Fanless Embedded Box PCs

Features

- Intel® Atom™ Dual Core D2550 1.86 GHz, DDR3 memory supports up to 4 GB
- VGA, HDMI, 48-bit LVDS, support dual independent display and DirectX 9
- Mini PCIe expansion with SIM holder for communication module, i.e. HSDPA, WLAN
- Supports up to 3 x GbE, 5 x USB 2.0 and 6 x COMs ports
- Supports external CFast socket and 1 x 2.5” SATA HDD Bay
- Supports 12 – 24V wide range DC input
- Lockable DC jack design
- Supports iManager, SUSIAccess and Embedded Software APIs

Specifications

- **Processor System**
  - **CPU**: Intel Atom D2550
  - **Frequency**: 1.86 GHz (Dual Core)
  - **L2 Cache**: 1MB
  - **System Chipset**: D2550 + Intel NM10
  - **BIOS**: AMI EFI 16Mbit

- **Memory**
  - **Technology**: DDR3 1066 MHz (D2550)
  - **Max. Capacity**: 4 GB
  - **Socket**: 1 x 204-pin SD-DIMM

- **Graphics**
  - **Chipset**: Intel Atom D2550
  - **Graphic Engine**: DirectX 9 and OpenGL3.0 support
  - **VGA**: Up to 1920 x 1200
  - **HDMI**: Supports 1920 x 1200, Max data rate: up to 1.65 Gb/s, Supports HDMI v1.3 Up to 1080p support
  - **LVDS**: Supports 48-bit LVDS, up to 2560 x 1600 (D2550)
  - **Dual Display**: Yes, (VGA + HDMI, VGA + LVDS, HDMI + LVDS)

- **Ethernet**
  - **LAN1**: 10/100/1000 Mbps Intel 82583V GbE, support Wake On Lan
  - **LAN2**: 10/100/1000 Mbps Intel 82583V GbE, support Wake On Lan
  - **LAN3**: 10/100/1000 Mbps Intel 82583V GbE, support Wake On Lan

- **Audio**
  - **Interface**: Realtek ALC892, High Definition Audio. Line-out, Mic-in, Line-in

- **IO Interface**
  - **Serial Ports**: 2 x RS-232 ports, 4 x RS-232/422/485 port with auto flow control (by BIOS setting)
  - **USB Interface**: 5 x USB ports, USB 2.0 Compliant

- **Other**
  - **Digital I/O**: 8-bit
  - **Watchdog Timer**: 255 levels timer interval, setup by software

- **Expansion**
  - **Mini PCIe**: 1 x full size Mini PCIe with SIM holder

- **Storage**
  - **HDD**: Supports one SATA 2.5” SATA HDD Bay (Compatible with 12.5mm height HDD) (Max. Data Transfer Rate 300 MB/s)
  - **SSD**: Supports one external CFast socket

- **Software Support**
  - **Microsoft Windows**: Windows 7 32bit, Windows 7 Embedded 32bit (XP Professional & XP Embedded support by project)
  - **Linux**: Ubuntu v12.04

- **Power Requirement**
  - **Power Type**: AT/ATX
  - **Power Input Voltage**: 12 Vdc ~ 24 Vdc
  - **Minimum Power Input**: 12 V = 24 V, 3.0 A = 1.5 A
  - **Power Adapter**: AC to DC, DC19 V/4.73A, 90 W (Optional)

- **Power Consumption**
  - **Typical**: 9.2 Watt (with Intel Atom D2550 at 1.8 GHz)
  - **Max.**: 11.59 Watt (with Intel Atom D2550 at 1.8 GHz)

- **Mechanical**
  - **Construction**: Aluminum housing
  - **Mounting**: Din-Rail mounting, Desk/wall-mounting, VESA mounting
  - **Dimensions (W x H x D)**: 264.50 x 68.39 x 133.0 mm (10.41” x 2.69” x 5.24”)
  - **Weight**: 2.5 kg (5.51 lb)

- **Environment**
  - **Operating Temperature**: With extended temperature peripherals: -20 ~ 60°C (-4 ~ 140°F) with air flow
  - **Storage Temperature**: -40 ~ 85°C (-40 ~ 185°F) with air flow
  - **Relative Humidity**: 95% @ 40°C (non-condensing)
  - **Vibration During Operation**: With SSD: 5 Gms, 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/EN55022 Class A, CCC, BSMI

All product specifications are subject to change without notice

Last updated: 20-Apr-2016
### Packing List

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>-</td>
<td>1 x ARK-2120 Unit</td>
</tr>
<tr>
<td>-</td>
<td>1 x Utility CD</td>
</tr>
<tr>
<td>-</td>
<td>1 x User Manual (Simplified Chinese)</td>
</tr>
<tr>
<td>-</td>
<td>1 x China RoHS</td>
</tr>
<tr>
<td>1700009001</td>
<td>1 x 2-pin Phoenix to DC-Jack power cable</td>
</tr>
</tbody>
</table>

### Optional Items

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>XARK-9NA6904747</td>
<td>AC-to-DC Adapter, DC19 V/4.73 A 90 W, with Phoenix Power Plug</td>
</tr>
<tr>
<td>1700001524</td>
<td>Power cable 3-pin 180cm, USA type</td>
</tr>
<tr>
<td>1702002605</td>
<td>Power cable 3-pin 180cm, EU type</td>
</tr>
<tr>
<td>1702031801</td>
<td>Power cable 3-pin 180cm, UK type</td>
</tr>
<tr>
<td>AMK-V004E</td>
<td>VESA mounting bracket</td>
</tr>
<tr>
<td>AMK-R004E</td>
<td>DIN-rail mounting kit for ARK-2000 series</td>
</tr>
</tbody>
</table>

### Ordering Information

<table>
<thead>
<tr>
<th>Part No.</th>
<th>CPU</th>
<th>VGA</th>
<th>HDMI/DVI</th>
<th>LVDS</th>
<th>GbE</th>
<th>USB 2.0</th>
<th>RS-232/422/485</th>
<th>RS-232</th>
<th>DID</th>
<th>Audio</th>
<th>Full-size MiniPCIe</th>
<th>SIM</th>
<th>CFast</th>
<th>2.5&quot; SATA HDD Bay</th>
<th>Power Input</th>
<th>Operating Temp.</th>
</tr>
</thead>
<tbody>
<tr>
<td>ARK-2120F-S8A1E</td>
<td>Intel Atom D2550 1.86 GHz</td>
<td>Yes</td>
<td>Yes</td>
<td>48-bits</td>
<td>3</td>
<td>5</td>
<td>2</td>
<td>4</td>
<td>8-bits</td>
<td>Lin-out, Line-in, Mic</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>DC 12V-24V 2-pin phoenix head</td>
<td>-20 ~ 60° C</td>
</tr>
</tbody>
</table>

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