

ARK-1220L

Intel Atom E3940 QC SoC with 4K Dual HDMI/Dual LAN/M.2 DIN-Rail Fanless Box PC

Preliminary



WISE-PaaS/RMM



LISTED



Features

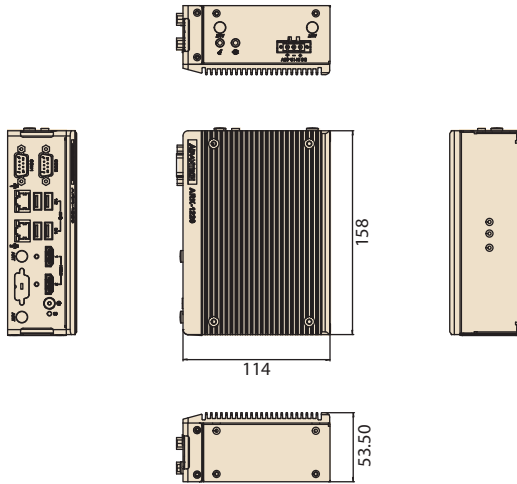
- Intel Atom E3940 Quad Core SoC turbo burst up to 1.8 GHz
- DIN-Rail system with essential I/O ports on front-side bezel
- 2 x Intel GbE and 4 x USB 3.0
- Dual HDMI display up to 4K resolution
- 1 x full-size mPCIe with SIM holder and 1 x M.2 2230 for WIFI
- 1 x 2.5" SATA III SSD and 1 x full-size mSATA*
- 12V ~ 28V wide range power input
- 30 ~ 70 °C extended operating temperature
- Advantech WISE-PaaS/RMM support

Specifications

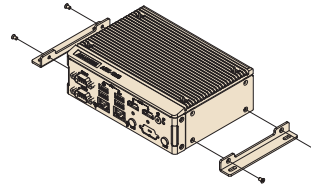
Model Name	ARK-1220L-S6A1E	
Processor System	CPU	Intel Atom E3940 Quad Core SoC
	Frequency	1.6 GHz, turbo burst up to 1.8 GHz
	Core Number	4
	BIOS	AMI EFI 64 Mbit
Memory	Technology	DDR3L 1866 Mhz
	Max capacity	8GB
	Socket	2 x 204-pin SO-DIMM, 2 x 4GB or 1 x 8GB memory
Graphics	Chipset	Intel HD Graphics 500, CPU integrated
	Graphic Engine	Gen9 Low Power; 18 Execution Units Media Codec Supported: H.264, MPEG2, MVC, VC-1, WMV9, H.265 / HEVC, VP8, JPEG / MJPEG 3D HW Acceleration: OpenGL 4.4, DirectX* 12, OpenCL* 2.0
	HDMI	HDMI1 : 3840 x 2160 @ 30Hz HDMI2 : 3840 x 2160 @ 30Hz
	Dual Display	HDMI1 + HDMI2
Ethernet	LAN1	10/100/1000 Mbps Intel i210GbE, support Wake On LAN
	LAN2	10/100/1000 Mbps Intel i210GbE, support Wake On LAN
Audio	Interface	Realtek ALC888S, High Definition Audio, Mic-in, Line-out
I/O Interface	Serial Ports	2 x RS-232/422/485 with auto flow control, COM2 with 5V/12V power supply
	USB Ports	4 x USB 3.0
	GPIO	8-bit Programmable DIO (Optional)
Expansion	Mini PCIe	1 x Full-size mPCIe with SIM holder
	M.2	1 x M.2 2230 E key for WIFI module
Storage	SSD/HDD	1 x 2.5" SATAIII Drive bay (compatible with 15mm height)
	mSATA	1 x Full-size mSATA (*share with mPCIe slot)
Other	WatchDog Timer	255 levels timer interval, setup by software
	TPM	SLB9665XQ2.0 FW5.62 (By T-PN, MOQ 30pcs)
Software Support	Microsoft Windows	Windows 10 Enterprise
	Linux	Support by project
Power Requirement	Power Type	ATX/AT
	Power Input Voltage	12 ~ 28 V _{DC}
	Power Adaptor	AC to DC, 60W (Optional)
Power Consumption	Typical	TBC
	Max.	TBC
Mechanical	Construction	Aluminum housing
	Mounting	DIN-rail/Wall Mount
	Dimensions (W x H x D)	53.5 x 158 x 114 mm (2.11" x 6.22" x 4.49")
	Weight	1.2 kg (2.65lb)
Environment	Operating Temperature	With extended temp. peripherals: -30 ~ 70 °C (-22 ~ 158F) with 0.7 m/s air flow With 2.5 inch hard disk: 0 ~ 40 °C (32 ~ 104°F) with 0.7 m/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, IEC60068-2-64, random, 5-500 Hz, 1hr/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	UL, CB, CCC and BSMI

Dimensions

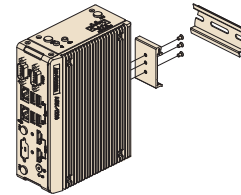
Unit: mm



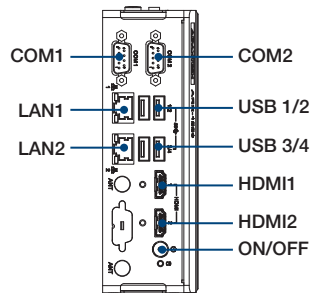
Wall Mount



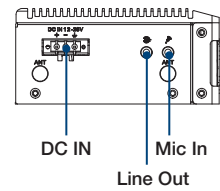
DIN Rail



Front Panel External I/O Mechanical Layout/Drawing



Top Panel External I/O Mechanical Layout/Drawing



Ordering Information

Part No.	CPU	RAM	HDMI	GbE	USB 3.0	RS-232/422/485	Audio	Full-size MiniPCle	SIM	M.2	2.5" SATA III HDD Bay	mSATA	Power Input	Operating Temp.
ARK-1220L-S6A1E	Intel Atom E3940 1.6 GHz SoC	Up to 8GB	2	2	4	2	Mic-in, Line-out	1	1	1	1	1 (shared w/ mPCle)	12-28 V _{DC}	-30 ~ 70 °C

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

Packing List

Part Number	Description
-	1 x ARK-1220L Unit
-	1 x User Manual (Simplified Chinese)
-	Wrench for top cover
-	1x DIN-rail bracket
-	1x 3-pin terminal block

Embedded OS

Part Number	Description
TBC	WIN10 IoT Ent LTSB 64bit, EN

Optional Items

Part Number	Description
96PSA-A60W24T2	AC to DC Adaptor, 24V/2.5A 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
1700000237	Power cable 3-pin 183cm, PSE type
AMK-W003	ARK-112X series Wall mounting kit
1700023855-01	1M lockable HDMI cable
1700023856-01	3M lockable HDMI cable
1700019967	GPIO cable, F Cable 2*5P-2.0/D-SUB 9P(F) 15CM