ARK-2251

Intel 13th Generation Core i3/i5 Modular Fanless Box PC

NEW

Features

- Intel® 13th Gen. Core™ i3/i5 processor
- Support dual channel DDR5 SODIMM memory up to 64GB
- Support NVMe with PCIe x4
- 3x GbE, 6x USB (2x independent), 6x COM, 2x CANbus, Dual HDMI
- M.2 E key and mPCIe interfaces support wireless module installation
- Support 11x iDoors for IO expansion
- Optional PoE module
- 12-24V wide power input
- -20-60°C wide operating temperature
- WISE-DeviceOn supported for quick AI deployment at scale

Windows Embedded **WISE-DeviceOn** **SUSI API** LISTED c(UL)us E180081 CE FC

Specifications

Processor System	CPU	13th Generation Intel® Core™ i Processor Core i3-1315UE	Core i5-1335UE
	Frequency	1.2 GHz	1.3 GHz
	Core Number	2P+4E	2P+8E
	BIOS	AMI EFI 256Mbit	
Memory	Technology	DDR5 4800 MHz	
	Max capacity	64GB	
	Socket	2x 262-pin SODIMM (no support ECC)	
Graphics	Chipset	Intel® UHD Graphics for 13th Gen Intel® Processors	Intel® Iris® Xe Graphics eligible
	HDMI	Up to 4096 x 2160 @ 60Hz	
	Dual Display	2x HDMI	
Ethernet	LAN1	10/100/1000 Mbps Intel i219 GbE, support Wake On LAN	
	LAN2	10/100/1000/2500 Mbps Intel i226 GbE, support Wake On LAN (optional PoE module)	
	LAN3	10/100/1000/2500 Mbps Intel i226 GbE, support Wake On LAN (optional PoE module)	
Audio	Interface	Realtek ALC888S, High Definition Audio. Line-out, Mic-in	
I/O Interface	Serial Ports	6x RS-232/422/485	
	USB Ports	6x USB3.1 (2x are independent), 1 x internal USB2.0 for security dongle	
	GPIO	8-bit Programmable DIO	
	CANBus	2	
Expansion	Mini PCIe	1x Full-size mPCIe	
	M.2	1x M.2 2230 (E Key) and 1x M.2 2280 (M Key)	
Storage	NVMe	1x M.2 M Key supporting NVMe (PCIe Gen3x4) [#1]	
	mSATA	shared with mPCIe	
Other	WatchDog Timer	255 levels timer interval, setup by software	
	TPM	TPM 2.0 (Optional by AMO-I029)	
Software Support	Microsoft Windows	Windows 10 Enterprise	
	Linux	Ubuntu 22.04, others by project support	
Power Requirement	Power Type	ATX/AT	
	Power Input Voltage	12-24 V_{DC}	
Power Consumption	Typical (OS idle mode)	19.05W	19.30W
	Max. (Full loading)	38.21W	41.23W
Mechanical	Construction	Aluminum housing	
	Mounting	Wall mounting	
	Dimensions (W x H x D)	260 x 54 x 140.2 mm (10.24" x 2.13" x 5.52")	
	Weight	2.3kg (5.06lb)	
Environment	Operating Temperature	With extended temp. peripherals: -20 ~ 60° C with 0.7m/s air flow (only up to 40°C when using with the adapter)	
	Storage Temperature	-40 ~ 85 °C (-40 ~ 185°F)	
	Relative Humidity	95% @ 40 °C (non-condensing)	
	Vibration during Operation	3 Grms, IEC60068-2-64, random, 5~500 Hz, 1hr/axis	
	Shock during Operation	30 G, IEC-60068-2-27, half sine, 11 ms duration	
	EMC	CE, FCC class B, CCC, BSMI	
	Safety	CB, UL, CCC, BSMI	

#1: M.2 M Key SSD with Heat Sink couldn't fit in ARK-2251.

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Premier Partner

Vertrieb durch

AMC

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ARK-2251

Dimensions

Unit: mm

Front Panel External I/O View

USB 3.1

Mic in   HDMI2   LAN3   LAN1   Switch
Line out   HDMI1   LAN2   CANBUS   DC in

Rear Panel External I/O View

COM4   COM3   COM2   COM1   LED   PWR Button

iDoor Module   DIO   COM6   COM5
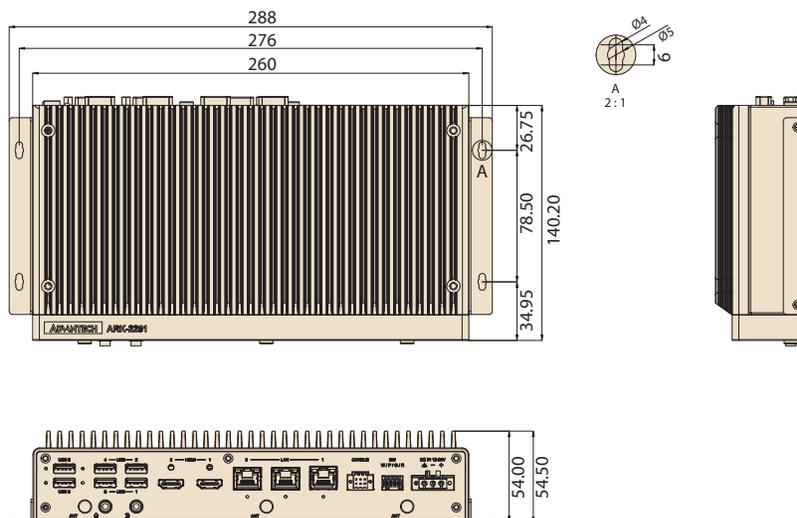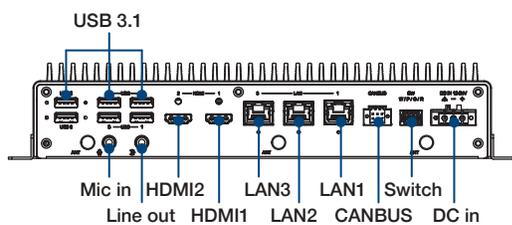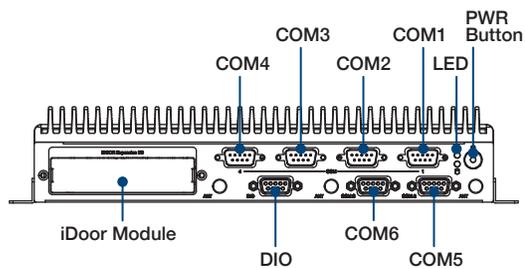
Ordering Information

Part No.	CPU	RAM	HDMI	GbE	USB3.1	RS-232/422/485	Audio	Full-size MiniPCIe	M.2	mSATA	Power Input	Operating Temp.	Made in
ARK-2251-S2A1	Intel Core i3-1315UE	Up to 64 GB	2	3	6	6	2	1	2	shared with mPCIe	12-24 V$_{DC}$	-20 ~ 60° C	China
ARK-2251-S2A1U	Intel Core i3-1315UE	Up to 64 GB	2	3	6	6	2	1	2	shared with mPCIe	12-24 V$_{DC}$	-20 ~ 60° C	Taiwan
ARK-2251-S3A1	Intel Core i5-1335UE	Up to 64 GB	2	3	6	6	2	1	2	shared with mPCIe	12-24 V$_{DC}$	-20 ~ 60° C	China
ARK-2251-S3A1U	Intel Core i5-1335UE	Up to 64 GB	2	3	6	6	2	1	2	shared with mPCIe	12-24 V$_{DC}$	-20 ~ 60° C	Taiwan

Packing List

Part Number	Description
-	1 x ARK-2251 Unit
-	1 x User Manual (Simplified Chinese)
-	Wrench for top cover
-	Mounting kit
-	Bracket & thermal pad for M.2 M Key SSD (NVMe)
36WSWPDOBD0211	WISE-DeviceOn
36WSWPDOBUND11	McAfee Application Control Lite/Acronis Backup 11.7 for Windows PC
1652004519	1 x 3-pin plug-in block for power in
1652007880-01	1 x 4-pin terminal block for switch
1652008233-01	1 x 6-pin terminal block for Canbus

Embedded OS

Part Number	Description
TBD	Win10
TBD	Ubuntu22.04

Optional Items

Part Number	Description
96PSA-A120W24T2-4	ADP A/D 100-240V 120W 24V C14 CORD END 62368
96PSA-A150W24T2-4	A/D 100-240V 150W 24V W/PFC C14 TERMINAL 62368
1702002600	Power cable 3-pin 183 cm, USA type
1702002605	Power cable 3-pin 183 cm, EU type
1702031801	Power cable 3-pin 183 cm, UK type
1700000237	Power cable 3-pin 183 cm, PSE type
1700024369-01	1M HDMI cable
1700031560-01	1.8M HDMI cable

Optional MOS modules for iDoor Expansion

Part Number	Description
MOS-2230-Z1201E	CANBus module, 2-Ch, USB I/F
MOS-2220-X1101E	Parallel LPT module, 1-Ch, USB I/F
MOS-2110Z-1201E	USB module, 2-Ch, PCIe I/F
MOS-2120-Z1101E	Giga LAN Ethernet module, 1-Ch, PCIe I/F
MOS-1120Y-0202E	Isolated RS-232, 2-Ch, DB9, PCIe I/F
MOS-1121Y-0202E	Isolated RS-422/485, 2-Ch, DB9, PCIe I/F
MOS-1120Y-1402E	Non-Isolated RS-232, 4-Ch, DB37, PCIe I/F
MOS-1130Y-0201E	Isolated CANBus, 2-Ch, DB9, PCIe I/F
MOS-1110Y-0101E	Isolated 16 DI/8 DO, 1-Ch, DB37, PCIe I/F
MOS-2120-Z1201	Dual Intel I210 GbE LAN iDoor, 2-Ch, PCIe I/F
MOS-2220-Z1101E	High Speed Serial COM module, 1-Ch, USB I/F

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