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With the principle of "Quality Parts,Customers Priority,Honest Operation,and Considerate Service",our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

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SOM-4463 B1

Intel® Atom™ Processor
N455/D525 ETX CPU Module



Features

- Embedded Intel® Atom™ Processor N455 1.66 GHz single Core™/ D525 1.80 GHz dual-Core™ + ICH8M
- Intel® Gen 3.5 DX9, MPEG2 hardware decoder, multiple display: VGA, 18/24-bit LVDS
- Supports DDR3-667 for N455 up to 2GB and DDR3-800 for D525 up to 4GB
- Supports 4 PCI, ISA, 2 IDE, 2 SATAII, 4 USB 2.0
- Supports SUSIAccess and Embedded Software APIs

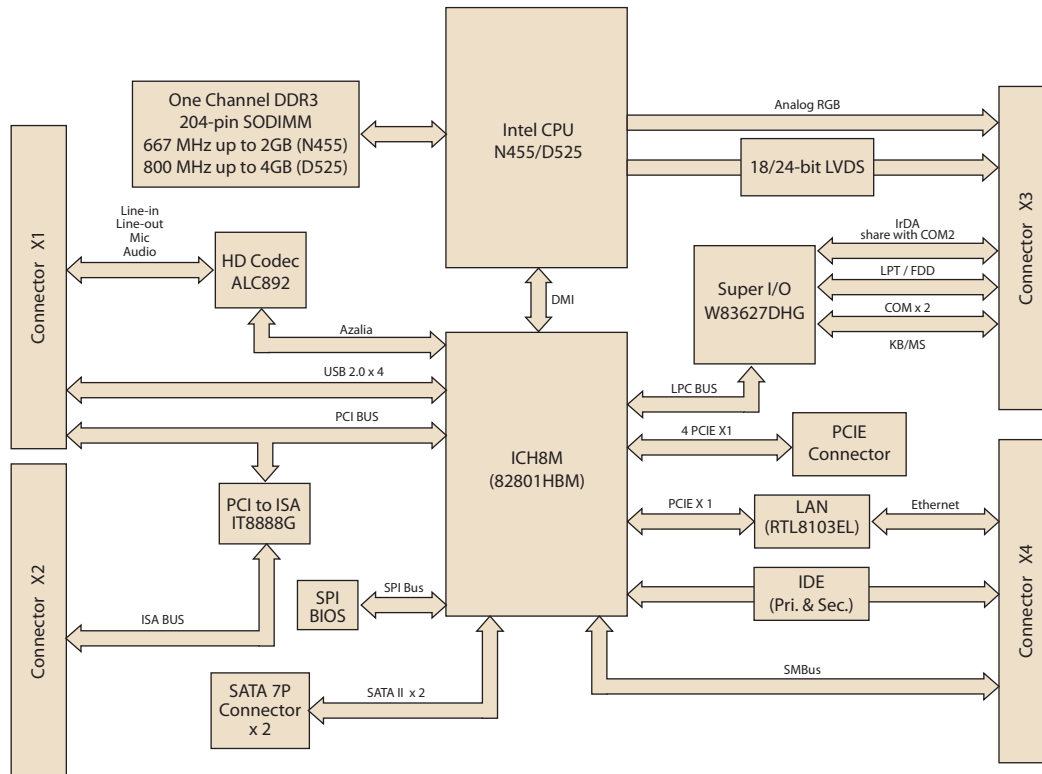
Software APIs:



Specifications

Form Factor		ETX 3.0
Processor System	CPU	Intel Atom N455 1.67 GHz (single Core), 512 KB L2 Cache Intel Atom D525 1.80 GHz (dual Core), 1 MB L2 Cache
	System Chipset	ICH8M
	BIOS	AMI 16 Mbit Flash BIOS
Memory	Technology	DDR3 667 MHz (N455) and 800 MHz (D525)
	Max. Capacity	Up to 2 GB (N455); Up to 4 GB (D525)
	Socket	1 x 204-pin SODIMM socket
Display	Chipset	Intel Atom N455 or Intel Atom D525
	Graphic Engine	Intel Gen 3.5 DX9, MPEG2 hardware decoder
	LVDS	18/24-bit single channel LVDS
	VGA	Intel Atom N455 Single Core up to 1400 x 1050 (SXGA) Intel Atom D525 Dual Core up to 2048 x 1536
	DVI	-
	TV Out	-
	SDVO	-
	Dual Display	CRT + LVDS
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		ISA, 4 PCI masters
I/O	PATA	2 x EIDE (UDMA 100)
	SATA	2 x SATAII (300 MB/s)
	USB	4 x USB 2.0
	Audio	ALC892 Audio
	GPIO	1-bit GPIO, 2-bit GPE
	COM	2 x COM Ports
	FDD/LPT	1 x FDD or LPT
Power	Power Type	ATX, AT
	Power Supply Voltage	+5 V (+5VSB is required for ATX power scheme)
	Power Consumption (Typical)	4463N (2 GB DDRIII 1333) +5 V @ 1.82 A 4463D (2 GB DDRIII 1333) +5 V @ 2.18 A
	Power Consumption (Max, test in HCT)	4463N (2 GB DDRIII 1333) +5 V @ 2.25 A 4463D (2 GB DDRIII 1333) +5 V @ 2.73 A
	Operating Temperature	0 ~ 60° C (32 ~ 140° F)
Environment	Humidity	Operating: 40° C @ 95% relative humidity, non-condensing Storage: 60° C @ 95% relative humidity, non-condensing
	Dimensions	114 x 95 mm (3.74" x 4.5")

Block Diagram



Ordering Information

Part No.	CPU	L2 Cache	Chipset	LVDS	VGA	10/100 LAN	HD Audio	PCI	USB 2.0	SATA	PATA	SMBus	ATX Power	AT Power	Thermal Solution	Operating Temp.
SOM-4463N-S6B1E	Atom N455	512 KB	ICH8M	18/24-bit	Yes	1	Yes	4	4	2 x SATAII	2	1	Yes	Yes	Passive	0 ~ 60° C
SOM-4463D-S8B1E	Atom D525	1 MB	ICH8M	18/24-bit	Yes	1	Yes	4	4	2 x SATAII	2	1	Yes	Yes	Active	0 ~ 60° C
SOM-4463DZ-S8B1E	Atom D525	1 MB	ICH8M	18/24-bit	Yes	1	Yes	4	4	2 x SATAII	2	1	Yes	Yes	Active	-20 ~ 80° C
SOM-4463DZ2-S8B1E	Atom D525	1 MB	ICH8M	18/24-bit	Yes	1	Yes	4	4	2 x SATAII	2	1	Yes	Yes	Active	-40 ~ 85° C
SOM-4463NZ-S6B1E	Atom N455	512 KB	ICH8M	18/24-bit	Yes	1	Yes	4	4	2 x SATAII	2	1	Yes	Yes	Passive	-20 ~ 80° C
SOM-4463NZ2-S6B1E	Atom N455	512 KB	ICH8M	18/24-bit	Yes	1	Yes	4	4	2 x SATAII	2	1	Yes	Yes	Passive	-40 ~ 85° C

Note: Passive = fanless; Active = with fan

Development Board

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

Optional Accessories

Part No.	Description
1960012091T00S	Semi-Heatsink 114 x 96 x 15 mm
1750001980	Semi-Cooler 114 x 96 x 15 mm

Packing List

Part No.	Description	Quantity
-	SOM-4463 CPU Module	1
-	Utility CD	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