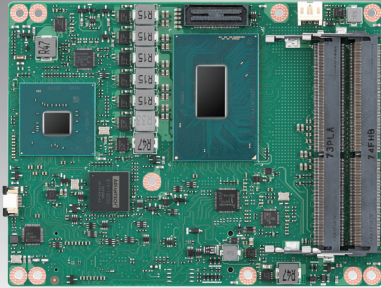


SOM-5899R/5899

9th/8thGen Intel® Xeon®/Core™ Processors COM Express Basic Module Type 6

NEW



Windows Embedded

iManager WISE-PaaS/RMM CE FC

Features

- Intel 9th/8th Gen Xeon®/Core™ Hexa/Quad Cores + PCH QM370/CM246
- Dual channel DDR4, Max 96GB (ECC optional)
- High Speed I/O: 4 USB3.1 (Gen2), 8 PCIe1(Gen3), 4 SATA (Gen3)
- Three Independent Symmetrical Displays (Up to 4K)
- Supports iManager, WISE-PaaS/RMM and Embedded Software APIs

Software APIs:



Watchdog



I²C



SMBus



H/W Monitor



GPIO

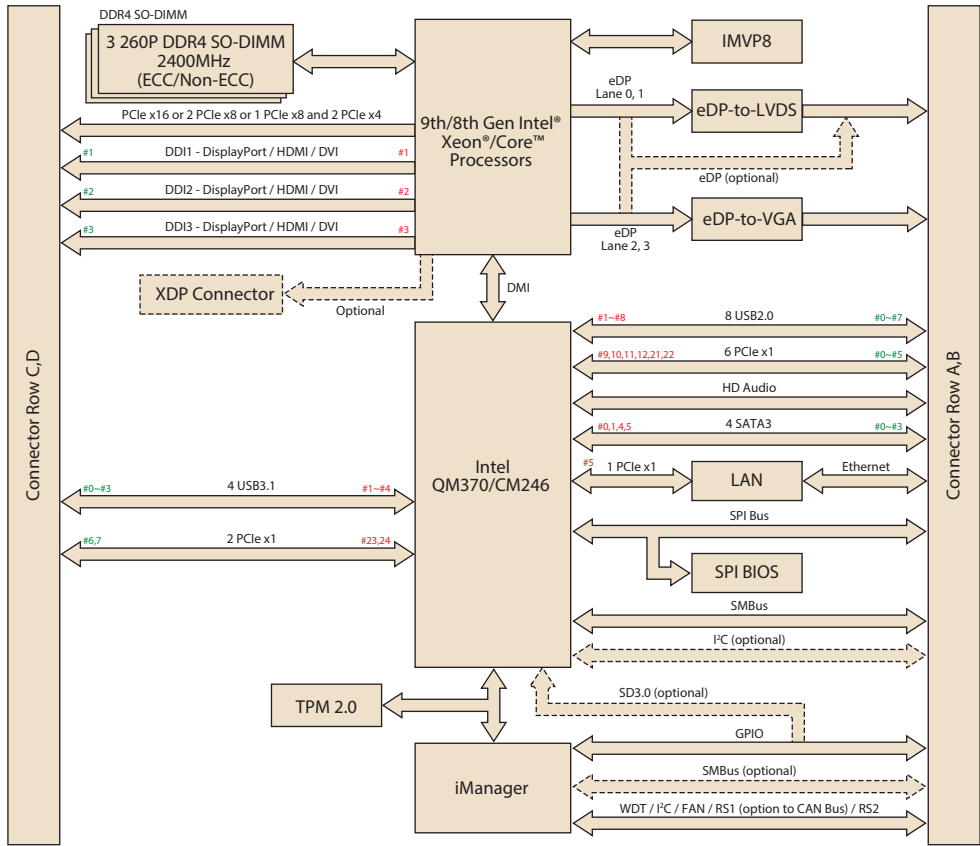


Brightness Control

Specifications

Form Factor	Form Factor	COM Express Basic Module													
	Pin-out Type	COM Express R3.0 Type 6 pin out													
Processor System	CPU	E-2276ME	E-2276ML	E-2254ME	E-2254ML	I7-9850HE	I7-9850HL	I3-9100HL	Pentium G5600E	Celeron G4930E	Celeron G4932E	E-2176M	i7-8850H	i5-8400H	i3-8100H
	Base Frequency	2.8 GHz	2.0 GHz	2.6 GHz	1.7 GHz	2.7 GHz	1.9 GHz	1.6 GHz	2.6 GHz	2.4 GHz	1.9 GHz	2.7GHz	2.6GHz	2.5GHz	3.0GHz
	Max Single Core Turbo Frequency	4.5 GHz	4.2 GHz	3.8 GHz	3.5 GHz	4.4 GHz	4.1 GHz	2.9 GHz	NA	NA	NA	4.4GHz	4.3GHz	4.2GHz	N/A
	Cores	6	6	4	4	6	6	4	2	2	2	6/12	6/12	4/8	4/4
	LLC	12MB	12MB	8MB	8MB	9MB	9MB	6MB	4MB	2MB	2MB	12MB	9MB	8MB	6MB
	CPU TDP	45W	25W	45W	25W	45W	25W	25W	35W	35W	25W	45W/35W	45W/35W	45W/35W	45W/35W
BIOS	AMI UEFI 256Mbit														
Memory	Technology	DDR4 (2DPC: Up to DDR4 2400 x 3 SO-DIMM/1DPC: Up to DDR4 2666 x 2 SO-DIMM)													
	ECC Support	ECC is supported with specific SKU													
	Max. Capacity	96GB													
	Socket	3 260P SO-DIMM: 2 on front side (channel 0&1) / 1 on rear side (channel 0)													
Graphics	Controller	Intel® UHD Graphics 630/P630													
	Max. Frequency	1200MHz													
	Graphic Memory	Shared Memory													
	3D/HW Acceleration	HW Encode: MPEG2, AVC/H264, VP8, JPEG, HEVC/H265, VP9 HW Decode: MPEG2, VC1/MMV9, AVC/H264, VP8, JPEG/MJPEG, JPEG/MJPEG, HEVC/H265 (10 bits & 8 bits), VP9													
Display	VGA	1920 x 1200@60Hz													
	LCD	LVDS dual channel: 1920 x 1200@60Hz (option support eDP 4096 x 2304@60Hz, 24bpp)													
	DDI	3 DDI ports support configurable HDMI/DVI/DisplayPort HDMI: 4096 x 2160@24Hz, DVI: 1920 x 1200@60Hz, DP: 4096 x 2304@60Hz													
	Multiple Display	Triple displays with each display combinations													
Expansion	PCI Express x16 (Gen3)	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 Interface													
	LPC	Yes													
Serial Bus	SMBus	Yes													
	I²C Bus	Yes													
	CAN Bus	Yes (Optional, co-layout with COM2)													
Ethernet	Controller	Intel I219													
	Speed	10/100/1000 Mbps													
I/O	SATA3.0	4 Ports (6Gbps)													
	USB3.1 (Gen2)	4 Ports (10Gbps)													
	USB2.0	8 Ports (480Mbps)													
	SPI Bus	Yes													
	GPIO	8 bits (Option support SD Card)													
	Watchdog	65536 level, 0-65535 sec													
	COM Port	2 Ports (2-wire)													
	TPM	TPM2.0 (Infineon SLB9665)													
Power	Smart Fan	2 Ports: 1 port on COM module (Notice: the input voltage of fan is aligned to Vin); 1 port on carrier board													
	Type	ATX: Vin, VSB; AT: Vin													
	Supply Voltage	Vin: 8.5V ~ 20V; VSB: 4.75V ~ 5.25 V, RTC Battery: 2.0V ~ 3.3V													
Environment	Power Consumption	Max: 44.63W @ 12V (i7-8850H with 48GB DDR4 2400) Idle: 6.89W @ 12V (i7-8850H with 48GB DDR4 2400) *Only for reference and will depends on custom software loading, detail refer to user manual													
	Operating Temperature	Standard: 0 ~ 60 °C (32 ~ 140 °F), Extend: -40 ~ 85 °C (-40 ~ 185 °F)													
Mechanical	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



***Display Configuration Table**

	DDI 1	DDI 2	DDI 3	LVDS/eDP	VGA
Default	DP++	DP++	HDMI/DVI	LVDS	VGA
Option 1	DP++	DP++	HDMI/DVI	eDP (2-lane)	VGA
Option 2	DP++	DP++	DP++	eDP (4-lane)	None

Support maximum 3 independent displays simultaneously.