

# ARK-2151S

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



### Features

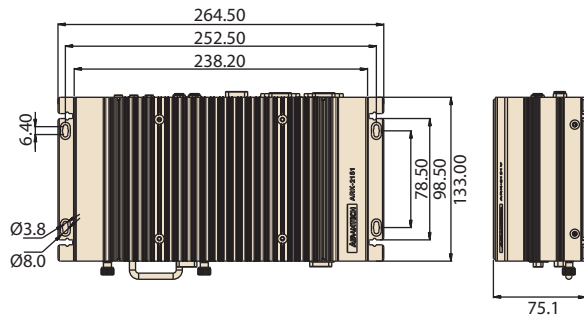
- Intel® Core i5-4300U Dual Core 1.9 GHz SoC
- 4 PoE Ports to Support Mainstream IP Cameras
- Diversity Communication Abilities, ex. WWAN, WLAN
- 3KV isolation for 6 x Di & 2 x Do
- 9 ~ 36 V<sub>DC</sub>\* Wide Power Input w/isolation
- 1 x Removable 2.5" drive bay
- Supports iManager, SUSIAccess and 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                                                                                                                                                                    |
|                   | VGA                        | Full AVC/VC1/MPEG2 HW Decode                                                                                                                                                                               |
|                   | HDMI                       | Up to 1920 x 1200 with 60 Hz, 154 MHz pixel clock rate                                                                                                                                                     |
| 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<br>- 4ports full-load, IEEE802.3af Class 2 (7Watt)<br>- 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<br>Input Voltage: 0 to 30 V <sub>DC</sub> , Output Current: Max. 500 mA per channel<br>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, 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<br>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 (No RED certification)                                                                                                                                                           |
|                   | Safety                     | CB, UL, CCC, BSMI                                                                                                                                                                                          |

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

## Dimensions



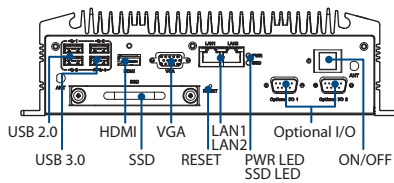
### DIN Rail

Unit: mm

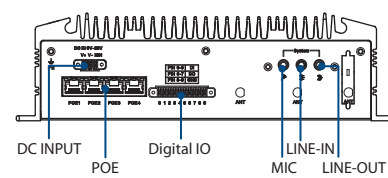
### VESA mount

### 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 | MiniPCle                       | SIM Holder | Power Input            | Operating Temperature |
|-----------------|------------------------------|-----------|------------|-------|---------------------|-----|-----|--------------------------|------------|----------------|--------------------------------|------------|------------------------|-----------------------|
| ARK-2151S-S9A1E | Intel i5-4300U<br>DC 1.9 GHz | Up to 8GB | 1          | 1     | 1 x HDMI<br>1 x VGA | 2   | 4   | 2 x USB2.0<br>2 x USB3.0 | 6Di<br>2Do | 2              | 3 x Full Size<br>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             |

## 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

## 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                |

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