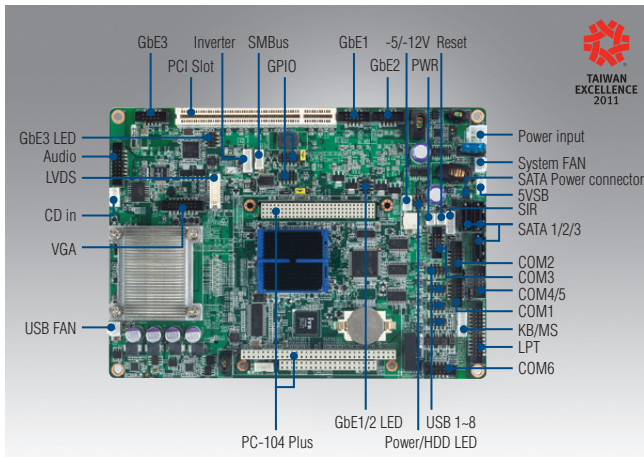


# PCM-9562

Intel® Atom™ N450/D510 EBX SBC with 3 GbE, 6 COM, 3 SATA, 8 USB 2.0, 2 Watchdog



## Features

- Embedded Intel® Atom™ processor N450 Single Core/D510 Dual Core 1.66 GHz + ICH8M
- Supports up to 3 Intel GbE, 6 COM, and 2 Watchdog timer
- Design complies with UL60601 on GbE3 and COM6 port isolation (PCM-9562F full version series only)
- Power off protection and Software I²C API support
- Supports SUSIAccess and Embedded Software APIs

**Software APIs:** Watchdog, I²C, SMBus, H/W Monitor, Brightness, GPIO, Backlight On/Off

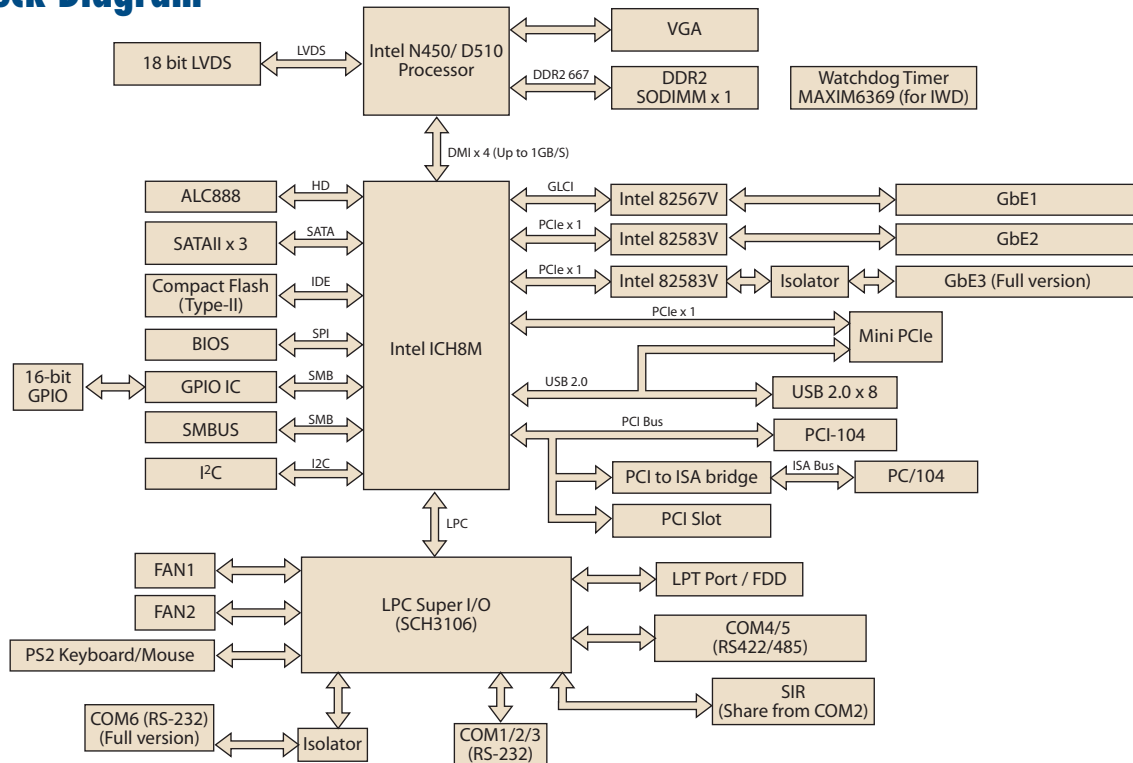
**Utilities:** BIOS Flash Monitoring



## Specifications

Processor System	CPU	Intel Atom N450/D510 1.66 GHz
	Frequency	Atom N450/D510 1.66 GHz
	L2 Cache	512 KB/1 MB
	System Chipset	N450/D510 + ICH8M
	BIOS	AMI 16 Mbit
Memory	Technology	DDR2 667 MHz
	Max. Capacity	2 GB
	Socket	1 x 200-pin SODIMM
Display	Chipset	N450/D510
	VRAM	Optimized Shared Memory Architecture up to 224 MB
	Graphics Engine	Embedded Gen3.5+ GFX Core, HW MPEG2 decoder
	LVDS	Single channel 18-bit LVDS up to WXGA 1366 x 768
	VGA	N450: Up to SXGA 1400 x 1050 @ 60 Hz (SXGA) D510: up to 2048 x 1536 (QXGA)
Ethernet	Interface	3 (RJ-45 connector through the cable and Ethernet3 is Full version only)
	Controller	GbE1 Intel 82567, GbE2 Intel 82583V, GbE3 Intel 82583V (UL60601 Compliant)
Audio	Chipset	ALC888 HD Codec, Speaker out, CD-input, Line-in, Line-out, Mic-in
	Amplifier	Max 2.2W/ch Stereo into a 3Ω Load
WatchDog Timer	Output	System reset
	Internal	Watchdog timer1 (IWT): monitor the system status before OS is ready (programmable 10ms, disable, 1s, 60s) Watchdog timer2 (PWT): monitor the application status after OS is ready (programmable 1 - 255 sec/min) (Full version only)
Storage	CompactFlash	CompactFlash type I/II
	SATA	3 SATA II (Max. Data Transfer Rate 300 MB/s)
	Floppy	Share with LPT (Optional)
	SPI Flash	16 Mbit
Internal I/O	Serial	4 x RS-232 (COM1/2/3/6, isolation design in COM6 is Full version only) 2 x RS-422/485 (COM4/5, default RS-422/485, RS-232 with TX/RX only is optional by request) ESD protection for RS-232: Air gap ±15kV, Contact ±8kV
	Ethernet	GbE x 3 (RJ-45 connector through the cable and GbE3 is Full version)
	PS/2 KB/Mouse	1
	VGA	1
	Reset Button	1
	USB	8 x USB 2.0
	Parallel (LPT)	1
	FDD	Share with LPT (Optional)
	GPIO	16-bit GPIO
	SMBUS	1
	I²C	1
	Expansion	PC/104-Plus slot
Full-size Mini PCIe		1
PCI Slot		1
Power	Power Type	AT / ATX (Both AT/ATX can support ACPI)
	Power Supply Voltage	ATX: 12V ±10%, 5VSB ±5% (5V stand-by power is only for auto power off function) AT: 12V ±10% only
	Power Consumption (Typical)	PCM-9562N-S6A1E: 893 mA @ 12 V, 8 mA @ 5 VSB (10.8 W) PCM-9562D-S6A1E: 1130 mA @ 12 V, 10 mA @ 5 VSB (13.6 W)
	Power Consumption (Max. test in HCT)	PCM-9562N-S6A1E: 1159 mA @ 12 V, 6 mA @ 5 VSB (13.9 W) PCM-9562D-S6A1E: 1404 mA @ 12 V, 8 mA @ 5 VSB (16.9 W)
Environment	Operating	0 ~ 60° C (32 ~ 140° F) (Operating humidity: 40° C @ 95% RH non-condensing)
	Non-Operating	-40° C ~ 85° C and 60° C @ 95% RH non-condensing
Physical Characteristics	Dimensions (L x W)	203 x 146 mm (8" x 5.75")
	Weight	0.7 kg (1.54 lb) (with heatsink)
	Total Height	29.6mm (PCM-9562N/NF), 38.6mm (PCM-9562D/DF), 44.6mm (PCM-9562Z/Z2)
	(with cooler + PCB + Bottom)	

## Block Diagram



## Ordering Information

Model	CPU	Memory	VGA	LVDS	GbE1	GbE2	GbE3 UL60601	HD Audio	USB 2.0	Watchdog Timer	RS-232	RS-422/485	PC/104-Plus	Mini PCIe	CF	Power	Thermal	Operating Temperature
PCM-9562N-S6A1E	Atom N450	SODIMM	1	18-bit	1	1	-	Yes	8	1	3	2	Yes	1	1	AT/ATX	Passive	0 ~ 60° C
PCM-9562D-S6A1E	Atom D510	SODIMM	1	18-bit	1	1	-	Yes	8	1	3	2	Yes	1	1	AT/ATX	Active	0 ~ 60° C
PCM-9562NF-S6A1E	Atom N450	SODIMM	1	18-bit	1	1	1	Yes	8	2	3+1	2	Yes	1	1	AT/ATX	Passive	0 ~ 60° C
PCM-9562DF-S6A1E	Atom D510	SODIMM	1	18-bit	1	1	1	Yes	8	2	3+1	2	Yes	1	1	AT/ATX	Active	0 ~ 60° C
PCM-9562NZ-1GS6A1E	Atom N450	Bundle 1GB	1	18-bit	1	1	Optional	Yes	8	1	3	2	Yes	1	1	AT/ATX	Passive	-20 ~ 80° C
PCM-9562Z2-1GS6A1E	Atom N450	Bundle 1GB	1	18-bit	1	1	Optional	Yes	8	1	3	2	Yes	1	1	AT/ATX	Passive	-40 ~ 85° C

\* Passive = fanless; Active = with fan

\* PCM-9562NF-S6A1E and PCM-9562DF-S6A1E are designed with UL60601 isolation GbE3, COM6, and Watchdog Timer2

\* Both COM6 and GbE3 are optional by request for extended temperature products

## Packing List

Part No.	Description	Quantity
	PCM-9562 SBC	1
9689000002	Mini Jumper Pack	1
2006956200	Startup Manual	1
2066956200	Utility CD	1
1700015741	ATX 5VSB cable	1
1960020569S000	Heatsink for PCM-9562N/NF (50 x 50 x 10 mm)	1
1960046526N001	Cooler for PCM-9562D/DF (50 x 50 x 24 mm)	1
1960002379	Heatsink for PCM-9562NZ/Z2 (50 x 50 x 30 mm)	1

## Optional Accessories

Part No.	Description
PCM-10586-9562E	Wiring kit for PCM-9562
1703100260	USB cable
170304015K	AT cable 4P x 2/4200-H-4P 15 cm
1960049954N001	Heatspreader 157.4 x 100 x 24 mm
1700001531	LPT to FDD cable

## Embedded OS/API

Embedded OS/API	Part No.	Description
Win XPE	2070010314	XPE WES2009 V4.0 MUI24
WES 7	2070009835	Image WES7E V5.0 ENG
WinCE7.0	2070011082	Image CE 7.0 Pro PCM-9562 V1.0 ENG
QNX		6.5
VxWorks		6.8
Linux		Ubuntu10.04.1
Software API	205E956000	SUSI 3.0 SW API for PCM-9562 B:20091009 XP