

PRIME Z590-A

Especificaciones



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 for CPU support list.

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

Memoria

5333(OC)/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® Core™ processors support 3200/2933/2800/2666
/2400/2133 natively.

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

Gráficos

* Graphics specifications may vary between CPU types.

** Only Intel® 11th Core™ processors support DisplayPort 1.4 with max.
resolution of 5120 x 2880 @60Hz, others will only support DisplayPort
1.4 with max. resolution of 4096 x 2304 @60Hz. Please refer to
www.intel.com for any updates"

*** Only Intel® 11th Core™ 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 for any
update.

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

Ranuras de expansión

Intel® 11th & 10th Gen Processors

3 x PCIe 4.0/3.0 x16 slots*

- Intel® 11th Core™ processors support PCIe 4.0 x16

- Intel®10th processors support PCIe 3.0 x16

Intel® Z590 Chipset

1 x PCIe 3.0 x4 slot

* Supports PCIe bandwidth bifurcation for RAID on CPU function.

Almacenamiento

Intel® 11th Gen Processors

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

- Only Intel® 11th Core™ 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 2242/2260/22110 (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_6. When M.2_6 runs SATA mode, SATA6G_6 will be disabled.

USB

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

4 x USB 3.2 Gen 2 ports (3 x Type-A, 1 x Type-C®)

4 x USB 2.0 ports (4 x Type-A)

1 x USB 3.2 Gen 1 connector (supports 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

Audio

Realtek S1220A 7.1 Surround Sound High Definition Audio CODEC*

- Impedance sense for front and rear headphone outputs

- Internal audio Amplifier to enhance the highest quality sound for headphone and speakers

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

retasking

- High quality 120 dB SNR stereo playback output and 113 dB SNR recording input (Line-in)

- Supports up to 32-Bit/192 kHz playback**

Audio Features:

- Power pre-regulator reduces power input noise to ensure consistent performance

- Rear optical S/PDIF out port

- Premium Japanese audio capacitors

- Audio Shielding

- Dedicated audio PCB layers

- Audio cover

- Unique de-pop circuit

* Due to limitations in HDA bandwidth, 32-Bit/192kHz is not supported

** See [Intel® Sound Open Platform](#)

Puertos E/S traseros

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

4 x USB 3.2 Gen 2 ports (3 x Type-A, 1 x Type-C®)

4 x USB 2.0 ports (4 x Type-A)

1 x DisplayPort

1 x HDMI™ port

1 x Intel® I225-V 2.5Gb Ethernet port

5 x Audio jacks

1 x Optical S/PDIF out port

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

1 x 4-pin VRM_HS Fan header

1 x W_PUMP+ header

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

3 x AURA Addressable Gen 2 headers

1 x AURA RGB headers

1 x Clear CMOS header

1 x COM Port header

1 x Front Panel Audio header (AAFP)

1 x CPU Over Voltage jumper

1 x Power button

1 x SPI TPM header (14-1pin)

1 x 20-3 pin System Panel header with Chassis intrude function

1 x Thermal Sensor header

1 x Thermal Sensor header

Funciones especiales de ASUS

ASUS 5X PROTECTION III

- ASUS DIGI+ VRM (- Digital power design with Dr. MOS)
- ASUS Enhanced DRAM Overcurrent Protection
- ASUS ESD Guards
- ASUS LANGuard
- ASUS Overvoltage Protection
- ASUS Stainless-Steel Back I/O

ASUS Q-Design:

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

ASUS Thermal Solution:

- Aluminum M.2 Heatsink
- Flexible M.2 heatsink

ASUS EZ DIY:

- Procool
- Pre-mounted I/O shield

- ASUS SafeSlot
 - AURA Sync
 - AURA RGB header
 - Addressable Gen 2 RGB header
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Software

ASUS Exclusive Software:

Armoury Crate:

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

AI Suite 3

- 5-way Optimization with AI Overclocking

TPU

EPU

Digi+ VRM

Fan Xpert 4

Turbo app

- EZ update

AI Charger

ASUS CPU-Z

ASUS Turbo LAN

DTS:X® Ultra

UEFI BIOS:

AI Overclocking Guide

ASUS EZ DIY :

- ASUS CrashFree BIOS 3
 - ASUS EZ Flash 3
 - ASUS UEFI BIOS EZ Mode
 - EZ Tuning Wizard
 - FlexKey
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BIOS

256 Mb Flash ROM, UEFI AMI BIOS

Manejabilidad

WOL by PME, PXE

Accesorios

Cables

3 x SATA 6Gb/s cables

Miscellaneous

2 x M.2 Rubber Packages

1 x Q-connector

Installation Media

1 x Support DVD

Documentation

1 x User manual
