






## ARK-1123H Computer Startup Manual

### Packing List

Before you begin installing your card, please make sure that the following items have been shipped:

#### ARK-1123H

-  1 x ARK-1123H unit
-  1 x Chinese user manual
-  1 x China RoHS
-  1 x 2 years warranty card
-  1 x power adapter

If any of these items are missing or damaged, please contact your distributor or sales representative immediately.

**Note 1:** For detailed contents of ARK-1123H, please refer to information on the enclosed CDROM (in PDF format).

**Note 2:** Acrobat Reader is required to view any PDF file. Acrobat Reader can be downloaded at:

<http://www.adobe.com/Prodindex/acrobat/readstep>.

html/ (Acrobat is a trademark of Adobe.)

**ARK-1123H, ARK-1123H-U0A1E, ARK-1123XXXXXXXXXXXXXXXX (where "X" may be any alphanumeric character, "-" or blank)**

**FCC ID :M82-ARK1123**

For more information on this and other Advantech products, please visit our website at:

<http://www.advantech.com>

<http://www.advantech.com/epc>

For technical support and service, please visit our support website at:

<http://service.advantech.com.tw/eservice/>

This manual is for the ARK-1123 series Rev. A

1st Edition,

# ARK-1123 Specifications

## [ARK-1123H]

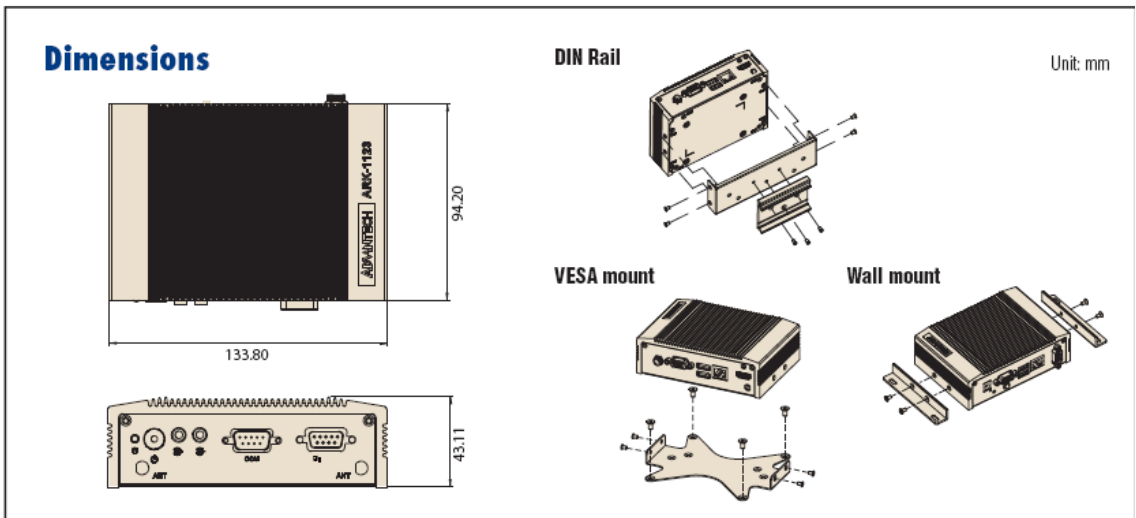
|                   |                        | ARK-1123H-U0A1E  |
|-------------------|------------------------|--|
| Processor System  | CPU                    | Intel® Celeron™ Processor J1900 Quad Core 2.0 GHz SoC  |
|                   | Frequency              | 2.0 GHz  |
|                   | L2 Cache               | 2 MB   |
|                   | BIOS                   | AMI EFI  |
| Memory            | Technology             | DDR3L 1333MHz  |
|                   | Max. Capacity          | 8 GB   |
|                   | Socket                 | 1 x 204-pin SO-DIMM  |
| Graphics          | Chipset                | 7th Gen. Intel Graphic core  |
|                   | Graphic Engine         | DirectX* 11.1, OGL 3.0, OCL 1.1, OGL ES 2.0 support<br>Encode: H264, MPEG2/4, VC1, WMV9<br>Decode: H264, MPEG2 |
|                   | HDMI                   | 2 x Lockable HDMI connector (please choose the lockable HDMI cable)  |
| 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           | 1 x Full-size Mini PCIe, support WLAN or WWAN module   |
|                   | Mini PCIe #2           | 1 x Half-size Mini PCIe, support Half-size mSATA module  |
| Storage           | 2.5" Drive Bay         | 1 x 2.5" SATA HDD Bay (Max Height 9.5mm)   |
|                   | mSATA                  | Leverage MiniPCIe #2 slot  |
| Software Support  | Microsoft Windows      | WES8, Windows 8, WES7 (TBC), Windows 7 (TBC)   |
|                   | 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 lockable design  |
| 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")  |

## WiFi card **EWM-W161H01E**

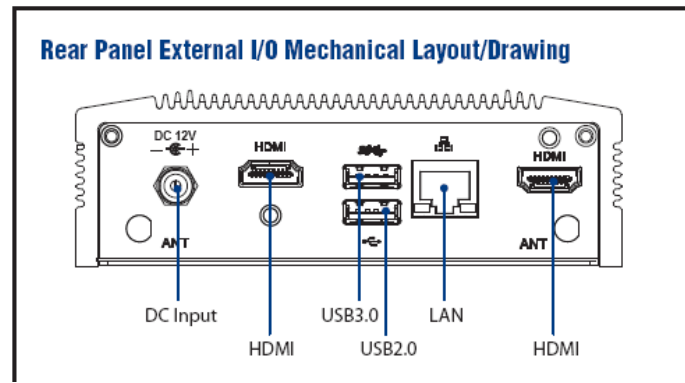
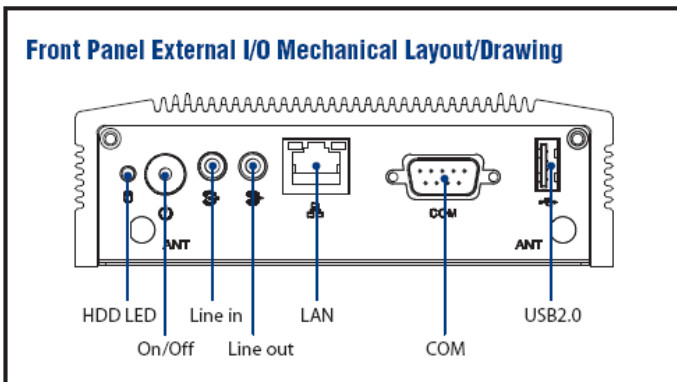
EWM-W161H01E IEEE 802.11 a/b/g/n PCIE WIFI and Bluetooth 4.0 + BT3.0 HS class II combo Module.

Dimensions 29.85mm x 26.65mm x 3.15mm (with shielding)

# ARK-1123 Dimensions



## [ARK-1123H]



# Safety Instructions

1. Read these safety instructions carefully.
2. Keep this User Manual for later reference.
3. Disconnect this equipment from any AC outlet before cleaning. Use a damp cloth. Do not use liquid or spray detergents for cleaning.
4. For plug-in equipment, the power outlet socket must be located near the equipment and must be easily accessible.
5. Keep this equipment away from humidity.
6. Put this equipment on a reliable surface during installation. Dropping it or letting it fall may cause damage.
7. The openings on the enclosure are for air convection. Protect the equipment from overheating. **DO NOT COVER THE OPENINGS.**
8. Make sure the voltage of the power source is correct before connecting the equipment to the power outlet.
9. Position the power cord so that people cannot step on it. Do not place anything over the power cord.
10. All cautions and warnings on the equipment should be noted.
11. If the equipment is not used for a long time, disconnect it from the power source to avoid damage by transient overvoltage.
12. Never pour any liquid into an opening. This may cause fire or electrical shock.
13. Never open the equipment. For safety reasons, the equipment should be opened only by qualified service personnel.

14. If one of the following situations arises, get the equipment checked by service personnel:

- The power cord or plug is damaged.
- Liquid has penetrated into the equipment.
- The equipment has been exposed to moisture.
- The equipment does not work well, or you cannot get it to work according to the user's manual.
- The equipment has been dropped and damaged.
- The equipment has obvious signs of breakage.

15. DO NOT LEAVE THIS EQUIPMENT IN AN ENVIRONMENT WHERE THE STORAGE TEMPERATURE MAY GO BELOW  $-40^{\circ}\text{C}$  ( $40^{\circ}\text{F}$ ) OR ABOVE  $85^{\circ}\text{C}$  ( $185^{\circ}\text{F}$ ) . THIS COULD DAMAGE THE EQUIPMENT. THE EQUIPMENT SHOULD BE IN A CONTROLLED ENVIRONMENT.

16. CAUTION: DANGER OF EXPLOSION IF BATTERY IS INCORRECTLY REPLACED. REPLACE ONLY WITH THE SAME OR EQUIVALENT TYPE RECOMMENDED BY THE MANUFACTURER, DISCARD USED BATTERIES ACCORDING TO THE MANUFACTURER'S INSTRUCTIONS.

The sound pressure level at the operator's position according to IEC 704-1:1982 is no more than 70 dB (A).

DISCLAIMER: This set of instructions is given according to IEC 704-1. Advantech disclaims all responsibility for the accuracy of any statements contained herein.

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

FCC Caution: Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment.

**FCC RF Radiation Exposure Statement:**

1. This Transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.
2. This equipment complies with FCC RF radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with a minimum distance of 20 centimeters between the radiator and your body.

This device complies with FCC radiation exposure limits set forth for an uncontrolled environment and it also complies with Part 15 of the FCC RF Rules. This equipment must be installed and operated in accordance with provided instructions and the antenna(s) used for this transmitter must be installed to provide a separation distance of at least 20 cm from all persons and must not be co-located or operating in conjunction with any other antenna or transmitter. End-users and installers must be provided with antenna installation instructions and consider removing the no-collocation statement.

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:  
(1) this device may not cause harmful interference, and  
(2) this device must accept any interference received, including interference that may cause undesired operation.

Caution!

Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

# 安全指示

1. 請仔細閱讀此安全操作說明。
2. 請妥善保存此用戶手冊供日後參考。
3. 用濕抹布清洗設備前，請從插座拔下電源線。請不要使用液體或去汙噴霧劑清洗設備。
4. 對於使用電源線的設備，設備周圍必須有容易接觸到的電源插座。
5. 請不要在潮濕環境中使用設備。
6. 請在安裝前確保設備放置在可靠的平面上，意外跌落可能會導致設備損壞。
7. 設備外殼的開口是用於空氣對流，從而防止設備過熱。請不要覆蓋這些開口。
8. 當您連接設備到電源插座上前，請確認電源插座的電壓是否符合要求。
9. 請將電源線佈置在人們不易絆到的位置，並不要在電源線上覆蓋任何雜物。
10. 請注意設備上的所有警告標識。
11. 如果長時間不使用設備，請將其同電源插座斷開，避免設備被超標的電壓波動損壞。
12. 請不要讓任何液體流入通風口，以免引起火災或者短路。
13. 請不要自行打開設備。為了確保您的安全，請由經過認證的工程師來打開設備。
14. 如遇下列情況，請由專業人員來維修：
  - a. 電源線或者插頭損壞；
  - b. 設備內部有液體流入；
  - c. 設備曾暴露在過於潮濕的環境中使用；
  - d. 設備無法正常工作，或您無法通過用戶手冊來使其正常工作；
  - e. 設備跌落或者損壞；
  - f. 設備有明顯的外觀破損。
15. 請不要把設備放置在超出我們建議的溫度範圍的環境，即不要低於-20°C（-4°F）或高於55°C（131°F），否則可能會損壞設備。
16. 注意：電腦配置了由電池供電的即時時鐘電路，如果電池放置不正確，將有爆炸的危險。因此，只可以使用製造商推薦的同一種或者同等型號的電池進行替換。請按照製造商的指示處理舊電池。

根據IEC 704-1:1982 的規定，操作員所在位置的聲壓級不可高於70dB(A)。

免責聲明：該安全指示符合IEC 704-1 的要求。研華公司對其內容的準確性不承擔任何法律責任。

# Safety Instructions

Follow these simple precautions to protect yourself from harm and the products from damage.

1. To avoid electrical shock, always disconnect the power from your PC chassis before you work on it.
2. For the sake of the equipment, disconnect power before making any configuration changes. The sudden rush of power as you connect a jumper or install a card may damage sensitive electronic components.
3. Electronic components are also vulnerable to damage by electrostatic discharge. An electrostatic charge can build up on the human body, especially where the air is dry. At minimum, dissipate potential body charge before handling any electronic board by touching a conductive surface on the chassis. Only then remove circuit boards from their antistatic bags.  
Handle boards by the edges or mounting brackets only; do not touch components or connecting pins.