

ARK-1250L

Intel® 11th Gen Core™ i processor with Triple LAN/ Quadruple COM Din-Rail Fanless Box PC

NEW



Features

- Intel 11th Gen. Core i5/i3
- DIN-Rail system with essential I/O ports on front-side bezel
- 3 x Intel GbE, 4 x RS-232/422/485, 8-bit DIO, optional CANBus
- 3 Expansions: M.2 E-Key 2230, M.2 B-Key 2280, 1 x Full-size mSATA share with mPCIe slot
- Dual independent displays with one 4K HDMI and one VGA
- 3 x USB 3.2 and 3 x USB 2.0
- mSATA and 1 x 2.5" SATA storage device
- 12V ~ 24V wide range power input
- 40 ~ 60 °C extended operating temperature
- Advantech iEdge support
- Qualified for Edge AI SRP of WISE-DeviceOn



WISE-DeviceOn SUSI API



Specifications

Model Name	ARK-1250L		
Processor System	CPU	Core i5-1145G7E	Core i3-1115G4E
	Frequency	1.5GHZ turbo boost up to 4.1 GHz	2.2 GHz turbo boost up to 3.9 GHz
	Core Number	4	2
	BIOS	AMI EFI 256 Mbit	
Memory	Technology	DDR4 3200 MHz	
	Max capacity	Up to 64 GB with 2 x slots	
	Socket	2 x Dual Channel DDR4 3200 MHz 260 pin SO-DIMM (no support ECC)	
	Chipset	Intel® Iris® Xe graphics	
Graphics	HDMI	Up to 4096 x 2160 @ 60Hz	
	VGA	Up to 1920 x 1200 @ 60Hz	
	Dual Display	HDMI + VGA	
	LAN1	10/100/1000/2500 Mbps Intel i225 GbE, support Wake On LAN	
Ethernet	LAN2	10/100/1000 Mbps Intel i219 GbE, support Wake On LAN	
	LAN3	10/100/1000/2500 Mbps Intel i225 GbE, support Wake On LAN	
	Interface	Realtek ALC888S, High Definition Audio, Mic-in or Line-out	
I/O Interface	Serial Ports	4 x RS-232/422/485 with auto flow control	
	USB Ports	3 x USB3.2, 3 x USB2.0, 1 x internal USB 2.0 supported by project	
	GPIO	8-bit Programmable DIO	
	CANBus	Optional (supported by project)	
	Mini PCIe	1 x Full-size mPCIe	
Expansion	M.2	1 x M2. 2230 E key and 1 x M.2 2280 B key with nano SIM holder #1	
	SSD/HDD	1 x 2.5" SATAIII Drive bay (compatible with 15mm height)	
Storage	mSATA	1 x Full-size mSATA (*share with mPCIe slot)	
	WatchDog Timer	255 levels timer interval, setup by software	
Other	TPM	TPM 2.0 (Optional, project supported by AMO-I029)	
	Microsoft Windows	Windows 10 Enterprise	
Software Support	Linux	Ubuntu 20.04, others by project support	
	Power Type	ATX/AT	
Power Requirement	Power Input Voltage	12 ~ 24 V _{DC}	
	Power Adaptor	AC to DC, 90W adaptor by default	
	Typical (OS idle mode)	19.8W	18W
Power Consumption	Max. (Full loading)	35.1W	30.6W
	Construction	Aluminum housing	
Mechanical	Mounting	DIN-rail/Wall Mount	
	Dimensions (W x H x D)	60 x 173 x 141 mm (2.36 x 6.73 x 5.55 in)	
	Weight	1.5KG	
	Operating Temperature	With extended temp. peripherals: -40 ~ 60° C with 0.7m/s air flow	
Environment	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 (with Wall Mount)	
	Shock during Operation	With SSD: 30 G, IEC-60068-2-27, half sine, 11 ms duration (with Wall Mount)	
	EMC	CE/FCC Class B, CCC	
	Safety	UL, CB, CCC	

Vertrieb durch



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#1 SIM holder and M.2 slot are hardware interfaces for wireless communication integration only. System level RF certification is not available.
 M.2 B key requires additional mechanical parts to fix for sizes other than 2280.

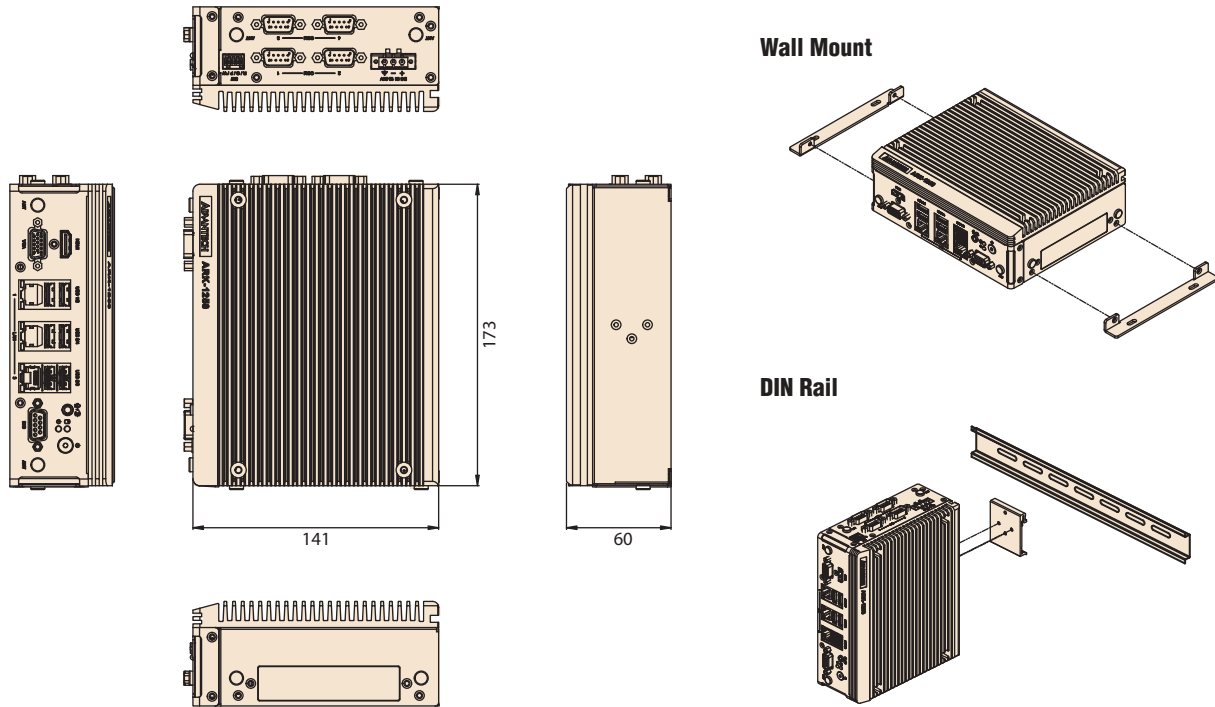


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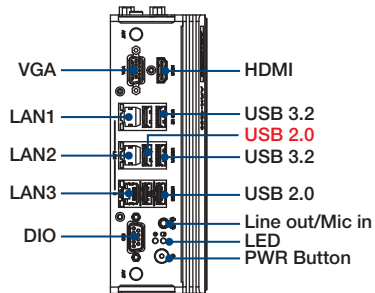
Last updated: 7-Mar-2023

Dimensions

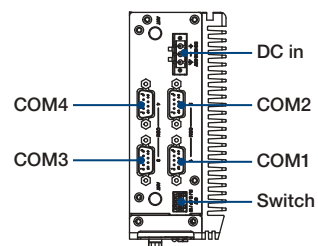
Unit: mm



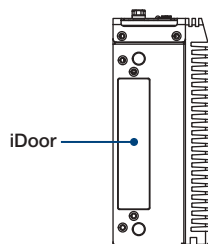
Front Panel External I/O Mechanical Layout/Drawing



Top Panel External I/O Mechanical Layout/Drawing



Bottom View External I/O Mechanical Layout/Drawing



Ordering Information

Part No.	CPU	RAM	HDMI	VGA	GbE	USB 3.2	USB 2.0	RS-232/422/485	Audio	Full-size MiniPCIe	SIM	M.2	2.5" SATA III HDD Bay	mSATA	Power Input	Operating Temp.
ARK-1250L-U2A1	Intel Core i3-1115G4E	Up to 64 GB	1	1	3	3	3	4	Mic in or Line out	1	1	2	1	1 (shared w/ mPCIe)	12-24 V _{DC}	-40 ~ 60 °C
ARK-1250L-S5A1	Intel Core i5-1145G7E	Up to 64 GB	1	1	3	3	3	4	Mic in or Line out	1	1	2	1	1 (shared w/ mPCIe)	12-24 V _{DC}	-40 ~ 60 °C
ARK-1250L-U2A1U	Intel Core i3-1115G4E	Up to 64 GB	1	1	3	3	3	4	Mic in or Line out	1	1	2	1	1 (shared w/ mPCIe)	12-24 V _{DC}	-40 ~ 60 °C
ARK-1250L-S5A1U	Intel Core i5-1145G7E	Up to 64 GB	1	1	3	3	3	4	Mic in or Line out	1	1	2	1	1 (shared w/ mPCIe)	12-24 V _{DC}	-40 ~ 60 °C

Note: Memory, storage and operating system bundled by request.

Packing List

Part Number	Description
-	1 x ARK-1250L Unit
-	1 x User Manual (Simplified Chinese)
-	Wrench for top cover
XARK-ADP-90MDH	AC to DC adaptor , 19V/90W
1950016395T101	1 x DIN-rail bracket
1652004519	1 x 3-pin plug-in block for power in
1652007880-01	1 x 4-pin terminal block for switch

Embedded OS

Part Number	Description
20706WX9VS0158	Win10 IoT Ent 2019 LTSC 64bit, English
20706U20DS0042	img Ubun20.4 ARK-1250L 64b 2004 ENU

Vertrieb durch 

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Optional Items

Part Number	Description
96PSA-A120W24T2-4	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)
1700024369-01	1M HDMI cable
1700031560-01	1.8M HDMI cable
AMK-W006	ARK-1250 wall mount kit
1700030518-01	CANBus Cable (replacing GPIO)

Note
 Please update BIOS to Advantech part number 1420056685 when using the optional CANBus cable 1700030518-01.

Optional TPM module

Part Number	Description
AMO-I029	TPM 2.0 Infineon SLB9670V2.0

Optional MOS modules for iDoor Expansion

Part Number	Description
MOS-2230-Z1201E	CANBus module, 2-Ch, USB Interface
MOS-2220-X1101E	Parallel LPT module, 1-Ch, USB Interface
MOS-2110Z-1201E	USB module, 2-Ch, PCIe Interface
MOS-2120-Z1101E	Giga LAN Ethernet module, 1-Ch, PCIe Interface
MOS-1120Y-0202E	Isolated RS-232, 2-Ch, DB9, PCIe Interface
MOS-1121Y-0202E	Isolated RS-422/485, 2-Ch, DB9, PCIe Interface
MOS-1120Y-1402E	Non-Isolated RS-232, DB37, 4-Ch, PCIe Interface
MOS-1121Y-1402E	Non-Isolated RS-422/485, DB37, 4-Ch, PCIe Interface
MOS-1130Y-0201E	Isolated CANBus, 2-Ch, DB9, PCIe Interface
MOS-1110Y-0101E	Isolated 16 DI/8 DO, 1-Ch, DB37, PCIe Interface
MOS-2120-Z1201	GigaLAN Ethernet module, mPCIe, RJ45 2-Ch, PCIe I/F
MOS-2220-Z1101E	High Speed Serial COM module, 1-Ch, USB Interface
AMO-I032	Expansion kit M.2 B key for mPCIe idoor

Note
 - Need to order AMO-I032 together with MOS modules
 - mPCIe and M.2 E Key cannot be used when adding any MOS module due to mechanical interference