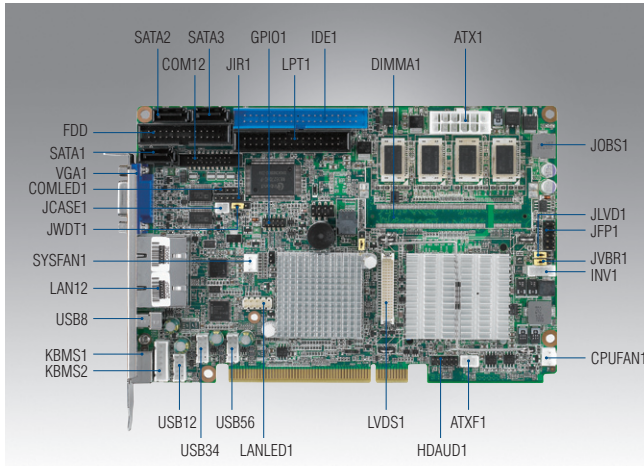


PCI-7031

Intel® Atom™ N450/D510 PCI Half-size SBC with Onboard DDR2/VGA/LVDS/Dual GbE/SATA/COM



Features

- Ultra low power, fanless Intel® Atom™ processor N450 CPU and 1 GB onboard DDR2 667 memory (Only for N SKU)
- Dual core high performance D510 CPU and maximum 2 GB DDR2 667 memory (Only for D SKU)
- VGA/LVDS dual video outputs
- Optional module for 4 x RS-485 w/ auto-flow control
- Supports embedded software APIs and Utilities

Software APIs:

- Watchdog H/W
- Monitor Brightness
- GPIO
- Backlight On/Off
- CPU Speed
- System Throttling

Utilities:

- BIOS flash
- Monitoring
- Flash Lock
- Embedded Security ID
- eSOS (Requires BIOS Customization)

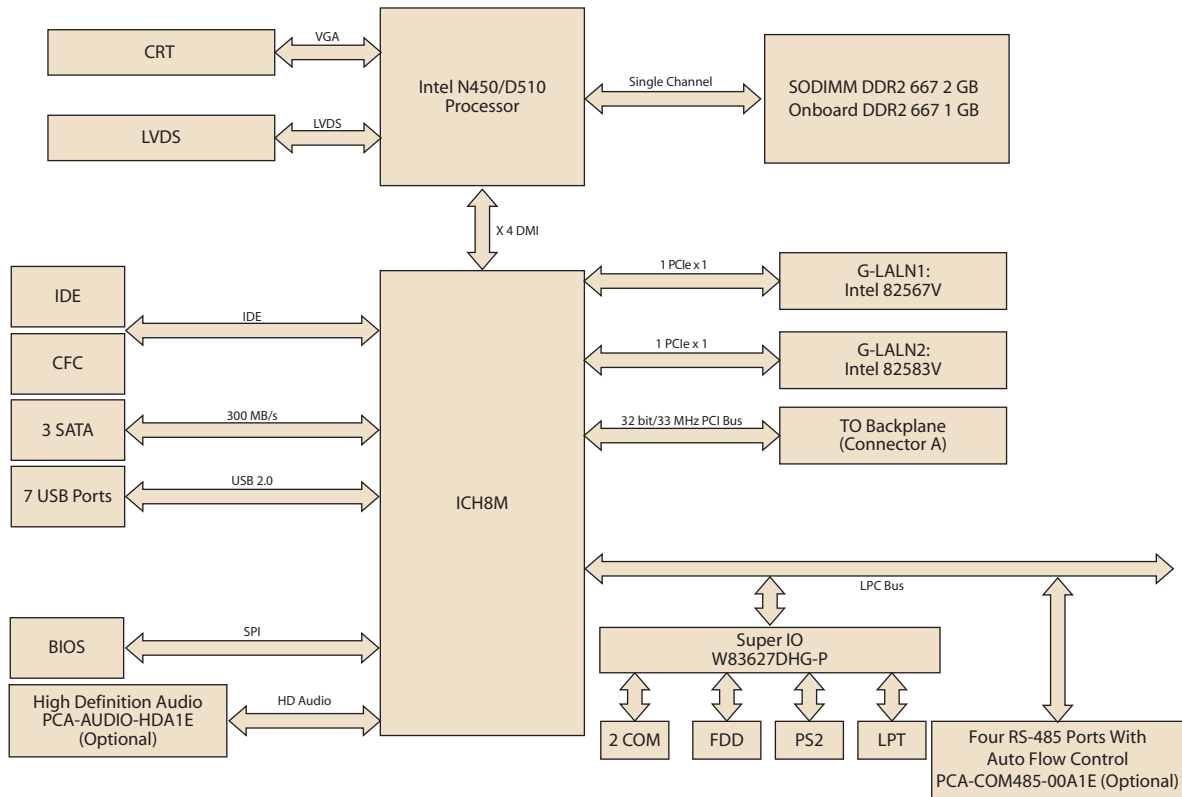
Note: eSOS needs ODM BIOS available by request



Specifications

Processor System	CPU	Intel Atom N450	Intel Atom D510
	Speed	1.66 GHz	1.66 GHz
	L2 Cache	512 KB	1 MB
	Chipset	ICH8M	
	BIOS	AMI 16Mb SPI Flash	
Bus	PCI-Express	-	
	PCI	Four 32 bit/33 MHz PCI Masters to Backplane	
Memory	Technology	Single channel DDR2 667 MHz	
	Max. Cap.	1 GB onboard for N SKU; max 2 GB SODIMM for D SKU	
	Socket	No socket for N SKU; 200-pin SODIMM x 1 for D SKU	
Graphics	Onboard	Embedded Gen3.5+ GFX Core technology, DirectX 9/Pixel Shader 2.0 compliant	
	VRAM	Shared 224 MB	
	Video Interface	15-pin VGA D-sub connector x1/Onboard LVDS pin header x 1 (supports single channel 18-bit LVDS)	
	Video Output	VGA: Supports up to SXGA 1400 x 1050 @ 60 Hz for N SKU, up to 2048 x 1536 @ 60 Hz for D SKU LVDS: Supports 18-bit single channel and up to WXGA 1366 x 768 or 1280 x 800 for both N and D SKUs Dual Display: VGA + LVDS, support extended mode and clone mode for both N and D SKUs	
Ethernet	Interface	10/100/1000 Mbps	
	Controller	LAN1: Intel 82567V LAN2: Intel 82583V	
	Connector	RJ-45 with LED Connector x 2	
SATA	Max. Transfer Rate	300 MB/s	
	Channel	3	
EIDE	Mode	ATA 100/66/33	
	Channel	1 (supports up to 2 IDE devices)	
I/O Interface	USB 2.0	7 ports on the SHB	
	Serial	Two RS-232 onboard pin-headers, plus four four RS-485 ports with auto-flow control by module (Optional, Advantech P/N: PCA-COM485-00A1E)	
	Parallel	1 (EPP/ECP)	
	FDD	1	
	PS/2	1 (for mouse and keyboard, an Y cable is included in the package)	
Watchdog Timer	Output	System reset	
	Interval	Programmable, 1~255 sec/min	
Miscellaneous	Audio Output	Intel High Definition audio interface (requires a audio extension module, P/N: PCA-AUDIO-HDA1E)	
	Test Equipment	Atom D510 CPU 1.66 GHz; Memory: 1 x 2 GB DDR2 667 MHz SODIMM; Storage: One IDE HDD and one SATA CD ROM	
Power Requirement	Test program	BurnIn test 6.0	
	Voltage	+12 V +5 V +3.3 V +5 SBY -12 V -5 V Total	
	Current	0.228 A 2.952 A 0 A 0.060 A 0 A 0 A 17.796 W	
	Test Equipment	Atom N450 CPU 1.66 GHz; Memory: Onboard 1 GB DDR2 667 MHz; Storage: One IDE HDD and one SATA CD ROM	
	Test program	BurnIn test 6.0	
	Voltage	+12 V +5 V +3.3 V +5 SBY -12 V -5 V Total	
Current	0.192 A 2.532 A 0 A 0.060 A 0 A 0 A 15.264 W		
Environment	Operating	0 ~ 60° C (32 ~ 140° F) (operating humidity: 40° C @ 85% RH Non-Condensing)	Non-Operating
	Temperature		-40 ~ 85° C and 60° C @ 95% RH Non-Condensing
Physical	Dimensions	185 mm (L) x 122 mm (W) (7.3" x 4.8")	

Board Diagram



Ordering Information

Model Name	CPU	Memory	Fanless	VGA	LVDS	SATA	USB	COM	CF
PCI-7031D-S6A1E	Atom D510	One SODIMM Socket 2 GB DDR2 667 No Onboard RAM	No	Yes	Yes	3	7	2	Yes
PCI-7031N-S6A1E	Atom N450	No SODIMM Socket Onboard 1 GB DDR2 667	Yes	Yes	Yes	3	7	2	Yes

Optional Accessories

Part Number	Description
PCA-COM485-00A1E	Extension module for four RS-422/485 ports with auto-flow control function
PCA-AUDIO-HDA1E	Extension module for 7.1 channel High Definition audio

Bracket View



PCI-7031D-S6A1E
 PCI-7031N-S6A1E

Packing List

Part Number	Description	Quantity
960046526N001	CPU cooler for Atom D510 CPU (only available for D SKU)	x 1
1700340640	FDD cable	x 1
1701400452	Ultra ATA 66/100 HDD cables	x 1
1700003194	Serial ATA HDD data cable	x 1
1703150102	Serial ATA HDD power cable	x 1
1701260301	Printer (parallel) port cable kit	x 1
1700008762	Dual COM ports cable kit	x 1
1700002343	ATX feature cable	x 1
1700008887	4-port USB cable kit	x 1
1700060202	Y cable for PS/2 keyboard and PS/2 mouse	x 1
1700000265	AT/ATX PSU 20-Pin to 12-Pin Cable Kit	x 1
9689000068	Jumper pack	x 1
-	Warranty card	x 1
-	PCI-7031 startup manual	x 1
-	CD with driver utility and manual (in PDF format)	x 1