ARK-1551

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

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 PCIex2 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 ALC892, High Defination Audio, Mic-in or Line-out	
I/O Interface	Seriel 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 PCIex2 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 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	

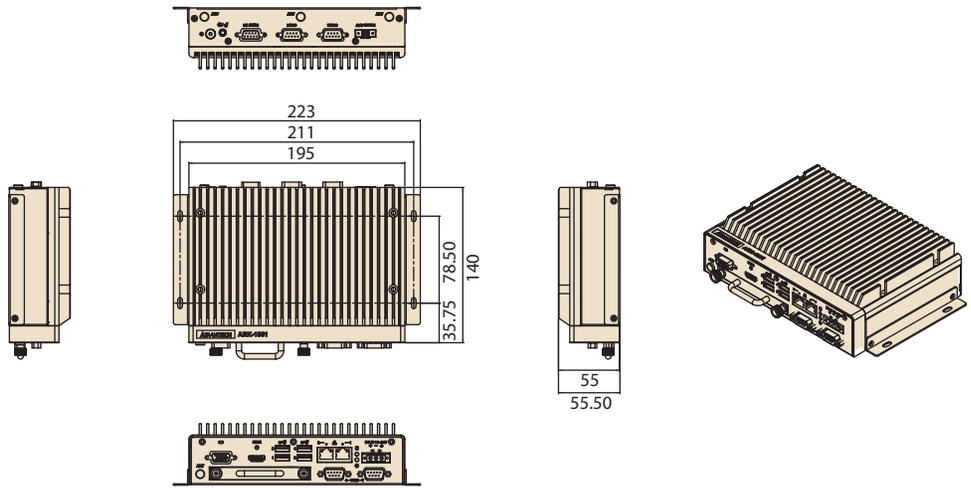
#1 SIM holder and M.2 slot are hardware interfaces for wireless communication integration only. System level RF certification is not available.

All product specifications are subject to change without notice.

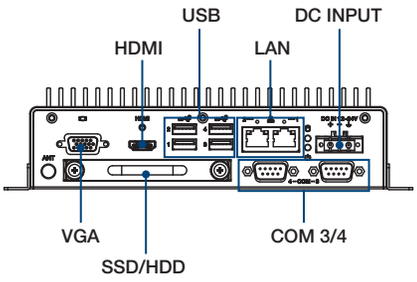
Last updated: 15-Dec-2020

Dimensions

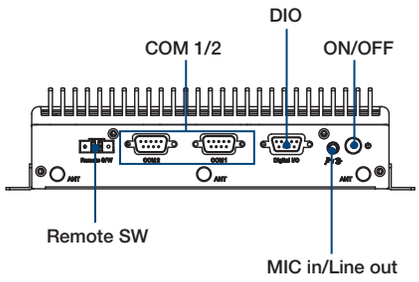
Unit: mm



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*

*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
20706WX9VS0089	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 (forXARK-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

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