

# TUF Gaming Z590-PLUS WIFI

Especificaciones



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## CPU

Supports Intel® 14 nm CPU

Supports Intel® Turbo Boost Technology 2.0 and Intel® Turbo Boost Max Technology 3.0\*\*

\* Refer to [www.asus.com](http://www.asus.com) for CPU support list.

\*\* Intel® Turbo Boost Max Technology 3.0 support depends on the CPU types.

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## Memoria

DDR4 5133(OC)/5000(OC)/4800(OC)/4700(OC)/4600(OC)  
/4500(OC)/4400(OC) /4266(OC)/4133(OC)/4000(OC)/3866(OC)  
/3733(OC)/3600(OC)/3466(OC)/3400(OC)/3333(OC)/3200/3000  
/2933/2800/2666/2400/2133 MHz Non-ECC, Un-buffered Memory\*

Dual Channel Memory Architecture

Supports Intel® Extreme Memory Profile (XMP)

OptiMem II

\* 10th Gen Intel® Core™ i7/i9 processors support 2933/2800  
/2666/2400/2133 natively, others will run at the maximum transfer rate  
of DDR4 2666MHz.

\* 11th Gen Intel® processors support 3200/2933/2800/2666  
/2400/2133 natively.

\* Refer to [www.asus.com](http://www.asus.com) for the Memory QVL (Qualified Vendors Lists),  
and memory frequency support depends on the CPU types.

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## Gráficos

1 x DisplayPort 1.4\*\*

1 x HDMI™ 2.0\*\*\*

\* Graphics specifications may vary between CPU types.

\*\* Intel® 11th & 10th processors support DisplayPort 1.4 with max. resolution of 4096 x 2304 @60Hz. Please refer to [www.intel.com](http://www.intel.com) for any updates.

\*\*\* Only Intel® 11th processors, support HDMI™ 2.0 with max. resolution of 4K@60Hz, others would only support HDMI™ 1.4 with max. resolution of 4K@30Hz. Please refer to [www.intel.com](http://www.intel.com) for any update.

\*\*\*\* VGA resolution support depends on processors' or graphic cards' resolution.

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## Ranuras de expansión

### **Intel® 11th & 10th Gen Processors**

1 x PCIe 4.0/3.0 x16 slot\*

- Intel® 11th processors support PCIe 4.0 x16

- Intel®10th processors support PCIe 3.0 x16

### **Intel® Z590 Chipset**

1 x PCIe 3.0 x16 slot (supports x4 mode)

2 x PCIe 3.0 x1 slots

\* Supports PCIe bandwidth bifurcation for RAID on CPU function.

\* Enable RST PCIe Storage Remapping for PCH attached PCIe slots to activate Intel® Optane Memory.

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## Almacenamiento

### **Total supports 3 x M.2 slots and 6 x SATA 6Gb/s ports**

#### **Intel®11th Gen Processors**

M.2\_1 slot (Key M), type 2242/2260/2280/22110

- Only Intel® 11th processors support PCIe 4.0 x4 mode, this slot will be disabled for other CPUs

#### **Intel® Z590 Chipset**

M.2\_2 slot (Key M), type 2242/2260/2280/22110 (supports PCIe 3.0 x4 & SATA modes)\*\*\*

M.2\_3 slot (Key M), type 2242/2260/2280 (supports PCIe 3.0 x4 & SATA modes)\*\*\*\*

6 x SATA 6Gb/s ports

\* Raid function for PCIe mode SSD in Intel® Rapid Storage Technology is available with either 1. Intel® SSDs installed in both CPU-attached and PCH-attached slots, or 2. any other 3rd party SSDs installed in PCH-attached slots.

\*\* To enable Intel® Optane™ Memory (Hybrid Storage device), it must be installed in PCH-attached slots with Intel® Rapid Storage Technology.

\*\*\* M.2\_2 shares bandwidth with SATA6G\_2. When M.2\_2 runs SATA mode, SATA6G\_2 will be disabled.

\*\*\*\* M.2\_3 shares bandwidth with SATA6G\_56. When M.2\_3 is occupied, SATA6G\_56 will be disabled.

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## USB

1 x USB 3.2 Gen 2x2 port (1 x USB Type-C®)

2 x USB 3.2 Gen 2 ports (2 x Type-A)

2 x USB 3.2 Gen 1 ports (2 x Type-A)

2 x USB 2.0 ports (2 x Type-A)

1 x USB 3.2 Gen 1 connector (suppports USB Type-C®)

1 x USB 3.2 Gen 1 header supports additional 2 USB 3.2 Gen 1 ports

2 x USB 2.0 headers support additional 4 USB 2.0 ports

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## Audio

Realtek ALC S1200A 7.1 Surround Sound High Definition Audio CODEC\*

- Supports: Jack-detection, Multi-streaming, Front Panel Jack-retasking

- Supports up to 24-Bit/192 kHz playback

### **Audio Features**

- Audio Shielding

- Rear optical S/PDIF out port

- Premium Japanese audio capacitors

- Dedicated audio PCB layers

- Audio cover

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## Puertos E/S traseros

1 x USB 3.2 Gen 2x2 port (1 x USB Type-C®)

2 x USB 3.2 Gen 2 ports (2 x Type-A)

2 x USB 3.2 Gen 1 ports (2 x Type-A)

2 x USB 2.0 ports (2 x Type-A)

1 x DisplayPort

1 x HDMI™ port

1 x ASUS Wi-Fi Module  
1 x Intel® I225-V 2.5Gb Ethernet port  
5 x Audio jacks  
1 x Optical S/PDIF out port  
1 x DC (2-K) and (M) connector

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## Puertos internos

### Fan and Cooling related

1 x 4-pin CPU Fan header  
1 x 4-pin CPU OPT Fan header  
1 x 4-pin AIO Pump header  
3 x 4-pin Chassis Fan headers

### Power related

1 x 24-pin Main Power connector  
1 x 8-pin +12V Power connector  
1 x 4-pin +12V Power connector

### Storage related

3 x M.2 slots (Key M)  
6 x SATA 6Gb/s ports

### USB

1 x USB 3.2 Gen 1 connector (supports USB Type-C®)  
1 x USB 3.2 Gen 1 headers supports additional 2 USB 3.2 Gen 1 ports  
2 x USB 2.0 headers support additional 4 USB 2.0 ports

### Miscellaneous

2 x AURA Addressable Gen 2 headers  
2 x AURA RGB headers  
1 x Clear CMOS header  
1 x COM Port header  
1 x Front Panel Audio header (AAFP)  
1 x 20-3 pin System Panel header with Chassis intrude function  
1 x Thunderbolt™ header

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## Funciones especiales de ASUS

### ASUS TUF PROTECTION

- DIGI+ VRM (- Digital power design with DrMOS)
- Enhanced DRAM Overcurrent Protection
- TUF LANGuard
- Overvoltage Protection

### ASUS Q-Design

- M.2 Q-Latch
- Q-DIMM
- Q-LED (CPU [red], DRAM [yellow], VGA [white], Boot Device [yellow green])
- Q-Slot

#### **ASUS Thermal Solution**

- M.2 heatsink
- VRM heatsink design

#### **ASUS EZ DIY**

- ProCool
- Pre-mounted I/O shield
- SafeSlot

#### **AURA Sync**

- AURA RGB headers
- Addressable Gen 2 RGB headers

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## Software

#### **ASUS Exclusive Software**

Armoury Crate

- AURA Creator
- AURA Sync
- Two-Way AI Noise Cancelation

AI Suite 3

- Performance And Power Saving Utility

TurboV EVO

EPU

Digi+ VRM

Fan Xpert 4

- EZ update

TUF GAMING CPU-Z

AI Charger

ASUS Turbo LAN

DAEMON Tools

DTS Custom for GAMING Headsets

MyASUS

Norton Anti-virus software (Free Trial version)

WinRAR

#### **UEFI BIOS**

ASUS EZ DIY

- ASUS CrashFree BIOS 3

- ASUS EZ Flash 3

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## BIOS

192 (128+64) Mb Flash ROM, UEFI AMI BIOS

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## Manejabilidad

WOL by PME, PXE

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## Accesorios

### **Cables**

2 x SATA 6Gb/s cables

### **Miscellaneous**

1 x ASUS Wi-Fi moving antenna

2 x M.2 Rubber Packages

1 x M.2 SSD screw package

1 x TUF Gaming sticker

### **Installation Media**

1 x Support DVD

### **Documentation**

1 x TUF Certification card

1 x User manual

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