

THE NEXT
PLAYGROUND
INTEL Z690 SERIES MOTHERBOARDS



MPG Z690 TOMAHAWK WIFI

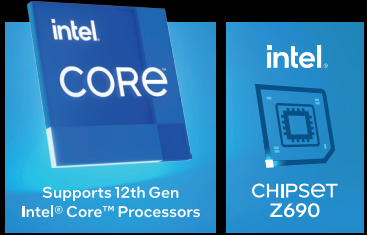
MEG Z690 ACE

MPG Z690 FORCE WIFI

PRO Z690-A WIFI



Model Name	MEG Z690 ACE	MEG Z690 UNIFY	MEG Z690 UNIFY-X	MEG Z690I UNIFY
CPU Support	Supports 12th Gen Intel® Core™ Processors, Pentium® Gold and Celeron® Processors	Supports 12th Gen Intel® Core™ Processors, Pentium® Gold and Celeron® Processors	Supports 12th Gen Intel® Core™ Processors, Pentium® Gold and Celeron® Processors	Supports 12th Gen Intel® Core™ Processors, Pentium® Gold and Celeron® Processors
Chipset	Intel® Z690 Chipset	Intel® Z690 Chipset	Intel® Z690 Chipset	Intel® Z690 Chipset
CPU Socket	LGA 1700	LGA 1700	LGA 1700	LGA 1700
Graphics Interface	2x PCIe 5.0 x16 slots 1x PCIe 4.0 x16 slot Support NVIDIA® SLI™ / AMD CrossFire™ Technology	2x PCIe 5.0 x16 slots 1x PCIe 3.0 x4 slot Support NVIDIA® SLI™ / AMD CrossFire™ Technology	2x PCIe 5.0 x16 slots 1x PCIe 3.0 x4 slot Support NVIDIA® SLI™ / AMD CrossFire™ Technology	1x PCIe 5.0 x16 slot
Display Interface	1x Type-C DisplayPort – Requires Processor Graphics 2x Thunderbolt™ 4 (Type-C) – Requires Processor Graphics or Input from mini DisplayPort	-	-	1x HDMI 2.1 port, 1x DisplayPort 1.4 port – Requires Processor Graphics 2x Thunderbolt™ 4 (Type-C) – Requires Processor Graphics or Input from mini DisplayPort
Memory Support	4 DIMMs, Dual Channel DDR5-6666+ (OC)	4 DIMMs, Dual Channel DDR5-6666+ (OC)	2 DIMMs, Dual Channel DDR5-6800+ (OC)	2 DIMMs, Dual Channel DDR5-6800+ (OC)
Expansion Slots	-	-	-	-
Storage	4x M.2 Gen4 x4 slots 1x M.2 Gen3 x4 slot 6x SATA 6Gbps ports	4x M.2 Gen4 x4 slots 1x M.2 Gen3 x4 slot 6x SATA 6Gbps ports	4x M.2 Gen4 x4 slots 1x M.2 Gen3 x4 slot 6x SATA 6Gbps ports	2x M.2 Gen4 x4 slots 1x M.2 Gen3 x4 slot 4x SATA 6Gbps ports
Thunderbolt™ 4	2x USB Type-C up to 40G, Charging support up to 5V/3A, 15W 2x Mini DisplayPort input ports	-	-	2x USB Type-C up to 40G, Charging support up to 5V/3A, 15W 2x Mini DisplayPort input ports
USB 3.2 Gen 2x2 20Gbps	2x USB 3.2 Gen 2x2 20Gbps (2C)	2x USB 3.2 Gen 2x2 20Gbps (2C)	2x USB 3.2 Gen 2x2 20Gbps (2C)	1x USB 3.2 Gen 2x2 20Gbps (1C)
USB 3.2 Gen 2 10Gbps	8x USB 3.2 Gen 2 10Gbps (7A + 1C)	7x USB 3.2 Gen 2 10Gbps (7A)	7x USB 3.2 Gen 2 10Gbps (7A)	2x USB 3.2 Gen 2 10Gbps (2A)
USB 3.2 Gen 1 5Gbps	4x USB 3.2 Gen 1 5Gbps (4A)	4x USB 3.2 Gen 1 5Gbps (4A)	4x USB 3.2 Gen 1 5Gbps (4A)	6x USB 3.2 Gen 1 5Gbps (4A)
USB 3.2 Gen 1 5Gbps	4x USB 2.0	6x USB 2.0	6x USB 2.0	2x USB 2.0
LAN	2x Intel® I225-V 2.5G LAN	2x Intel® I225-V 2.5G LAN	2x Intel® I225-V 2.5G LAN	1x Intel® I225-V 2.5G LAN
Wi-Fi	Intel® Wi-Fi 6E module	Intel® Wi-Fi 6E module	Intel® Wi-Fi 6E module	Intel® Wi-Fi 6E module
Audio	ALC4082 + ESS SABRE9018Q2C	ALC4080	ALC4080	ALC4080
Form Factor	E-ATX	ATX	ATX	Mini-ITX
Accessory	-	-	Tuning Controller / DIY Stand Set	-
Audio				
Audio Feature	Audio Boost 5 HD	Audio Boost 5	Audio Boost 5	Audio Boost 5
Audio Technology	Nahimic 3 / Sound Tune	Nahimic 3 / Sound Tune	Nahimic 3 / Sound Tune	Nahimic 3 / Sound Tune
Network				
LAN	2.5G LAN	2.5G LAN	2.5G LAN	2.5G LAN
LAN Manager	•	•	•	•
Intel WIFI	•	•	•	•
Cooling				
All Aluminum Design	•	•	•	•
Heat-pipe Design	•	•	•	•
Extended Heatsink Design	•	•	•	•
Aluminum Backplate	•	•	•	•
M.2 Shield Frozr	• (double-side design)	• (double-side design)	• (double-side design)	•
7W/mK MOSFET Thermal Pad	•	•	•	•
Choke Thermal Pad	•	•	•	•
Pump Fan	•	•	•	•
Smart Fan Control	•	•	•	•
LED				
Mystic Light				
Mystic Light Extension	RGB / Rainbow / Corsair	RGB / Rainbow / Corsair	RGB / Rainbow / Corsair	Rainbow
Mystic Light SYNC / Ambient Devices Support	•/•	•/•	•/•	•/•
Performance				
Lightning Gen 5	PCI-E	PCI-E	PCI-E	PCI-E
Lightning Gen 4	PCI-E / M.2	M.2	M.2	M.2
Multi GPU	SLI / CrossFire	SLI / CrossFire	SLI / CrossFire	
Memory Boost	•	•	•	•
Memory Force	•	•	•	•
Core Boost	•	•	•	•
Game Boost	•	•	•	•
OC Engine	•	•	•	•
Thunderbolt 4 / USB 4.0	•/•			•/•
Lightning USB 20G	•	•	•	•
USB 3.2 Gen 2 10G	•	•	•	•
USB with Type A+C	•	•	•	•
Front USB Type-C	2x USB 3.2 Gen 2x2	1x USB 3.2 Gen 2x2	1x USB 3.2 Gen 2x2	1x USB 3.2 Gen 2x2
Dual CPU Power	2x 8 pin	2x 8 pin	2x 8 pin	
Server PCB	•	•	•	•
2oz Copper thickened PCB	•	•	•	
Protection				
PCI-E Steel Armor	•	•	•	•
Pre-installed I/O Shield	•	•	•	
Experience				
Smart Button	•	•	•	
MSI Center	•	•	•	•
Click BIOS 5	•	•	•	•
EZ M.2 Clip	•	•	•	
Forzr AI Cooling	•			•
System Saver	•	•	•	
Flash BIOS Button	•	•	•	
EZ LED Control	•	•	•	•
EZ DEBUG LED	•	•	•	•
App player	•	•	•	•
Tile	•	•	•	•



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INTEL Z690 SERIES MOTHERBOARDS



MPG Z690 TOMAHAWK WIFI

MEG Z690 ACE

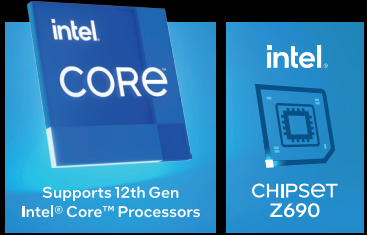


MPG Z690 FORCE WIFI

PRO Z690-A WIFI



Model Name	MPG Z690 CARBON WIFI	MPG Z690 CARBON EK X	MPG Z690 GAMING FORCE	MPG Z690 EDGE WIFI	MPG Z690 EDGE WIFI DDR4
CPU Support	Supports 12th Gen Intel® Core™ Processors, Pentium® Gold and Celeron® Processors	Supports 12th Gen Intel® Core™ Processors, Pentium® Gold and Celeron® Processors	Supports 12th Gen Intel® Core™ Processors, Pentium® Gold and Celeron® Processors	Supports 12th Gen Intel® Core™ Processors, Pentium® Gold and Celeron® Processors	Supports 12th Gen Intel® Core™ Processors, Pentium® Gold and Celeron® Processors
Chipset	Intel® Z690 Chipset	Intel® Z690 Chipset	Intel® Z690 Chipset	Intel® Z690 Chipset	Intel® Z690 Chipset
CPU Socket	LGA 1700	LGA 1700	LGA 1700	LGA 1700	LGA 1700
Graphics Interface	2x PCIe 5.0 x16 slots 1x PCIe 3.0 x16 slot Support AMD CrossFire™ Technology	2x PCIe 5.0 x16 slots 1x PCIe 3.0 x16 slot Support AMD CrossFire™ Technology	2x PCIe 5.0 x16 slots 1x PCIe 3.0 x16 slot Support AMD CrossFire™ Technology	1x PCIe 5.0 x16 slot 2x PCIe 3.0 x16 slots Support AMD CrossFire™ Technology	1x PCIe 5.0 x16 slot 2x PCIe 3.0 x16 slots Support AMD CrossFire™ Technology
Display Interface	1x HDMI 2.1 port 1x DisplayPort 1.4 port ~ Requires Processor Graphics	1x HDMI 2.1 port 1x DisplayPort 1.4 port ~ Requires Processor Graphics	1x HDMI 2.1 port 1x DisplayPort 1.4 port ~ Requires Processor Graphics	1x HDMI 2.1 port 1x DisplayPort 1.4 port ~ Requires Processor Graphics	1x HDMI 2.1 port 1x DisplayPort 1.4 port ~ Requires Processor Graphics
Memory Support	4 DIMMs, Dual Channel DDR5-6666+ [OC]	4 DIMMs, Dual Channel DDR5-6666+ [OC]	4 DIMMs, Dual Channel DDR5-6666+ [OC]	4 DIMMs, Dual Channel DDR5-6400+ [OC]	4 DIMMs, Dual Channel DDR4-5200+ [OC]
Expansion Slots	-	-	-	1x PCIe 3.0 x1 slot	1x PCIe 3.0 x1 slot
Storage	4x M.2 Gen4 x4 slots 1x M.2 Gen3 x4 slot 6x SATA 6Gbps ports	4x M.2 Gen4 x4 slots 1x M.2 Gen3 x4 slot 6x SATA 6Gbps ports	4x M.2 Gen4 x4 slots 1x M.2 Gen3 x4 slot 6x SATA 6Gbps ports	4x M.2 Gen4 x4 slots 6x SATA 6Gbps ports	4x M.2 Gen4 x4 slots 6x SATA 6Gbps ports
Thunderbolt™ 4	-	-	-	-	-
USB 3.2 Gen 2x2 20Gbps	1x USB 3.2 Gen 2x2 20Gbps (1C)	1x USB 3.2 Gen 2x2 20Gbps (1C)	1x USB 3.2 Gen 2x2 20Gbps (1C)	1x USB 3.2 Gen 2x2 20Gbps (1C)	1x USB 3.2 Gen 2x2 20Gbps (1C)
USB 3.2 Gen 2 10Gbps	6x USB 3.2 Gen 2 10Gbps (5A+1C)	6x USB 3.2 Gen 2 10Gbps (5A+1C)	6x USB 3.2 Gen 2 10Gbps (5A+1C)	6x USB 3.2 Gen 2 10Gbps (5A+1C)	6x USB 3.2 Gen 2 10Gbps (5A+1C)
USB 3.2 Gen 1 5Gbps	2x USB 3.2 Gen 1 5Gbps (2A)	2x USB 3.2 Gen 1 5Gbps (2A)	2x USB 3.2 Gen 1 5Gbps (2A)	2x USB 3.2 Gen 1 5Gbps (2A)	2x USB 3.2 Gen 1 5Gbps (2A)
USB 3.2 Gen 1 5Gbps	8x USB 2.0	8x USB 2.0	8x USB 2.0	8x USB 2.0	8x USB 2.0
LAN	1x Intel® I225-V 2.5G LAN	1x Intel® I225-V 2.5G LAN	1x Intel® I225-V 2.5G LAN	1x Intel® I225-V 2.5G LAN	1x Intel® I225-V 2.5G LAN
Wi-Fi	Intel® Wi-Fi 6E module	Intel® Wi-Fi 6E module	Intel® Wi-Fi 6E module	Intel® Wi-Fi 6E module	Intel® Wi-Fi 6 module
Audio	ALC4080	ALC4080	ALC4080	ALC4080	ALC4080
Form Factor	ATX	ATX	ATX	ATX	ATX
Accessory	-	EK customized monoblock, leak tester	-	-	-
Audio					
Audio Feature	Audio Boost 5	Audio Boost 5	Audio Boost 5	Audio Boost 5	Audio Boost 5
Audio Technology					
Network					
LAN	2.5G LAN	2.5G LAN	2.5G LAN	2.5G LAN	2.5G LAN
LAN Manager	•	•	•	•	•
Intel WiFi	•	•	•	•	•
Cooling					
All Aluminum Design				•	•
Heat-pipe Design	•		•	•	•
Extended Heatsink Design				•	•
Aluminum Backplate				•	•
M.2 Shield Frozr	• [1x double-side design]	• [1x watercooling design]	• [1x double-side design]	•	•
7W/mK MOSFET Thermal Pad	•	•	•	•	•
Choke Thermal Pad	•	•	•	•	•
Pump Fan	•	•	•	•	•
Smart Fan Control	•	•	•	•	•
LED					
Mystic Light	•	•	•	•	•
Mystic Light Extension	RGB / Rainbow / Corsair	RGB / Rainbow / Corsair	RGB / Rainbow / Corsair	RGB / Rainbow	RGB / Rainbow
Mystic Light SYNC / Ambient Devices Support	• / •	• / •	• / •	• / •	• / •
Performance					
Lightning Gen 5	PCI-E	PCI-E	PCI-E	PCI-E	PCI-E
Lightning Gen 4	M.2	M.2	M.2	M.2	M.2
Multi GPU	CrossFire	CrossFire	CrossFire	CrossFire	CrossFire
Memory Boost	•	•	•	•	•
Memory Force					
Core Boost	•	•	•	•	•
Game Boost	•	•	•	•	•
OC Engine					
Thunderbolt 4 / USB 4.0					
Lightning USB 20G	•	•	•	•	•
USB 3.2 Gen 2 10G	•	•	•	•	•
USB with Type A+C	•	•	•	•	•
Front USB Type-C	USB 3.2 Gen 2	USB 3.2 Gen 2	USB 3.2 Gen 2	USB 3.2 Gen 2	USB 3.2 Gen 2
Dual CPU Power	2x 8 pin	2x 8 pin	2x 8 pin	2x 8 pin	2x 8 pin
Server PCB	•	•	•	•	•
ZoZ Copper thickened PCB	•	•	•	•	•
Protection					
PCI-E Steel Armor	•	•	•	•	•
Pre-installed I/O Shield	•	•	•	•	•
Experience					
Smart Button					
MSI Center	•	•	•	•	•
Click BIOS 5	•	•	•	•	•
EZ M.2 Clip	•	•	•	•	•
Forzr AI Cooling	•	•	•	•	•
System Saver					
Flash BIOS Button	•	•	•	•	•
EZ LED Control	•	•	•	•	•
EZ DEBUG LED	•	•	•	•	•
App player	•	•	•	•	•
Title	•	•	•	•	•



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MAG Z690 TOMAHAWK WIFI

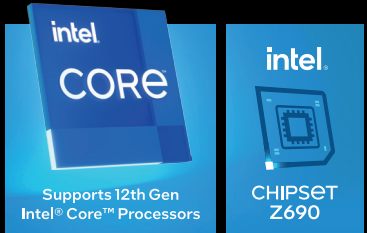
MEG Z690 ACE

MPG Z690 FORCE WIFI

PRO Z690-A WIFI



Model Name	MAG Z690 TOMAHAWK WIFI	MAG Z690 TORPEDO	MAG Z690 TORPEDO EK X	MAG Z690 TOMAHAWK WIFI DDR4
CPU Support	Supports 12th Gen Intel® Core™ Processors, Pentium® Gold and Celeron® Processors	Supports 12th Gen Intel® Core™ Processors, Pentium® Gold and Celeron® Processors	Supports 12th Gen Intel® Core™ Processors, Pentium® Gold and Celeron® Processors	Supports 12th Gen Intel® Core™ Processors, Pentium® Gold and Celeron® Processors
Chipset	Intel® Z690 Chipset	Intel® Z690 Chipset	Intel® Z690 Chipset	Intel® Z690 Chipset
CPU Socket	LGA 1700	LGA 1700	LGA 1700	LGA 1700
Graphics Interface	1x PCIe 5.0 x16 slot 1x PCIe 3.0 x16 slot Support AMD CrossFire™ Technology	1x PCIe 5.0 x16 slot 1x PCIe 3.0 x16 slot Support AMD CrossFire™ Technology	1x PCIe 5.0 x16 slot 1x PCIe 3.0 x16 slot Support AMD CrossFire™ Technology	1x PCIe 5.0 x16 slot 1x PCIe 3.0 x16 slot Support AMD CrossFire™ Technology
Display Interface	1x HDMI 2.1 port 1x DisplayPort 1.4 port – Requires Processor Graphics	1x HDMI 2.1 port 1x DisplayPort 1.4 port – Requires Processor Graphics	1x HDMI 2.1 port 1x DisplayPort 1.4 port – Requires Processor Graphics	1x HDMI 2.1 port 1x DisplayPort 1.4 port – Requires Processor Graphics
Memory Support	4 DIMMs, Dual Channel DDR5-6400+ (OC)	4 DIMMs, Dual Channel DDR5-6400+ (OC)	4 DIMMs, Dual Channel DDR5-6400+ (OC)	4 DIMMs, Dual Channel DDR4-5200+ (OC)
Expansion Slots	1x PCIe 3.0 x16 slot 1x PCIe 3.0 x1 slot	1x PCIe 3.0 x16 slot 1x PCIe 3.0 x1 slot	1x PCIe 3.0 x16 slot 1x PCIe 3.0 x1 slot	1x PCIe 3.0 x16 slot 1x PCIe 3.0 x1 slot
Storage	3x M.2 Gen4 x4 slots 1x M.2 Gen3 x4 slot 6x SATA 6Gbps ports	3x M.2 Gen4 x4 slots 1x M.2 Gen3 x4 slot 6x SATA 6Gbps ports	3x M.2 Gen4 x4 slots 1x M.2 Gen3 x4 slot 6x SATA 6Gbps ports	3x M.2 Gen4 x4 slots 1x M.2 Gen3 x4 slot 6x SATA 6Gbps ports
Thunderbolt™ 4	-	-	-	-
USB 3.2 Gen 2x2 20Gbps	1x USB 3.2 Gen 2x2 20Gbps (1C)	1x USB 3.2 Gen 2x2 20Gbps (1C)	1x USB 3.2 Gen 2x2 20Gbps (1C)	1x USB 3.2 Gen 2x2 20Gbps (1C)
USB 3.2 Gen 2 10Gbps	4x USB 3.2 Gen 2 10Gbps (3A + 1C)	4x USB 3.2 Gen 2 10Gbps (3A + 1C)	4x USB 3.2 Gen 2 10Gbps (3A + 1C)	4x USB 3.2 Gen 2 10Gbps (3A + 1C)
USB 3.2 Gen 1 5Gbps	4x USB 3.2 Gen 1 5Gbps (4A)	4x USB 3.2 Gen 1 5Gbps (4A)	4x USB 3.2 Gen 1 5Gbps (4A)	4x USB 3.2 Gen 1 5Gbps (4A)
USB 3.2 Gen 1 5Gbps	6x USB 2.0	6x USB 2.0	6x USB 2.0	6x USB 2.0
LAN	1x Intel® I225-V 2.5G LAN	1x Intel® I225-V 2.5G LAN	1x Intel® I225-V 2.5G LAN	1x Intel® I225-V 2.5G LAN
Wi-Fi	Intel® Wi-Fi 6E module	-	-	Intel® Wi-Fi 6E module
Audio	ALC4080	ALC4080	ALC4080	ALC4080
Form Factor	ATX	ATX	ATX	ATX
Accessory	-	-	EK customized monoblock	-
Audio				
Audio Feature	Audio Boost 5	Audio Boost 5	Audio Boost 5	Audio Boost 5
Audio Technology				
Network				
LAN	2.5G LAN	2.5G LAN	2.5G LAN	2.5G LAN
LAN Manager	•	•	•	•
Intel WiFi	•			•
Cooling				
All Aluminum Design	•	•	•	•
Heat-pipe Design				
Extended Heatsink Design	•	•	•	•
Aluminum Backplate				
M.2 Shield Frozr	•	•	•	•
7W/mK MOSFET Thermal Pad	•	•	•	•
Choke Thermal Pad	•	•	•	•
Pump Fan	•	•	•	•
Smart Fan Control	•	•	•	•
LED				
Mystic Light				
Mystic Light Extension	RGB / Rainbow	RGB / Rainbow	RGB / Rainbow	RGB / Rainbow
Mystic Light SYNC / Ambient Devices Support	•/•	•/•	•/•	•/•
Performance				
Lightning Gen 5	PCI-E	PCI-E	PCI-E	PCI-E
Lightning Gen 4	M.2	M.2	M.2	M.2
Multi GPU	CrossFire	CrossFire	CrossFire	CrossFire
Memory Boost	•	•	•	•
Memory Force				
Core Boost	•	•	•	•
Game Boost	•	•	•	•
OC Engine				
Thunderbolt 4 / USB 4.0				
Lightning USB 20G	•	•	•	•
USB 3.2 Gen 2 10G	•	•	•	•
USB with Type A+C	•	•	•	•
Front USB Type-C	USB 3.2 Gen 2	USB 3.2 Gen 2	USB 3.2 Gen 2	USB 3.2 Gen 2
Dual CPU Power	2x 8 pin	2x 8 pin	2x 8 pin	2x 8 pin
Server PCB	•	•	•	•
2oz Copper thickened PCB	•	•	•	•
Protection				
PCI-E Steel Armor	•	•	•	•
Pre-installed I/O Shield	•	•	•	•
Experience				
Smart Button				
MSI Center	•	•	•	•
Click BIOS 5	•	•	•	•
EZ M.2 Clip	•	•	•	•
Forzr AI Cooling	•			•
System Saver				
Flash BIOS Button	•	•	•	•
EZ LED Control	•	•	•	•
EZ DEBUG LED	•	•	•	•
App player	•	•	•	•
Tile	•			•



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INTEL Z690 SERIES MOTHERBOARDS

MPG Z690 TORAHAWK WIFI

MEG Z690 ACE

MPG Z690 FORCE WIFI

PRO Z690-A WIFI



Model Name	PRO Z690-A WIFI	PRO Z690-A	PRO Z690-A WIFI DDR4	PRO Z690-A DDR4	PRO Z690-P DDR4
CPU Support	Supports 12th Gen Intel® Core™ Processors, Pentium® Gold and Celeron® Processors	Supports 12th Gen Intel® Core™ Processors, Pentium® Gold and Celeron® Processors	Supports 12th Gen Intel® Core™ Processors, Pentium® Gold and Celeron® Processors	Supports 12th Gen Intel® Core™ Processors, Pentium® Gold and Celeron® Processors	Supports 12th Gen Intel® Core™ Processors, Pentium® Gold and Celeron® Processors
Chipset	Intel® Z690 Chipset	Intel® Z690 Chipset	Intel® Z690 Chipset	Intel® Z690 Chipset	Intel® Z690 Chipset
CPU Socket	LGA 1700	LGA 1700	LGA 1700	LGA 1700	LGA 1700
Graphics Interface	1x PCIe 5.0 x16 slot 1x PCIe 3.0 x16 slot Support AMD CrossFire™ Technology	1x PCIe 5.0 x16 slot 1x PCIe 3.0 x16 slot Support AMD CrossFire™ Technology	1x PCIe 5.0 x16 slot 1x PCIe 3.0 x16 slot Support AMD CrossFire™ Technology	1x PCIe 5.0 x16 slot 1x PCIe 3.0 x16 slot Support AMD CrossFire™ Technology	1x PCIe 5.0 x16 slot 1x PCIe 3.0 x16 slot Support AMD CrossFire™ Technology
Display Interface	1x HDMI 2.1 port 1x DisplayPort 1.4 port ~ Requires Processor Graphics	1x HDMI 2.1 port 1x DisplayPort 1.4 port ~ Requires Processor Graphics	1x HDMI 2.1 port 1x DisplayPort 1.4 port ~ Requires Processor Graphics	1x HDMI 2.1 port 1x DisplayPort 1.4 port ~ Requires Processor Graphics	1x HDMI 1.4b 1x DisplayPort 1.4 ~ Requires Processor Graphics
Memory Support	4 DIMMs, Dual Channel DDR5-6400+ (OC)	4 DIMMs, Dual Channel DDR4-6400+ (OC)	4 DIMMs, Dual Channel DDR4-5200+ (OC)	4 DIMMs, Dual Channel DDR4-5200+ (OC)	4 DIMMs, Dual Channel DDR4-5000+ (OC)
Expansion Slots	1x PCIe 3.0 x16 slot 1x PCIe 3.0 x1 slot	1x PCIe 3.0 x16 slot 1x PCIe 3.0 x1 slot	1x PCIe 3.0 x16 slot 1x PCIe 3.0 x1 slot	1x PCIe 3.0 x16 slot 1x PCIe 3.0 x1 slot	3x PCIe 3.0 x1 slots 1x M.2 2230 with E-Key for Wi-Fi Module
Storage	3x M.2 Gen4 x4 slots 1x M.2 Gen3 x4 slot 6x SATA 6Gbps ports	3x M.2 Gen4 x4 slots 1x M.2 Gen3 x4 slot 6x SATA 6Gbps ports	3x M.2 Gen4 x4 slots 1x M.2 Gen3 x4 slot 6x SATA 6Gbps ports	3x M.2 Gen4 x4 slots 1x M.2 Gen3 x4 slot 6x SATA 6Gbps ports	2x M.2 Gen4 x4 slots 4x SATA 6Gbps ports
Thunderbolt™ 4	-	-	-	-	-
USB 3.2 Gen 2x2 20Gbps	1xUSB 3.2 Gen 2x2 20Gbps (1C)	1xUSB 3.2 Gen 2x2 20Gbps (1C)	1xUSB 3.2 Gen 2x2 20Gbps (1C)	1xUSB 3.2 Gen 2x2 20Gbps (1C)	1xUSB 3.2 Gen 2x2 20Gbps (1C)
USB 3.2 Gen 2 10Gbps	2x USB 3.2 Gen 2 10Gbps (1A+1C)	2x USB 3.2 Gen 2 10Gbps (1A+1C)	2x USB 3.2 Gen 2 10Gbps (1A+1C)	2x USB 3.2 Gen 2 10Gbps (1A+1C)	-
USB 3.2 Gen 1 5Gbps	6x USB 3.2 Gen 1 5Gbps (6A)	6x USB 3.2 Gen 1 5Gbps (6A)	6x USB 3.2 Gen 1 5Gbps (6A)	6x USB 3.2 Gen 1 5Gbps (6A)	8x USB 3.2 Gen 1 5Gbps (8A)
USB 3.2 Gen 1 5Gbps	8x USB 2.0	8x USB 2.0	8x USB 2.0	8x USB 2.0	6x USB 2.0
LAN	1x Intel® I225-V 2.5G LAN	1x Intel® I225-V 2.5G LAN	1x Intel® I225-V 2.5G LAN	1x Intel® I225-V 2.5G LAN	1x Realtek RTL8125BG 2.5G LAN
Wi-Fi	Intel® Wi-Fi 6E module	-	Intel® Wi-Fi 6 module	-	-
Audio	ALC897	ALC897	ALC897	ALC897	ALC897
Form Factor	ATX	ATX	ATX	ATX	ATX
Accessory					
Audio					
Audio Feature	Audio Boost	Audio Boost	Audio Boost	Audio Boost	Audio Boost
Audio Technology					
Network					
LAN	2.5G LAN	2.5G LAN	2.5G LAN	2.5G LAN	2.5G LAN
LAN Manager	•	•	•	•	•
Intel WiFi	•		•		
Cooling					
All Aluminum Design					
Heat-pipe Design		•	•	•	•
Extended Heatsink Design	•				
Aluminum Backplate		•			
M.2 Shield Frozr	•	•		•	
7W/mk MOSFET Thermal Pad	•	•	•	•	•
Choke Thermal Pad	•	•	•	•	•
Pump Fan	•	•	•	•	•
Smart Fan Control	•	•	•	•	•
LED					
Mystic Light					
Mystic Light Extension	RGB / Rainbow	RGB / Rainbow	RGB / Rainbow	RGB / Rainbow	RGB / Rainbow
Mystic Light SYNC / Ambient Devices Support	• / •	• / •	• / •	• / •	• / •
Performance					
Lightning Gen 5	PCI-E	PCI-E	PCI-E	PCI-E	PCI-E
Lightning Gen 4	M.2	M.2	M.2	M.2	M.2
Multi GPU	CrossFire	CrossFire	CrossFire	CrossFire	CrossFire
Memory Boost	•		•	•	•
Memory Force					
Core Boost	•	•	•	•	•
Game Boost	•	•	•	•	•
OC Engine					
Thunderbolt 4 / USB 4.0					
Lightning USB 20G	•	•	•	•	•
USB 3.2 Gen 2 10G	•	•	•	•	
USB with Type A+C	•		•	•	•
Front USB Type-C	USB 3.2 Gen 2	USB 3.2 Gen 2	USB 3.2 Gen 2	USB 3.2 Gen 2	
Dual CPU Power	2x 8 pin	2x 8 pin	2x 8 pin	2x 8 pin	1x 8 pin + 1x 4 pin
Server PCB	•	•	•	•	•
2oz Copper thickened PCB	•		•	•	
Protection					
PCI-E Steel Armor	•	•	•	•	•
Pre-installed I/O Shield					
Experience					
Smart Button					
MSI Center	•	•	•	•	•
Click BIOS 5	•	•	•	•	•
EZ M.2 Clip	•	•	•	•	
Forzr AI Cooling	•	•	•	•	•
System Saver					
Flash BIOS Button	•	•	•	•	
EZ LED Control	•	•	•		•
EZ DEBUG LED	•	•	•	•	•
App player					
Title	•		•		

