ARK-3381

Seven Serial Port Fanless Embedded Box Computer



Features

- Seven serial port interfaces, 5 x RS-232/422/485 and 2 x RS-232
- Dual independent display capability
- Onboard Intel® Ultra Low Voltage 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, with wide range of power source







Introduction

The ARK-3381 fanless Embedded Box Computer combines seven serial port interfaces and other industrial features into a rugged, compact metal chassis for intensive communication based applications. The fanless operation provides noise protection for the platform to be deployed in external environments. The ARK-3381 Embedded Box Computer is ideally suited for embedded PC applications. All electronics are protected in a compact sealed housing for embedded and stand-alone applications, where space and environment are critical.

Serial Port Intensive with Networking Capability

Multiple serial port interface: 5 x RS-232/422/485 serial port and two RS-232 serial port enable communication with field level for measurement and operator control of diversified automation control.

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-3381 can be used under space critical installation conditions

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 Source

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

High Computing Performance

Scalable Low Voltage and Ultra Low Voltage Pentium® M class processor system with Ethernet networking capability for high computing performance

Specifications

Processor Core Logic System

- CPU Intel® Ultra low voltage Celeron® or Intel® Pentium® M low voltage processor ULV Celeron® M 600 MHz (ARK-3381-1M0A1)

LV Pentium® M 1.1 GHz (ARK-3381-1S1A1) LV Pentium® M 1.4 GHz (ARK-3381-1S4A1)

 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

One 200-pin SO-DIMM sockets System Memory DDR 200-pin SO-DIMM x 1, Max. 1G

Display

Chipset Integrated graphics with 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

36-bit LVDS interface, optional support up to 48-bit

Ethernet

 Ethernet Controller Intel 82551ER 10/100BaseT Ethernet Controller

Other

 Watchdog Timer 255 levels timer interval, setup by software Keyboard/Mouse Support 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

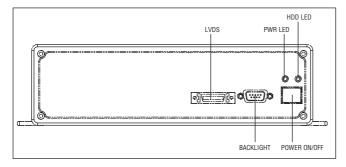
Online Download www.advantech.com/products

ADVANTECH

Front Panel External I/O

- One LVDS Port by D-Sub Connector
- One Backlight On/Off Control Connector
- One 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 $V_{DC} \sim 24 V_{DC}$, Typical 12 $V_{DC} @ 4.5 A$, 16 $V_{DC} @ 3.4$

A, $19 V_{DC} @ 2.9 A$, $24 V_{DC} @ 2.3 A$

 Output Voltage +5 V_{DC} @ 7 A, +12 V_{DC} @ 0.5 A, +5 VSB @ 1 A

Environment Specifications

• OperatingTemperature When system is equipped with CompactFlash disk only

-20 to 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 equiped 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 peak acceleration(11 msec. Duration), IEC 60068-2-27, half

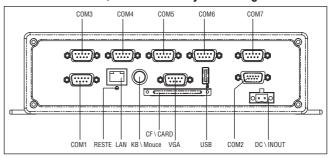
sine. 11 ms duration

 EMC Approved CE, FCC Safety Approved UL

Rear Panel External I/0

- One Full Functional RS-232 Serial Port as COM1
- One RS-232 Serial Port Support Tx/Rx Function Only (Without Support of Handshaking) as COM7
- Five RS-232/422/485 Serial Port as COM2~COM6
- One RJ45 Port: Support 10/100Base-T Ethernet Connection
- One PS/2 Connector
- One Reset Button
- One VGA/CRT Connector
- One USB 2.0 Connector
- One Phoenix Type of Power Input Connector

Rear Panel External I/O Mechanical Layout Drawing



Packing list

- 1 x ARK-3381 Unit
- 1 x DIN-Rail Mounting Kit
- 1 x PS2 Kevboard/Mouse Cable
- 1 x Startup Manual
- 1 x Utility CD

Ordering Information

ARK-3381-1M0A1 ULV Celeron® M 600 MHz Box Computer, with VGA/

LVDS, Fast Ethernet, 2 x RS-232, 5 x RS-232/422/485 LV Pentium® M 1.1 GHz Embedded Box Computer.

ARK-3381-1S1A1 with VGA/LVDS, Fast Ethernet, 2 x RS-232,

5 x RS-232/422/485

ARK-3381-1S4A1

LV Pentium® M 1.4 GHz. Embedded Box Computer.

with VGA/LVDS, Fast Ethernet, 2 x RS-232,

5 x RS-232/422/485

