to ensure stability, and adequate heat dissipation is recommended for optimal operation.

In-Vehicle

In-Vehicle


Model Number	AIE-VX28-IP	AIE-VX18-IP	AIE-VO24	AIE-VO34	AIE-VN34	AIE-VN44
Module Compatibility	NVIDIA Jetson AGX Orin 64GB	NVIDIA Jetson AGX Orin 32GB	NVIDIA Jetson Orin Nano Super 4GB	NVIDIA Jetson Orin Nano Super 8GB	NVIDIA Jetson Orin NX 8GB	NVIDIA Jetson Orin NX 16GB
AI Performance	275 TOPS	200 TOPS	34 TOPS	67 TOPS	70 TOPS	100 TOPS
GMSL	8 x GMSL2 via Fakra Z	8 x GMSL2 via Fakra Z	4 x GMSL2 via Fakra Z			
GPU	2048-core NVIDIA Ampere GPU with 64 Tensor Cores	1792-core NVIDIA Ampere GPU with 56 Tensor Cores	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	12-core Arm® Cortex®-A78AE v8.2 64-bit CPU 3MB L2 + 6MB L3	8-core NVIDIA Arm® Cortex A78AE v8.2 64-bit CPU 2MB L2 + 4MB L3	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	64GB 256-bit LPDDR5 204.8GB/s	32 GB 256-bit LPDDR5 204.8 GB/s	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 2280 (NVMe, PCIe Gen 4 x4)	1 x M.2 M-Key 2280 (NVMe, PCIe Gen 4 x4)	1 x M.2 M-Key 2242 (128GB built-in)			
Display	1 x HDMI 2.0 Type-A			1 x HDMI 2.0 Type-A		
RTC	Supports RTC battery and Battery Life Monitoring by MCU			Supports RTC battery and Battery Life Monitoring by MCU		
LAN	4 x GbE via M12 connector (PoE, 60 W total) 1 x 10 GbE via M12 connector			1 x RJ-45 GbE Port		
USB	2 x USB 2.0 Gen 1 Type-A (lockable) 1 x USB 2.0 Gen 1 Type-C (OTG)			2 x USB 3.2 Gen 2 Type-A 1 x USB Type-C (OTG)		
I/O Interfaces	2 x CAN (isolated, CAN FD supported) 1 x RS-232/RS-485/RS-422 1 x RS-232 4 x DI / 4 x DO (isolated) 1 x OOB (by request)			1 x CAN (isolated, DB9 port 1, CAN FD supported) 2 x DI / 3 x DO or RS-232 (DB9 port 2) 2 x antenna holes for Wi-Fi		
Expansion	1 x M.2 B-Key 3042/3052 USB 3.1 Gen 1 (LTE/4G/5G) 1 x M.2 E-Key 2230 (Wi-Fi/BT) 1 x M.2 M-Key 2280 (NVMe, PCIe Gen 4 x4) 2 x Micro SIM card			1 x M.2 E-Key 2230 (Wi-Fi/BT) 1 x M.2 M-Key 2242 (NVMe 128 GB built-in, PCIe Gen 4 x4) 1 x microSD card slot (optional, occupies M.2 E-Key slot)		
Power consumption	Idle: TBD W Full Loading: TBD* W			Idle: TBD W Full Loading: TBD* W		Idle: TBD W Full Loading: TBD* W
Mounting	Wall Mount			Wall Mount / Din Rail (optional)		
MISC. Function	1 x Recovery Button, 1 x Reset Button			1 x Recovery Button, 1 x Reset Button		
Power Input / Connector	DC-in 9–50 VDC, 3-pin (V+/V-/IGN) terminal block with ignition power control			DC-in 9–36 VDC*, 3-pin (V+/V-/IGN) terminal block		
LED Indicator	1 x PWR (w/ IGN), 1 x PGM (Programmable by user)			1 x PWR (w/ IGN), 1 x PGM (Programmable by user define)		
Dimension (W x D x H)	194 x 224 x 88 mm (7.64 x 8.82 x 3.46 in) (w/o rubber foot) 194 x 224 x 91 mm (7.64 x 8.82 x 3.58 in) (with rubber foot)			132 x 114 x 75 mm (5.20 x 4.49 x 2.95 in)		
IP	IP66			N/A		
Net Weight	5.2 kg (11.46 lb)			1.36 kg (2.99 lb)		
Vibration	Operating, MIL-STD-810H, Method 514.8, Category 4			Operating, MIL-STD-810H, Method 514.8, Category 4		
Shock	Operating, MIL-STD-810H, Method 516.8, Procedure I			Operating, MIL-STD-810H, Method 516.8, Procedure I		
Temperature	Operating Temp.: -25°C ~ +70°C with 0.5 m/s air flow; 30W TDP Mode (w/o 10GbE Transmission and PoE Load) -25°C ~ +55°C with 0.5 m/s air flow with full function Storage Temp.: -40°C ~ +85°C			Operating Temp.: -25°C ~ +55°C 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)			95% @ 40°C (104°F) (non-condensing)		
OS Support	Linux (supports NVIDIA JetPack™ 6.2 and above)			Linux (supports NVIDIA JetPack™ 6.2 and above)		
Certification	CE / FCC Class A, according to EN 55032 & EN 55035 EN 50121-3 (EN 50155:2017, Clause 13.4.8) E-Mark (E-24)			CE / FCC / E-Mark (E24)		

*For more test condition information, please refer to user manual

AI on ARM Series — Accelerated by SoC & AI Accelerator

Aetina's AI on ARM Series is a portfolio of ARM-based systems designed for scalable AI expansion and powered by SoC and AI ASIC acceleration. With flexible M.2 AI accelerator support, it delivers a adaptable path to efficient AI. Easily adapt to evolving AI technologies without hardware redesign, accelerating time to market. Unlock the full potential of advanced NPU architectures for high-performance, low-latency edge AI.

Powered by Rockchip & AI Accelerator Bundle Solution

Powered by RK6588, the system delivers seamless real-time video streaming and inference, making it ideal for smart security and retail applications such as multi-camera monitoring and behavior analysis.

- Powered by Rockchip RK3588
- LPDDR4X 16GB, eMMC 32GB
- 2 x M.2 M-Key, one w/ PCIe 3.0 x4 for AI ASIC Accelerator, one w/SATA for Storage
- 1 x M.2 E-Key for WIFI/BT, 1 x mPCIe for LTE
- 1 x USB 3.2 Gen1, 2 x GbE, 2 x COM, 1 x HDMI 2.1



Model Number	AIB-MR1B-B1		AIE-KR1B-B1	AIE-KR1B-B1-AXE	AIE-KR1B-B1-ECX
Module Compatibility	Rockchip RK3588		Rockchip RK3588	Rockchip RK3588	Rockchip RK3588
Memory	LPDDR4X 16GB		LPDDR4X 16GB	LPDDR4X 16GB	LPDDR4X 16GB
Storage	32GB eMMC 1 x Micro-SD slot (SD 2.0) 1 x M.2 M-Key 2280 w/SATA for Storage (Bottom Side)			32GB eMMC 1 x Micro-SD slot (SD 2.0) 1 x M.2 M-Key 2280 w/SATA for Storage (Bottom Side)	
Display	1 x HDMI 2.1 TMDS 3840X2160 60Hz (HDMI Type A Connector)			1 x HDMI 2.1 TMDS 3840X2160 60Hz (HDMI Type A Connector)	
Audio	1 x MIC-In, 1 x Line-Out, 1 x Line-In (Optional with daughter board)			1 x MIC-In, 1 x Line-Out, 1 x Line-In (Optional with daughter board)	
LAN	2 x GbE (2 x RJ45)			2 x GbE (2 x RJ45)	
USB	1 x USB 3.2 Gen1 (Type A) 1 x USB 2.0 (Type A) 1 x Type C for Programming			1 x USB 3.2 Gen1 (Type A) 1 x USB 2.0 (Type A) 1 x Type C for Programming	
I/O Interface	1 x RS-232 header (TXD/RXD/CTS/RTS), 1 x RS-485 header		1 x DB9 for RS-232 (TXD/RXD/CTS/RTS) / RS485	1 x DB9 for RS-232(TXD/RXD/CTS/RTS) / RS485	
OOB	1 x OOB (Optional OOB Module)			1 x OOB (Optional OOB Module)	
Expansion	1 x M.2 M-Key 2280 (PCIe 3.0 x4) for AI Accelerator (Top Side) or NVME SSD 1 x M.2 E-Key 2230 (PCIe 2.1 x1+USB 2.0) for WIFI/BT 1 x mPCIe full-size (USB 2.0) for LTE w/Micro-SIM card holder			1 x M.2 M-Key 2280 (PCIe 3.0 x4) for AI Accelerator - Axelera Metis® M.2 Inference Acceleration Card (Top Side) 1 x M.2 E-Key 2230 (PCIe 2.1 x1+USB 2.0) for WIFI/BT 1 x mPCIe full-size (USB 2.0) for LTE w/Micro-SIM card holder	1 x M.2 M-Key 2280 (PCIe 3.0 x4) for AI Accelerator - EdgeCortex SAKURA®-II M.2 Module (Top Side) 1 x M.2 E-Key 2230 (PCIe 2.1 x1+ USB 2.0) for WIFI/BT 1 x mPCIe full-size (USB 2.0) for LTE w/Micro-SIM card holder
MISC. Function	1 x Power Button, 1 x Reset Button, 1 x Recovery Button, 1 x Maskrom Button			1 x Power Button, 1 x Reset Button, 1 x Recovery Button, 1 x Maskrom Button	
Power Input / Connector	DC-in 12V / Terminal Block 2-pin			DC-in 12V / Terminal Block 2-pin	
Dimension (W x D)	131 x 120mm (5.16" x 4.72")		155 x 123 x 51mm (6.10" x 4.84" x 2.01")	155 x 123 x 51mm (6.10" x 4.84" x 2.01")	
Net Weight	0.237 kg (0.522 lb)		0.827 kg (1.822 lb)	0.827 kg (1.822 lb)	
Temperature	Operating Temperature: 0°C ~ 70°C (32°F ~ 158°F) Storage Temperature: -40°C ~ 85°C (-40°F ~ 185°F)			Operating Temperature: 0°C ~ +60°C (32°F ~ 140°F) Storage Temperature: -40°C ~ 85°C (-40°F ~ 185°F)	
Humidity	95% @ 40°C Related Humidity (non-condensing)			95% @ 40°C Related Humidity (non-condensing)	
Certification	CE / FCC		CE / FCC / LVD	CE / FCC / LVD	

*For more test condition information, please refer to user manual

Powered by Texas Instruments (TI)

Driven by TI AM69A SoC, the compact edge AI platform is optimized for vision computing and industrial control. Supporting up to dual M.2 AI accelerators and rich industrial I/O, it enables scalable, low-latency deployment from prototyping to field operations.

- Powered by Texas Instruments AM69A
- LPDDR4X 32/16GB, eMMC 32GB
- Up to 2x M.2 (M-Key, 2280) slots (PCIe) for AI accelerator modules / NVMe SSD
- 1 x M.2 E-Key for WIFI/BT
- 3 x USB 3.2 Gen1 Type A, 2 x GbE (PoE optional), 1 x DP 1.4



Preliminary



Preliminary



Preliminary

Model Number	AIB-MT11-ES	AIE-KT11-ES	AIE-PT11-ES
Module Compatibility	Texas Instruments AM69A (e.g., AM69A98)		
Memory	32/16GB LPDDR4		
Storage	32GB eMMC / 1 x Micro-SD slot		
Display	1 x Display Port v1.4 (Active)		
Audio	1 x Line-In, 1 x Line-Out, 1 x MIC-In (I2S header, Optional with daughter board)		
LAN	2 x GbE (2 x RJ45. Optional for PoE 802.3af)		
USB	3 x USB 3.2 Gen1 Type A		
I/O Interface	2 x CAN FD, 1 x I2C, 5 x GPIO, 1 x UART 1 x RS-232 (TXD/RXD/CTS/RTS)/RS-422/RS-485	2 x CAN FD - 1 x DB9 1 x I2C, 5 x GPIO - 1 x DB9 1 x I2C, 5 x GPIO - 1 x DB9	2 x CAN FD - 1 x DB9 1 x I2C, 5 x GPIO - 1 x DB9 1 x I2C, 5 x GPIO - 1 x DB9
OOB		1 x OOB Module (header, Optional)	
Expansion	1 x M.2 M-Key 2280 (PCIe 3.0 x4) for AI Accelerator / NVMe storage w/ active LED 1 x M.2 M-Key 2280 (PCIe 3.0 x2) for AI Accelerator / NVMe storage w/ active LED 1 x M.2 E-Key 2230 (PCIe 2 x1+USB 2.0) for WIFI/BT		1 x M.2 M-Key 2280 (PCIe 3.0 x4) for AI Accelerator / NVMe storage w/ active LED 1 x M.2 M-Key 2280 (PCIe 3.0 x2) for NVMe storage w/ active LED 1 x M.2 E-Key 2230 (PCIe 2 x1+USB 2.0) for WIFI/BT
MISC. Function	1 x Power Button, 1 x Reset Button 2 x FAN header	1 x Power Button, 1 x Reset Button	1 x Power Button, 1 x Reset Button
Power Input / Connector	DC-in 9V~36V / Terminal 2-PIN		
Dimension (W x D)	147 x 140 mm (5.79" x 5.51")	218 x 160.8 x 77 mm (8.58" x 6.33" x 3.03")	280*160*80mm (11.02" x 6.30" x 3.15")
Net Weight	TBD kg	TBD kg	TBD kg
Temperature	Operating Temperature: -20°C ~ +85°C Storage Temperature: -40°C ~ +85°C	Operating Temperature: -20°C ~ +65°C Storage Temperature: -40°C ~ +85°	Operating Temperature: -20°C ~ +60°C Storage Temperature: -40°C ~ +85°
Humidity	95% @ 40°C, Non-condensing		
Certification	CE / FCC / LVD / UKCA		

*For more test condition information, please refer to user manual



From Automation to Autonomy: Next Gen Robotics and AMR

The modern food delivery landscape is evolving rapidly, fueled by growing consumer demand for fast, convenient service in bustling urban environments. Faced with rising labor costs, and increasing order volumes, traditional delivery methods struggle to maintain speed, consistency, and service quality.

Autonomous delivery robots — powered by Aetina's AIB-MN32 as the robot's brain — offer a smarter solution. They can independently navigate complex, dynamic city streets, perform continuous deliveries with precision and reliability, and interact safely with people, setting new standards for urban logistics in speed, efficiency, and responsiveness.

Aetina's AIB-MN32 Edge AI platform, accelerated by NVIDIA Jetson Orin™ NX 8GB, provides up to 70 TOPS of AI performance for real-time spatial data computing, precise localization and advanced visual analysis, enabling robots to perceive and react to complex outdoor urban environments in real time. Its compact design fits seamlessly into robotic systems, while rich I/Os and expansions support scalable, next-generation autonomous applications across diverse urban settings. Along with NVIDIA CUDA® toolkit and Vision Programming Interface (VPI) software library, the platform simplifies robotic vision development, ensuring faster deployment and optimized performance for modern AI robotics.

Benefits

- **Compact Edge AI with Powerful Intelligence :** AIB-MN32, powered by NVIDIA Jetson Orin NX 8GB, delivers up to 70 TOPS to enable real-time vision and autonomous decision-making.
- **Autonomy-Ready AI & Rich Connectivity :** Supports real-time inference with built-in Wi-Fi and LTE/4G/5G connectivity.
- **Flexible & Scalable Design :** Adapts to different robot types, with wide-temp operation and wide input power for harsh environments.

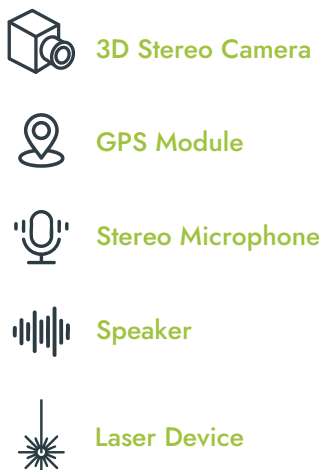
Results

- **Accurate & Safe Navigation :** High-precision localization and environmental awareness enable safe mobility.
- **Real-Time Robotic Vision :** Enables real-time 3D vision and advanced object recognition.
- **Improved Food Delivery Efficiency :** Faster, reliable autonomous delivery improves service speed.



Aetina AIB-MN32

Accelerated by
NVIDIA Orin™ NX 8GB



Robot Brain

- Robotic control
- Decision-making

Robot Perception

- Spatial data computing
- Obstacle/ sound detection

Precise Localization

- RTK GPS fusion

Human-Robot Interaction

- Speech recognition
- Response

AIoT-Enabled Smart Traffic Large-scale Deployments

The integration of AI and IoT (AIoT) into smart traffic systems has significantly improved traffic management efficiency. However, large-scale deployments at intersections and roadside locations face challenges such as limited wired and wireless coverage, restricted data transmission distance, power constraints and high operational and maintenance costs. Wired networks, requiring extensive cabling, are limited by their small coverage area and high costs, while wireless networks like traditional Wi-Fi, are also confined to a 0.1-kilometer range and are prone to interference.

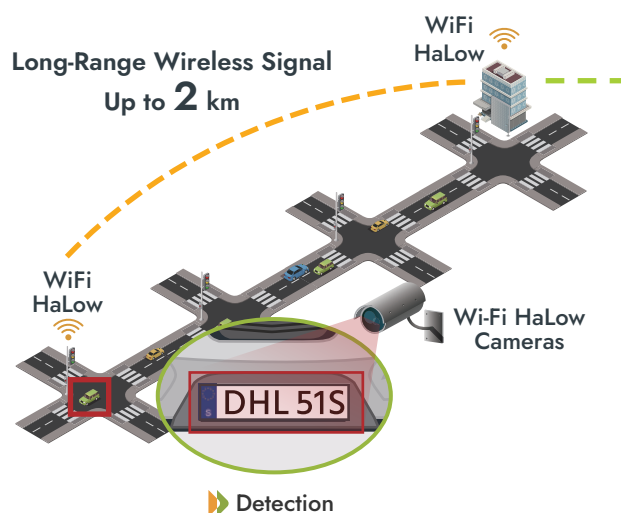
Developed with an independent software vendor (ISV) and Wi-Fi HaLow partner, this solution uses Aetina's AIE-PX-11/12/21/22 fanless edge AI systems for scalable, cost-effective smart traffic deployments. Powered by NVIDIA Jetson AGX Orin™, it delivers real-time, accurate license plate recognition with 99% precision, while ensuring low latency. With Wi-Fi HaLow, it offers ultra-long transmission distances—20x greater than traditional Wi-Fi—while consuming less power. This AIoT-enabled system is ideal for smart city applications, supporting traffic control, violation detection, and crime tracking with high efficiency and cost-effectiveness for large-scale deployments.

► Benefits

- **20x Longer Data Transmission:** Wi-Fi HaLow offers a 2-km range, far exceeding standard Wi-Fi's 0.1 km.
- **Lower Power Consumption:** Aetina's energy-efficient AI system with Wi-Fi HaLow is ideal for outdoor use and easy maintenance.
- **Highly Scalable:** Wi-Fi HaLow supports up to 256 points, eliminating complex cabling and high 4G/5G costs.
- **99% High-Precision Algorithm:** The AI system recognizes skewed license plates at up to 60-degree angles, enabling better decision-making.

► Results

- **Cost-Effectiveness:** No SIM cards, no contracts, and no monthly fees.
- **Low Power Consumption, Unlimited Data:** Enables real-time image transmission to the control center for AI analysis.
- **Comprehensive Solution:** Reduces integration costs, speeds up deployment, and lowers maintenance costs.
- **Reduced Manual Verification:** 99% accuracy in recognition rate lowers the costs for operations and maintenance.



► License Plate Identification

Aetina Edge AI Powers Human-Robot Synergy and Boosts Operational Efficiency

High staff turnover, rising labor costs, and ongoing workforce shortages are reshaping today's food service industry. For many restaurants, these challenges lead to slower operations, inconsistent service quality, and reduced profitability. To overcome these obstacles, a Korean-style fried chicken restaurant adopted the Aetina DeviceEdge AIB-SN41 edge AI platform.

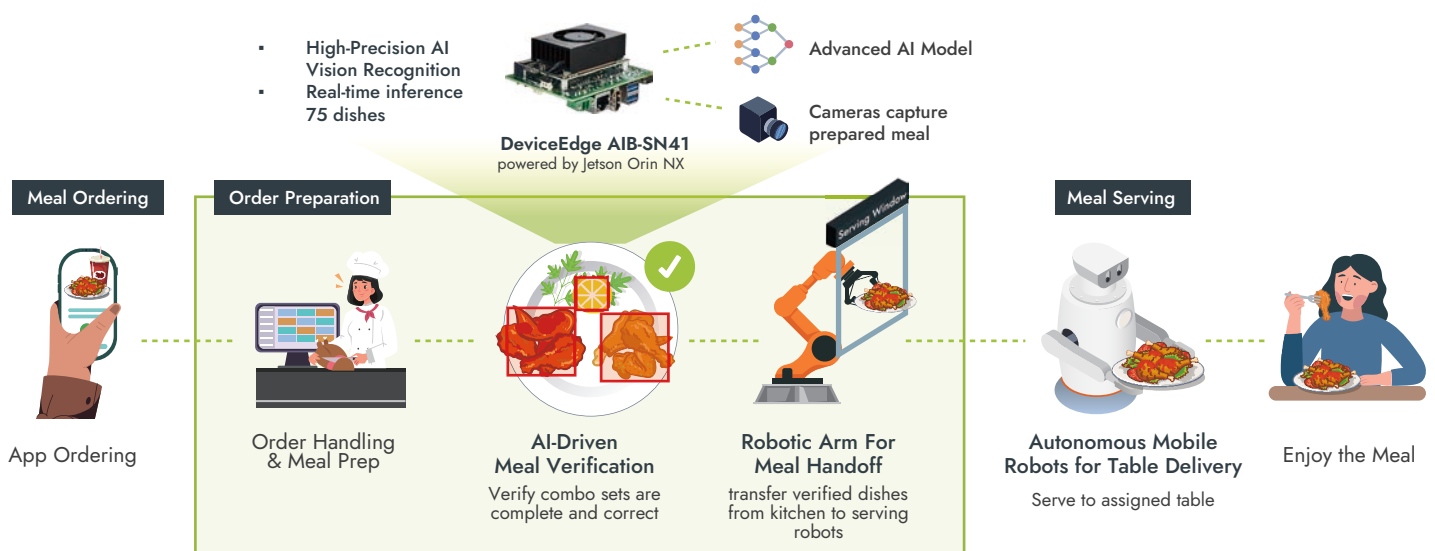
Compact yet powerful, the AIB-SN41, powered by NVIDIA Jetson Orin NX 16GB, has been seamlessly integrated into the restaurant's robotic systems for both meal verification and serving. While the chef remains in charge of food preparation and taste, the AIB-SN41-driven robotic arm leverages AI vision to identify dishes and verify that combo sets are complete and correct. Verified meals are automatically assigned to the correct table based on order data, then handed off to autonomous serving robots for delivery. Combined with advanced AI models and cameras, the AIB-SN41 enables real-time inference to recognize up to 75 dishes with high precision. By combining human expertise with robotic precision, this seamless human-robot synergy allows chefs to focus on culinary excellence while robots ensure speed, accuracy, and consistency—showcasing how Aetina's edge AI systems streamline workflows, cut labor costs, maintain food quality, and relieve labor shortage pressures.

Benefits

- **Palm-Sized AI, 100 TOPS Performance :** AIB-SN41, powered by Jetson Orin NX, enables precise and fast AI vision detection with easy integration and deployment.
- **Accurate AI Vision for Meal Verification & Real-Time Assignment :** Ensures combo sets are complete and correctly matched to orders.
- **Automated Meal Confirmation and Table Assignment :** AIB-SN41-driven AI recognitions real-time data processing and decision-making at the edge.

Results

- **Streamlined Workflows & Shorter Customer Wait Times :** Edge AI automation powered by Aetina boosts efficiency and speeds up service.
- **From Kitchen to Table :** Human-Robot Synergy Maximizes Efficiency, combining human expertise with robotic precision to optimize restaurant workflows and service quality.
- **Lower Labor Cost & Sustainable Operations :** Reduces reliance on manual labor, easing staff shortages and turnover pressures.



◆▶ **Aetina Corporation | Headquarters**

17F, No.237. Sec.1, Datong Rd.,
Xizhi Dist., New Taipei City 221, Taiwan
Tel: +886-2-7709-2568
Fax: +886-2-7746-1102
Email: sales@aetina.com

◆▶ **Aetina Europe B.V.**

Pisanostraat 57, 5623 CB, Eindhoven, The Netherlands
Tel: +31-0-40-3045-400
Email: eusales@aetina.com

◆▶ **Aetina Japan Corporation**

2-35-4 2nd floor, Nihonbashi-Hamacho, Chuo-ku,
Tokyo. Nihonbashi-Hamacho Park building
Mobile: +81-70-3148-9655
Email: sales@aetina.com

◆▶ **Aetina (Shenzhen) Artificial Intelligence Co., LTD**
— Shanghai Office

Room 210, 2F, Building 1, Hansheng Technology
Industries Park, No.3888, Humin Highway, Minhang
District, Shanghai, China
Mobile: +86-153-1699-0980
Email: cnsales@aetina.com

◆▶ **Aetina USA Corporation**

42996 Osgood Road, Suite A, Fremont CA 94539, USA
Tel: +1-510-996-5659
Email: usasales@aetina.com



Website



Linkedin



Facebook



Youtube