

# ARK-2121F A2

## Intel® Celeron® Quad Core J1900 SoC with Multiple I/Os Fanless Box PC



### Features

- Intel® Celeron® J1900 Quad Core 2.0 GHz SoC with Turbo boost support
- VGA and HDMI dual independent display
- 6 x COM, 6 x USB, isolated DIO
- 9 ~ 36 V<sub>DC</sub> wide range power input
- 20 ~ 70° C extend temperature operating
- Mini PCIe expansion with SIM holder for communication module
- mSATA and 1 x 2.5" SATA storage device
- Optional DVI/2nd HDMI/4x GbE by project support
- Internal USB for security dongle



susiAccess iManager



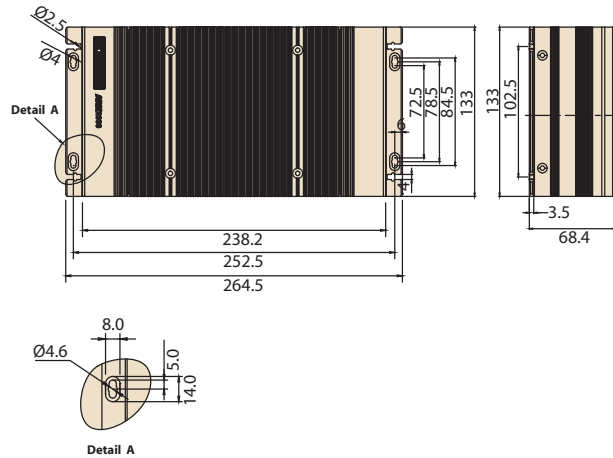
### Specifications

|                   |                            | ARK-2121F-U0A2E   |
|-------------------|----------------------------|---|
| Processor System  | CPU                        | Intel Celeron Processor J1900 Quad Core SoC   |
|                   | Frequency                  | 2.0 GHz, turbo boost up to 2.42 GHz   |
|                   | L2 Cache                   | 2 MB  |
|                   | BIOS                       | AMI EFI   |
| Memory            | Technology                 | DDR3L 1333 MHz  |
|                   | Max. Capacity              | 8 GB  |
|                   | Socket                     | 1 x 204-pin SO-DIMM   |
| Graphics          | Chipset                    | Intel Celeron J1900 SoC integrated, 7th Gen. Intel Graphic core   |
|                   | Graphic Engine             | DirectX 11.1, OCL 1.2, OGL 3.2<br>Encode: H.264, MPEG2/4, VC1, WMV9<br>Decode: H.264, MPEG2   |
|                   | VGA                        | Up to 2048 x 1152 @ 60Hz  |
|                   | HDMI                       | 1 HDMI port (default), HDMI 1.4a for HD video playback, 1080P at 60Hz (2nd HDMI support by project only)  |
|                   | DisplayPort*               | Up to 2560 x 1600 at 60Hz (by Project only)   |
|                   | DVI-D                      | Up to 1920 x 1200 at 60Hz (by Project only)   |
| Ethernet          | Dual Display               | Yes, VGA + HDMI   |
|                   | LAN1/LAN2                  | 10/100/1000Mbps Intel i210 GbE, support Wake On LAN, optional LAN3/LAN4 support by project  |
| Audio             | Interface                  | Realtek ALC888S, High Definition Audio. Line-out, Mic-in, Line-in   |
|                   | Serial Ports               | 6 x RS-232/422/485 with auto flow control   |
| IO Interface      | USB Interface              | 1 x USB 3.0, 5 x USB 2.0, 1 x internal USB 2.0 for security dongle  |
|                   | PS/2                       | Yes ( by project only)  |
|                   | Watchdog timer             | 255 levels timer interval, setup by software  |
| Other             | Digital I/O                | 4ch digital input and 4ch digital output with 3kV isolation   |
|                   | Mini PCIe                  | 2 x full size Mini PCIe (1 with SIM holder)   |
| Storage           | HDD                        | Supports one SATA 2.5" HDD Bay (Compatible with 12.5mm height HDD) (Max. Data Transfer Rate 600 MB/s)   |
|                   | mSATA                      | 1 x full size mSATA socket, with USB signal co-layer  |
| Software Support  | Microsoft Windows          | WES8, Windows 8, WES7, Windows 7  |
|                   | Linux                      | Support by project  |
| Power Requirement | Power Type                 | ATX   |
|                   | Power Input Voltage        | 9 ~ 36 V <sub>DC</sub>  |
|                   | Minimum Power Input        | 12 V, 1.5 A   |
|                   | Power Adapter              | AC to DC, DC19 V/3.42 A, 65 W (Optional)  |
| Power Consumption | Typical                    | 8.4W  |
|                   | Max.                       | 16.2W   |
| Mechanical        | Construction               | Aluminum housing  |
|                   | Mounting                   | Din-Rail mounting, Desk/wall-mounting, VESA mounting  |
|                   | Dimensions (W x H x D)     | 264.5 x 68.4 x 133.0 mm (10.41" x 2.69" x 5.24")  |
|                   | Weight                     | 2.3 kg (5.07 lb)  |
| Environment       | Operating Temperature      | With extended temperature peripherals: -20 ~ 70° C (-4 ~ 158° F) with 0.7m/s air flow<br>With 2.5-inch hard disk 0 ~ 45° C (32 ~ 112° F) with 0.7m/s air flow |
|                   | Storage Temperature        | - 40 ~ 85° C (- 40 ~ 185° F)  |
|                   | 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 A, CCC, BSMI   |
|                   | Safety Certifications      | UL, CB, CCC, BSMI   |

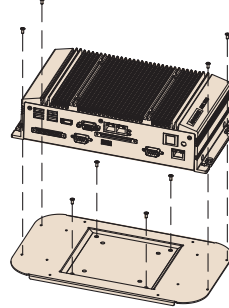
\* DisplayPort is supported by project only.

## Dimensions

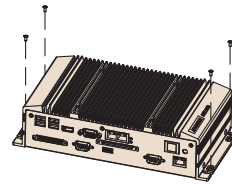
Unit: mm



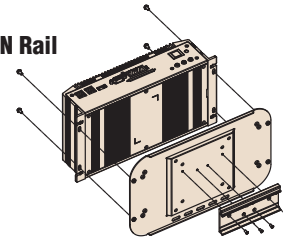
VESA mount



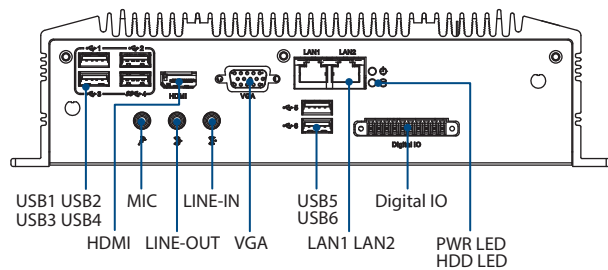
Wall mount



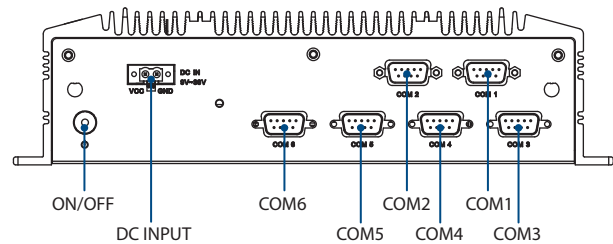
DIN Rail



Front Panel External I/O Mechanical Layout/Drawing



Rear Panel External I/O Mechanical Layout/Drawing



## Ordering Information

| Part No.        | CPU                        | VGA | HDMI/DP* | GbE | USB 2.0 | USB 3.0 | RS-232/422/485 | Audio                 | Full-size MiniPCIe | SIM | mSATA | 2.5" SATA II HDD Bay | Power Input            | Operating Temp. |
|-----------------|----------------------------|-----|----------|-----|---------|---------|----------------|-----------------------|--------------------|-----|-------|----------------------|------------------------|-----------------|
| ARK-2121F-U0A2E | Intel Celeron J1900 2.0GHz | Yes | Yes      | 2   | 5       | 1       | 6              | Lin-out, Line-in, MIC | 2                  | 1   | 1     | 1                    | 9 – 36 V <sub>DC</sub> | -20 – 70° C     |

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

\*DP is support by project only.

## Packing List

| Part Number    | Description                             |
|----------------|---|
| -              | 1 x ARK-2121 Unit                       |
| -              | 1 x User Manual (Simplified Chinese)    |
| -              | 1 x China RoHS                          |
| 1700009001     | 1x 2-pin Phoenix to DC-Jack power cable |
| 1960069484N000 | 2 x LAN clip                            |

## Embedded OS

| Part Number    | Description              |
|----------------|--------------------------|
| 2070013717     | WES7E 64bit ENG/JP/TC/SC |
| 2070013716     | WES8E 64bit ENG/JP/TC/SC |
| 20706WE7PS0004 | WES7P 64bit 10MUJ        |
| 2070015089     | Win10 64bit ENG          |

## Optional Items

| Part Number      | Description   |
|------------------|---|
| 96PSA-A65W19P2-2 | AC-to-DC Adapter, DC 19V/3.42A 65W, 0 ~ 40° C for Home and Office Use |
| 1700001524       | Power cable 3-pin 183cm, USA type                                     |
| 170203183C       | Power cable 3-pin 183cm, EU type                                      |
| 170203180A       | Power cable 3-pin 183cm, UK type                                      |
| AMK-V019E        | VESA mounting kit   |
| AMK-R005E        | DIN-rail mounting kit   |
| 1652003235       | 10pin DIO Plug in block   |