

ARK-3384

Wireless Enabled, AC97 Audio and Three USB Fanless Embedded Box Computer

NEW



Features

- Fanless operation, built-in low power consumption Intel® Pentium® M or Celeron® M processor
- Built-in IEEE 802.11b/g wireless LAN with antenna
- Built-in three USB 2.0 ports
- Dual independent display supports LVDS and CRT
- AC97 stereo audio with dual output 6W amplifier
- Accepts wide range of ATX supported DC power inputs from 12 V ~ 24 V
- Anti-vibration to ensure maximum reliability

Introduction

The ARK-3384 is a wireless fanless embedded box computer that combines wireless LAN, one 10/100Base-T Fast Ethernet, three USB 2.0 ports, two serial ports, digital LVDS & analog VGA/CRT display interfaces. The ARK-3384 is supplied with AC'97 dual output 6W stereo audio in a rugged, compact chassis for multimedia intensive and data communication based applications. The fanless operation provides noise protection to the platform when deployed in external environments. The ARK-3384 Embedded Box computer is ideally suited for embedded PC 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/Celeron M Processors:
ULV Celeron M 1.0 GHz (ARK-3384-1S0A2E)
LV Pentium M 1.4 GHz (ARK-3384-1S4A2E)
- **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 1GB

Display

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

Audio

- **Audio Interface** Audio controller built-in ICH4 chipset
AC97 3D stereo surround sound
Dual output 6 W Amplifier

Ethernet

- **Ethernet Controller** Intel 82551QM 10/100BaseT Ethernet controller

Wireless

- **802.11b/g Wireless LAN** Built-in integrated MAC/baseband processor, supports IEEE 802.11b and 802.11g standard protocol and operates in the 2.4 GHz frequency bands
Supports data speeds up to 54 Mbps
Built-in system antenna support

Serial

- **USB Interface** Integrated USB 2.0 controller on ICH4 chipset
Supports 3 x USB 2.0 ports
- **COM Interface** Supports 1 x RS-232 port, and 1 x RS-232/422/485 port

Other

- **Watch Dog Timer** 255 levels timer interval, setup by software
- **Keyboard/Mouse** Supports PS/2 mouse and PS/2 keyboard

Storage

- Supports drive bay space for 2.5" HDD
- Supports CompactFlash socket for Type I/II CompactFlash disk

Software Options

- Windows XP embedded, Windows 2000/XP

Mechanical

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

Power Supply

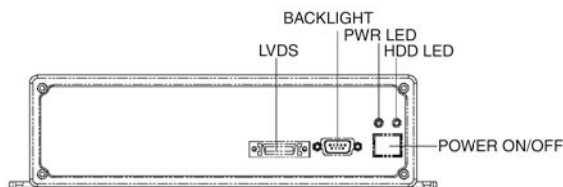
- **Output Rating** 46 W
- **Fuse Rating** 7 A @ 125 V
- **Input Voltage** DC: 12V ~ DC 24V,
Typical: 12 V_{DC} @ 4.5 A, 16 V_{DC} @ 3.4 A,
19 V_{DC} @ 2.9 A, 24 V_{DC} @ 2.3 A

Environmental

- **Operation Temperature** When system is equipped with industrial grade CompactFlash: -20° C ~ 60° C
When system is equipped with HDD: 0° C ~ 45° C
- **Vibration Loading Duration Operation** When system is equipped with industrial grade Compact Flash disk: 5 Grms, 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: 50 G, IEC 60068-2-27, half sine, 11ms duration
When system is equipped with hard disk: 20 G, IEC 60068-2-27, half sine, 11 ms duration

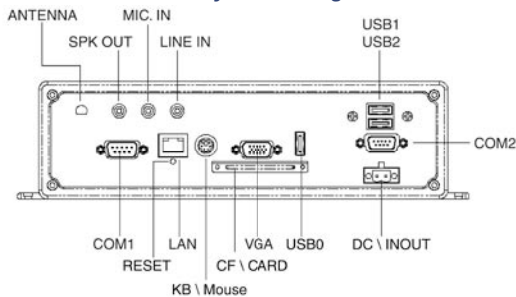
External I/O Connectors

Front Panel External I/O Mechanical Layout/Drawing



- 1 x LVDS Port by D-Sub Connector
- 1 x Backlight On/Off Control Connector
- 1 x ATX Power On/Off Button

Rear Panel External I/O Layout/Drawing



- 1 x Antenna for IEEE 802.11b/g Wireless LAN
- 1 x Line-out Port
- 1 x Mic-in Port
- 1 x Line-in Port
- 1 x Series Port: Supports RS-232 Interface as COM1
- 1 x RJ45 Port: Support 10/100Base-T Ethernet Connection
- 1 x Reset Button
- 1 x PS/2 KB/Mouse Connector
- 1 x VGA/CRT Connector
- 1 x Disk Drive Bay for Accessing CompactFlash Disk
- 3 x USB 2.0 Connectors as USB0, USB1 and USB2
- 1 x Phoenix Power Input Connector
- 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.

Packing List

- 1 x ARK-3384 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-P Phoenix to DC-Jack Power Cable (P/N: 1700001394)
- 1 x 2.4 GHz External Antenna (P/N: 1750000318)

Ordering Information

- **ARK-3384-1S0A2E** ULV Celeron M 1.0 GHz Embedded Box Computer, with 1 x LVDS, 3 x USB 2.0, 2 x COM, AC97, 1 x Fast Ethernet, 1 x 802.11b/g Wireless LAN
- **ARK-3384-1S4A2E** LV Pentium M 1.4 GHz Embedded Box Computer, with LVDS, 3 x USB 2.0, 2 x COM, AC97, 1 x Fast Ethernet, 1 x 802.11b/g Wireless LAN

Optional Items

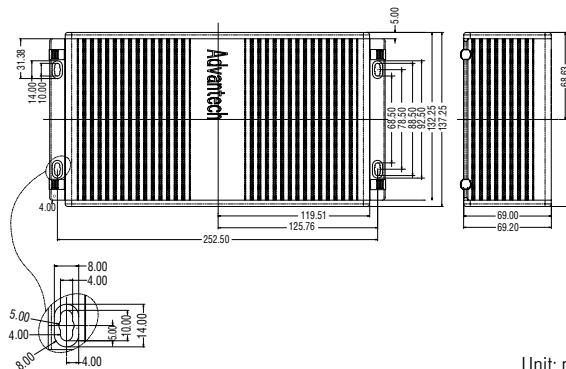
External AC-to-DC Adapter and Power Cable

- **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 60W 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)
- **2070001116** XPE with Feature Pack 2007 OS Image and License for ARK-3380/1/2/3/4/9 Italian Version (600MB)

Dimensions



Unit: mm

Benefits

Wireless Enabled, IEEE 802.11 b/g Compliant

The built-in IEEE 802.11b/g compliant wireless LAN interface, and IEEE 802.3u compliant 10/100Base-T Fast Ethernet interface, plus the low power consumption Pentium® M/ Celeron® M processor make the ARK-3384 an ideal communication gateway that allows users to perform remote and local processing for many diversified embedded applications such as:

- Machine to Machine (M2M) communications between remote measurement systems, control facilities, service & supervising control systems
- Sensor data transmission to a central unit

Dual Display, Dual Output 6W Stereo AC97 Audio

Analog VGA and digital LVDS interfaces that support dual independent displays and AC97 audio with stereo 6 W outputs suit diverse embedded multimedia applications such as:

- Building Automation
 - Wireless Embedded Server
 - Elevator Infotainment Platform
- Wireless Kiosk/POS/POI/Gaming system platform

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
- Fanless operation with low power consumption in aluminum sealed construction
- Accepts a wide input voltage range from 12 ~ 24 V DC
- Accepts a wide range of ATX-supported DC power inputs for maximum flexibility

Highly Compact, Robust Casting Construction with Optimized Integration

- A special cushioned design that absorbs vibration to ensure maximum reliability under harsh conditions
- With its maximum mounting height of 69 mm, the ARK-3384 can be used under space critical installation condition
- Few parts, easy integration and easy maintenance for reduced investment
- Systems are supplied "Ready-to-Run"
- Long life cycle support for product continuity

Applications

ARK-3384 also comes with AC97 dual output 6 W stereo audio as well as other industrial features all in a rugged, compact metal chassis for the following multimedia intensive and data communication based applications:

- Wireless POI/Ticketing/Billing System
- M2M

Application Example

