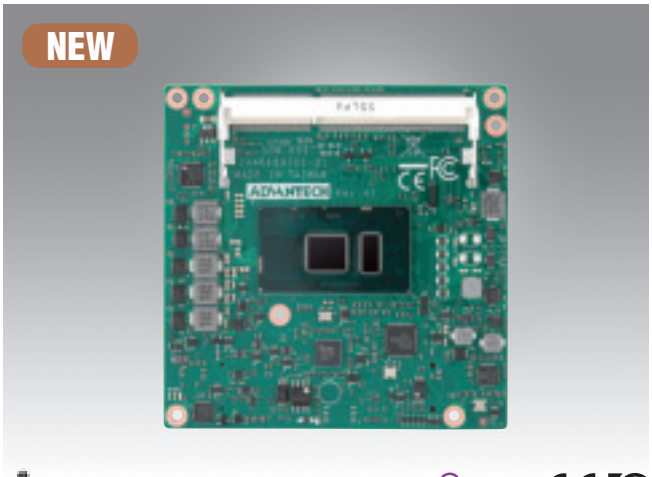
SOM-6897

6th Gen Intel Core/Celeron Processors
COM Express Compact Module Type 6



Windows Embedded iManager SUSIAccess CE FC

Features

- 6th Gen Intel Core i7/i5/i3/Celeron w/ integrated PCH-LP
- Support Dual Channel DDR3L-1600 SODIMM up to 16GB
- Integrated GFx supports HEVC, VP8, VP9 HW Transcode
- Flexible PCI Express up to 8 lanes
- Supports iManager SUSIAccess, and Embedded Software APIs

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

Utilities: BIOS flash, Monitoring, Embedded Security ID

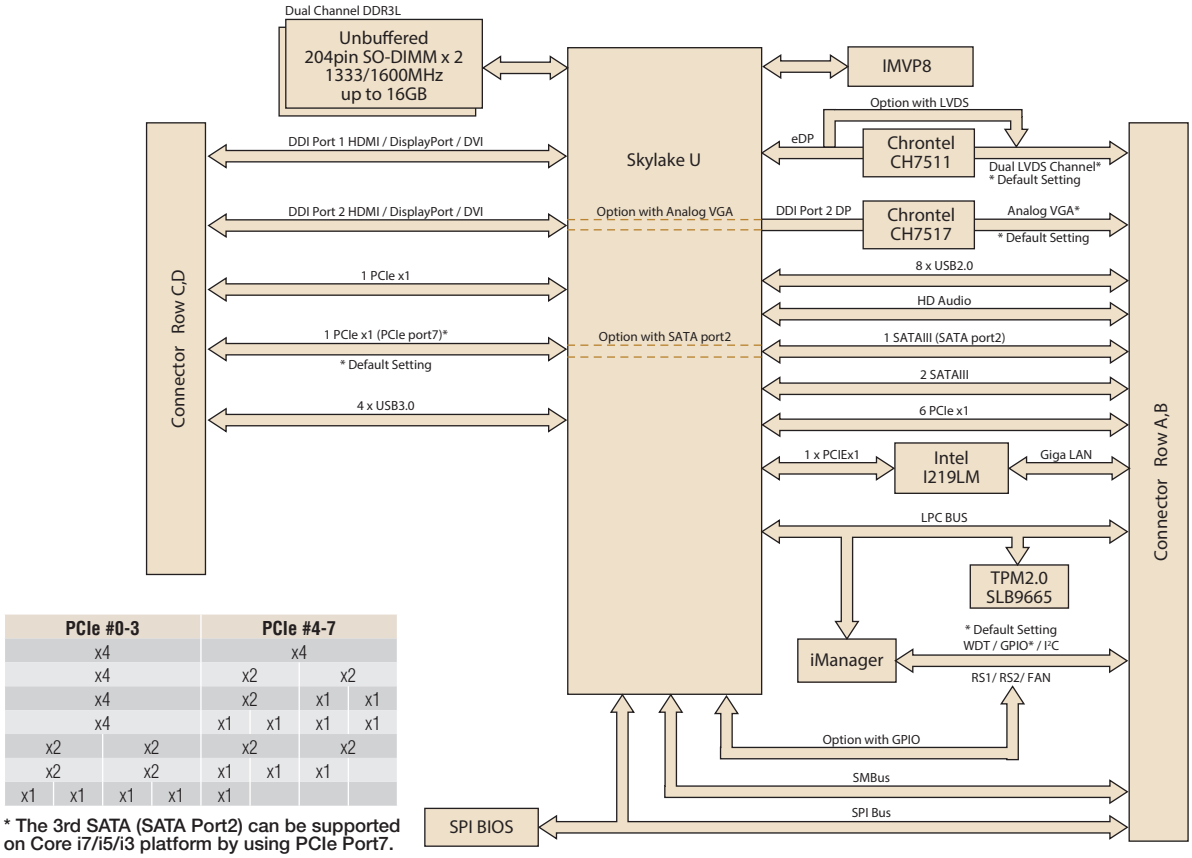
Specifications

Compliance	Form-Factor	COM Express Compact Module			
	Pin-out Type	COM Express R2.1 Type 6 pin out			
Platform	Processor	i7-6600U	i5-6300U	i3-6100U	Celeron 3955U
	Base Frequency	2.6 GHz	2.4 GHz	2.3 GHz	2.0 GHz
	Turbo Boost Freq.	3.4 GHz	3.0 GHz	N/A	N/A
	Core/Tread	2/4	2/4	2/4	2C/2T
	LLC	4 MB	3 MB	3 MB	2 MB
	CPU TDP	15W	15W	15W	15W
	Chipset	Integrated PCH-LP			
	BIOS	AMI EFI BIOS			
Memory	Technology	DDR3L (1.35V)-1600MHz			
	ECC Support	Not supported			
	Channel/Socket	Dual channels / 2 sockets			
	Max. Capacity	Up to 16GB			
Graphics	Controller	Intel Gen 9 LP GT2	Intel Gen 9 LP GT2	Intel Gen 9 LP GT2	Intel Gen 9 LP GT1
	Base/Turbo Freq.	300/1050MHz	100/1000 MHz	100/1000 MHz	100/900 MHz
	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			
Display	VGA	Support up to 1920 x 1200 @ 60 Hz			
	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			
Expansion	PCI Express x16	Not available			
	PCI Express x1	PCI Express Gen3 (8.0 GT/s) 5 PCIe x1 or 4 PCIe x1 + 1 PCIe x4 (support up to 5 devices and 8 lanes)			
	Audio Interface	Intel HD Audio Interface			
	LPC	Yes (24MHz)			
Serial Bus	SMBus	Yes			
	I²C Bus	Yes			
Ethernet	Controller	Intel i219LM			
	Speed	10/100/1000 Mbps			
I/O	SATA	Supports 2 SATA Gen 3 (6Gb/s), i7/i5 optional support 3 SATA while PCIe supporting downgraded Support RAID 0/1/5/10, AHCI 1.3			
	USB3.0	4 Ports			
	USB2.0	8 Ports			
	SPI Bus	For BIOS only			
	GPIO	8-bit GPIO			
	Watchdog	65536 level, 0 ~ 65535 sec			
	COM Port	2 Ports (2-wire)			
	Express Card	2 Ports			
	TPM	Optional 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: (16GB DDR3L 1600) i3-6100U +12V @ 12.81W Idle: (16GB DDR3L 1600) i3-6100U +12V @ 2.76W *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 TBD) 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")			

All product specifications are subject to change without notice.

Last updated: 30-May-2018

Block Diagram



PCIe #0-3				PCIe #4-7			
x4				x4			
x4				x2		x2	
x4				x2		x1	x1
x4				x1	x1	x1	x1
x2		x2		x2		x2	
x2		x2		x1	x1	x1	
x1	x1	x1	x1	x1			

* The 3rd SATA (SATA Port2) can be supported on Core i7/i5/i3 platform by using PCIe Port7.

Ordering Information

Part No.	CPU	Freq.	Core	Graphic	SATA	Thermal Solution	Operating Temperature
SOM-6897C7-U6A1E	i7-6600U	2.6GHz	2	Gen 9 GT2	2	Active	0 ~ 60° C
SOM-6897C5-U4A1E	i5-6300U	2.4GHz	2	Gen 9 GT2	2	Active	0 ~ 60° C
SOM-6897C3-U3A1E	i3-6100U	2.3GHz	2	Gen 9 GT2	2	Active	0 ~ 60° C
SOM-6897CR-U0A1E	Celeron 3955U	2.0GHz	2	Gen 9 GT1	2	Active	0 ~ 60° C
SOM-6897C7Z2-U6A1E	i7-6600U	2.6GHz	2	Gen 9 GT2	2	Active	-40 ~ 85° C
SOM-6897C5Z2-U4A1E	i5-6300U	2.4GHz	2	Gen 9 GT2	2	Active	-40 ~ 85° C
SOM-6897C3Z2-U3A1E	i3-6100U	2.3GHz	2	Gen 9 GT2	2	Active	-40 ~ 85° C
SOM-6897CRZ2-U0A1E	Celeron 3955U	2.0GHz	2	Gen 9 GT2	2	Active	-40 ~ 85° C

Development Board

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

Optional Accessories

Part No.	Description
1960048819N001	Semi-Cooler 95 x 95 x 33.5 mm with 12V Fan

Packing List

Part No.	Description	Quantity
-	SOM-6897 CPU module	1
1960073722N011	Heatspreader	1

Embedded OS

OS	Part No.	Description
WES8.1	2070015099	img W81 IP SOM-6897 64b
WES7P	2070015100	img WES7P SOM-6897 64b ENU