

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
- Dust and fungus resistant (optional)
- Customization service

Introduction

Advantech's ARK stackable System PCI-104 compact embedded computer feature 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 Stackable System 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
- Supports 2-channel 36-bit LVDS LCD display (internal pinhead)

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 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 5.0 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

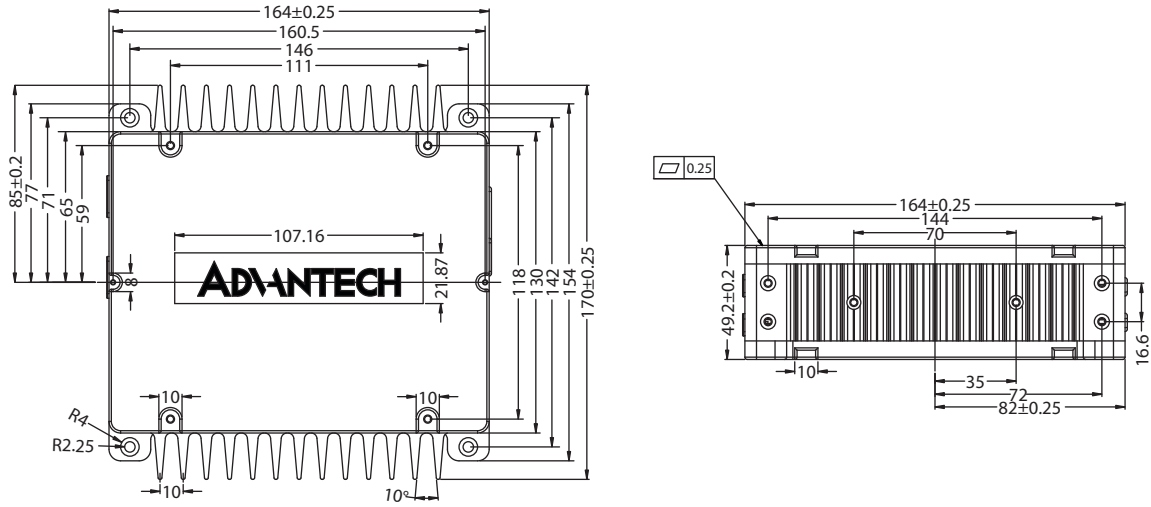
- **Construction** Aluminum housing
- **Mounting** Wall-mounting
- **Dimension** 164 mm x 170 mm x 49.2 mm
- **Weight** 2 kg

Power

- **Power Supply Voltage** AT, +5 V \pm 5%, +12 V \pm 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)

Dimensions

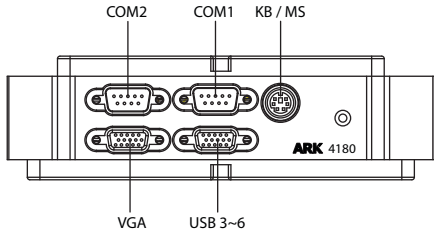
Unit: mm



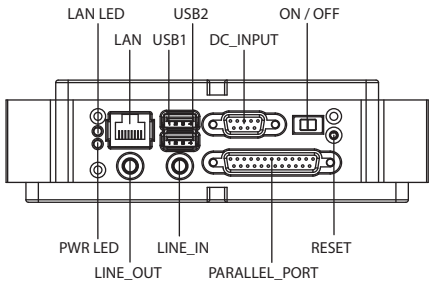
Front Panel External I/O

- 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
- 1 x line-in connector
- 1 x line-out connector

Rear Panel External I/O Mechanical Layout/Drawing



Front Panel External I/O Mechanical Layout/Drawing



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

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	--