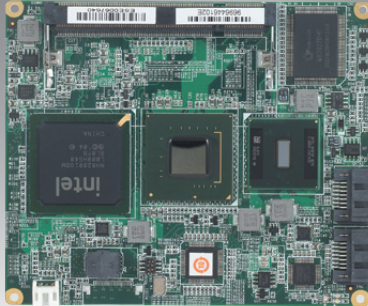


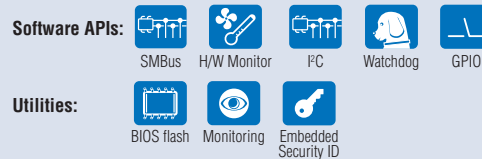
# SOM-4461

## Intel® Atom™ Processor N270 ETX CPU Module



### Features

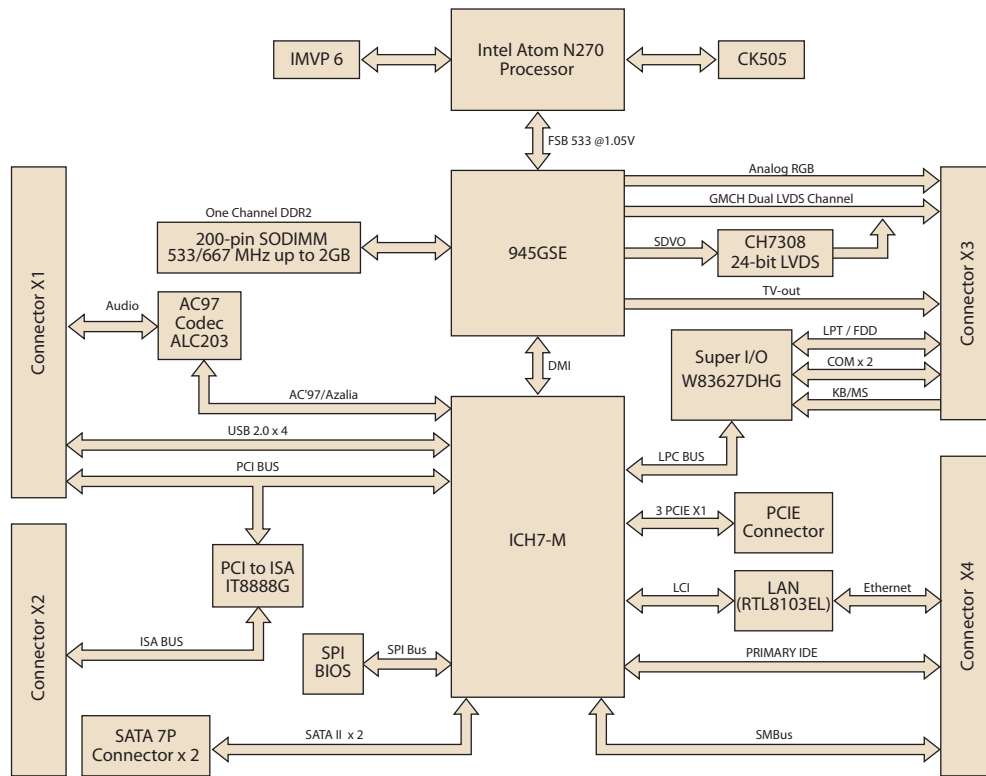
- Embedded Intel® Atom™ Processor N270 1.6 GHz + 945GSE + ICH7M
- Intel GMA 950, Microsoft DirectX 9.1, Supports 36/48-bit LVDS TFT LCD
- Supports one DDR2-533 memory SODIMM sockets up to 2 GB
- Interface & I/O: Supports 4 PCI Master, LPC, 1 IDE, 2 SATA, 4 USB 2.0, 2 COMs, FDD/LPT, Line-in/out, Mic-in
- Supports SUSIAccess and Embedded Software APIs



### Specifications

Form Factor		ETX 3.0
Processor System	CPU	Embedded Intel Atom Processor N270 1.6 GHz
	Front Side Bus	533 MHz
	System Chipset	Intel 945GSE/ ICH7M
	BIOS	AWARD 8 Mbit Flash BIOS
Memory	Technology	DDR2 400/533 MHz
	Max. Capacity	Up to 2 GB
	Socket	1 x 200-pin SODIMM socket
Display	Chipset	Intel 945GSE
	VRAM	DVMT 3.0 supports up to 224 MB
	Graphics Engine	Intel GMA950, Microsoft DirectX* 9.1 supported
	LVDS	Dual channel 36/48-bit LVDS
	VGA	Up to 2048 x 1536
	DVI	-
	TV-out	Supports NTSC/PAL, S-Video and Composite Output interfaces
Ethernet	Chipset	Realtek 8103EL 10/100 Mbps Ethernet
	Speed	10/100 Mbps
WatchDog Timer		256 level timer interval, from 0 to 255 sec or min setup by software, jumperless selection, generates system reset
Expansion		4 x PCI master, ISA
I/O	PATA	1 x EIDE (UDMA 100)
	SATA	2 x SATA (On ETX CPU module)
	USB	4 x USB 2.0
	Audio	Realtek ALC203 AC97 Codec support Line-in / out, Mic-in
	GPIO	2-bit GPIO (Supports by customized BIOS)
	COM	2 COM ports
	FDD/LPT	1 x FDD or LPT
	SSD	-
Power	Power Type	ATX, AT
	Power Supply Voltage	+5VSB is required for ATX power scheme
	Power Consumption (Typical)	Typical: (1 GB DDRII 533) +5 V @ 1.15 A
	Power Consumption (Max, test in HCT)	Max: (1 GB DDRII 533) +5 V @ 1.98 A
Environment	Operating Temperature	0 ~ 60° C (32 ~ 140° F)
	Operating Humidity	0% ~ 90% relative humidity, non-condensing
Mechanical	Dimensions	114 x 95 mm (4.5" x 3.74")

## Block Diagram



## Ordering Information

Part No.	CPU	L2 Cache	Chipset	LVDS	VGA	TV out	10/100 LAN	AC97 Audio	PCI	USB 2.0	SATA	LPT/Floppy	KB/MS	ATX Power	AT Power	Thermal Solution	Operating Temp.
SOM-4461RL-S6A2E	Atom N270 1.6 GHz	512 KB	945GSE	36/48-bit	Yes	Yes	Yes	Yes	4	4	2	Note1	Yes	Yes	Yes	Passive	0 – 60° C
SOM-4461RZ-S6A2E	Atom N270 1.6 GHz	512 KB	945GSE	36/48-bit	Yes	Yes	Yes	Yes	4	4	2	Note1	Yes	Yes	Yes	Passive	-20 – 80° C
SOM-4461RZ2-S6A2E	Atom N270 1.6 GHz	512 KB	945GSE	36/48-bit	Yes	Yes	Yes	Yes	4	4	2	Note1	Yes	Yes	Yes	Passive	-40 – 85° C

Note1: Select Parallel port function and floppy via BIOS selection. Default mode is Parallel port mode.

Note 2: Passive = fanless; Active = with fan

## Development Board

Part No.	Description
SOM-DB4400-00A2E	Development Board for ETX Rev.A2
SOM-DB4700-00A1E	Development Board for ETX Rev.A1

## Optional Accessories

Part No.	Description
1960012091T00S	Semi-Heatsink 114 x 96 x 15 mm

## Packing List

Part No.	Description	Quantity
-	SOM-4461 CPU Module	1
-	Utility CD	1
1960035037N00B	Heatspreader	1

## Embedded OS

OS	Part No.	Description
WinCE	2070007811	CE 6.0 Pro Intel (852/855/915/945) 2COM V1.2 ENG
Win XPE	2070007912	XPE WES2009 Intel-Uniprocess V4.0 MUI2
QNX		V6.4.1