

# ARK-VH200

## Intel® Atom™ Dual Core D510 In-Vehicle DVR with 4 BNC Fanless Box PC



### Features

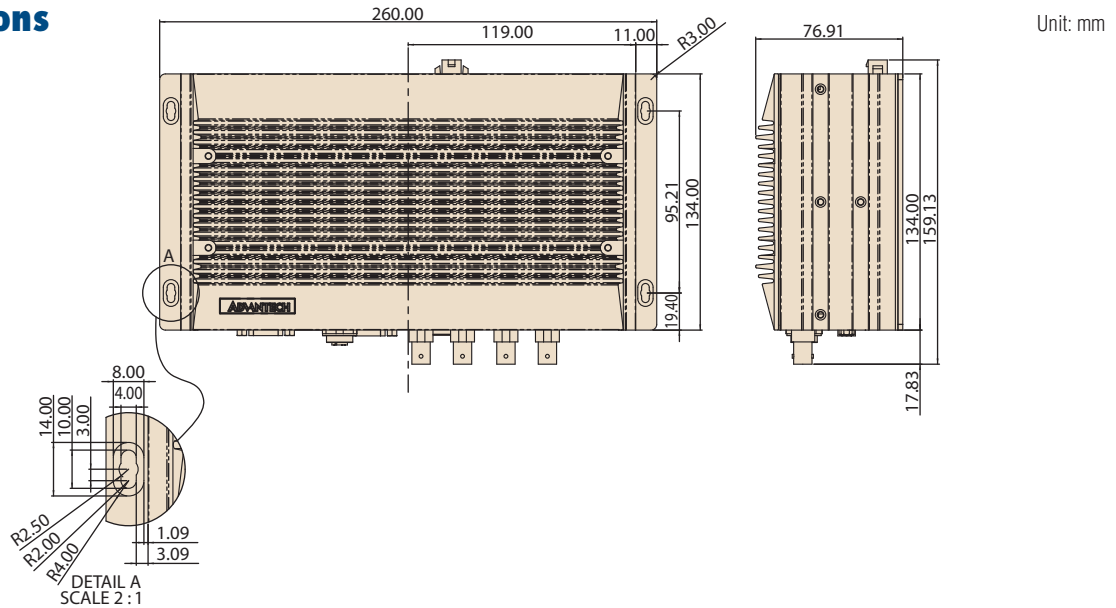
- Intel® Atom™ D510 processor at 1.66 GHz
- 120/100 FPS D1 resolution video preview and recording
- Optional add-on Mini PCIe card for wireless applications, e.g. WLAN or 3.5G module
- eSATA for large capacity external HDD
- In-vehicle power design and IGN support, compliant with ISO-7637-2
- 4 x USB 2.0 ports (2 x USB ports are lockable for secure connection)
- Compliant with EN50155 for rail transportation applications
- IP40 sealed design
- Supports SUSIAccess and Embedded Software APIs



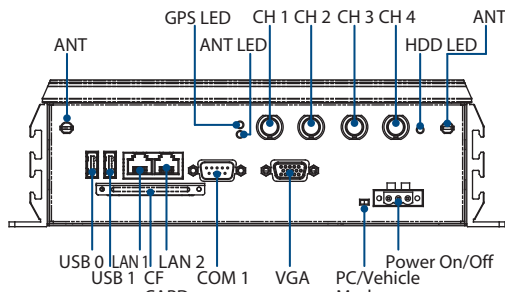
### Specifications

Processor System	CPU	Intel Atom Dual Core D510
	Frequency	1.66 GHz
	L2 Cache	1 MB
	BIOS	AMI 16 Mbit Flash BIOS
Memory	Technology	DDR2 667 MHz
	Max. Capacity	2 GB
	Socket	1 x 200-pin SO-DIMM
Graphics	Chipset	Embedded Gen 3.5G+GFX Core, Intel Gen 3.5 DX9, MPEG2 Decode in HW
	Interface	CRT Interface
Ethernet	LAN 1	10/100/1000 Mbps Intel 82567V GbE, support Wake On LAN
	LAN 2	10/100/1000 Mbps Intel 82583V GbE, support Wake On LAN
Audio	Interface	Line-out, Mic-in
IO interface	Serial Interface	2 x RS-232 port, 1 x RS-232/422/485 (Optional)
	USB Interface	4 x USB ports, Compliant with USB 2.0 (2 x USB ports are lockable)
Other	Digital I/O	Supports up to 4-bit DIO
	GPS	On-board GPS
	eSATA	1 x eSATA
	Watchdog timer	255-level timer interval, setup by software
Expansion	Mini PCIe	2 x Mini PCIe
	SIM Socket	1 x SIM Socket
Video Recording	Video Compression	H/W H.264
	Video Input	4 x Ch Video Inputs, BNC
	Video Resolution	Preview@D1; Record@D1+CIF (dual stream)
	Video Frame	Total 120/100 FPS (NTSC/PAL) @ D1 resolution
	SDK Support	VC++/.NET/VB/V4L2
Storage	HDD	Supports 1 x SATA 2.5" HDD Bay (9.5 mm height only)
	SSD	Supports CompactFlash socket for type I/II CompactFlash disk
Software Support	Microsoft Windows	WES2009, WES7
	Linux	Fedora v10.04.1
Power Requirement	Power Type	AT/ATX
	Power Input Voltage	PC Mode: 9 V <sub>DC</sub> ~ 32 V <sub>DC</sub> VH Mode: 12 V battery (11 V <sub>DC</sub> ~ 16 V <sub>DC</sub> ), 24V battery (22 V <sub>DC</sub> ~ 32 V <sub>DC</sub> )
	Ignition	Supports ignition function
	PIC Firmware	Battery status check, and Off-delay support
	Minimum Power Inputs	36W
Power Consumption	Power Adapter	AC to DC, DC19V/3.42A, 65W (Optional)
	Typical	19 W
Mechanical	Max.	22 W
	Construction	Aluminum housing
	Mounting	Desk/wall-mounting
	Dimensions (W x H x D)	260 mm x 77 mm x 134 mm
	Weight	3 kg (6.6 lb)
Environment	Operating Temperature	With extend temperature peripherals CompactFlash disk: -20 ~ 60° C (-4 ~ 140° F) With extend temperature peripherals 2.5-inch hard disk 0 to 45° C (32 ~ 113° F), with air flow
	Storage Temperature	-40 ~ 85° C (-40 ~ 185° F)
	Relative Humidity	95% @ 40° C (non-condensing)
	Vibration Loading During Operation	With CompactFlash disk: 5 Grms, IEC 60068-2-64, random, 5 ~ 500 Hz, 1 Oct./min, 1 hr/axis. With 2.5-inch hard disk: 1 Grms, IEC 60068-2-64, random, 5 ~ 500 Hz, 1 Oct./min, 1 hr/axis.
	Shock During Operation	With CompactFlash disk: 50 G, IEC 60068-2-27, half sine, 11 ms duration With hard disk: 20 G, IEC 60068-2-27, half sine, 11 ms duration
	EMC	CE/FCC Class A
	Safety Certifications	CE/FCC, CCC, UL/cUL
	In-Vehicle Certification	E-Mark E13

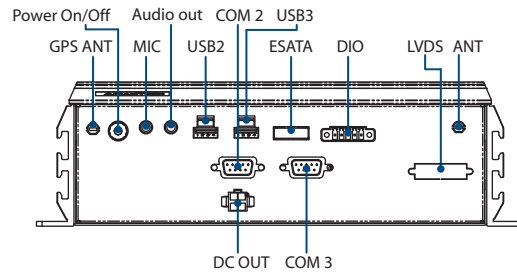
## Dimensions



### Front Panel External I/O Mechanical Layout/Drawing



### Rear Panel External I/O Mechanical Layout/Drawing



## Ordering Information

Part Number	Intel CPU	RAM	Display	Audio	GbE	Storage	USB 2.0	COM	On board GPS	4-bit GPIO	MiniPCIe	eSATA	Video	Operating Temp.
ARK-VH200A-D5A2E	Intel Atom D510 1.6GHz	Up to 2 GB	VGA	Line-out Mic-in	2	1x 2.5" HDD bay & 1x CF Card	4	2 x RS-232 & 1 x RS-232/422/485 (Optional)	1	1	2 (1 w/ SIM)	1	4 Ch Video Inputs (BNC)	-20 ~ 60° C

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

## Packing List

Part Number	Description
-	1 x ARK-VH200 Unit
-	1 x Driver/Utility CD/Manual
-	1 x User Manual (Simplified Chinese)
1652004519	1 x 3-pole Phoenix Power BLOCK 5.0mm
1750001782	1 x GPS antenna Active with 5M SMA cable

## Optional Items

Part Number	Description
1757003659	AC-to-DC Adapter DC19 V/3.42 A 65 W, 0 ~ 40°C for Home and Office Use
1700001947	Power cable 2-pin 180 cm, USA type
1700001948	Power cable 2-pin 180 cm, Europe type
1700001949	Power cable 2-pin 180 cm, UK type
AMK-C001E	In-vehicle Cradle, SAE J1445 Standard

## Embedded OS

Part Number	Description
2070012562	XPE WES 2009 OS Image
2070012563	WES7 OS Image