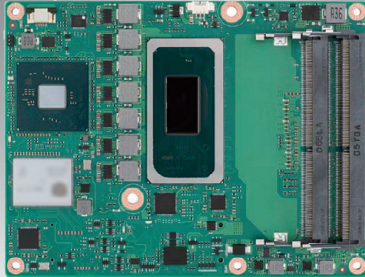


# SOM-5883

## Intel® 11th Gen Core Processors (Code Name: Tiger Lake-H) COM Express® Basic Type 6 Module

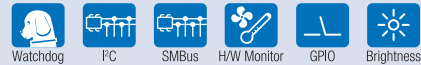
Preliminary



### Features

- Intel® 11th Gen Core Processors, up to 8Core/16T, L3 Cache 24M
- Intel Iris Xe(Gen 12) graphics, 4 independent 4K display
- Dual channel DDR4 Max 128GB SODIMM, support ECC
- Super speed I/O: PCIe4 x16 (16GT/s), USB3.2 gen3 (10Gb), 2.5GbE, SATA3 (6Gb)
- TPM2.0 security protection, onboard NVMe SSD fast & anti-vibration
- Supports iManager, Edge-AI Suite, DeviceOn

Software APIs:

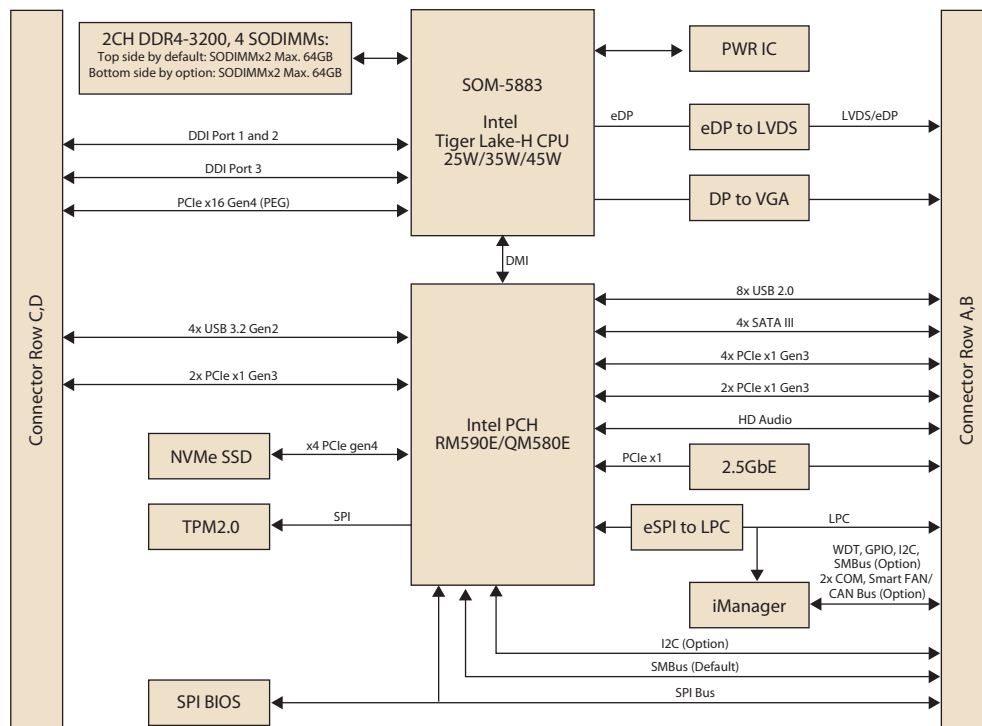


 Windows Embedded **iManager WISE-DeviceOn**  

### Specifications

Form Factor	Form Factor	COM Express Compact Module							
	Pin-out Type	COM Express R3.0 Type 6 compatible							
Processor System	CPU	i7-11850HE	i5-11500HE	i3-11100HE	6600HE	W-11865MRE	W-11555MRE	W-11155MRE	W-11865MLE
	Base Frequency	2.6 GHz	2.6 GHz	2.4 GHz	2.6 GHz	2.6 GHz	2.6 GHz	2.4 GHz	1.5 GHz
	Max Single Core Turbo Frequency	4.7 GHz	4.5 GHz	4.4 GHz	-	4.7 GHz	4.5 GHz	4.4 GHz	4.5 GHz
	Cores	8	6	4	2	8	6	4	8
	LLC	24 MB	12 MB	8 MB	8 MB	24 MB	12 MB	8 MB	24 MB
	CPU TDP	45W/35W	45W/35W	45W/35W	35W	45W/35W	45W/35W	45W/35W	25W
	Chipset	QM580E	QM580E	QM580E	QM580E	RM590E	RM590E	RM590E	RM590E
	BIOS	AMI UEFI 256Mbit							
Memory	Technology	DDR4							
	Speed	3200	3200	3200	3200	3200	3200	3200	3200
	ECC Support	Non-ECC or ECC support by specific SKU							
	Max. Capacity	Max. 128GB							
	Socket	Maximum 4pcs 260P SO-DIMM (Dual Channel), 2pcs top side by default & 2pcs bottom side by option							
Graphics	Controller	Intel Iris Xe(Gen 12) graphics							
	Max. Frequency	TBD							
	Graphic Memory	Shared memory							
Display	3D/HW Acceleration	JPEG, H264 (8 bits) and HEVC/H265 (10 bits)							
	VGA	1920 x 1200@60Hz							
	LCD	LVDS dual channel: 1920 x 1200@60Hz (optional eDP 4096 x 2304@60Hz, 24bpp)							
	DDI	*3 DDI ports support configurable HDM/ DVI/ DisplayPort HDMI: 4096 x 2160@24Hz, DVI: 1920 x 1200@60Hz, DP: 4096 x 2304@60Hz*							
	Multiple Display	Quad Simultaneous Independent Display							
Expansion	PCI Express x16 (Gen4)	1 PCIe x16 configurable to 1 x16, 2 x8, 1 x8 + 2 x4							
	PCI Express x1 (Gen3)	8 PCIe x1, configurable to x4 or x2							
	Audio Interface	Intel HD Audio							
	LPC	Yes							
Serial Bus	SMBus	Yes							
	I2C Bus	Yes							
Ethernet	Gigabit	Intel I225LM/IT (up to 2.5GbE)							
I/O	SATA3.0	4 Ports (6 Gbps)							
	USB3.2 (Gen2)	4 Ports (10 Gbps)							
	USB2.0	8 Ports (480 Mbps)							
	SPI Bus	Yes. For BIOS EEPROM							
	GPIO	8-bit							
	Watchdog	65536 level, 0 ~ 65535 sec							
	COM Port	2 Ports (2-Wire)							
	TPM	TPM2.0							
	Smart Fan	2 Ports: 1 port on COM module (Notice: the input voltage of fan is aligned to Vin); 1 port on carrier board							
	Power	Type	ATX: Vin, VSB; AT: Vin						
Supply Voltage		Vin: 8.5V ~ 20V; VSB: 4.75V ~ 5.25 V, RTC Battery: 2.0V ~ 3.3V							
Power Consumption (Max.)		TBD							
Power Consumption (Idle)		TBD							
Environment	Operating Temperature	Operating Standard: 0 ~ 60° C (32 ~ 140° F), Extend: -40 ~ 85° C (-40 ~ 185° F) with 0.7m/s air flow. Storage: -40 ~ 85° C (-40 ~ 185° F)				Standard: 0 ~ 60° C (32 ~ 140° F) Extend: -40 ~ 85° C (-40 ~ 185° F)			
	Storage Temperature	-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 mm x 95 mm (4.92" x 3.74")							

## Block Diagram



## Ordering Information

Part No.	CPU	Core	Base Freq.	Max. Boost Freq.	CPU TDP	LLC	PCH	DDR4 SODIMM	SSD	USB4	Thermal solution	Operating Temp.
SOM-5883C7Q-U6A1	I7-11850HE	8	2.6GHz	4.7GHz	45W/35W	24MB	QM580E	non-ECC	64GB	N/A	Active	0 ~ 60 °C
SOM-5883C5Q-U6A1	I5-11500HE	6	2.6GHz	4.5GHz	45W/35W	12MB	QM580E	non-ECC	32GB	N/A	Active	0 ~ 60 °C
SOM-5883C3Q-U4A1	Core i3-11100HE	4	2.4GHz	4.4GHz	45W/35W	8MB	QM580E	non-ECC	N/A	N/A	Active	0 ~ 60 °C
SOM-5883C3QA-U4A1	Core i3-11100HE	4	2.4GHz	4.4GHz	45W/35W	8MB	QM580E	non-ECC	N/A	Option*	Active	0 ~ 60 °C
SOM-5883CRQ-U6A1	Celeron 6600HE	2	2.6GHz	N/A	35W	8MB	QM580E	non-ECC	N/A	N/A	Active	0 ~ 60 °C
SOM-5883D8R-U6A1	Xeon W-11865MRE (8C)	8	2.6GHz	4.7GHz	45W/35W	24MB	RM590E	ECC	N/A	N/A	Active	0 ~ 60 °C
SOM-5883D6R-U6A1	Xeon W-11555MRE (6C)	6	2.6GHz	4.5GHz	45W/35W	12MB	RM590E	ECC	N/A	N/A	Active	0 ~ 60 °C
SOM-5883D4R-U4A1	Xeon W-11155MRE (4C)	4	2.4GHz	4.4GHz	45W/35W	8MB	RM590E	ECC	N/A	N/A	Active	0 ~ 60 °C
SOM-5883D8RX-U6A1	Xeon W-11865MRE (8C)	8	2.6GHz	4.7GHz	45W/35W	24MB	RM590E	ECC	N/A	N/A	Active	-40 ~ 85 °C
SOM-5883D6RX-U6A1	Xeon W-11555MRE (6C)	6	2.6GHz	4.5GHz	45W/35W	12MB	RM590E	ECC	N/A	N/A	Active	-40 ~ 85 °C
SOM-5883D4RX-U4A1	Xeon W-11155MRE (4C)	4	2.4GHz	4.4GHz	45W/35W	8MB	RM590E	ECC	N/A	N/A	Active	-40 ~ 85 °C
SOM-5883D8RX-SSA1	Xeon W-11865MLE (8C)	8	1.5GHz	4.5GHz	25W	24MB	RM590E	ECC	N/A	N/A	Active	-40 ~ 85 °C

\*SOM-MZ10 is not included in SOM-5883C3QA-U4A1, need to be purchased from optional accessories  
 Any other SKUs or combination is project based support. Please contact sales for details.  
 Memory sockets maximum 4pcs. 2pcs top side by default & 2pcs bottom side by option.

## Development Board

Part No.	Description
SOM-DB5830-00A2	COMe Devel. Board COMe R3.0 Type6 pin-out (LVDS) 0 ~ 60 °C
SOM-DB5830A-00A2	COMe Devel. Board COMe R3.0 Type6 pin-out (eDP) 0 ~ 60 °C
SOM-DB5830X-00A2	COMe Devel. Board COMe R3.0 Type6 pin-out (LVDS) -40 ~ 85 °C

## Packing List

Part No.	Description	Quantity
-	SOM-5883 COM module	1
197005238T000	Heatspreader of SOM-5883	1

## Optional Accessories

Part No.	Description
1970005036T001	Semi-Cooler 125 x 95 x 33.2 mm with 12V Fan

## Embedded OS

OS	Part No.	Description
Win10	20706WX9HS0143	img W10 19HL SOM-5883 64b 1809 ENU
Win10	20706WX9VS0147	img W10 19VL SOM-5883 64b 1809 ENU
Win10	20706WX9ES0158	img W10 19EL SOM-5883 64b 1809 ENU