ARK-1124U A3

Intel® Celeron™ N3350 DC SoC With Dual LAN/ Four USB 3.0/M.2/TPM IoT Gateway Modular Fanless Box PC

Features

- Intel® Celeron™ N3350 Dual Core SoC
- VGA Display/2x RS-232/422/485/4x USB 3.0
- 1 x Full-size miniPCIe with SIM holder for communication module #1
- 1 x M.2 E-key for WIFI module #2
- -20 ~ 60 °C extended operating temperature
- TPM 2.0 default built-in
- 12V lockable DC jack power input
- Optional 12~24V power module (Dual Layer)
- Advantech iDoor module compatible (Dual Layer)
- Advantech WISE-DeviceOn support

Windows Embedded **WISE-DeviceOn**

Specifications

		ARK-1124U-S1A3
Processor System	CPU	Intel® Celeron® N3350 Dual Core SoC
	Frequency	1.1GHz, turbo burst 2.4 GHz
	L2 Cache	2 MB
	BIOS	AMI EFI 64 bit
Memory	Technology	DDR3L 1866 MHz
	Max. Capacity	8 GB
	Socket	1 x 204-pin SO-DIMM
Graphics	Chipset	Intel® HD Graphics 500
	Graphic Engine	4K Codec Decode& Encode for H.264, MPEG2, MVC, VC-1, WMV9, H.265 / HEVC, VP8, JPEG / MJPEG
	VGA	Up to 2048 x 1280 @ 60Hz
Ethernet	LAN1	10/100/1000 Mbps Intel i210 GbE, support Wake On Lan
	LAN2	10/100/1000 Mbps Intel i210 GbE, support Wake On Lan
Audio	Interface	Realtek ALC888S, High Definition Audio. Line-out,,Line-in
IO Interface	Serial Ports	2 x RS-232/422/485 port with auto flow control
	USB Interface	4 x USB 3.0
Other	Watchdog timer	255 levels timer interval, setup by software
	TPM	Infineon SLB9665XQ 2.0
Expansion	Mini PCIe	1 x full-size mPCIe for WLAN/WWAN with SIM holder #1
	M.2	1 x M.2 E-key for WIFI (by CTOS or T-PN) #2
	iDoor	1, optional (2nd layer)
Storage	HDD/SSD	Supports 1 x SATA III Drive Bay (Compatible with 9.5mm height)
Software Support	Microsoft Windows	Win 10 IoT Enterprise LTSB
	Linux	Support by project
Power Requirement	Power Type	AT/ATX
	Power Input Voltage	$12V_{DC}$ (Optional 12~24V power module)
	Minimum Power Input	12 V, 5 A
	Power Adapter	AC to DC, DC12 V/5 A, 60 W with lockable DC Jack
Power Consumption	Typical	5W
	Max.	15.73W
Mechanical	Construction	Aluminum housing
	Mounting	DIN-Rail/Wall/VESA Mounting Kits (Optional)
	Dimensions (W x H x D)	133 x 46.4 x 94.2mm (5.24" x 1.83" x 3.71")
	Weight	0.7 Kg (1.55lb)
Environment	Operating Temperature	With extended temperature peripherals: -20 ~ 60 °C (-4 ~ 140 °F) with 0.7m/s air flow With 2.5-inch hard disk 0 ~ 40 °C (32 ~ 104 °F) with 0.7m/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, IEC 60068-2-64, random, 5 ~ 500 Hz, 1 hr/axis With HDD: 0.5Grms, 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 With HDD: 10G, IEC 60068-2-27, half sine, 11 ms duration
	EMC	CE/FCC Class B, CCC, BSMI
	Safety Certifications	UL, CB, CCC, BSMI

#1 SIM holder is for hardware interface for wireless module integration only. No system level RF certification is available.
#2 FCC and RED for WiFi/BT are available with AMO-WIFI10. Other system level RF certification is not available.

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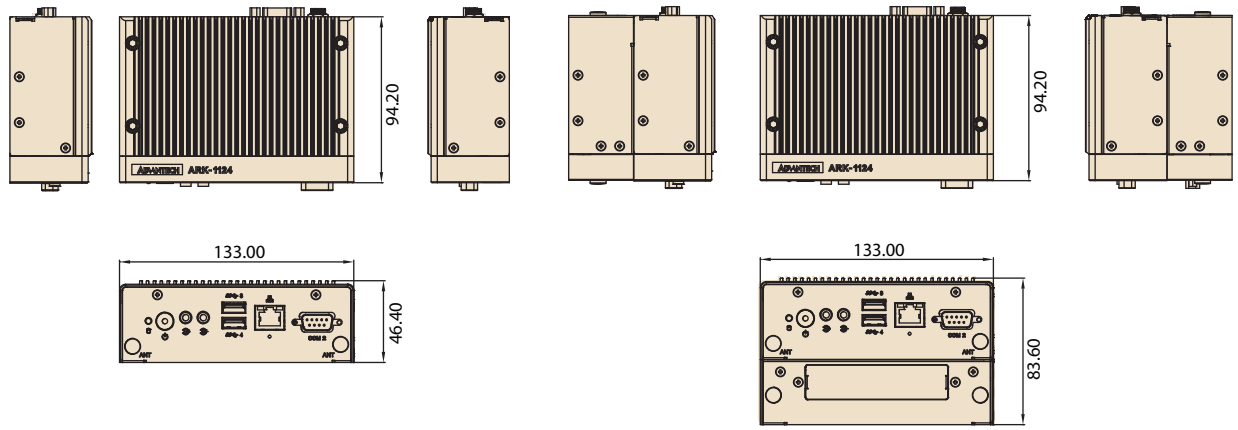
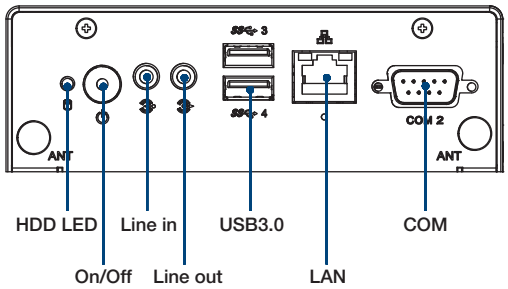
Dimensions

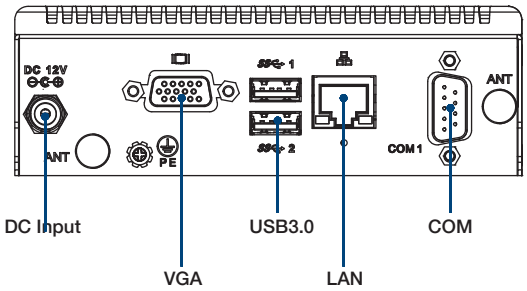
Unit: mm



Front Panel External I/O Mechanical Layout/Drawing



Rear Panel External I/O Mechanical Layout/Drawing



Ordering Information

Part No.	CPU	RAM	VGA	GbE	USB 3.0	RS-232/ 422/485	Audio	Full-size MiniPCIe	SIM	M.2	2.5" SATA III HDD Bay	Power Input	Operating Temp.
ARK-1124U-S1A3	Intel Celeron N3350 1.1 GHz Soc	Up to 8GB	1	2	4	2	Lin-out, Line-in	1	1	1	1	12 V_{DC}	-20 ~ 60 °C

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

Packing List

Part Number	Description
-	1 x ARK-1124U Unit
-	1 x User Manual (Simplified Chinese)
96PSA-A60W12W7-3	1 x A/D 100-240V 60W 12V C14 LOCKABLE DC PLUG
-	LAN clip
-	Wrench for top cover

Optional Embedded OS

Part Number	Description
20706WX9ES0062	Win10 IoT Ent LTSC 2019 64bit, ENG

Optional Item for Default SKU

Part Number	Description
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
AMK-W001E	ARK-112X series Wall mounting kit
AMK-V003E	ARK-112X series VESA mounting kit
AMK-R001E	ARK-112X series DIN-rail mounting kit
AMO-WIFI10	802.11 a/b/g/n/ac,QCA6174A,2T2R,w/BT4.1,M.2 2230 E Key FCC RF/RED system level RF certifications are ready with ARK-1124U single layer.

ARK Plus Extended Modules

ARK-1124 Dual Layer Expansion Option Items

Expansion Kit Selection

AMO-1101 and iDoor

AMO-1101 and AMO-P011

Ordering Information

Optional ARK Plus Mechanical Kit

P/N	Description
AMO-1101	Mechanical kit for 2nd layer expansion

Optional 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-1130Y-0201E	Isolated CANBus, 2-Ch, DB9, PCIe Interface
MOS-1110Y-0101E	Isolated 16 DI/8 DO, 1-Ch, DB37, PCIe Interface
MOS-2220-Z1101E	High Speed COM module, 1-Ch, USB Interface
MOS-1120Y-0202E	Isolated RS-232, 2-Ch, DB9, PCIe I/F
MOS-1121Y-0202E	Isolated RS-422/485, 2-Ch, DB9, PCIe I/F
MOS-1120Y-1402E	Non-Isolated RS-232, 4-Ch, DB37, PCIe I/F
MOS-1121Y-1402E	Non-Isolated RS-422/485, 4-Ch, DB37, PCIe I/F
MOS-2120-Z1201	Dual Intel I210 GbE LAN, 2-Ch, PCIe I/F

Optional 12-24V DC Power module

Part Number	Description
AMO-P011	12-24V DC input power module Operating temp. -20~60 °C
96PSA-A60W12P2-3	AC to DC ADP, 12V/5A 60W (for AMO-P011)
1702002600	Power cord 3-pin 183cm, USA type
1702002605	Power cord 3-pin 183cm, EU type
1702031801	Power cord 3-pin 183cm, UK type
1700000237	Power cable 3-pin 183cm, PSE type

* For iDoor module expansion, please order AMO-1101 and iDoor P/N
* For Wide range power module expansion, please order AMO-1101 and AMO-P011
* For iDoor and wide range power module expansion, please order AMO-1101, iDoor P/N and AMO-P011
* Dual layer mounting kit is same as single layer