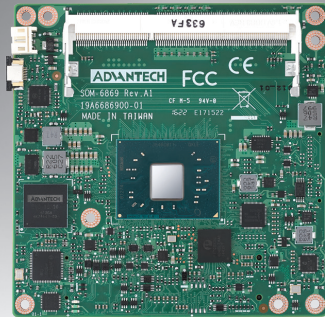


# SOM-6869

## Intel® Pentium® N4200, Celeron® N3350, and Atom® E3900 Series COM Express Compact Module Type 6

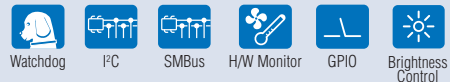
Preliminary



### Features

- Intel® Pentium®, Celeron® and Atom® SoC
- PICMG COM Express R2.1 Compact Module Type 6 pin out
- Supports 5 PCIe x1, 2 USB 3.0, 8 USB 2.0
- Rich display interface: LVDS/eDP, HDMI/DP/VGA
- Supports up to 3 simultaneous display
- Native extended temperature
- Supports wide range power input from 4.75 ~ 20 V
- iManager, WISE-PaaS/RMM, and Embedded Software APIs

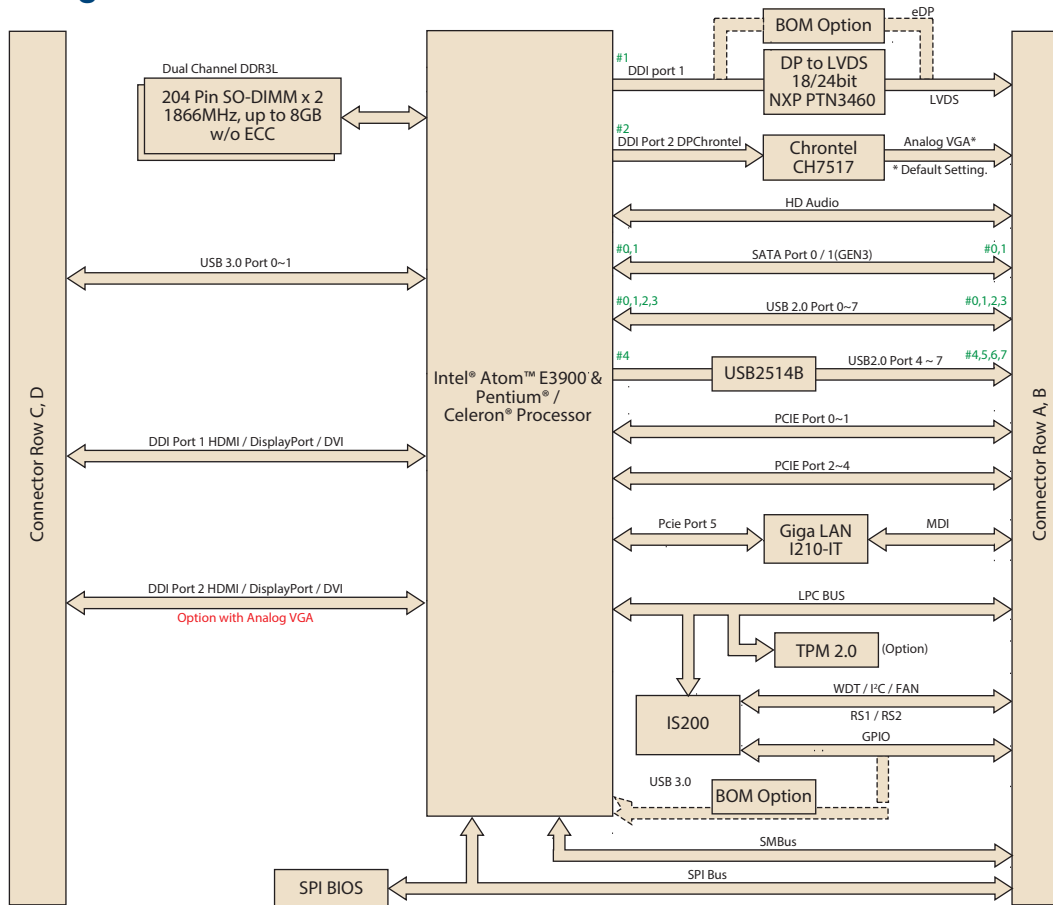
Software APIs:



### Specifications

Compliance	Form-Factor	COM Express Compact Module				
	Pin-out Type	COM Express R2.1 Type 6 pin out				
Platform	Processor	Pentium® N4200	Celeron® N3350	Atom® x7-E3950	Atom® x5-E3940	Atom® x5-E3930
	Base Frequency	1.1GHz	1.1GHz	1.6GHz	1.6GHz	1.3GHz
	Turbo Boost Freq.	2.5GHz	2.4GHz	2.0GHz	1.8GHz	1.8GHz
	Core	4	2	4	4	2
	LLC	2 MB	2 MB	2 MB	2 MB	2 MB
	CPU TDP	6 W	6 W	12 W	9 W	6 W
	BIOS	AMI UEFI BIOS @ 64 Mb				
Memory	Technology	Dual channel DDR3L 1866 MT/s				
	ECC Support	Not supported				
	Channel/Socket	Dual Channels / 2 sockets				
	Max. Capacity	Up to 8 GB				
Graphics	Controller	Intel® HD Graphics 505	Intel® HD Graphics 500	Intel® HD Graphics 505	Intel® HD Graphics 500	Intel® HD Graphics 500
	Base/Turbo Freq.	750MHz	650MHz	650MHz	600MHz	550MHz
	Graphics Memory	TBD				
Display	3D/HW Acceleration	DX (9.3, 10, 11.3, 12), OpenGL 4.3, OGL ES 3.0, OpenCL 2.0 HEVC (H.265) @ L5, H.264 @ 5.2, MVC, MPEG2, VP8, VP9, VC-1, WMV9, JPEG/MJPEG HW Decode, HEVC (H.265) @ L4, H.264 @ 5.2, MVC, VP8, VP9, JPEG/MJPEG HW Encode				
	VGA	1 port up to 1920 x 1200				
	LCD	Dual Channel 18/24-bit LVDS, up to 1920 x 1200 Multi-independent display: Up to 3 simultaneous display (1 Internal + 2 Externals) Resolution: <ul style="list-style-type: none"> <li>▪ HDMI1.4b: 3840 x 2160 @ 30Hz</li> <li>▪ DP1.2a: 4096 x 2160 @ 60Hz</li> <li>▪ eDP1.4: 4096 x 2160 @ 60Hz</li> </ul>				
Expansion	PCI Express x1	5 PCIe x1, configurable to x4 or x2				
	Audio Interface	Intel HD Audio Interface				
	LPC	Yes				
Serial Bus	SMBus	Yes				
	I²C Bus	Yes				
Ethernet	Controller	Intel i210				
	Speed	10/100/1000 Mbps				
	SATA	2 ports to support SATA Gen 3 (6 GB/s)				
	USB3.0	2 ports				
	USB2.0	8 ports				
	SPI Bus	Support SPI BIOS EEPROM				
	GPIO	8-bit GPIO programmable				
	Watchdog	1ms to 4 hours trigger durations				
	COM Port	2				
	Express Card	2				
Power	Type	ATX: Vin, VSB; AT: Vin				
	Supply Voltage	Vin: 4.75V (5-5%) ~ 20V (19+10%); VSB: 5 +/-5%				
	Power Consumption	TBD				
	Temperature	Operating Standard: 0 ~ 60° C (32 ~ 140° F), Extend: -40 ~ 85° C (-40 ~ 185° 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	Vibration Resistance	3.5 Grms				
	Dimensions	95 x 95 mm (3.74" x 3.74")				

## Block Diagram



## Ordering Information

Part No.	CPU	Frequency Base/Burst	Core	CPU TDP	DDR3L Memory	LVDS	VGA	DDI	Giga LAN	HD Audio	PCIE x 1	USB 2.0	USB 3.0	SATAIII	LPC	Power	Thermal Solution	Operating Temperature
SOM-6869RC-S1A1E	Celeron N3350	1.1/2.4 GHz	2C	6W	DDR3L-1866 MHz	18/24-bit	1	2	1	Yes	5	8	2	2	Yes	AT/ATX	Passive	0 ~ 60° C
SOM-6869PC-S2A1E	Pentium N4200	1.1/2.5 GHz	4C	6W	DDR3L-1866 MHz	18/24-bit	1	2	1	Yes	5	8	2	2	Yes	AT/ATX	Passive	0 ~ 60° C
SOM-6869AC-S3A1E	Atom x5-E3930	1.3/1.8 GHz	2C	6.5W	DDR3L-1866 MHz	18/24-bit	1	2	1	Yes	5	8	2	2	Yes	AT/ATX	Passive	0 ~ 60° C
SOM-6869AC-S6A1E	Atom x5-E3940	1.6/1.8 GHz	4C	9.5W	DDR3L-1866 MHz	18/24-bit	1	2	1	Yes	5	8	2	2	Yes	AT/ATX	Passive	0 ~ 60° C
SOM-6869AC-S7A1E	Atom x7-E3950	1.6/2.0 GHz	4C	12W	DDR3L-1866 MHz	18/24-bit	1	2	1	Yes	5	8	2	2	Yes	AT/ATX	Passive	0 ~ 60° C

## Packing List

Part No.	Description	Quantity
-	SOM-6869 CPU Module	1
1960080793T000	SOM-6869 non-I-APL Heatspreader (N4200 & N3350)	1
1960080792T000	SOM-6869 I-APL 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
Win10	2070015008	img W10 16EL SOM-6869 64bit 1701 Eng

## Development Board

Part No.	Description
SOM-DB5800-00A2E	COMe Devel. Board Type6 pint-out Rev. A2