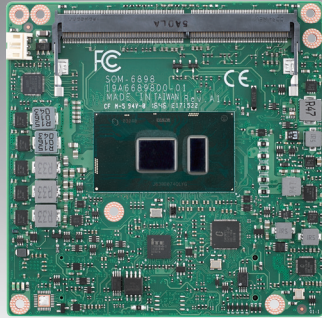


# SOM-6898

## 7<sup>th</sup> Gen Intel Core/Celeron Processors COM Express Compact Module Type 6

**NEW**



### Features

- 7<sup>th</sup> Gen Intel Core i7/i5/i3/Celeron w/ integrated PCH-LP
- Support Dual Channel DDR4 2133 SODIMM up to 32GB
- Integrated GFX supports HEVC, VP8, VP9 HW Transcode
- Flexible PCI Express up to 8 lanes
- Supports iManager, WISE-PaaS/RMM, and Embedded Software APIs

**Software APIs:**

- Watchdog
- IPC
- SMBus
- H/W Monitor
- GPIO
- Brightness Control

**Utilities:**

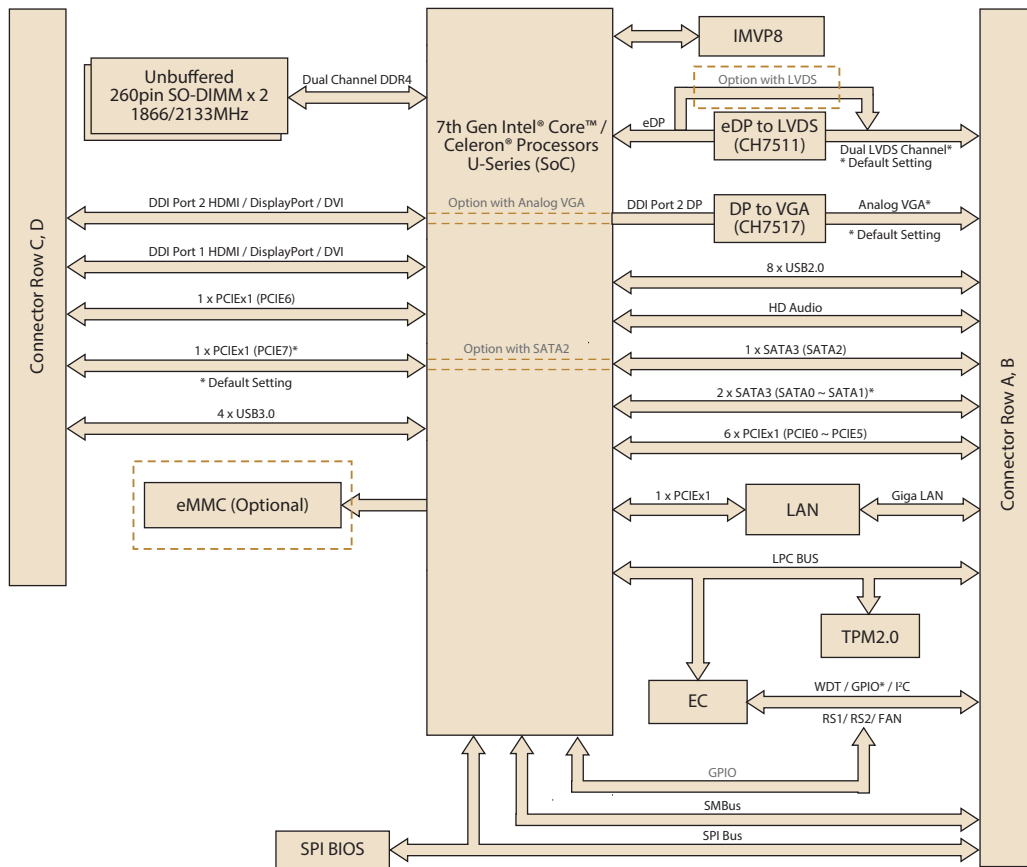
- BIOS flash
- Monitoring
- Embedded Security ID



### Specifications

Compliance	Form-Factor	COM Express Compact Module			
	Pin-out Type	COM Express R2.1 Type 6 pin out			
Platform	SoC	i7-7600U	i5-7300U	i3-7100U	Celeron3965U
	Base Frequency	2.8 GHz	2.6 GHz	2.4 GHz	2.2 GHz
	Turbo Boost Freq.	3.9 GHz	3.5 GHz	N/A	N/A
	Core/Tread	2/4	2/4	2/4	2/2
	LLC	4M	3M	3M	2M
	CPU TDP	15W	15W	15W	15W
	Chipset	integrated in CPU			
	BIOS	AMI EFI BIOS			
Memory	Technology	DDR4 2133			
	ECC Support	Not supported			
	Channel/Socket	Dual channels / 2 sockets			
	Max. Capacity	32GB			
Graphics	Controller	Intel® HD Graphics 620	Intel® HD Graphics 620	Intel® HD Graphics 620	Intel® HD Graphics 610
	Base/Turbo Freq.	300MHz/1.15GHz	300MHz/1.10GHz	300MHz/1GHz	300MHz/900MHz
	Graphics Memory	Intel DVMT			
	3D/HW Acceleration	Direct3D 2015/11.2/11.1/10/9, Direct2D, OpenGL 5.0, OpenCL 2.1/2.0/1.2 HW Decode: H.265/HEVC, H.264/AVC, VP9, VP8, MPEG2, WMV9/VC1, JPEG/MJPEG HW Encode: H.265/HEVC, H.264/AVC, VP9, VP8, MPEG2, JPEG			
	VGA	Support up to 1920 x 1200 @ 60 Hz			
Display	LCD	LVDS support 2 channels 18/24-bit, up to 1920 x 1200 @ 60Hz Optional eDP up to 3840 x 2160 @ 60Hz 24bpp or 4096 x 2304 @ 60Hz 24bpp			
	DDI	1 Ports, optional 2 while remove VGA, configurable to HDMI1.4/DVI/Displayport1.2 HDMI up to 4096 x 2160 @ 24Hz 24bpp DVI up to 1920 x 1080 @ 60Hz DP up to 3840 x 2160 @ 60Hz 24bpp or 4096 x 2304 @ 60Hz 24bpp			
	Multiple Display	Support 3 independent display			
	PCI Express x16	Not available			
	PCI Express x1	PCI Express Gen3 (8.0 GT/s) 4 PCIe x1 + 1 PCIe x4, 5 PCIe x1 (Optional)			
Expansion	Audio Interface	Intel HD Audio			
	LPC	Yes (24MHz)			
Serial Bus	SMBus	Yes			
	IPC Bus	Yes			
Ethernet	Controller	Intel i219LM			
	Speed	10/100/1000 Mbps			
I/O	SATA	Supports 2 SATA 3.0 (6 Gbit/s), optional support 3 SATA 3.0 (6 Gbit/s) Support RAID 0/1/5/10, AHCI 1.3/1.3.1			
	USB3.0	4 Ports			
	USB2.0	8 Ports			
	SPI Bus	For BIOS only			
	GPIO	8-bit GPIO			
	eMMC	Optional			
	Watchdog	65536 level, 0 ~ 65535 sec			
	COM Port	2 Ports (2-wire, support console redirection)			
	Express Card	2 ports			
	TPM	TPM2.0 (Infineon SLB9665)			
	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: 8.5V (9V-5%) ~ 20V (19+5%); VSB: 5V ±5%			
	Power Consumption	Burn in: 17.9W Idle: 4.4W *Only for reference and will depends on custom software loading, detail refer to user manual			
Environment	Temperature	Operating : 0 ~ 60° C (32 ~ 140° F) (Extend model -40 ~ 85° C) Storage : -40 ~ 85° C (-40 ~ 185° F)			
	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.	SoC	Base/Turbo Boost Freq.	Core	LLC	CPU TDP	DDR4 Memory	Thermal Solution	Operating Temperature
SOM-6898C7-U8A1E	i7-7600U	2.8GHz / 3.9GHz	2	4MB	15W	Non-ECC	Active	0 ~ 60° C
SOM-6898C5-U6A1E	i5-7300U	2.6GHz / 3.5GHz	2	3MB	15W	Non-ECC	Active	0 ~ 60° C
SOM-6898C3-U4A1E	i3-7100U	2.4GHz / N/A	2	3MB	15W	Non-ECC	Active	0 ~ 60° C
SOM-6898CR-U4A1E	Celeron 3965U	2.2GHz / N/A	2	2MB	15W	Non-ECC	Active	0 ~ 60° C
SOM-6898C7Z2-U8A1E	i7-7600U	2.8GHz / 3.9GHz	2	4MB	15W	Non-ECC	Active	-40 ~ 85° C
SOM-6898C5Z2-U6A1E	i5-7300U	2.6GHz / 3.5GHz	2	3MB	15W	Non-ECC	Active	-40 ~ 85° C
SOM-6898C3Z2-U4A1E	i3-7100U	2.4GHz / N/A	2	3MB	15W	Non-ECC	Active	-40 ~ 85° C
SOM-6898CRZ2-U4A1E	Celeron 3965U	2.2GHz / N/A	2	2MB	15W	Non-ECC	Active	-40 ~ 85° C

Note: Any other sku or combination is project based support. Please contact sales for details.

## Development Board

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

## Packing List

Part No.	Description	Quantity
-	SOM-6898 CPU module	1
1960080159N000	Heatspreader	1

## Optional Accessories

Part No.	Description
1960048819N001	Semi-Cooler 95 x 95 x 33.5 mm with 12V Fan
96LEDK-I057VG50NA1	5.7" LED PANEL 500N 640X480(G)
96LEDK-A084SV45NB2	8.4" LED PANEL 450N 800X600(G) G084SN05 V9
96LEDK-C150XG40NG1	15" LED PANEL 400N 1024X768(G) G150XGE-L04
96LEDK-A170SX35NF1	17" LED 350N 1280X1024(G) G170EG01 V1

## Embedded OS

OS	Part Number	Description
Win10	2070015199	img W10 16HL SOM-6898 64b 1701 ENU
Win10	2070015200	img W10 16VL SOM-6898 64b 1701 ENU
Win10	2070015201	img W10 16EL SOM-6898 64b 1701 ENU