

# ARK-2121S

## Outdoor NVR w/4 PoE Ports Intel® Atom E3845 SoC Fanless Box PC



### Features

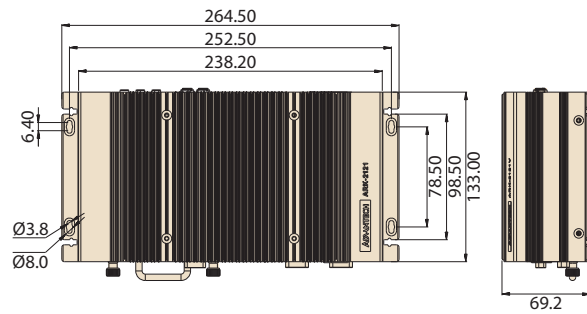
- Intel® Atom E3845 Quad Core 1.91 GHz SoC
- 4 PoE Ports to Support Mainstream IP Cameras
- 3KV isolation for 6 x Di & 2 x Do
- Diversity Communication Abilities, ex. WWAN, WLAN
- 9 ~ 36 V<sub>DC</sub>\* Wide Power Input w/isolation
- 1 x Removable 2.5" drive bay
- Supports iManager, SUSIAccess and Embedded Software APIs
- Up to -40 ~ 70° C wide temperature support (by project)

### Specifications

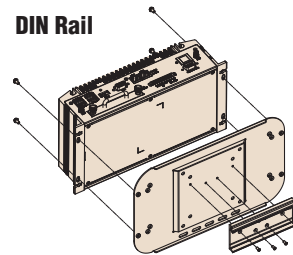
		ARK-2121S-S9A1E
Processor System	CPU	Intel Atom E3845 QC SoC
	Frequency	1.91 GHz
	L2 Cache	2 MB
	BIOS	AMI EFI 64 Mbit
Memory	Technology	DDR3L 1333 MHz
	Max. Capacity	8 GB
	Socket	1 x 204-pin SO-DIMM
Graphics	Chipset	Intel Gen7 Graphics
	Graphic Engine	DirectX11, OpenGL3.2, OpenCL1.1 Full HW acceleration, decode: H.264, MPEG2/4, VC-1, WMV9. Encode: H.264, MPEG2
	VGA	Up to 2560 x 1600 @ 60Hz
	HDMI	Lockable HDMI connector, up to 1080p
Audio	Main System	Realtek ALC888S, High Definition Audio (HD), Line-in, Line out, Mic-in
Ethernet	LAN #1	10/100/1000 Mbps Intel I210-IT GbE, support Wake on LAN
	LAN #2	10/100/1000 Mbps Intel I210-IT GbE, support Wake on LAN
I/O Interface	Power over Ethernet, PoE	4 x 10/100 Mbps - 4ports full-load, IEEE802.3af Class 2 (7Watt) - 2ports full-load, IEEE802.3af Class 3 (15.4Watt)
	Serial Ports	2 x RS-232/422/485 ports (support auto flow control, BIOS selectable)
	GPIO	6 x DI & 2 x DO w/ 3KV isolation Input Voltage: 0 to 30 V <sub>DC</sub> , Output Current: Max. 500 mA per channel On-state Voltage: 24 V <sub>DC</sub> nominal, open collector to 30 V <sub>DC</sub>
	USB	3 x USB 2.0 & 1 x USB3.0
Other	Watchdog timer	255-level timer interval, setup by software
Expansion	Mini PCIe #1	Full-size Mini PCIe, support mSATA
	Mini PCIe #2	Full-size Mini PCIe, support WLAN module
	Mini PCIe #3/4	2 x Full-size Mini PCIe w/SIM holders, support WWAN module. (USB interface)
Storage	2.5" Drive Bay	1 x removable 2.5" drive bay (Max 9.5mm height)
	mSATA	Leverage MiniPCIe #1 slot
Software Support	Microsoft Windows	WES8, WES7, Windows 8, Windows 7
	Linux	Support by project
Power Requirement	Power Type	ATX/AT
	Power Input Voltage*	9 ~ 36 V <sub>DC</sub> w/ isolation
	Isolation	1.5KV Isolated
Mechanical	Construction	Aluminum housing, Silver
	Mounting	Din-Rail mounting, Desk/wall-mounting, VESA mounting
	Dimensions (W x H x D)	264.5 x 69.2 x 133.0 mm (10.41" x 2.72" x 5.24")
Environment	Operating Temperature	With extended temperature peripherals: -30 ~ 60° C with 0.7m/s air flow (standard), -40 ~ 70° C with 0.7m/s air flow (by project) With standard temperature peripherals: 0 ~ 45° C 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 mSATA/SSD: 3 Grms, IEC 60068-2-64, random, 5 ~ 500 Hz, 1 hr/axis
	Shock During Operation	With mSATA/SSD: 30 G, IEC 60068-2-27, half sine, 11 ms duration
Regulation	EMC	CE/FCC Class A, CCC, BSMI
	Safety	CB, UL, CCC, BSMI

\* Power Input Constraint at low voltage: 9-10.9V.

## Dimensions

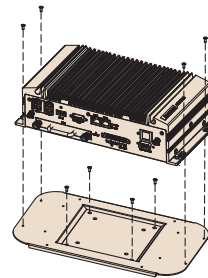


### DIN Rail

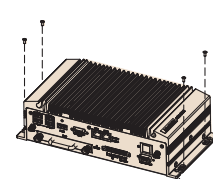


Unit: mm

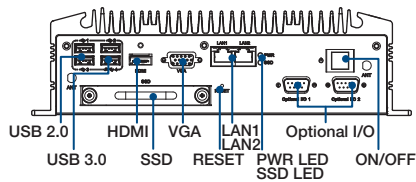
### VESA mount



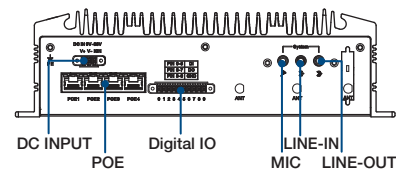
### Wall mount



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



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



## Ordering Information

Part Number	Intel CPU	RAM	2.5" Drive	mSATA	Display	GbE	PoE	USB	DIO	RS-232/422/485	MiniPCIe	SIM Holder	Power Input	Operating Temperature
ARK-2121S-S9A1E	Intel Atom E3845 QC 1.91 GHz	Up to 8GB	1	1	1 x HDMI 1 x VGA	2	4	3 x USB2.0 1 x USB3.0	6Di 2Do	2	4 x Full Size	2	9 ~ 36 V <sub>oc</sub>	-30 ~ 60° C

## Packing List

Part Number	Description
-	1 x ARK-2121 Unit
-	1 x Driver/Utility CD/Manual
-	1 x User Manual (Simplified Chinese)
1652000049	3-pole phoenix power block 3.81mm
1652003235	10-Pin DIO plug in block

## Embedded OS

Part Number	Description
2070013559	WES7 E OS image
2070013598	WE8S OS image
2070014587	IDP 3.1 x64 OS image

\*Default BIOS is supported for 64-bit OS installation, BIOS 32-bit OS is supported by

project

## Optional Items

Part Number	Description
96PSA-A120W19T2	AC-to-DC Adapter
1702002600	Power Cable 3-pin 180cm, USA type
1702002605-02	Power Cable 3-pin 183cm, Europe type
1700018704	Power Cable 3-pin 183cm, UK type
AMK-V004E	VESA mounting kit
AMK-R004E	DIN-rail mounting kit

# ARK-2121V

## In-Vehicle NVR w/4 PoE Ports Intel® Atom E3825 / Atom E3845 SoC Fanless Box PC



### Features

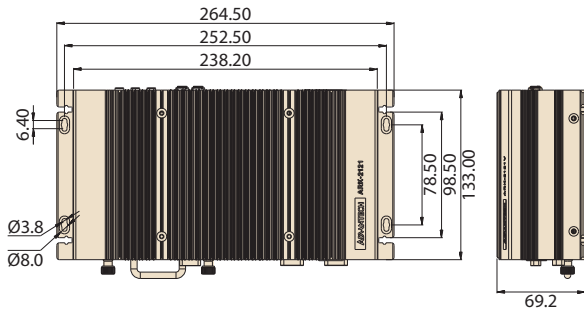
- Intel® Atom E3825 Dual Core 1.33 GHz & E3845 Quad Core 1.91 GHz SoC
- 4 PoE Ports to Support Mainstream IP Cameras
- Isolated COM ports and DIO
- Diversity Communication Abilities, ex. WWAN, WLAN
- Built-in GPS and G-Sensor for GIS application
- Intelligent Vehicle Power Ignition
- 9 ~ 36 V<sub>DC</sub>\* Wide Power Input w/isolation
- 1 x Removable 2.5" drive bay
- Supports iManager, SUSIAccess and Embedded Software APIs
- Up to -40 ~ 70° C wide temperature support (by project)

### Specifications

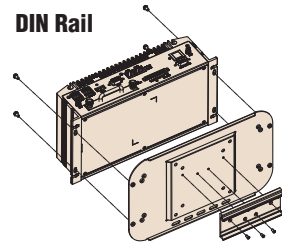
		ARK-2121V-S9A1E	ARK-2121V-S3A1E
Processor System	CPU	Intel Atom E3845 QC SoC	Intel Atom E3825 DC SoC
	Frequency	1.91 GHz	1.33 GHz
	L2 Cache	2 MB	1 MB
	BIOS	AMI EFI 64 Mbit	
Memory	Technology	DDR3L 1333 MHz	DDR3L 1066 MHz
	Max. Capacity	8 GB	
	Socket	1 x 204-pin SO-DIMM	
Graphics	Chipset	Intel Gen7 Graphics	
	Graphic Engine	DirectX11, OpenGL3.2, OpenCL1.1	
	VGA	Up to 2560 x 1600 @ 60Hz	
	HDMI	Lockable HDMI connector, up to 1080p	
Audio	Main System	Realtek ALC888S, High Definition Audio (HD), Line-in, Line out, Mic-in	
Ethernet	LAN #1	10/100/1000 Mbps Intel I210-IT GbE, support Wake on LAN	
	LAN #2	10/100/1000 Mbps Intel I210-IT GbE, support Wake on LAN	
I/O Interface	Power over Ethernet, PoE	4 x 10/100 Mbps - 4ports full-load, IEEE802.3af Class 2 (7Watt) - 2ports full-load, IEEE802.3af Class 3 (15.4Watt)	N/A
	Serial Ports	2x non-isolated RS-232/422/485 with auto flow control	2x isolated RS-232/422/485 with auto flow control (3KV isolation) 2x non-isolated RS-232/422/485 with auto flow control
	CANBus	Option, 2ch CANBus 2.0A/B (1xCOM will be replaced) 6 x DI & 2 x DO w/ 3KV isolation Input Voltage: 0 to 30 V <sub>DC</sub> Output Current: Max. 500 mA per channel On-state Voltage: 24 V <sub>DC</sub> nominal, open collector to 30 V <sub>DC</sub>	
	GPIO	3 x USB 2.0 & 1 x USB3.0	
Other	GPS	On board standalone GPS, support GPS, GLONASS and QZSS signals	
	G-Sensor	On board high resolution G-Sensor, up to 13-bit resolution at ± 16g	
	Watchdog timer	255-level timer interval, setup by software	
Expansion	Mini PCIe #1	Full-size Mini PCIe (USB, SATA interface)	
	Mini PCIe #2	Full-size Mini PCIe w/SIM holder (PCIE, USB interface)	
	Mini PCIe #3/4	2 x Full-size Mini PCIe w/SIM holders (USB interface)	
Storage	2.5" Drive Bay	1 x removable 2.5" drive bay (Standard 9.5mm height, 15mm height support by project)	
	mSATA	Leverage MiniPCIe #1 slot	
Software Support	Microsoft Windows	WES8, WES7, Windows 8, Windows 7	
	Linux	Support by project	
Power Requirement	Power Type	ATX/AT	
	Power Input Voltage*	9 ~ 36 V <sub>DC</sub> w/isolation	
	Vehicle Power Ignition	Selectable boot-up & shut-down voltage, on/off delay time	
	Power Consumption	16W (Typical), 66W (Max)	16W (Typical), 36W (Max)
Mechanical	Isolation	1.5KV Isolated	
	Construction	Aluminum housing, Silver	
	Mounting	Din-Rail mounting, Desk/wall-mounting, VESA mounting	
Environment	Dimensions (W x H x D)	264.5 x 69.2 x 133.0 mm	
	Operating Temperature	With extended temperature peripherals: -30 ~ 60° C with 0.7m/s air flow (standard) -40 ~ 70° C with 0.7m/s air flow (by project)	With extended temperature peripherals: -30 ~ 70° C with 0.7m/s air flow (standard) -40 ~ 70° C with 0.7m/s air flow (by project)
	Storage Temperature	With standard temperature peripherals: 0 ~ 45° C with 0.7m/s air flow	With standard temperature peripherals: 0 ~ 45° C with 0.7m/s air flow
	Relative Humidity	-40 ~ 85° C (-40~185° F)	
	Vibration/Shock	95% @ 40° C (non-condensing)	
Regulation	EMC	CE/FCC Class A, CCC, BSMI	
	Safety	UL, CCC, BSMI, E-Mark (E13)	
	In-Vehicle Power	ISO7637-2 Lev.4	

\* Power Input Constraint at low voltage: 9~10.9V.

## Dimensions

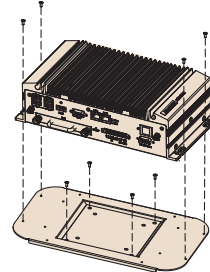


### DIN Rail

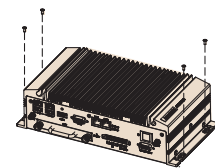


Unit: mm

### VESA mount

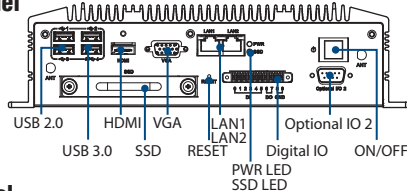


### Wall mount

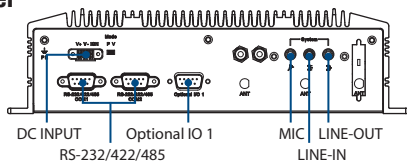


## ARK-2121V-S3A1E External I/O Mechanical Layout/Drawing

### Front Panel

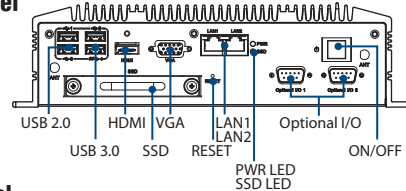


### Rear Panel

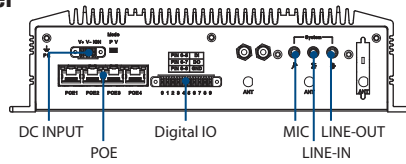


## ARK-2121V-S9A1E External I/O Mechanical Layout/Drawing

### Front Panel



### Rear Panel



## Ordering Information

Part Number	Intel CPU	RAM	2.5" Drive	mSATA	Display	GbE	PoE	USB	DIO	RS-232/422/485	MiniPCIe	SIM Holder	Power Input	Operating Temperature
ARK-2121V-S3A1E	Intel Atom E3825 DC 1.33 GHz	Up to 8GB	1	1	1 x HDMI 1 x VGA	2	N/A	3 x USB2.0 1 x USB3.0	6Di 2Do	4	4 x Full Size	3	9 - 36 V <sub>DC</sub>	-30 - 70° C
ARK-2121V-S9A1E	Intel Atom E3845 QC 1.91 GHz						4			2				-30 - 60° C

## Packing List

Part Number	Description
-	1 x ARK-2121 Unit
-	1 x Driver/Utility CD/Manual
-	1 x User Manual (Simplified Chinese)
1652000049	3-pole phoenix power block 3.81mm
1750001782	1 x GPS antenna Active with 5M SMA cable
1652003235	10-Pin DIO plug in block

## Optional Items

Part Number	Description
96PSA-A120W19T2	AC-to-DC Adapter
1702002600	Power Cable 3-pin 180cm, USA type
1702002605-02	Power Cable 3-pin 183cm, Europe type
1700018704	Power Cable 3-pin 183cm, UK type
AMK-V004E	VESA mounting kit
AMK-R004E	DIN-rail mounting kit

## Embedded OS

Part Number	Description
2070013555	ARK-2121V-S3A1E WES7 E OS image
2070013559	ARK-2121V-S9A1E WES7 E OS image
2070013597	ARK-2121V-S3A1E WE8S OS image
2070013598	ARK-2121V-S9A1E WE8S OS image
2070014590	ARK-2121V-S3A1E IDP 3.1 x64 OS image
2070014979	ARK-2121V WES7 P OS image (10MUI, 64bit)
20706WX6ES0002	ARK-2121V Win10 IoT Enterprise OS image (US, 64bit)

\*Default BIOS is supported for 64-bit OS installation, BIOS 32-bit OS is supported by project

# ARK-2151S

## Outdoor Full HD NVR w/4 PoE Ports 4th Gen. Intel Core i5 4300U SoC Fanless Box PC



### Features

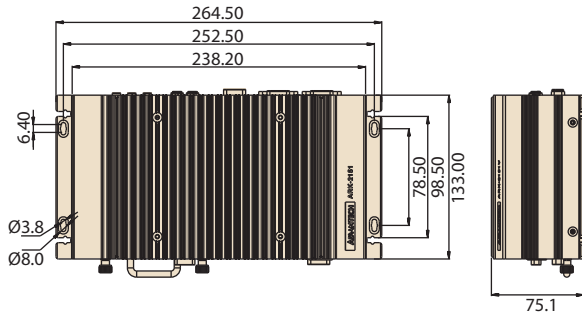
- Intel® Core i5-4300U Dual Core 1.9 GHz SoC
- 4 PoE Ports to Support Mainstream IP Cameras
- Diversity Communication Abilities, ex. WWAN, WLAN
- 3KV isolation for 6 x Di & 2 x Do
- 9 ~ 36 V<sub>DC</sub>\* Wide Power Input w/isolation
- 1 x Removable 2.5" drive bay
- Supports iManager, SUSIAccess and Embedded Software APIs

### Specifications

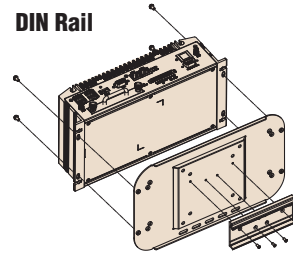
		ARK-2151S-S9A1E	
Processor System	CPU	Intel i5-4300U	
	Frequency	1.9 GHz	
	L3 Cache	3 MB	
	BIOS	AMI EFI 128 Mbit	
Memory	Technology	DDR3L 1600 MHz	
	Max. Capacity	8 GB	
	Socket	1 x 204-pin SO-DIMM	
Graphics	Chipset	GT2-4400 Graphics	
	Graphic Engine	DirectX11.1, OpenGL 4.0, and OpenCL 1.2 Full AVC/VC1/MPEG2 HW Decode	
	VGA	Up to 1920 x 1200 with 60 Hz, 154 MHz pixel clock rate	
	HDMI	Lockable HDMI connector, up to 4K at 24 Hz	
Audio	Main System	Realtek ALC888S, High Definition Audio (HD), Line-in, Line out, Mic-in	
Ethernet	LAN #1	10/100/1000 Mbps Intel I218 GbE, support Wake on LAN	
	LAN #2	10/100/1000 Mbps Intel I210-IT, support Wake on LAN	
I/O Interface	Power over Ethernet, PoE	4 x 10/100 Mbps - 4ports full-load, IEEE802.3af Class 2 (7Watt) - 2ports full-load, IEEE802.3af Class 3 (15.4Watt)	
	Serial Ports	2 x RS-232/422/485 ports (support auto flow control, BIOS selectable)	
	USB Interface	2 x USB 2.0 & 2 x USB3.0	
	GPIO		6 x DI & 2 x DO w/ 3KV isolation Input Voltage: 0 to 30 V <sub>DC</sub> , Output Current: Max. 500 mA per channel On-state Voltage: 24 V <sub>DC</sub> nominal, open collector to 30 V <sub>DC</sub>
		Watchdog timer	255-level timer interval, setup by software
Expansion	Mini PCIe #1	Full-size Mini PCIe, support mSATA	
	Mini PCIe #2	Half-size Mini PCIe, support WLAN module	
	Mini PCIe #3/4	2 x Full-size Mini PCIe w/SIM holders, support WWAN module. (USB interface)	
Storage	2.5" Drive Bay	1 x removable 2.5" drive bay (Max 9.5mm height)	
	mSATA	Leverage MiniPCIe #1 slot	
Software Support	Microsoft Windows	WES8, WES7, Windows 8, Windows 7	
	Linux	Support by project	
Power Requirement	Power Type	ATX/AT	
	Power Input Voltage*	9 ~ 36 V <sub>DC</sub> w/ isolation	
	Isolation	1.5 KV Isolated	
Mechanical	Construction	Aluminum housing, Silver	
	Mounting	Din-Rail mounting, Desk/wall-mounting, VESA mounting	
	Dimensions (W x H x D)	264.5 x 75.1 x 133.0 mm (10.41" x 2.96" x 5.24")	
Environment	Operating Temperature	With extended temperature peripherals:-20 ~ 60° C with 0.7m/s air flow With standard temperature peripherals:0 ~ 45° C 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 mSATA/SSD: 3 Grms, IEC 60068-2-64, random, 5 ~ 500 Hz, 1 hr/axis	
	Shock During Operation	With mSATA/SSD: 30 G, IEC 60068-2-27, half sine, 11 ms duration	
Regulation	EMC	CE/FCC Class A, CCC, BSMI	
	Safety	CB, UL, CCC, BSMI	

\* Power Input Constraint at low voltage: 9~10.9V

## Dimensions

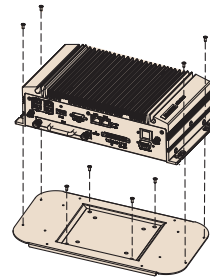


### DIN Rail

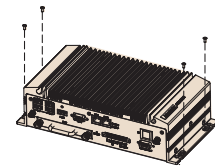


Unit: mm

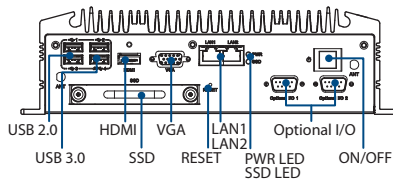
### VESA mount



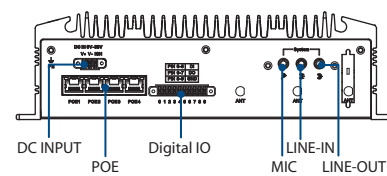
### Wall mount



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



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



## Ordering Information

Part Number	Intel CPU	RAM	2.5" Drive	mSATA	Display	GbE	PoE	USB	DIO	RS-232/422/485	MiniPCIe	SIM Holder	Power Input	Operating Temperature
ARK-2151S-S9A1E	Intel i5-4300U DC 1.9 GHz	Up to 8GB	1	1	1 x HDMI 1 x VGA	2	4	2 x USB2.0 2 x USB3.0	6Di 2Do	2	3 x Full Size 1 x Half Size	2	9 ~ 36 V <sub>DC</sub>	-20 ~ 60° C

## Packing List

Part Number	Description
-	1 x ARK-2151 Unit
-	1 x Driver/Utility CD/Manual
-	1 x User Manual (Simplified Chinese)
1652000049	3-pole phoenix power block 3.81mm
1652003235	10-Pin DIO plug in block

## Optional Items

Part Number	Description
96PSA-A120W19T2	AC-to-DC Adapter
1702002600	Power Cable 3-pin 180cm, USA type
1702002605-02	Power Cable 3-pin 183cm, Europe type
1700018704	Power Cable 3-pin 183cm, UK type
AMK-V004E	VESA mounting kit
AMK-R004E	DIN-rail mounting kit

## Embedded OS

Part Number	Description
2070013568	WE7 E OS image
2070013600	WE8S OS image
2070014995	Win10 IoT Enterprise OS image (US, 64bit)

\*Default BIOS is supported for 64-bit OS installation, BIOS 32-bit OS is supported by project

# ARK-2151V

## In-Vehicle Full HD NVR w/4 PoE Ports 4th Gen. Intel® Core i5 4300U / Celeron 2980U SoC Fanless Box PC



### Features

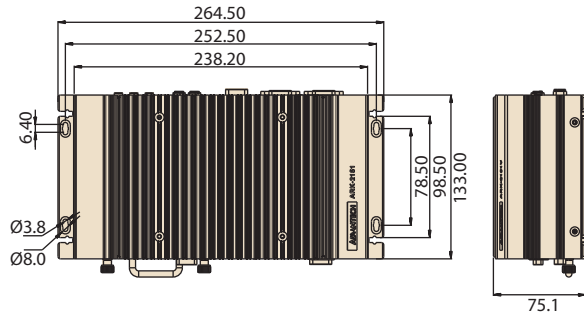
- Intel® Celeron 2980U 1.6GHz / Core i5-4300U 1.9 GHz SoC
- 4 PoE Ports to Support Mainstream IP Cameras
- Diversity Communication Abilities, ex. WWAN, WLAN
- Intelligent Vehicle Power Ignition
- 9 ~ 36 V<sub>DC</sub>\* Wide Power Input w/isolation
- 1 x Removable 2.5" drive bay
- Supports iManager, SUSIAccess and Embedded Software APIs

### Specifications

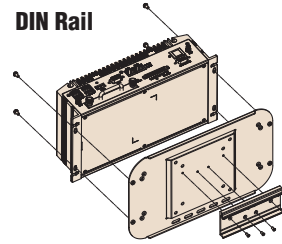
		ARK-2151V-S6A1E	ARK-2151V-S9A1E
Processor System	CPU	Intel Celeron 2980U Dual Core	Intel i5-4300U Dual Core
	Frequency	1.6 GHz	1.9 GHz
	L3 Cache	2 MB	3 MB
	BIOS	AMI EFI 128 Mbit	
Memory	Technology	DDR3L 1333 MHz	DDR3L 1600 MHz
	Max. Capacity	8 GB	
	Socket	1 x 204-pin SO-DIMM	
Graphics	Chipset	HD Graphics	GT2-4400 Graphics
	Graphic Engine	DirectX11.1, OpenGL 4.0, and OpenCL 1.2 Full AVC/VC1/MPEG2 HW Decode	
	VGA	Up to 1920 x 1200 with 60 Hz, 154 MHz pixel clock rate	
	HDMI	Lockable HDMI connector, up to 4K at 24 Hz	
Audio	Main System	Realtek ALC888S, High Definition Audio (HD), Line-in, Line out, Mic-in	
Ethernet	LAN #1	10/100/1000 Mbps Intel I218 GbE, support Wake on LAN	
	LAN #2	10/100/1000 Mbps Intel I210-IT, support Wake on LAN	
I/O Interface	Power over Ethernet, PoE	N/A	4 x 10/100 Mbps - 4ports full-load, IEEE802.3af Class 2 (7Watt) - 2ports full-load, IEEE802.3af Class 3 (15.4Watt)
	Serial Ports	2x isolated RS-232/422/485 with auto flow control (3KV isolation) 2x non-isolated RS-232/422/485 with auto flow control	2x non-isolated RS-232/422/485 with auto flow control
	CANBus	Option, 2ch CANBus 2.0A/B (1xCOM will be replaced)	
	USB Interface	2 x USB 2.0 & 2 x USB3.0	
	GPIO	6 x DI & 2 x DO w/ 3KV isolation Input Voltage: 0 to 30 V <sub>DC</sub> , Output Current: Max. 500 mA per channel On-state Voltage: 24 V <sub>DC</sub> nominal, open collector to 30 V <sub>DC</sub>	
Other	Watchdog timer	255-level timer interval, setup by software	
Expansion	Mini PCIe #1	Full-size Mini PCIe w/SIM holder (PCIe, USB, SATA interface)	
	Mini PCIe #2	Half-size Mini PCIe (PCIe interface)	
	Mini PCIe #3/4	2 x Full-size Mini PCIe w/SIM holders (USB interface)	
Storage	2.5" Drive Bay mSATA	1 x removable 2.5" drive bay (Standard 9.5mm height, 15mm height support by project) Leverage MiniPCIe #1 slot	
Software Support	Microsoft Windows Linux	WES8, WES7, Windows 8, Windows 7 Support by project	
Power Requirement	Power Type	ATX/AT	
	Power Input Voltage*	9 ~ 36 V <sub>DC</sub> w/isolation	
	Vehicle Power Ignition	Selectable boot-up & shut-down voltage, on/off delay time	
	Power Consumption	26W (Typical), 46W (Max)	26W (Typical), 76W (Max)
Mechanical	Isolation	1.5 KV Isolated	
	Construction	Aluminum housing, Silver	
	Mounting	Din-Rail mounting, Desk/wall-mounting, VESA mounting	
Environment	Dimensions (W x H x D)	264.5 x 75.1 x 133.0 mm (10.41" x 2.96" x 5.24")	
	Operating Temperature	With extended temperature peripherals: -20 ~ 60° C with 0.7m/s air flow With standard temperature peripherals: 0 ~ 45° C with 0.7m/s air flow	
	Storage Temperature	-40 ~ 85° C (-40~185° F)	
	Relative Humidity	95% @ 40° C (non-condensing)	
	Vibration/Shock	With mSATA/SSD: IEC 60721-3-5 Class 5M3	
Regulation	EMC	CE/FCC Class A, CCC, BSMI	
	Safety	UL, CCC, BSMI, E-Mark (E13)	
	In-Vehicle Power	ISO7637-2 Lev.4	

\* Power Input Constraint at low voltage: 9~10.9V.

## Dimensions

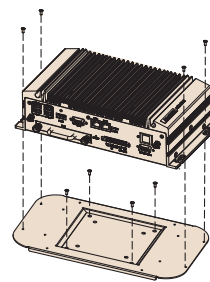


### DIN Rail

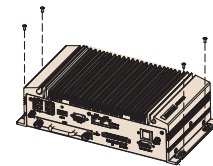


Unit: mm

### VESA mount

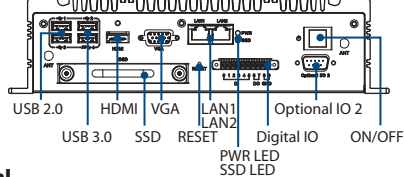


### Wall mount

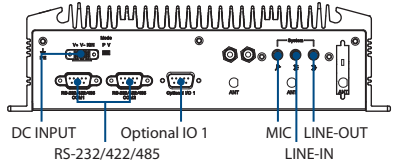


## ARK-2151V-S6A1E External I/O Mechanical Layout/Drawing

### Front Panel

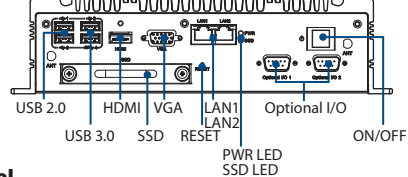


### Rear Panel

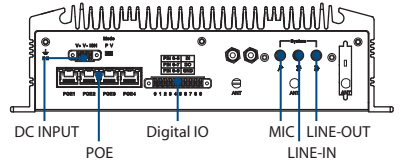


## ARK-2151V-S9A1E External I/O Mechanical Layout/Drawing

### Front Panel



### Rear Panel



## Ordering Information

Part Number	Intel CPU	RAM	2.5" Drive	mSATA	Display	GbE	PoE	USB	DIO	COM	MiniPCIe	SIM Holder	Power Input	Operating Temperature
ARK-2151V-S6A1E	Intel Celeron 2980U 1.6 GHz	Up to 8GB	1	1	1 x HDMI 1 x VGA	2	N/A	2 x USB2.0 2 x USB3.0	6Di 2Do	4 2	3 x Full Size 1 x Half Size	3	9 - 36 V <sub>DC</sub>	-20 ~ 60° C
ARK-2151V-S9A1E	Intel i5-4300U 1.9 GHz						4							

## Packing List

Part Number	Description
-	1 x ARK-2151 Unit
-	1 x Driver/Utility CD/Manual
-	1 x User Manual (Simplified Chinese)
1652000049	3-pole phoenix power block 3.81mm
1652003235	10-Pin DIO plug in block

## Optional Items

Part Number	Description
96PSA-A120W19T2	AC-to-DC Adapter
1702002600	Power Cable 3-pin 180cm, USA type
1702002605-02	Power Cable 3-pin 183cm, Europe type
1700018704	Power Cable 3-pin 183cm, UK type
AMK-V004E	VESA mounting kit
AMK-R004E	DIN-rail mounting kit

## Embedded OS

Part Number	Description
2070013560	ARK-2151V-S6A1E WES7 E OS image
2070013568	ARK-2151V-S9A1E WES7 E OS image
2070013599	ARK-2151V-S6A1E WE8S OS image
2070013600	ARK-2151V-S9A1E WE8S OS image
2070014978	ARK-2151V WES7 P OS image (10MUI, 64bit)
2070014995	ARK-2151V Win10 IoT Enterprise OS image (US, 64bit)

\*Default BIOS is supported for 64-bit OS installation, BIOS 32-bit OS is supported by project



# ARK-2231R

## EN50155 Intel® Atom E3845 SoC Rolling Stock Fanless System



### Features

- Intel® E3845 Quad Core 1.91 GHz SoC
- Stackable extension design, option extension kit for applications
- DC 24V EN50155 S2/C1 compliant, DC 48/72/110V options
- -40 ~ 70 °C wide temperature support with EN50155 TX compliant
- Solid connection for LAN/USB/Audio/COM and power input
- Anti-vibration/shock proof, IEC61373 Category1, ClassB
- Built-in Advantech remote management software WISE-PaaS/RMM



WISE-PaaS/RMM iManager

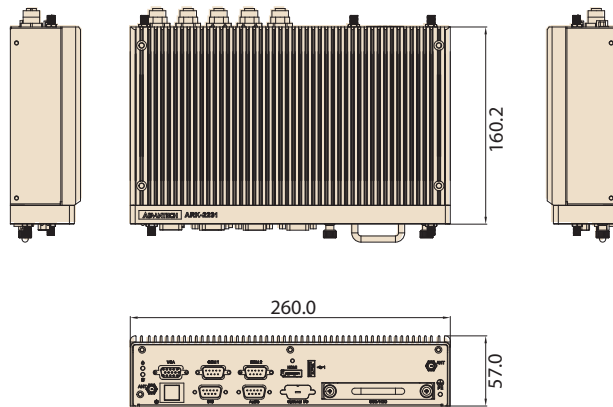


### Specifications

		ARK-2231R-S9A1E
Processor System	CPU	Intel® E3845 Quad Core
	Frequency	1.91 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® Gen7 Graphics
	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 2560 x 1600 @ 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, M12 X-Coded
	LAN2	10/100/1000 Mbps Intel i210 GbE, support Wake On Lan, M12 X-Coded
Audio	Interface	Realtek ALC888S, High Definition Audio. Line-out, Mic-in, Line-in
IO Interface	Serial Ports	2 x RS-232/422/485 port with auto flow control
	USB Interface	1 x USB2.0/3.0 Water-proof, 1 x USB2.0 M12 A-Coded, 1 x USB2.0 Type A
	GPIO	8bit Programmable DI/DO
Other	GPS	On board standalone GPS, support GPS, GLONASS, GALILEO, BeiDou and QZSS signals
	G-Sensor	On board high resolution G-Sensor, up to 13-bit resolution at ± 16g
	Watchdog timer	255 levels timer interval, setup by software
Expansion	Mini PCIe	1 x Full-size Mini PCIe (SATA/PCIe/USB) 1 x Full-size Mini PCIe (PCIe/USB) 1 x Full-size Mini PCIe (USB) w/Accessible SIM socket
	SSD/HDD	1 x 2.5" SATA drive bay
	mSATA	1 x full size mSATA socket
Software Support	Microsoft Windows	Win7, WES7, Win8, WSE8, Win10
	Linux	Support by project
Power Requirement	Power Type	ATX
	Power Input Voltage	DC 24V - Standard DC 48/72/110V - Options
	Regulation	EN50155 S2/C1 Compliant
	Power Adapter	24V/ 150W (Option)
Power Consumption	Typical	18W
	Max.	45W
Mechanical	Construction	Aluminum housing
	Mounting	Wall / VESA / DIN-Rail Kit options
	Dimensions (W x H x D)	260 x 57 x 160.2 mm
	Weight	2.3 kg (5.07 lb)
Environment	Operating Temperature	With extended temperature peripherals: -40 ~ 70 °C EN50155 TX
	Storage Temperature	- 40 ~ 85 °C ( -40 ~ 185 °F)
	Relative Humidity	95% @ 40 °C (non-condensing)
	Vibration During Operation	IEC61373 Category1, Class B
	Shock During Operation	IEC61373 Category1, Class B
	EMC	CE/FCC Class B, CCC, BSMI, EN50155
Safety Certifications	UL, CCC, BSMI, CB, EN50155	

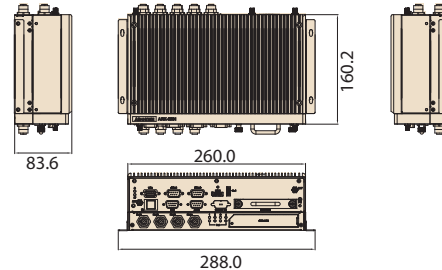
## Dimensions

### ARK-2231R

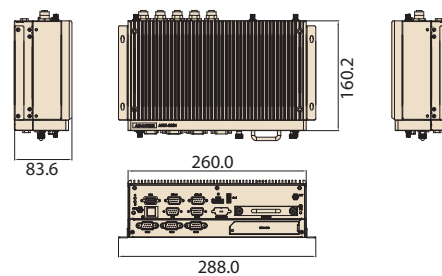


### ARK-2231R+AMK-R100E

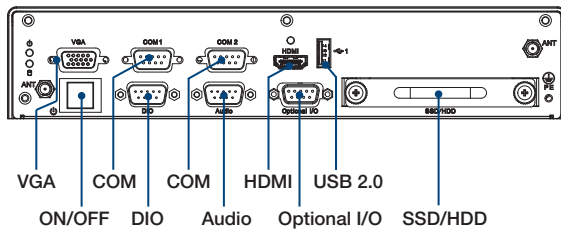
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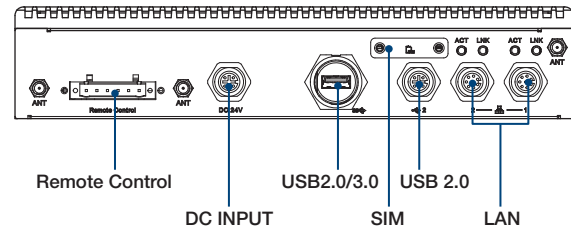
### ARK-2231R+AMK-R102E



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



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



## Ordering Information

Part No.	CPU	RAM	Display	GbE	USB 2.0	USB 2.0/3.0	DIO	RS-232/422/485	Audio	Full-size MiniPCIe	SIM	mSATA	2.5" SATA II Drive Bay	Power Input	Operating Temp.
ARK-2231R-S9A1E	Intel® Atom E3845 DC 1.91GHz	Up to 8G	1 x HDMI 1 x VGA	2	2	1	8 bit	2	Lin-out, Line-in, MIC	3	1	1	1	24 V <sub>DC</sub>	-40 ~ 70 °C

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

## Packing List

Part Number	Description
ARK-2231R-S9A1E	1 x ARK-2231R Unit
-	1 x User Manual (Simplified Chinese)
-	1 x China RoHS
1750006432	1 x GPS antenna 5000mm
1960071555N011	2 x Wall mounting brackets for ARK-2231R
1652001524	1 x Terminal Block 6P 5.00mm

## Optional Item for Default SKU

Part Number	Description
XARK-FSP180-AAAN2	AC-to-DC Adapter, DC24V/150W
1702002600	Power cable 3-pin 183cm, USA type
1702002605	Power cable 3-pin 183cm, EU type
1702031801	Power cable 3-pin 183cm, UK type
1700029009-01	M12 A-coded to USB type A female, 10cm
1700028852-01	M12 X-coded to RJ-45 female, 10cm
1700028854-01	M12 A-coded to 5pin terminal block (for DC input), 10cm

## Optional Embedded OS

Part Number	Description
2070015162	WES7E 64bit ENG/T-CH/S-CH/JP
TBD	WES8E 64bit ENG/T-CH/S-CH/JP

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

# ARK-R Extended Modules

## ARK-2231R+AMK-R100E

Extra 8 x GbE PoE + removable 2.5" drive bay



### Specifications

General	
PoE	8 x 10/100/1000Base T(X) PoE+, 802.3at compliant, Total: 60W
PoE Connector	M12 X-coded, 8PIN
Drive bay	1 x Removable 2.5" drive bay
Power Consumption	75W (Max)
Mechanical	
Dimension	260 x 26.5 x 160.2
Environment	
Operating temperature	-40 ~ 70 °C, EN50155 TX
Shock/Vibration	IEC61373 Category1, Class B

### Ordering Information

P/N	Description
AMK-R100E	8 x GbE PoE M12 X-coded, 1 x removable 2.5" drive bay

## ARK-2231R+AMK-R104E

Extra 8 x 10/100 Mbps PoE + removable 2.5" drive bay



### Specifications

General	
PoE	8 x 10/100 Base T(X) PoE+, 802.3at compliant, Total: 60W
PoE Connector	M12 D-coded, 4PIN
Drive bay	1 x Removable 2.5" drive bay
Power Consumption	75W (Max)
Mechanical	
Dimension	260 x 26.5 x 140
Environment	
Operating temperature	-40 ~ 70 °C, EN50155 TX
Shock/Vibration	IEC61373 Category1, Class B

### Ordering Information

P/N	Description
AMK-R104E	8 x 10/100 Mbps PoE M12 D-Coded, 1 x removable 2.5" drive bay

Note: When installing PoE extension modules with ARK-2231R, additional power boards and cables are required to sustain sufficient power input. Please contact us for ordering details if you have any inquiries on AMK-R10XE series.

## ARK-2231R+AMK-R101E

Extra 4 x GbE PoE + removable 2.5" drive bay



### Specifications

General	
PoE	4 x 10/100/1000Base T(X) PoE+, 802.3at compliant, Total: 60W
PoE Connector	M12 X-coded, 8PIN
Drive bay	1 x Removable 2.5" drive bay
Power Consumption	75W (Max)
Mechanical	
Dimension	260 x 26.5 x 160.2
Environment	
Operating temperature	-40 ~ 70 °C, EN50155 TX
Shock/Vibration	IEC61373 Category1, Class B

### Ordering Information

P/N	Description
AMK-R101E	4 x GbE PoE M12 X-coded, 1 x removable 2.5" drive bay

## ARK-2231R+AMK-R105E

Extra 4 x 10/100 Mbps PoE + removable 2.5" drive bay



### Specifications

General	
PoE	4 x 10/100 Base T(X) PoE+, 802.3at compliant, Total: 60W
PoE Connector	M12 D-coded, 4PIN
Drive bay	1 x Removable 2.5" drive bay
Power Consumption	75W (Max)
Mechanical	
Dimension	260 x 26.5 x 140
Environment	
Operating temperature	-40 ~ 70 °C, EN50155 TX
Shock/Vibration	IEC61373 Category1, Class B

### Ordering Information

P/N	Description
AMK-R105E	4 x 10/100 Mbps PoE M12 D-Coded, 1 x removable 2.5" drive bay

# ARK-2250R

6th Gen Intel Core i7-6822EQ QC/i5-6442EQ QC  
Rolling Stock Fanless System



## Features

- Intel i7-6822EQ QC/ Intel i5-6442EQ QC SoC
- Support TPM2.0
- Stackable extension design, option extension kit for applications
- DC 24V EN50155 S2/C1 compliant, DC 48/72/110V options
- Supports intelligent boot-up & shutdown timing management
- 40 ~ 70 °C wide temperature support with EN50155 TX compliant
- Railway EMC comply with EN50121-3-2, EN50121-4
- Solid connection for LAN/USB/Audio/COM and power input
- Anti-vibration/shock proof, IEC 61373 Category1, ClassB
- Built-in Advantech remote management software WISE-PaaS/RMM



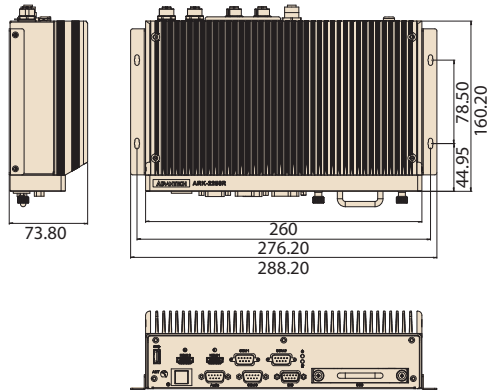
## Specifications

		ARK-2250R-U0A1E	ARK-2250R-S9A1E
Processor System	CPU	Intel i7-6822EQ QC SoC	Intel i5-6442EQ QC SoC
	Frequency	2.0GHz	1.9GHz
	Cache	8 MB	6 MB
	BIOS	AMI EFI	
Memory	Technology	DDR4 2133MHz	
	Max. Capacity	32G	
	Socket	2 x 260-pin SO-DIMM	
Graphics	Chipset	QM170	
	Graphic Engine	DirectX 11.3, OGL 4.4, OCL 2.1 Encode: H.264, MPEG2/4, VC1, WMV9 Decode: H.264, MPEG2 EHVC: H.265	
	VGA	Up to 1920 x 1200 @ 60Hz	
	HDMI	HDMI 1.4a for HD video playback, 1080P at 60Hz	
	Dual Display	Dual HDMI (Std.) or VGA + HDMI (by project)	
Ethernet	LAN1	10/100/1000 Mbps Intel i219 GbE, support Wake On Lan, M12 X-Coded	
	LAN2	10/100/1000 Mbps Intel i210 GbE, support Wake On Lan, M12 X-Coded	
Audio	Interface	Realtek ALC888S, High Definition Audio. Line-out, Mic-in, Line-in	
IO Interface	Serial Ports	3 x RS-232/422/485 port with auto flow control	
	USB Interface	2 x USB2.0 A-Coded, 1x USB3.0 Type A	
	GPIO	8bit Programmable DI/DO	
Other	Watchdog timer	255 levels timer interval, setup by software	
	TPM	TPM2.0 (Infineon SLB9665)	
Expansion	Mini PCIe	#1, Full-size Mini PCIe (SATA/PCIe/USB) w/external SIM socket #2, Full-size Mini PCIe (PCIe/USB) w/external SIM socket #3, M.2 2230 E key	
Storage	SSD/HDD	1 x 2.5" SATA drive bay	
	mSATA	1 x full size mSATA socket (Mini PCIe #1)	
Software Support	Microsoft Windows	Win7, WES7, Win8, WSE8, Win10	
	Linux	Support by project	
Power Requirement	Power Type	ATX	
	Power Input Voltage	DC 24V - Standard DC 48/72/110V - Options	
	Regulation	EN50155 S2/C1 Compliant	
	Intelligent Ignition Management	Selectable boot-up & shut-down timer	
	Connector	M12 A-Coded (5Pin)	
Power Consumption	Power Adapter	24V/ 180W (Option)	
	Typical	22W	
Mechanical	Max.	55W	
	Construction	Aluminum housing	
	Mounting	Wall mounting kit	
	Dimensions (W x H x D)	260 x 73 x 160.2mm	
Environment	Weight	3.2 Kg	
	Operating Temperature	With extended temperature peripherals: -40 ~ 70 °C EN50155 TX	
	Storage Temperature	- 40 ~ 85 °C (- 40 ~ 185 °F)	
	Relative Humidity	95% @ 40 °C (non-condensing)	
	Vibration During Operation	IEC61373 Category1, Class B	
	Shock During Operation	IEC61373 Category1, Class B	
	EMC	CE/FCC Class B, CCC, BSMI, EN50121-3-2, EN50121-4	
Safety Certifications	UL, CCC, BSMI, CB, EN50155		

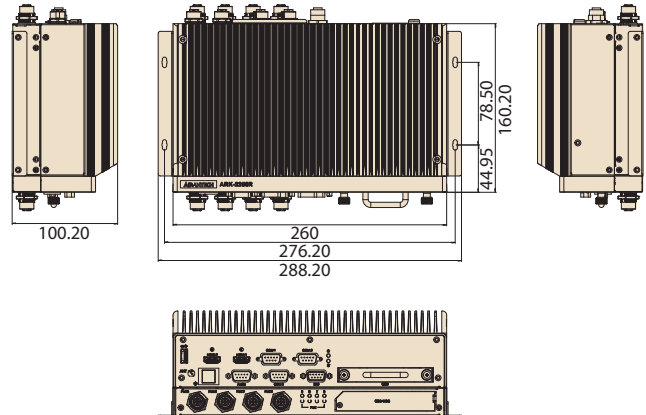
## Dimensions

Unit: mm

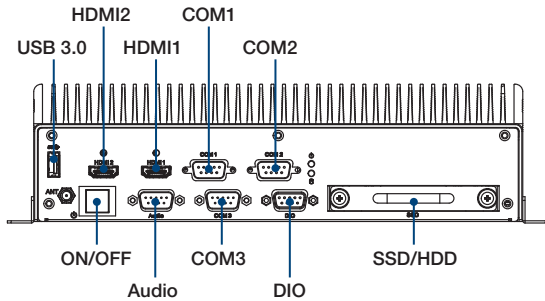
### ARK-2250R



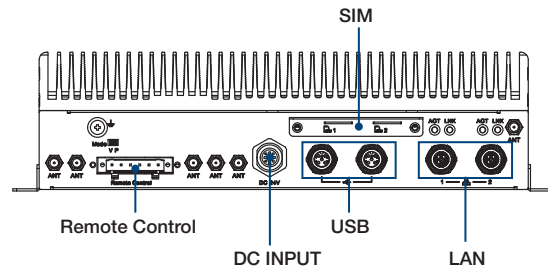
### ARK-2250R+AMK-R100E



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



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



## Ordering Information

Part No.	CPU	VGA	HDMI	GbE	USB 2.0	USB 3.0	DIO	RS-232/422/485	Audio	MiniPCIe	M.2	SIM	2.5" SATA Drive Bay	Operating Temp.
ARK-2250R-U0A1E	Intel Core i7-6822EQ QC	0	2	2	2	1	8 bit	3	Lin-out, Line-in, MIC	2	1	2	1	-40 ~ 70 °C
ARK-2250R-U0A1EPOE*	Intel Core i7-6822EQ QC	0	2	2	2	1	8 bit	3	Lin-out, Line-in, MIC	2	1	2	1	-40 ~ 70 °C
ARK-2250R-S9A1E	Intel Core i5-6442EQ QC	0	2	2	2	1	8 bit	3	Lin-out, Line-in, MIC	2	1	2	1	-40 ~ 70 °C
ARK-2250R-S9A1EPOE*	Intel Core i5-6442EQ QC	0	2	2	2	1	8 bit	3	Lin-out, Line-in, MIC	2	1	2	1	-40 ~ 70 °C

\* : This P/N is for AMK-R100E / AMK-R101E / AMK-R104E / AMK-R105E application  
 Note: Memory, storage and operating system bundled by request.

## Packing List

Part Number	Description
-	1 x ARK-2250R Unit
1960071555N011	2 x Wall Mounting Brackets
1652001524	1 x Terminal Block 6P 5.00mm
1652000177	1 x Terminal Block 5P 5mm

## Optional Embedded OS

Part Number	Description
20706WX6HS0010	Win10 IoT Ent LTSB 2016 MultLang 64bit (ARK-2250R-U0A1E)
20706WX6VS0017	Win10 IoT Ent LTSB 2016 MultLang 64bit (ARK-2250R-S9A1E)
20706WE7ES0011	WES7E 64bit ASIA 4 MUI

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

## Optional Item for Default SKU

Part Number	Description
XARK-FSP180-AAAN2	AC-to-DC Adapter, DC24V/180W
1702002600	Power cable 3-pin 183cm, USA type
1702002605	Power cable 3-pin 183cm, EU type
1702031801	Power cable 3-pin 183cm, UK type

# ARK-R Extended Modules

## ARK-2250R+AMK-R100E

Extra 8 x GbE PoE + removable 2.5" drive bay



### Specifications

General	
Bus interface	MIOe
PoE	8 x 10/100/1000Base T(X) PoE, 802.3at compliant
Drive bay	1 x Removable 2.5" drive bay
Mechanical	
Dimension	260 x 26.5 x 160.2
Environment	
Operating temperature	-40 ~ 70 °C, EN50155 TX
Shock/Vibration	IEC61373 Category1, Class B

### Ordering Information

P/N	Description
AMK-R100E	8 x GbE PoE M12 X-coded, 1 x removable 2.5" drive bay

## ARK-2250R+AMK-R101E

Extra 4 x GbE PoE + removable 2.5" drive bay



### Specifications

General	
Bus interface	MIOe
PoE	4 x 10/100/1000Base T(X) PoE, 802.3at compliant
Drive bay	1 x Removable 2.5" drive bay
Mechanical	
Dimension	260 x 26.5 x 160.2
Environment	
Operating temperature	-40 ~ 70 °C, EN50155 TX
Shock/Vibration	IEC61373 Category1, Class B

### Ordering Information

P/N	Description
AMK-R101E	4 x GbE PoE M12 X-coded, 1 x removable 2.5" drive bay

## ARK-2250R+AMK-R104E

Extra 8 x 10/100 Mbps PoE + removable 2.5" drive bay



### Specifications

General	
Bus interface	MIOe
PoE	8 x 10/100 Base T(X) PoE, 802.3at compliant
Drive bay	1 x Removable 2.5" drive bay
Mechanical	
Dimension	260 x 26.5 x 140
Environment	
Operating temperature	-40 ~ 70 °C, EN50155 TX
Shock/Vibration	IEC61373 Category1, Class B

### Ordering Information

P/N	Description
AMK-R104E	8 x 10/100 Mbps PoE M12 D-Coded, 1 x removable 2.5" drive bay

## ARK-2250R+AMK-R105E

Extra 4 x 10/100 Mbps PoE + removable 2.5" drive bay



### Specifications

General	
Bus interface	MIOe
PoE	4 x 10/100 Base T(X) PoE, 802.3at compliant
Drive bay	1 x Removable 2.5" drive bay
Mechanical	
Dimension	260 x 26.5 x 140
Environment	
Operating temperature	-40 ~ 70 °C, EN50155 TX
Shock/Vibration	IEC61373 Category1, Class B

### Ordering Information

P/N	Description
AMK-R105E	4 x 10/100 Mbps PoE M12 D-Coded, 1 x removable 2.5" drive bay

Note: When installing PoE extension modules with ARK-2250 series, please check ordering information or contact us for details.

# ARK-2250S

6th Gen Intel Core i7-6822EQ QC/i5-6442EQ QC  
Rugged FullHD NVR



## Features

- Intel i7-6822EQ QC/ Intel i5-6442EQ QC SoC
- Support TPM2.0
- Extreme graphic performance, support up to 1080p 120fps video encode&decode
- Stackable extension design, option extension kit for applications
- Isolated 12 ~ 24V<sub>DC</sub> wide-range power input
- Diversity communication extensible, ex. WLAN, WWAN
- Anti-vibration & shock proof, certified by MIL-STD-810G
- NEMA TS2-certified, -34 ~ 74 °C
- Certified for general standard, CE, FCC, CB, UL, CCC and BSMI
- Built-in Advantech remote management software WISE-PaaS/RMM

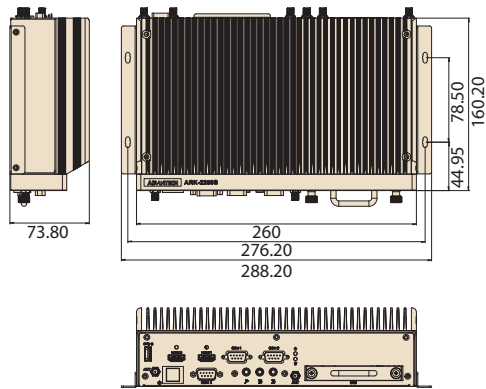
## Specifications

		ARK-2250S-U0A1E	ARK-2250S-S9A1E
Processor System	CPU	Intel i7-6822EQ QC SoC	Intel i5-6442EQ QC SoC
	Frequency	2.0GHz	1.9GHz
	Cache	8 MB	6 MB
	BIOS	AMI EFI	
Memory	Technology	DDR4 2133MHz	
	Max. Capacity	32G	
	Socket	2 x 260-pin SO-DIMM	
Graphics	Chipset	QM170	
	Graphic Engine	DirectX 11.3, OGL 4.4, OCL 2.1 Encode: H.264, MPEG2/4, VC1, WMV9 Decode: H.264, MPEG2 HEVC: H.265	
	HDMI	HDMI 1.4a for HD video playback, 1080P at 60Hz	
	Dual Display	Dual HDMI	
Ethernet	LAN1	10/100/1000 Mbps Intel i219 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	3 x RS-232/422/485 port with auto flow control	
	USB Interface	3 x USB3.0 Type A	
	GPIO	4 x DI & 4 x DO w/ 1.5KV isolation, Input Voltage: 0 to 30 V <sub>DC</sub> , Output Current: Max. 500 mA per channel, On-state Voltage: 24 V <sub>DC</sub> nominal, open collector to 30 V <sub>DC</sub>	
	CANBus	Optional	
Other	Watchdog timer	255 levels timer interval, setup by software	
Expansion	Mini PCIe	#1, Full-size Mini PCIe (SATA/PCIe/USB) w/external SIM socket #2, Full-size Mini PCIe (PCIe/USB) w/external SIM socket #3, M.2 2230 E key	
	SSD/HDD	1 x 2.5" SATA drive bay	
	mSATA	1 x full size mSATA socket (Mini PCIe #1)	
Software Support	Microsoft Windows	Win7, WES7, Win8, WSE8, Win10	
	Linux	Support by project	
Power Requirement	Power Type	ATX	
	Power Input Voltage	12-24V <sub>DC</sub> w/isolation	
	Isolation	1.5 KV	
Power Consumption	Typical	22W	
	Max.	45W	
Mechanical	Construction	Aluminum housing	
	Mounting	Wall mounting kit	
	Dimensions (W x H x D)	260 x 73 x 160.2mm	
	Weight	3.2 Kg	
Environment	Operating Temperature	With extended temperature peripherals: -20 ~ 70 °C with 0.7m/s air flow	
	Storage Temperature	- 40 ~ 85 °C ( -40 ~ 185 °F)	
	Relative Humidity	95% @ 40 °C (non-condensing)	
	Vibration During Operation	MIL-STD-810G, Method 514.6	
	Shock During Operation	MIL-STD-810G, Method 516.6	
	EMC	CE, FCC Class B, CCC, BSMI	
	Transportation	NEMA TS2-2016 Environmental	
	Safety	UL, CCC, BSMI, CB	

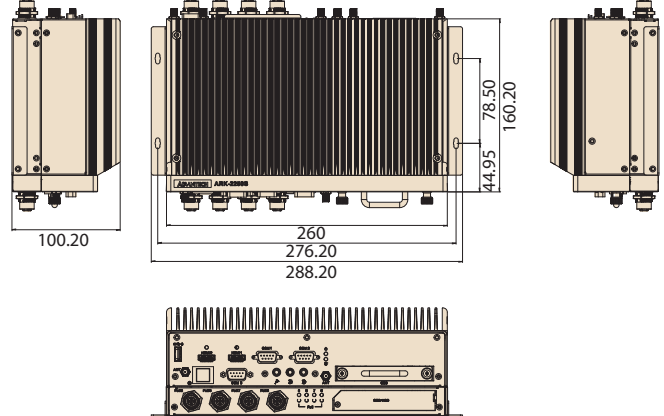
## Dimensions

Unit: mm

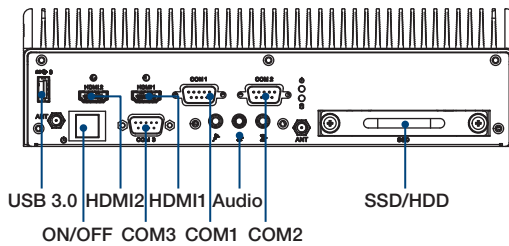
**ARK-2250S**



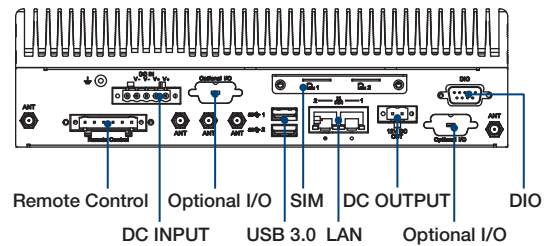
**ARK-2250S+AMK-R100E**



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



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



## Ordering Information

Part No.	CPU	HDMI	GbE	USB 3.0	DIO	RS-232/422/485	Audio	MiniPCIe	M.2	SIM	2.5" SATA Drive Bay	Operating Temp.
ARK-2250S-U0A1E	Intel Core i7-6822EQ QC	2	2	3	4Di, 4Do	3	Lin-out, Line-in, MIC	2	1	2	1	-20 ~ 70 °C
ARK-2250S-U0A1EPOE*	Intel Core i7-6822EQ QC	2	2	3	4Di, 4Do	3	Lin-out, Line-in, MIC	2	1	2	1	-20 ~ 70 °C
ARK-2250S-S9A1E	Intel Core i5-6442EQ QC	2	2	3	4Di, 4Do	3	Lin-out, Line-in, MIC	2	1	2	1	-20 ~ 70 °C
ARK-2250S-S9A1EPOE*	Intel Core i5-6442EQ QC	2	2	3	4Di, 4Do	3	Lin-out, Line-in, MIC	2	1	2	1	-20 ~ 70 °C

\* : This P/N is for AMK-R100E / AMK-R101E / AMK-R104E / AMK-R105E application  
 Note: Memory, storage and operating system bundled by request.

## Packing List

Part Number	Description
-	1 x ARK-2250S Unit
1652001524	1 x Terminal Block 6P 5mm
1652000177	1 x Terminal Block 5P 5mm
1960071555N011	2 x Wall Mounting Brackets

## Optional Embedded OS

Part Number	Description
20706WX6HS0008	Win10 IoT Ent LTSC 2016 MultiLang 64bit (ARK-2250S-U0A1E)
20706WX9HS0025	Win10 IoT Ent LTSC 2019 MultiLang 64bit (ARK-2250S-U0A1E)
20706WX6VS0014	Win10 IoT Ent LTSC 2016 MultiLang 64bit (ARK-2250S-S9A1E)
20706WX9VS0028	Win10 IoT Ent LTSC 2019 MultiLang 64bit (ARK-2250S-S9A1E)
20706WE7ES0004	WES7E 64bit ASIA 4 MUI

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

## Optional Item for Default SKU

Part Number	Description
96PSA-A150W24T2	AC-to-DC Adapter, DC24V/150W
1702002600	Power cable 3-pin 183cm, USA type
1702002605	Power cable 3-pin 183cm, EU type
1702031801	Power cable 3-pin 183cm, UK type



# ARK-R Extended Modules

## ARK-2250S+AMK-R100E

Extra 8 x GbE PoE + removable 2.5" drive bay



### Specifications

General	
Bus interface	MIOe
PoE	8 x 10/100/1000Base T(X) PoE, 802.3at compliant
Drive bay	1 x Removable 2.5" drive bay
Mechanical	
Dimension	260 x 26.5 x 160.2

### Build by T-P/N

P/N	Description
AMK-R100E	8 x GbE PoE M12 X-coded, 1 x removable 2.5" drive bay

## ARK-2250S+AMK-R101E

Extra 4 x GbE PoE + removable 2.5" drive bay



### Specifications

General	
Bus interface	MIOe
PoE	4 x 10/100/1000Base T(X) PoE, 802.3at compliant
Drive bay	1 x Removable 2.5" drive bay
Mechanical	
Dimension	260 x 26.5 x 160.2

### Build by T-P/N

P/N	Description
AMK-R101E	4 x GbE PoE M12 X-coded, 1 x removable 2.5" drive bay

## ARK-2250S+AMK-R104E

Extra 8 x 10/100 Mbps PoE + removable 2.5" drive bay



### Specifications

General	
Bus interface	MIOe
PoE	8 x 10/100 Base T(X) PoE, 802.3at compliant
Drive bay	1 x Removable 2.5" drive bay
Mechanical	
Dimension	260 x 26.5 x 140

### Build by T-P/N

P/N	Description
AMK-R104E	8 x 10/100 Mbps PoE M12 D-Coded, 1 x removable 2.5" drive bay

## ARK-2250S+AMK-R105E

Extra 4 x 10/100 Mbps PoE + removable 2.5" drive bay



### Specifications

General	
Bus interface	MIOe
PoE	4 x 10/100 Base T(X) PoE, 802.3at compliant
Drive bay	1 x Removable 2.5" drive bay
Mechanical	
Dimension	260 x 26.5 x 140

### Build by T-P/N

P/N	Description
AMK-R105E	4 x 10/100 Mbps PoE M12 D-Coded, 1 x removable 2.5" drive bay

Note: When installing PoE extension modules with ARK-2250 series, please check ordering information or contact us for details.