ARK-3531

Intel® 9th Gen / Core™ i3/i5/i7/i9 LGA1151 Fanless Box PC

Windows Embedded WISE-DeviceOn SUSI API

Features

- Supports Intel® 9th Gen Core™ i3/i5/i7/i9 35W processor
- Dual display: VGA + HDMI
- DDR4 SO-DIMM memory support up to 64 GB
- 9-36V wide range power input
- Versatile I/Os including 2 x USB 3.1, 6 x USB 3.0 and 8 x COM ports
- Support 2 internal 2.5" Hard Drive bays (Intel SW RAID 0/1)
- SUSI API, WISE-DeviceOn, McAfee, Acronis bundled
- IP40 rating

Specifications

Processor System	CPU	i9-9900T	i7-9700TE	i5-9500TE	i3-9100TE	G4900T
	Frequency	2.1GHz-4.4GHz	1.8GHz-3.8GHz	2.2GHz-3.6GHz	2.2GHz-3.2GHz	2.9GHz
	L3 Cache	16MB	12MB	9MB	6MB	2MB
	Core	8	8	6	4	2
	TDP	35W				
	Chipset	H370 (Q370 support by TPN)				
	BIOS	AMI EFI 128Mbit				
Memory	Technology	DDR4 2666 MHz				
	Max. Capacity	64 GB				
	Socket	2 x 260-pin SO-DIMM				
Graphics	Chipset	Intel® UHD Graphics 630				
	Graphic Engine	Direct x 12, OpenGL 4.4 HW Encode: H.265/HEVC, H.264/MPEG-4 AVC, MPEG-2, JPEG/MJPEG and VP8. HW Decode: H.265/HEVC, H.264/MPEG-4 AVC, MPEG-2, VC-1/WMV9, JPEG/MJPEG, VP8 and VP9				
	VGA	2048x1280@ 60Hz				
	HDMI	1 HDMI port, HDMI 1.4 for HD video playback, 3840x2160@30Hz				
	Flexible Display (by TPN project)	HDMI+HDMI, VGA+DP, HDMI+DP				
Ethernet	LAN1	10/100/1000 Mbps Intel I219-LM GbE, support Wake On Lan				
	LAN2	10/100/1000 Mbps Intel I210GbE, support wake on lan				
	LAN3/LAN4 (by TPN project)	10/100/1000 Mbps Intel I210GbE, support wake on lan				
Audio	Interface	Realtek ALC888S, High Definition Audio, Line-out/Mic-in (switch)				
Others	Watch dog Timer	255-level timer interval, setup by software				
	TPM	Onboard TPM 2.0				
I/O Interface	Serial Port	4 x RS-232, 4 x RS-232/422/485 port with auto flow control; COM 1 support 5V/12V power supply (by jumper)				
	USB	2 x USB 3.1 Gen2 (5V/1.8A), 6 x USB 3.0 (5V/0.9A)				
	GPIO	16bit DIO				
Expansions	Mini PCIe	1 x Full-size MiniPCIe (support mSATA, support SIM holder #1, Optional AMO-I026 to supports m.2 B+M key 2280)				
	M.2	1 x E key 2230 for WiFi				
Storage	HDD	2 x 2.5" SATAIII HDD Bay with Max Height 9.5mm (Supports Intel SW RAID 0/1)				
	mSATA	1 x mSATA socket (Share with Mini PCIe)				
Software Support	Microsoft Windows	Windows 10				
	Linux	By Project Support				
Power Requirements	Power Type	AT/ATX				
	Power Input Voltage	9-36V				
	Power Adapter	AC to DC, 150W (Optional)				
Power Consumption (CPU/Memory Only)	Typical	16.8W				
	Max.	34.8W				
Mechanical	Construction	Aluminum housing				
	Mounting	Desk mounting				
	Dimensions (W x H x D)	200 x 75 x 215 mm				
	Weight	3.2Kg				
Environment	Operating Temperature	35W Processor with extended temp peripherals: -20 ~ 60° C with 0.7m/s air flow				
	Storage Temperature	-40 ~ 85° C				
	Relative Humidity	95% @ 40° C (non-condensing)				
	Vibration During Operation	With SSD: 3 Grms, IEC 60068-2-64, random, 5 ~ 500 Hz, 1 hr/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	CB(62368), UL(62368), CCC, BSMI				

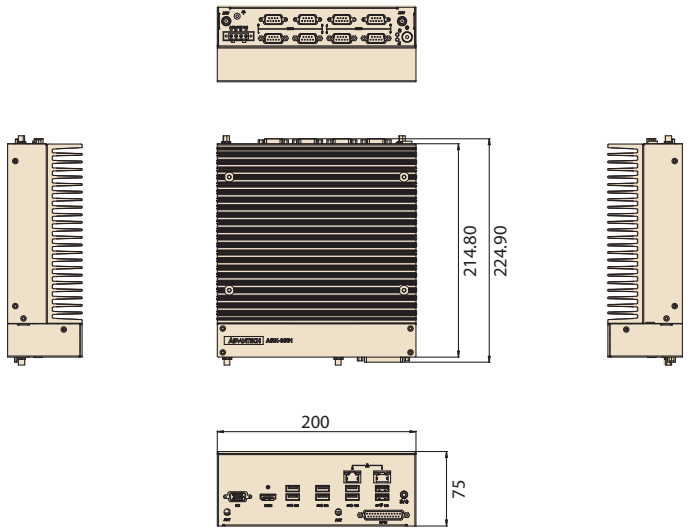
#1 SIM holder and M.2 slot are hardware interfaces for wireless communication integration only. System level RF certification is not available.

15323776600

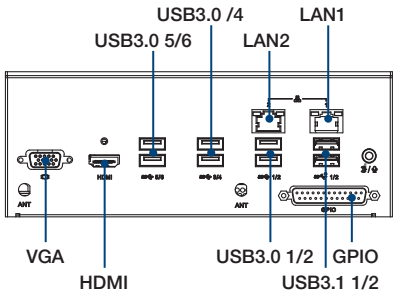
All product specifications are subject to change without notice.

Dimensions

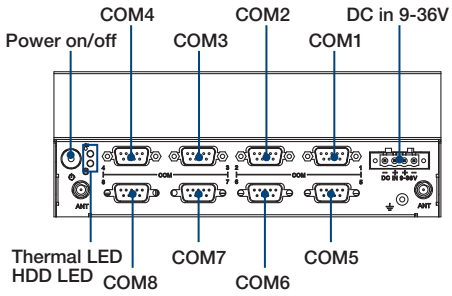
Unit: mm



Front Panel External I/O Mechanical Layout/Drawing



Rear Panel External I/O Mechanical Layout/Drawing



Ordering Information

Part No.	CPU	DDR4	GbE	VGA	HDMI	RS-232	RS-232/422/485	USB 3.1	USB 3.0	MiniPCIe	SIM	M.2 E key	DC Input
ARK-3531-00A1	LGA1151 Socket Type	Up to 64GB	2	1	1	4	4	2	6	1	1	1	9-36V
ARK-3531-00A1U (Made in Taiwan)	LGA1151 Socket Type	Up to 64GB	2	1	1	4	4	2	6	1	1	1	9-36V

Note: CPU/Memory/Storage and operating system bundled by request.

Packing List

Part Number	Description
ARK-3531-00A1	ARK-3531 Unit
2006K35310	User Manual (Simplified Chinese)
202KAKMC00	China RoHS
1960093556N001	Wall mount kit
36WSWPDOBUND11	WISE-DeviceOn
36WSWPDOBD0211	McAfee Application Control Lite/Acronis Backup 11.7 for Windows PC

Embedded OS

Part Number	Description
20706WX9HS0090	WIN10 IOT 1809 64bit for i7/i9
20706WX9VS0094	WIN10 IOT 1809 64bit for Celeron/Pentium/i3/i5
20706U20DS0025	Ubuntu 20.4 64bit 2004 ENU

ARK-3531 Option Items

Part Number	Description
96PSA-A150W19P4-3	AC-to-DC Adapter, DC19V 150W, 0 ~ 40° C
96PSA-A230W24P4-3	AC to DC adapter, DC 24V 230W, -20 ~ 60° C
1702002600	Power cable 3-pin 183cm, USA type
1702002605	Power cable 3-pin 183cm, EU type
1702031801	Power cable 3-pin 183cm, UK type

ARK-3531 Optional Expansion kit

Part Number	Description
AMO-I026A	Expansion M.2 B key 2280 kit for USB module
AMO-I026B	Expansion M.2 B Key 2280 kit for PCIe/SATA module
AMO-I026C	Expansion M.2 M Key 2280 kit for PCIe/SATA module