

ARK-1123H A4

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 MiniPCle (ex. WLAN or WWAN module) #1
- 1 x Half Size mSATA
- Optional VESA / DIN Rail / Wall Mounting kits
- Threaded DC jack design
- Supports WISE-DeviceOn and Embedded Software APIs



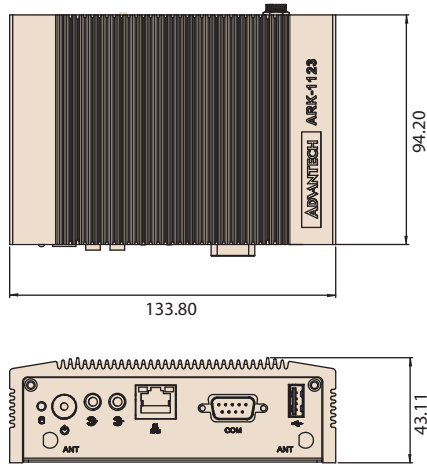
Specifications

| | | ARK-1123H-U0A4 |
|-------------------|----------------------------|---|
| Processor System | CPU | Intel® Celeron® Processor J1900 Quad Core 2.0 GHz SoC |
| | 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) |
| Memory | Technology | DDR3L 1333MHz |
| | Max. Capacity | 8 GB |
| | Socket | 1 x 204-pin SO-DIMM |
| Graphics | Chipset | Intel® Atom SoC integrated |
| | Graphic Engine | DirectX* 11.1, OGL 3.0, OCL 1.1, OGL ES 2.0 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 #1 |
| 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 | Windows 10 |
| | Linux | Support (by Project) |
| Power Requirement | Power Input Voltage | 12 V _{DC} |
| | Power Adapter | AC to DC, DC12 V/3 A, 36 W with threaded design |
| Power Consumption | Typical | 5.64W |
| | Max. | 14.04W |
| Mechanical | Construction | Aluminum housing |
| | 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 |
| Environment | 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) |
| | Relative Humidity | 95% @ 40° C (non-condensing) |
| | Vibration During Operation | With mSATA/SSD: 3 Grms, IEC 60068-2-64, random, 5 ~ 500 Hz, 1 hr/axis 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, UKCA |
| | Safety | UL, CCC, BSMI, CB, UKCA |

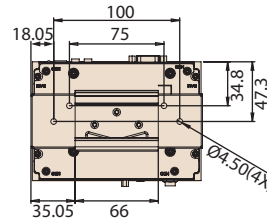
#1 Mini PCIe is hardware interfaces for wireless communication integration only. Other system level RF certification is not available.

Dimensions

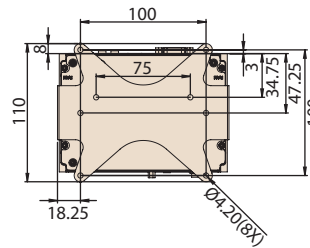
Unit: mm



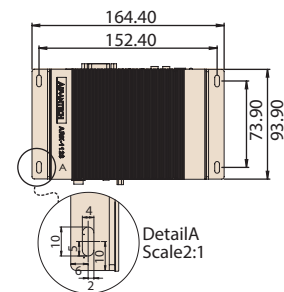
DIN Rail



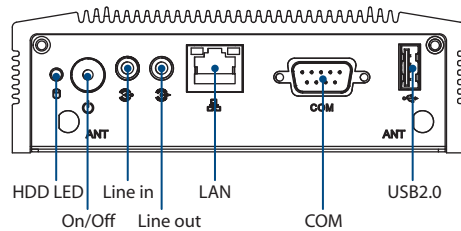
VESA mount



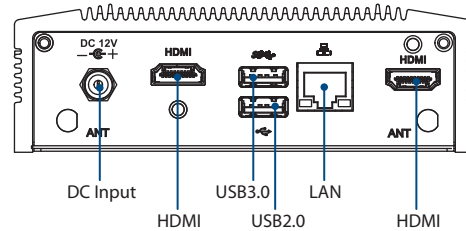
Wall mount



Front Panel External I/O Mechanical Layout/Drawing



Rear Panel External I/O Mechanical Layout/Drawing



Ordering Information

| Part Number | CPU | RAM | HDMI | GbE | USB 2.0 | USB 3.0 | RS-232/422/485 | Audio | MiniPCle | 2.5" HDD bay | mSATA | Operating Temperature |
|----------------|---------------------|-----------|------|-----|---------|---------|----------------|---------------------|-------------|--------------|---------|-----------------------|
| ARK-1123H-U0A4 | Intel Celeron J1900 | Up to 8GB | 2 | 2 | 2 | 1 | 1 | Line in Line out | 1 Full size | 1 | 1 (H/S) | -20 ~ 60° C |

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-A36W12W7-5 | 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 |
|----------------|--|
| 20706WX9ES0088 | Windows 10 IoT Enterprise 2019 LTSC 64bit 1809 ENU (OS size around 16.5GB) |

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 |