ARK-2121L A2

Intel® Celeron® Quad Core J1900 SoC with Multiple I/Os Fanless Box PC

Windows Embedded SUSI API WISE-DeviceOn

Features

- Intel® Celeron® J1900 Quad Core 2.0 GHz SoC with Turbo boost support
- VGA and HDMI dual independent display
- 9 ~ 36 V_{DC} wide range power input
- -20 ~ 70° 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

Specifications

		ARK-2121L-U0A2E
Processor System	CPU	Intel Celeron Processor J1900 Quad Core SoC
	Frequency	2.0 GHz, turbo boost up to 2.42 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, OCL 1.2, OGL 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
	DisplayPort*	Up to 2048 x 1152 at 60Hz(by project only)
	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
	USB Interface	1 x USB 3.0, 3 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	WES8, Windows 8, WES7, Windows 7
	Linux	Support by project
Power Requirement	Power Type	ATX
	Power Input Voltage	9 ~ 36 V_{DC}
	Minimum Power Input	12 V, 1.5 A
	Power Adapter	AC to DC, DC19 V/3.42 A, 65 W (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)	264.5 x 68.4 x 133.0 mm (10.41" x 2.69" x 5.24")
	Weight	2.3 kg (5.07 lb)
Environment	Operating Temperature	With extended temperature peripherals: -20 ~ 70° C (-4 ~ 158° F) with 0.7m/s air flow With 2.5-inch hard disk 0 ~ 45° C (32 ~ 112° 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 A, CCC, BSMI
	Safety Certifications	UL, CB, CCC, BSMI

* DisplayPort is supported by project only.

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

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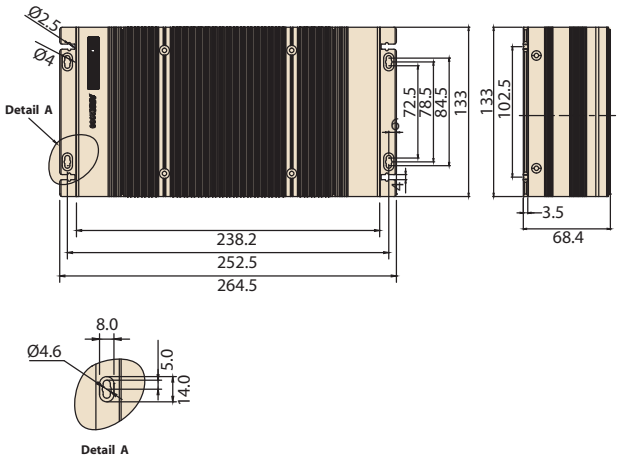
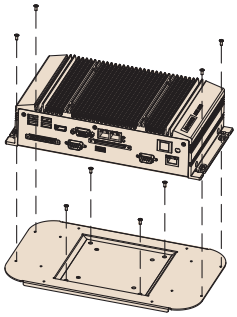
All product specifications are subject to change without notice.

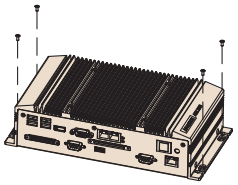
Dimensions



VESA mount

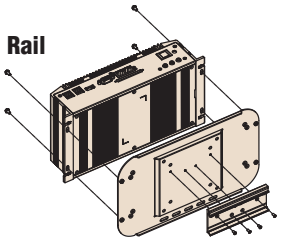


Wall mount

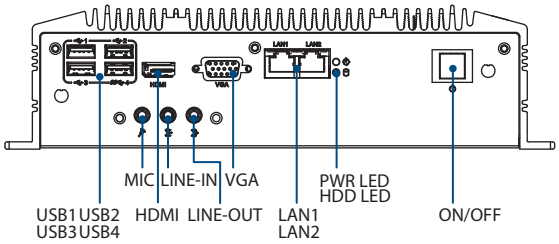


Unit: mm

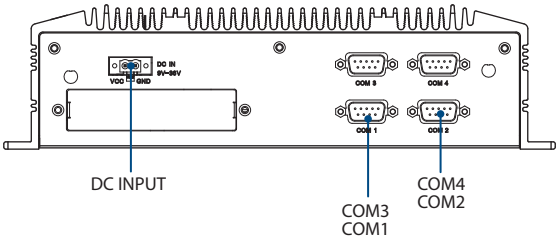
DIN Rail



Front Panel External I/O Mechanical Layout/Drawing



Rear Panel External I/O Mechanical Layout/Drawing



Ordering Information

Part No.	CPU	VGA	HDMI/ DP*	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-2121L-U0A2E	Intel Celeron J1900 2.0GHz	Yes	Yes	2	3	1	2	2	Lin-out, Line-in, MIC	1	1	1	1	9 ~ 36 V_{DC}	-20 ~ 70° C

Note: Memory, storage and operating system bundled by request.
*DP is support by project only.

Packing List

Part Number	Description
-	1 x ARK-2121 Unit
-	1 x User Manual (Simplified Chinese)
-	1 x China RoHS
1700009001	1x 2-pin Phoenix to DC-Jack power cable

Embedded OS

Part Number	Description
20706WE7ES0024	WES7E ARK-2121L 64b ASIA 4 MUI
20706WE7PS0023	WES7P ARK-2121L 64b 10 MUI
20706WX9ES0110	W10 19EL ARK-2121L 64b 1809 ENU

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

Optional Items

Part Number	Description
96PSA-A65W19P2-1	AC-to-DC Adapter, DC 19V/3.42A 65W, 0 ~ 40° C for Home and Office Use
1700001524	Power cable 3-pin 183cm, USA type
170203183C	Power cable 3-pin 183cm, EU type
170203180A	Power cable 3-pin 183cm, UK type
AMK-V019E	VESA mounting kit
AMK-R005E	DIN-rail mounting kit

Optional MOS modules

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