

# ARK-1123H

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



WISE-PaaS/RMM



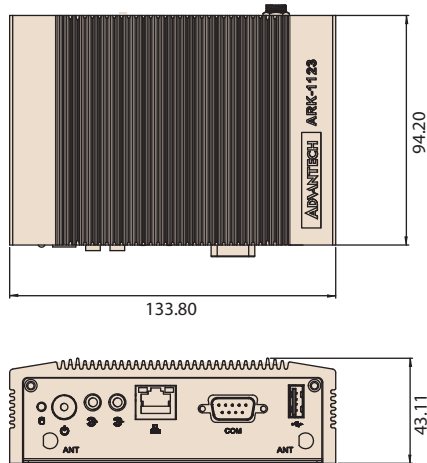
### Features

- 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 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

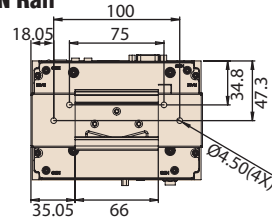
### Specifications

| ARK-1123H-U0A2E   |                            |                                                                                                                                                                       |
|-------------------|----------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 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<br>Encode: H264, MPEG2/4, VC1, WMV9<br>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                      | 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 PCle                  | 1 x Full-size Mini PCle, 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 mPCle (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 V <sub>DC</sub>                                                                                                                                             |
|                   | 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<br>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<br>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<br>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                                                                                                                                                     |

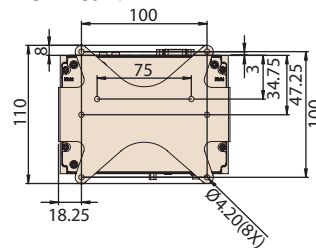
## Dimensions



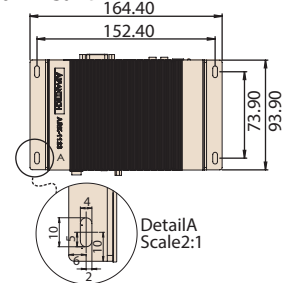
### DIN Rail



### VESA mount

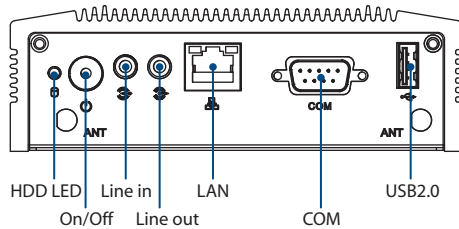


### Wall mount

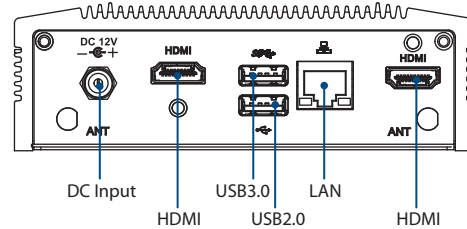


Unit: mm

## 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               | MiniPCIe    | 2.5" HDD bay | mSATA   | Operating Temperature |
|-----------------|---------------------|-----------|------|-----|---------|---------|----------------|---------------------|-------------|--------------|---------|-----------------------|
| ARK-1123H-U0A2E | Intel Celeron J1900 | Up to 8GB | 2    | 2   | 2       | 1       | 1              | Line in<br>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 | 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  | WE7E 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 |