

# ARK-3500

3rd Gen. Intel® Core™ i3/ i5/ i7 with 2 Expansion slots and wide range power Fanless Box PC

NEW



## Features

- Supports Intel® Core™ i3/i5/i7 mobile processor(rPGA) + Intel QM77 PCH
- Triple independent display with 3rd gen Core i processor : DVI + HDMI + DisplayPort
- DDR3/DDR3L SO-DIMM memory support up to 16 GB
- 2 expansion slots with vary interface: PCI, PCIe x 1 & PCIe x 4
- 2 x miniPCIe slots with SIM card holders
- 9-34V wide range lockable DC jack design
- Versatile I/Os including 4 x high speed USB 3.0 and 8 x COM ports
- Flexible Storage Support including 2x mSATA, 1x CFast and 2x 2.5" SATA HDD/ SSD bays
- Supports iManager, SUSIAccess and Embedded Software APIs



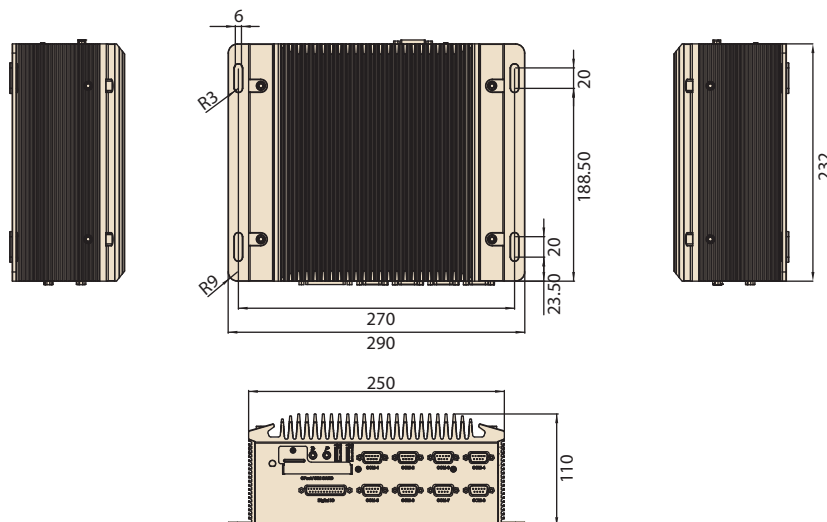
susiAccess iManager



## Specifications

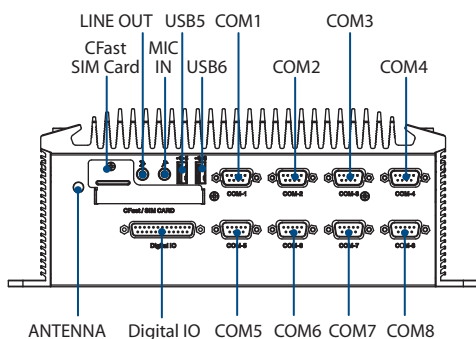
|                    |                            |   |                      |                      |                             |
|--------------------|----------------------------|---|----------------------|----------------------|-----------------------------|
| Processor System   | CPU (rPGA)                 | Intel Core i7-3610QE  | Intel Core i5-3610ME | Intel Core i3-3120ME | Celeron 1020E               |
|                    | Frequency                  | 2.3 GHz (Quad Core)   | 2.7 GHz (Dual Core)  | 2.4 GHz (Dual Core)  | 2.2 GHz (Dual Core)         |
|                    | L3 Cache                   | 6 MB  | 3 MB                 | 3 MB                 | 2 MB                        |
|                    | Watts                      | 45W   | 35W                  | 35W                  | 35W                         |
|                    | System Chipset             | Intel QM77  |                      |                      |                             |
| Memory             | BIOS                       | AMI EFI 64Mbit  |                      |                      |                             |
|                    | Technology                 | DDR3/DDR3L 1600MHz  |                      |                      |                             |
| Graphics           | Max. Capacity              | 16 GB   |                      |                      |                             |
|                    | Socket                     | 2 x 204-pin SO-DIMM   |                      |                      |                             |
|                    | Chipset                    | Intel QM77 Integrated GFX Gen 7   |                      |                      |                             |
|                    | Graphic Engine             | DirectX11, OpenGL 3.1, and Open CL 11; Hardware decode acceleration: AVC/H.264, MPEG-2, VC-1  |                      |                      |                             |
|                    | CRT                        | VGA integrated in DVI-I port  |                      |                      |                             |
|                    | DVI-I                      | 1920 x 1200 @ 60 Hz   |                      |                      |                             |
|                    | HDMI                       | Support HDMI 1.4, 1920 x 1200 @ 60 Hz   |                      |                      |                             |
| Ethernet           | Display port               | 2560 x 1600 @ 60Hz (Video only, and only support on 3rd generation processor)   |                      |                      |                             |
|                    | Dual Display               | VGA+DVI, VGA+HDMI, VGA+DP, DVI+HDMI, DVI+DP, HDMI+DP  |                      |                      | VGA+DVI, DVI+HDMI, VGA+HDMI |
|                    | Triple Display             | DVI-D + HDMI + DisplayPort (Main display)   |                      |                      | N/A                         |
| Audio              | LAN1                       | 10/100/1000 Mbps Intel 82579LM GbE, support Wake On Lan   |                      |                      |                             |
|                    | LAN2                       | 10/100/1000 Mbps Intel I-210IT GbE, support Wake On Lan   |                      |                      |                             |
| I/O Interface      | Interface                  | Realtek ALC892, High Definition Audio, Line-out, Mic-in   |                      |                      |                             |
|                    | Serial Port                | 4 x RS-232 ports, 4 x RS-232/422/485 port with auto flow control  |                      |                      |                             |
|                    | USB                        | 4 x USB 3.0 ports (USB1,2,3,4); 2 x USB 2.0 ports (USB5,6)  |                      |                      |                             |
|                    | DIO                        | 16 bit DIO  |                      |                      |                             |
| Expansions         | Mini PCIe                  | 2 x Full-size Mini PCIe with SIM holder (Supports mSATA)  |                      |                      |                             |
|                    | Add-on Card Slot           | ARK-3500P-00A1E : 2 x PCI; Maximum card size: 110 mm (H) x 180 mm (L)<br>ARK-3500F-00A1E : PCIe x 1 + PCIe x 4; Maximum card size: 110 mm (H) x 180 mm (L)<br>Suggest maximum power consumption 10w for each slot |                      |                      |                             |
| Storage            | HDD                        | Two 2.5" SATA HDD Bays with maximum device height 9.5mm, SATA III, Gen 3 Support (Max. Data Transfer Rate 600 MB/s), Support SATA RAID 0, 1   |                      |                      |                             |
|                    | Solid State Disk           | 1 x CFast Card slot   |                      |                      |                             |
| Software Support   | Microsoft Windows          | Windows 8 , Windows 7, XP Professional (32bit), XP Embedded (32bit)   |                      |                      |                             |
|                    | Linux                      | Ubuntu 12.04  |                      |                      |                             |
| Power Requirements | Power Type                 | AT/ATX  |                      |                      |                             |
|                    | Power Input Voltage        | 9 ~ 34 V <sub>DC</sub>  |                      |                      |                             |
|                    | Power Adapter              | AC to DC, DC19V / 6.32A, 120W (Optional)  |                      |                      |                             |
| Power Consumption  | Typical                    | 19.2W   | 16.4W                | 14.8W                | 16.4W                       |
|                    | Max.                       | 60W   | 36.5W                | 30W                  | 31.8W                       |
| Mechanical         | Max. :                     | test with 100% CPU loading and HDD R/W access only.   |                      |                      |                             |
|                    | Construction               | Aluminum housing  |                      |                      |                             |
|                    | Mounting                   | Desk/wall-mounting  |                      |                      |                             |
|                    | Dimensions (W x H x D)     | 290 x 110 x 232mm (11.4" x 4.33" x 9.13")   |                      |                      |                             |
| Environment        | Weight                     | 4.8 kg  |                      |                      |                             |
|                    | Operating Temperature      | with SSD: -10 ~ 60° C with 0.7m/s air flow<br>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: 5 Grms, IEC 60068-2-64, random, 5 ~ 500 Hz, 1 hr/axis.  |                      |                      |                             |
|                    | Shock During Operation     | With SSD: 50 G, IEC 60068-2-27, half sine, 11 ms duration   |                      |                      |                             |
|                    | EMC                        | CE/FCC Class A, CCC, BSMI   |                      |                      |                             |
| Safety             | CB, UL, CCC, BSMI          |   |                      |                      |                             |

## Dimensions

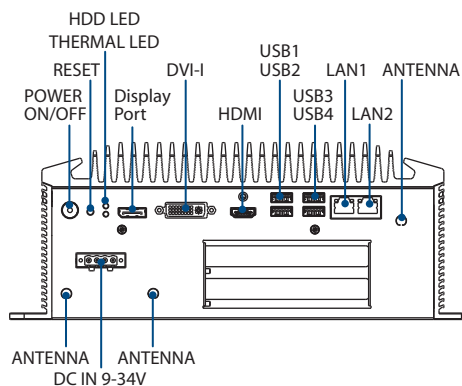


Unit: mm

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



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



## Ordering Information

| Part No.        | CPU             | DDR3        | DP | HDMI | DVI-I | RS-232/422/485 | RS-232 | USB 3.0 | USB 2.0 | MiniPCIe | SIM | DC input | Expansion                    |
|-----------------|-----------------|-------------|----|------|-------|----------------|--------|---------|---------|----------|-----|----------|------------------------------|
| ARK-3500P-00A1E | PGA Socket Type | up to 16 GB | 1  | 1    | 1     | 4              | 4      | 4       | 2       | 2        | 2   | 9 ~ 34 V | 2 x PCI                      |
| ARK-3500F-00A1E | PGA Socket Type | up to 16 GB | 1  | 1    | 1     | 4              | 4      | 4       | 2       | 2        | 2   | 9 ~ 34 V | 1 x PCIe x 1<br>1 x PCIe x 4 |

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

## Packing List

| Part Number | Description                                      |
|-------------|--|
| 1654009744  | DVI-I to VGA adaptor                             |
| 968EMLSAP2  | SUSI CD  |
| -           | User Manual (Simplified Chinese)                 |
| -           | China RoHS for ARK-3500 Electronic Pollution 1st |
| 1652003234  | 4 pin DC in terminal block                       |
| 1930001241  | HDD screws                                       |
| 2190000902  | CARDBOARD-WARRANTY REV. A2                       |

## Embedded OS

| Part Number | Description                 |
|-------------|-----------------------------|
| 2070012570  | WES2009 32bit 24MUI         |
| 2070012650  | WES7E 32bit ENG/CHT/CHS/JPN |
| 2070012706  | WES7E 64bit ENG/CHT/CHS/JPN |
| 2070012705  | WES7P 32bit ENG/CHT/CHS/JPN |
| 2070012628  | WES7P 64bit ENG/CHT/CHS/JPN |

## Optional Items

| Part Number      | Description  |
|------------------|--|
| 1757004523-01    | AC-to-DC Adapter, DC 19V/6.32A 120W, 0~40° C for Home and Office Use   |
| 1757004529-01    | AC-to-DC Adaptor, DC 19V/6.84A, 130W, -20 ~ 70° C                      |
| 1702002600       | Power cable 3-pin 180cm, USA type, for 1757004523-01 and 1757004529-01 |
| 1702031801       | Power cable 3-pin 180cm, UK type, for 1757004523-01 and 1757004529-01  |
| 1702002605       | Power cable 3-pin 180cm, EU type, for 1757004523-01 and 1757004529-01  |
| 1700000237       | Power cable 3-pin 180cm, with PSE, for 1757004523-01                   |
| 96MPI7M-2.3-6M9T | CORE 2.3G 6M 988P 4CORE I7-3610QE(G)                                   |
| 96MPI5-2.7-3M9T  | CORE 2.7G 3M 988P 2CORE I5-3610ME(G)                                   |
| 96MPI3M-2.4-3M9T | CORE 2.4G 3M 988P 2CORE I3-3120ME(G)                                   |
| 96MPCM-2.2-2M9T  | CELERON M 2.2G 2M 988P 2CORE I020E(G)                                  |