



# MSI MPG Z490 GAMING EDGE WIFI LGA 1200 ATX Motherboard

\$209.95

## Product Images





## Short Description

### GAME IN STYLE

The MPG series brings out the best in gamers by allowing full expression in color with advanced RGB lighting control and synchronization. Experiment on another level of personalization with a front LED strip that provides convenient in-game and real time notifications. With the MPG series, transform your equipment into the center of attention and top leaderboards in style.

# About MSI MPG Z490 GAMING EDGE

### Game In Style

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### Exclusive Features

#### Core Boost Technology

Combining 8+4 pin power connectors and premium layout design, that is ready for unleashing the maximum performance.

#### 6-Layer PCB

6 layer PCB provides higher performance and long-lasting system stability without any compromise.

#### Digital PWM

Highest quality component digital power IC makes sure your system runs smoothly under the most extreme conditions.

#### PCI-E Steel Armor

Protecting VGA cards against bending and EMI for better performance, stability and strength.

#### Premium Thermal Solution

##### Aluminum Cover

All-metal extended heatsink cover enlarges the surface of heat dissipation, ensuring even high-end processors to run in full speed.

##### M.2 Shield Frozr

Strengthened built-in M.2 thermal solution. Keeps M.2 SSDs safe while preventing throttling, making them run faster.

##### Pump Fan Support

Control watercooling pump speeds for best flow and noise control.

##### Heatsinks with 7W/mK Thermal Pad

7W/mK thermal pad provides better heat transfer to the heatsink

##### High-Speed Transmission

##### Lightning 20G

Built-in USB 3.2 Gen 2x2 port, offers the 20Gbps transmission speed, 4X faster than USB 3.2 Gen 1.

##### Intel Wi-Fi 6

The latest wireless solution supports MU-MIMO and BSS color technology, delivering speeds up to 2400Mbps.

#### 2.5G Network Solution

Featuring premium 2.5G LAN with LAN manager delivers better network experience.

#### DDR4 Boost

The fully isolated DDR circuit to deliver pure data signals for the best gaming and overclocking performance.

#### Twin Turbo M.2

With 2 x M.2 slots . Running at PCI-E Gen3 x4 maximizes performance for NVMe based SSDs.

#### Premium Hardware Design

With years of experience, MSI is no stranger to building high-performance motherboards. Our R&D and engineering teams have reviewed countless designs, evaluated a wide selection of high quality components, and developed products for reliability even under extreme conditions.

#### Cooling

##### Aluminum Cover: Thermal Solution for More Cores and Higher Performance

With more cores' processors, thermal and power design is more important to make sure the temperature keeps lower. MSI extended PWM heatsink and enhanced circuit design ensures even high-end CPU to run in full speed with MSI motherboards.

##### M.2 Shield Frozr

World's fastest SSDs can start to lower performance when getting hot. Part of the motherboards heatsink design, M.2 SHIELD FROZR is the next generation M.2 thermal solution to avoid this by offering the best thermal protection to make sure that SSD maintains maximum performance.

##### Fully Fan Control: Fully Controllable In Bios and Software

MSI motherboards let you manage speeds and temperatures for all your system and CPU fans. Total Fan Control allows you to check your primary system characteristics in a simplified graphical interface. You can also set up to 4 temperature targets for CPU and motherboard, which will adjust the fan speeds automatically.

##### System Cooling: DIY 2.0 - Integrating with the System Environment

Connect and synchronize with MSI coolers and cases with strategically positioned pin-header locations including a dedicated pump-fan header.

#### Power Solution

##### Structure: 12 + 1 +1 Duet Rail Power System

Unleash and sustain maximum performance with an aggressive VRM design built with digital CPU power system. Combining 8 + 4-pin power connectors and exclusive Core Boost technology, MPG series motherboard is ready to sustain heavy gaming loadings.

##### Core Boost

Core Boost technology combines MSI's premium layout and digital power design which allows for faster and undistorted current delivery to the CPU at pin-point precision. This creates the perfect conditions for multi-core CPU while doing.

##### Game Boost: 1-Second Overclocking!

MSI Game Boost enables one-second overclocking, giving you the performance boost you need to get more FPS.

#### More for Performance:

##### Load-Line Calibration

What you set, is what you get. LLC makes sure your CPU voltage remains 100% stable under any load. This greatly improves stability when demanding more CPU performance.

##### Overvoltage Protection

Prevents potential short-circuit damage to the CPU and other critical components.

##### Digital Power Design

A fully digital power design allows for faster and undistorted current delivery to the CPU at pin-point precision. Creating the perfect conditions for CPU overclocking.

##### Double Power Connectors

8+4 pin connectors deliver adequate power even for an overclocked multi-core CPU

#### DIY Friendly

##### Pre-Installed IO Shielding

Featuring the pre-installed IO shielding, makes your installation process easier and safer. The patent-pending design protect your IO ports and also prevent electrostatic discharge damage, makes your motherboard a strong gaming foundation.

##### Keep Out Zone

MSI motherboards circuitry ensure the case standoff keep out zones are pure and clean, preventing any component contact or damage to the motherboard.

#### More User Friendly Enhancements:

##### XL Clip:

The enlarged PCI-E clip helps you swap or remove your devices easier. Keep the PCI-E slot stronger and safer.

##### EZ Debug LED:

Run into trouble? Onboard LEDs for key components will indicate the source of the problem so you know exactly where to look to get up and running again.

##### EZ LED Control:

A built-in LED button on the motherboard to control your light effect. Turn on/off your light in a second!

##### Atypical PCB: Easy To Arrange Your Cables

Not clever at cable arrangement? MSI Atypical PCB design not only the identity of stylish but also makes SATA and USB cable routing easier. Arranges cable neatly even you are not familiar with system build.

#### Protection

##### 6 Layers PCB: More Reliable Circuit Transmission

6 PCB layers allows for higher bandwidth and faster transfer speeds. This is also beneficial for reliable circuit transmission.

### Steel Armor: Fortify Your System With PCI-E Steel Armor

MSI PCI Express Steel Armor slots are secured to the motherboard with extra solder points and support the weight of heavy graphics cards. When every advantage in games counts, Steel Armor shields the point of contact from electromagnetic interference.

### Double ESD protection: Ultimate Motherboard Protection

Double ESD protection doubles up the grounding layer around the mounting holes, preventing static discharge surges from damaging the motherboard.

### Certification: Lightning Gen 4 Support, Ready 4 The Future !!!

MSI Z490 motherboards adopt tons of components, enhanced layout placement and PCB design dedicated for PCI-E Gen 4 solution, ensure the higher bandwidth and faster transfer speeds stability, ready 4 the future!

- Reinforced PCIe 4.0 slot provides up to 64GB/s transfer bandwidth
- Dedicated PCIe 4.0 M.2 connectors for the fastest onboard storage solution
- PCIe 4.0 external clock generator provides better PCIe 4.0 overclocking performance
- Dedicated switches transfer both PCIe slot and M.2 4.0 signals
- Optimized PCB layout fully supports higher bandwidth and transfer speeds for PCIe 4.0

### Enhanced Performance

High performance MSI motherboards are loaded with advanced features and the latest technology to overwhelm any challenge at hand no matter whether you're a gamer, prosumer, or PC enthusiast.

### Memory

#### DDR4 Boost: Extreme Stability & Compatibility Testing

MSI conducts thorough memory testing with the most popular memory brands under extreme conditions to ensure your system runs stable no matter what. Our memory partners include brands like Corsair, Crucial, Kingston, G.Skill and many more to optimize memory modules, configurations and even improve overclocking.

#### DDR4 Enhancement: A Huge Step of DDR Performance

MSI OC LAB does not merely work hard on extreme overclocking. Compare to Z390 motherboard memory XMP profile, MSI does have great improvement on performance and efficiency for Z490. Easy to enable XMP profile with auto power settings to get the best memory speed and stability.

#### XMP: Easy Overclocking With XMP Profile

The XMP (Extreme Memory Profiles) in MSI BIOS are tested and certified by MSI OC LAB. It is easy to enable with auto power settings to get the best memory speed and stability.

### Connectivity

MSI motherboards are built with a variety of connectors to satisfy gamers. Enhanced audio, advanced LAN networking capabilities, USB and Mystic Light turn any gaming experience into an immerse one.

### Networking

#### 2.5G LAN: High-Bandwidth and Low-Latency Network

2.5Gbps LAN provides incredible data transfer speed faster than general Gigabit LAN. This is a premium solution for demanding users.

#### Wi-Fi 6: Surfacing With The Real Mu-Mimo Technology

The WIFI 6 adopts the latest OFDMA and two-way MU-MIMO technologies and could provide up to 4X network capacity and efficiency in the high signal density environment.

## Features

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### MSI MPG Z490 GAMING EDGE Features

- Supports 10th Gen Intel Core / Pentium Celeron processors for LGA 1200 socket
- Supports DDR4 Memory, up to 5000(OC) MHz
- Ready 4 the Future: Support Lightning Gen 4 Solution for the future
- Enhanced Power Design: 12+1+1 Duet Rail Power System, 8+4 pin CPU power connectors, Core Boost, DDR4 Boost
- Premium Thermal Solution: Aluminum Cover with Extended Heatsink Design and M.2 Shield Frozr are built for high performance system and non-stop gaming experience
- Lightning USB 20G: Powered by ASmedia 3241 USB 3.2 Gen2x2 controller, offering never before seen USB speeds up to 20Gb/s with USB Type-C
- 2.5G LAN with LAN Manager and Intel Wi-Fi 6 AX Solution: Upgraded network solution for professional and multimedia use. Delivers a secure, stable and fast network connection
- MYSTIC LIGHT: 16.8 million colors / 29 effects controlled in one click. MYSTIC LIGHT EXTENSION supports both RGB and RAINBOW LED strip
- Pre-installed I/O Shielding: Better EMI protection and more convenience for installation
- Audio Boost: Reward your ears with studio grade sound quality



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# MSI MPG Z490 GAMING EDGE Specifications

Socket	1200
CPU (Max Support)	i9
Chipset	Intel Z490 Chipset
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DDR4 Memory	5000(OC)/ 4800(OC)/ 4600(OC)/ 4533(OC)/ 4400(OC)/ 4300(OC)/ 4266(OC)/ 4200(OC)/ 4133(OC)/ 4000(OC)/ 3866(OC)/ 3733(OC)/ 3600(OC)/ 3466(OC)/ 3400(OC)/ 3333(OC)/ 3300(OC)/ 3200(OC)/ 3000(OC)/ 2933(JEDEC)/ 2666(JEDEC)/ 2400(JEDEC)/ 2133(JEDEC) MHz
Memory Channel	Dual
DIMM Slots	4
Max Memory (GB)	128
PCI-E X16	2
PCI-E X1	2
SATAIII	6
M.2 Slot	2
Raid	0/1/5/10
TPM (Header)	1
LAN	1x Realtek RTL8125B 2.5G LAN
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USB 3.2 Ports	Front: 1(Gen 1, Type C), 2(Gen 1, Type A) Rear: 1(Gen 2x2, Type C), 1(Gen 2, Type A), 4(Gen 1, Type A)
USB 2.0 Ports	Front: 4 Rear: 2
Audio Ports (Rear)	5+ Optical S/PDIF (Realtek ALC1200 Codec)
Displayport	1
HDMI	

1  
Directx  
12  
Form Factor  
ATX  
Crossfire  
Y  
Operating System  
Support for Windows 10 64-bit  
Processor  
Supports 10th Gen Intel Core and Pentium Gold / Celeron processors for LGA1200 socket  
Memory  
4x DDR4 memory slots, support up to 128GB1

Supports 1R 2133/2666/2933 MHz:  
1DPC 1R Max speed up to 5000+ MHz  
1DPC 2R Max speed up to 4500+ MHz  
2DPC 1R Max speed up to 4400+ MHz  
2DPC 2R Max speed up to 4000+ MHz

Supports Dual-Channel mode  
Supports non-ECC, un-buffered memory  
Supports Intel Extreme Memory Profile (XMP)

Expansion Slots  
1x PCIe 3.0 x16 slot (from CPU)  
1x PCIe 3.0 x16 slot (x4 mode, from PCH)  
2x PCIe x1 slots (from PCH)

Onboard Graphics  
1x HDMI port, supports a maximum resolution of 4096x2160 @ 30Hz  
1x DisplayPort port supports a maximum resolution of 4096 x 2304 @ 60Hz

Multi-GPU  
Supports AMD 2-Way CrossFire Technology

Storage  
Intel Z490 Chipset:  
6x SATA 6Gb/s ports 1  
  
2x M.2 slots (Key M):  
Supports up to PCIe 3.0 x4 and SATA 6Gb/s  
M2\_1 slot supports 2242/ 2260 /2280/ 22110 storage devices1  
M2\_2 slot supports 2242/ 2260 /2280 storage devices

Intel Optane Memory Ready

RAID  
Intel Z490 Chipset:  
Supports RAID 0, RAID 1, RAID 5 and RAID 10 for SATA storage devices  
Supports RAID 0 and RAID 1 for M.2 PCIe storage devices

USB  
Intel Z490 Chipset:  
1x USB 3.2 Gen 2 10Gbps Type-A port on the back panel  
7x USB 3.2 Gen 1 5Gbps (4 Type-A ports on the back panel, 2 ports through the internal USB connector, 1 Type-C internal connector)

2x USB 2.0 ports on the back panel  
4x USB 2.0 ports available through the internal USB connectors, hub-GL850G

ASMedia ASM3241:

1x USB 3.2 Gen 2x2 20Gbps Type-C port on the back panel

#### Audio

Realtek ALC1200-VD1 Codec:

7.1-Channel High Definition Audio

Supports S/PDIF output

#### WIFI & Bluetooth

Intel AX201:

Supports 802.11 a/b/g/n/ac/ax, MU-MIMO Rx, 2.4GHz-5GHz (160MHz) up to 2.4Gbps

WiFi 6 Pre-Certified

Supports Bluetooth 5.1 , FIPS, FISMA

The Wireless module is pre-install in the M2 (Key-E) slot

#### Internal Connectors

1x 24-pin ATX main power connector

1x 8-pin ATX 12V power connector

1x 4-pin ATX 12V power connector

6x SATA 6Gb/s connectors

1x USB 3.2 Gen 1 5Gbps Type-C port

1x USB 3.2 Gen 1 5Gbps connector (support additional 2 USB 3.2 Gen 1 5Gbps ports)

2x USB 2.0 connectors (support additional 4 USB 2.0 ports)

1x 4-pin CPU fan connector

1x 4-pin water pump connector

#### Internal Connectors (Contd.)

6x 4-pin system fan connectors

1x front panel audio connector

2x system panel connectors

1x chassis intrusion connector

1x Clear CMOS jumper

2x 4-pin RGB LED connectors

2x 3-pin RAINBOW LED connectors

1x TPM module connector

1x TBT connector 1

1x RTD3 connector

#### Back Panel Ports

PS/2 Combo Port

DisplayPort

USB 3.2 Gen 2 10Gbps (Type-A)

LAN Port

HD Audio Connectors

USB 2.0

HDMI Port

USB 3.2 Gen 2x2 20Gbps (Type-C)

USB 3.2 Gen 1 5Gbps (Type-A)

Wi-Fi / Bluetooth

Optical S/PDIF OUT

#### Mounting

9 mounting holes

#### Dimensions

ATX Form Factor  
12 x 9.6" (30.5 x 24.4cm)

## Additional Information

Brand	MSI
SKU	Z490EDGEWIFI
Weight	9.0000
Processor Manufacturer	Intel
Chipset	Z490

