

Please contact FAE support for below orange blocks

Ampere CPU for Altra and Altra max											
Product Name	Core Name	Q-Spec	Stepping	Cache	System Bus	# of Cores	Processor Base Frequency	Max Frequency	TDP	Memory Types	Note
Ampere CPU											
Ampere Altra Max CPU M128-30	Altra Max				25 GT/s	128	2.8 GHz	3.0 GHz	250	DDR4-3200	
Ampere Altra Max CPU M128-28	Altra Max				25 GT/s	128	2.8 GHz	2.8 GHz	230	DDR4-3200	
Ampere Altra Max CPU M128-26	Altra Max				25 GT/s	128	2.6 GHz	2.6 GHz	190	DDR4-3200	
Ampere Altra Max CPU M112-30	Altra Max				25 GT/s	112	3.0 GHz	3.0 GHz	240	DDR4-3200	
Ampere Altra Max CPU M96-30	Altra Max				25 GT/s	96	3.0 GHz	3.0 GHz	220	DDR4-3200	
Ampere Altra Max CPU M96-28	Altra Max				25 GT/s	96	2.8 GHz	2.8 GHz	190	DDR4-3200	
Ampere Altra CPU Q80-33	Altra				25 GT/s	80	3.0 GHz	3.3 GHz	250	DDR4-3200	
Ampere Altra CPU Q80-30	Altra				25 GT/s	80	2.8 GHz	3.0 GHz	210	DDR4-3200	
Ampere Altra CPU Q80-28	Altra				25 GT/s	80	2.6 GHz	2.8 GHz	185	DDR4-3200	
Ampere Altra CPU Q80-26	Altra				25 GT/s	80	2.4 GHz	2.6 GHz	150	DDR4-3200	
Ampere Altra CPU Q72-30	Altra				25 GT/s	72	2.8 GHz	3.0 GHz	195	DDR4-3200	
Ampere Altra CPU Q64-33	Altra				25 GT/s	64	3.0 GHz	3.3 GHz	220	DDR4-3200	
Ampere Altra CPU Q64-30	Altra				25 GT/s	64	2.8 GHz	3.0 GHz	180	DDR4-3200	
Ampere Altra CPU Q64-26	Altra				20 GT/s	64	2.4 GHz	2.6 GHz	125	DDR4-3200	
Ampere Altra CPU Q64-22	Altra				16 GT/s	64	2.0 GHz	2.2 GHz	95	DDR4-3200	
Ampere Altra CPU Q32-17	Altra				16 GT/s	32	1.7 GHz	1.7 GHz	65	DDR4-3200	

**Memory (Memory actually maximum frequency will follow memory controller's spec of CPU you used)**

Product Name	Memory Type	Module Supplier	Size	Chip Brand	Rank	Voltage	Data Transfer Rate	Error Correction	CAS Latency	Pins	Note
RDIMM											
MTA36ASF4G72PZ-3G2E2	DDR4	Micron	16GB	Micron-Rambus	2Rx4	1.2v	3200MHz	ECC Registered	24	288-pin	
M393A4G43AB3-CWE	DDR4	Samsung	32GB	Samsung-IDT	2Rx8	1.2v	3200MHz	ECC Registered	22	288-pin	
M393A2K40CB2-CTD6Q	DDR4	Samsung	16GB	Samsung-Montage	1Rx4	1.2v	2666MHz	ECC Registered	19	288-pin	
M393A8K40B22-CWD6Q	DDR4	Samsung	64GB	Samsung	252Rx4	1.2v	2666MHz	ECC Registered	19	288-pin	
M393A8G40MB2-CTD7Q	DDR4	Samsung	64GB	Samsung-IDT	2Rx4	1.2v	2666MHz	ECC Registered	19	288-pin	
CT32G4RFD4266.36FD1	DDR4	CRUCIAL	32GB	Micron	2Rx4	1.2v	2666MHz	ECC Registered	19	288-pin	
CT32G4RFD4266-2G6D1.001	DDR4	CRUCIAL	32GB	Micron	2Rx4	1.2v	2666MHz	ECC Registered	19	288-pin	
CT32G4RFD4266-2G6H1.001	DDR4	CRUCIAL	32GB	Micron	2Rx4	1.2v	2666MHz	ECC Registered	19	288-pin	
HMA84GR7AFR4N-VKT3	DDR4	SKhynix	32GB	SKhynix-Montage	2Rx4	1.2v	2666MHz	ECC Registered	19	288-pin	
M393A2K43DB2-CVFBQ	DDR4	Samsung	16GB	Samsung-IDT	2Rx8	1.2v	2933MHz	ECC Registered	21	288-pin	
M393A4K40DB2-CVFBQ	DDR4	Samsung	32GB	Samsung-IDT	2Rx4	1.2v	2933MHz	ECC Registered	21	288-pin	
M393A8G40AB2-CVFBY	DDR4	Samsung	64GB	Samsung-IDT	2Rx4	1.2v	2933MHz	ECC Registered	21	288-pin	
M393A2K43EB3-CWBEQ	DDR4	Samsung	16GB	Samsung-IDT	2Rx8	1.2v	3200MHz	ECC Registered	22	288-pin	
CT16G4RFD8293.18FE1	DDR4	CRUCIAL	16GB	Micron	2Rx8	1.2v	2933MHz	ECC Registered	21	288-pin	
MTA9ASF2G72PZ-2G9E1UI	DDR4	Micron	16GB	Micron-Rambus	1Rx8	1.2v	2933MHz	ECC Registered	21	288-pin	
CT32G4RFD4293-2G9E2.001	DDR4	CRUCIAL	32GB	Micron	2Rx4	1.2v	2933MHz	ECC Registered	21	288-pin	
MTA36ASF4G72PZ-2G9E2TG	DDR4	Micron	32GB	Micron-Montage	2Rx4	1.2v	2933MHz	ECC Registered	21	288-pin	
MTA18ASF4G72PDZ-2G9E1TI	DDR4	Micron	32GB	Micron-Montage	2Rx8	1.2v	2933MHz	ECC Registered	21	288-pin	
MTA18ASF4G72PDZ-3G2F1UI	DDR4	Micron	32GB	Micron-Rambus	2Rx8	1.2v	3200MHz	ECC Registered	22	288-pin	
MTA36ASF8G72PZ-2G9E1TI	DDR4	Micron	64GB	Micron-Montage	2Rx4	1.2v	2933MHz	ECC Registered	21	288-pin	
HMA82GR7CJR8N-WM T4	DDR4	SKhynix	16GB	SKhynix-Montage	2Rx8	1.2v	2933MHz	ECC Registered	21	288-pin	
HMA84GR7CJR4N-WM TG	DDR4	SKhynix	32GB	SKhynix-IDT	2Rx4	1.2v	2933MHz	ECC Registered	21	288-pin	
HMAA8GR7MJR4N-WM T4	DDR4	SKhynix	64GB	SKhynix-Montage	2Rx4	1.2v	2933MHz	ECC Registered	21	288-pin	
KSM29RD8/16HDR	DDR4	Kingston	16GB	SKhynix-Rambus	2Rx8	1.2v	2933MHz	ECC Registered	21	288-pin	
KSM29RD4/32HDR	DDR4	Kingston	32GB	SKhynix-Rambus	2Rx4	1.2v	2933MHz	ECC Registered	21	288-pin	
NT16GA72D8PBX3P-IX	DDR4	Nanya	16GB	Nanya-IDT	2Rx8	1.2v	2933MHz	ECC Registered	21	288-pin	
NT32GA72D4NBX3P-IX	DDR4	Nanya	32GB	Nanya-Montage or IDT	2Rx4	1.2v	2933MHz	ECC Registered	21	288-pin	
HMA82GR7DJR8N-XN T8	DDR4	SKhynix	16GB	SKhynix-Rambus	2Rx8	1.2v	3200MHz	ECC Registered	22	288-pin	
HMA82GR7DJR8N-XN TG	DDR4	SKhynix	16GB	SKhynix-IDT	2Rx8	1.2v	3200MHz	ECC Registered	22	288-pin	
HMA84GR7DJR4N-XN T4	DDR4	SKhynix	32GB	SKhynix-Montage	2Rx4	1.2v	3200MHz	ECC Registered	22	288-pin	
HMAA8GR7AJR4N-XN TG	DDR4	SKhynix	64GB	SKhynix-IDT	2Rx4	1.2v	3200MHz	ECC Registered	22	288-pin	
CT16G4RFD832A-3G2E1.001	DDR4	Crucial	16GB	Micron-Rambus	2Rx8	1.2v	3200MHz	ECC Registered	22	288-pin	
MTA9ASF2G72PZ-3G2E1TI	DDR4	Micron	16GB	Micron-Montage	1Rx8	1.2v	3200MHz	ECC Registered	22	288-pin	
MTA18ASF4G72PDZ.3G2B2TI	DDR4	Micron	32GB	Micron-Montage	2Rx8	1.2v	3200MHz	ECC Registered	22	288-pin	
MTA36ASF4G72PZ-3G2J3UI	DDR4	Micron	32GB	Micron-Rambus	2Rx4	1.2v	3200MHz	ECC Registered	22	288-pin	
MTA36ASF4G72PZ-3G2E7VI	DDR4	Micron	32GB	Micron-IDT	2Rx4	1.2v	3200MHz	ECC Registered	22	288-pin	
MTA36ASF8G72PZ-3G2E1VI	DDR4	Micron	64GB	Micron-IDT	2Rx4	1.2v	3200MHz	ECC Registered	22	288-pin	
MTA18ASF4G72PDZ-3G2E1TI	DDR4	Micron	32GB	Micron	2Rx8	1.2v	3200MHz	ECC Registered	22	288-pin	
MTA18ASF2G72PDZ-3G2J3	DDR4	Micron	16GB	Micron	2Rx8	1.2v	3200MHz	ECC Registered	22	288-pin	
MTA18ASF4G72PZ-3G2F1TI	DDR4	Micron	32GB	Micron	1Rx4	1.2v	3200MHz	ECC Registered	22	288-pin	
M393A2K43DB3-CWBEQ	DDR4	Samsung	16GB	Samsung-IDT	2Rx8	1.2v	3200MHz	ECC Registered	22	288-pin	
M393A2K40DB3-CWEGQ	DDR4	Samsung	16GB	Samsung-Rambus	1Rx4	1.2v	3200MHz	ECC Registered	22	288-pin	
M393A4K40DB3-CWECQ	DDR4	Samsung	32GB	Samsung-Montage	2Rx4	1.2v	3200MHz	ECC Registered	22	288-pin	
M393A4K40DB3-CWBEQ	DDR4	Samsung	32GB	Samsung-IDT	1Rx4	1.2v	3200MHz	ECC Registered	22	288-pin	
M393A4K40DB3-CWEGQ	DDR4	Samsung	32GB	Samsung-Rambus	2Rx4	1.2v	3200MHz	ECC Registered	22	288-pin	

M393A8G40AB2-CWEBO	DDR4	Samsung	64GB	Samsung-IDT	2Rx4	1.2v	3200MHz	ECC Registered	22	288-pin	
M393A8G40AB2-CWECC	DDR4	Samsung	64GB	Samsung-Montage	1Rx4	1.2v	3200MHz	ECC Registered	22	288-pin	
M393AAG40M32-CAEBQ	DDR4	Samsung	128GB	Samsung	2S2Rx4	1.2v	3200MHz	ECC Registered	22	288-pin	
M393A4K40EB3-CWE	DDR4	Samsung	32GB	Samsung	2Rx4	1.2v	3200MHz	ECC Registered	22	288-pin	
M393A4G43BB4-CWEBY	DDR4	Samsung	32GB	Samsung-IDT	1Rx4	1.2v	3200MHz	ECC Registered	22	288-pin	
M393A8G40BB4-CWE	DDR4	Samsung	64GB	Samsung	2Rx4	1.2v	3200MHz	ECC Registered	22	288-pin	
KSM32RS8/16MER	DDR4	Kingston	16GB	Micron-Rambus	1Rx8	1.2v	3200MHz	ECC Registered	22	288-pin	
KSM32RD4/32HDR	DDR4	Kingston	32GB	SKhynix-Rambus	1Rx4	1.2v	3200MHz	ECC Registered	22	288-pin	
KSM32RS4/32MER	DDR4	Kingston	32GB	Micron-Rambus	1Rx4	1.2v	3200MHz	ECC Registered	22	288-pin	
AD4R3200716G22-BHYA	DDR4	ADATA	16GB	SKhynix-Montage	1Rx8	1.2v	3200MHz	ECC Registered	22	288-pin	
MTA36ASF4G72PZ-3G2R1UI	DDR4	Micron	32GB	Micron-Rambus	1Rx4	1.2v	3200MHz	ECC Registered	22	288-pin	
MTA18ASF2G72PDZ-3G2R1UI	DDR4	Micron	16GB	Micron-Rambus	2Rx8	1.2v	3200MHz	ECC Registered	22	288-pin	
MTA18ASF2G72PDZ-3G2R1VI	DDR4	Micron	16GB	Micron-IDT	2Rx8	1.2v	3200MHz	ECC Registered	22	288-pin	
MTA18ASF2G72PDZ-3G2R1TI	DDR4	Micron	16GB	Micron-Rambus	2Rx8	1.2v	3200MHz	ECC Registered	22	288-pin	

**HDD / U.2 / M.2 (SATS/ SAS HDD may need RAID Card support and please check if the model support NVMe)**

Product Name	Type	Vendor	Form Factor	Format	Capacity	Interface Speed	Series	Cache	RPM	Encryption	Note
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SATA HDD											
ST1000NX0313	SATA	Seagate	2.5"	512E	1TB	6Gb/s	Exos 7E2000 (Enterprise Capacity V.3)	128MB	7200	N/A	SN05
ST2000NX0243	SATA	Seagate	2.5"	4Kn	2TB	6Gb/s	Exos 7E2000 (Enterprise Capacity V.3)	128MB	7200	N/A	NN02
ST4000NM000B	SATA	Seagate	3.5"	512n	4TB	6Gb/s	Exos 7E10	256MB	7200	N/A	
HUS726T6TALE6L4	SATA	WD	3.5"	4Kn/512e	6TB	6Gb/s	Ultrastar® DC HC330	256MB	7200	N/A	FW:984
MG06ACA800E	SATA	Toshiba	3.5"	4Kn/512e	6TB	6Gb/s	Enterprise	256MB	7200	N/A	FW:0108

SATA SSD											
MTFDDAK3T8TDS-1AW1ZABYY (5300 PRO)	SATA	Micron	2.5"	SSD	3.84TB	6Gb/s					
MTFDDAK1T9TDS-1AW1ZABYY (5300 PRO)	SATA	Micron	2.5"	SSD	1.92TB	6Gb/s					
MZ-7LH1T9NE 883 DCT Series	SATA	Samsung	2.5"	SSD	1.92TB	6Gb/s					
MZ7LH3T8HMLT PM883 Series	SATA	Samsung	2.5"	SSD	3.84TB	6Gb/s					
SSDSC2K8019T8 D3-S4510 Series	SATA	Intel	2.5"	SSD	1.92TB	6Gb/s					
SSDSC2K8019T801 D3-S4610 Series	SATA	Intel	2.5"	SSD	1.92TB	6Gb/s					
SSDSC2K8480G801 D3-S4510 Series	SATA	Intel	2.5"	SSD	480GB	6Gb/s					
SSDSC2K8480G801 D3-S4610 Series	SATA	Intel	2.5"	SSD	480GB	6Gb/s					
SSDSC2K8038T801 D3-S4510 Series	SATA	Intel	2.5"	SSD	3.84TB	6Gb/s					
XA960LE10063	SATA	Seagate	2.5"	SSD	960GB	6Gb/s					
KHK61RSE960G	SATA	Toshiba	2.5"	SSD	960GB	6Gb/s					
MZ7LH7T6HMLA-00005 PM 883	SATA	Samsung	2.5"	SSD	7.68TB	6Gb/s					
MZ7L3960HCLR-00A07 Samsung PM893	SATA	Samsung	2.5"	SSD	960GB	6Gb/s					
MZ7LH960HAJR-00005 Samsung 883	SATA	Samsung	2.5"	SSD	960GB	6Gb/s					
MZ7L33T8HBLT-00A07 PM893 Series	SATA	Samsung	2.5"	SSD	3.84TB	6Gb/s					
SSB1K9G7LCW-D2-SME1720GBT	SATA	Phison	2.5"	SSD	1.92TB	6Gb/s	ESM1720 Series				

SAS HDD											
ST300MP0006	SAS	Seagate	2.5"	512n	300GB	12Gb/s	Exos 15E900 (Enterprise Performance 15K)	256MB	15000	N/A	
ST300MP0106	SAS	Seagate	2.5"	4Kn/512e	300GB	12Gb/s	Exos 15E900 (Enterprise Performance 15K)	256MB	15000	N/A	
ST2400MM0129	SAS	Seagate	2.5"	4Kn/512e	2TB	12Gb/s	Exos 10E2400 (Enterprise Performance 10K)	256MB	10000	N/A	C001
AL15SEB24EQ	SAS	Toshiba	2.5"	512e	2.4TB	12Gb/s	Performance	128MB	10500	N/A	FW:0102

SAS SSD											
MZ1LT7T6HMLA-00007 PM1643 Series	SAS	Samsung	2.5"	SSD	7.68TB	12Gb/s					
XS960SE70084 Nytro 3332 Series	SAS	Seagate	2.5"	SSD	960GB	12Gb/s					

M.2 NVMe SSD											
MTFDH8G3T8TDF 3840GB 7300 Pro Series	M.2	Micron	22110	PCIe(NVMe)	3840GB	PCIe Gen3 x4					
Phison PS5016-E16 & PS5019-E19	M.2	Gigabyte	2280	PCIe(NVMe)	1TB	PCIe Gen4 x4					
MZ1LB1T9HALS-00007 Samsung 983	M.2	Samsung	22110	PCIe(NVMe)	1.92TB	PCIe Gen3 x4					
MZ1LB960HAJQ-00007 Samsung Pm983	M.2	Samsung	22110	PCIe(NVMe)	960GB	PCIe Gen3 x4					
MZ1L21T9HCLS-00A07 Samsung Pm9A3	M.2	Samsung	22110	PCIe(NVMe)	1.92TB	PCIe Gen4 x4					
MZ1L23T8HBLA-00A07 Samsung Pm9A3	M.2	Samsung	22110	PCIe(NVMe)	3.84TB	PCIe Gen4 x4					

**M.2 Expansion PCIe Card**

Product Name	Type	Vendor	Form Factor	Interface	Max. Channels	Interface Speed	Note				
CMT4032	PCIe	Gigabyte	22110	PCIe(NVMe)	2	PCIe Gen3 x8	-				

**GPGPU Card (GPGPU server only)**

Product Name	Processor Cores	Memory Bandwidth (GB/sec)	VRAM	OpenGL	Microsoft DirectX	Graphics Card Power (W)	NVIDIA SLI / AMD CrossFire Ready	Note			
A100 (Ampere)	6912	1555 GB/s	40GB			250 W		Without the CPU of Ultra Max series			
A100 (Ampere)	6912	1935 GB/s	80GB			300 W		Without the CPU of Ultra Max series			
H100 (Ampere)	16896	2000 GB/s	80GB			350 W					

**RAID Cards**

Product Name	RAID-on-Chip Controller	Host Bus Type	Internal Ports	Internal Connectors	External Ports	External Connectors	Data Transfer Rates	Note	Support type	RAID
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**GIGABYTE Storage Cards**

CRA4448	LSI SAS 3108	PCIe Gen3 x8	8	2 x Mini-SAS HD SFF-8643	-	-	Up to 12Gb/s per port		SATA / SAS	Hardware RAID (PCIe 5 not support) Firmware need support ARM HII
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CRA3338	LSI SAS 3008	PCIe Gen3 x8	8	2 x Mini-SAS HD SFF-8643	-	-	Up to 12Gb/s per port		SATA / SAS	Software RAID
LSI RAID Controller Cards										
LSI SAS 9500-8i	SAS3808	PCIe Gen4 x8	8	1 x8 SlimSAS SFF-8654	-	-	Up to 12Gb/s per port		SATA / SAS / U.2	NO RAID Function <small>*PCIe SFF-8654 support U.2</small>
MegaRAID SAS 9361-8i	LSISAS3108 dual core RAID on Chip (ROC)	PCIe Gen3 x8	8	2 x Mini-SAS HD SFF-8643	-	-	Up to 12Gb/s per port		SATA / SAS	Hardware RAID
MegaRAID SAS 9460-8i	SAS3508 dual-core RAID-on-Chip (ROC)	PCIe Gen3 x8	8	2 x Mini-SAS HD SFF-8643	-	-	Up to 12Gb/s per port		SATA / SAS	Hardware RAID
LSI SAS 9305-16i	SAS3224	PCIe Gen3 x8	16	6 Mini-SAS HD SFF8643	-	-	Up to 12Gb/s per port		SATA / SAS	NO RAID Function
LSI SAS 9305-24i	SAS3224	PCIe Gen3 x8	24	6 Mini-SAS HD SFF8643	-	-	Up to 12Gb/s per port		SATA / SAS	NO RAID Function
Microsemi Adaptec HBA 1100-16i	Adaptec HBA 1100-16i	PCIe Gen3 x8	16	6 Mini-SAS HD SFF8643	-	-	Up to 12Gb/s per port		SATA / SAS	NO RAID Function
Microsemi Adaptec 2100-8i	SmartHBA 2100	PCIe Gen3 x8	8	6 Mini-SAS HD SFF8643	-	-	Up to 12Gb/s per port		SATA / SAS	Software RAID
LAN Cards										
Product Name	Connector	System Interface Type	# of Ports	Data Rate	Note					
GIGABYTE LAN Cards										
CLN4B20	RJ-45	PCIe Gen3 x8	Dual	10Gb/s per port	Broadcom BCM57416					(Need update v225 ARM-HiFiFirmware)
CLN4312	RJ-45	PCIe Gen2 x4	Dual	1Gb/s per port	Intel® I350-AM2					
Intel_1GbE										
Intel® Ethernet Converged Network Adapter I350-T2V2	RJ-45	PCIe Gen2 x4	Dual	1Gb/s per port						
Mellanox ConnectX										
MCX621102AN-ADAT	SFP28	PCIe Gen4 x8	Dual	25Gb/s per port	Mellanox ConnectX-6 Dx EN					
Mellanox VPI Adapter Cards										
MCX354A-FCBT	QSFP	PCIe Gen3 x8	Dual	FDR and 40/56GbE	Mellanox ConnectX®-3 VPI					
Broadcom										
BCM957414A4142CC	SFP28	PCIe Gen3 x8	Dual	25Gb/s per port	BCM57414					Firmware version: 223.0.161.0/pkg 223.1.96.0
(Mellanox) NVIDIA BlueField-2 DPU Cards										
MBF2M345A-HESOT	QSFP56	PCIe Gen4 x16	Single	200Gb/s per port	E-Series/ 2.0GHz					
USB Device										
Product Name	Type	Vendor	Capacity	Note						
USB 3.0										
PURE CLASSIC X176B1FWBO75	HDD	Gigabyte	500G							
GoFlex STAA500305	HDD	Seagate	500G							
TOSHIBA CANVIO BASIC	HDD	Toshiba	500G							
NU EBC113	Blue-ray	NU								
NU ESW863 8X SLIM	DVD	NU								
Verico Evolution Life S 16GB	Flash	Verico	16G							
NA317U+	Device	inoe								
S1-DS3-Plus	Device	CyberSLIM								
MB981U3-1S	Device	ICYDOCK								
I310-SB3(6G)	Device	STARDOM								