

# ARK-3530F

## Intel® Xeon® E3 / Core™ i3/i5/i7 LGA1151 Modular Expansion Fanless Box PC



### Features

- Support Intel® Xeon® / 6th & 7th Gen. Core™ i3/i5/i7 processor
- Triple independent display: VGA + HDMI + Optional Display
- DDR4 SO-DIMM memory support up to 32 GB
- 9-36V power module compatible with all-in-one ordering
- Optional modular design for 2.5" hard drive bays: internal /removable (support up to 4 sets)
- Advantech iDoor module compatible
- Advantech EMIO miniPCIe module compatible with all-in-one ordering



WISE-DeviceOn SUSI API



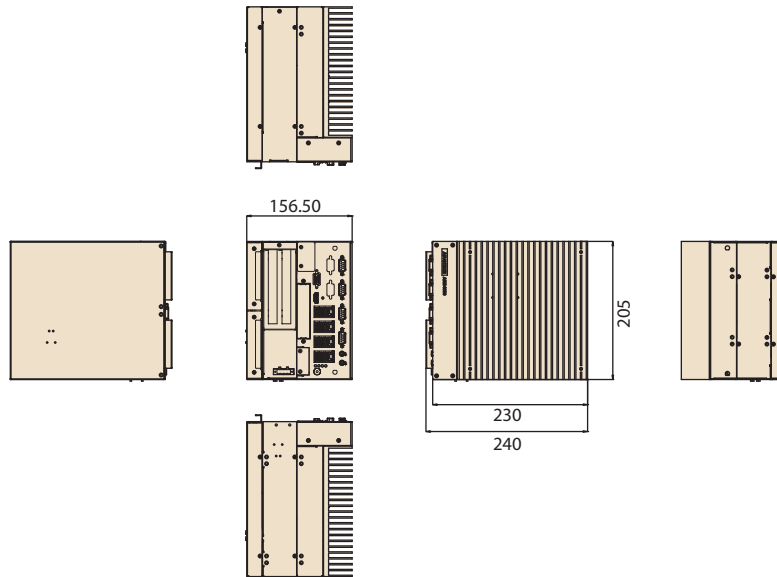
### Specifications

|                                     |                                 |  |                 |                 |          |
|-------------------------------------|---------------------------------|--|-----------------|-----------------|----------|
| Processor System                    | CPU                             | E3-1235L V5  | i7-7700/i7-6700 | i5-7500/i5-6500 | i3-7101E |
|                                     | Frequency                       | 2.0GHz   | 3.6GHz/3.4GHz   | 3.4GHz/3.2GHz   | 3.9GHz   |
|                                     | L3 Cache                        | 8MB  | 8MB             | 6MB             | 3MB      |
|                                     | TDP                             | 25W  | 65W             | 65W             | 54W      |
|                                     | Chipset                         | C236   |                 |                 |          |
|                                     | BIOS                            | AMI EFI 128Mbit  |                 |                 |          |
| Memory                              | Technology                      | DDR4 2133 MHz  |                 |                 |          |
|                                     | Max. Capacity                   | 32 GB  |                 |                 |          |
|                                     | Socket                          | 2 x 260-pin SO-DIMM  |                 |                 |          |
| Graphics                            | Chipset                         | Intel® HD Graphics 630   |                 |                 |          |
|                                     | Graphic Engine                  | Direct x 12, OpenGL 4.4<br>HW Encode: H.265/HEVC, H.264/MPEG-4 AVC, MPEG-2, JPEG/MJPEG and VP8.<br>HW Decode: H.265/HEVC, H.264/MPEG-4 AVC, MPEG-2, VC-1/WMV9, JPEG/MJPEG, VP8 and VP9         |                 |                 |          |
|                                     | VGA                             | 1920x1200@ 60Hz  |                 |                 |          |
|                                     | HDMI                            | 1 HDMI port, HDMI 2.0 for HD video playback, 3840x2160@30Hz  |                 |                 |          |
|                                     | Optional 3rd Display module     | DVI-D / DP / HDMI Display Port   |                 |                 |          |
| Ethernet                            | LAN1                            | 10/100/1000 Mbps Intel I219-LM GbE, support Wake On Lan  |                 |                 |          |
|                                     | LAN2, 3, 4                      | 10/100/1000 Mbps Intel I210 GbE, support Wake On Lan   |                 |                 |          |
| Audio                               | Interface                       | Realtek ALC888S, High Definition Audio, Line-out, Mic-in (ARK-3530F-00A2 without Audio)  |                 |                 |          |
| Others                              | Watch dog Timer                 | 255-level timer interval, setup by software  |                 |                 |          |
|                                     | TPM                             | TPM 2.0 (Optional by project support)  |                 |                 |          |
| I/O Interface                       | Serial Port                     | 4 x RS-232/422/485 port with auto flow control; COM 1 support 5V/12V power supply (by jumper)  |                 |                 |          |
|                                     | USB                             | 8 x USB 3.0 ports  |                 |                 |          |
|                                     | P/S2                            | 1 Port support by cable and bracket (Optional)   |                 |                 |          |
|                                     | Optional I/O                    | 16bit DIO or 2 x RS-232 ports  |                 |                 |          |
| Expansions                          | Mini PCIe                       | 2 x Full-size Mini PCIe (2 x support mSATA, 1 x support SIM holder #1)   |                 |                 |          |
|                                     | M.2                             | 1 x E key for WIFI Module #1   |                 |                 |          |
|                                     | i Door                          | 1 set (Optional)   |                 |                 |          |
|                                     | Add-on Card Slot                | Maximum card size 110mm (H) x 180mm (L)<br>Suggest maximum power consumption 10W for each slot<br>2 Slots PCI (Default)<br>2 Slots PCIe8 (Option AMO-R026)<br>1 Slots PCIe16 (Option AMO-3507) |                 |                 |          |
| Storage                             | HDD                             | 2 x 2.5" SATAIII HDD Bay with Max Height 15mm support Intel SW RAID (Up to 4 x 2.5" SATAIII HDD bays by optional 2*AMK-A0028E)   |                 |                 |          |
|                                     | mSATA                           | 2 x mSATA socket (Share with Mini PCIe)  |                 |                 |          |
| Software Support                    | Microsoft Windows               | Windows 10 (Windows 7 for 6th Gen CPU only)  |                 |                 |          |
|                                     | Linux                           | By Project Support   |                 |                 |          |
| Power Requirements                  | Power Type                      | AT/ATX   |                 |                 |          |
|                                     | Power Input Voltage             | 9-36V  |                 |                 |          |
|                                     | Power Adapter                   | AC to DC, 150W (Optional)  |                 |                 |          |
| Power Consumption (CPU/Memory Only) | Typical                         | 25.68W   |                 |                 |          |
|                                     | Max.                            | 88.92W   |                 |                 |          |
| Mechanical                          | Construction                    | Aluminum housing   |                 |                 |          |
|                                     | Mounting                        | Desk mounting  |                 |                 |          |
|                                     | Dimensions (W x H x D)          | 156.5 x 205 x 230 mm (6.16" x 8.07" x 9.06")   |                 |                 |          |
|                                     | Weight                          | 5.87Kg   |                 |                 |          |
| Environment                         | Operating Temperature           | 25W/35W/65W(only 6th Gen) Processor with extended temp peripherals: -20 ~ 60° C with 0.7m/s air flow<br>Under 73W processor with HDD: 0 ~ 40° C with 0.7m/s air flow                           |                 |                 |          |
|                                     | Storage Temperature             | -40 ~ 85° C  |                 |                 |          |
|                                     | 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 B, CCC, BSMI  |                 |                 |          |
| Safety                              | CB(62368), UL(62368), CCC, BSMI |  |                 |                 |          |

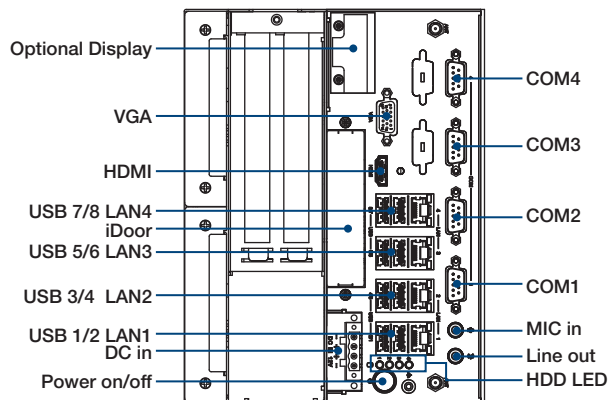
#1 SIM holder and M.2 slot are hardware interfaces for wireless communication integration only. System level RF certification is not available.

## Dimensions

Unit: mm



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



\* There is no Mic in and Line out function of ARK-3530F-00A2

## Ordering Information

| Part No.       | CPU                    | DDR4       | Gbe | VGA | HDMI | Option 3rd display module | RS-232/422/485 | USB 3.0 | MiniPCIe | Audio               | SIM | M.2 | DC Input | Expansion |
|----------------|------------------------|------------|-----|-----|------|---------------------------|----------------|---------|----------|---------------------|-----|-----|----------|-----------|
| ARK-3530F-00A1 | LGA1151<br>Socket Type | Up to 32GB | 4   | 1   | 1    | 1                         | 4              | 8       | 2        | Mic in,<br>Line out | 1   | 1   | 9-36V    | 2 x PCI   |
| ARK-3530F-00A2 | LGA1151<br>Socket Type | Up to 32GB | 4   | 1   | 1    | 1                         | 4              | 8       | 2        | N/A                 | 1   | 1   | 9-36V    | 2 x PCI   |

Note: CPU/Memory/Storage and operating system bundled by request.

## Packing List

| Part Number | Description                      |
|-------------|----------------------------------|
| -           | ARK-3530F Unit                   |
| -           | User Manual (Simplified Chinese) |
| -           | China RoHS                       |
| -           | Desk mounting kit                |

## Embedded OS

| Part Number    | Description                                     |
|----------------|---|
| 20706WX9HS0023 | WIN10 IoT LTSC 64bit for Xeon and Core i7       |
| 20706WX9VS0026 | WIN10 IoT LTSC 64bit for Core i3/i5 and Celeron |

## ARK-3530 Default SKU Option Items

### Optional Item for Default SKU

| Part Number       | Description                                |
|-------------------|--|
| 96PSA-A150W19P4-3 | AC-to-DC Adapter, DC19V 150W, 0 ~ 40 °C    |
| 96PSA-A230W24P4-3 | AC to DC adapter, DC 24V 230W, -20 ~ 60 °C |
| 1700028547-01     | 16bit DIO Cable                            |
| 1700028548-01     | COM5/6 Cable                               |
| 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         |

### Optional MOS modules for iDoor Expansion

| 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 Com USB module, 2-Ch, PCIe 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  | Dual Intel I210 GbE LAN iDoor, 2-Ch, PCIe I/F |

\*Please noted ARK-3530F can support only 1 iDoor.

## ARK-3530F Optional HDD expansion Kit (Support up to 2 sets)

| Part Number | Description                            |
|-------------|--|
| AMK-A0028E  | 1 x internal HDD Kit (Max Height 15mm) |

### Optional Display Module

| Part Number | Description                  |
|-------------|------------------------------|
| AMO-D001E   | DVI-D module (1920x1080)     |
| AMO-D002E   | DP module (3840x2160@60Hz)   |
| AMO-D003E   | HDMI module (3840x2160@30Hz) |

### Optional Riser Expansion

| Part Number | Description          |
|-------------|----------------------|
| AMO-R026    | 2 x PCIe8            |
| AMO-3507    | 1 x PCIe16 + Fan kit |