## 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

## Specifications

**ARK-1123H-U0A1E**

### 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
- **Storage**: 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, WEBS, Windows 8 and Windows 10 (32-bit support by project)
- **Linux**: Support (by Project)

### Power Requirement
- **Power Input Voltage**: Single 12 Vdc
- **Power Adapter**: AC to DC, DC12 V/3.3A, 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/RAID : -20 – 60° C with 0.7m/s air flow
  With standard temperature HDD/SSD/mSATA/RAID 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
- **Safety**: UL, CCC, BSMI, CB

For technical advice and sales please contact: tel: 0330 124 4540, email: smartwave@apcplc.com
## ARK-1123H

### Packing List

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 x ARK-1123H Unit</td>
<td></td>
</tr>
<tr>
<td>1 x User Manual (Simplified Chinese)</td>
<td></td>
</tr>
<tr>
<td>1 x AC to DC adapter DC 12V/3A 36W, -20 – 60° C</td>
<td></td>
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</tbody>
</table>

### Embedded OS

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

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>WE57E 64-bit with EN/JP/TC/SC (OS size around 11G)</td>
<td></td>
</tr>
<tr>
<td>WE8S 64-bit with EN/JP/TC/SC (OS size around 13G)</td>
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</tr>
<tr>
<td>WIN10 IoT LTSB_x64_Eng</td>
<td></td>
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<tr>
<td>Win10 IoT Core_x32 V10.1.10586.0 EN</td>
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</tr>
<tr>
<td>IDP-WR3.1_x64 V1.0.1 EN</td>
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</tbody>
</table>

### Optional Items

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Description</th>
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</thead>
<tbody>
<tr>
<td>Power Cable 3-pin 180cm, USA type</td>
<td></td>
</tr>
<tr>
<td>Power Cable 3-pin 180cm, Europe type</td>
<td></td>
</tr>
<tr>
<td>Power Cable 3-pin 180cm, UK type</td>
<td></td>
</tr>
<tr>
<td>Power Cable 3-pin PSE Mark 183cm</td>
<td></td>
</tr>
<tr>
<td>AMK-V003E ARK-112X series VESA mounting kit</td>
<td></td>
</tr>
<tr>
<td>AMK-R001E ARK-112X series DIN-rail mounting kit</td>
<td></td>
</tr>
<tr>
<td>AMK-W001E ARK-112X series Wall mounting kit</td>
<td></td>
</tr>
<tr>
<td>1M lockable HDMI cable</td>
<td></td>
</tr>
<tr>
<td>3M lockable HDMI cable</td>
<td></td>
</tr>
<tr>
<td>WIFI802.11a/b/g/n, Atheros AR9462.2T2R</td>
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</tr>
</tbody>
</table>

### Dimensions

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

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

**Ordering Information**

<table>
<thead>
<tr>
<th>Part Number</th>
<th>CPU</th>
<th>RAM</th>
<th>HDMI</th>
<th>GbE</th>
<th>USB 2.0</th>
<th>USB 3.0</th>
<th>RS-232/422/485</th>
<th>Audio</th>
<th>MiniPCIe</th>
<th>2.5” HDD bay</th>
<th>mSATA</th>
<th>Operating Temperature</th>
</tr>
</thead>
<tbody>
<tr>
<td>ARK-1123H-U0A1E</td>
<td>Intel Celeron J1900</td>
<td>Up to 8GB</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>1</td>
<td>1</td>
<td>Full size</td>
<td>1</td>
<td>H/S</td>
<td>-20 – 60° C</td>
<td></td>
</tr>
</tbody>
</table>

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

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