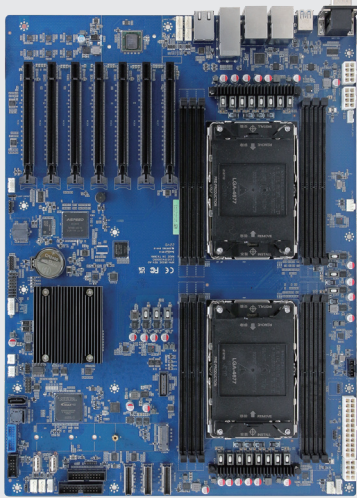




Features

- Dual Intel LGA4677 Sockets support 4th/5th Generation Intel® Xeon® Scalable Processor (Max. TDP at 270W)
- Intel® C741 Chipset
- 12 x DDR5 5600 MHz RDIMM up to 3TB
- TPM 2.0 onboard
- IPMI 2.0 with AST 2600 BMC controller onboard
- 1 x Intel I210AT 1GbE controller
1 x Intel I226-LM 2.5GbE controller
1 x Intel X550AT2 10GbE controller supports 2 x 10GbE Ethernet ports
- 5 x SATA III Support RAID 0,1,5,10
- 1 x RS232 port, 6 x USB 3.2 Gen1 ports at Edge I/O
- 2 x Internal USB 3.2 Gen1 port & 2 x USB 2.0 type A receptacle & 2 x internal USB 2.0 ports
- 1 x M.2 M-Key PCIe 5.0 x4 NVMe SSD, 2242/2260/2280/22110 form factor



4th/5th Gen.
Intel®Xeon®
Scalable
Processor



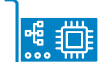
12 x DDR5
RDIMM
5600MHz



IPMI 2.0
supported



10GbE



PCIe Gen5
multiple
expansion

Specifications

System Information

Processor	Dual Intel LGA4677 Sockets support 4th/5th Generation Intel® Xeon® Scalable Processor (Max. TDP at 270W each)
Platform Controller Hub	Intel® C741 Chipset
System Memory	12 x DDR5 5600 MHz RDIMM up to 3TB
BIOS Information	AMI UEFI BIOS
Watchdog Timer	System reset event 0 ~ 6553 seconds
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 2600 BMC controller onboard

Rear I/O

USB	6 x USB 3.2 Gen1 ports
COM Port	1 x RS232 port
RJ-45	5 x RJ45 MGMT port for dedicated IPMI access only LAN1 port for 1GbE shared with IPMI access LAN2 port for 2.5GbE LAN3 and 4 ports for 10GbE
VGA	1 x VGA port

Display

Graphic Chipset	AST2600 BMC controller
Resolution	1 x VGA port VGA: 1920 x 1200 @ 60Hz 32bpp

Expansion

Expansion	7 x PCIe Gen5 x16 slots Slot 1, PCIe 5.0 x16 from 2nd CPU Slot 2, PCIe 5.0 x16 from 1st CPU Slot 3, PCIe 5.0 x16 from 2nd CPU Slot 4, PCIe 5.0 x16 from 1st CPU Slot 5, PCIe 5.0 x16 from 2nd CPU Slot 6, PCIe 5.0 x16 from 1st CPU Slot 7, PCIe 5.0 x16 from 2nd CPU (Slot 7 is the slot closest to CPU)
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Storage

M.2	1 x M.2 M-Key PCIe 5.0 x4 NVMe SSD, 2242/2260/2280/22110 form factor
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I/O

USB	2 x Internal USB 3.2 Gen1 ports 2 x Internal USB 2.0 type A receptacle 2 x Internal USB 2.0 ports
SATA	5 x SATA III (Note:SATA 1~4 support RAID 0,1,5,10) (1 x Mini-SAS HD 4i (from PCH for 4 xSATA or 1 x4 NVMe interface) & 1 x 7pin SATA connector)
Serial	1 x Internal RS232 port
Other	3 x Slim SAS 8i (SFF-8654) connectors (from 1st CPU)
CMOS Battery	1 x Horizontal Socket Type CMOS Battery Holder with CR2450

Ethernet

LAN Chipset	1 x Intel I210AT 1GbE controller 1 x Intel I226-LM 2.5GbE controller 1 x Intel X550AT2 10GbE controller supports 2 x 10GbE Ethernet ports
LAN Port	5 x RJ45 MGMT port for dedicated IPMI access only LAN1 port for 1GbE shared with IPMI access LAN2 port for 2.5GbE LAN3 and 4 ports for 10GbE

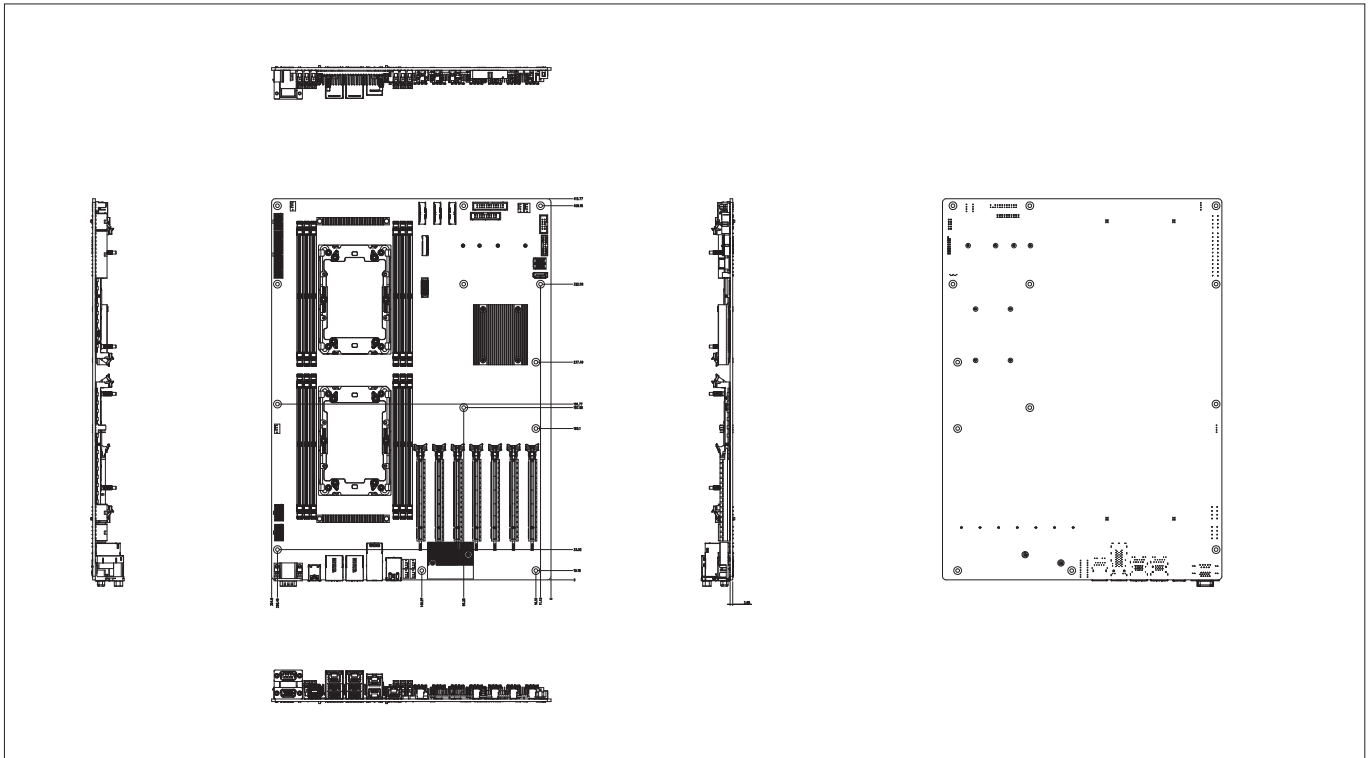
Mechanical & Environmental

Operating Temp.	0 ~ 50°C (32 ~ 122°F) to support up to 250W TDP CPU 0 ~ 40°C (32 ~ 104°F) to support up to 270W TDP CPU
Storage Temp.	-40 ~ 85°C
Operating Humidity	40°C @ 95% Relative Humidity, Non-condensing
Weight	2.2KG
Power Connector	1 x Std. 24 Pin ATX connector 3 x 8 Pin SSI 12V connectors
Dimension (L x W)	12" x 16.452" (304.8mm x417.88mm), PCB thickness is 2.86mm

Software Support

OS	Windows 10 IoT Enterprise LTSC 2021 Windows Server IoT 2019 with VT-d disabled Windows Server IoT 2022 Ubuntu 21.10, 22.04 LTS or later Red Hat Enterprise Linux(RHEL)8.2 and later
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Mechanical Drawing



Ordering Information

Model Name	P/N	Description
HPM-ERSDE	HPM-ERSDEA-A1R	EATX 2xLGA4677 Intel 5th Gen.C741/X550 12xDDR5/4xPCIex16/2x10GbE/1x1GbE/1x2.5GbE/8xUSB3/5xSATA3
HPM-ERSDE	HPM-ERSDEL-A1R	EATX 2xLGA4677 Intel 5th Gen.C741 12xDDR5/4xPCIex16/1x1GbE/1x2.5GbE/8xUSB3/5xSATA3

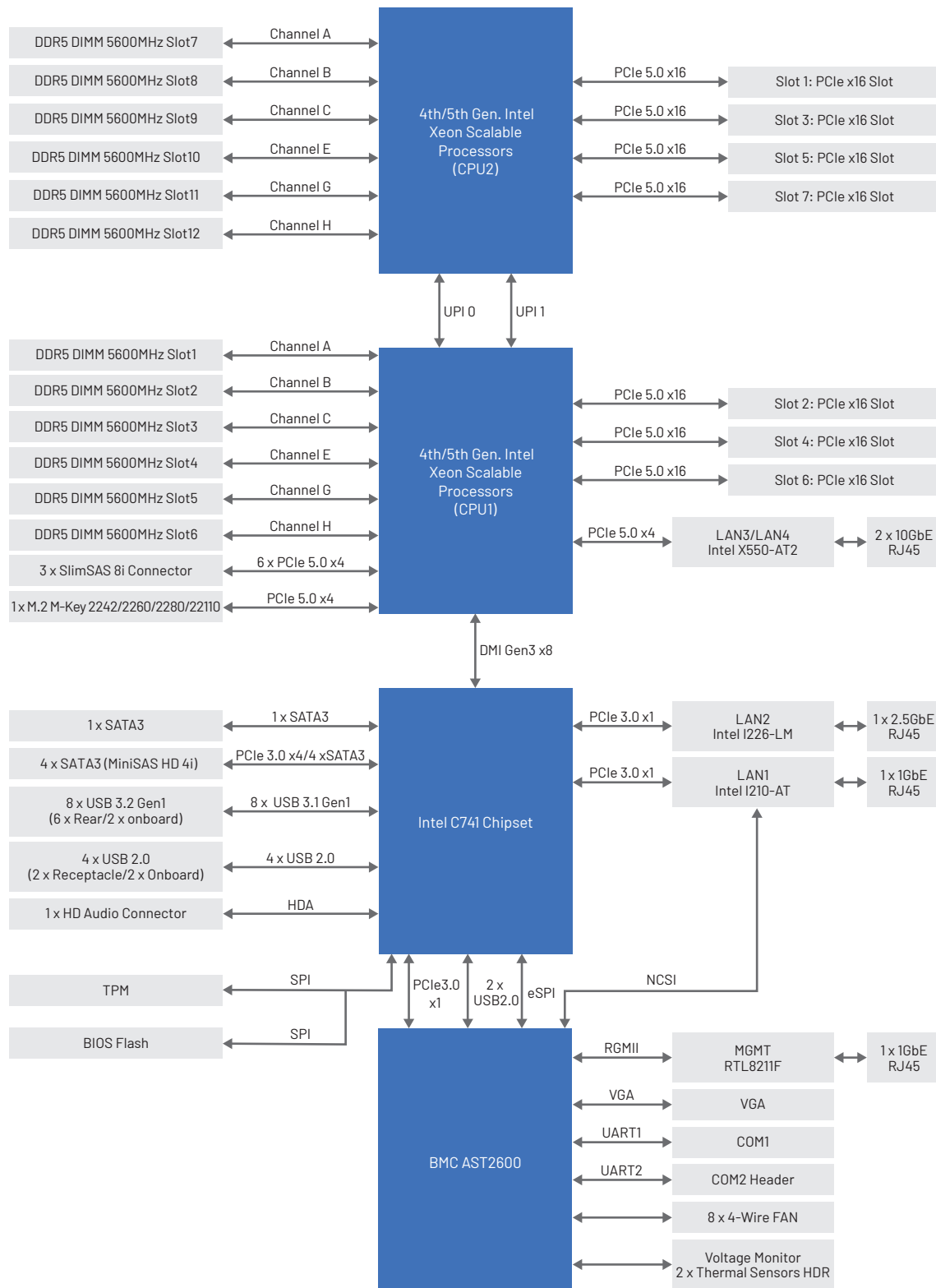
Packing List

Item	P/N	Quantity
HPM-ERSDE motherboard	HPM-ERSDEA-A1R	1
HPM-ERSDEA I/O shield	E195BKHPRSDE00R	1
LGA4677 CPU carrier-E1B	E199TR00063R	1

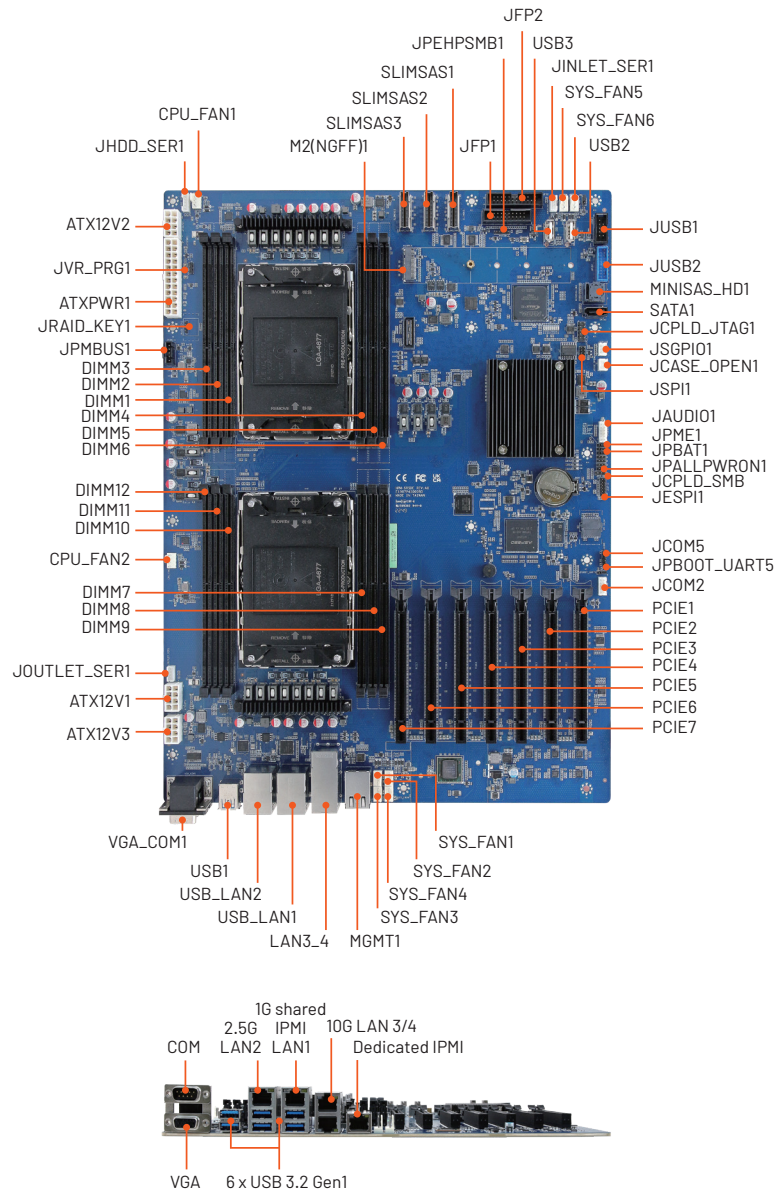
Optional Items

Item	P/N
CPU Cooler for LGA4677 4U 4500RPM 350W	BCC-FAN-467-01R

Block Diagram



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® Gold 6548Y+	Q4,23	32	64	2.5 GHz	4.1 GHz	250
Intel® Xeon® Gold 6526Y	Q4,23	16	32	2.8 GHz	3.9 GHz	195
Intel® Xeon® Gold 5515+	Q4,23	8	16	3.2 GHz	4.1 GHz	165
Intel® Xeon® Gold 6530	Q4,23	32	64	2.1 GHz	4.0 GHz	270
Intel® Xeon® Gold 5520+	Q4,23	28	56	2.2 GHz	4.0 GHz	205
Intel® Xeon® Silver 4516Y+	Q4,23	24	48	2.2 GHz	3.7 GHz	185
Intel® Xeon® Silver 4514Y	Q4,23	16	32	2.0 GHz	3.4 GHz	150
Intel® Xeon® Silver 4510	Q4,23	12	24	2.4 GHz	4.1 GHz	150
Intel® Xeon® Silver 4509Y	Q4,23	8	16	2.6 GHz	4.1 GHz	125
Intel® Xeon® Silver 4510T	Q4,23	12	24	2.0 GHz	3.7 GHz	115
Intel® Xeon® Bronze 3508U (Support single socket only)	Q4,23	8	8	2.1 GHz	2.2 GHz	125
Intel® Xeon® Gold 6448Y	Q1,23	32	64	2.1 GHz	4.1 GHz	225
Intel® Xeon® Gold 6426Y	Q1,23	16	32	2.5 GHz	4.1 GHz	185
Intel® Xeon® Gold 6418H	Q1,23	24	48	2.1 GHz	4.0 GHz	185
Intel® Xeon® Gold 5415+	Q1,23	8	16	2.9 GHz	4.1 GHz	150
Intel® Xeon® Gold 5420+	Q1,23	28	56	2.0 GHz	4.1 GHz	205
Intel® Xeon® Gold 5418Y	Q1,23	24	48	2.0 GHz	3.8 GHz	185
Intel® Xeon® Silver 4416+	Q1,23	20	40	2.0 GHz	3.9 GHz	165
Intel® Xeon® Silver 4410Y	Q1,23	12	24	2.0 GHz	3.9 GHz	150
Intel® Xeon® Silver 4410T	Q1,23	10	20	2.7 GHz	4.0 GHz	150
Intel® Xeon® Bronze 3408U (Support single socket only)	Q1,23	8	8	1.8 GHz	1.9 GHz	125
Intel® Xeon® Gold 6430	Q1,23	32	64	2.10 GHz	3.40 GHz	270