

**ARK-1123H**

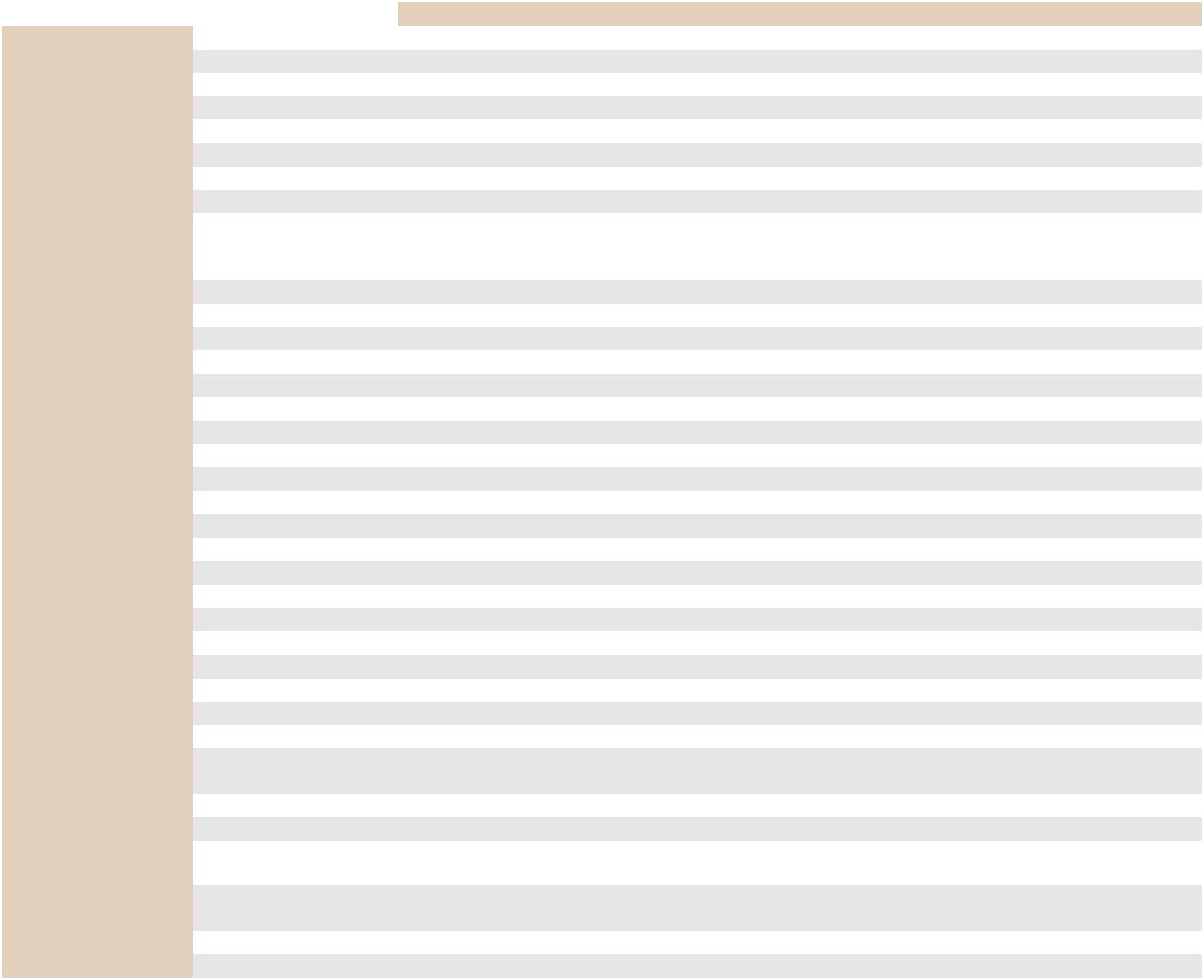


**RoHS**

**COMPLIANT**

**2002/95/EC**

**Specifications**



**Intel® Celeron Quad Core J1900 SoC with Dual HDMI/GbE IoT Fanless BOX PC**

**Features**

**** Intel®Celeron J1900 Quad Core 2.0 GHz SoC **** 1 x 2.5" SATA HDD/SSD Bay

**** 2 x GbE for Multiple Internet Transmission

**** 2 x Independent HDMI

**** 1 x RS-232/422/485 (BIOS selection)

**** 1 x Full-Size MiniPCIe (ex. WLAN or WWAN module)

**** 1 x Half Size mSATA

**** Optional VESA / DIN Rail / Wall Mounting kits **** Threaded DC jack design

**** Supports SUSIAccess and Embedded Software APIs **** Support WIFI 802.11 a/b/g/n bundled for IoT Gateway

|  |  |  |  |
| --- | --- | --- | --- |
|  |  | ARK-1123H-U0A2E |  |
|  | CPU | Intel® Celeron™ Processor J1900 Quad Core 2.0 GHz SoC |  |
| Processor System | Frequency | 2.0 GHz (Up to 2.41 GHz w/ burst frequency enabled) |  |
| L2 Cache | 2 MB |  |
|  |  |
|  | BIOS | AMI EFI 64 Mbit (Default BIOS is supported for 64-bit OS installation, BIOS for 32-bit OS is supported by project) |  |
|  | Technology | DDR3L 1333MHz |  |
| Memory | Max. Capacity | 8 GB |  |
|  | Socket | 1 x 204-pin SO-DIMM |  |
|  | Chipset | Intel® Atom SoC integrated |  |
| Graphics |  | DirectX\* 11.1, OGL 3.0, OCL 1.1, OGL ES 2.0 |  |
| Graphic Engine | Encode: H264, MPEG2/4, VC1, WMV9 |  |
|  |  | Decode: H264, MPEG2 |  |
|  | HDMI | 2 x Lockable HDMI connector, support up to 1920 x 1080 at 60Hz (2nd HDMI w/o audio function by Intel limitation) |  |
| Audio | Main System | ALC-888S, High Definition Audio. Line-out & Line-in |  |
| Ethernet | LAN #1 | 10/100/1000 Mbps Intel I210 GbE, support Wake on LAN |  |
| LAN #2 | 10/100/1000 Mbps Intel I210 GbE, support Wake on LAN |  |
|  |  |
| I/O Interface | Serial Ports | 1 x RS-232/422/485 (BIOS selectable) |  |
| USB Interface | 2 x USB 2.0 & 1 x USB3.0 |  |
|  |  |
| Other | Watchdog timer | 255-level timer interval, setup by software |  |
| Expansion | Mini PCIe | 1 x Full-size Mini PCIe, support WLAN or WWAN module |  |
| Storage | 2.5" Drive Bay | 1 x 2.5” SATA HDD Bay (Max Height 9.5mm) |  |
| mSATA | 1 x Half-size mPCIe (Suggest to assembly by CTOS or T-Part due to complex installation) |  |
|  |  |
| Software Support | Microsoft Windows | WES7, Windows 7, WE8S, Windows 8 and Windows 10 |  |
| Linux | Support (by Project) |  |
|  |  |
| Power Requirement | Power Input Voltage | Single 12 VDC |  |
| Power Adapter | AC to DC, DC12 V/3 A, 36 W with threaded design |  |
|  |  |
| Power Consumption | Typical | 5.64W |  |
| Max. | 14.04W |  |
|  |  |
|  | Construction | Aluminum housing |  |
| Mechanical | Mounting | VESA/DIN Rail/Wall Mounting Kits (Optional) |  |
| Dimensions (W x H x D) | 133.8 x 43.1 x 94.2 mm (5.27" x 1.7" x 3.71") |  |
|  |  |
|  | Weight | 0.8kg |  |
|  | Operating Temperature | With extended temperature SSD/mSATA/RAM : -20 ~ 60° C with 0.7m/s air flow |  |
|  | With standard temperature HDD/SSD/mSATA/RAM peripherals:0 ~ 40° C with 0.7m/s air flow |  |
|  |  |  |
|  | Storage Temperature | -40 ~ 85° C (-40~185° F) |  |
| Environment | Relative Humidity | 95% @ 40° C (non-condensing) |  |
|  | With mSATA/SSD: 3 Grms, IEC 60068-2-64, random, 5 ~ 500 Hz, 1 hr/axis |  |
|  | Vibration During Operation |  |
|  | With HDD: 0.5Grms, IEC 60068-2-64, random, 5~500Hz, 3 axes, 1hr/axis |  |
|  |  |  |
|  | Shock During Operation | With mSATA/SSD: 30 G, IEC 60068-2-27, half sine, 11 ms duration |  |
|  | With HDD: 10G, IEC 60068-2-27, half sine, 11 ms duration |  |
|  |  |  |
| Regulation | EMC | CE/FCC Class B, CCC, BSMI |  |
| Safety | UL, CCC, BSMI, CB |  |
|  |  |

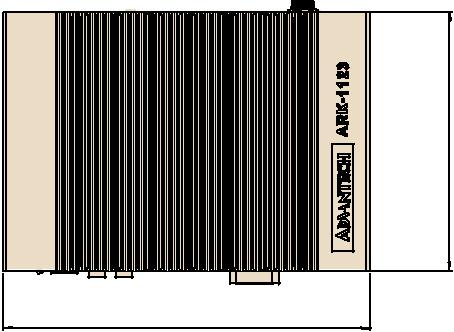


**Fanless Embedded Box PCs**

All product specifications are subject to change without notice. Last updated: 10-Jan-2019

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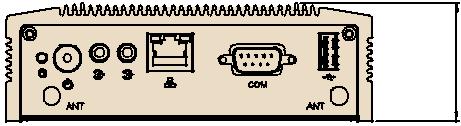
**Dimensions**



|  |  |  |  |
| --- | --- | --- | --- |
| **DIN Rail** | **100** | Unit: mm |  |
| **18.05** |  |
| **75** |  |
|  |  |
|  |  | **34.8347.** |  |

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|  |  | **50(4X**) | | |  |
| **35.05** | **66** |  |  |  |  |
| **VESA mount** | **100** |  |  |  |  |
|  |  |  |  |  |
| **8** |  | **3** | **7534.** | **2547.100** |  |
| **110** | **75** |  |
|  |  |  |  |  |

**Wall mount**

**A**

**164.40**

**152.40**

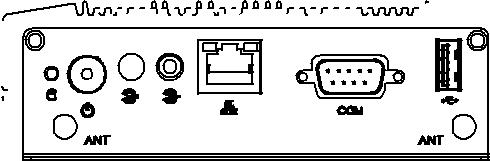
|  |
| --- |
| **9093. 73.90** |

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| 1143. |

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| --- | --- | --- |
|  | Ø4 |  |
| **18.25** | **.** |  |
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|  | **0(8X** |  |
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| --- | --- | --- | --- |
|  | **4** |  |  |
| **105** |  | **DetailA** |  |
| **10** | **Scale2:1** |  |
| **6** | **2** |  |  |
|  |  |  |

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



**HDD** LE**D** Line in L**AN** **U**SB2..0

**O**n/**O**ff Line out **COM**

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

**DC** IInput **U**SB3..0 L**AN**

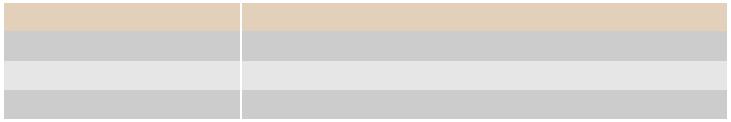
**HDM**II **U**SB2..0 **HDM**II

**Ordering Information**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Part Number** | **CPU** | **RAM** | **HDMI** | **GbE** | **USB** | **USB** | **RS-232/** | **Audio MiniPCIe** | | **2.5" HDD** | **mSATA** | **Operating** |  |
| **2.0** | **3.0** | **422/485** | **bay** | **Temperature** |  |
|  | Intel Celeron |  |  |  | Line in |  |  |  |
| ARK-1123H-U0A2E | Up to 8GB | 2 | 2 | 2 | 1 | 1 | 1 Full size 1 | | 1 (H/S) | -20 ~ 60° C |  |
| J1900 | Line out |  |
|  |  |  |  |  |  |  |  |  |  |  |  |

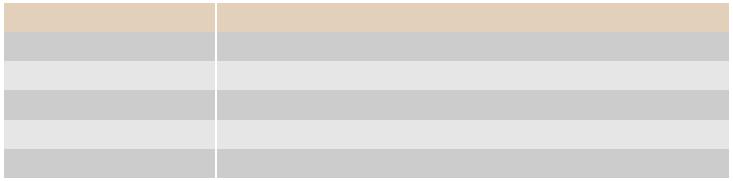
Note: Memory, storage and operating system bundled by request.

**Packing List**



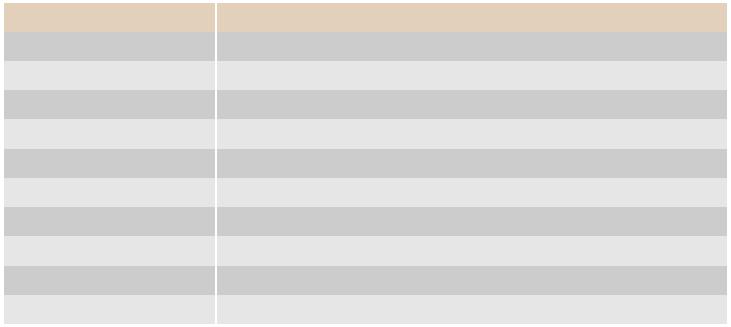
|  |  |
| --- | --- |
| **Part Number** | **Description** |
| - | 1 x ARK-1123H Unit |
| - | 1 x User Manual (Simplified Chinese) |
| 96PSA-A36W12W7 | 1 x AC to DC adapter DC 12V/3A 36W, -20 ~ 60° C |

**Embedded OS** (Only available for T-Parts OEM, and CTOS service)



|  |  |
| --- | --- |
| **Part Number** | **Description** |
| 2070013033 | WES7E 64-bit with EN/JP/TC/SC (OS size around 11G) |
| 2070013371 | WE8S 64-bit with EN/JP/TC/SC (OS size around 13G) |
| 2070014792 | WIN10 IoT LTSB\_x64\_Eng |
| 2070014334 | Win10 IoT Core\_x32 V10.1.10586.0 EN |
| 2070014369 | IDP-WR3.1\_x64 V1.0.1 EN |

**Optional Items**



|  |  |
| --- | --- |
| **Part Number** | **Description** |
| 1700001524 | Power Cable 3-pin 180cm, USA type |
| 170203183C | Power Cable 3-pin 180cm, Europe type |
| 170203180A | Power Cable 3-pin 180cm, UK type |
| 1700008921 | Power Cable 3-pin PSE Mark 183cm |
| AMK-V003E | ARK-112X series VESA mounting kit |
| AMK-R001E | ARK-112X series DIN-rail mounting kit |
| AMK-W001E | ARK-112X series Wall mounting kit |
| 1700023855-01 | 1M lockable HDMI cable |
| 1700023856-01 | 3M lockable HDMI cable |
| AMO-WIFI08E | WIFI802.11a/b/g/n, Atheros AR9462,2T2R |

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