

# ARK-3533

## Intel® 12<sup>th</sup>&13<sup>th</sup> Gen Core™ i3/i5/i7/i9 LGA1700 Expansion Fanless Box PC

NEW



### Features

- Support Intel® 12<sup>th</sup>&13<sup>th</sup> Gen. Core™ i3/i5/i7/i9 processor
- Dual display: HDMI + HDMI
- DDR5 SO-DIMM memory support up to 64 GB
- 9-36V<sub>DC</sub> wide range power input
- Support 2 x 2.5" hard drive bays
- Support up to 4GbE, 8USB, 8COM, 16bit DIO, 2CANBus, TPM2.0
- SUSI API, WISE-DeviceOn, Trellix and Acronis bundled



WISE-DeviceOn SUSI API



### Specifications

		i9-13900TE	i9-12900TE	i7-13700TE	i7-12700TE	i5-13500TE	i5-12500TE	i3-13100TE	i3-12100TE	
Processor System	CPU	i9-13900TE	i9-12900TE	i7-13700TE	i7-12700TE	i5-13500TE	i5-12500TE	i3-13100TE	i3-12100TE	
	Frequency	1.0-5.0GHz	1.0-4.8GHz	1.1-4.8GHz	1.0-4.6GHz	1.1-4.5GHz	1.9-4.3GHz	2.4-4.1GHz	2.1-4.0GHz	
	L3 Cache	36MB	30MB	30MB	25MB	24MB	18MB	12MB	12MB	
	Cores	24	16	16	12	14	6	4	4	
	TDP	35W	35W	35W	35W	35W	35W	35W	35W	
	Chipset	H610E								
Memory	BIOS	AMI EFI 256Mbit								
	Technology	DDR5 4800 MHz								
	Max. Capacity	64 GB								
Graphics	Socket	2 x 262-pin SO-DIMM								
	Chipset	Intel® UHD Graphics 770								
	Graphic Engine	DirectX 12, OpenGL 4.5 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								
	HDMI	2 HDMI port, HDMI 2.0 for HD video playback, 4096x2160@60Hz								
Ethernet	Dual Display	HDMI+HDMI (DP support by project)								
	LAN1	10/100/1000 Mbps Intel I219-LM GbE, support Wake On Lan								
Audio	LAN2/3/4	10/100/1000/2500 Mbps Intel i226-V GbE, support Wake On Lan								
	Interface	Realtek ALC888S, High Definition Audio, Line-out/Mic-in (switch)								
Others	Watch dog Timer	255-level timer interval, setup by software								
	TPM	TPM 2.0 (by optional AMO-I029)								
I/O Interface	Serial Port	4 x RS-232/422/485 port with auto flow control, 4 x RS-232								
	USB	4 x USB 3.2 (2 x Gen2, 2 x Gen1), 4 x USB 2.0								
	DIO	16bit DIO (by optional cable)								
Expansions	CANBus	2 ports by optional cable								
	M.2	1 x M.2. 2230 E key and 1 x M.2 2280 B key with SIM holder #1								
	Add-on Card Slot	2 Slot PCI (by optional AMO-3510)								
	Maximum card size	110mm (H) x 180mm (L)								
Storage	HDD	2 x 2.5" SATAIII 9mm height HDD bays								
	NVME	1 x PCIe2 (Share with M.2 2280 B key)								
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, 230W (Optional)								
Power Consumption (CPU/Memory Only)	Typical	21.2W								
	Max.	40.4W								
Mechanical	Construction	Aluminum housing								
	Mounting	Desk mounting								
	Dimensions (W x H x D)	200 x 75 x 215 mm								
	Weight	3.2 Kg								
Environment	Operating Temperature	Up to 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, UKCA								
Safety	CB, UL, CCC, BSMI, UKCA									

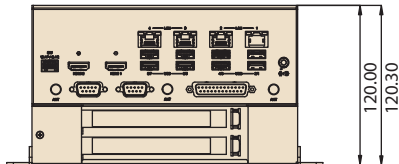
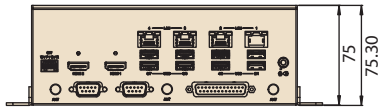
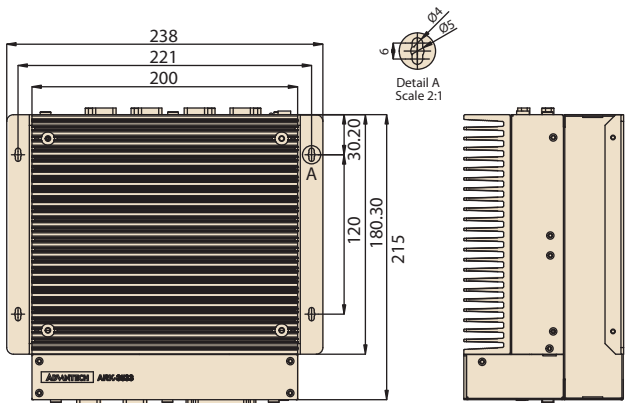
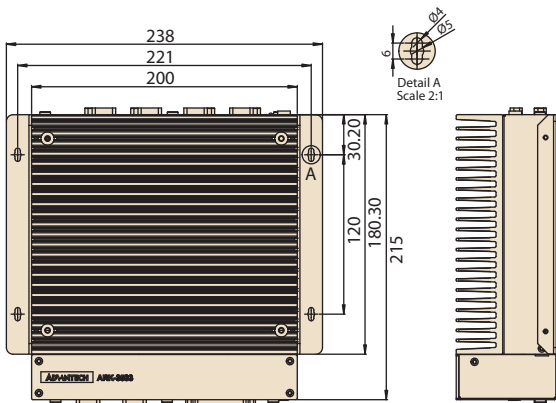
#1 SIM holder and M.2 slot are hardware interfaces for wireless communication integration only. System level RF certification is not available.

Dimensions

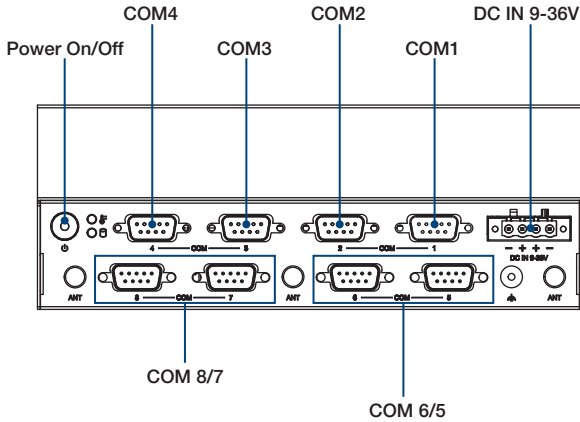
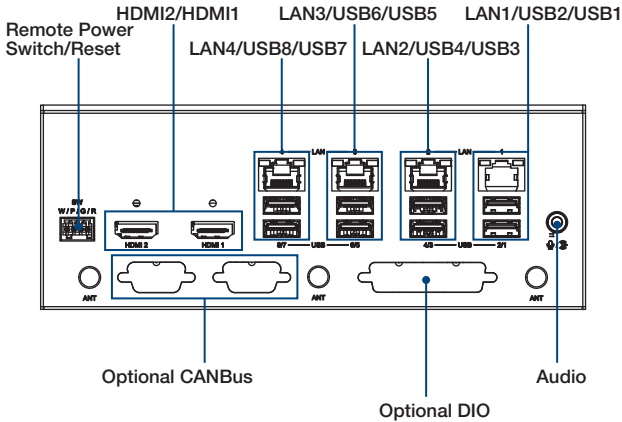
Unit: mm

ARK-3533

ARK-3533+AM0-3510



External I/O Mechanical Layout/Drawing



- Note:
- 1. LAN 1 up to 10/100/1000 Mbps  
LAN 2 up to 10/100/1000/2500Mbps
  - 2. USB 3.2: USB1-4  
USB 2.0: USB5-8
  - 3. RS-232: COM1/2/5/6  
RS-232/422/485: COM3/4/7/8

## Ordering Information

Part No.	CPU	DDR5	Gbe	HDMI	RS-232	RS-232/422/485	USB	M.2 B key	SIM	M.2 E Key	Expansion	Made in
ARK-3533-00A1	LGA1700 Socket Type	Up to 64GB	4	2	4	4	8	1	1	1	2 PCI (option)	China
ARK-3533-00A1U	LGA1700 Socket Type	Up to 64GB	4	2	4	4	8	1	1	1	2 PCI (option)	Taiwan

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

## Packing List

Part Number	Description
-	ARK-3533 Unit
-	User Manual (Simplified Chinese)
-	China RoHS
-	Mounting kit
36WSWPD0BUND11	WISE-DeviceOn
36WSWPD0BD0211	Trellix Application Control Lite/Acronis Backup 11.7 for Windows PC

## Embedded OS

Part Number	Description
20706WX1HS0047	WIN10 IoT LTSC 21H2 64bit for i7/i9
20706WX1VS0047	WIN10 IoT LTSC 21H2 64bit for i3/i5
20706U22DS0020	img UbuntuD ARK-3533 64b 22.04 ENU

## ARK-3533 Optional Expansion Kit for add-on Cards

Part Number	Description
AMO-3510	ARK-3533 expansion kit for 2*PCI
TBD	ARK-3533 thermal kit for 5G and Hailo AI card

## ARK-3533 Default SKU Option Items

### Optional Item for Default SKU

Part Number	Description
96PSA-A150W19P4-4	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
1700000237	Power cable, 3-Pin 183cm, PSE type
1960109859N000	Internal USB Bracket for ARK-3533
1700026760-21	Internal USB Cable 20cm (CN:USB9)
1700031864-01	16bit DIO Cable 10cm (CN: GPIO01)
1700030518-01	1 Port CANBus cable 15cm

### Optional TPM Module

Part Number	Description
AMO-1029	TPM 2.0 Infineon SLB9670V2.0