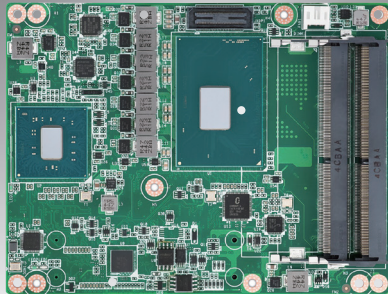


SOM-5897

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

Preliminary



Features

- 6th Gen Intel 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



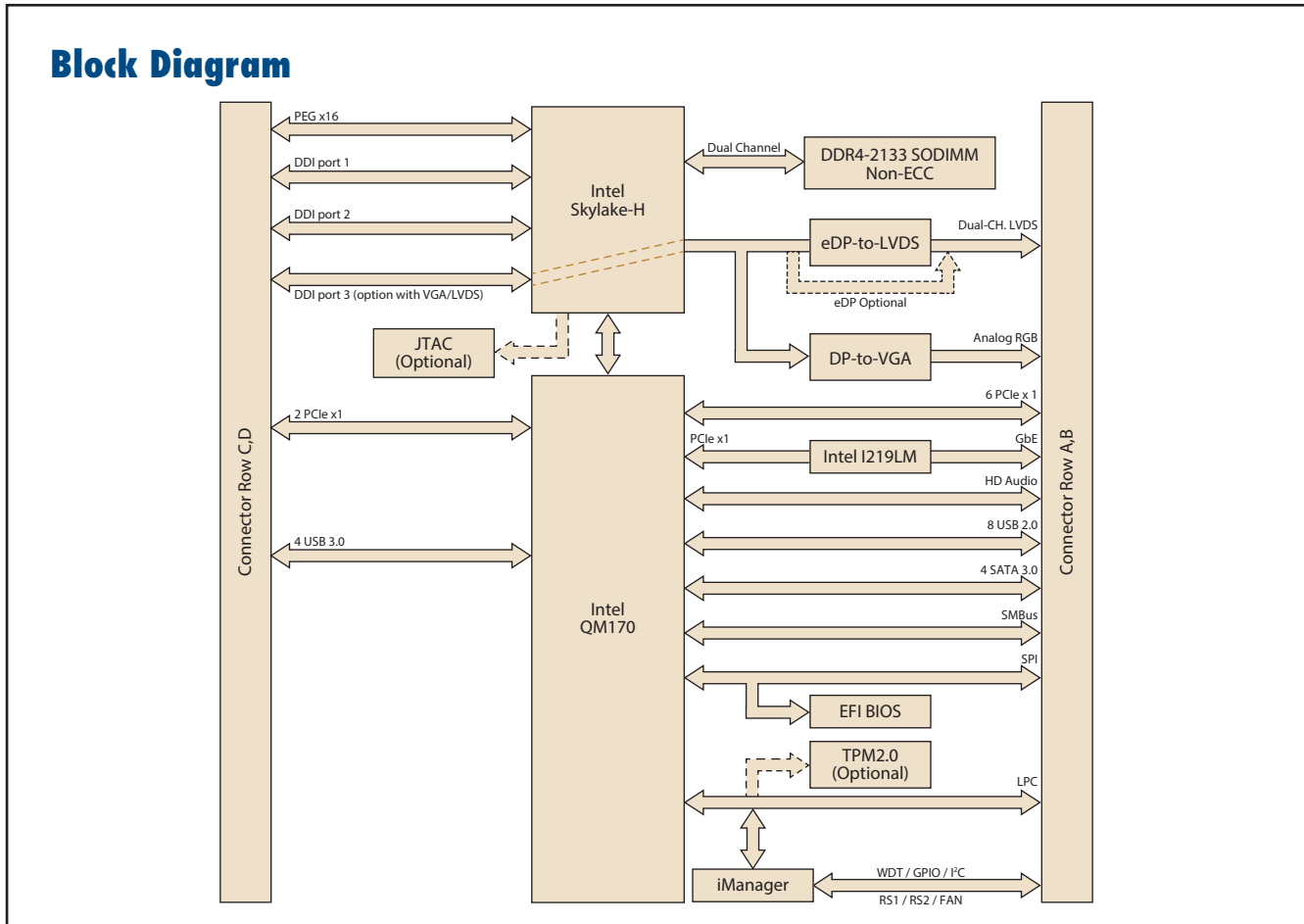
Windows Embedded



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	E3-1505M V5	E3-1505L V5
	Base Frequency	2.8GHz	2.0GHz	2.7GHz	1.9GHz	2.7GHz	1.9GHz	2.8GHz	2.0GHz
	Turbo Boost Freq.	3.5GHz	2.8GHz	3.4GHz	2.7GHz	-	-	3.7GHz	2.8GHz
	Core/Tread	4/8	4/8	4/4	2/2	2/4	2/4	4/8	4/8
	LLC	8	8	6	6	3	3	8	8
	CPU TDP	45W	25W	45W	25W	35W	25W	45W	25W
	Chipset	QM170							
	BIOS	AMI UEFI 128Mbit							
Memory	Technology	DDR4							
	ECC Support	Not supported	Not supported	Not supported	Not supported	Not supported	Not supported	Support	Support
	Channel/Socket	Dual Channels / 2 sockets							
	Max. Capacity	Up to 32GB							
Graphics	Controller	Intel Gen 9							
	Base/Turbo Freq.	350/1000	350/1000	350/1000	350/1000	350/950	350/950	350/1050	350/1000
	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 2.1/2.0/1.2							
Display	VGA	1 port up to 1920 x 1200 @ 60Hz							
	LCD	LVDS Dual Channel 18/24-bit, up to 1920 x 1200 @ 60Hz							
	DDI	2 Port configurable to HDMI1.4/DVI/Displayport1.2 HDMI up to 4096 x 2160@24Hz, DVI up to 1920 x 1200@60Hz, DP up to 4096 x 2304 @ 60Hz							
	Multiple Display	Dual display, Triple display with each display combinations							
Expansion	PCI Express x16	1 PCIe x16 configurable to 1 x16, 2 x8, 1 x8 + 2 x4							
	PCI Express x1	8 PCIe x1, configurable to x4 or x2							
	Audio Interface	Intel HD Audio Interface							
	LPC	Yes							
Serial Bus	SMBus	Yes							
	I ² C Bus	Yes							
Ethernet	Controller	Intel i219							
	Speed	10/100/1000 Mbps							
I/O	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							
	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: 5 +/-5%, RTC Battery: 2.0-3.3V							
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							
Environment	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			
	Vibration Resistance	3.5 Grms							
Mechanical	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	0-60C
SOM-5897C7-U0A1E	i7-6822EQ	2.0 GHz	4	25W	8	non-ECC	Active	0-60C
SOM-5897C5-U7A1E	i5-6440EQ	2.7 GHz	4	45W	6	non-ECC	Active	0-60C
SOM-5897C5-S9A1E	i5-6442EQ	1.9 GHz	4	25W	6	non-ECC	Active	0-60C
SOM-5897C3-U7A1E	i3-6100E	2.7 GHz	2	35W	3	non-ECC	Active	0-60C
SOM-5897C3-S9A1E	i3-6102E	1.9 GHz	2	25W	3	non-ECC	Active	0-60C
SOM-5897E4C-U7A1E	E3-1505M V5	2.8GHz	4	45W	8	ECC	Active	0-60C
SOM-5897E4C-U0A1E	E3-1505L V5	2.0GHz	4	25W	8	ECC	Active	0-60C

Development Board

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

Optional Accessories

Part No.	Description
1960048820N001	Semi-Cooler 125X95X33mm with 12V FAN

Packing List

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

Embedded OS

OS	Part No.	Description
TBD		TBD