

Intelligent Edge Computers

Built for the Edge, Designed for the Industry

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ADVANTECH

Enabling an Intelligent Planet

www.advantech.com

Leading Industrial Edge Computers

Built for the Edge, Designed for Industry

Advantech ARK Edge Computers deliver stable, high-performance edge computing with industrial-grade reliability, rich I/O expansion, and strong security features—ensuring seamless operation in demanding vertical applications.



Security Management Ready

DeviceOn EdgeBMC OOB
TPM 2.0 IEC 62443

AI & Versatile I/O Expansions

NVIDIA Intel HAILO
CANBus TSN Modbus OPC UA

Worldwide Certifications

CE/FCC Class B CB UL CCC
BSMI ErP UKCA

Compact

ARK-1100 Series

- Palm-sized
- Wireless connectivity



DIN-Rail

ARK-1200 Series

- Easy installation
- Single-Side I/Os



Modular

ARK-2000 Series

- Medium-to-high performance
- Flexible I/O extension



Performance

ARK-3000 Series

- High performance
- Multifunction and expandable

Star Lineup for Target Markets

Advantech ARK Edge Computers are ideal for diverse industrial applications—such as energy storage management, smart kiosks, automation, robotics, machine vision, and AI. Engineered for stability, expandability, and security, ARK platforms offer AI-ready add-on computing power, wide I/O and protocol support, and global certifications. The ARK series ensures reliable performance suited to vertical market applications, accelerating intelligent edge transformation.



ARK-1251

Energy Storage Management

The Advantech DIN-Rail series ARK-1251, built with Intel® Core Ultra 5/7 CPU, combines high-efficiency AI compute and low-power consumption, supporting up to 96 GB DDR5 memory. With wide 12–28 VDC input, triple LAN, rich serial/CANBus I/O, Hailo AI module add-on, TPM 2.0 security, and EdgeBMC/DeviceOn OOB management, it provides robust and real-time Energy Storage System (ESS) control and monitoring.



ARK-1125

Equipment Manufacturing Industry

The Advantech Ultra Compact ARK-1125 series, powered by Intel® Atom® x7211E dual-core SoC with up to 16 GB DDR5-4800, delivers palm-size fanless reliability in semiconductor fab environments. Its four RS-232/422/485 serial ports, HDMI, 2.5 GbE, USB ports, and three M.2 slots for AI, Wi-Fi 7 and 5G modules make it ideal for equipment integration.



ARK-3534

Factory Automation

The Advantech High performance ARK-3534, powered by 12th/13th/14th Gen Intel® Core®i processors, delivers high-performance expandability for robotics and vision-based factory automation. With up to four PCIe/PCI slots for GPU/data-acquisition cards, support for 25+ connections (GbE, USB, COM, CAN, DIO), wide-range 9–36 VDC input. With special software—DeviceOn for remote management, it enables real-time motion control, and collaborative robot operations in industrial settings.



ARK-2251

Intelligence in AI IoT

Advantech ARK-2251 flexible I/O Edge Computers combine Intel® Core® processing power with rich I/O, triple displays, dual LAN, and iDoor expansion for IoT and AI at the edge. Featuring a fanless, wide-temperature design and support for AI accelerators, they are well-suited for smart factories and self-service kiosks, making it easy to deploy edge intelligence.

Strategic AI and Edge Security Resilience

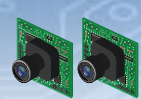
The Advantech ARK-3534 is a robust, fanless Edge AI Computer designed for industrial-grade performance and real-time processing at the edge. Powered by 12th, 13th, and 14th Gen Intel® Core® i processors, it delivers high computing efficiency, ideal for machine vision, robotics, and automated inspection. Integrating the Advantech Edge AI SDK, the ARK-3534 enables seamless AI model deployment and optimization, accelerating inference and reducing development time for AI applications. Strategically aligned with AIoT demands, the system supports GPU/NPU expansion, enabling scalable AI performance at the edge. To ensure system integrity and secure deployment in data-critical environments, the ARK-3534 is IEC 62443-4-2 certified, delivering multi-layered cybersecurity for device-level protection. This includes secure boot, TPM 2.0, and runtime integrity monitoring. The ARK-3534's rugged design, advanced AI toolkit, and built-in cybersecurity defenses make it an ideal solution for smart manufacturing, intelligent surveillance, and industrial automation, requiring high performance with security assurance.



ARK-3534



ARK-3534



Cameras



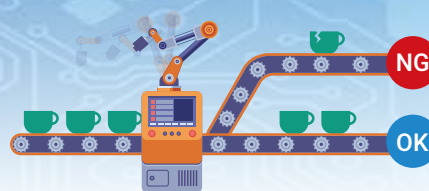
Data Collection



Robotic Arms



Monitors

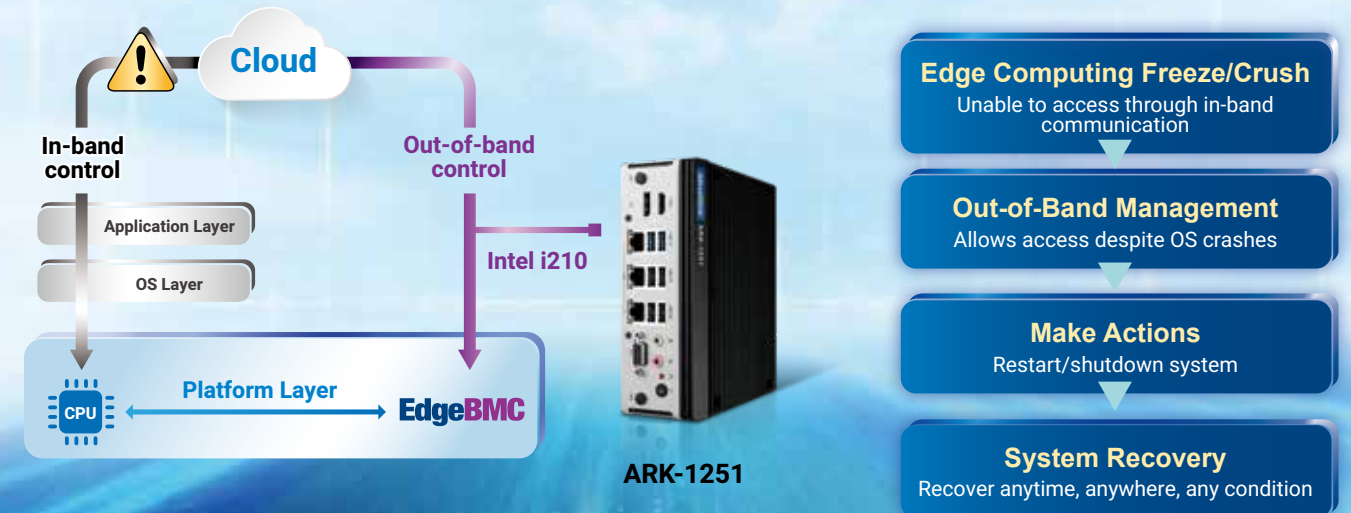


Out-of-Band Management for Unmanned Automation

Advantech ARK-1251 and the entire series of Edge Computers are equipped with EdgeBMC for out-of-band management (OOBM) capability. It provides advanced monitoring, management, and troubleshooting capabilities for unmanned and industrial applications. These high-performance edge devices leverage EdgeBMC to enable seamless, remote system access and control.

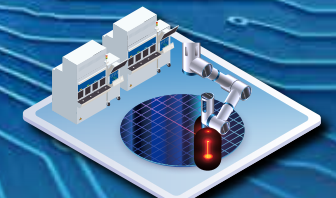
With EdgeBMC, uninterrupted access to the system is maintained, even if the operating system or BIOS becomes unresponsive. Operating independently, it serves as a direct lifeline to the system, drastically reducing the need for costly on-site visits and minimizing system downtime. This critical feature ensures that unmanned operations remain efficient and continuously operational.

Out-of-Band Management (OOBM) Mechanism



With OOBM

Without OOBM



Case Study

Empowering the New Era of Smart Manufacturing

Background

Smart manufacturing is driving a new industrial revolution, demanding more from edge computing devices. ARK-1200 series is a compact, robust Edge Computers, designed to deliver reliable performance in challenging industrial environments. It seamlessly integrates Operational Technology (OT) with Information Technology (IT), accelerating production line automation and data acquisition, forming a critical infrastructure for Industry 4.0.

Customer Painpoints

Modern manufacturing demands industrial PCs with exceptional computing power, compact design, and wide operating temperature ranges. Additionally, devices must support various industrial communication protocols to connect sensors, robots, and automation equipment. ARK-1222 meets the rigorous requirements for 24/7 stable operation in harsh environments, ensuring uninterrupted production lines.

Our Solutions

Powered by Intel® N-series and Amston Lake processors, ARK-1222 delivers high-performance computing while maintaining low power consumption. Its fanless design prevents dust accumulation, significantly enhancing system stability and reducing maintenance costs. With a wide operating temperature range and rich I/O interfaces, it's an ideal choice for machine vision, collaborative robots, and automation control systems, accelerating edge AI deployment.

- Intel® N-series / Amston Lake processors for optimal performance
- Up to 16GB DDR5 memory ensures smooth and reliable operation
- Dual GbE LAN ports and multiple serial/USB ports for versatile connectivity
- M.2 expansion slots for flexible storage and wireless communication options
- Wide operating temperature range of -40°C to 70°C, ideal for harsh industrial environments

ARK-1222

Intel® N97 to i3-N305, DDR5 Memory, Versatile Connectivity, and Extreme Temperature Support



Case Study

Security IEC 62443-4-2 in Automation

Background

As manufacturing increasingly integrates AI vision for smarter automation, cybersecurity becomes crucial for maintaining reliable operations. With the Cyber Resilience Act (CRA) coming into effect by 2027, manufacturers are seeking IEC 62443-4-2 certified platforms to safeguard data, support AI-driven edge computing, prevent downtime, and ensure compliance with EU regulations—delivering secure, resilient, and efficient production environments.

Customer Painpoints

A packaging machine maker was seeking to enter the European Union with its new AI vision product. Their intelligent packaging machines require high computing performance and support for GPU card expansion to execute seamless vision-to-action operations. Their primary focus was the data collected and monitored at the edge; this data was used to help improve the efficiency and accuracy of new product lines.

Our Solutions

Leveraging Intel® 12th, 13th, and 14th Gen Core® i processors, the ARK-3534 series provides diverse I/O for up to 25 device connections and up to 4 PCIe/PCI slots to satisfy advanced AI and industrial applications, such as AOI, semiconductor equipment, and collaborative robot applications. With its capability to add a PCIe x16 GPU for advanced AI computing and intelligent data generation, customers and applications require an IEC 62443-4-2 certified embedded controller to secure this critical data.

- Supports Intel 12/13/14th Gen Desktop Core i processor, Celeron/i3/i5/i7/i9 up to 24 cores
- PCIe and PCI expansions
- 3x 2.5Gbps, 1x 1Gbps LAN port, total 4 LAN ports, 2x CANBus (optional) for robotic applications



ARK-3534D

Powerful Multi-Core Intel® Support with High-Speed LAN & Expandable PCIe for Advanced Robotics



Case Study

Semiconductor Equipment High Integration

Background

With the growing demand for high-performance and reliable electronic devices in IPC, semiconductor automation equipment is becoming increasingly vital, as automation systems can reduce human errors, contamination risks, and production variability. This equipment requires a high-performance, compact, yet I/O-rich system as the main controller. To meet these needs, the ARK-1125 series is designed with rich I/O in a palm-size form factor and industrial-grade heat dissipation capabilities, ensuring stable operation while maintaining expansion opportunities.

Customer Painpoints

In recent years, semiconductor automation equipment has required a multi-functional yet compact industrial computer as a main controller. This industrial PC must monitor other devices, collect large amounts of data, and respond immediately while maintaining a small form factor to fit into constrained equipment spaces. It also needs to ensure system stability even when there is minimal airflow.

Our Solutions

The ARK-1125 is powered by either Intel® N200 QC SoC processor or Intel® Atom® x7211E DC SoC processor, offering high performance with low power consumption. It is a compact and versatile fanless embedded system. Its palm-sized dimensions allow it to be installed in limited-space environments, and its ample I/O ports and several M.2 slots allow expansion with various devices. Moreover, it operates within a wide operating temperature range of -30 to 60°C, and it serves as a ready-to-use platform for semiconductor automation equipment.

- Intel Latest Atom® Processor X Series and N Series
- I/O Interfaces for Different Applications
 - » DDR5 memory up to 16GB
 - » M.2 Key B, E and M for SSD, WiFi, 5G solution
 - » Hailo-8 AI module support
- CE, FCC, CB, UL, UKCA, CCC and BSMI for all SKUs



ARK-1125

Next-Gen Intel® Atom® with AI Support, Flexible I/O, and Global Compliance

Energy Star for Energy Efficiency in USA –
ARK-1125C
RED for wireless module installation in EU –
ARK-1125H

Case Study

Smart Energy Storage Management

Background

With the U.S. energy storage market projected to surpass 30 GW (gigawatts) in annual deployments by 2030, Smart Energy Storage delivers a future-ready, all-in-one solution for fast and cost-effective system integration. It simplifies deployment without compromising quality or configurability. Tailored Smart Service plans offer industry-leading guarantees, optimized performance, and AI-driven predictive maintenance to extend system lifespan and protect long-term value. As AI-enabled, edge-based energy management becomes essential in decentralized power networks, Smart Energy Storage positions itself as a reliable and scalable platform for commercial, industrial, and grid-edge applications.

Customer Painpoints

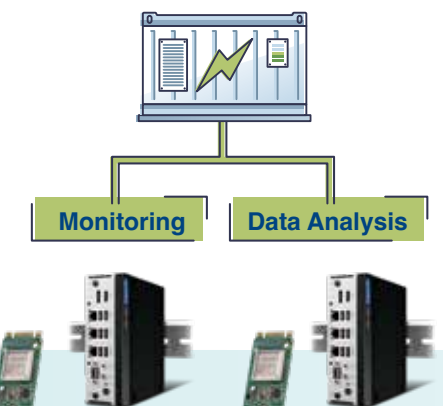
Smart Energy Storage systems rely on a distributed computing architecture, with dedicated units performing real-time monitoring and advanced data analytics. Designed for outdoor deployment, these systems must ensure reliable operation in harsh cabinet environments, while offering a compact footprint and a vertical I/O layout for easy installation and maintenance.

Our Solutions

Each Smart Energy Storage cabinet deploys two ARK-1251 systems, one for monitoring and one for data analysis. Built for industrial environments, ARK-1251 features a fanless design, IP40 protection, and a -20°C to 60°C temperature range. Its DIN-RAIL mounting and vertical I/O layout simplify cable management and facilitate on-site maintenance.

With integrated Hailo AI modules, ARK-1251 enables real-time edge inference for anomaly detection, predictive maintenance, and performance optimization. By analyzing battery health data locally, it enhances system reliability, reduces downtime, and improves energy efficiency. Combined with EdgeBMC and DeviceOn, the system supports remote diagnostics, OTA updates, and AI development management for scalable and reliable Smart Energy Storage operation.

- Intel® Core Ultra 5/Ultra 7 processor built-in
- -20 ~ 60°C extended operating temperature
- 12V ~ 28V wide range power input support
- Rich vertical I/O design: 4x COM, 3x LAN, 6x USB, 3x M.2, 8 bit DIO, DP+HDMI
- Supports EdgeBMC OOB, DeviceOn for remote monitoring



ARK-1251

Hailo AI add-on w/ AMK-A0054 thermal kit

Edge Computers

Product Selection Guide

Compact Series



Model Name		ARK-1124C	ARK-1124U	ARK-1124H	ARK-1125C	ARK-1125H
CPU	CPU	Intel® Celeron® DC N3350	Intel® Celeron® DC N3350	Intel® Atom® QC E3940	Intel® Atom® X7211E	Intel® N200
	Core Number	2	2	4	2	4
Memory	Max. Capacity	DDR3L 1600 MHz, up to 8GB	DDR3L 1600 MHz, up to 8GB	DDR3L 1600 MHz, up to 8GB	DDR5 4800 MHz, up to 16GB	DDR5 4800 MHz, up to 16GB
	Socket	1 x 204-pin SODIMM	1 x 204-pin SODIMM	1 x 204-pin SODIMM	1 x 262-pin SODIMM	1 x 262-pin SODIMM
Display	VGA	1 x VGA, up to 2048 x 1280 @ 60Hz	1 x VGA, up to 2048 x 1280 @ 60Hz	-	-	-
	HDMI/DP	-	-	2 x Lockable HDMI, up to 3840 x 2160 @ 30Hz	1 x HDMI: 4096 x 2160 @ 60Hz	2 x HDMI: 4096 x 2160 @ 60Hz
Expansion Interface	Mini PCIe	1 x full-size MiniPCIe	1 x full-size MiniPCIe w/ SIM	1 x full-size MiniPCIe w/ SIM	-	-
	M.2	-	1, 2230 E-Key for Wi-Fi	1, 2230 E-Key for Wi-Fi	3 (1 x E-Key 2230, 1 x B-Key 2280, 1 x M-Key 2242)	2 (1 x E-Key 2230, 1 x B-Key 2280)
	i Door	Yes	Yes	Yes	-	-
Ethernet	Controller	GbE1: Intel i210 GbE	GbE1: Intel i210 GbE; GbE2: Intel i210 GbE	GbE1: Intel i210 GbE; GbE2: Intel i210 GbE	GbE1: Intel i226-LM GbE	GbE1: Intel i226-LM GbE; GbE2: Intel i226-LM GbE
	Wake on LAN	Yes	Yes	Yes	Yes	Yes
Audio	CODEC	Realtek ALC-888S-VD2-GR	ALC-888S-VD2-GR	ALC-888S-VD2-GR	ALC-888S-VD2-GR	ALC-888S-VD2-GR
	Connector	Line-in, Line-out	Line-in, Line-out	Line-in, Line-out	Mic-in, Line-out	Mic-in, Line-out
Watchdog Timer		Yes	Yes	Yes	Yes	Yes
Storage	SATA	1 x 2.5" SATA drive bay (Max 9.5mm height)	1 x 2.5" SATA drive bay (Max 9.5mm height only)	1 x 2.5" SATA drive bay (Max 9.5mm height only)	-	-
	mSATA	1 x half-size mSATA	-	1 x half-size mSATA	-	-
	M.2	-	-	-	3x, (recommend: 1x M.2 2280 B key (PCIe x1), 1x M.2 2242 M key (PCIe x1), SATA shared with NVMe), 1x M.2 2230 E key (PCIe x1))	2x, (recommend: 1x M.2 2280 B key (PCIe x1), 1x M.2 2230 E key (PCIe x1))
I/O Port	USB Type A	2 x USB 3.0	4 x USB 3.0	4 x USB 3.0	2 x USB 3.2, 2 x USB 2.0	2 x USB 3.2, 2 x USB 2.0
	USB Type C	-	-	-	-	-
	GPIO	-	-	-	8-bit programmable DIO	8-bit programmable DIO
	COM	4 x RS-232/422/485	2 x RS-232/422/485	1 x RS-232/422/485	4 x RS232/422/485	2 x RS232/ 422/ 485
	Others	-	-	-	Optional 1 x CANBus, by replacing DIO	2 x CANBus
Power	Power Supply Voltage	Default: 12 V ^{DC} optional:: 12 V ^{DC} - 24V ^{DC} by power module	Default: 12 V ^{DC} optional:: 12 V ^{DC} - 24V ^{DC} by power module	Default: 12 V ^{DC} optional:: 12 V ^{DC} - 24V ^{DC} by power module	12 V ^{DC}	12 V ^{DC}
	Power Consumption (full loading)	5.5W/10.2W	5W/15.7W	6.02W/15.7W	10.05W/19.72W	10.54W/29.18W
	Power Adapter	Lockable AC to DC, DC 12V/3A, 36W	Lockable AC to DC, DC 12V/5A, 60W	Lockable AC to DC, DC 12V/5A, 60W	Lockable AC to DC, DC 12V/5A, 60W	Lockable AC to DC, DC 12V/5A, 60W
Environment	Operating Temperature (air flow 0.7 m/s)	With extended temperature peripherals: -20 ~ 60°C	With extended temperature peripherals: -20 ~ 60°C	With extended temperature peripherals: -20 ~ 60°C	With extended temperature peripherals: -30 ~ 60°C	With extended temperature peripherals: -30 ~ 60°C
	Vibration & Shock Resistance (with SSD/mSATA)	Vibration: IEC 60068-2-64, random, 5 ~ 500 Hz, 1 hr/axis. Shock: IEC 60068-2-27, half sine, 11 ms duration	Vibration: IEC 60068-2-64, random, 5 ~ 500 Hz, 1 hr/axis. Shock: IEC 60068-2-27, half sine, 11 ms duration	Vibration: IEC 60068-2-64, random, 5 ~ 500 Hz, 1 hr/axis. Shock: IEC 60068-2-27, half sine, 11 ms duration	3 Grms, IEC60068-2-64, random, 5~500 Hz, 1hr/axis (with wall mount)	3 Grms, IEC60068-2-64, random, 5~500 Hz, 1hr/axis (with wall mount)
Physical Characteristics	Dimensions (W x H x D mm)	Default: 133 x 46.4 x 94.2 mm Dual Layer: 133 x 83.6 x 94.2 mm	Single Layer: 133 x 46.4 x 94.2mm Dual Layer: 133 x 83.6 x 94.2mm	Default: 133 x 46.4 x 94.2 mm Dual Layer: 133 x 83.6 x 94.2 mm	133 x 46.4 x 94.2 mm (5.24 x 1.83 x 3.71 in)	133 x 46.4 x 94.2 mm (5.24 x 1.83 x 3.71 in)
	Weight	0.7 Kg (1.55lb)	0.7 Kg (1.55lb)	0.7 Kg (1.55lb)	0.7 Kg (1.55lb)	0.7 Kg (1.55lb)
	Mounting	Optional DIN-rail / VESA / wall mount	Optional DIN-rail / VESA / wall mount	Optional DIN-rail / VESA / wall mount	Optional DIN-rail / VESA / wall mount	Optional DIN-rail / VESA / wall mount
Operating System	Microsoft Windows	Windows 10 64-bit	Windows 10 64-bit	Windows 10 64-bit	Windows 10/11 64-bit	Windows 10/11 64-bit
	Linux	Yes (by project inquiry)	Yes (by project inquiry)	Yes (by project inquiry)	Yes (by project inquiry)	Yes (by project inquiry)
Security & Managebility	DeviceOn	Yes	Yes	Yes	Yes	Yes
	Trellix, Acronis	Yes	Yes	Yes	Yes	Yes
	TPM / EdgeBMC	-	Yes (TPM on board) / No EdgeBMC	Yes (TPM on board) / No EdgeBMC	Yes (TPM on board) / No EdgeBMC	Yes (TPM on board) / No EdgeBMC
	IEC-62443 Pre-Certified/VOC	-	-	-	Yes	-

Note: “-” means Not Applicable (N/A).

DIN-Rail Series



NEW

Modular Series



ARK-1221L	ARK-1222	ARK-1250L	ARK-1251	ARK-2250L	ARK-2251
Intel® Atom® x6413E Intel® Celeron® N6210 Intel® Celeron® J6412	Intel® Atom® x7433RE Intel® N97 Intel® i3-N305	Intel® Core i3-1115G4E Intel® Core i5-1145G7E Intel® Core i7-1185G7E (by project)	Intel® Core Ultra 5 125U Intel® Core Ultra 7 155U	Intel® Core i7-6600U/ Intel® Core i3-6100U/ Intel® Core i5-1335UE/ Intel® Core i7-7600U/ Intel® Core i3-7100U	Intel® Core i3-1315UE/ Intel® Core i5-1335UE/ Intel® Core i7-1365UE
4/2/4	4/4/8	2/4/4	12/12	2	2P+4E/2P+8E/2P+8E
DDR4 3200 MHz, up to 32GB	DDR5 4800 MHz, up to 16GB (Built-in)	DDR4 3200 MHz, up to 64GB	DDR5 5600 MHz, up to 96GB	DDR4 2133 MHz	DDR5 4800MHz
2 x 260-pin SO-DIMM	1x 262-pin SO-DIMM	2 x 260-pin SODIMM	2 x 262-pin SODIMM	1 x 260-pin SODIMM	2 x 262-pin SODIMM
-	-	1 x VGA, up to 1920 x 1200 @ 60Hz	-	1x VGA, Up to 1920 x 1200 @ 60Hz	-
1 x HDMI: 4096 x 2160 @ 60 Hz 1 x DP: 4096 x 2160 @ 60 Hz	2 x HDMI: 4096 x 2160 @ 60 Hz	1 x HDMI: 4096 x 2160 @ 60 Hz 2 x HDMI: 4096 x 2160 @ 60Hz (supported by A2)	1 x HDMI: 4096 x 2160 @ 60 Hz 1 x DP: 4096 x 2160 @ 60 Hz	DP and HDMI(Optional) HDMI 4096 x 2160 @ 24Hz	2 x HDMI (4096 x 2304 @ 60Hz)
1 x full-size mPCIe	1 x full-size mPCIe	1 x full-size mPCIe	-	2 x full-size Mini-PCIe (one with SIM holder, one supporting mSATA)	1 x full-size Mini-PCIe (supports mSATA)
2 (1 x E-Key, 1 x B-Key)	2 (1 x E-Key, 1 x B-Key)	2 (1 x E-Key, 1 x B-Key)	3 (1 x E-Key, 1 x B-Key, 1 x M-key)	-	2 (1 x E-Key, 1 x M-Key)
-	Yes	Yes	Yes	Supported	Supported
GbE1: Intel i225-LM GbE GbE2: Intel i225-LM GbE	GbE1: Intel i226-IT GbE; GbE2: Intel i226-IT GbE	GbE1/3: Intel i225 GbE; GbE2: Intel i219 GbE; GbE4: Intel i225 GbE (supported by A2)	GbE1/2: Intel i226LM GbE GbE3: Intel i210 GbE:	Intel i219 GbE	GbE1: Intel i219 GbE GbE2/3: Intel i226 GbE
Yes	Yes	Yes	Yes	-	-
Realtek ALC888S	Realtek ALC888S	Realtek ALC888S	Realtek ALC888S	Realtek ALC888S	Realtek ALC888S
Line-out/Mic-in (switch)	Mic-in, Line-out	Line-out/Mic-in (switch)	Mic-in, Line-out	Line-out, Mic-in	Line-out, Mic-in
Yes	Yes	Yes	Yes	Yes	Yes
1 x 2.5" SATA drive bay (Max 9.5mm height)	-	1 x 2.5" SATA drive bay (Max 9.5mm height)	-	1 x 2.5" SATA III HDD bay (Max 12.5mm in height)	-
1 x full-size mSATA (shared with mPCIe)	1 x full-size mSATA (shared with mPCIe)	1 x full-size mSATA (shared with mPCIe)	-	1 x full-size mSATA share with miniPCIe	1 x full-size mSATA share with main mPCIe
1 x B key, 1 x E key	1 x B-Key, 1 x E key	-	1x B Key, 1x M Key	-	-
2 x USB 3.2, 2 x USB 2.0	2 x USB3.2, 2 x USB2.0	3 x USB3.2, 3 x USB2.0 1 x internal USB 2.0 (by project)	2 x USB3.2, 4 x USB2.0	6 (4 x USB 3.0, 2 x USB 2.0)	6 (Gen1)
-	-	-	-	-	-
8-bit programmable DIO	8-bit programmable DIO	8-bit programmable DIO	8-bit programmable DIO	8-bit programmable DIO	8-bit programmable DIO
2 x RS-232/422/485	4 x RS-232/422/485	4 x RS-232/422/485	2 x RS-232/422/485, 2 x RS-422/485	4 x RS232/ 422/ 485	6 x RS232/ 422/ 485
Optional: 1 x CANBus	Optional: 2 x CANBus	Optional: 1 x CANBus	Optional: 1 x CANBus (replacing GPIO)	-	-
12 ~ 28 V ^{DC}	12 ~ 28 V ^{DC}	12~24 V ^{DC}	12 ~ 28 V ^{DC}	Default: 12 V ^{DC} , ± 10%; Optional : 9-36 V ^{DC}	12 ~ 24 V ^{DC}
Atom x6413E: 9.6W/18.96W Celeron N6210: 12.66W/21.89W Celeron J6412: 12.97W/26.46W	Atom X7433RE: 11.11W/29.3W N97:12.95W/32.8W i3-N305:14.47W/49.08W	Core i3-1115G4E: 18W/30.6W Core i5-1145G7E: 19.8W/35.1W	Core Ultra 5 125U: 18.19W/61.74W Core Ultra 7 155U: 17.83W/59.44W	6.92W (i3-6100U)/ 7.96W (i7-6600U)	19.05W(i3-1315UE)/ 19.30W(i5-1335UE)/ 19.47W(i7-1365UE)
Optional: Lockable AC to DC, DC 24V/2.5A, 60W	Optional: AC to DC 19V/4.74A, 90W	Default: AC to DC, DC 19V/4.74A, 90W Optional: AC to DC, DC 24V/5A, 120W	Optional: AC to DC, DC 24V/5A, 120W	Lockable AC to DC, DC 12V/5A, 60W (Optional)	120W
With extended temperature peripherals: Atom x6413E: -40 ~ 60°C Celeron N6210/J6412: -20 ~ 60°C	With extended temperature peripherals: Atom X7433RE: -40 ~ 70°C Intel N97/i3-N305: -20 ~ 60°C	With extended temperature peripherals: -40 ~ 60°C	With extended temperature peripherals: -20 ~ 60°C	With extended temperature peripherals: -20 ~ 60°C	With extended temperature peripherals: -20 ~ 60°C
Vibration: IEC 60068-2-64, random, 5 ~ 500 Hz, 1 hr/axis(with wall mount) Shock: IEC 60068-2-27, half sine, 11 ms duration(with wall mount)	Vibration: IEC 60068-2-64, random, 5 ~ 500 Hz, 1 hr/axis(with wall mount) Shock: IEC 60068-2-27, half sine, 11 ms duration(with wall mount)	Vibration: IEC 60068-2-64, random, 5 ~ 500 Hz, 1 hr/axis. (with wall mount) Shock: IEC 60068-2-27, half sine, 11 ms duration(with wall mount)	Vibration: IEC 60068-2-64, random, 5 ~ 500 Hz, 1 hr/axis. (with wall mount) Shock: IEC 60068-2-27, half sine, 11 ms duration(with wall mount)	With SSD: 3 Grms, random, 5 ~ 500 Hz, 1 hr/axis.	With SSD: 3 Grms, IEC 60068-2-64, random, 5 ~ 500 Hz, 1 hr/axis.
60 x 158 x 114 mm	60 x 158 x 114 mm	60 x 173 x 141 mm	60 x 173 x 141 mm	260 x 54 x 140.2 mm (10.24 x 2.13 x5.52 in)	260 x 54 x 140.2 mm (10.24 x 2.13 x5.52 in)
1.05kg (2.31lb)	0.94kg (2.07lb)	1.5kg (3.3lb)	1.5kg (3.3lb)	2.3kg (5.06lb)	2.3kg (5.06lb)
Default DIN-rail Optional VESA / wall mount	Default DIN-rail Optional VESA / wall mount	Default DIN-rail Optional VESA / wall mount	Default DIN-rail Optional VESA / wall mount	Desk / Wall / VESA / DIN-Rail Mount	Wall Mount
Windows 10/11 64-bit	Windows 10/11 64-bit	Windows 10/11 64-bit	Windows 10/11 64-bit	Windows 8.1, Windows 10	Windows 10, Windows 11
Ubuntu 20.04	Ubuntu 24.04	Ubuntu 20.04/Ubuntu 22.04	Ubuntu 24.04	Yes	Yes
Yes	Yes	Yes	Yes	Yes	Yes
Yes	Yes	Yes	Yes	Yes	Yes
Yes (optional: AMO-i029A) / No EdgeBMC	Yes (TPM on board) / No EdgeBMC	Yes (optional: AMO-i029A) / No EdgeBMC	Yes (TPM on board) / Yes (EdgeBMC)	-	Yes (optional: AMO-i029A) / No EdgeBMC
-	Yes	-	Yes	-	-

Performance Series



Model Name		ARK-3532B/C/D	ARK-3533
CPU	CPU	10 th Gen Intel Xeon W and Core i3/i5/i7/i9 processor	12 th /13 th /14 th Gen Intel Core i3/i5/i7/i9 processor 12 th /13 th
	Chipset	Intel W480E	Intel H610E
Memory	Max. Capacity	DDR4 2933 MHz, up to 64GB	DDR5 4800 MHz up to 64GB
	Socket	2 x 260-pin SODIMM	2 x 262-pin SO-DIMM
Display	VGA	1920 x 1200 @ 60Hz	-
	HDMI/DP	1 x HDMI port, HDMI 1.4 for HD video playback, 4096 x 2160 @ 30Hz; optional 3 rd display module (DVI-D/DP/HDMI)	2 x HDMI ports, HDMI 2.0 for HD video playback, 4096 x 2160 @ 60Hz, (DP by project)
	Multiple Displays	VGA+HDMI + 3 rd display module	Dual
Expansion Interface	Mini PCIe	1 x full-size Mini PCIe (supports mSATA, SIM shared with M.2)	-
	M.2	1 x M.2 Key E 2230	1 x M.2 Key E 2230 and 1 x M.2 Key B 2280
	PCIe + PCI	1 x PCIe x4, 1 x PCIe x16 for ARK-3532B 1 x PCIe x4, 2 x PCI for ARK-3532C 1 x PCIe x4, 2 x PCI, 1 x PCIe x16 for ARK-3532D	Optional 2 x PCI by AMO-3510)
	i Door	-	-
Ethernet	Controller	GbE1: Intel i219-LM GbE; GbE2/3/4: Intel i210 GbE	GbE1: Intel i219-LM GbE GbE2/3/4: Intel i226-V GbE
	CODEC	Realtek ALC888S	ALC888S
	Connector	Line-out/Mic-in (switch)	Line-out/Mic-in (switch)
Watchdog Timer		Yes	Yes
Storage	SATA	2 x 2.5" SATA III max. 15mm height (optional Up to 4 x 2.5 HDD bays)	2 x 2.5" SATA III (9mm height HDD bays)
	M.2	-	1 x M.2 Key B 2280 (PCIe x 2)
	mSATA	1 x mSATA socket (shared with Mini PCIe)	-
I/O	USB Type A	4x USB 3.2, 4x USB 3.0	2 x USB3.2 Gen 2, 2 x USB3.2 Gen 1, 4 x USB2.0
	USB Type C	-	-
	GPIO	16-bit	Optional 16-bit
	COM Port	4 x RS-232/422/485; 2 x RS-232 (COM3 w/ 5V/12V)	4 x RS-232/422/485; 4 x RS-232
	Others	-	Optional 2 x CANBus
Power	Power Type	AT/ATX	AT/ATX
	Power Supply Voltage	12-36 V ^{DC}	9~36 V ^{DC}
	Connector	4-pin phoenix head	4-pin phoenix head
	Power Consumption(Idle/ Full loading)	30W/64.8W	21.2W/40.4W
	Power Adapter	230W (optional)	150W/230W (optional)
Environment	Operating Temperature (air-flow 0.7 m/s)	Up to 65W processor: -20 ~ 60°C w/ 0.7m/sec air flow w/ HDD: 0 ~ 40°C w/ 0.7m/sec air flow	Up to 35W processor with extended temp peripherals: -20 ~ 60°C w/ 0.7m/sec air flow
	Vibration & Shock Resistance (with SSD/mSATA)	3 Grms, IEC 60068-2-64, random, 5 ~ 500 Hz, 1 hr/axis. 30G, IEC 60068-2-27, half sine, 11 ms duration	With SSD: 3 Grms, IEC 60068-2-64, random, 5 ~ 500 Hz, 1 hr/axis.
Physical Characteristics	Dimensions (W x H x D mm)	ARK-3532B/C: 156 x 204 x 230 mm ARK-3532D: 197.2 x 204 x 230 mm	200 x 75 x 215 mm
	Weight	5.7 kg (12.6 lb) for ARK-3532B/C 6.4 kg (14.1 lb) for ARK-3532D	3.2 kg (7.06 lb)
	Mounting	Desk mount	Desk mount
Operating System	Microsoft Windows	Windows 10/11	Windows 10/11
	Linux	Yes (by project inquiry)	Ubuntu 22.04/24.04
Security & Managebility	DeviceOn	DeviceOn, DeviceOn/iEdge	DeviceOn, DeviceOn/iEdge
	Trellix, Acronis	Yes	Yes
	TPM / EdgeBMC	TPM optional: AMO-I029A / No EdgeBMC	TPM optional: AMO-I029A / No EdgeBMC
	IEC-62443 Pre-Certified/VOC	-	Yes

Note: “-” means Not Applicable (N/A).



ARK-3534B	ARK-3534C	ARK-3534D	ARK-3535
12 th /13 th /14 th Gen Intel Core i3/i5/i7/i9 processor 12 th /13 th	12 th /13 th /14 th Gen Intel Core i3/i5/i7/i9 processor	12 th /13 th /14 th Gen Intel Core i3/i5/i7/i9 processor	AMD Ryzen 5 Pro 8640U/ AMD Ryzen 7 Pro 8845HS
Intel H610E (R680E by project)	Intel H610E (R680E by project)	Intel R680E	-
DDR5 4800 MHz up to 64GB	DDR5 4800 MHz up to 64GB	DDR5 4800 MHz up to 64GB	DDR5 5600 MHz up to 128GB
2 x 262-pin SO-DIMM	2 x 262-pin SO-DIMM	2 x 262-pin SO-DIMM	2 x 262-pin SO-DIMM
-	-	-	-
2 x HDMI ports, HDMI 2.0 for HD video playback, 4096 x 2160 @ 60Hz	2 x HDMI ports, HDMI 2.0 for HD video playback, 4096 x 2160 @ 60Hz	2 x HDMI ports, HDMI 2.0 for HD video playback, 4096 x 2160 @ 60Hz	2 x HDMI and 1 x Type-C(Alt) (3840 x 2160 @ 60Hz)
Dual HDMI + optional 3rd display module	Dual HDMI + optional 3rd display module	Dual HDMI + optional 3rd display module	Triple
-	-	-	-
1 x M.2 Key E 2230 and 1 x M.2 Key B 2280	1 x M.2 Key E 2230 and 1 x M.2 Key B 2280	1 x M.2 Key E 2230 and 1 x M.2 Key B 2280	2 (1 x B-Key and 1 x E-Key)
1 x PCIe x4, 1 x PCIe x16	2 x PCI, 1 x PCIe x16	2 x PCI, 1 x PCIe x4, 1 x PCIe x16	-
-	-	-	-
GbE1: Intel i219-LM GbE GbE2: Intel i225-V GbE	GbE1: Intel i219-LM GbE GbE2: Intel i225-V GbE	GbE1: Intel i219-LM GbE GbE2/3/4: Intel i225-LM GbE	GbE1/2/3: Intel i226V LAN GbE4: Intel i2101T GbE
ALC888S	ALC888S	ALC888S	ALC888S
Line-out/Mic-in (switch)	Line-out/Mic-in (switch)	Line-out/Mic-in (switch)	Line-out/Mic-in (switch)
Yes	Yes	Yes	Yes
2 x 2.5" SATA III 15mm height HDD bay supporting Intel SW RAID (Up to 3 x 2.5" SATA III HDD bays)	2 x 2.5" SATA III 15mm height HDD bay supporting Intel SW RAID (Up to 3 x 2.5" SATA III HDD bays)	2 x 2.5" SATA III 15mm height HDD bay supporting Intel SW RAID (Up to 3 x 2.5" SATA III HDD bays)	2 x 2.5" SATA III 9.5mm height HDD bays
1 x M.2 Key B 2280 (PCIe x 2)	1 x M.2 Key B 2280 (PCIe x 2)	1 x M.2 Key B 2280 (PCIe x 2)	1 x M.2 Key B 2280 (PCIe x 2)
-	-	-	-
2 x USB3.2 Gen 2, 2 x USB3.2 Gen 1, 4 x USB2.0	2 x USB3.2 Gen 2, 2 x USB3.2 Gen 1, 4 x USB2.0	4 x USB3.2 Gen2, 4 x USB3.2 Gen1	8
-	-	-	1 (USB4/DP ALT mode/5V-3A)
Optional 16-bit	Optional 16-bit	Optional 16-bit	16-bit
4 x RS-232/422/485; 2 up to 4 (optional) x RS-232	4 x RS-232/422/485; 2 up to 4 (optional) x RS-232	4 x RS-232/422/485; 2 up to 4 (optional) x RS-232	6 (2 x RS-232/422/485 + 4 x RS-232/485)
Optional 2 x CANBus	Optional 2 x CANBus	Optional 2 x CANBus	2
AT/ATX	AT/ATX	AT/ATX	ATX/AT
9~36 V ^{DC}	9~36 V ^{DC}	9~36 V ^{DC}	9~36 V ^{DC}
4-pin Phoenix head	4-pin Phoenix head	4-pin Phoenix head	3-pin terminal block
56.1W/92.4W	56.1W/92.4W	56.1W/92.4W	TBD
230W (optional)	230W (optional)	230W (optional)	230W (optional)
Up to 65W processor with extended temp peripherals: -20 ~ 60°C w/ 0.7m/sec air flow	Up to 65W processor with extended temp peripherals: -20 ~ 60°C w/ 0.7m/sec air flow	Up to 65W processor with extended temp peripherals: -20 ~ 60°C w/ 0.7m/sec air flow	With extended temp peripherals: -20 ~ 50°C
With SSD: 3 Grms, IEC 60068-2-64, random, 5 ~ 500 Hz, 1 hr/axis.	With SSD: 3 Grms, IEC 60068-2-64, random, 5 ~ 500 Hz, 1 hr/axis.	With SSD: 3 Grms, IEC 60068-2-64, random, 5 ~ 500 Hz, 1 hr/axis.	With SSD: 3 Grms, IEC 60068-2-64, random, 5 ~ 500 Hz, 1 hr/axis.
156 x 204 x 230 mm	156 x 204 x 230 mm	197.2 x 204 x 230 mm	200 x 75 x 215 mm (78.74 x 29.53 x 84.65 in)
5.705 kg (12.57 lb)	5.705 kg (12.57 lb)	6.41 kg (14.13 lb)	3.2 kg (7.06 lb)
Desk mount	Desk mount	Desk mount	Desk mount
Windows 10/11	Windows 10/11	Windows 10/11	Windows 10, Windows 11
Ubuntu 22.04/24.04	Ubuntu 22.04/24.04	Ubuntu 22.04/24.04	Ubuntu 24.04, others by project inquiry
DeviceOn, DeviceOn/iEdge	DeviceOn, DeviceOn/iEdge	DeviceOn, DeviceOn/iEdge	DeviceOn, DeviceOn/iEdge
Yes	Yes	Yes	Yes
Yes (optional: AMO-I029A) / No EdgeBMC	Yes (optional: AMO-I029A) / No EdgeBMC	Yes (optional: AMO-I029A) / No EdgeBMC	Yes (TPM on board) / Yes (EdgeBMC)
Yes	Yes	Yes	-

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