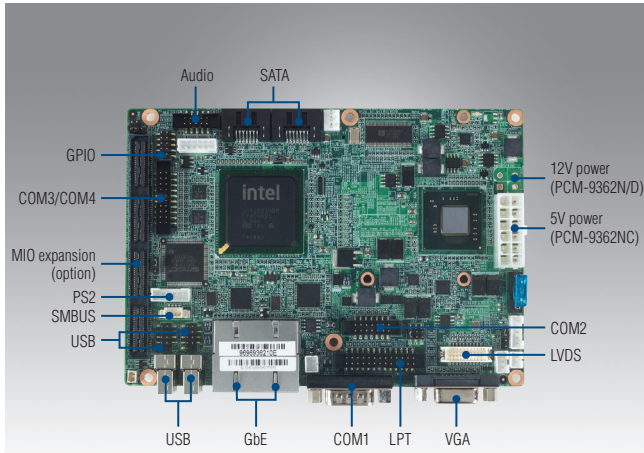


# PCM-9362

Intel® Atom™ N450/D510 3.5" SBC, LVDS, VGA, 2 GbE, Mini PCIe, CF, MIO-160 Expansion



## Features

- Embedded Intel® Atom™ processor N450 Single Core/ D510 Dual Core 1.66 GHz + ICH8M
- Intel Gen 3.5 DX9, MPEG2 Decode in HW, multiple display: VGA, 18-bit LVDS
- Supports 12 V input power for PCM-9362N/D, 5V input power for PCM-9362NC/NCF, supports extended temperature -40° C ~ 85° C
- Supports 2 Intel Giga Ethernet ports; Rich I/O interfaces with 4 COM, 2 SATA, 6 USB and GPIO
- Supports SUSIAccess and Embedded Software APIs

### Software APIs:



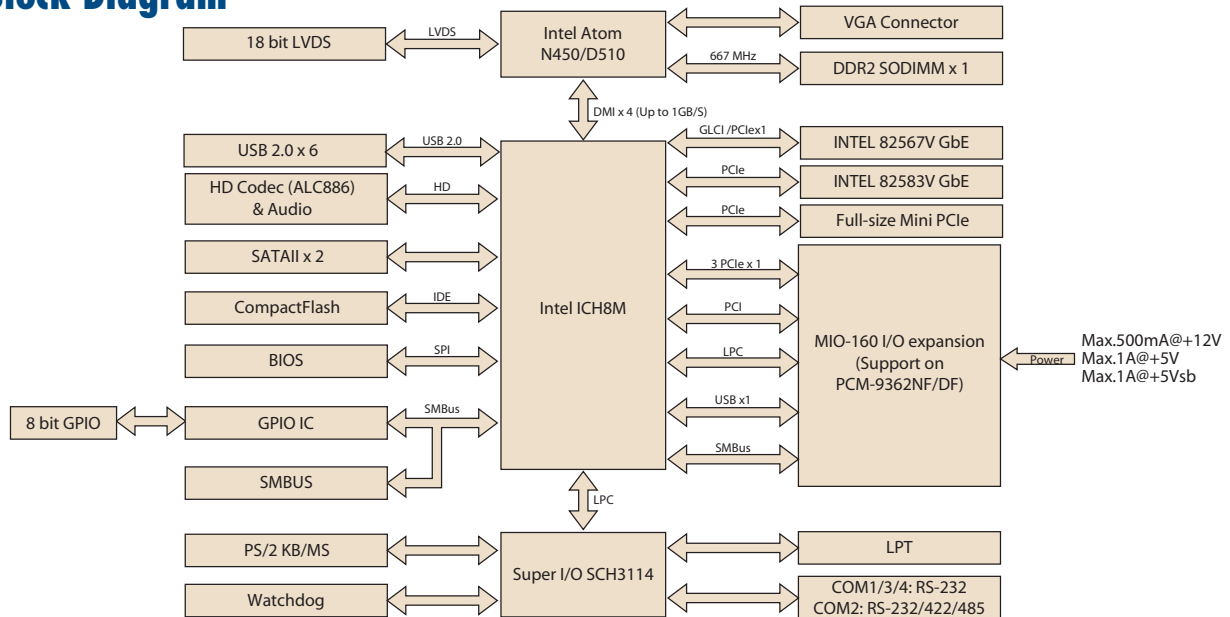
### Utilities:



## Specifications

Processor System	CPU	Intel Atom Processor, N450 Single Core 1.66 GHz Intel Atom Processor, D510 Dual Core 1.66 GHz
	Frequency	1.66 GHz
	L2 Cache	512 KB/1 MB
	System Chipset	Intel N450/D510 + ICH8M
	BIOS	AMI 16 Mbit Flash BIOS
Memory	Technology	DDR2 667 MHz
	Max. Capacity	2 GB
	Socket	1 x 200-pin SODIMM
Display	Chipset	Intel Atom N450/D510 1.66 GHz
	VRAM	Optimized Shared Memory Architecture up to 224 MB system memory
	Graphics Engine	Intel Gen 3.5 DX9, MPEG2 Decode in HW, Embedded Gen3.5+ GFX Core
	LVDS	LVDS: Single channel 18-bit LVDS up to WXGA 1366 x 768
	VGA	Intel Atom N450 Single Core up to 1400 x 1050 (SXGA) Intel Atom D510 Dual Core up to 2048 x 1536
Ethernet	Dual Display	VGA+LVDS
	Speed	10/100/1000 Mbps (Supports Wake on LAN)
Audio	Controller	GbE1 Intel 82567V, GbE2 Intel 82583V
	Connector	RJ-45 on GbE1, GbE2
WatchDog Timer	Chipset	Realtek ALC886, High Definition Audio(HD), Line-in, Line out, Mic-in
		Output System reset, Programmable counter from 1 ~ 255 minutes/ seconds
Storage	CompactFlash	CompactFlash type I/II (Primary Master IDE Channel)
	SATA	2 x SATA II (Max. Data Transfer Rate 300 MB/s)
Rear I/O	Serial	1 (COM1 supports RS-232) (ESD protection for RS-232: Air gap ±15kV, Contact ±8kV)
	Ethernet	2 (10/100/1000 Mbps)
	VGA	1
	USB	2
Internal I/O	USB	4 x USB 2.0 ports
	Serial	3 x COM ports (ESD protection for RS-232: Air gap ±15kV, Contact ±8kV) COM3/COM4 supports RS-232 COM2 supports RS-232/422/485 (Supports RS-485 auto flow control)
	Parallel (LPT)	1
	PS/2 KB/Mouse	1
	GPIO	8-bit GPIO
	SMBus	1
Expansion	Mini PCIe	1 (Full-size)
	MIO-160	1 (Supported on PCM-9362NF/NCF/DF) (SMBus, USB2.0x1, LPC, PCI, 3 x PCIe1x1, 5V/12V power)
Power	Power Type	AT/ATX (ATX only support on NC/NCF sku)
	Power Supply Voltage	For NC/NCF sku AT: 5V±5% (12V is optional for LCD inverter and add-on card) ATX: 5V±5%, 5 Vsb±5% (12V is optional for LCD inverter and add on card) For D/N/DF/NF sku AT: 12V±10% (No support ATX power supply)
	Power Consumption (Typical)	PCM-9362N: 0.87 A @ 12 V (10.44 W) PCM-9362NC/NCF: 2.31 A @ 5 V (11.55 W) PCM-9362D: 1.14 A @ 12 V (13.68 W)
	Power Consumption (Max, test in HCT)	PCM-9362N: 1.01 A @ 12 V (12.12 W) PCM-9362NC/NCF: 2.36 A @ 5 V (11.8 W) PCM-9362D: 1.43 A @ 12 V (17.16 W)
	Power Management	APM, ACPI
Environment	Battery	Lithium 3 V/210 mAH
	Operational	0 ~ 60° C (32 ~ 140° F) (Operating humidity: 40° C @ 95% RH non-condensing)
Physical Characteristics	Non-Operational	-40° C ~ 85° C and 60° C @ 95% RH non-condensing
	Dimensions (L x W)	146 x 102 mm (5.7" x 4")
	Weight	0.64 kg (1.41 lb), weight of total package
	Total Height	30.5mm for PCM-9362N/NC/NCF/NZ/NZ2 34.5mm for PCM-9362D/DF

## Block Diagram



## Ordering Information

Model	CPU	L2 Cache	Memory	Power	Expansion	VGA	LVDS	GbE	Audio	SATAII	USB 2.0	Mini PCIe	CF	RS-232	RS-232/422/485	Thermal Solution	Operating Temperature
PCM-9362NC-S6A1E	Atom N450	512 KB	SODIMM	5 V	-	1	18-bit	2	Yes	2	6	Full-size	1	3	1	Passive	0 ~ 60° C
PCM-9362N-S6A1E	Atom N450	512 KB	SODIMM	12 V	-	1	18-bit	2	Yes	2	6	Full-size	1	3	1	Passive	0 ~ 60° C
PCM-9362D-S6A1E	Atom D510	1 MB	SODIMM	12 V	-	1	18-bit	2	Yes	2	6	Full-size	1	3	1	Active	0 ~ 60° C
PCM-9362DF-S6A1E	Atom D510	1 MB	SODIMM	12 V	MIO-160	1	18-bit	2	Yes	2	6	Full-size	1	3	1	Active	0 ~ 60° C
PCM-9362NZ-1GS6A1E	Atom N450	512 KB	1GB bundle	12 V	-	1	18-bit	2	Yes	2	6	Full-size	1	3	1	Passive	-20 ~ 80° C
PCM-9362NZ21GS6A1E	Atom N450	512 KB	1GB bundle	12 V	-	1	18-bit	2	Yes	2	6	Full-size	1	3	1	Passive	-40 ~ 85° C
PCM-9362NCF-S6A1E	Atom N450	512 KB	SODIMM	5 V	MIO-160	1	18-bit	2	Yes	2	6	Full-size	1	3	1	Passive	0 ~ 60° C

Note: Passive = fanless; Active = with fan

## Packing List

Part No.	Description	Quantity
	PCM-9362 SBC	
	Startup Manual	
	Utility CD	
9689000002	mini Jumper pack	1
1700000265	ATX power cable (PCM-9362NC series only)	1
1700017838-11	SATA cable with lock 30cm	1
1703060191	PS/2 cable 19cm	1
1701140201	COM2 IDE D-SUB 20 cm cable	1
1703100121	USB 2 x 5P-2.0 12 cm W/BKT cable	2
1703100152	Audio cable 20cm	1
1700260250	LPT IDE 26P D-SUB 25 cm cable	1
1700001795	COM3/4 cable 19cm	1
1960050034N001	CPU N450 heatsink (75 x 62 19.9 mm) for PCM-9362N series	1
1960050035N001	CPU D510 cooler (75 x 62 x 24.4 mm) for PCM-9362D	1
1960024933S00B	ICH8M Heatsink for PCM-9362 series (38.1x33.6x7.5mm)	1

## Rear I/O View



## Optional Accessories

Part No.	Description
MIO-6250-00A1E	MIO-160 module w/ 3 10/100 Ethernet (RTL8139)
MIO-6260-00A1E	MIO-160 IO module w/2 COM, 4 USB
MIO-6260L-00A1E	MIO-160 IO module w/2 COM, 4 USB, 1 10/100 Ethernet
1700016161	AT Power cable, 2 x 6P to 3 x 4P 10 cm
1700016141	AT power cable, 2 x 6P to 2 10P 10 cm
1960047470N001	Heat spreader(97 x 75 18.5 mm)
1655003865	Right angle 12V power connector 2*2P
1655003866	Right angle 5V power connector 2*6P
1700018436	Inverter 5P to SATA power 15P cable 10cm
ACK-A001E	Embedded chassis for PCM-9362(12V)/9363 series (System dimension with mounting bracket: 230 x 65 x145 mm)

Note: MIO-160 modules are supported by PCM-9362NF/DF version

## Embedded OS/API

Embedded OS/API	Part No.	Description
Win XPE	2070010314	XPE WES2009 V4.0 MUI24
WinCE	2070009693	CE 6.0 Pro PCM-9362 V1.3 ENG
	2070010935	CE 7.0 Pro PCM-9362 V1.0 ENG
WES 7	2070009835	Image WES7E V5.0 ENG
QNX		6.5
Vxwork		6.8
Linux		Ubuntu 10.04.1
Software API	205E362010	SUSI 3.0 SW API for PCM-9362 B: 20091117 XP