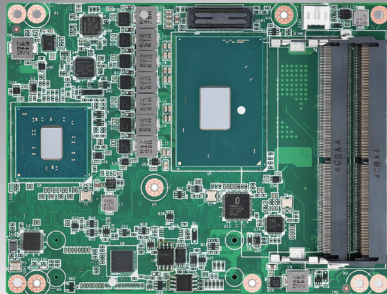


SOM-5897

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

NEW



Windows Embedded

iManager susiAccess CE FCC

Features

- 6th Gen Intel Xeon/Core i7/i5/i3/Celeron + PCH QM170
- Dual DDR4 2133, 1.2V Low Power Memory, Max. 32GB
- Support XDP, TPM2.0
- Flexible I/O support: 8 PCIe x1 (Gen3) with LAN, TPM2.0
- Supports iManager susiAccess, and Embedded Software APIs

Software APIs:



Watchdog



I2C



SMBus



H/W Monitor



GPIO



Brightness Control

Utilities:



BIOS flash



Monitoring

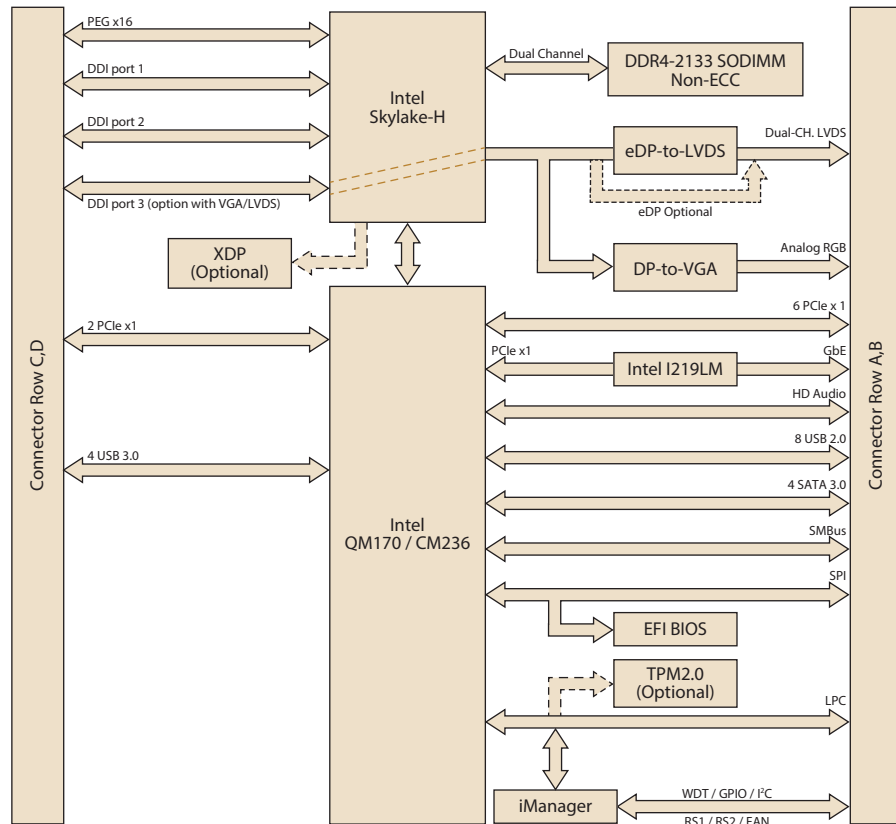


Embedded Security ID

Specifications

Compliance	Form-Factor	COM Express Basic Module										
	Pin-out Type	COM Express R2.1 Type 6 pin out										
Platform	Processor	i7-6820EQ	i7-6822EQ	i5-6440EQ	i5-6442EQ	i3-6100E	i3-6102E	G3900E	E3-1505M V5	E3-1505L V5	E3-1515M v5	
	Base Frequency	2.8GHz	2.0GHz	2.7GHz	1.9GHz	2.7GHz	1.9GHz	2.4GHz	2.8GHz	2.0GHz	2.8GHz	
	Turbo Boost Freq.	3.5GHz	2.8GHz	3.4GHz	2.7GHz	-	-	-	3.7GHz	2.8GHz	3.7GHz	
	Core/Tread	4/8	4/8	4/4	4/4	2/4	2/4	2/2	4/8	4/8	4/8	
	LLC	8	8	6	6	3	3	2	8	8	8	
	CPU TDP	45W	25W	45W	25W	35W	25W	35W	45W	25W	45W	
	Chipset	Core with QM170; Xeon with CM236										
Memory	BIOS	AMI UEFI 128Mbit										
	Technology	DDR4										
	ECC Support	Not supported	Not supported	Not supported	Not supported	Not supported	Not supported	Not supported	Support	Support	Support	
Graphics	Channel/Socket	Dual Channels / 2 sockets										
	Max. Capacity	Up to 32GB										
	Controller	Intel Gen 9								Intel® HD Graphics P530		Intel® Iris™ Pro Graphics P580
	Base/Turbo Freq.	350/1000	350/1000	350/1000	350/1000	350/950	350/950	350/950	350/1050	350/1000	350/1000	
Display	Graphics Memory	Intel DMVT5.0, share memory up to 1024MB										
	3D/HW Acceleration	HW Encode: H.265/HEVC, H.264, MPEG2, HW Decode: H.264, Direct3D 12(2015)/11.2/11.1/10/9, Direct2D, OpenGL 4.4, OpenCL 2.0/1.2										
	VGA	1 port up to 1920 x 1200 @ 60 Hz										
	LCD	LVDS Dual Channel 18/24-bit, up to 1920 x 1200 @ 60Hz										
Expansion	DDI	2 Port configurable to HDMI1.4/DVI/Displayport1.2										
	Multiple Display	Dual display, Triple display with each display combinations										
	PCI Express x16	1 PCIe x16 configurable to 1 x16, 2 x8, 1 x8 + 2 x4										
Serial Bus	PCI Express x1	8 PCIe x1, configurable to x4 or x2										
	Audio Interface	Intel HD Audio Interface										
	LPC	Yes										
Ethernet	SMBus	Yes										
	I2C Bus	Yes										
I/O	Controller	Intel i219										
	Speed	10/100/1000 Mbps										
	SATA	4 SATAIII 6.0Gb/s										
	USB3.0	4 Ports										
	USB2.0	8 Ports										
	SPI Bus	Yes										
	GPIO	8-bit										
	Watchdog	65536 level, 0-65535 sec										
	COM Port	2 Ports (2-wire)										
	Express Card	2 Ports										
Power	TPM	Optional TPM2.0 (Infineon SLB9665)										
	Smart Fan	2 Ports; 1 port on COM module. Support 12V Fan, 1 port on carrier board										
	Type	ATX: Vin, VSB; AT: Vin										
	Supply Voltage	Vin: 8.5V (9V-5%) ~ 20V (19+5%); VSB: 5 +/-5%, RTC Battery: 2.0-3.3V										
Environment	Power Consumption	Max: (16GB DDR4 2133) i7-6820EQ +12V @ 43.3W Idle: (16GB DDR4 2133) i7-6820EQ +12V @ 5.23W *Only for reference and will depends on custom software loading, detail refer to user manual										
	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	125 x 95 mm (4.92" x 3.74")										

Block Diagram



Ordering Information

Part No.	CPU	Freq.	Core	CPU TDP	LLC	DDR4 Memory	Thermal Solution	Operating Temperature
SOM-5897C7-U8A1E	i7-6820EQ	2.8 GHz	4	45W	8	non-ECC	Active	0 ~ 60 °C
SOM-5897C7-U0A1E	i7-6822EQ	2.0 GHz	4	25W	8	non-ECC	Active	0 ~ 60 °C
SOM-5897C5-U7A1E	i5-6440EQ	2.7 GHz	4	45W	6	non-ECC	Active	0 ~ 60 °C
SOM-5897C5-S9A1E	i5-6442EQ	1.9 GHz	4	25W	6	non-ECC	Active	0 ~ 60 °C
SOM-5897C3-U7A1E	i3-6100E	2.7 GHz	2	35W	3	non-ECC	Active	0 ~ 60 °C
SOM-5897C3-S9A1E	i3-6102E	1.9 GHz	2	25W	3	non-ECC	Active	0 ~ 60 °C
SOM-5897CR-U4A1E	G3900E	2.4 GHz	2	35W	2	non-ECC	Active	0 ~ 60 °C
SOM-5897E4C-U7A1E	E3-1505M V5	2.8 GHz	4	45W	8	ECC	Active	0 ~ 60 °C
SOM-5897E4C-U0A1E	E3-1505L V5	2.0 GHz	4	25W	8	ECC	Active	0 ~ 60 °C
SOM-5897E4C-U8A1E	E3-1515M V5	2.8 GHz	4	45W	8	ECC	Active	0 ~ 60 °C
SOM-5897E4X-U0A1E	Xeon E3-1505L V5	2.0 GHz	4	25W	8	ECC	Active	-40 ~ 85 °C
SOM-5897C7Z2-U0A1E	i7-6822EQ	2.0 GHz	4	25W	8	non-ECC	Active	-40 ~ 85 °C
SOM-5897C7X-U8A1E	i7-6820EQ	2.8 GHz	4	45W	8	non-ECC	Active	-40 ~ 85 °C
SOM-5897E4X-U7A1E	Xeon E3-1505M V5	2.8 GHz	4	45W	8	ECC	Active	-40 ~ 85 °C
SOM-5897E4X-U8A1E	Xeon E3-1515M V5	2.8 GHz	4	45W	8	ECC	Active	-40 ~ 85 °C

Development Board

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

Packing List

Part No.	Description	Quantity
-	SOM-5897 CPU module	1
1960073944N001	Heatspreader	1

Optional Accessories

Part No.	Description
1960048820N001	Semi-Cooler 125 x 95 x 33 mm with 12V FAN
1960073941T061	Low Profile DHCS (125 x 95 x 30 mm)
1960073941T051	High Perf. DHCS (125 x 95 x 43 mm)

* Test conditions follow Advantech regulations and procedures.

* DHCS: Dynamic Heat Conduction System Cooler

Embedded OS

OS	Part No.	Description
Win10 IoT LTSP	2070015177	Img Win10 IoT Ent_LTSP 64 bit