ARK-3389

Intel® Pentium® M
Fanless Embedded Box Computer

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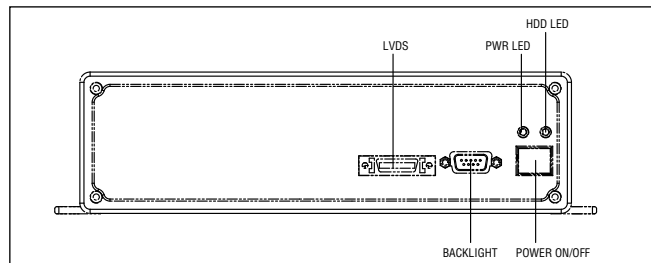
10 Vehicle Mounted Computing Platforms

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Features

- Built-in Intel 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 range of power source

Microsoft® Windows® Embedded CE FCC LISTED cULus E190081

Introduction

The ARK-3389 fanless Embedded Box Computer is the ideal application ready system platform solution. All electronics are protected in a robust, compact sealed housing for embedding into a housing, or as a stand-alone application, where space is critical and the environment is harsh.

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, easy maintenance to reduce investment
- Systems are supplied "Ready-to-Run"
- Long life cycle support for product continuity

Wide Range of Power Sources

- Wide range of DC 12 V ~ 24 V power source offers flexibility of power input for various automation environments.

ARK-BTOS Service

The ARK-3389 can be configured with the Advantech ARK-MIO Application Kit and Advantech certificated peripherals, in cooperation with the Advantech ARK-BTOS 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.

Specifications

Processor Core Logic System

- **CPU** Intel uFCBGA 479-pin of Ultra Low Voltage Celeron or Intel Pentium M Low Voltage Processor
  ULV Celeron M 600 MHz (ARK-3389-1M0A1)
  LV Pentium M 1.1 GHz (ARK-3389-1S1A1)
  LV Pentium M 1.4 GHz (ARK-3389-1S4A1)
- **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 sockets,
  1 x DDR 200-pin SO-DIMM, Max. 1 G

Display

- **Chipset** Integrated graphics built-in Intel 852GM GMCH, or Intel 855GME GMCH, utilizing Intel Extreme Graphics 2 technology
- **Display Memory** Dynamic Video Memory Allocation up to 32 MB
- **Display Interface** CRT Interface
  36-bit LVDS interface

Ethernet

- **Ethernet Controller** Intel 82551ER 10/100BaseT Ethernet Controller

Other

- **Watchdog timer** 255 levels timer interval, setup by software
- **Keyboard/Mouse** Supports PS/2 Mouse and PS/2 Keyboard
- **USB** USB 2.0 compliant

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 by D-Sub Connector
- 1 x Backlight On/Off Control Connector
- 1 x 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 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**   12 VDC ~ 24 VDC, Typical 12 VDC @ 4.5 A,
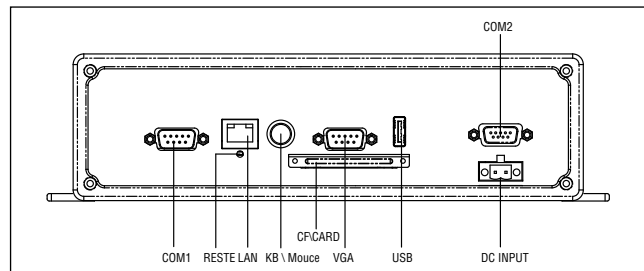   16 VDC @ 3.4 A, 19 VDC @ 2.9 A, 24 VDC @ 2.3 A

Environment Specifications

- **OperatingTemperature** When system is equipped with Industrial Grade
    CompactFlash Disk only -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
    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

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 support via replacing the internal cable and adjust the jumper inside of system)
- 1 x RJ45 Port: Support Ethernet Connection
- 1 x PS/2 Connector: Support 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 support RS-485/RS-422 mode for COM2 serial port
    (P/N: 1700001967)
- 1 x 2-P Phoenix to DC-Jack power cable   (P/N: 1700001394**)**

Ordering Information

- **ARK-3389-1M0A1**   ULV Celeron M 600 MHz Embedded Box Computer, with VGA/LVDS, Fast Ethernet, 1 x RS-232, 1 x RS-232/422/485
- **ARK-3389-1S1A1**   LV Pentium M 1.1 GHz Embedded Box Computer, with VGA/LVDS, Fast Ethernet, 1 x RS-232, 1 x RS-232/422/485
- **ARK-3389-1S4A1**   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

- **1757000222**   AC-to-DC Adapter, DC19 V/3.42 A 65 W, with Phoenix Power Plug, 0° C ~ 45° C for Home and Office Use
- **1700001947**   Power cable 2P 180 cm, USA for ARK-338X
- **1700001948**   Power cable 2P 180 cm, Europe for ARK-338X
- **1700001949**   Power cable 2P 180 cm, UK for ARK-338X
- **2070000521**   XPE SP1 OS Image and License for ARK-3380/1/2/9, English Version (440 MB)
- **2070000636**   XPE SP2 OS Image and License for ARK-3380/1/2/9, English Version (600 MB)
- **2070000574**   XPE SP1 OS Image and License for ARK-3380/1/2/9, Traditional Chinese Version(477 MB)
- **2070000637**   XPE SP2 OS Image and License for ARK-3380/1/2/9, Japanese Version (600 MB)

Dimensions

Unit: mm