

# SOM-6894

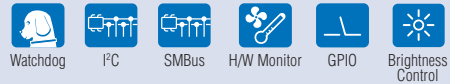
## Intel® Core™ i7/i5/i3/Celeron® Processor COM Express® Compact Module



### Features

- Embedded Intel® Core™ i7/i5/i3/Celeron® processor (U-Processor Line)
- Supports Dual Channel DDR3L 1600 SODIMM sockets up to 16 GB
- Supports 4 PCIe x1, 8 USB 2.0, 2 USB3.0, 4 SATA, 1 GbE
- Supports 3 independent displays: VGA, LVDS, HDMI/DisplayPort/DVI
- Supports iManager, SUSIAccess and Embedded Software APIs

#### Software APIs:

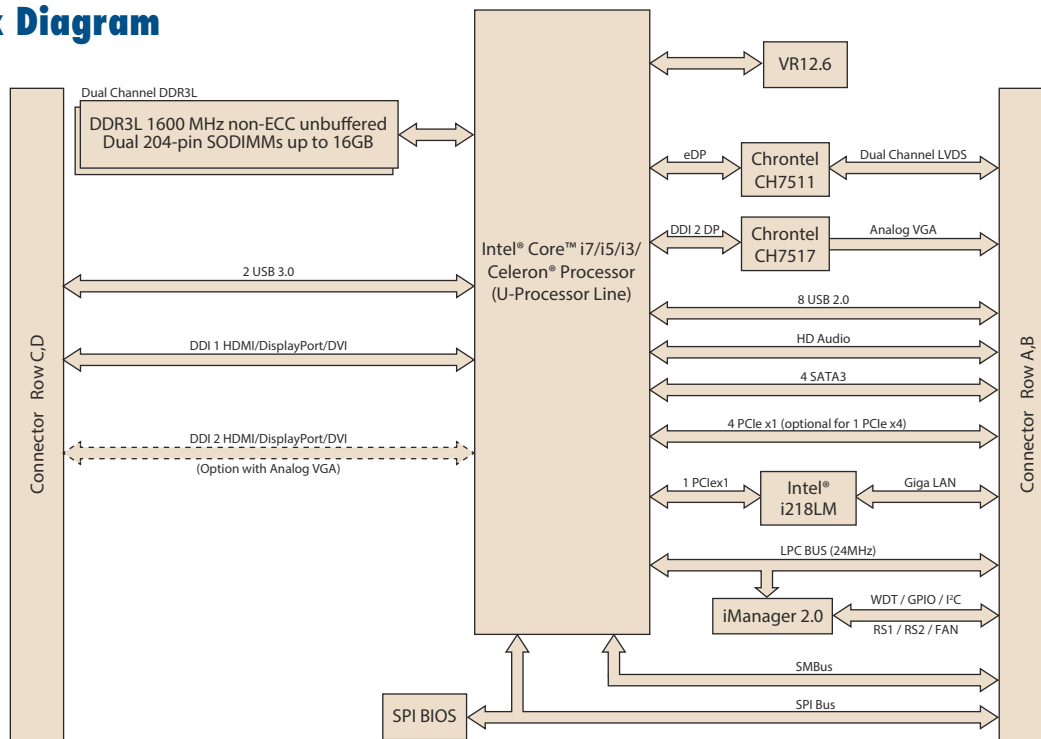


iManager susiAccess CE FCC

### Specifications

Form Factor	Form Factor	COM Express 2.1			
	Pin-out Type	Compact Module, Type 6 Pin-out			
Processor System	CPU + PCH	Intel® 4 <sup>th</sup> Gen. Processor Intel® i7-4650U	Intel® i5-4300U	Intel® i3-4010U	Celeron 2980U
	Base Frequency	1.7GHz	1.9GHz	1.7GHz	1.6GHz
	Intel Turbo Boost Frequency 2.0	3.3GHz	2.9GHz	N/A	N/A
	Max Single Core Turbo Frequency				
	Core/Thread	2	2	2	2
	LLC	4MB	3MB	3MB	2MB
	CPU TDP	15W	15W	15W	15W
	BIOS	AMI UEFI BIOS @ 128 Mb			
Memory	Technology	DDR3L 1600MHz non-ECC unbuffered			
	Max. Capacity	16GB			
	Socket	Two 204P SODIMMs			
Graphics	Controller	Intel® HD graphics 5000	Intel® HD graphics 4400	Intel® HD Graphics 4400	Intel® HD Graphics
	Max. Frequency	1.1 GHz	1.1 GHz	1 GHz	1 GHz
	Graphic Memory	Intel® DVM T 5.0 support up to 1024MB video memory			
	3D/HW Acceleration	DX 11.1, OGL 3.2, OCL 1.2 support			
Display	VGA	1920 x 1200			
	LCD (TTL/LVDS/eDP)	Single and dual channel 18/24-bit LVDS			
	DDI (HDMI/DVI/DisplayPort)	DDI 1: support HDMI, DisplayPort, DVI (DDI 2: Optional)			
	Dual Display	VGA, LVDS (Default)			
	Triple Display	VGA, LVDS, HDMI/DisplayPort/DVI			
Expansion	PCI Express x1	4 PCIe x1 (optional for 1 PCIe x4)			
	Audio Interface	HD Audio			
	LPC	Yes (24MHz)			
Serial Bus	SMBus	Yes			
	I <sup>2</sup> C Bus	Yes			
Ethernet	Controller	Intel® i218LM			
	Speed	10/100/1000 Mbps			
I/O	SATA	4 Ports, Support Gen2 (3 Gb/s) and Gen3 (6Gb/s), RAID 0, 1, 5, 10			
	USB3.0	2 Ports			
	USB2.0	8 Ports			
	GPIO	8-bit GPIO			
	Watchdog	65536 level, 0 ~ 65535 sec			
	COM Port	2 Ports (2-Wire)			
	Smart Fan	2 Ports; 1 Port on COM Module. Support 12V Fan, 1 Port on Carrier Board			
Power	Type	ATX, AT			
	Supply Voltage	ATX (Vin 4.75-20V, Vsb 4.75-5.25V) AT (Vin 4.75-20V)			
	Power Consumption (Max.)	+12V @ 1.84A (i7-4650U), 1.79A (i5-4300U), 1.8A (i3-4010U), 1.73A (Celeron 2980U)			
	Power Consumption (Idle)	+12 V @ 0.37A (i7-4650U), 0.35A (i5-4300U), 0.37A (i3-4010U), 0.34A (Celeron 2980U)			
Environment	Temperature	Operating: 0 ~ 60° C (32 ~ 140° F) Storage: -20 ~ 80° C (-4 ~ 176° 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.	CPU + PCH	Freq.	CPU TDP	LLC	DDR3L Memory	LVDS	VGA	DDI	Giga LAN	HDA	PCIe x1	USB 2.0	USB 3.0	SATA III	LPC	Power	Thermal Solution	Operating Temperature
SOM-6894C7-S7A1E	Intel® i7-4650U	1.7GHz	15W	4M	Non-ECC	18/24 bit	Yes	2*	1	Yes	4	8	2	4	Yes	AT/ATX	Active	0 ~ 60° C
SOM-6894C5-S9A1E	Intel® i5-4300U	1.9GHz	15W	3M	Non-ECC	18/24 bit	Yes	2*	1	Yes	4	8	2	4	Yes	AT/ATX	Active	0 ~ 60° C
SOM-6894C3-S7A1E	Intel® i3-4010U	1.7GHz	15W	3M	Non-ECC	18/24 bit	Yes	2*	1	Yes	4	8	2	4	Yes	AT/ATX	Active	0 ~ 60° C
SOM-6894CR-S6A1E	Celeron 2980U	1.6GHz	15W	2M	Non-ECC	18/24 bit	Yes	2*	1	Yes	4	8	2	4	Yes	AT/ATX	Active	0 ~ 60° C
SOM-6894C7Z-S7A1E	Intel® i7-4650U	1.7GHz	15W	4M	Non-ECC	18/24 bit	Yes	2*	1	Yes	4	8	2	4	Yes	AT/ATX	Active	-20 ~ 80° C
SOM-6894C5Z-S9A1E	Intel® i5-4300U	1.9GHz	15W	3M	Non-ECC	18/24 bit	Yes	2*	1	Yes	4	8	2	4	Yes	AT/ATX	Active	-20 ~ 80° C
SOM-6894C3Z-S7A1E	Intel® i3-4010U	1.7GHz	15W	3M	Non-ECC	18/24 bit	Yes	2*	1	Yes	4	8	2	4	Yes	AT/ATX	Active	-20 ~ 80° C
SOM-6894CRZ-S6A1E	Celeron 2980U	1.6GHz	15W	2M	Non-ECC	18/24 bit	Yes	2*	1	Yes	4	8	2	4	Yes	AT/ATX	Active	-20 ~ 80° C

\*-DDI2 is optional

Note: Passive = fanless; Active = with fan

## Development Board

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

## Packing List

Part No.	Description	Quantity
-	SOM-6894 CPU Module	1
1960062204N001	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 No.	Description
WE8S (32bit)	2070012296	img WE8S SOM-6894 V5.1.4 x86 Eng
WE8S (64bit)	2070012484	img SOM-6894 WE8S7P x64 V5.6.4 Eng
WE8S (32bit)	2070012249	img WE8S SOM-6894 x86 V6.0.0 Eng
WE8S (64bit)	2070012423	img WE8S SOM-6894 x64 V6.5.0 Eng
Linux	2070012218	Linux Ubuntu13.04