# ARK-3383

## Seven USB 2.0, Four Serial and Dual LAN AC97 Audio, Fanless Embedded Box Computer

**NEW**

## Features

- Seven built-in USB 2.0 ports and four serial ports, enable comprehensive communication and connectivity capacity

- Built-in Ultra Low Voltage or Low Voltage Intel® Celeron®/Intel Pentium® M processor

- Sealed construction with fanless operation, low power consumption

- Accepts a wide range of DC power inputs from 12 ~ 24 V DC to ATX

- Anti-vibration to ensure maximum reliability

- Easy integration, easy maintenance, few parts

## Introduction

The ARK-3383 fanless Embedded Box Computer combines seven USB 2.0 ports, four serial ports and dual Fast Ethernet as well as other industrial features into a rugged, compact aluminum chassis for intensive control and communication based applications. The fanless operation provides noise protection so the platform can be deployed in external environments. The ARK-3383 Embedded Box Computer is perfectly suited for a diverse range of embedded applications. All electronics are conveniently protected in a compact sealed housing, ideal for applications in which space and environmental demands are critical.

## Specifications

### Processor Core Logic System

- **CPU** — Intel Ultra Low Voltage or Low Voltage Pentium M or Celeron M Processors:
  ULV Celeron M 1.0 GHz (ARK-3383-2S0A2E)
  LV Pentium M 1.4 GHz (ARK-3383-2S4A2E)
- **System Chipset** — Intel 852GM GMCH or Intel 855GME chipset
  Intel ICH4 chipset, 400 MHz FSB
- **BIOS** — 4 Mbit Flash BIOS, supports Plug & Play, APM 1.2
- **System Memory** — 1 x 200-pin SO-DIMM socket
  Supports DDR SDRAM up to 1 GB

### Display

- **Chipset** — Integrated graphics built in to Intel 852GM or 855GME GMCH, utilizing Intel Extreme Graphics2 technology
- **Display Memory** — Dynamic video memory allocation up to 64 MB
- **Display Interface** — CRT Interface
  36-bit LVDS interface

### Ethernet

- **Ethernet Controller** — 2 x Intel 82551QM 10/100Base-T Ethernet controllers, support LAN1 and LAN2

### USB

- **USB Controller** — Integrated USB 2.0 controller on built-in Intel ICH4 chipset supports USB1 ~ USB3
  1 x NEC uD720101 PCI USB 2.0 controller supports USB4 ~ USB7

### Audio

- **Audio Interface** — Audio Controller on the ICH4 chip.
  AC97 stereo sound, Dual 2.2W Amplifier

### Serial Port

- **Serial Interface** — Built-in Winbond® 83627HF Super I/O controller
  Supports COM1 ~ COM2
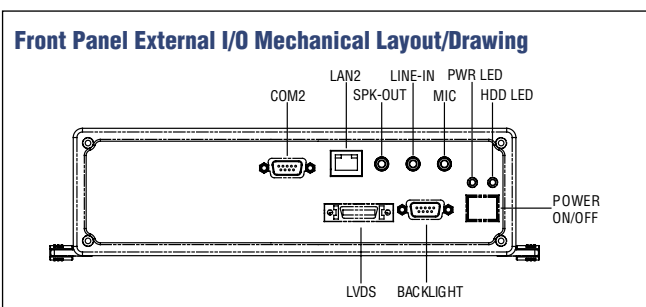  Built-in SMSC SCH3114 LPC Serial Ports Controller
  Supports COM3 ~ COM4

### Other

- **Watchdog Timer** — 255 level timer interval, setup by software
- **Keyboard/Mouse** — Support PS/2 Mouse and PS/2 Keyboard

### Storage

- Supports Single Drive Bay Space For 2.5" HDD
- Supports CompactFlash Socket For Type I/II CompactFlash Disk

### Front Panel External I/O

- **1 x LVDS Port by D-Sub Connector**
- **1 x Backlight On/Off Control Connector**
- **1 x ATX Power On/Off Button**
- **1 x Serial Port Supports RS-232/422/485 Interface as COM2**
  Note: The default setting of COM2 is RS-232. The RS-422/485 mode of COM2 can be supported by replacing the internal cable and adjusting the jumper inside.
- **1 x RJ45 Port, Support 10/100Base-T Ethernet Connection, as LAN2**
- **1 x Speaker-out port**
- **1 x Line-in port**

### Front Panel External I/O Mechanical Layout/Drawing
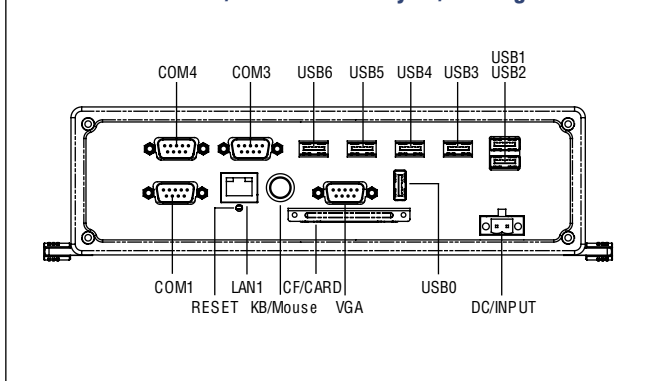
- 1 x Mic-in port

## Rear Panel External I/O

- 1 x fully functional RS-232 Serial Port as COM1
- 2 x Serial Ports support RS-232/422/485 interfaces: COM3 and COM4

Note: The default setting of COM3 and COM4 are RS-232. The RS-422/485 mode of COM3 and COM4 can be supported via a BIOS setting

- 1 x RJ45 Port: Supports 10/100Base-T Ethernet Connection, as LAN1
- 7 x USB 2.0 Connectors, as USB0 ~ USB6
- 1 x PS/2 Connector
- 1 x Reset Button
- 1 x VGA/CRT Connector

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



- 1 x 2-pin, Phoenix Power Input Connector

## Mechanical

- **Construction**      Aluminum housing
- **Mounting**          Din-Rail mounting Desk/wall-mounting
- **Dimensions (W x H x D)**    264.5 x 69.2 x 137.25 mm (10.41" x 2.72" x 5.4")
- **Weight**            2 kg

## Power Supply

- **Output Rating**     46 W
- **Fuse Rating**       7 A @ 125 V
- **Input Voltage**     12 $V_{DC}$ ~ DC 24 $V_{DC}$, Typical 12 $V_{DC}$ @ 4.5 A, 16 $V_{DC}$ @ 3.4 A, 19 $V_{DC}$ @ 2.9 A, 24 $V_{DC}$ @ 2.3 A

## Environment Specifications

- **Operating Temperature** When system is equipped with Industrial Grade Compact Flash Disk only: -20° C ~ 60° C When system is equipped with HDD: 0° C ~ 45° C
- **Relative Humidity**   95% @ 40° C  (non-condensing)
- **Vibration Loading**   When system is equipped with CompactFlash Disk
- **Duration Operation**  only: 5 Grms, IEC 60068-2-64, random, 5 ~ 500 Hz, 1 Oct./min, 1 hr/axis When system is equipped with 2.5-inch hard disk: 1 Grms, IEC 60068-2-64, random, 5 ~ 500 Hz, 1 Oct./min, 1 hr/axis
- **Shock During Operation** When system is equipped with CompactFlash Disk only: 50 G, IEC 60068-2-27, half-sine, 11 ms duration When system is equipped with hard disk: 20 G, IEC 60068-2-27, half-sine, 11 ms duration

- **EMC Approved**      CE, FCC
- **Safety Approved**   UL

## Packing List

- 1 x ARK-3383 Unit
- 1 x DIN-Rail Mounting Kit
- 1 x PS2 Keyboard/Mouse Cable          (P/N: 1700060202)
- 1 x Utility CD
- 1 x Flat cable for RS-485/422 mode of COM2    (P/N: 1700001967)
- 1 x 2-pin Phoenix to DC-Jack power cable      (P/N: 1700001394)

## Ordering Information

- **ARK-3383-2S0A2E**   ULV Celeron M 1.0 GHz Embedded Box Computer, with 1 x VGA, 1 x LVDS, 2 x LAN, 4 x COM, 7 x USB 2.0, and Audio
- **ARK-3383-2S4A2E**   LV Pentium M 1.4 GHz Embedded Box Computer, with 1 x VGA, 1 x LVDS, 2 x LAN, 4 x COM, 7 x USB 2.0, and Audio
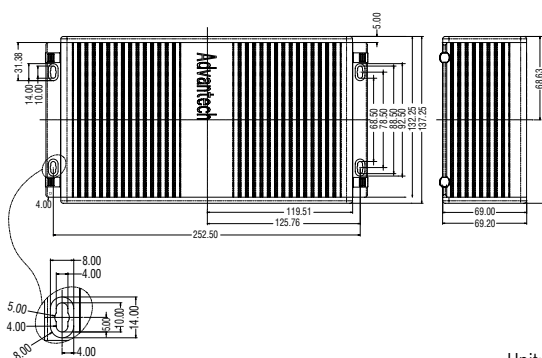
## Optional Items

### External AC-to-DC Adapter and Power Cable

- **1757000222**    AC-to-DC Adapter DC19 V/3.42 A 65 W, with Phoenix Power Plug, 0 ~ 40° C for Home and Office Use
- **1700001947**    Power cable 2-pin 180 cm, USA for ARK-338X
- **1700001948**    Power cable 2-pin 180 cm, Europe for ARK-338X
- **1700001949**    Power cable 2-pin 180 cm, UK for ARK-338X
- **1757000254**    AC-to-DC 60 W Adapter, DC19 V/3.15 A with Phoenix Power Plug, with PSE Mark for Japanese Market

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

- **2070001112**    XPE with Feature Pack 2007 OS Image and License for ARK-3380/1/2/3/4/9 English Version (600MB)
- **2070001113**    XPE with Feature Pack 2007 OS Image and License for ARK-3380/1/2/3/4/9 Traditional Chinese Version (600MB)
- **2070001114**    XPE with Feature Pack 2007 OS Image and License for ARK-3380/1/2/3/4/9 German Version (600MB)
- **2070001115**    XPE with Feature Pack 2007 OS Image and License for ARK-3380/1/2/3/4/9 French Version (600MB)

### Dimensions



Unit: mm

# Benefits

## Seven USB Ports and Four Serial Ports with Dual Fast Ethernet

ARK-3383 enables you to access USB peripherals such as storage subsystems, security ID devices, card readers, bar code scanners, multifunction printers and scanners individually dedicated or shared among users and configured via the network to maximize your USB device investment.

In additional to seven USB 2.0 ports, ARK-3383 is also equipped with dual Fast Ethernet and four serial ports that make ARK-3383 an ideal solution to communicate with many field level devices and perform control operations for automation applications, such as embedded storage servers, image printers, medical devices and security & access control of POI/POS/Kiosks.

## Highly Scalable Performance with low power consumption

Scalable Low Voltage and Ultra Low Voltage Pentium® M class processor system delivers high computing performance with low power consumption

## Highly Robust Casting Construction

- Fanless operation in a sealed aluminum construction
- A special cushioned design that absorbs vibration ensures maximum reliability under harsh conditions

## Highly Compact Size

With its maximum mounting height of 69 mm, the ARK-3380 can be used under space critical installation conditions

## Optimized Integration

- Few parts, easy integration and easy maintenance for reduced investment
- Systems are supplied ready to run
- Long life cycle support for product continuity

## Wide DC Input Voltage Range and ATX Support

The ARK-3383 accepts a wide input voltage range of 12 ~ 24 V DC as well as ATX for flexibility and excellent power management in embedded environments.

# Applications

ARK-3383 is an ideal solution to communicate with many field level devices and perform control operations for automation applications.

- Embedded Device Servers for Storage
- Image Printing
- Medical Applications
- Security
- POI/POS/KIOSK

# Application Example



ARK-3383 USB Device Server & Communication