

# ARK-4180

Modular and Stackable system, Celeron M 600 MHz/1.0 GHz processor, -40 ~ +75° C, Fanless, Compact Embedded Computer

NEW



## Features

- Celeron® 1.0 GHz/600MHz CPU
- Two serial ports and six USB 2.0 ports
- VGA, LAN, Audio, LPT and KB/MS ports
- Embedded 1 GB Industrial CF and 512 MB industrial DDR SDRAM
- Embedded XPe solution (WinCE optional)
- Ultra small size, robust construction with fanless operation
- Modularized and stackable design
- Support 1 x PCI-104 expansion slot
- Customization service

## Introduction

Advantech's PCI-104 Compact Embedded Computer, ARK-4180, features industrial grade components that have passed extra strict testing and quality assurance for higher reliability and longer operating life. Many industrial applications demand high shock/vibration resistance and an extended range of temperature endurance for computers that must operate in inhospitable and remote environments. The ARK-4000 Compact Embedded Computer combines all these crucial capacities in space efficient, modular aluminum enclosures. Advantech's enclosures are the most versatile and rugged solutions on the market today.

ARK-4180 is an all-in-one industrial computer with Intel Celeron M processor, supporting up to six USB 2.0 ports, two RS-232 connectors, line-in, line-out, LAN and VGA functions. The ARK stackable series is ultra compact and suitable for a great variety of critical applications. It offers superior resistance against harsh environments that generate dust and moisture.

## Specifications

### Processor Core Logic System

- **CPU** Embedded Intel Celeron M 600MHz/Celeron M 1.0 GHz
- **System Chipset** 855GME+ICH4 (with Celeron M 1.0 GHz)  
852GM+ICH4 (with Celeron M 600 MHz)
- **BIOS** Award 512KB Flash BIOS
- **System Memory** 1 x 200-pin SODIMM Socket supports DDR SDRAM

### Display

- Intel 855GME
- Supports CRT Display with external VGA connector

### Audio

- ICH4 chip, AC'97 2.0 compliant. Supports Line-in, Line-out

### Ethernet

- **Ethernet Controller** Intel 82551ER 10/100Base-T Ethernet Controller

### Serial ports

- **USB Interface** Integrated USB 2.0 controller on ICH4 chipset, supports 6 x USB 2.0 ports
- **COM Interface** 2 x RS-232 ports

### Other

- **WatchDog Timer** 255 level timer interval, setup by software
- **Keyboard/Mouse** PS/2 mouse and PS/2 keyboard

### Software Support

- Embedded Windows XP embedded; supports Windows CE 6.0 and Windows 2000/XP

### Environmental Specification

- **Operation Temperature** -40° C ~ 75° C
- **Vibration During Operation** 5 Grms, 60068-2-64, random, 5 ~ 500 Hz, 1 Oct./min, 1 hr/axis.
- **Shock During Operation** 50 G, IEC 60068-2-27, half sine, 11ms duration
- **Certification** CE, FCC, UL

### Mechanical

- **Construction** Aluminum housing
- **Mounting** Wall-mounting
- **Dimension** 164 mm x 170 mm x 49.2 mm
- **Weight** 2 kg

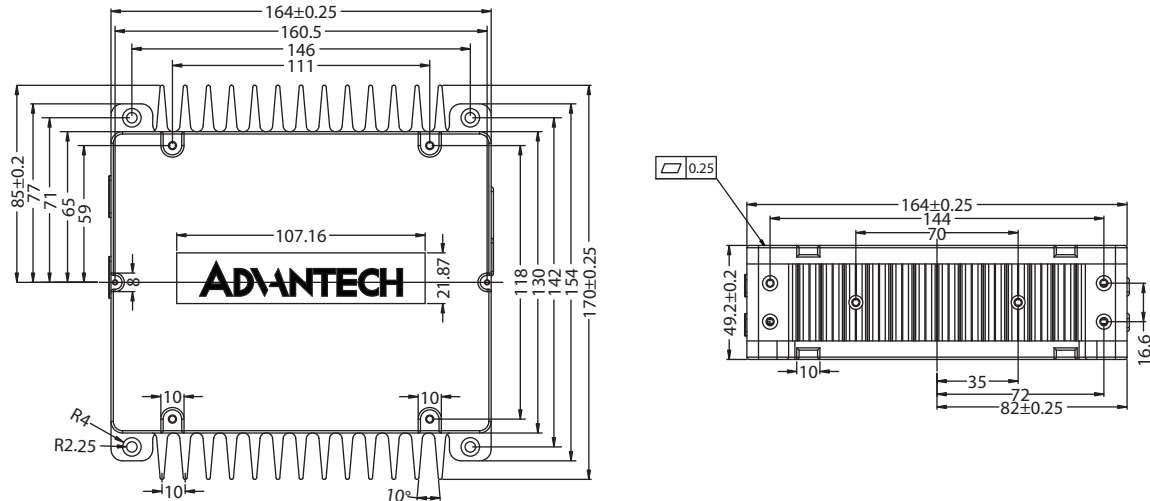
### Power

- **Power Supply Voltage** AT, +5 V ± 5%, +12 V ± 5% (Optional) (5 V only, 12 V optional for PC104 add on card and LCD inverter)
- **Power Consumption** Typical: +5 V @ 1.63 A (w/Celeron-M 1.0 GHz)  
Max.: +5 V @ 2.18 A (w/Celeron-M 1.0 GHz)

### Front Panel External I/O

## Dimensions

Unit: mm

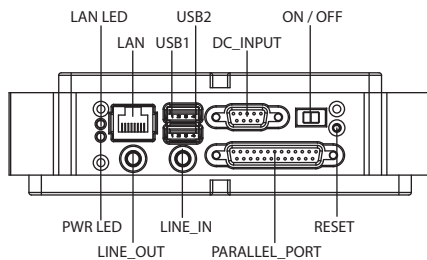


- 1 x RJ-45 Ethernet port
- 2 x USB 2.0 connector
- 1 x DC input connector
- 1 x Parallel port
- 1 x Power On/Off switch
- 1 x Reset Button
- 1 x Power LED light and Lan LED
- 1 x line-in connector
- 1 x line-out connector

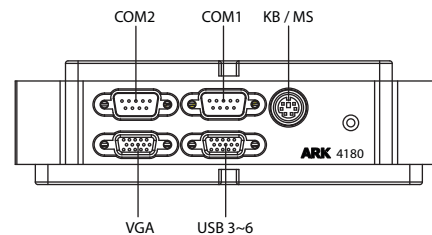
### Rear Panel External I/O

- 2 x Serial Port: Support RS-232 Interface
- 1 x VGA/CRT Connector
- 1 x D-SUB 15-pin connector as 4 x USB 2.0
- 1 x PS/2 Connector for PS/2 Keyboard and Mouse

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



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



## Packing List

- 1 x ARK-4180 Unit
- 1 x Startup Guide
- 1 x USB for 4 ports cable
- 1 x AT power cable
- 1 x PS2 keyboard/Mouse Cable
- 1 x Utility CD

## Optional Accessories

- 1757001117 AC to DC 110W adaptor 100~240V (need to order 1700007091 together)
- 1702002600 Power cord (USA)
- 1702002605 Power cord (Europe)
- 1702031801 Power cord (UK)
- 1700000596 Power cord (China)

## Ordering Information

Part No.	CPU	CRT	10/100	USB2.0	RS-232	LPT	KB/MS	Audio	CF	Memory	Operation Temp.	Embedded OS
ARK-4180Y-AS0A1E	Intel Celeron M 1.0 GHz	Yes	1	6	2	Yes	Yes	Yes	Industrial grade 1 GB	Industrial grade 512 MB	-40 ~ 75° C	XP Embedded
ARK-4180Y-AM0A1E	Intel Celeron M 600 MHz	Yes	1	6	2	Yes	Yes	Yes	Industrial grade 1 GB	Industrial grade 512 MB	-40 ~ 75° C	XP Embedded
ARK-4180Y-1S0A1E	Intel Celeron M 1.0 GHz	Yes	1	6	2	yes	yes	yes	--	--	-40 ~ 75° C	--
ARK-4180Y-1M0A1E	Intel Celeron M 600MHz	Yes	1	6	2	yes	yes	yes	--	--	-40 ~ 75° C	--