GIGABYTE™

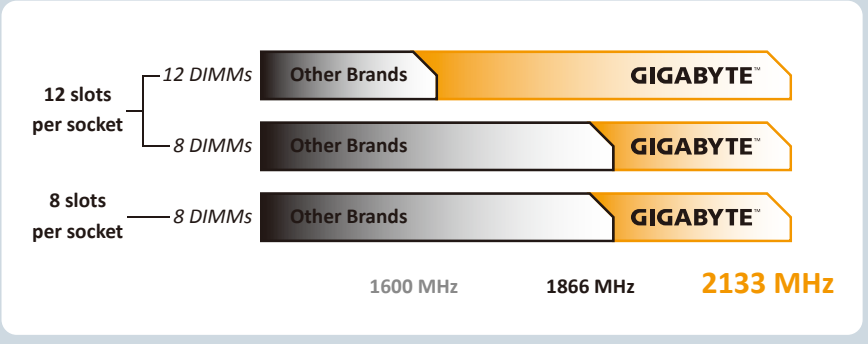
2017 2H

Server Motherboards
Server Barebones & Accessories
IoT Gateway



Get the Performance Edge on Our Socket 2011-3 Motherboards

On the previous server platforms from Intel, the maximum supported memory frequency has always been automatically downgraded by design when more DIMMs were being added on a server motherboard. As this trade-off between performance and capacity represents a dilemma to many memory-hungry server applications, GIGABYTE offers a unique solution. All our motherboards based on the LGA 2011-3 socket support by default a maximum frequency of 2133MHz in any memory configuration :



Easy BIOS Update

Because updating your BIOS to a newer version can be a troublesome experience, GIGABYTE has developed this integrated function (no additional software to install) that lets you update the BIOS of your server / workstation motherboard(s) equipped with an Aspeed AST2400 controller:

- Without having to install CPUs, memory, drives, operating system, etc.
- Without having to power on the system (but a power supply must be connected)
- One board at a time via our IPMI 2.0 web interface
- Multiple boards simultaneously via command line

The Best Components Only

All IR Power Design

The CPU and memory power delivery of our motherboards is ensured by industry-leading IR Digital PWM and IR PowIRstage IC controllers. These components guarantee a super stable operating environment and allow the processors and the memory to deliver their maximum performance.

OS-CON Capacitors

With a service life of a minimum of 50'000 hours, our server motherboards are built with ultra long lasting components for the highest reliability possible.

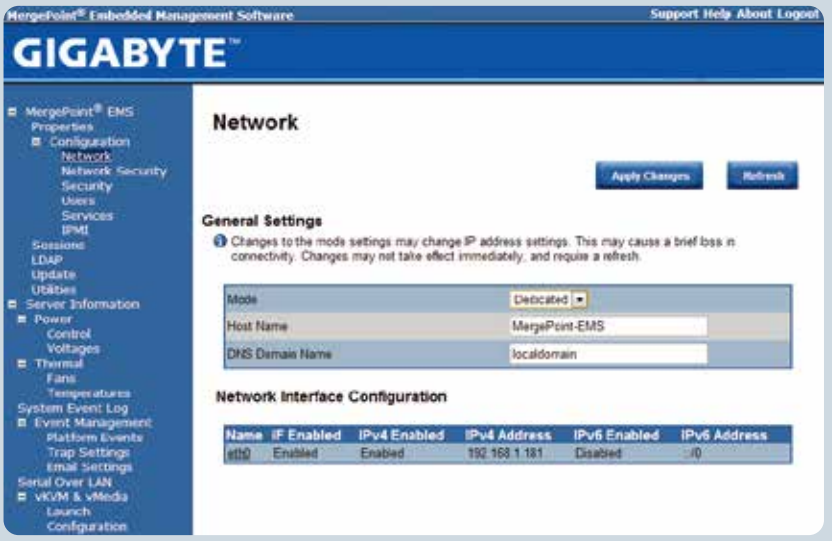
High End Ferrite Core Chokes

The top quality chokes we install on our server motherboards also contribute to an ultra stable power delivery to the CPU and the memory.

Remote System Management

All our motherboards and barebones built with an onboard Aspeed AST2400 / AST2300 controller include comprehensive remote system monitoring with a whole set of management features, such as:

- Remote boot & reset
- Remote image mounting
- Full control over network, users, services, etc.
- Complete system monitoring & diagnostics





MX31-CE0

Form factor	microATX (244 x 244mm)
CPU	Intel Xeon processor E3-1200 V6/V5 product family 7th/ 6th Gen. Intel Core i3/ Celeron/ Pentium processors
Socket	1 x LGA 1151
Chipset	Intel C232
Memory	4 x DDR4 2CH ECC/Non-ECC UDIMM 2133/ 2400MHz
LAN	2 x GbE (Intel I210 & I219LM) 1 x GbE MLAN
BMC	Aspeed AST2400 IPMI 2.0 + iKVM
SAS	-
SATA	6 x SATA 6Gb/s
RAID	Intel RAID 0/ 1/ 10/ 5
PCIe Slots	2 x PCIe x16 (Gen3 x8) 1 x PCIe x4 (Gen3 x4) 1 x PCIe x1 (Gen3 x1)
Rear I/O	4 x USB 3.0 3 x RJ45 1 x COM 1 x VGA



MU70-SU0

Form factor	ATX (305 x 244mm)
CPU	Intel Xeon E5-2600 V3/V4 processors Intel Xeon E5-1600 V3/V4 processors
Socket	1 x LGA 2011-3 Narrow ILM (56 x 94mm)
Chipset	Intel C612
Memory	12 x DDR4 4-ch RDIMM / LRDIMM / 3DS LRDIMM DDR4 2400/ 2133/ 1866/ 1600MHz
LAN	4 x GbE (Intel I210) 1 x GbE MLAN
BMC	Aspeed AST2400 IPMI 2.0 + iKVM
SAS	-
SATA	8 x SATA 6Gb/s 1 x SATA 6Gb/s support SATA DOM 1 x mSATA 6Gb/s connector
RAID	Intel RAID 0/ 1/ 10/ 5
PCIe Slots	2 x PCIe x16 (Gen3 x16) 1 x PCIe x16 (Gen3 x8) *run at Gen3 x4 bandwidth when mezzanine slot is populated 1 x PCIe x4 (Gen2 x2) 1 x PCIe x4 mezzanine card slot
Rear I/O	4 x USB 3.0 2 x USB 2.0 4 x RJ45 1 x M-LAN 1 x COM 1 x VGA 1 x ID button 1 x PS/2



MX11-PC0

Form factor	Mini-ITX (170 x 170mm)
CPU	Intel Xeon processor E3-1200 V6/V5 product family 7th/ 6th Gen. Intel Core i3/ Celeron/ Pentium processors
Socket	1 x LGA 1151
Chipset	Intel C232
Memory	2 x DDR4 2-ch ECC/Non-ECC UDIMM 2133/ 1866MHz
LAN	2 x GbE (Intel I210)
BMC	Aspeed AST2400 IPMI 2.0 + iKVM
SAS	1 x Mini-SAS HD (3.0 x4) from PCH supports NVMe drive
SATA	4 x SATA 6Gb/s (SATA DOM supported)
RAID	Intel RAID 0/ 1/ 10/ 5
PCIe Slots	1 x PCIe x16 (Gen3 x16)
Rear I/O	2 x USB 3.0 2 x RJ45 1 x COM 1 x VGA 1 x ID button 1 x PWR button 1 x RST button 1 x NMI button



MZ31-AR0

Form factor	E-ATX (350 x 330mm)
CPU	AMD EPYC™ 7000 series processor family
Socket	Socket SP3
Memory	16 x DDR4 8-ch RDIMM / LRDIMM DDR4 2400/ 2133/ 2667MHz
LAN	2 x SFP+ 10Gb/s LAN (Broadcom BCM 57810S) 1 x GbE MLAN
BMC	Aspeed AST2500 IPMI 2.0 + iKVM
SAS	-
SATA	4 x SlimSAS for 16 x SATA 6Gb/s
RAID	-
PCIe Slots	2 x PCIe x8 (Gen3 x8) 4 x PCIe x16 (Gen3 x16) 1 x PCIe x16 (Gen3 x8) 1 x M.2 (M-key) @ PCIe Gen3 x4 - Supports NGFF-2242/2260/2280 cards
Rear I/O	2 x USB 3.0 2 x USB 2.0 2 x SFP+ 1 x M-LAN 1 x COM 1 x VGA 1 x ID button

MOTHERBOARD



R180-F34

Form factor	1U (430 x 43.5 x 710mm)
CPU	2 x Intel Xeon E5-2600 V3/V4 processors
Socket	2 x LGA 2011-3
Chipset	Intel C612
Memory	24 x DDR4 slot 4-ch RDIMM / LRDIMM / 3DS LRDIMM DDR4 2400/ 2133/ 1866/ 1600MHz
LAN	2 x GbE LAN ports (Intel I350-BT2) 1 x 10/100/1000 MLAN
Storage	4 x 3.5" Hot-swappable HDD/SSD bays Supports 2.5" HDD/SSD
RAID	Intel RAID 0/1/5/10
Expansion Slots	Riser Card CRS1010: - 1 x PCIe x16 (PCIe 3.0 x16) Riser Card CRS1020: - 1 x PCIe x16 (PCIe 3.0 x16) - 1 x PCIe x8 (PCIe 3.0 x8) 1 Mezzanine type slot: - 1 x mezzanine slot (PCIe 3.0 x8)
Power Supply	2 x 800W Redundant PSU 80 +Platinum, 100~220V AC Option 550W



R280-A3C

Form factor	2U (430 x 87 x 712.4mm)
CPU	2 x Intel Xeon E5-2600 V3/V4 processors
Socket	2 x LGA 2011-3
Chipset	Intel C612
Memory	24 x DDR4 slot 4-ch RDIMM / LRDIMM / 3DS LRDIMM DDR4 2400/ 2133/ 1866/ 1600MHz
LAN	2 x GbE LAN ports (Intel I350-BT2) 1 x 10/100/1000 MLAN
Storage	12 x 3.5" Hot-swappable HDD/SSD bays Supports 2.5" HDD/SSD SAS card required to enable the drive bays
RAID	Intel RAID 0/1/5/10
Expansion Slots	Riser Card CRS2140: - 1 x PCIe x16 (PCIe 3.0 x16 or x8) - 1 x PCIe x8 (PCIe 3.0 x0 or x8) - 1 x PCIe x8 (PCIe 3.0 x8 or x0) - 1 x PCIe x8 slot (Gen3 x0 or x8) Riser Card CRS2120: - 1 x PCIe x16 (PCIe 3.0 x16 or x8) - 1 x PCIe x8 (PCIe 3.0 x0 or x8) 1 Mezzanine type slot: - 1 x mezzanine slot (PCIe 3.0 x8) Riser Card CRS2121: - 1 x PCIe x8 (PCIe 3.0 x0 or x8) - 1 x PCIe x16 (PCIe 3.0 x16 or x8)
Power Supply	2 x 800W Redundant PSU 80+ Platinum, 100~220V AC



R121-340

Form factor	1U (430 x 43.5 x 533.4mm)
CPU	Intel Xeon E3-1200 V6/V5 product family 7th/ 6th Gen. Intel Core i3/ Celeron/ Pentium processors
Socket	1 x LGA 1151
Chipset	Intel C232
Memory	4 x DDR4 slot 2-ch ECC UDIMM 2400/2133 MHz
LAN	2 x GbE LAN ports (Intel I210) 1 x 10/100/1000 MLAN
Storage	4 x 3.5" Hot-swap 2.5" HDD/SSD bay Supports 2.5" HDD/SSD
RAID	Intel RAID 0/1/5/10
Expansion Slots	Riser Card CRS1016: - 1 x PCIe x8 (PCIe 3.0 x8) Riser Card CRS1020: - 1 x PCIe x16 (PCIe 3.0 x8) - 1 x PCIe x8 (PCIe 3.0 x4)
Power Supply	1 x 250W PSU 80+ Bronze, 100~240V AC, 250W DC



G250-G50

Form factor	2U HPC server (448 x 87.5 x 800mm)
CPU	2 x Intel Xeon E5-2600 V3/V4 processors
Socket	2 x LGA 2011-3
Chipset	Intel C612
Memory	24 x DDR4 slot 4-ch RDIMM / LRDIMM / 3DS LRDIMM DDR4 2400/ 2133/ 1866/ 1600MHz
LAN	2 x GbE (Intel I350-AM2) 1 x 10/100/1000 management LAN
BMC	Aspeed AST2400 management controller IPMI 2.0 + iKVM
Storage	8 x 2.5" Hot-swappable HDD/SSD bays
RAID	Intel RAID 0/ 1/ 10/ 5
Expansion Slots	8 x PCIe x16 (PCIe 3.0 x16) support: Intel Xeon Phi cards Nvidia cards AMD cards 1 x Low-profile PCIe x16 (PCIe 3.0 x8) 1 x mezzanine card slot (PCIe 3.0 x8)
Power Supply	2 x 1600W 80+ Platinum, 100~220V AC



G150-B10

Form factor	1U (430 x 43.5 x 625mm)
CPU	Intel Xeon D-1541 processor
Socket	BGA 1667
Chipset	-
Memory	4 x DIMM slots Supports 1.2V DDR4 memory
LAN	2 x 10GbE SFP+ LAN (Intel X552) 2 x GbE LAN (Intel I210) 1 x 10/100/1000 MLAN
Storage	4 x 3.5" hot-swappable HDD/SSD bays Supports 2.5" HDD
RAID	-
Expansion Slots	Riser Card CRSG010: - Extension card Riser Card CRSG020: - 1 x PCIe x16 (PCIe 3.0 x16 or x8) - 1 x PCIe x8 (PCIe 3.0 x0 or x8)
Power Supply	1 x 600W PSU 80+ Gold, 100~240V AC



G190-H44

Form factor	1U HPC server (440 x 43.5 x 900mm)
CPU	2 x Intel Xeon E5-2600 V3/V4 processors
Socket	2 x LGA 2011-3
Chipset	Intel C612
Memory	24 x DDR4 slot 4-ch RDIMM / LRDIMM / 3DS LRDIMM 2400/2133/1866/1600MHz
LAN	2 x GbE (Intel I350-AM2) 1 x 10/100/1000 management LAN
BMC	Aspeed AST2400 management controller IPMI 2.0 + iKVM
Storage	2 x 2.5" hot-swappable HDD/SSD bays 2 x 1.8" fixed HDD/SSD bays
Expansion Slots	4 x PCIe x16 (PCIe 3.0 x16) support: Intel Xeon Phi cards Nvidia cards AMD cards 1 x Low-profile PCIe x16 (PCIe 3.0 x8) 1 x Low-profile PCIe x8 (PCIe 3.0 x8)
Power Supply	2 x 2000W PSU 80+ Platinum, 100~240V AC

Storage Server

D120-C21

Form Factor	1U Storage Server (438 x 43.5 x 867mm)
CPU	Intel Xeon D-1541 2.1~2.7GHz 8-Core SoC
Socket	1 x FCBGA 1667
Chipset	-
Memory	4 x DDR4 slot 2-ch 2400/2133/1866/1600MHz up to 128GB for ECC R-DIMM up to 64GB for ECC/non-ECC UDIMM
LAN	2 x 10G SFP+ (Cortina® CS4227 PHY) plus 2 x GbE (Intel I210) 1 x GbE MLAN
BMC	Aspeed AST2400 management controller IPMI 2.0 + iKVM
Storage	16 x 3.5" HDD bay Supports SATA
RAID	Software RAID 0/1/1E/10
Power Supply	1 x 400W PSU 80+ Gold, 100~220V AC



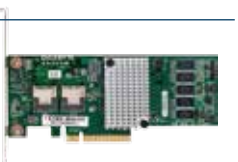
D120-S3G

Form Factor	1U Storage Server (438 x 43.5 x 860mm)
CPU	Annapurna Labs® Alpine AL514 processor ARMv7 architecture Cortex-A15 quad-core, 1.7GHz
Memory	DDR3/DDR3L 1600MHz RDIMM/ECC-UDIMM Support 1Rx8 / 1Rx16 memory modules (max. 4GB) Support 2Rx8 / 2Rx16 memory modules (max. 8GB) 4GB DDR3L memory pre-installed
LAN	2 x 10G SFP+ LAN ports (integrated) 2 x GbE LAN ports (Atheros AR8035) 1 x 10/100/1000 MLAN
BMC	-
Storage	16 x 3.5" HDD bay Supports SATA
Power Supply	1 x 400W PSU 80+ Gold, 100~240V AC



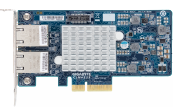
RAID Card





Model	CRA3338	CRA4448	RA201-A
I/O	2 x internal mini-SAS HD support SAS 12Gb/s	2 x internal mini-SAS HD support SAS 12Gb/s Max. 32 physical devices	2 x internal mini-SAS HD support SAS 6Gb/s
Controller	LSI SAS3008	LSI SAS3108	LSI SAS2208
RAID	SW RAID 0/ 1/ 1E/ 10 IR RAID	HW RAID 0/ 1/ 5/ 6/ 10/ 50/ 60 RAID 5/ 6 XOR Engine	HW RAID 0/ 1/ 5/ 6/ 10/ 50/ 60 RAID 5/ 6 XOR Engine
Connector	Low-profile PCIe x8 (3.0 x8)	Low-profile PCIe x8 (3.0 x8)	Low-profile PCIe x8 (3.0 x8)
Dimensions	167.6 x 64.4mm	168 x 68.9mm	165 x 68.9mm

LAN Card





Model	CLN4222	CLN4832	GC-MLIZ
Data Rate &Output	2 x 10G Base-T RJ45 LAN	2 x 10G Base-T	2 x 10G Base-T
Controller	Intel X550-AT2	Intel X540	Intel X540
Connector	Low-profile PCIe x8 (3.0 x4)	Low-profile PCIe x8 (2.0 x8)	Mezzanine Card (3.0 x8)
Dimensions	131 x 68.9 mm	143 x 68.9 mm	135 x 81mm

IoT Gateway



EL-20-3060-32G / EL-20-3710-32G

CPU	Intel Celeron processor N3060 / Intel Pentium processor N3710
Memory	2 x SO-DIMM slots
LAN	2 x GbE LAN ports (Realtek RTL8111HS)
Storage	32GB eMMC memory 1 x SDXC card slot
Expansion slots	1 x Full-size Mini-PCIe slot (for 3G module or mSATA storage) 1 x Half-size Mini-PCIe slot (for WiFi+BT module)
Rear I/O	1 x DC-in / 2 x HDMI v1.4b / 2 x RJ45
Support OS	Windows 7/ 8.1 / 10 / Android 5.1

W121-001 Tower Server



Form factor	Mini Tower
CPU	Intel Xeon E3-1200 V5 processors
Memory	4 x UDIMM DDR4 slots 2400/2133 MHz
Vedio	2D video graphic adapter with PCIe bus interface 1920x1200@60Hz 32bpp
Storage	2 x ODD 2 x 3.5" HDD trays 3 x 3.5" internal HDD trays 1 x 2.5" HDD tray Support SATA III Micro SD slot
SATA	6 x SATA III ports on board
RAID	Intel SATA RAID 0/1/10/5
Expansion slots	2 x PCIe x16 (Gen3 x8 bus) slot 1 x PCIe x4 (Gen3 x4 bus) slot 1 x PCIe x3 (Gen3 x1 bus) slot
LAN	2 x GbE LAN ports 1 x management LAN
Rear I/O	1x Seria (COM1) 1 x VGA 3 x RJ45 4 x USB 3.0

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