

# ARK-6310

## Fanless Mini-ITX Compact Embedded Computer System

**NEW**



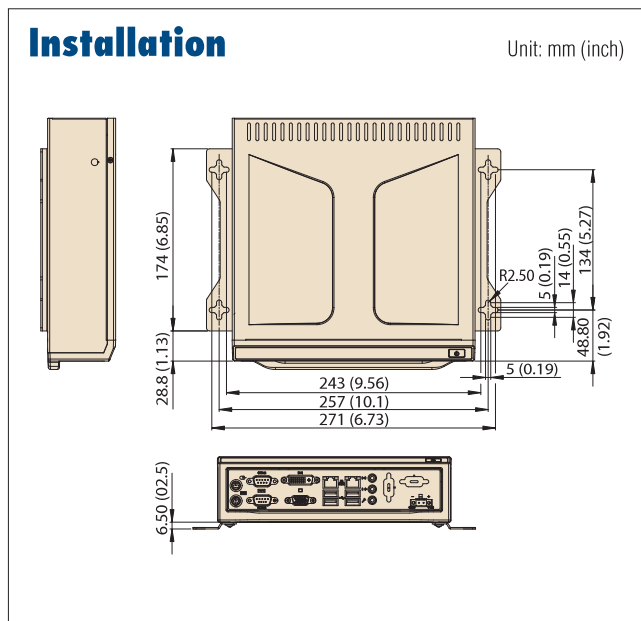
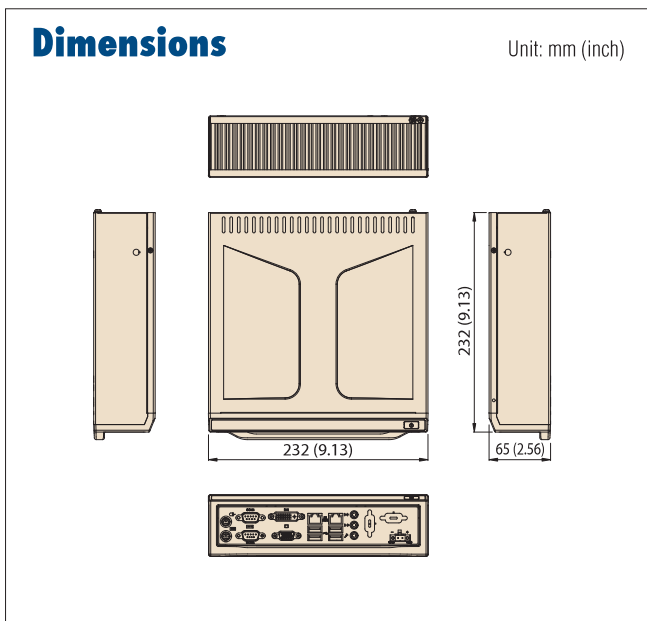
### Features

- Built-in CPU up to Intel Core™ 2 Duo 1.06 GHz
- Multiple Control and Communication I/O of Gigabit Ethernet, USB and COM ports
- ATX and wide range of DC input voltage supported: 14 ~ 24 V<sub>DC</sub>
- Fanless, Ultra compact and Robust Construction
- Anti-vibration cushion design to one 2.5" HDD-bay to ensure maximum reliability
- Bottom access cover design give easy maintenances to Compact Flash Socket, or Mini-PCI socket
- Ruggedized handle for mobility
- Built-in mounting bracket support Wall-mount and Table-mount, optional support of VESA mounting bracket



### Specifications

		ARK-6310-3M01E	ARK-6310-3M02E	ARK-6310-6M01E
Processor System	CPU	Intel LV Pentium M® 1.4 GHz	Intel® ULV Celeron® 600 MHz	Intel® Core™ 2 Duo 1.06 GHz
	L2 Cache	2 MB	512 KB	2 MB
	Front Side Bus	400 MHz	400 MHz	533 MHz
	Chipset	Intel® 855GME + ICH4	Intel® 852GM + ICH4	Intel® GME965 + ICH8M
	BIOS	Award 4Mbit FWH	Award 4 Mbit FWH	AMI 16Mbit SPI BIOS
Memory	Technology	DDR 200/266/333 SDRAM (ECC/Non-ECC support)	DDR 200/266 SDRAM (ECC/Non-ECC support)	DDR2 533/667 SDRAM
	Max. Capacity	1 x 184-pin DIMM socket up to 1 GB	1 x 184-pin DIMM socket up to 1 GB	2 x 200-pin SODIMM sockets up to 4 GB
Graphic	Chipset	Intel® 855GME GMCH Integrated Extreme Graphics 2 controller	Intel® 852GM GMCH integrated Extreme Graphics 2 controller	Intel® GME965 GMCH Integrated Mobile Intel® GMA X3100 controller
	Display Memory	Intel® DVM 2.1 supports up to 64 MB video memory	Intel® DVM 2.1 supports up to 64 MB video memory	Intel® DVM 2.1 supports up to 384 MB video memory
	Resolution	1600 x 1200 @ 32 bpp (85 Hz)	1600 x 1200 @ 32 bpp (85 Hz)	Support a QXGA maximum Resolution of 2048 x 1536 at 60 Hz, 32-bpp
	Optional Support LVDS	Single-channel 18-bit, Dual-channel 36-bit LVDS	Single-channel 18-bit Dual-channel 36-bit LVDS	Single-channel 18/24-bit, Dual-channel 36/48-bit LVDS
	Optional Support DVI	Chrontel® CH7009A DVI transmitter up to 135M pixels/second	Chrontel® CH7009A DVI transmitter up to 135M pixels/second	DVI specification 1.0 compliant Chrontel® CH7307C SDVO transmitter
	Optional Support TV-Out	Chrontel CH7009A TV encoder supports both NTSC/PAL Supports both S-Video and composite video	Chrontel® CH7009A TV encoder supports both NTSC/PAL Supports both S-Video and composite video	N/A
Ethernet	Dual Display	Optional Support CRT + LVDS, or DVY/TV-out + LVDS or CRT +DVI	Optional Support CRT + LVDS, or DVI/TV-out + LVDS or CRT + DVI	CRT + DVI, Optional Support CRT + LVDS or DVI + LVDS
	Interface	10/100/1000 Base-T	10/100/1000Base-T	Dual 10/100/1000Base-T
	Controller	Realtek RTL8110S Gigabit LAN	Realtek RTL8110S Gigabit LAN	Dual Realtek RTL8110S Gigabit LAN
Watchdog Timer	Connector	1 x RJ45	1 x RJ45	2 x RJ45
	Output	System reset	System reset	System reset
Storage Interface	Interval	Programmable 1 ~ 255 sec.	Programmable 1 ~ 255 sec.	Programmable 1 ~ 255 sec. / min.
	2.5" HDD	1 x Drive Bay	1 x Drive Bay	1 x Drive Bay
Expansion Interface	Compact Flash	1 x Type I/II Socket (Access from the bottom cover)	1 x Type I/II Socket (Access from the bottom cover)	1 x Type I/II Socket (Access from the bottom cover)
	Mini-PCI	1 x 32-bit/33MHz slot (Access from the bottom cover)	1 x 32-bit/33MHz slot (Access from the bottom cover)	N/A



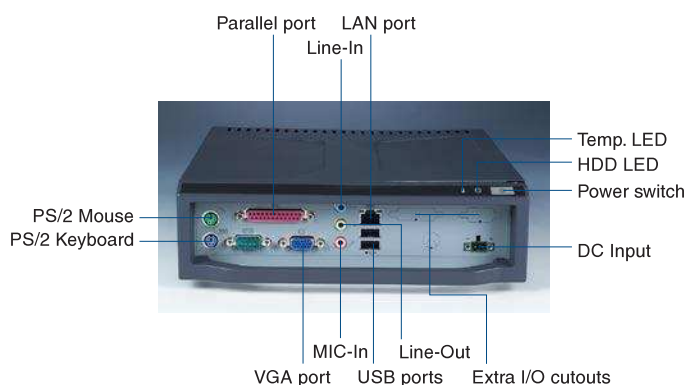
I/O Interface	Front I/O Ports	2 x PS/2 (Mouse & Keyboard*), 1 x Printer, 1 x COM, 1 x VGA, 3 x Audio (Mic-In, Line-In, Line-Out), 1 x LAN, 2 x USB	2 x PS/2 (Mouse & Keyboard), 1 x Printer, 1 x COM, 1 x VGA, 3 x Audio (Mic-in, Line-in, Line-out), 1 x LAN, 2 x USB	2 x PS/2 (Mouse & Keyboard), 1 x Printer, 1 x COM, 1 x VGA, 3 x Audio (Mic-in, Line-in, Line-out), 1 x LAN, 2 x USB
	Extra Cutouts	2 x COM, 1 x DVI/LVDS, 1 x S/C-Video, 1 x WLAN Antenna	2 x COM, 1 x DVI/LVDS, 1 x S/C-Video, 1 x WLAN Antenna	2 x COM 1 x WLAN Antenna
Software Compatibility	Operation System	Microsoft® Windows 2000/XP Microsoft® Embedded Windows XP Ubuntu Linux 7.04	Microsoft® Windows 2000/XP Microsoft® Embedded Windows XP Ubuntu Linux 7.04	Microsoft® Windows 2000/XP Microsoft® Embedded Windows XP
Chassis	Construction	Heavy-duty steel		
System Switch	Power On/Off switch	1 x Push Button		
System LED Indicators	Power On	1 x Blue LED		
	HDD Activity	1 x Blue LED		
	Temperature	1 x Blue/Red LED		
Cooling System	Fan-less	1 x Dedicated heatsink and heatpipe set		
Power Supply	Output Rating	75W		
	Input Voltage	14 V <sub>DC</sub> ~ 24 V <sub>DC</sub> @ 6.4 A ~ 3.75 A (Max.); 19 V <sub>DC</sub> @ 4.74 A (Max.)		
	Output Voltage	+5 V @ 6 A (with +5 Vsb @ 2A Max.); +3.3 V @ 5 A; +12 V @ 2 A; -12 V @ 0.3 A; -5 V @ 0.3 A		
Environment	Operating Temperature	0 ~ 40° C (32 ~ 104° F)		
	Operating Humidity	10 ~ 85% @ 40°C, non-condensing		
	Operating Vibration	1 Grms, IEC 60068-2-64, random 5-500hZ, 1 Oct./min, 1 hr/axis		
	Altitude	0 to 3,048 m (0 ~ 10,000 ft)		
Physical Characteristics	Dimensions (W x H x D)	232 x 65 x 232 mm (9.1" x 2.6" x 9.1")		
	Net Weight	2.74 Kg (6.03 lb)		

## System Ordering Information

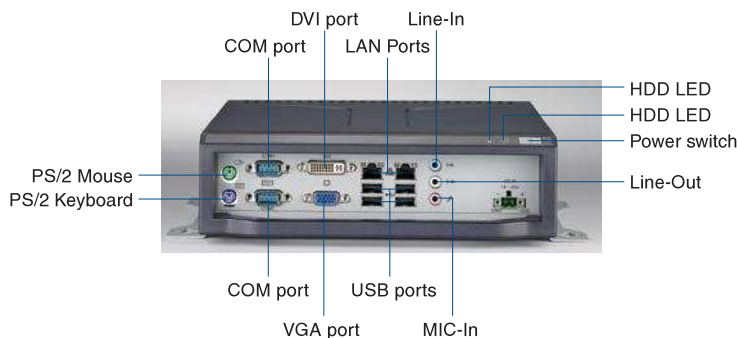
Part Number	Description
ARK-6310-3M01E	LV Pentium M 1.4 GHz Mini-ITX wallmount Embedded Box Computer, with VGA, 1 x Gigabit Ethernet, AC97 Audio 1 x RS-232/422/485, 1 x LPT, 2 x USB, 2 x PS/2 (KB & Mouse)
ARK-6310-3M02E	ULV Celeron M 600 MHz Mini-ITX wallmount Embedded Box Computer, with VGA, 1 x Gigabit Ethernet, AC97 Audio, 1 x RS-232/422/485, 1 x LPT, 2 x USB, 2 x PS/2 (KB & Mouse)
ARK-6310-6M01E	ULV Core™ 2 Duo 1.06 GHz Mini-ITX wallmount Embedded Box Computer, with VGA, DVI, 2 x Gigabit Ethernet, 5.1 Channel Audio, 2 x RS-232, 4 x USB, 2 x PS/2 (KB & Mouse)

## Packing List

Part Number	Description
	1 x ARK-6310 Unit
2002631030	1 x Startup Manual English Version
2002631040	1 x Startup Manual Simplified Chinese Version
1960014487T00C	2 x Bottom Mounting Brackets
2062631000	1 x Utility CD
2066002310	1 x Ubuntu7.04 Linux OS installer CD (Kernel 2.6.20.16) (2 GB)
1990005896S000	4 x Bottom Rubber Pads
1939000410	4 x M4 Screws for Bottom Mounting Brackets or Bottom Rubber Pads
1930001881	4 x M3 Screws for assembling the Hard Disk Drive



ARK-6310-3M01E/02E Front IO view



ARK-6310-6M01E Front IO view

## Optional Accessories

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

Part Number	Description
1757001377	AC-to-DC adapter, DC 19 V/90 W with Phoenix power plug
1700001947	Power Cable 2-pin 180 cm, USA type
1700001948	Power Cable 2-pin 180 cm, Europe type
1700001949	Power Cable 2-pin 180 cm, UK type
1700002141	Power Cable 2-pin 180 cm, Japan type

### VESA Mounting Plate

Part Number	Description
1960018754N00C	VESA Mounting Plate for ARK-6620/6310

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

Part Number	Description
2070001573	Windows XP Embedded SP2 Feature Pack 2007 for ARK-6310-3M01E and ARK-6310-3M02E



ARK-6310-3M01E/02E Inside view



ARK-6310-6M01E Inside view



ARK-6310 Rear View

# ARK-6310-3M04E

**Fanless Mini-ITX  
Embedded Computer  
System with ATOM  
Solution**



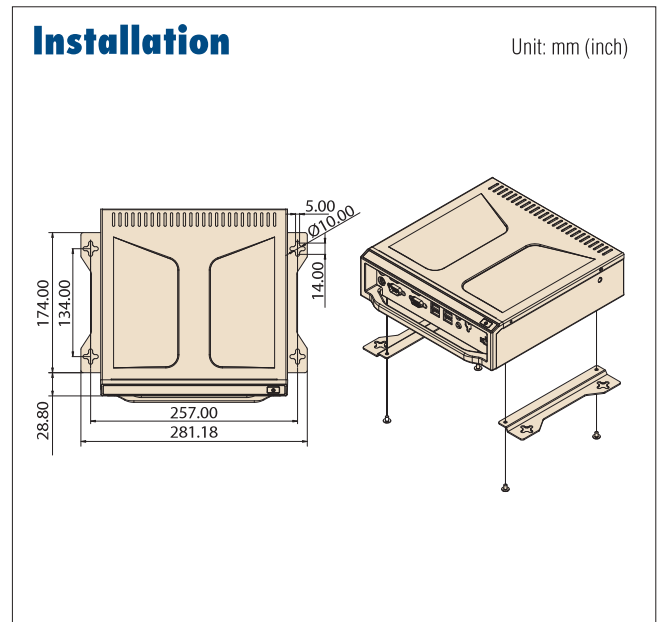
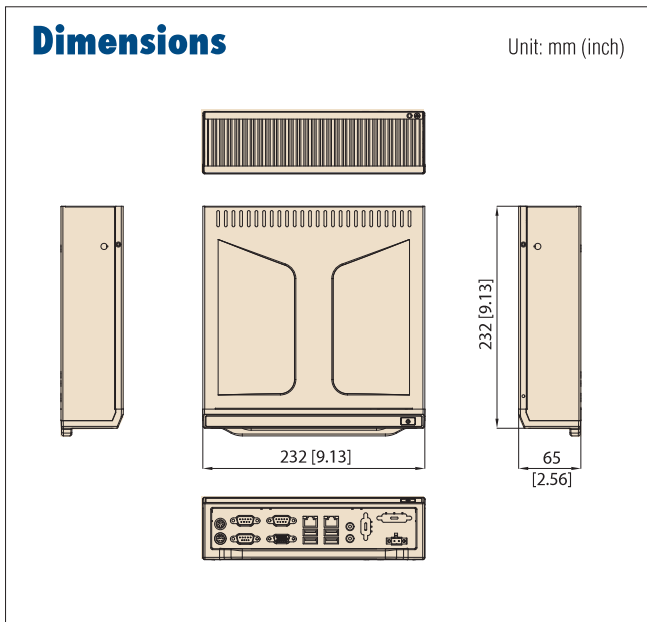
## Features

- Built-in Intel® Atom™ Processor N270 1.60 GHz
- Comprehensive I/O of Dual Gigabit Ethernet, 4 USB, 3 COM ports, 1 VGA, and audio port
- Wide range of DC input voltage supported: 14 ~ 24 V<sub>DC</sub>
- Fanless, ultra compact and robust construction, ruggedized handle for mobility
- Anti-vibration cushion design to one 2.5" HDD-bay to ensure maximum reliability
- Bottom access cover design give easy maintenances to Compact Flash socket
- Built-in mounting bracket support wall-mount and table-mount, optional support of VESA mounting bracket



## Specifications

Processor System	CPU	Intel Atom Processor N270 1.60 GHz
	Front Side Bus	533 MHz
	L2 Cache	512 KB
	Chipset	Intel 945GSE + ICH7M
	BIOS	AWARD 16 Mbit, SPI
Memory	Technology	Single Channel DDR2 533 SDRAM
	Max. Capacity	200-pin SODIMM x1 up to 2 GHz
Graphics	Chipset	Intel 945GSE GMCH integrated Graphic Media Accelerator 950
	Display Memory	Shared system memory up to 224 MB SDRAM
	LVDS	Single channel 18-bit/Dual channel 36-bit LVDS
	DVI	None
	Dual Display	VGA, LVDS
Ethernet	Interface	10/100/1000 Mbps
	Controller	Dual Realtek RTL8111C Gigabit LAN
	Connector	2 x RJ-45 connectors
Watchdog Timer	Output	System reset
	Interval	Programmable 1~255 sec.
Storage Interface	2.5" HDD Bay	1
	Compact Flash	1 x Type 1/II Socket (on the solder side of the motherboard)
I/O Interface	Front I/O Ports	2 x PS/2 (Mouse & Keyboard)
		3 x COM
		1 x VGA
2 x LAN		
Extra I/O cutouts	4 x USB	
	1 x Audio (Mic-In, Line-Out)	
Miscellaneous	Overheating Protection	System Shut-down when Overheated
	LED Indicators	3 x LED of Power, HDD and Temperature
	Control	1 x ATX Power On/Off switch button
Software Compatibility	Operating System	Microsoft Widows 2000, Windows XP and Embedded Windows XP
	Output Rating	75W
Power Supply	Input Voltage	14 V <sub>DC</sub> ~ 24 V <sub>DC</sub> @ 6.4 A ~ 3.75 A (Max.); 19 V <sub>DC</sub> @ 4.74 A (Max.)
	Output Voltage	+5 V with 5 VSB @ 6 A (+5 VSB @ 2A Max.); +3.3 V @ 5 A; +12 V @ 2 A, -12 V @ 0.3 A; -5 V @ 0.3 A
Environment	Operating Temp.	0 ~ 40° C (32 ~ 104° F)
	Operating Humidity	10 ~ 85% @ 40° C, non-condensing
	Vibration Loading	1 Grms, IEC 60068-2-64, random, 5 ~ 500 Hz, 1 Oct./min, 1 hr/axis
	Duration Vibration	
Physical Characteristics	Altitude	0 to 3,048 m (0 ~ 10,000 ft)
	Dimensions (W x H x D)	232 x 65 x 232 mm (9.1" x 2.6" x 9.1")
	Net Weight	2.74 Kg (6.03 lb)



## System Ordering Information

Part Number	CPU	VGA	G-LAN	*USB 2.0	RS-232	Audio	KB/MS
ARK-6310-3M04E	Intel ATOM N270 1.6 GHz	1	2	4 ~ 8	3 ~ 4	Yes	Yes

Note: Packing accessory kit is included, and its serial cable supports up to 4 COMs  
 \* Supports up to 8 USB ports via optional cable kit (P/N: 9652631001)

## Optional Accessories

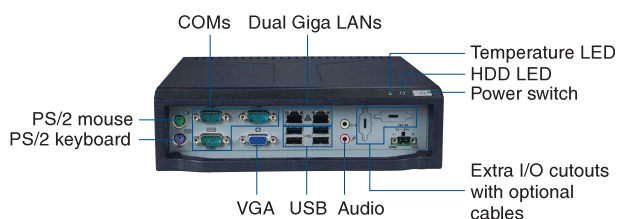
### External AC-to-DC Adapter and Power Cable

Part Number	Description
1757000222	AC-to-DC adapter, DC 19 V/65 W with Phoenix power plug
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1700001948	Power Cable 2-pin 180 cm, Europe type
1700001949	Power Cable 2-pin 180 cm, UK type
1700002141	Power Cable 2-pin 180 cm, Japan type

### Accessories

Part Number	Description
989K008732	VESA Mounting Plate for ARK-6620/6310
ARK-WLAN-USB	Frame module to support WLAN with USB connection
9652631001	4 USB cable kit for ARK-6310

## Front View



## Real View



## Inside View

