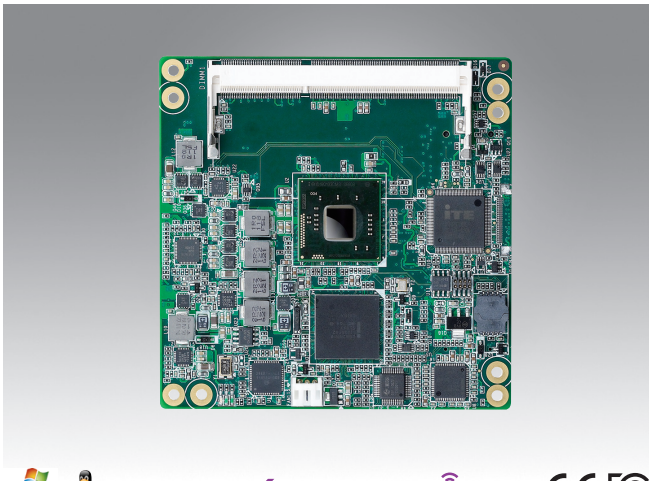
SOM-6765

Intel® Atom™ Processor N2600/N2800/D2550 COM Express® Compact Module



Features

- Embedded Intel® Atom™ Processor N2600/N2800/D2550 + NM10
- Intel® Gfx support DX9 and OpenGL 3.0
- Supports VGA, 18/24 bit LVDS
- Supports DDR3 memory up to 1066 4GB
- Supports 2 PCIe x1, 4 PCI Master, LPC, SMBus, I2C Bus, 2 SATAII, EIDE, 8 USB2.0, GbE
- Supports iManager, SUSIAccess and Embedded Software APIs

Software APIs: Watchdog, I²C, SMBus, H/W Monitor, GPIO, Brightness Control

Windows Embedded

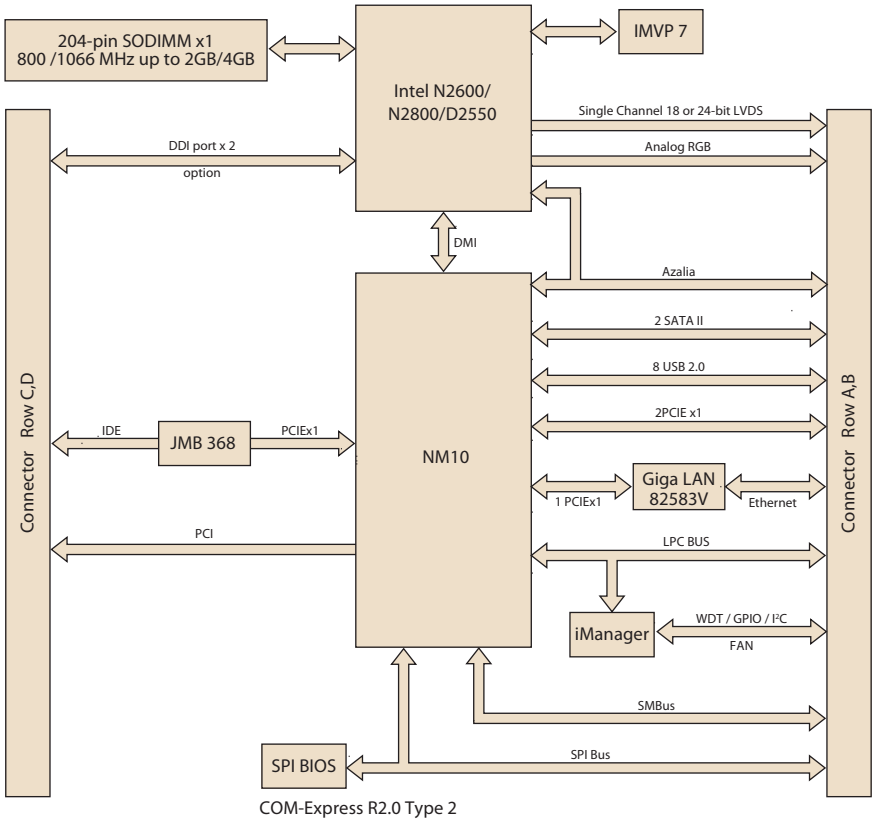
iManager SUSIAccess CE FC

Specifications

Form Factor		COM Express R2.0 Compact Module, Type 2 Pin-out.		
Processor System	CPU	Intel Atom Processor N2600 1.6 GHz, 2 x 512 KB L2 Cache Intel Atom Processor N2800 1.86GHz, 2 x 512 KB L2 Cache Intel Atom Processor D2550 1.86GHz, 2 x 512KB L2 Cache		
	System Chipset	NM10		
	BIOS	AMI EFI 16Mb		
Memory	Technology	Support DDR3 1066 MHz for N2800/D2550, DDR3 800 MHz for N2600		
	Max. Capacity	Up to 4 GB for N2800/D2550, up to 2 GB for N2600		
	Socket	1 x 204-pin SODIMM Socket		
Display	Chipset	Intel Gfx integrated in Atom Processor		
	Graphic Engine	Intel Gfx 640 MHz for N2800/D2550: 400 MHz for N2600, supports DX9, OpenGL 3.0, MPEG2/VC1/H.264 HW Decoder		
	LVDS	18-bit up to 1366x768 for N2600/N2800 and 24-bit up to 1440 x 900 for D2550		
	VGA	1920 x 1200		
	DDI	2 ports shared with HDMI/DVI/DisplayPort (Option)		
	TV Out	-		
	SDVO	-		
	Dual Display	CRT + LVDS, CRT + DDI (Option) LVDS + DDI (Option)		
Ethernet	Chipset	Intel 82583 Gigabit Ethernet		
	Speed	10/100/1000 Mbps		
WatchDog Timer		65536 level timer interval, from 0~65535 sec, multi-level, multi-option watchdog timer		
Expansion		2 PCIe x1 (Option for 4 PCIe x1), 4 PCI masters, LPC, SMBus, I2C Bus		
I/O	PATA	1 EIDE (UDMA 100)		
	SATA	2 SATAII (300 MB/s)		
	USB	8 USB 2.0		
	Audio	High definition audio interface		
	GPIO	8-bit GPIO		
Power	Power Type	ATX, AT		
	Power Supply Voltage	+12 V and +5 VSB for ATX, +12V for AT		
	Power Consumption (Typical)	6765N2600 (2G DDRIII 800) 7.06W @ Vin=12V	6765D2550 (4G DDRII 1066) 8.1W @ Vin=12V	6765N2800 (4G DDRIII 1066) 6.9W @ Vin=12V
	Power Consumption (Max, test in Burn In Test)	6765N2600 (2G DDRIII 800) 9.08W @ Vin=12V	6765D2550 (4G DDRIII 1066) 10.3W @Vin=12V	6765N2800 (4G DDRIII 1066) 9.4W @ Vin=12V
Environment	Temperature	Operating: 0 ~ 60° C (32 ~ 140° F) Storage: -40 ~ 85° C (-40 ~ 185° F)		
	Humidity	Operating: 40° C @ 95% relative humidity, non-condensing storage: 60° C @ 95%relative humidity, non-condensing		
Mechanical	Dimensions	95 x 95 mm (3.74" x 3.74")		

All product specifications are subject to change without notice

Block Diagram



COM-Express R2.0 Type 2

Ordering Information

Part No.	CPU	L2 Cache	Chipset	LVDS	VGA	HDMI/DVI/ DisPlayPort (Option)	Giga LAN	HD Audio	PCIe x1	PCI	USB 2.0	SATA II	LPC	SMBus	I²C Bus	ATX Power	AT Power	Thermal Solution	Operating Temp.
SOM-6765N-S6A1E	Atom N2600	1 MB	NM10	18-bit	Yes	2	1	Yes	2	4	8	2	1	1	1	Yes	Yes	Passive	0 ~ 60° C
SOM-6765NZ-S6A1E	Atom N2600	1 MB	NM10	18-bit	Yes	2	1	Yes	2	4	8	2	1	1	1	Yes	Yes	Passive	-20 ~ 80° C
SOM-6765NZ2-S6A1E	Atom N2600	1 MB	NM10	18-bit	Yes	2	1	Yes	2	4	8	2	1	1	1	Yes	Yes	Passive	-40 ~ 85° C
SOM-6765N-S8A1E	Atom N2800	1 MB	NM10	18-bit	Yes	2	1	Yes	2	4	8	2	1	1	1	Yes	Yes	Passive	0 ~ 60° C
SOM-6765NZ-S8A1E	Atom N2800	1 MB	NM10	18-bit	Yes	2	1	Yes	2	4	8	2	1	1	1	Yes	Yes	Passive	-20 ~ 80° C
SOM-6765NZ2-S8A1E	Atom N2800	1 MB	NM10	18-bit	Yes	2	1	Yes	2	4	8	2	1	1	1	Yes	Yes	Passive	-40 ~ 85° C
SOM-6765D-S8A1E	Atom D2550	1 MB	NM10	24-bit	Yes	2	1	Yes	2	4	8	2	1	1	1	Yes	Yes	Active	0 ~ 60° C
SOM-6765DZ-S8A1E	Atom D2550	1 MB	NM10	24-bit	Yes	2	1	Yes	2	4	8	2	1	1	1	Yes	Yes	Active	-20 ~ 80° C
SOM-6765DZ2-S8A1E	Atom D2550	1 MB	NM10	24-bit	Yes	2	1	Yes	2	4	8	2	1	1	1	Yes	Yes	Active	-40 ~ 85° C

Note: Passive = fanless; Active = with fan

Development Board

Part No.	Description
SOM-DB5720-00A1E	Development Board for COM Express Type2

Optional Accessories

Part No.	Description
1960048815N001	Semi-Heatsink 95 x 95 x 17 mm
1960048819N001	Semi-Cooler 95 x 95 x 33.5 mm with 12V fan

Packing List

Part No.	Description	Quantity
-	SOM-6765 CPU Module	1
1960053504N001	Heatspreader	1