

HPM-621UA

Single 1st and 2nd Generation Intel® Xeon® Scalable Processor ATX Server Board with Intel® C621 Chipset and IPMI2.0. Processor supports up to 150W TDP



Features

- Intel FCLGA3647 Socket supports 1st and 2nd Generation Intel® Xeon® Scalable Processors (Max. TDP at 150W)
- Intel® C621 Chipset
- 6 x DDR4 2933/ 2666/ 2400/ 2133 MHz RDIMM/ LRDIMM Up to 768GB
- TPM 2.0 onboard
- IPMI 2.0 with AST 2500 BMC controller onboard.
- 4 x Intel I210AT 1GbE controllers
- 9 x SATA III Support RAID 0,1,5,10
- 2 x Internal RS232 ports
- 4 x USB 3.2 Gen1 ports at Edge I/O
- 2 x Internal USB 2.0 ports
- 2 x Internal USB 3.2 Gen1 ports
- 1 x M.2 M-Key PCIe 3.0 x4 NVMe SSD, 2242/2260/2280 form factor
- 12" x 9.6" (304.8mm x 243.84mm), PCB thickness is 2.0mm



1st/2nd Gen.
Intel®Xeon®
Scalable
Processor



6 x DDR4
RDIMM/LRDIMM
2933/ 2666/
2400/ 2133MHz



IPMI 2.0
supported



PCIe Gen3
multiple
expansion

Specifications

System Information

Processor	Intel FCLGA3647 Socket supports 1st and 2nd Generation Intel® Xeon® Scalable Processor (Max. TDP at 150W)
Platform Controller Hub	Intel® C621 Chipset
System Memory	6 x DDR4 2933/ 2666/ 2400/ 2133 MHz RDIMM/ LRDIMM up to 768GB
Watchdog Timer	System reset event 0 ~ 6553 seconds
BIOS	AMI UEFI BIOS
H/W Status Monitor	CPU temperature Fan speed and voltage monitoring Fan speed control Case open detection
TPM	TPM 2.0 onboard
IPMI	IPMI 2.0 with AST 2500 BMC controller onboard

Rear I/O

USB	4 x USB 3.2 Gen1 ports
RJ-45	4 x RJ45 (LAN1 shares IPMI port)

Display

Graphic Chipset	AST 2500 BMC controller
Resolution	1 x VGA port VGA: 1920 x 1200 @ 60Hz 32bpp

Expansion

Expansion	1 x PCI 3.0 slot, 3 x PCIe Gen3 x16 slots or 6 x PCIe Gen3 x8 slots Slot 1, PCI 3.0 Slot 2, PCIe 3.0 x8 Slot 3, PCIe 3.0 x16 (x16 will switch to x8 automatically when Slot 2 is used) Slot 4, PCIe 3.0 x8 Slot 5, PCIe 3.0 x16 (x16 will switch to x8 automatically when Slot 4 is used) Slot 6, PCIe 3.0 x8 Slot 7, PCIe 3.0 x16 (Slot 7 is the slot closest to CPU, x16 will switch to x8 automatically when Slot 6 is used)
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Storage

M.2	1 x M.2 M-Key PCIe 3.0 x4 NVMe SSD, 2242/2260/2280 form factor
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I/O

USB	2 x Internal USB 2.0 ports 2 x Internal USB 3.2 Gen1 ports
SATA	9 x SATA III Support RAID 0,1,5,10
Serial	2 x Internal RS232 ports
VGA	1 x Internal VGA port
CMOS Battery	1 x Horizontal Socket Type CMOS Battery Holder with CR2450

Ethernet

LAN Chipset	4 x Intel I210AT 1GbE controllers
LAN Port	4 x RJ45 (LAN1 shares IPMI port)

Mechanical & Environmental

Operating Temp.	0 ~ 60°C (32 ~ 140°F)
Storage Temp.	-40 ~ 85°C
Operating Humidity	40°C @95% Relative Humidity, Non-condensing
Weight	0.97KG
Power Connector	1 x Std. 24 Pin ATX connector 1 x 8 Pin SSI 12V connector
Dimension (L x W)	12" x 9.6" (304.8mm x 243.84mm), PCB thickness is 2.0mm

Software Support

OS	Windows 10 IoT Enterprise Windows Server 2016 Windows Server 2019 Ubuntu* 18.04 LTS or Later
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Mechanical Drawing



Ordering Information

P/N	CPU	Chipset	Memory	PCIe Slot	10 GbE	2.5 GbE	1 GbE	M.2	USB 3.2 Gen2	USB 3.2 Gen1	USB 2.0	TPM 2.0
HPM-621UAA-A1R	1	C621	6	7	-	-	4	1	-	6	2	1

Packing List

Item	P/N	Quantity
HPM-621UA motherboard	HPM-621UAA-A1R	1
HPM-621UA I/O shield	E195BKHP21DE00R	1

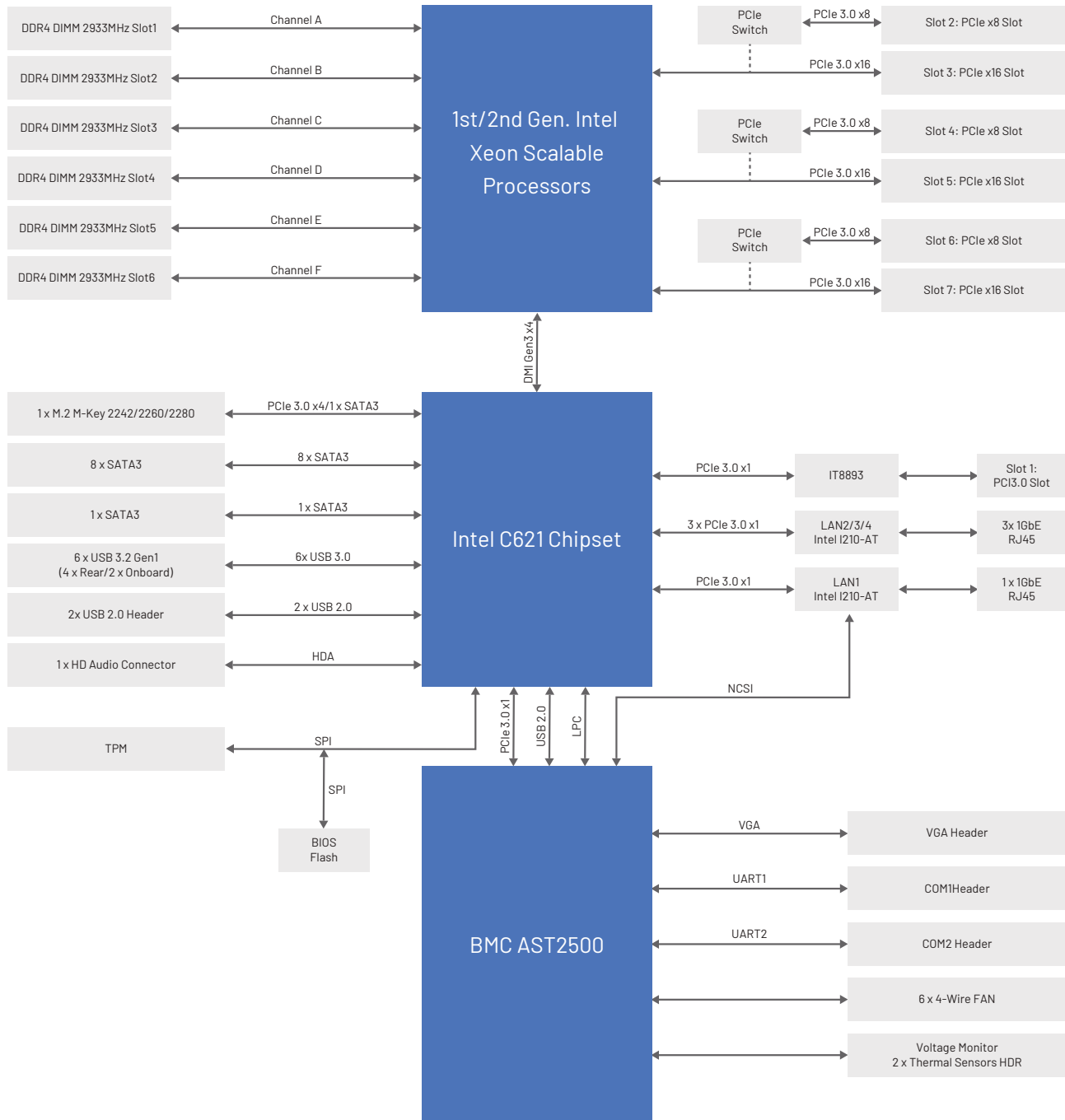
Optional Items

Item	P/N
CPU Cooler for LGA3647 4U	BCC-FAN-364-01R

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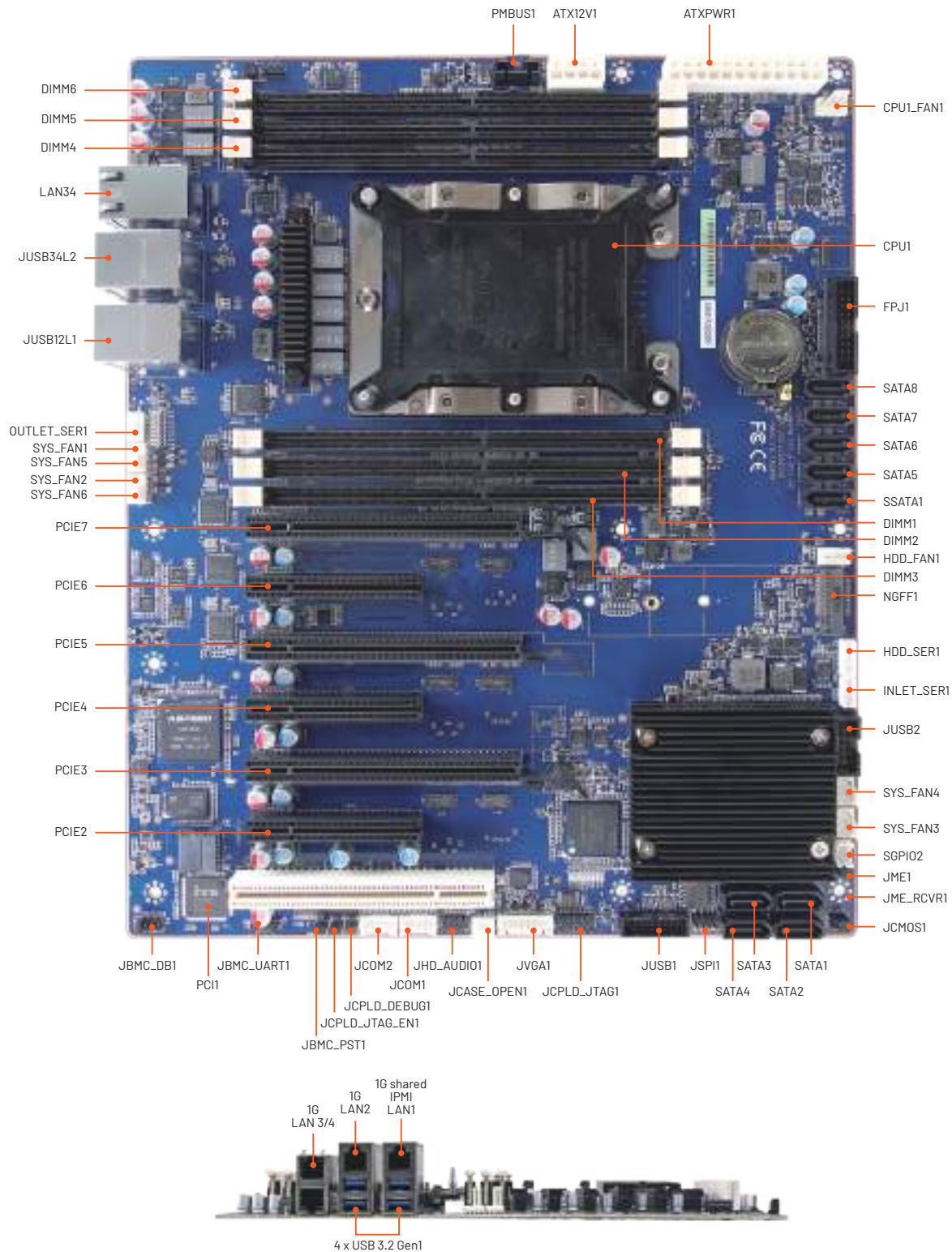
Block Diagram



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I/O Overview



CPU Support List (HPC Only)

SKU	Launch Date	# of Cores	# of Threads	Processor Base Frequency	Max Turbo Frequency	TDP (W)
Intel® Xeon® Bronze 3106	Q3'17	8	8	1.70 GHz	NA	85
Intel® Xeon® Silver 4109T	Q3'17	8	16	2.00 GHz	3.00 GHz	70
Intel® Xeon® Silver 4110	Q3'17	8	16	2.10 GHz	3.00 GHz	85
Intel® Xeon® Silver 4114T	Q3'17	10	20	2.20 GHz	3.00 GHz	85
Intel® Xeon® Silver 4116	Q3'17	12	24	2.10 GHz	3.00 GHz	85
Intel® Xeon® Silver 4116T	Q3'17	12	24	2.10 GHz	3.00 GHz	85
Intel® Xeon® Gold 5118	Q3'17	12	24	2.30 GHz	3.20 GHz	105
Intel® Xeon® Gold 5119T	Q3'17	14	28	1.90 GHz	3.20 GHz	85
Intel® Xeon® Gold 5120T	Q3'17	14	28	2.20 GHz	3.20 GHz	105
Intel® Xeon® Gold 6126T	Q3'17	12	24	2.60 GHz	3.70 GHz	125
Intel® Xeon® Gold 6126	Q3'17	12	24	2.60 GHz	3.70 GHz	125
Intel® Xeon® Gold 6130T	Q3'17	16	32	2.10 GHz	3.70 GHz	125
Intel® Xeon® Gold 6130	Q3'17	16	32	2.10 GHz	3.70 GHz	125
Intel® Xeon® Gold 6138	Q3'17	20	40	2.00 GHz	3.70 GHz	125
Intel® Xeon® Silver 4209T	Q2'19	8	16	2.20 GHz	3.20 GHz	70
Intel® Xeon® Silver 4210	Q2'19	10	20	2.20 GHz	3.20 GHz	85
Intel® Xeon® Silver 4215	Q2'19	8	16	2.50 GHz	3.50 GHz	85
Intel® Xeon® Silver 4214	Q2'19	12	24	2.20 GHz	3.20 GHz	85
Intel® Xeon® Silver 4216	Q2'19	16	32	2.10 GHz	3.20 GHz	100
Intel® Xeon® Gold 5215	Q2'19	10	20	2.50 GHz	3.40 GHz	85
Intel® Xeon® Gold 5218T	Q2'19	16	32	2.10 GHz	3.80 GHz	105
Intel® Xeon® Gold 6226	Q2'19	12	24	2.70 GHz	3.70 GHz	125
Intel® Xeon® Gold 6230	Q2'19	20	40	2.10 GHz	3.90 GHz	125
Intel® Xeon® Gold 6238T	Q2'19	22	44	1.90 GHz	3.70 GHz	125