

ARK-5261 / ARK-5261I**Intel® Celeron® Processor J1900 Fanless Embedded
BOX PC with PCI/PCIe Expansion and Dual Mobile
HDDs/SSDs****Startup Manual****Packing List**

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

- | | |
|----------------------------|---------------------------------------|
| 1. ARK-5261 System x 1 | P/N: ARK-5261S-J0A1E |
| (ARK-5261I System x 1 | P/N: ARK-5261I-J0A1E) |
| 2. Startup Manual x 1 | P/N: 2001526110 |
| 3. Driver CD x 1 | P/N: 2061526100 |
| 4. Warranty Card | P/N: 2190000902 |
| 5. Wallmount bracket x2 | P/N: 1960049826N001
1960049827N001 |
| 6. DB37 to DB9 Cable* | P/N: 1700021869-01 |
| Only for ARK-5261I version | |

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

Note 1: For detailed contents of ARK-5261, please refer to information on the enclosed CD-ROM (in PDF format).

Note 2: Acrobat Reader is required to view any PDF file. Acrobat Reader can be downloaded at: get.adobe.com/reader (Acrobat is a trademark of Adobe)

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

<http://www.advantech.com>

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

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

<http://support.advantech.com.tw/support/default.aspx>

This manual is for the ARK-5261 Series Rev. A1.

Part No. 2001526110

Printed in China

1st Edition
November 2014

Specifications**Processor System**

- Intel® Celeron® Processor J1900 up to 2.41 GHz

Memory

- Support dual channel DDR3L (Lower power 1.35V)-1333 Mhz, 2GB per slot without ECC function; Max. capacity is up to 8GB

Graphics

- Chipset integrated Intel HD Graphic

Serial Ports

- **Standard Type:**
 - 4x RS-232/422/485, selection by BIOS
 - Support Auto-flow control
 - COM1 & COM2 support 5V/12V power, selection by Jumper
- **Isolation Type:**
 - 4 x RS-422/485 ports (by DB37 to 4x DB9 cable)
 - ESD protection: 15Kv
 - Sugar production: 2Kv
 - Electrical Isolation: 2Kv

Ethernet

- **Interface:** 10/100/1000 Mbps
- **Controller:**
 - LAN1: Intel I211, supports Wake on LAN
 - LAN2: Intel I211, supports Wake on LAN

Storage

- **Internal 2.5" HDD Bay:** 2
- **m-SATA:** 1 (Shared with SATA 2)

Front I/O

- **Display:** 1 x VGA
- **USB:** 1 x USB3.0; 4 x USB2.0; 1 x Internal USB2.0
- **Serial:** 4 x RS-232/422/485 selection by BIOS
- **DIO:** Support 8-bit GPIO by DB9 Connector
- **Parallel port:** Support D-sub 25 pin connector
- **Keyboard/Mouse:** 1 x PS/2 port, support PS/2 mouse and Keyboard

Power Requirement

- **Power Type:** ATX /AX
- Power Input Voltage: 9~30 VDC
- Minimum Power Input: 9V @ 6.6A ~ 30V @ 2A
- Power Adapter: AC to DC, 65W DC19V/3.4A

Specifications (cont.)

Miscellaneous

- **LED Indicators:** Power, HDD
- **Control:** Power on/off switch

Environment

- **Operating Temperature:**
 - 10 ~ 60° C with 0.7m/sec air flow: with 2 x Industrial SSD without PC expansion boards
 - 0 ~ 45° C with 0.7m/sec air flow: with 1 x 2.5" HDD or mSATA without PC expansion boards
- **Storage Temperature:** -40 ~ 85° C (-40 ~ 185° F)
- **Relative Humidity:** 95% @ 40° C (non-condensing)

Physical Characteristics

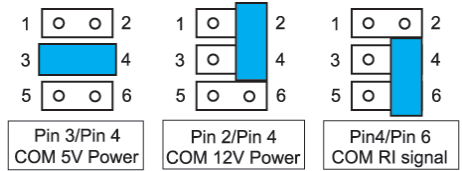
- **Dimension (WxHxD):** 137 x 189 x 221 mm
- **Weight:** 4.2 Kg

Jumpers and Connectors

The board has a number of jumpers that allow you to configure your system to suit your application. The table below lists the function of each of the jumpers and connectors.

Connectors	
Label	Function
VGA1	VGA connector
LAN 1	Intel I211
LAN 2	Intel I211
USB 1	USB 3.0
PS/2	Keyboard & Mouse connector
COM 12	RS-232/422/485 with Power
COM 34	RS-232/422/485
Isolation COM*	RS-422/485 Isolation COM
DIO1	GPIO Connector
LTP	Printer Connector
USB 2345	USB 2.0 port 2,3,4,5
Audio	Audio Jack x 2
DC 9~30V2	Power Connector
*Only for Isolation version	

Jumpers and Connectors (cont.)



JCOMPWR1/JCOMPWR2: COM1 & 2 Power Selection

Functions	Jumper Setting
4-6	RI (Default no power)
3-4	5V Power
4-6	12V Power



PSO1: System AT/ATX Module Selection

Function	Jumper Setting
1-2	AT module
2-3	ATX module

Software Installation

The drivers for the ARK-5261 are located on the software installation CD. Please click through the folder and follow the on screen instructions to install them.

Caution! The computer is supplied with a battery-powered realtime clock circuit. There is a danger of explosion if battery is incorrectly replaced. Replace only with same or equivalent type recommended by the manufacturer. Discard used batteries according to manufacturer's instructions.

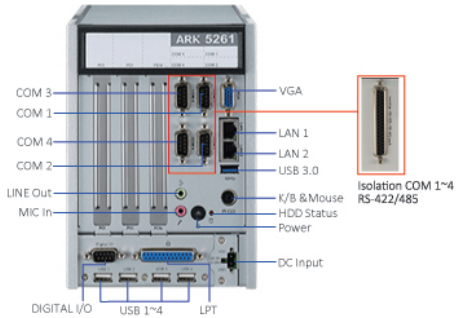


Declaration of Conformity

This device complies with the requirements in Part 15 of the FCC rules. Operation is subject to the following two conditions:

1. This device may not cause harmful interference;
2. This device must accept any interference received, including interference that may cause undesired operation.

System I/O Interface



Simple Maintain Process

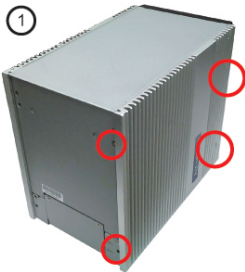
Memory Installation

Warning: ARK-5261 system already is on-board 4GB memory inside, if you want to expand to 8GB. Please connect your sales or agents to order compatible memory modules, the part number below:
 AQD-SD3L4GN16-SG
 4G SO-DDR3-1600 512x8 1.35v SAM

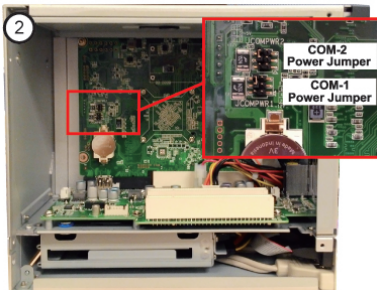
Note: If ARK-5261 use different brand of SO-DIMM memory, the system will be not boot.

COM with Power Jumper Selection

1. Unscrew and remove left side case cover.



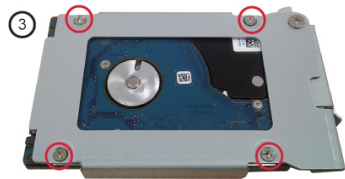
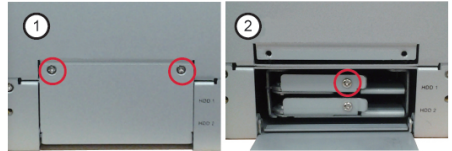
2. COM 1 & 2 Power Jumper location and you can be selection 5V or 12V power based on your device power required.



Simple Maintain Process (cont.)

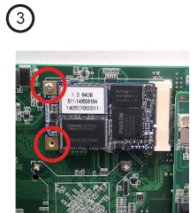
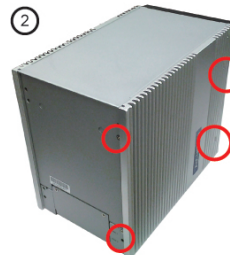
HDD Installation

1. Unscrew the HDD door screws
2. Unscrew the HDD tray's screw.
3. Assemble 2.5' SATA HDD with four screws on bottom side fo bracket.
4. Insert the bracket into the housing.
5. Secure the HDD tray with screw
6. Replace the HDD door and secure with screws.

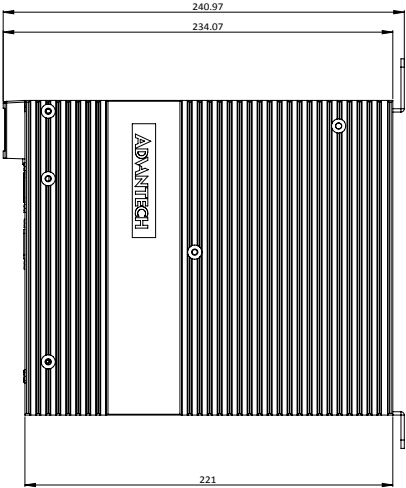
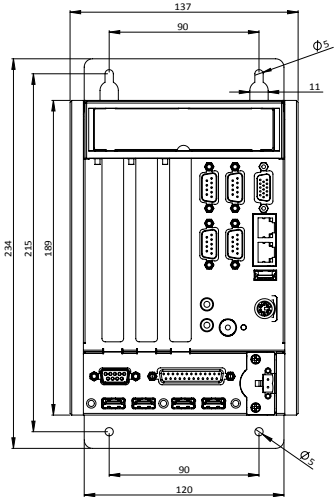


m-SATA Installation

1. Unscrew 2 screws and remove the top cover.
2. Unscrew and remove top bracket & left side case cover. Install the m-SATA and secure screw.
3. Replace the left side cover first and top bracket/cover and secure with screws.



System Dimension



Unit : mm(inch)

ARK-5261 / ARK-5261I 无风扇嵌入式工控机

搭载Intel® Celeron® 处理器J1900,

支持PCI/PCIe扩展和双移动HDD/SSD

快速入门手册

包装清单

安装板卡之前，用户需确认包装中含有下面所列各项：

- | | |
|-------------------|---------------------------------------|
| 1. ARK-5261系统 x 1 | P/N: ARK-5261S-J0A1E |
| (ARK-5261I系统 x 1) | P/N: ARK-5261I-J0A1E) |
| 2. 快速入门手册 x 1 | P/N: 2001526110 |
| 3. 驱动光盘 x 1 | P/N: 2061526100 |
| 4. 质保卡 | P/N: 2190000902 |
| 5. 壁挂式安装支架 x 2 | P/N: 1960049826N001
1960049827N001 |
| 6. DB37转DB9电缆* | P/N:* 1700021869-01 |
| 仅适用于ARK-5261I版本 | |

如果其中任何一项缺失或损坏，请立即与经销商或销售代表联系。

- 注1: 关于ARK-5261的详细信息，请参考附带的CD-ROM光盘（PDF格式）。
- 注2: 阅读PDF文件需要使用Acrobat Reader。用户可从以下路径下载Acrobat Reader: get.adobe.com/reader（Acrobat为Adobe公司的商标）。

如需了解有关产品及研华其它产品的详细信息，请访问我们的网站：

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

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

如需技术服务与支持，请访问我们的技术支持网站：

<http://support.advantech.com.cn>

本手册适用于ARK-5261系列Rev. A1。

料号：2001526110

中国印刷

第一版
2014年11月

产品规格

处理器系统

- Intel® Celeron® 处理器J1900，最高可达2.41 GHz

内存

- 支持双通道DDR3L（低功耗1.35V）-1333 Mhz，每个插槽可支持2 GB（不支持ECC功能）；最大容量可达8 GB

显示

- 芯片组集成Intel HD显卡

串行端口

- 标准类型：
 - 4 x RS-232/422/485，可通过BIOS选择
 - 支持自动流控制功能
 - COM1 & COM2支持5 V/12 V电源，可通过跳线选择
- 隔离类型：
 - 4 x RS-422/485端口（通过DB37转4 x DB9电缆）
 - ESD保护：15 Kv
 - 浪涌保护：2 Kv
 - 电隔离：2 Kv

以太网

- 接口：10/100/1000 Mbps
- 控制器：
 - LAN1: Intel I211，支持网络唤醒
 - LAN2: Intel I211，支持网络唤醒

存储

- 内置2.5" HDD托架：2
- m-SATA：1（与SATA2共用）

前部I/O

- 显示：1 x VGA
- USB：1 x USB3.0、4 x USB2.0和1 x 内置USB2.0
- 串行端口：4 x RS-232/422/485，可通过BIOS选择
- DIO：通过DB9接口支持8-bit GPIO
- 并行端口：支持D-sub 25针接口
- 键盘/鼠标：1 x PS/2接口，支持PS/2鼠标和键盘

电源要求

- 电源类型：ATX /AT
- 输入电压：9 ~ 30 V_{DC}
- 最小电源输入：9 V @ 6.6 A ~ 30 V @ 2 A
- 电源适配器：AC转DC，65W DC 19 V/3.4 A

其它

- LED指示灯：电源、HDD
- 控制：电源开关

产品规格（续）

环境规格

- 工作温度：
-10 ~ 60° C, 0.7 m/sec气流（带2 x 工业级SSD，不带PC扩展板）
0 ~ 45° C, 0.7 m/sec气流（带1 x 2.5" HDD或mSATA，不带PC扩展板）
- 储存温度：- 40 ~ 85° C (-40 ~ 185° F)
- 相对湿度：95% @ 40° C（非凝结）

物理规格

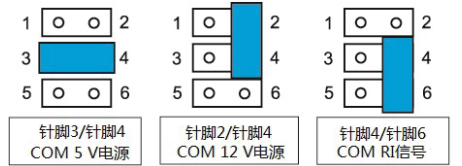
- 尺寸（W x H x D）：137 x 189 x 221 mm
- 重量：4.2 Kg

跳线和接口

主板上有很多跳线允许用户配置系统，满足各种不同应用需求。下表为每个跳线和接口的功能列表。

接口	
接口名	功能
VGA1	VGA接口
LAN 1	Intel I211
LAN 2	Intel I211
USB 1	USB 3.0
PS/2	键盘 & 鼠标接口
COM 12	RS-232/422/485（上电）
COM 34	RS-232/422/485
Isolation COM*	RS-422/485隔离COM
DIO1	GPI接口
LTP	打印机接口
USB 2345	USB 2.0接口2、3、4、5
Audio	音频插孔 x 2
DC 9 ~ 30V2	电源接口
* 仅适用于隔离版	

跳线和接口（续）



JCOMPWR1/JCOMPWR2: COM1 & 2电源选择	
功能	跳线设置
4-6	RI（默认未上电）
3-4	5 V电源
4-6	12 V电源



PSON1: 系统AT/ATX模块选择	
功能	跳线设置
1-2	AT模式
2-3	AT模式

软件安装

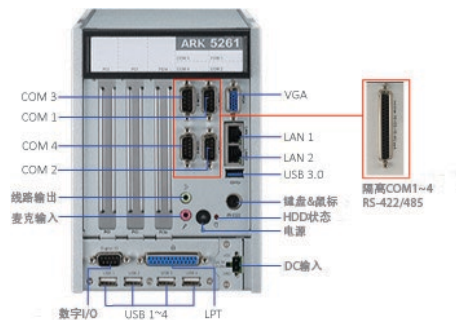
ARK-5261的驱动保存在软件安装光盘中。请双击文件夹中的驱动程序并按照屏幕指示进行安装。

注意！ 计算机配置了由电池供电的实时时钟电路，如果电池更换不正确，将有爆炸的危险。因此，只可以使用制造商推荐的同一种或者同等型号的电池进行替换。请按照制造商的指示处理旧电池。

符合性声明

本品符合FCC规则第15款限制。操作符合下列两种情况：
1. 此装置不可产生干扰，且
2. 此装置必须接受任何干扰，包括可能导致非预期操作的干扰。

系统I/O接口



简单安装步骤

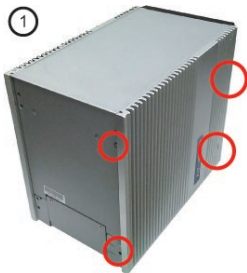
内存安装

警告： ARK-5261系统已内置板载4 GB内存。如需扩展为8 GB内存，请联系研华销售代表或销售代理订购适用的内存模块。产品料号如下：
AQD-SD3L4GN16-SG
4G SO-DDR3-1600 512x8 1.35v SAM

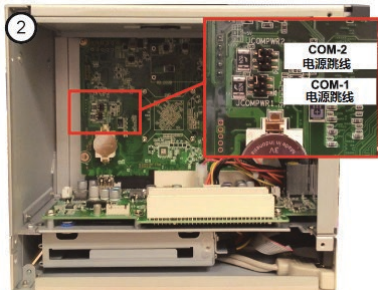
注： 若ARK-5261采用了不同品牌的SO-DIMM内存，则系统将无法启动。

支持电源跳线选择的COM

1. 卸下并移除左侧盖上的螺丝。



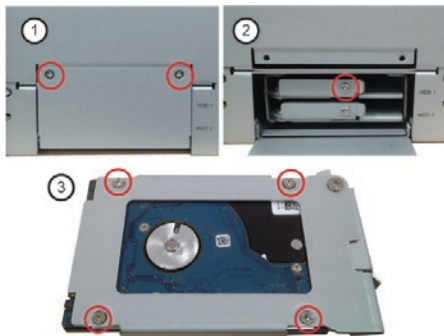
2. 在COM 1 & 2的电源跳线位置，根据设备电源需求选择5 V或12 V。



简单安装步骤（续）

HDD安装

1. 卸下HDD挡板上的螺丝。
2. 卸下HDD托架上的螺丝。
3. 用四颗螺丝将2.5" SATA HDD固定在支架的底部。
4. 将支架插入到机箱中。
5. 用螺丝将HDD托架固定。
6. 放回HDD挡板并用螺丝固定。

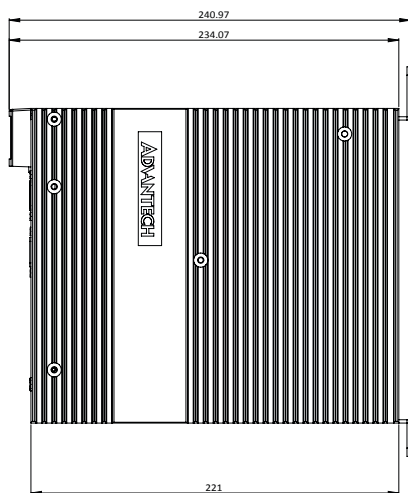
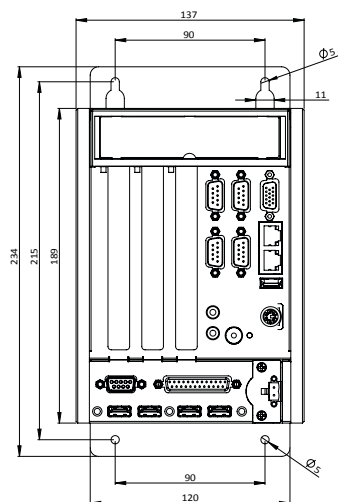


m-SATA安装

1. 卸下两颗螺丝并移除顶盖。
2. 卸下螺丝并移除顶部支架和左侧机箱盖。安装m-SATA并用螺丝固定。
3. 放回左侧机箱盖和顶部支架/顶盖，并用螺丝固定。



系统尺寸



Unit : mm(inch)