

# ARK-3510

**3rd Gen. Intel® Core™ i3/ i5/ i7 with  
2 x 2.5" Removable HDD Bays 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
- Supports 2 x 2.5" removable SATAIII drive bays
- 2 x miniPCIe cards with SIM card holders
- Versatile I/Os including 4 x high speed USB 3.0 and 4 x COM ports
- Lockable 12V DC jack design
- Supports iManager, WISE-PaaS/RMM and Embedded Software APIs



**WISE-PaaS/RMM 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 1600 MHz                                                                                                                                   |                      |                      |                             |
|                    | Max. Capacity                                              | 16 GB                                                                                                                                                 |                      |                      |                             |
| Graphics           | 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 @ 60Hz                                                                                                                  |                      |                      |                             |
|                    | Display port                                               | 2560 x 1600 @ 60Hz (Video only, and only support on 3rd generation processor)                                                                         |                      |                      |                             |
| Other              | 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                         |
| Ethernet           | Watchdog Timer                                             | 255-level timer interval, setup by software                                                                                                           |                      |                      |                             |
|                    | LAN1                                                       | 10/100/1000 Mbps Intel 82579LM GbE, support Wake On Lan                                                                                               |                      |                      |                             |
| Audio              | LAN2                                                       | 10/100/1000 Mbps Intel I-210IT GbE, support Wake On Lan                                                                                               |                      |                      |                             |
|                    | Interface                                                  | Realtek ALC892, High Definition Audio, Line-out,Mic-in                                                                                                |                      |                      |                             |
| I/O Interface      | Serial Port                                                | 2 x RS-232 ports, 2 x RS-232/422/485 port with auto flow control                                                                                      |                      |                      |                             |
|                    | USB                                                        | 4 x USB 3.0 ports (USB1,2,3,4) and 2 x USB 2.0 ports (USB5,6)                                                                                         |                      |                      |                             |
| Expansion          | Mini PCIe                                                  | 2 x Full-size Mini PCIe with SIM holder (Supports mSATA)                                                                                              |                      |                      |                             |
| Storage            | HDD                                                        | Two 2.5" SATA removable 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                                                                                                                                        |                      |                      |                             |
| 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                                        | 12 V <sub>DC</sub> , ± 10% (9 ~ 34 V <sub>DC</sub> support by request)                                                                                |                      |                      |                             |
|                    | Power Adapter                                              | AC to DC, DC12V / 7A, 84 W (Optional)                                                                                                                 |                      |                      |                             |
| Power Consumption  | Typical                                                    | 19.2W                                                                                                                                                 | 16.4W                | 14.8W                | 16.4W                       |
|                    | Max.                                                       | 60W                                                                                                                                                   | 36.5W                | 30W                  | 31.8W                       |
|                    | Max. : test with 100% CPU loading and HDD R/W access only. |                                                                                                                                                       |                      |                      |                             |
| Mechanical         | Construction                                               | Aluminum housing                                                                                                                                      |                      |                      |                             |
|                    | Mounting                                                   | Desk/wall-mounting                                                                                                                                    |                      |                      |                             |
|                    | Dimensions (W x H x D)                                     | 290 x 90 x 232 mm (11.4" x 3.54" x 9.13")                                                                                                             |                      |                      |                             |
|                    | Weight                                                     | 4.63kg                                                                                                                                                |                      |                      |                             |
| Environment        | Operating Temperature                                      | with extended temp peripherals: -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: 3 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                                                                                                                                     |                      |                      |                             |

**ADVANTECH**

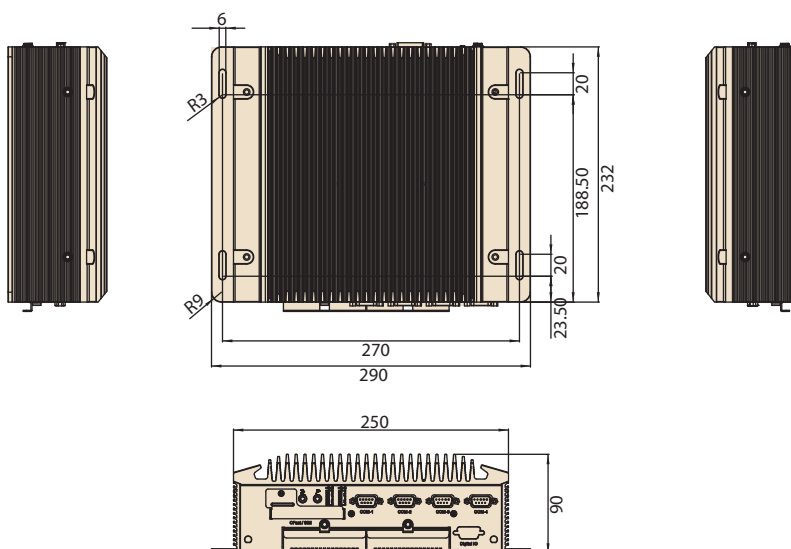
**Fanless Embedded Box PCs**

All product specifications are subject to change without notice

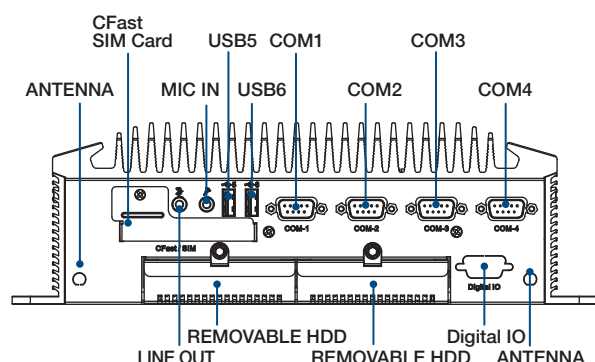
Last updated : 16-Nov-2016

## Dimensions

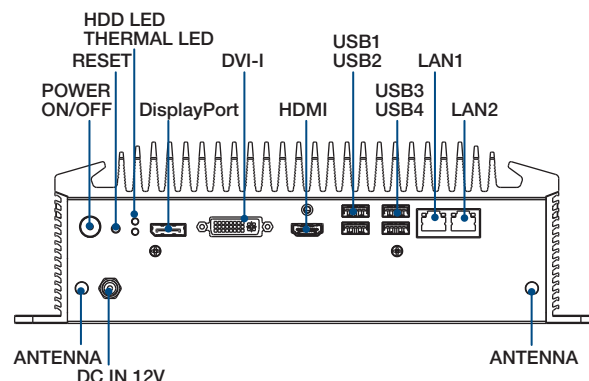
Unit: mm



## 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-3510L-00A1E | PGA Socket Type | up to 16 GB | 1  | 1    | 1     | 2              | 2      | 4       | 2       | 2        | 2   | 12V      | MIOe      |

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

## Packing List

| Part Number | Description                                      |
|-------------|--------------------------------------------------|
| 1654009744  | DVI-I to VGA adaptor                             |
| 968EMLSAP2  | SUSI CD                                          |
| 2006351010  | User Manual (Simplified Chinese)                 |
| -           | China RoHS for ARK-3510 Electronic Pollution 1st |
| 2190000902  | CARDBOARD-WARRANTY REV. A2                       |

## Embedded OS

| Part Number | Description                 |
|-------------|-----------------------------|
| 2070012634  | WES2009 32bit 10MUI         |
| 2070012650  | WES7E 32bit ENG/CHT/CHS/JPN |
| 2070012706  | WES7E 64bit ENG/CHT/CHS/JPN |
| 2070014612  | WES7P 32bit ENG/CHT/CHS/JPN |
| 2070012627  | WES7P 64bit ENG/CHT/CHS/JPN |

## Optional Items

| Part Number      | Description                                                      |
|------------------|------------------------------------------------------------------|
| 96PSA-A84W12W6-1 | AC-to-DC Adapter, DC 12V/7A 84W, 0~40° C for Home and Office Use |
| 96PSA-A150W12W7  | AC-to-DC Adaptor, DC 12V, -20 ~ 70° C                            |
| 1702002600       | Power cable 3-pin 180cm, USA type                                |
| 1702031801       | Power cable 3-pin 180cm, UK type                                 |
| 1702002605       | Power cable 3-pin 180cm, EU type                                 |
| 1700000237       | Power cable 3-pin 180cm, with PSE                                |
| 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 1020E(G)                            |

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