**ARK-2121F**

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



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RoHS

**COMPLIANT 2002/95/EC**

*E180881*

**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 VDC 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

# Specifications

|  |  |  |
| --- | --- | --- |
|  | | ARK-2121F-U0A1E |
| 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 Encode: H.264, MPEG2/4, VC1, WMV9 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) |
| Dual Display | Yes, VGA + HDMI |
| Ethernet | 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 |
| IO Interface | Serial Ports | 6 x RS-232/422/485 with auto flow control |
| 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) |
| Other | Watchdog timer | 255 levels timer interval, setup by software |
| Digital I/O | 4ch digital input and 4ch digital output with 3kV isolation |
| Expansion | 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-lay |
| Software Support | Microsoft Windows | WES8, Windows 8, WES7, Windows 7 |
| Linux | Support by project |
| Power Requirement | Power Type | ATX |
| Power Input Voltage | 9 ~ 36 VDC |
| 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 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.

**Fanless Embedded Box PCs**

All product specifications are subject to change without notice Last updated : 5-Oct-2015

# ARK-2121F

**DIN Rail**

3.5

68.4

238.2

252.5

264.5

6

**Detail A**

4

72.5

78.5

84.5

133

133

102.5



**Dimensions**

**VESA mount Wall mount**

Unit: mm

8.0

Ø4.6

**Detail A**

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

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

USB3 USB4

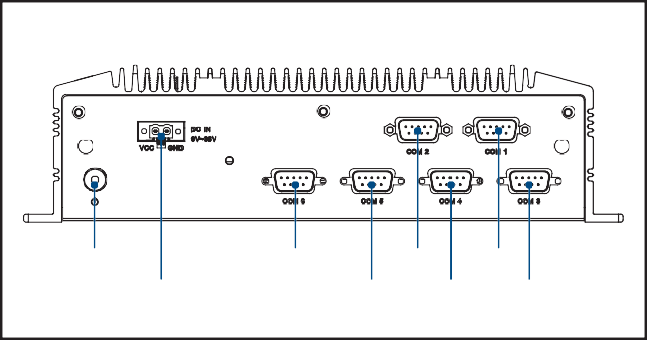
HDMI LINE-OUT VGA

Digital IO

ON/OFF

COM6

COM2 COM1

**Ordering Information**

DC INPUT COM5 COM4 COM3

LAN1 LAN2 PWR LED HDD LED

USB6

USB1 USB2 MIC LINE-IN USB5

5.0

14.0

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **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-U0A1E | Intel Celeron J1900 2.0GHz | Yes | Yes | 2 | 5 | 1 | 6 | Lin-out, Line-in, MIC | 2 | 1 | 1 | 1 | 9 ~ 36 VDC | -20 ~ 70° C |

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

\*DP is support by project only.

# Packing List 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-V004E | VESA mounting kit |
| AMK-R004E | DIN-rail mounting kit |
| 1652003235 | 10pin DIO Plug in block |

|  |  |
| --- | --- |
| **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 |

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