

ARK-3389

Intel® Pentium® M Fanless Embedded Box Computer



Introduction

The ARK-3389 fanless Embedded Box Computer is the ideal application-ready system platform. All electronics are protected and sealed inside a robust, compact housing ideal for either embedding or installation as a stand-alone unit. The ARK-3389 is intended to save space while meeting the demand of harsh environmental conditions.

Highly Robust Casting Construction

- Fanless operation in aluminum sealed construction
- A special cushioned design that absorbs vibration to ensure 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

Highly Scalable Performance with Low Power Consumption

Pentium M class processors bring high computing performance with low power consumption

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 Range of Power Sources

Wide input voltage range of 12 ~ 24 V DC offers flexibility in automation environments

ARK-CTOS Service

The ARK-3389 can be configured with the Advantech ARK-MIO application kit and Advantech certificated peripherals, in cooperation with the Advantech ARK-CTOS Service to suit diverse application fields.

ARK-DTOS Service

Distinctive customized system design and hardware expansions can be implemented project by project using Advantech ARK-DTOS service.

Features

- Built-in Ultra Low Voltage Intel® Celeron® or Low Voltage Intel Pentium® M processor
- Sealed construction with fanless operation
- Anti-Vibration to ensure maximum reliability
- Easy integration, easy maintenance, few parts, and wide input voltage range

Specifications

Processor Core Logic System

- **CPU** Intel uFCBGA 479-pin Ultra Low Voltage Celeron or Intel Pentium M Low Voltage Processor
ULV Celeron M 1.0 GHz (ARK-3389-1S0A2E)
LV Pentium M 1.4 GHz (ARK-3389-1S4A2E)
- **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 SODIMM socket,
Supports DDR SDRAM up to 1 GB

Display

- **Chipset** Integrated graphics built in to Intel 852GM GMCH, or Intel 855GME GMCH, utilizing Intel Extreme Graphics 2 technology
- **Display Memory** Dynamic Video Memory Allocation up to 64 MB
- **Display Interface** CRT Interface
36-bit LVDS interface

Ethernet

- **Ethernet Controller** Intel 82551QM 10/100Base-T Ethernet controller

Serial

- **Serial Interface** 1 x RS-232 port and 1 x RS-232/422/485 port
- **USB Interface** 1 x USB port, USB 2.0 Compliant

Other

- **Watchdog timer** 255 levels timer interval, setup by software
- **Keyboard/Mouse** Supports PS/2 Mouse and PS/2 Keyboard

Software Options

- Windows® XP Embedded, Windows 2000/XP

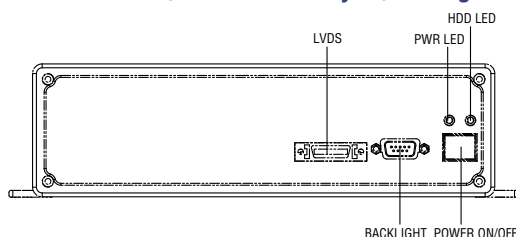
Storage

- Supports 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 D-Sub Connector
- 1 x Backlight On/Off Control Connector
- 1 x ATX Power On/Off Button

Front Panel External I/O Mechanical Layout/Drawing



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} ~ 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

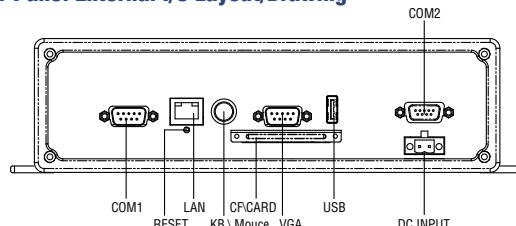
Environment Specifications

- Operating Temperature** When system is equipped with Industrial Grade CompactFlash disk: -20 ~ 60° C
When system is equipped with 2.5-inch hard disk 0 to 45° C
- Relative Humidity** 95% @ 40° C (non-condensing)
- Vibration Loading During Operation** When system is equipped with CompactFlash disk: 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

Rear Panel External I/O

- 1 x Serial Port: Supports RS-232 Interface as COM1
- 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 the system)
- 1 x RJ45 Port: Support Ethernet Connection
- 1 x PS/2 Connector: Supports PS/2 Keyboard and PS/2 Mouse
- 1 x Reset Button
- 1 x VGA/CRT Connector
- 1 x USB 2.0 Connector
- 1 x Phoenix Type of Power Input Connector

Rear Panel External I/O Layout/Drawing



Packing List

- 1 x ARK-3389 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-3389-1S0A2E** ULV Celeron M 1.0 GHz Embedded Box Computer, with VGA/LVDS, Fast Ethernet, 1 x RS-232, 1 x RS-232/422/485
- ARK-3389-1S4A2E** LV Pentium M 1.4 GHz, Embedded Box Computer, with VGA/LVDS, Fast Ethernet, 1 x RS-232, 1 x RS-232/422/485

Optional Items

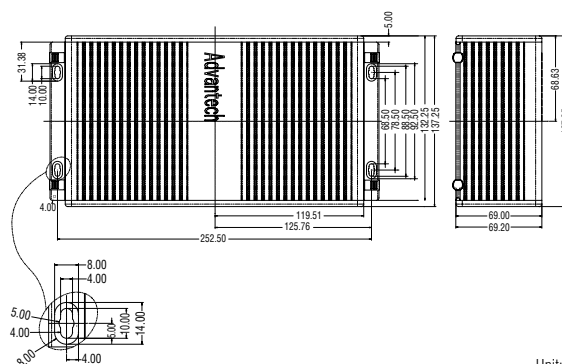
External AC-to-DC Adapter and Power Cable

- 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, DC19V/3.15A with Phoenix Power Plug, with PSE Mark for Japanese Market

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

- 2070000636** XPE SP2 OS Image and License for ARK-3380/1/2/9, English Version (600 MB)
- 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