

ARK-2230L A2

Intel® Celeron® Quad Core J1900 SoC Modular Fanless Box PC



*Dual Layer model is ARK-2230 with ARK Plus module

Features

- Intel® Celeron® J1900 Quad Core 2.0 GHz SoC
- VGA and HDMI dual independent display
- 12V lockable DC jack power input
- 9-36V power module compatible with all-in-one ordering
- -20 ~ 60 °C extend temperature operating
- Mini PCIe expansion with SIM holder for communication module
- mSATA and 1 x 2.5" SATA storage device
- Advantech iDoor module compatible
- Advantech EMIO miniPCIe module compatible with all-in-one ordering
- Advantech MIOe module compatible with all in one ordering (2 Layers)



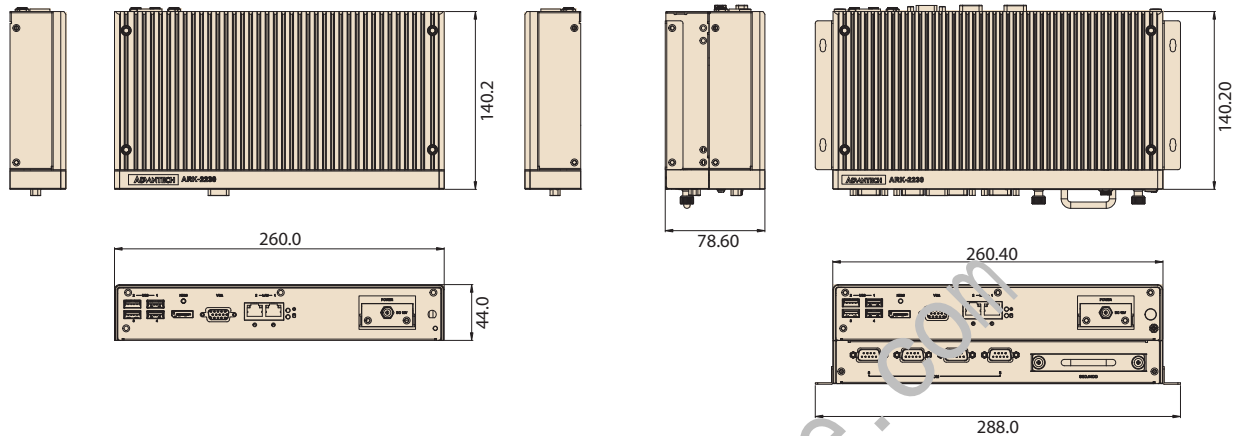
Specifications

		ARK-2230L-U0A2E	
Processor System	CPU	Intel Celeron Processor J1900 Quad Core SoC	
	Frequency	2.0 GHz	
	L2 Cache	2 MB	
	BIOS	AMI EFI	
Memory	Technology	DDR3L 1333 MHz	
	Max. Capacity	8 GB	
	Socket	1 x 204-pin SO-DIMM	
Graphics	Chipset	Intel Celeron J1900 SoC integrated, 7th Gen. Intel Graphic core	
	Graphic Engine	DirectX	11.1, OpenGL 3.2
		Encode	H.264, MPEG2/4, VC1, WMV9
		Decode	H.264, MPEG2
VGA	Up to 2048 x 1152 @ 60Hz		
HDMI	HDMI 1.4a for HD video playback, 1080P at 60Hz		
Dual Display	Yes, VGA + HDMI		
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, Mic-in, Line-in	
IO Interface	Serial Ports	2 x RS-232 ports, 2 x RS-232/422/485 port with auto flow control	
	Digital I/O	8bit programmable general purpose input/output	
	USB Interface	1 x USB 3.0, 4 x USB 2.0	
Other	Watchdog timer	255 levels timer interval, setup by software	
Expansion	Mini PCIe	1 x full size Mini PCIe with SIM holder #1	
Storage	HDD	Supports one SATA 2.5" HDD Bay (Compatible with 12.5mm height HDD) (Max. Data Transfer Rate 300 MB/s)	
	SSD	1 x full size mSATA socket, with USB signal co-lay	
Software Support	Microsoft Windows	Windows 10, WES8, Windows 8, WES7, Windows 7	
	Linux	Support by project	
Power Requirement	Power Type	ATX	
	Power Input Voltage	12V _{DC} (9-36V as option)	
	Minimum Power Input	12 V, 1.5 A	
	Power Adapter	AC to DC, DC12V/5A, 60W (Optional)	
Power Consumption	Typical	7.3W	
	Max.	13.3W	
Mechanical	Construction	Aluminum housing	
	Mounting	Din-Rail mounting, Desk/wall-mounting, VESA mounting	
	Dimensions (W x H x D)	260 x 44 x 140.2 mm (10.24" x 1.73" x 5.52")	
	Weight	2.3 kg (5.07 lb)	
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.	
	Shock During Operation	With SSD: 30 G, IEC 60068-2-27, half sine, 11 ms duration	
	EMC	CE/FCC Class B, CCC, BSMI	
Safety Certifications	UL, CCC, BSMI		

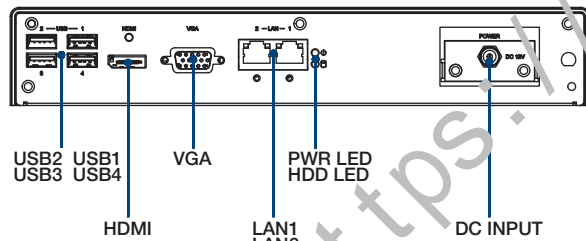
#1 SIM holder is the hardware interface for wireless communication integration only. System level RF certification is not available.

Dimensions

Unit: mm

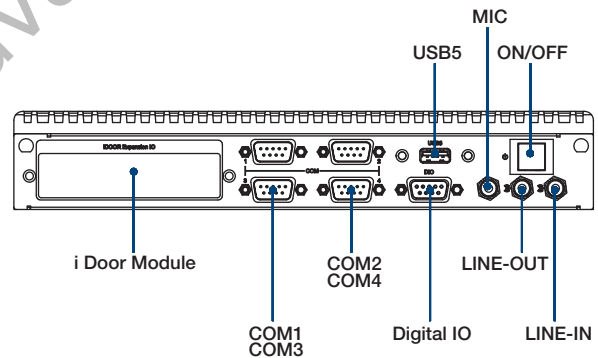


Front Panel External I/O Mechanical Layout/Drawing



*Power Input module by option

Rear Panel External I/O Mechanical Layout/Drawing



Ordering Information

Part No.	CPU	VGA	HDMI	GbE	USB 2.0	USB 3.0	RS-232	RS-232/422/485	Audio	Full-size MiniPCIe	SIM	mSATA	2.5" SATA II HDD Bay	Power Input	Operating Temp.
ARK-2230L-U0A2E	Intel Celeron J1900 2.0GHz	Yes	Yes	2	4	1	2	2	Lin-out, Line-in, MIC	1	1	1	1	12 V _{DC}	-20 ~ 60 °C
ARK-2230L-U0A3	Intel Celeron J1900 2.0GHz	Yes	Yes	2	4	1	2	2	N/A	1	1	1	1	12 V _{DC}	-20 ~ 60 °C

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

Packing List

Part Number	Description
ARK-2230L-U0A2E	1 x ARK-2230L Unit
2006K22310	1 x User Manual (Simplified Chinese)
2026K22300	1 x China RoHS
1960071555N001	Wall mounting kit

ARK-2230 Default SKU Option Items

Optional Embedded OS

Part Number	Description
2070013990	WES7E 64bit ENG/T-CH/S-CH/JP
2070015119	WES7P 64bit ENG/T-CH/S-CH/JP
20706WX9ES0095	Win10Ent 64bit ENG

Note: Default BIOS is for 32bit OS support only. 64bit OS will need to update BIOS (1420050223)

Optional Item for Default SKU

Part Number	Description
96PSA-A60W12W7-3	AC-to-DC Adapter, DC12V/5A 60W
1702002600	Power cable 3-pin 183cm, USA type
1702002605	Power cable 3-pin 183cm, EU type
1702031801	Power cable 3-pin 183cm, UK type
AMK-R005E	DIN Rail mount kits
AMK-V019E	VESA mount kits

ARK-2230 Single Layer Expansion Option Items

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

*Please noted ARK-2230L can support only 1 iDoor for single layer.

Optional 9-36V DC Power module

Part Number	Description
MIOE-PWR2-00A1E	9-36V DC input power module
96PSA-A65W19P2-1	AC-to-DC Adapter, DC19V/3.42A 65W (for MIOE-PWR2)
1700001524	Power cable 3-pin 183cm, USA type (for MIOE-PWR2)
170203183C	Power cable 3-pin 183cm, EU type (for MIOE-PWR2)
170203180A	Power cable 3-pin 183cm, UK type (for MIOE-PWR2)

ARK-2230 Dual Layer Expansion Option Items

Optional modules for ARK Plus Expansion

Part Number	Description
AMO-2201E (2 nd Layer)	4 x RS232/422/485 + removable 2.5" drive
AMO-2202E (2 nd Layer)	4 x 10/100/1000Base T(X) PoE
AMO-2203E (2 nd Layer)	2-Port isolated CAN-Bus

ARK Plus Extended Modules

AMO-2201E

4 x RS232/422/485 + removable 2.5" drive bay



Specifications

General	
Bus interface	MIOe
Ports	4 x RS232/422/485 (set up by jumper)
Others	Removable 2.5" drive bay
Mechanical	
Dimension	260 x 34.6 x 140.2 mm (10.24" x 1.36" x 5.52")
Environment	
Operating Temp.	0 ~ 40 °C

Ordering Information

P/N	Description
AMO-2201E	4 x RS232/422/485 + removable 2.5" drive bay

- * For Win 8.1/Win10, please update BIOS with Advantech part number 1420048117
- * ARK-2230L has only one SATA connector and cannot support a second SSD/HDD in the drive bay of AMO-2201E.

AMO-2202E (AMO-I018)

4 x 10/100/1000Base T(X) PoE



Specifications

General	
Bus interface	MIOe
Ports	4 x RJ45 10/100/1000-Mbps PoE ports
Power consumption	Typical 15W, Max. 60W
Compatibility	IEEE 802.3, IEEE 802.3u, IEEE802.3ab, IEEE802.3x, IEEE802.3af Powered Device (P) auto detection and classification Supports IEEE 802.3u Auto-Negotiation
Power	
Input	12 V _{DC} power input 4 pin phoenix power (Change System Power input Cable)
Output PoE Power	1 W at 48 V _{DC} per PoE port
Mechanical	
Dimension	260 x 34.6 x 140.2 mm (10.24" x 1.36" x 5.52")
Environment	
Operating Temp.	0 ~ 40 °C

Ordering Information

P/N	Description
AMO-2202E	4 x 10/100/1000Base T(X) PoE

AMO-2203E

2-Port isolated CAN-Bus



Specifications

General	
Bus interface	MIOe
Ports	2 x DB9 isolated CAN-Bus
Communications	
Signal Support	CAN_H, CAN_L
Protocol	CAN 2.0 A/B
Data Transfer Rate	Programmable up to 1Mbps
CAN Frequency	16MHz
Protection	
Isolation Protection	2,500 V _{DC}
Mechanical	
Dimension	260 x 34.6 x 140.2 mm (10.24" x 1.36" x 5.52")
Environment	
Operating Temp.	0 ~ 40 °C

Ordering Information

P/N	Description
AMO-2203E	2-Port isolated CAN-Bus