

SOM-6868

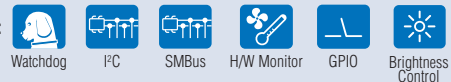
Intel® Pentium® and Celeron® N3000 Series COM Express Compact Module Type 6



Features

- Intel® Pentium®/Celeron® N3000 Series and Atom™ SoC
- PICMG COM Express R2.1 Compact Module Type 6 pin out
- Supports 5 PCIe x1, 4 USB 3.0, 8 USB 2.0
- Rich display interface: LVDS/eDP, HDMI/DP
- Up to 3 independent display
- Supports Wide Range Power input support from 4.75 ~ 20 V
- iManager, WISE-PaaS/RMM, and Embedded Software APIs

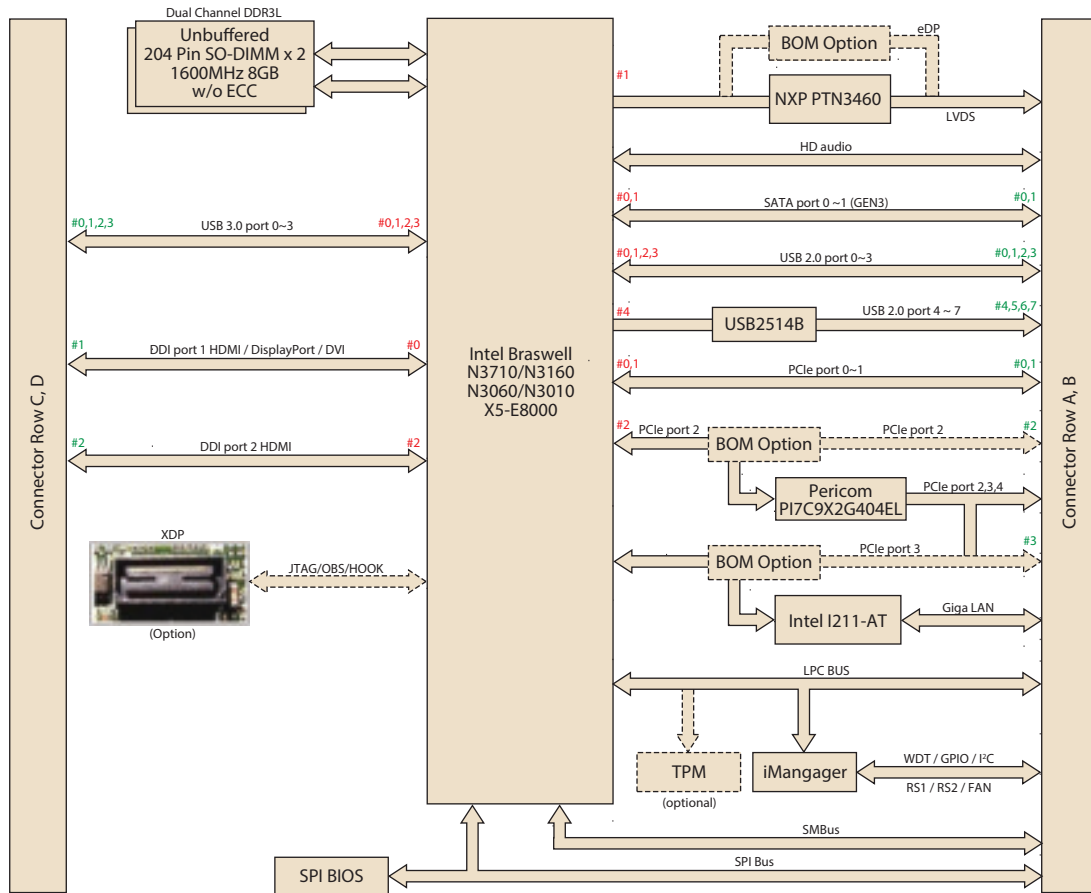
Software APIs:



Specifications

Compliance	Form-Factor	COM Express Compact Module				
	Pin-out Type	COM Express R2.1 Type 6 pin out				
Platform	Processor	Pentium® N3710	Celeron® N3160	Celeron® N3060	Celeron® N3010	Atom™ X5-E8000
	Base Frequency	1.6 GHz	1.6 GHz	1.6 GHz	1.04 GHz	1.04 GHz
	Burst Frequency	2.56 GHz	2.24 GHz	2.48 GHz	2.24 GHz	2 GHz
	Core/Tread	4/4	4/4	2/2	2/2	4/4
	LLC	2 MB	2 MB	2 MB	2 MB	2 MB
	CPU TDP	6 W	6 W	6 W	4 W	5 W
	BIOS	AMI UEFI BIOS @ 64 Mb				
Memory	Technology	dual channel DDR3L-1600 MHz				
	ECC Support	not supported				
	Channel/Socket	dual channels / 2 sockets				
	Max. Capacity	Up to 8 GB				
Graphics	Controller	Intel® HD Graphics				
	Base/Turbo Freq.	400/700 MHz	320/640 MHz	320/600 MHz	320/600 MHz	320/320 MHz
	Graphics Memory	TBD				
	3D/HW Acceleration	DX 11.1, OpenGL 4.2, OpenGL ES 3.0, OpenCL 1.2, HW Decode: H.265, H.264, MPEG2.MVC, CV-1, WMV9, VP8, JPEG/MJPEG HW Encode: H.264, MVC, JPEG/MJPEG				
Display	LCD	LVDS dual channel 18/24-bit LVDS, up to 1920 x 1200 @ 60 Hz option support eDP1.4 a: 2560 x 1440 @ 60 Hz 24 bpp				
	DDI	2 DDI ports support DP, DVI, or HDMI DP1.1 a: 3840 x 2160 @ 30 Hz or 2560 x 1600 @ 60 Hz, 24 bpp HDMI1.4 b: 3840 x 2160 @ 30 Hz or 2560 x 1600 @ 60 Hz, 24 bpp DVI up to 1920 x 1080 @ 60 Hz				
	Multiple Display	3 independent display				
	PCI Express	5 PCIe x1 option: support PCIe x4 only while remove PCIe & GbE Chips, Configurable to 4 x1, 1 x4, 2 x2, 1 x1 + 2 x1				
Expansion	Audio Interface	HD audio interface				
	LPC	Yes				
Serial Bus	SMBus	Yes				
	I²C Bus	Yes				
Ethernet	Controller	Intel® i211AT				
	Speed	10/100/1000 Mbps				
I/O	SATA	2 port support SATA Gen 3 (6 GB/s)				
	USB	4 port support USB 3.0				
	USB	8 port support USB 2.0				
	SPI Bus	support SPI BIOS EEPROM				
	GPIO	8-bit GPIO				
	Watchdog	65536 level, 0 ~ 65535 sec				
	COM Port	2 ports				
	Express Card	2 ports				
	TPM	option TPM1.2				
	Smart Fan	2 ports; 1 port on COM module support 12V fan ; 1 Port on carrier board				
Power	Type	ATX: Vin, VSB; AT: Vin				
	Supply Voltage	Vin: 4.75 V (5-5%) ~ 20 V (19+5%), VSB: 5 V ±5%, RTC Battery: 2.0-3.3 V				
	Power Consumption	TBD				
	Temperature	operating standard: 0 ~ 60° C (32 ~ 140° F) storage: -40 ~ 85° C (-40 ~ 185° F)				
Environment	Humidity	operating: 40° C @ 95% relative humidity, non-condensing storage: 60° C @ 95% relative humidity, non-condensing				
	Vibration Resistance	3.5 Grms				
Mechanical	Dimensions	95 x 95 mm (3.74" x 3.74")				

Block Diagram



Ordering Information

Part No.	CPU	Frequency Base/Burst	CPU TDP	Core	DDR3L Memory	LVDS	DDI	Giga Lan	HD Audio	PCIe x1	USB 2.0	USB 3.0	SATA III	LPC	Power	Thermal Solution	Operating Temperature
SOM-6868PC-S6A1E	Pentium® N3710	1.6/2.56 GHz	6 W	4	DDR3-L 1600 MHz	18/24-bit	2	1	Yes	5	8	4	2	Yes	AT/ATX	Passive	0 ~ 60° C
SOM-6868RC-S6A1E	Celeron® N3160	1.6/2.24 GHz	6 W	4	DDR3-L 1600 MHz	18/24-bit	2	1	Yes	5	8	4	2	Yes	AT/ATX	Passive	0 ~ 60° C
SOM-6868RC-S5A1E	Celeron® N3060	1.6/2.48 GHz	6 W	2	DDR3-L 1600 MHz	18/24-bit	2	1	Yes	5	8	4	2	Yes	AT/ATX	Passive	0 ~ 60° C
SOM-6868RC-S0A1E	Celeron® N3010	1.04/2.24 GHz	4 W	2	DDR3-L 1600 MHz	18/24-bit	2	1	Yes	5	8	4	2	Yes	AT/ATX	Passive	0 ~ 60° C
SOM-6868AC-S0A1E	Atom™ X5-E8000	1.04/2 GHz	5W	4	DDR3-L 1600 MHz	18/24-bit	2	1	Yes	5	8	4	2	Yes	AT/ATX	Passive	0 ~ 60° C

Development Board

Part No.	Description
SOM-DB5800-00A2E	COM Express Development Board A2 Type 6 Pin-out

Packing List

Part No.	Description	Quantity
-	SOM-6868 CPU Module	1
1960075199N001	HeatSpreader	1

Optional Accessories

Part No.	Description
1960048815N001	Semi-Heatsink 95 x 95 x 16.25 mm
1960048819N001	Semi-Cooler 95 x 95 x 33 mm

Embedded OS

OS	Part No.	Description
WES8.1	TBD	TBD
WES10	TBD	TBD