

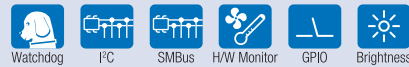
# SOM-5994

## Intel® Atom® P6900 (Grand Ridge) Processors COM Express® Basic Type 7 Module

### Features

- Intel® Atom® P6900 (Grand Ridge) Processors
- COM Express® R3.1 Basic Module Type 7 Pinout
- 16~24 E Cores Processor, with Max. TDP 86W
- Dual-Channel DDR5-4800MT/s up to 64GB SODIMM
- High speed Ethernet (4x 10GBASE-KR interfaces, one 2.5GbE)
- Multiple Expansions (16x PCIe x16 Gen4, 16x PCIe Gen3/2, 4x USB3.0, SATA3)
- Supports Ubuntu, Embedded BIOS, SUSI API and DeviceOn

#### Software APIs:

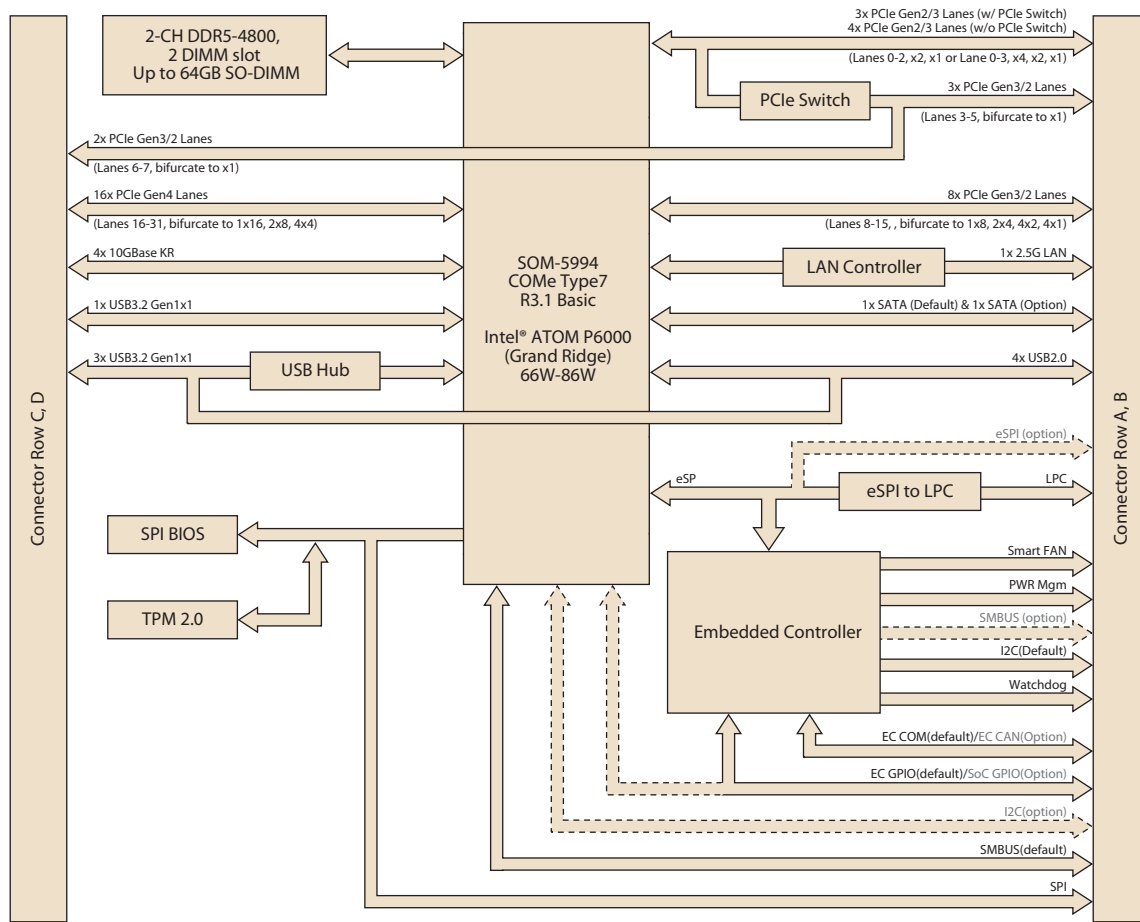


SUSI API DeviceOn CE FC

### Specifications

Form Factor	Form Factor	COM Express Basic				
	Pin-out Type	COM Express R3.1 Type 7 compatible				
Processors	CPU	P6962-5	P6962-3	P6952-3	P6942-3	P6922-3
	Cores	24c	24c	20c	16c	8c
	Frequency	2.6GHz	2.2GHz	2.2GHz	2.2GHz	2.2GHz
	Power (SDP)	86W	82W	74W	66W	~50W
	Last Level Cache (LLC)	24MB	24MB	20MB	16MB	8MB
	BIOS	AMI UEFI 256Mbit				
Memory	Technology	DDR5				
	Speed	4800 MT/s				
	Max. Capacity	Up to 64GB				
	Channel/Socket	Dual Channel / 2 Sockets SODIMM, 1DPC				
	ECC Support	Support ECC or non-ECC				
Ethernet	10GB Ethernet	Intel integrated 4 x 10G LAN controller; Interface: 10GBASE-KR				
	Gigabit	1 Port support 10M / 100M / 1000M / 2.5GbE				
I/O Interfaces	PCI Express	16x PCIe Gen4 Lanes, bifurcatable to 1x16, 2x8, 4x4 16x PCIe Gen3/2 Lanes, bifurcatable to x8, x4, x2 or x1				
	LPC	Yes				
	SATA3.0	Up to 2 Ports (6Gbps)				
	USB3.2 (Gen2)	4 Ports (10 Gbps)				
	USB2.0	4 Ports (480 Mbps)				
	GPIO	8-bit, Default from EC, Option from SoC				
	Watchdog	65536 level, 0 ~ 65535 sec				
	COM Port	2 Ports (2-Wire)				
	Smart Fan	2 Ports: 1 port on COM module; 1 port on carrier board				
Serial Bus	SMBus	Default from SoC and option from EC				
	I2C Bus	Default from EC and option from SoC				
	CAN Bus	Support one CAN Bus option from COM Port				
	SPI Bus	Yes				
Security	Trusted Platform Module (TPM)	TPM2.0				
Power	Type	ATX: Vin, VSB; AT: Vin				
	Supply Voltage	Vin: 9V(±5%)~12V (±5%),VSB: 5V±5%, RTC Battery: 2.0-3.3V				
	Power Consumption (Max.)	TBC				
	Power Consumption (Idle)	TBC				
Environment	Operating Temperature	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,IEC 60068-2-64, random, 5 ~ 500 Hz, 1 hr/axis				
Mechanical	Dimensions	125 mm x 95 mm (4.92" x 3.74")				

## Block Diagram



## Ordering Information

Part No.	SKU	CPU Cores	SDP	LLC	Thermal Solution	Operating Temp.
TBD	Grand Ridge 24c	24c @ up to 2.6GHz	86W	24MB	Active	0-60°C /-40-85°C
TBD	Grand Ridge 24c	24c @ up to 2.2GHz	82W	24MB	Active	0-60°C /-40-85°C
TBD	Grand Ridge 20c	20c @ up to 2.2GHz	74W	20MB	Active	0-60°C /-40-85°C
TBD	Grand Ridge 16c	16c @ up to 2.2GHz	66W	16MB	Active	0-60°C /-40-85°C
TBD	Grand Ridge 8c	8c @ up to 2.2GHz	~50W	8MB	Active	0-60°C

Any other SKUs or combination is project based support. Please contact sales for details.

## Development Board

Part No.	Description
SOM-DB5930-00A1	COMe Devel. Board COMe R3.1 Type7 pin-out (LVDS)
SOM-DB5930A-00A1	COMe Devel. Board COMe R3.1 Type7 pin-out (eDP)

## Optional Accessories

Part No.	Description
TBD	Semi-Heatsink
TBD	QFCS Cooler

## Packing List

Part No.	Description	Quantity
-	SOM-5994 COM module	1
TBD	Heatspreader	1

## Embedded OS

OS	Part No.	Description
Ubuntu	TBD	TBD