

ARK-3533

Intel® 12th/13th/14th Gen Core™ i3/i5/i7/i9 & Core Series 2 LGA1700 Expansion Fanless Box PC

NEW



Features

- Support Intel® 12th/13th/14th Gen. Core™ i3/i5/i7/i9 & Core Series 2 processor
- Dual display: HDMI + HDMI
- DDR5 SO-DIMM memory support up to 64 GB
- 9-36V_{DC} wide range power input
- Support 2x 2.5" hard drive bays
- Support up to 4x GbE, 8x USB, 8x COM, 2x CANBus
- SUSI API, WISE-DeviceOn, Trellix and Acronis bundled
- Support Windows 11 IoT Enterprise LTSC
- IEC 62443-4-2 Certified (Security Level 2), supporting compliance readiness for the EU Cyber Resilience Act



Specifications

Intel® Core™ Processors Series 2	CPU	Core 9 273PTE	Core 7 253PTE	Core 7 251TE	Core 7 251E	Core 5 223PE	Core 5 223PTE	Core 5 213PTE	Core 5 221E	Core 5 221TE	Core 5 211E	Core 5 211TE	Core 3 201E	Core 3 201TE
	P-core Base Frequency	1.4GHz	1.8GHz	1.4GHz	1.6GHz	2.9GHz	2.3GHz	2.1GHz	2.7GHz	1.8GHz	2.7GHz	1.7GHz	3.6GHz	2.9GHz
	L3 Cache	36MB	33MB	36MB	36MB	24MB	24MB	24MB	24MB	24MB	20MB	20MB	12MB	12MB
	Cores	12	10	24	24	8	8	8	14	14	10	10	4	4
	Processor Base Power	45W	45W	45W	65W	65W	45W	45W	65W	45W	65W	45W	60W	45W
	Chipset	H610E												
14th Generation Processor	BIOS	AMI EFI 256Mbit												
	CPU	i9-14900T	i7-14700T	i5-14500T	i3-14100T									
	P-core Frequency	1.1~5.5GHz	1.3~5.0GHz	1.7~4.8GHz	2.7~4.4GHz									
	L3 Cache	36MB	33MB	24MB	12MB									
	Cores	24	20	14	4									
	TDP	35W	35W	35W	35W									
13th and 12th Generation Processor	Chipset	H610E												
	BIOS	AMI EFI 256Mbit												
	CPU	i9-13900TE	i7-13700	i7-13700TE	i5-13500TE	i3-13100TE	i9-12900TE	i7-12700	i7-12700TE	i5-12500	i5-12500TE	i3-12100TE		
	P-core Frequency	1.0~5.0GHz	2.1~5.1GHz	1.1~4.8GHz	1.3~4.5GHz	2.4~4.1GHz	1.1~4.8GHz	2.1~4.8GHz	1.4~4.6GHz	3.0~4.6GHz	1.9~4.3GHz	2.1~4.0GHz		
	L3 Cache	36MB	30MB	30MB	24MB	12MB	30MB	25MB	25MB	18MB	18MB	12MB		
	Cores	24	16	16	14	4	16	12	12	6	6	4		
Memory	TDP	35W	65W	35W	35W	35W	35W	65W	35W	65W	35W	35W		
	Chipset	H610E												
	BIOS	AMI EFI 256Mbit												
Graphics	Technology	DDR5 5600 MHz												
	Max. Capacity	96 GB												
	Socket	2 x 262-pin SO-DIMM												
Graphics	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 ports, HDMI 2.0 for HD video playback, 4096x2160@60Hz												
	Dual Display	HDMI+HDMI (DP support by project)												
Ethernet	LAN1	10/100/1000 Mbps Intel i219-LM GbE, support Wake On Lan												
	LAN2/3/4	10/100/1000/2500 Mbps Intel i226-V GbE, 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	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 M2 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)												

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

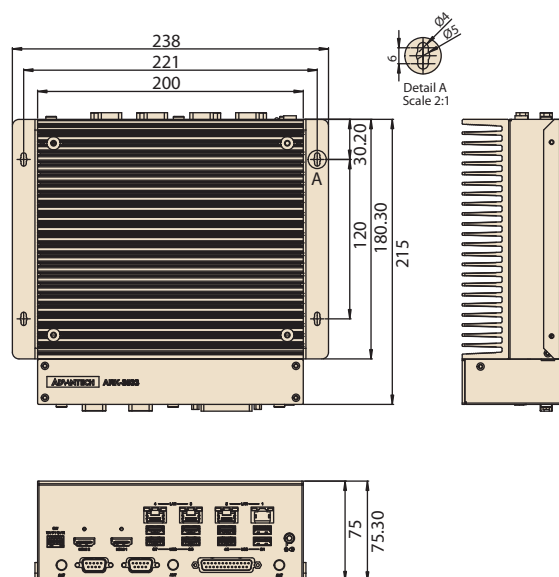
Specifications (Cont.)

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 10/11
	Linux	Ubuntu 24.04
Power Requirements	Power Type	AT/ATX
	Power Input Voltage	9-36V
	Power Adapter	AC to DC (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

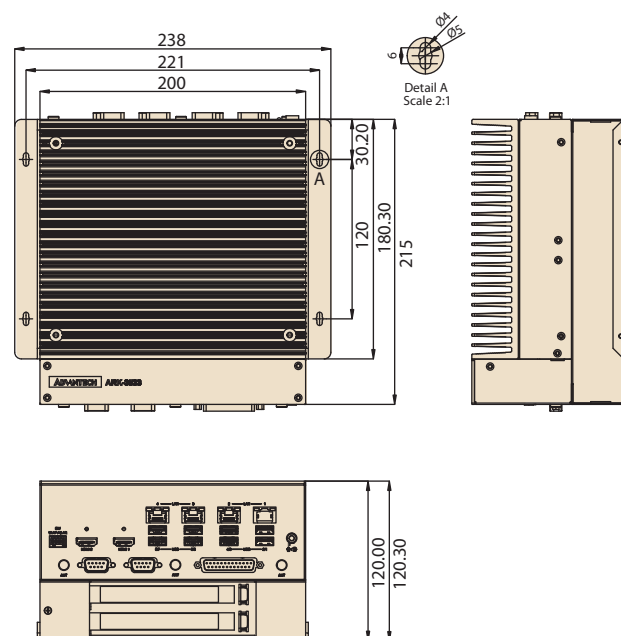
Dimensions

Unit: mm

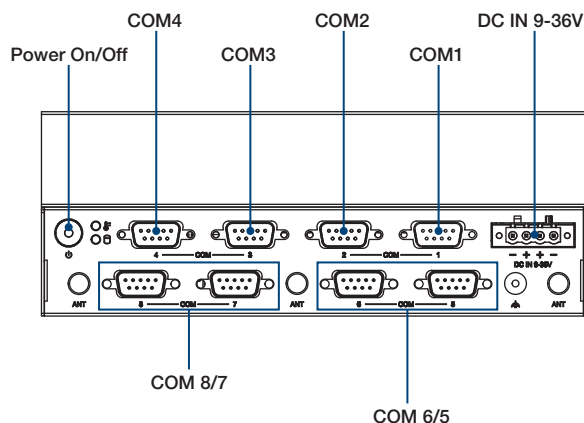
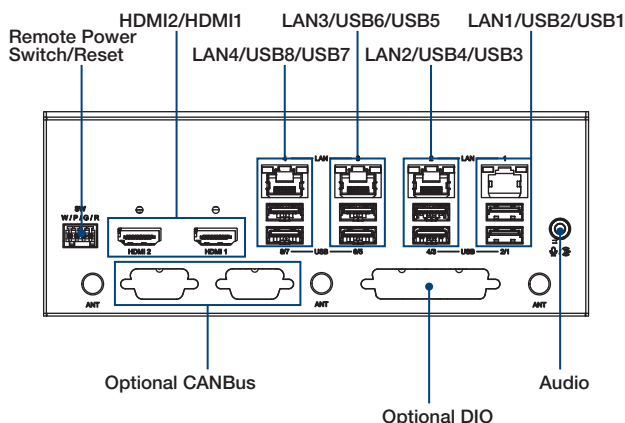
ARK-3533



ARK-3533+AM0-3510



External I/O Mechanical Layout/Drawing



Note:

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

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 96GB	4	2	4	4	8	1	1	1	2 PCI (option)	China
ARK-3533-00A1U	LGA1700 Socket Type	Up to 96GB	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
36WSWPDOBUND11	WISE-DeviceOn
36WSWPDOBD0211	Trellix Application Control Lite/Acronis Backup 11.7 for Windows PC

Embedded OS

Part Number	Description
20706WLH1S0144	WIN11 IoT LTSC 24H2 64bit for i7/i9/Core 7/Core 9
20706WLV1S0144	WIN11 IoT LTSC 24H2 64bit for i3/i5/Core 3/Core 5
20706WX1HS0161	WIN10 IoT LTSC 21H2 64bit for i7/i9/Core 7/Core 9
20706WX1VS0161	WIN10 IoT LTSC 21H2 64bit for i3/i5/Core 3/Core 5
20706U24DS0064	img UbuntuD ARK-3533 64b 24.04 ENU_20084

ARK-3533 Optional Expansion Kit for add-on Cards

Part Number	Description
AMO-3510	ARK-3533 expansion kit for 2*PCI
AMK-A0047	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
1960103315N010	M.2 Bracket (for 3052 device on M.2 B key)
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-i029	TPM 2.0 Infineon SLB9670V2.0