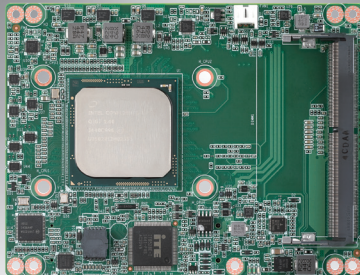


# SOM-5991

## Intel® Xeon® Processor D-1500 Product Family COM Express® Basic Module Type 6

**NEW**



### Features

- Intel® Xeon® Processor D-1500 Product Family
- COM Express R2.1 Basic Module Type 6 pin out compatible
- Up to 16 core with TDP 45W
- Dual DDR4 2400, 1.2V Low Power Memory, up to 32GB
- Integrated high speed 10GbE interface
- PCIe x16, 8 PCIe x1, 2 x 10GBASE-KR interface
- Supports iManager, and Embedded Software APIs

**Software APIs:**

- Watchdog
- I<sup>2</sup>C
- SMBus
- H/W Monitor
- GPIO
- Brightness Control

**Utilities:**

- BIOS flash
- Monitoring
- Embedded Security ID

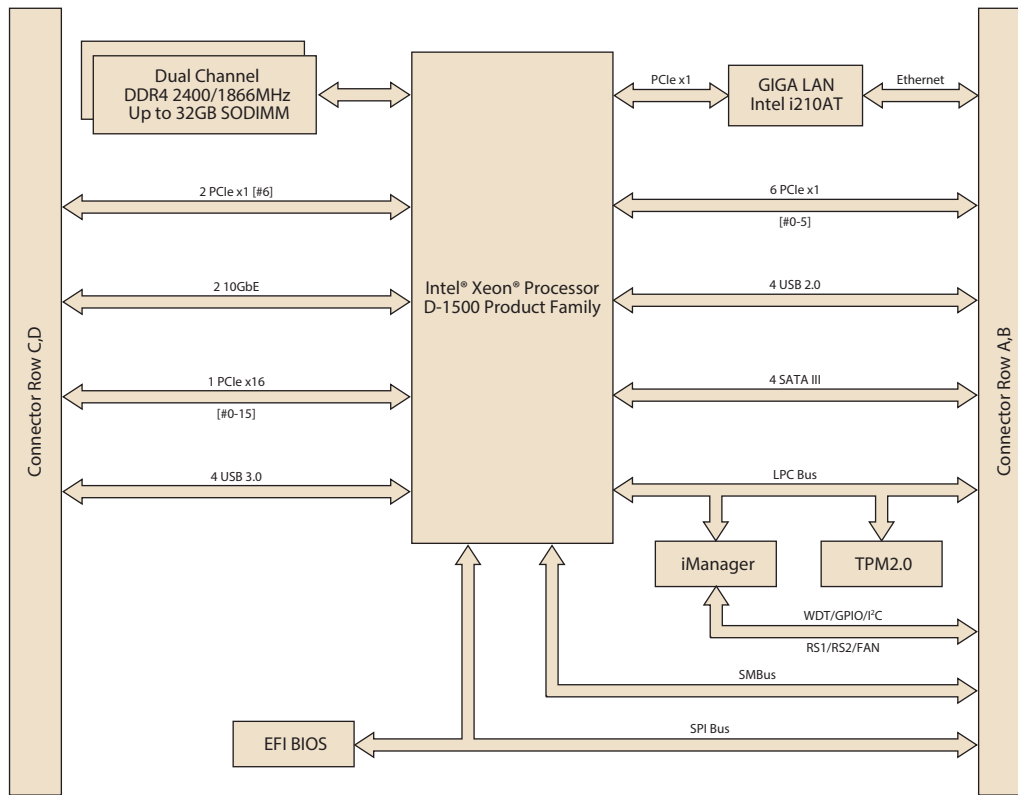


**iManager** CE FCC

### Specifications

Form Factor	Form Factor	COM Express Basic Module	
	Pin-out Type	COM Express R2.1 Type 6 compatible	
Processor System	CPU	Xeon D-1548	Pentium D1508
	Base Frequency	2.0 GHz	2.2 GHz
	Max Single Core Turbo Frequency	2.6 GHz	2.6 GHz
	Core	8	2
	LLC	12MB	3MB
	CPU TDP	45W	25W
	BIOS	AMI UEFI 128Mbit	
Memory	Technology	DDR4 up to 2400MHz	
	ECC Support	ECC and non-ECC	
	Max. Capacity	up to 32GB	
	Socket	Dual Channel 260P SODIMM	
Expansion	PCI Express x16	1 port support up to Gen3 8.0 GT/s Bifurcatable to 2 x8, 1 x8 & 2 x4, or 4 x4	
	10GBASE-KR	2 x 10GBASE-KR Interfaces, with side-band MDIO and I <sup>2</sup> C control signals	
	PCI Express x1	8 ports support up to Gen2 5.0 GT/s	
	LPC	Yes	
Serial Bus	SMBus	Yes	
	I <sup>2</sup> C Bus	Support 100Kb/s & 400Kb/s devices. Default master mode, optional slave mode	
Ethernet	Controller	Intel® i210AT	
	Speed	10/100/1000 Mbps	
I/O	SATA	4 ports support SATA III 6.0Gb/s	
	USB3.0	4 ports	
	USB2.0	4 ports	
	SPI Bus	Yes (BIOS only)	
	GPIO	8-bit GPIO	
	Watchdog	65536 level, 0 ~ 65535 sec	
	COM Port	2 ports (2-wire)	
	Express Card	2 ports	
	TPM	TPM2.0	
	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: 8.5(9-5%)-20V(19+5%), VSB: 5V±5%, RTC Battery: 2.0-3.3V	
	Power Consumption (Max.)	D-1548 (32GB DDR4 2400) +12V @ 55.6W	
	Power Consumption (Idle)	D-1548 (32GB DDR4 2400) +12V @ 11W	
Environment	Temperature	Operating Standard: 0 ~ 60° C (32 ~ 140° 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, IEC 60068-2-64, random, 5 ~ 500 Hz, 1 hr/axis.	
Mechanical	Dimensions	125 x 95 mm (4.92" x 3.74")	

## Block Diagram



## Ordering Information

Part No.	CPU	Core	Freq.	CPU TDP	LLC	DDR4 SODIMM	Giga LAN	10GBase-KR	PEG x16	PCIe x1	USB 2.0	USB 3.0	SATA III	LPC	Power	Thermal solution	Operating Temp.
SOM-5991X8-U0A1E	Xeon D-1548	8	2.0	45W	12MB	ECC/non ECC	1	2	1	8	4	4	4	Yes	AT/ATX	Active	0 ~ 60° C
SOM-5991P2-U2A1E	Pentium D1508	2	2.2	25W	3MB	ECC/non ECC	1	2	1	8	4	4	4	Yes	AT/ATX	Active	0 ~ 60° C

## Optional Accessories

Part No.	Description
1960048820N001	Semi-Cooler 125x95x33.5mm with 12V Fan
1960075879N001	Cooler 66x60x23mm with 12V Fan

## Packing List

Part No.	Description	Quantity
-	SOM-5991 CPU module	1
1960077016N001	Heatspreader	1

## Development Board

Part No.	Description
SOM-DB5900-00A1E	COMe Devel. Board w/10GB I/O pint-out