ARK-2252

Intel® Core™ Ultra Series 3 processors Fanless Box PC



WISE-DeviceOn SUSI API WEDA EdgeAI SDK

Features

- Intel® Core Ultra Series 3 Processor
- DDR5-6400/7200 CSODIMM memory support up to 128G
- M.2 E Key, B Key and M Key for storage and wireless module installation
- Up to 4 x Intel GbE, 6 x serial ports, 8-bit DIO, 2xCANBus
- TPM on board for system security
- 3 displays with 2 x 4K HDMI, 1x4K typeC
- 4 x USB 3.2 and 2 x USB 2.0
- 12V~24V wide range power input
- -20 ~ 60 °C extended operating temperature
- Support Advantech idoor, POE module
- Support Edge AI SDK, WEDA

Specifications

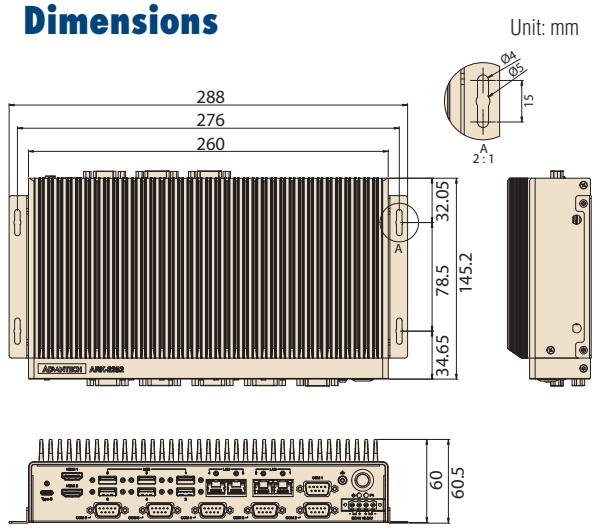
Processor System	CPU	Intel® Core™ Ultra 7 - 358H (12Xe)	Intel® Core™ Ultra 5 - 325 (4Xe)
	Frequency	1.9GHz up to 4.8GHz	2.1GHz up to 4.5GHz
	Core Number	16	8
	BIOS	AMI EFI 512 Mbit	
	AI Capability	Up to 180 TOPS	Up to 95 TOPS
Memory	Technology	DDR5 6400/7200 MT/s CSODIMM	DDR5 6400 MT/s CSODIMM
	Max capacity	Up to 128 GB	
	Socket	2x 262-pin SODIMM (no support ECC)	
Graphics	Chipset	Intel® Xe 3 LPG up to 192EU (12Xe) Intel® Xe 3 LPG (4Xe)	
	HDMI	2x HDMI 2.1 TMDS: 3840x2160@ 60Hz	
	TypeC DP	1x DP via USB Type C Alt mode: 3840x2160@ 60Hz	
	Triple Display	2 x HDMI + 1 x Type C DP	
Ethernet	LAN1	10/100/1000/2500 Mbps Intel i226V GbE, support Wake On LAN	
	LAN2	10/100/1000/2500 Mbps Intel i226V GbE, support Wake On LAN	
	LAN3	10/100/1000/2500 Mbps Intel i226V GbE, support Wake On LAN, support PoE module	
	LAN4	10/100/1000/2500 Mbps Intel i226V GbE, support Wake On LAN, support PoE module	
Audio	Interface	1x, (Mic-in or Line-out, by Realtek ALC888S, modified by OS)	
I/O Interface	Seriel Ports	2 x RS232/422/485 (default: RS-232, default support High speed COM), modified by BIOS 4 x RS232/485 (6 wires), (default: RS-485) modified by Jumper and BIOS	
	USB Ports Type A	4 x USB3.2 Gen2 (w/ Cable locking mechanism) 2 x USB2.0 (w/ Cable locking mechanism) 1 x internal USB 2.0 Type A for security dongle (cannot co-exist w/ iDoor or PoE)	
	USB Port Type C	1x USB Type C w/ USB4, DP alt mode, 5V-3A	
	GPIO	8-bit Programmable DIO	
	CANBus	2x CANBus 2.0	
Expansion	M.2	1 x Key-B 3042/ 3052 (PCIe Gen4 x2, USB3.2) w. 1 x with nano SIM holder, for 5G/AI/idoor module 1 x Key-E 2230 (PCIe Gen4 x1, USB2.0) for WiFi Module 1 x Key-M 2280 (PCIe Gen5 x4)	
Storage	NVMe	Default: 1x M.2 2280 M key (PCIe Gen5 x4) Optional: 1x M.2 2242 B key (PCIe Gen4x2) (modified by switch, need 1 expansion BRK:1960110006N010 & 1 screw 193B0305E2) support Intel SW RAID up to 512G	
Other	WatchDog Timer	255 levels timer interval, setup by software	
	TPM	TPM2.0, NPCT764AAEYX FW7.2.4.1	
Software Support	Microsoft Windows	Windows 11 (LTSC) only	
	Linux	Ubuntu 26.04 only	
Power Requirement	Power Type	ATX/AT (default ATX)	
	Power Input Voltage	12-24 V_{DC}	
	Power Adapter	AC to DC, 230W (Optional)	
Power Consumption	Typical (OS idle mode)	358H: 16.8W; 325: 18.3W	
	Max. (Full loading)	358H: 36.7W; 325: 34.1W	
Mechanical	Construction	Aluminum housing	
	Mounting	DIN-rail/Wall Mount/VESA Mount	
	Dimensions (W x H x D)	260 x 60 x 145 mm	
	Weight	2.675 kg	
Environment	Operating Temperature	With extended temp. peripherals: -20 ~ 60° C with 0.7m/s air flow	
	Storage Temperature	-40 ~ 85 °C (-40 ~ 185°F)	
	Relative Humidity	95% @ 40 °C (non-condensing)	
	Vibration during Operation	With SSD: 3 Grms, IEC60068-2-64, random, 5~500 Hz, 1hr/axis (with Wall Mount)	
	Shock during Operation	With SSD: 30 G, IEC-60068-2-27, half sine, 11 ms duration (with Wall Mount)	
	EMC	CE/FCC Class B, CCC, UKCA, BSMI	
	Safety	UL, CB, CCC, UKCA	

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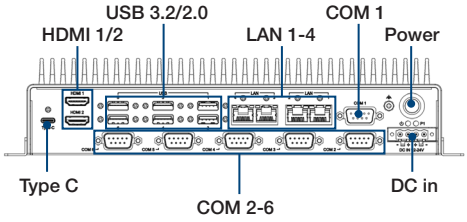
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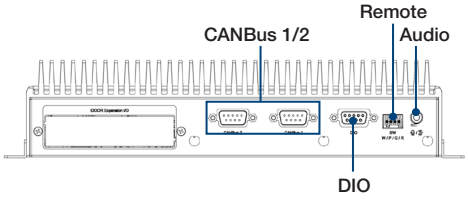
Dimensions



Front Panel External I/O View



Rear Panel External I/O View



Ordering Information

Barebone system	CPU	RAM	HDMI	TypeC DP	LAN	COM	USB	M.2 B	M.2 E	M.2 M	SIM	Option Module
ARK-2252-U1A1	Ultra 5 325	2 socket (up to 128G)	2	1	4	6	4 x USB 3.2 2 x USB 2.0	1	1	1	1	5G/WiFi/iDoor/PoE
ARK-2252-S9A1	Ultra 7 358H	2 socket (up to 128G)	2	1	4	6	4 x USB 3.2 2 x USB 2.0	1	1	1	1	5G/WiFi/iDoor/PoE
ARK-2252-U1A1U	Ultra 5 325	2 socket (up to 128G)	2	1	4	6	4 x USB 3.2 2 x USB 2.0	1	1	1	1	5G/WiFi/iDoor/PoE
ARK-2252-S9A1U	Ultra 7 358H	2 socket (up to 128G)	2	1	4	6	4 x USB 3.2 2 x USB 2.0	1	1	1	1	5G/WiFi/iDoor/PoE

* P/N with alphabet "U" as suffix are Made in TW

WEDA-Ready System	CPU	RAM	Storage	HDMI	TypeC DP	LAN	COM	USB	M.2B	M.2 E	SIM	Option Module
ARK-2252-SW0A1	Ultra 7 358H	1x16G DDR5 6400 built in	1x256G M.2 M key 2280 built in	2	1	4	6	4 x USB 3.2 2 x USB 2.0	1	1	1	5G/WiFi/iDoor/PoE

*WEDA-Ready System is made in TW

Packing List

Part Number	Description
-	1 x ARK-2252 Unit
-	1 x User Manual (Simplified Chinese)
-	1 x China RoHS
-	2 x second memory pad
1652003234	1 x 4-pin plug-in block for power in
1652007880-01	1 x 4-pin plug-in block for remote switch
1960071555N031	2 x mounting bracket
36WSWPDOBD0211	Trellix, Acronis
36WSWPDOBUND11	WISE-PaaS/DeviceOn Client Bundle

Embedded OS

Part Number	Description
20706WLH1M0005	Win 11 IoT Ent 2024 High End for Ultra 7
20706WLV1M0006	Win 11 IoT Ent 2024 Value for Ultra 5
TBD	Ubuntu 26.04 (should be ready in Oct.~Nov)

Optional POE modules

Part Number	Description
AMO-M021	POE Module A1 Single 30W w/ HS for ARK-2252
AMO-M022	POE Module A1 dual 15.4W w/ HS for ARK-2252

1: 30W PoE can be supported by LAN4 only
2: 15W PoE can be supported by LAN3 and LAN4
3: Cannot co-exist w/ internal USB 2.0 or iDoor

Optional thermal kit for 5G and Hailo module

Part Number	Description
AMK-A0067	Thermal kit of ARK-2252 for 5G and Hailo AI B Key

1. Condition may apply, contact your representative for further information

Optional Items

Part Number	Description
96PSA-A230W24P4-3	ADP A/D 100-240V 230W 24V C14 TERMINAL BLOCK 4P
1702002600	Power cable 3-pin 183cm, USA type
1702002605	Power cable 3-pin 183cm, EU type
1702031801-11	Power cable 3-pin 183cm, UK type
1700000237	Power cable 3-pin 183cm, PSE type
1700001714	Power cable 3-pin 183cm, Taiwan BSMI
AMK-V019E	VESA mount kits
AMK-R005E	DIN Rail mount kits

Optional modules for iDoor

Part Number	Description
96PSA-A230W24P4-3	ADP A/D 100-240V 230W 24V C14 TERMINAL BLOCK 4P
PCM-34D4R2-AE	Non-Isolated RS-232, DB37x1, M.2 Bkey (2242, USB)
PCM-34D2R2-AE	Isolated RS-232, DB9 x2, M.2 Bkey (2242, USB)
PCM-34R1TP-AE	1 Port 2.5G, Intel i225-IT, RJ45, M.2 B+M key (3042, PCIex1)
PCM-34R2GL-AE	2 Port 1G, Intel i350-AM2, RJ45, M.2 B+M key (3042, PCIex1)
AMK-A0066	ARK-2252 2xUSB port expansion Kit

1: PCM IO module need to add side bracket
a.1x 1960065854N002 (bracket)
b.2x 19310305C0 (screw)
2. PCM M.2 2242/3042 idoor main board need to assembled with expansion bracket
a.1x 1960110006N010 (expansion bracket)
b.1x 193B0305E2 (M3x5L screw)
3. Cannot co-exist w/ internal USB 2.0 or PoE

Edge AI SDK — *Edge AI Inference Deployment and Hardware Validation*

Inference Kit | Production-Ready AI Inference on Edge Devices

Provides a unified and hardware-aligned runtime for deploying and validating AI inference on edge devices

It simplifies integration across CPUs, GPUs, and AI accelerators while enabling performance benchmarking and compatibility verification on target hardware.Designed for production use, Inference Kit helps hardware partners ensure stable, scalable, and repeatable AI deployment across product lines.



Benefits and Features

Unified Inference Runtime

- Consistent inference across CPUs, GPUs, and accelerators
- Vendor-optimized runtime integration
- Built-in UnielnfraI acceleration framework
- Optimized inference pipelines and runtime efficiency

Hardware Validation

- Benchmarking on target devices
- OS and accelerator compatibility validation
- Performance and stability verification

Production-Ready Deployment

- Stable, long-running inference operation
- System monitoring and observability support
- Designed for scalable edge deployment

Global Customer Support

- System reliability certification
- Inference computing enablement
- Edge-to-cloud scalability collaboration

Vertrieb durch AMC

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