

# ARK-2120F

## Intel® Atom™ Dual Core D2550 with 3 GbE, 6 COM & Wide Range Power Fanless Box PC



### Features

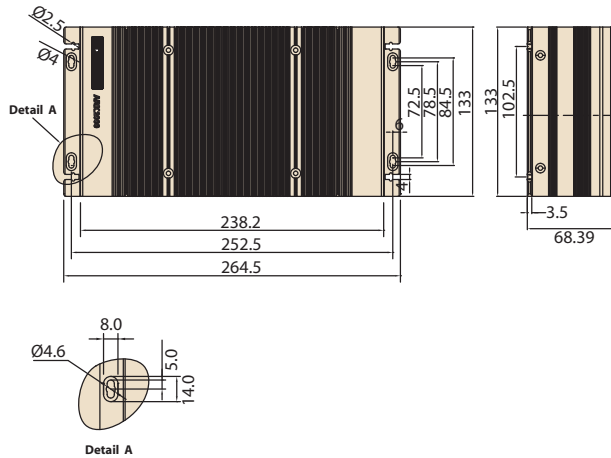
- Intel® Atom™ Dual Core D2550 1.86 GHz, DDR3 memory supports up to 4 GB
- VGA, HDMI, 48-bit LVDS, support dual independent display and DirectX 9
- Mini PCIe expansion with SIM holder for communication module, i.e. HSDPA, WLAN
- Supports up to 3 x GbE, 5 x USB 2.0 and 6 x COMs ports
- Supports external 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

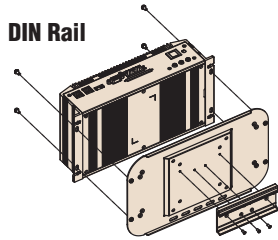
|                   |                            | ARK-2120F-S8A1E   |
|-------------------|----------------------------|---|
| Processor System  | CPU                        | Intel Atom D2550  |
|                   | Frequency                  | 1.86 GHz (Dual Core)  |
|                   | L2 Cache                   | 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 SO-DIMM   |
| Graphics          | Chipset                    | Intel Atom D2550  |
|                   | Graphic Engine             | DirectX 9 and OpenGL3.0 support<br>Hardware decode H/W acceleration: MPEG2<br>H/W Decode/Acceleration: H.264/VC1/WMV9                           |
|                   | 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 IO                 | 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)  |
| Power Requirement | Power Type                 | AT/ATX  |
|                   | Power Input Voltage        | 12 V <sub>DC</sub> ~ 24 V <sub>DC</sub>   |
|                   | 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<br>With 2.5-inch hard disk 0 ~ 45° C (32 ~ 112° F) with air flow |
|                   | Storage Temperature        | -40 ~ 85° C (-40 ~ 185° F)  |
|                   | 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 Certifications      | UL, CCC, BSMI   |

## Dimensions

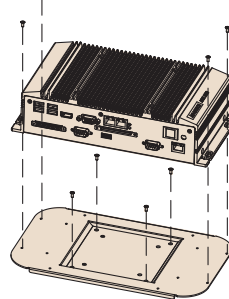


### DIN Rail

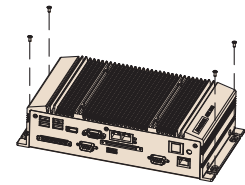
Unit: mm



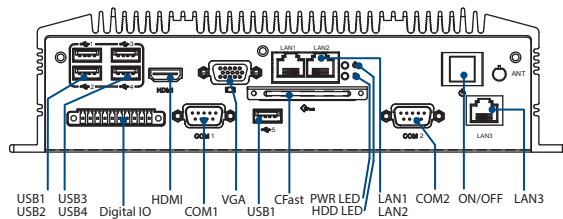
### VESA mount



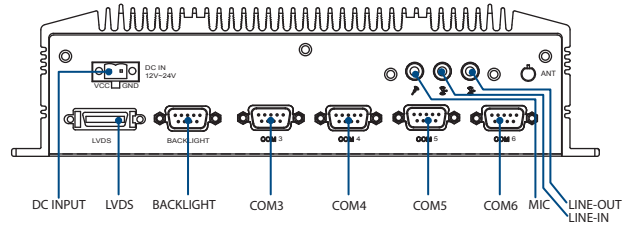
### Wall mount



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



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



## Ordering Information

| Part No.        | CPU                       | VGA | HDMI/DP | LVDS    | GbE | USB 2.0 | RS-232 | RS-232/422/485 | DIO    | Audio                 | Full-size MiniPCIe | SIM | CFast | 2.5" SATA II HDD Bay | Power Input                      | Operating Temp. |
|-----------------|---------------------------|-----|---------|---------|-----|---------|--------|----------------|--------|-----------------------|--------------------|-----|-------|----------------------|----------------------------------|-----------------|
| ARK-2120F-S8A1E | Intel Atom D2550 1.86 GHz | Yes | Yes     | 48-bits | 3   | 5       | 2      | 4              | 8-bits | Lin-out, Line-in, MIC | 1                  | 1   | 1     | 1                    | DC 12V-24V<br>2-pin phoenix head | -20 - 60° C     |

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

## Packing List

| Part Number | Description                              |
|-------------|--|
| -           | 1 x ARK-2120 Unit                        |
| -           | 1 x Utility CD                           |
| -           | 1 x User Manual (Simplified Chinese)     |
| -           | 1 x China RoHS                           |
| 1700009001  | 1 x 2-pin Phoenix to DC-Jack power cable |

## Optional Items

| Part Number     | Description   |
|-----------------|---|
| XARK-9NA0904747 | AC-to-DC Adapter, DC19 V/4.73 A 90 W, with Phoenix Power Plug |
| 1700001524      | Power cable 3-pin 180cm, USA type                             |
| 1702002605      | Power cable 3-pin 180cm, EU type                              |
| 1702031801      | Power cable 3-pin 180cm, UK type                              |
| AMK-V004E       | VESA mounting bracket   |
| AMK-R004E       | DIN-rail mounting kit for ARK-2000 series                     |

## Embedded OS

| Part Number | Description                        |
|-------------|------------------------------------|
| 2070011953  | Image WES7E SP1 x32 ENG/GER/JPN/CT |