

ARK-1551

Intel® 8th Generation Core™ i5/Celeron Slim Fanless Computer

NEW



Features

- 8th Gen Intel® Core™ i5/Celeron
- Dual DDR4 2400MHz SO-DIMM memory up to 32G
- 1 x swappable 2.5" SATA HDD drive bay and 1 x mSATA slot, supports Intel software RAID 0/1
- 4 x USB 3.1 Gen 2, 2 x Intel GbE LAN, 4 x RS-232/422/485, 8 bit GPIO
- 4K2K HDMI and VGA dual independent displays
- 1 x full-size mPCIe with SIM holder and 1 x M.2 2230 E Key
- Support Advantech SQF PCIe2 NVMe storage
- 12V - 24V @ -10%/+20% wide range power input
- Advantech DeviceOn built-in for easy manageability



WISE-DeviceOn SUSI API



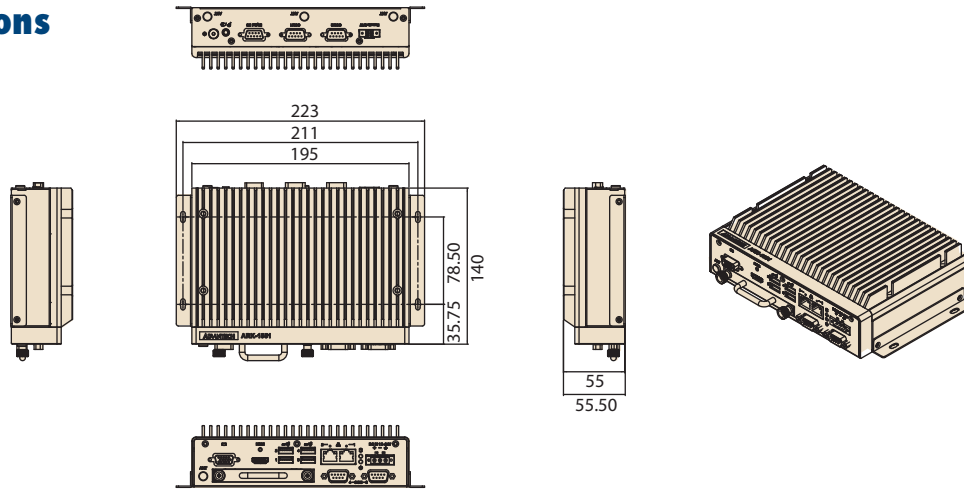
Specifications

Model Name		ARK-1551-S6A1	ARK-1551-U0A1
Processor System	CPU	Intel® Core i5-8365UE	Celeron 4305UE
	Frequency	1.6 GHz, turbo burst up to 4.1 GHz	2.0 GHz
	Core Number	4	2
	L3 Cache	6MB	2MB
	BIOS	AMI UEFI 256Mbit	
Memory	Technology	DDR4 2400MHz	
	Max capacity	32GB, each memory slot support up to 16GB	
	Socket	2 x 260-pin SO-DIMM	
Graphics	Chipset	Intel UHD Graphics 620	Intel HD Graphics 610
	Graphic Engine	Gen9 Low Power; 24 (UHD 620) /12(UHD 610) Execution Units Media Codec Supported: H.264, MPEG2, MVC, VC-1, WMV9, H.265 / HEVC 3D HW Acceleration: OpenGL 4.5, DirectX* 11.3/12, OpenCL* 2.1	
	Display Interface	HDMI: 1 x HDMI 1.4b, 4096 x 2160@30Hz VGA: 1 x VGA, 1920 x 1080@ 60Hz DP: 1 x DP 1.2, 4096 x 2304 @ 60Hz (*co-lay with VGA, by project support with MOQ = 30)	
	Dual Display	HDMI + VGA (Default) ; HDMI + DP (By project support, MOQ 30)	
Ethernet	LAN1	10/100/1000 Mbps Intel i210GbE, support Wake On LAN	
	LAN2	10/100/1000 Mbps Intel i219GbE, support Wake On LAN	
Audio	Interface	Realtek ALC888S, High Definition Audio, Mic-in or Line-out (ARK-1551-S6A2 without Audio)	
I/O Interface	Serial Ports	4 x RS-232/422/485 support from 50 bps to 921.6 kbps, with auto flow control. COM3 with 5V/12V power, by jumper setting	
	USB Ports	4 x USB 3.1 Gen2, Type A connector	
	GPIO	8-bit programmable DIO	
Expansion	Mini PCIe	1 x full-size mPCIe with 1x nano SIM holder (PCIe x2, USB 2.0x1, UIM, SATA x1) #1	
	M.2	1 x M.2 2230 E key for WiFi module (PCIe x2, USB 2.0x1) #1	
Storage	SSD/HDD	1 x Swappable 2.5" SATAIII drive bay (compatible with 7mm height)	
	mSATA	1 x full-size mSATA (share with mPCIe slot)	
	PCIe	Support 2x Advantech SQF PCIe2 NVMe storage (1 x M.2 2230 E Key + 1 x mPCIe)	
Other	WatchDog Timer	255 levels timer interval, setup by software	
	TPM	SLB9665XQ2.0	(Support by project)
	Case Open	Support	
Software Support	Microsoft Windows	Windows 10 / 11 IoT Enterprise	
	Linux	Support by project	
Power Requirement	Power Type	ATX/AT	
	Power Input Voltage	12 ~ 24 V _{DC} @ -10%/+20%	
	Power Adaptor	Celeron 4305UE: AC to DC, 90W (Optional) i5-8365UE: AC to DC, 90W for 0 ~ 40 °C (Optional) AC to DC, 120W for -20 ~ 55 °C (Optional)	
Power Consumption	Typical	12.81 Watt	8.93 Watt
	Max.	42.14Watt	24.7 Watt
Mechanical	Construction	Aluminum housing	
	Mounting	Wall Mounting (Default); VESA & DIN-Rail Mounting (Optional)	
	Dimensions (W x H x D)	195 x 55 x 140 mm (7.68" x 2.16" x 5.52")	
	Weight	Net Weight: 1.9KG; Gross Weight: 2.6KG	
Environment	Operating Temperature	With extended temp. peripherals: -20 ~ 55 °C (-4 ~ 131 °F) with 0.7 m/s air flow With 2.5 inch hard disk: 0 ~ 40 °C (32 ~ 104 °F) with 0.7 m/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	
	Shock during Operation	With SSD: 30 G, IEC-60068-2-27, half sine, 11 ms duration	
	EMC	CE/FCC Class B, CCC, BSMI	
	Safety	UL, CB, CCC and BSMI	

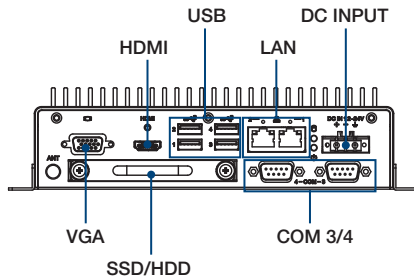
#1 SIM holder and M.2 slot are hardware interfaces for wireless communication integration only. System level RF certification is not available.

Dimensions

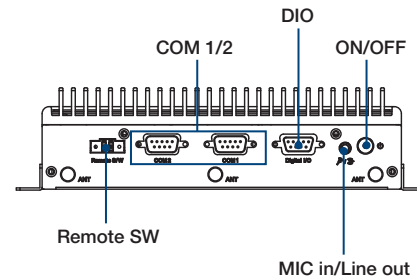
Unit: mm



Front Panel External I/O View



Rear Panel External I/O View



Ordering Information

Part No.	CPU	RAM	Display	GbE	USB 3.1 Gen 2	RS-232/422/485	Audio	Full-size MiniPCIe	SIM	M.2	2.5" SATA III HDD Bay	mSATA	Power Input	Operating Temp.
ARK-1551-S6A1	Intel® Core i5-8365UE Q/C SoC	Up to 32GB**	HDMI x 1 VGA x 1	2	4	4	Mic-in or Line-out	1	1	1	1 x swappable HDD Bay**	1 (shared w/ mPCIe)**	12-24 V _{DC}	-20 ~ 55 °C*
ARK-1551-U0A1	Celeron 4305UE D/C SoC	Up to 32GB**	HDMI x 1 VGA x 1	2	4	4	Min-in or Line-out	1	1	1	1 x swappable HDD Bay**	1 (shared w/ mPCIe)**	12-24 V _{DC}	-20 ~ 55 °C*
ARK-1551-S6A2	Intel® Core i5-8365UE Q/C SoC	Up to 32GB**	HDMI x 1 VGA x 1	2	4	4	N/A	1	1	1	1 x swappable HDD Bay**	1 (shared w/ mPCIe)**	12-24 V _{DC}	-20 ~ 55 °C*

*CPU condition: Turbo boost on with 0.7 air flow

** Memory, storage and operating system bundled by request.

Packing List

Part Number	Description
-	1 x ARK-1551 unit
-	1 x user manual (Simplified Chinese)
-	1 x wrench for top cover
-	1 x 3-pin terminal block
-	1 x 2-pin terminal block for remote power switch
-	WISE-PaaS/DeviceOn Package
-	2 x LAN Clip
-	1 x wall mount kit

Embedded OS

Part Number	Description
20706WX9VS0127	Win10 IoT Ent 2019 Value LTSC 64bit, English

Optional Items

Part Number	Description
XARK-ADP-90MDH	AC to DC adaptor, 19V/90W
96PSA-A120W24T2-3	AC to DC adaptor, 24V/120W
1700001524	Power Cable 3-pin 180cm, USA type (for XARK-ADP-90MDH)
170203183C	Power Cable 3-pin 180cm, Europe type (for XARK-ADP-90MDH)
170203180A	Power Cable 3-pin 180cm, UK type (for XARK-ADP-90MDH)
1700008921	Power Cable 3-pin PSE Mark 183cm (for XARK-ADP-90MDH)
1702002600	Power cable 3-pin 183cm, USA type (for 96PSA-A120W24T2-3)
1702002605	Power cable 3-pin 183cm, EU type (for 96PSA-A120W24T2-3)
1702031801	Power cable 3-pin 183cm, UK type (for 96PSA-A120W24T2-3)
1700000237	Power cable 3-pin 183cm, PSE type (for 96PSA-A120W24T2-3)
1700023855-01	1M lockable HDMI cable
1700023856-01	3M lockable HDMI cable
AMK-V019E	VESA mounting kit
AMK-R005E	DIN-rail mounting kit
EWM-C186K1	Wireless kit with Intel XMM7560 4G LTE CAT16
EWM-W192K2	WiFi/BT kit package with Intel AC9260 802.11 ac/a/b/g/n