

ASUS Introduces the **PRIME Z790-A WIFI** Motherboard

Item Name:

ASUS Prime Z790-A WiFi 6E LGA 1700(Intel®13th&12th) ATX motherboard (16+1 DrMOS, PCIe 5.0,DDR5,4x M.2 slots, Intel® 2.5 Gb LAN,USB 3.2 Gen 2 front panel Type-C, Thunderbolt™ 4(USB4), DP, Aura Sync RGB lighting)

25-word:

The ASUS Prime Z790-A WiFi 6E built for productivity with a robust power design, comprehensive cooling solutions and intelligent tuning options to unleash the full potential of 13th Gen Intel® Core™ processors.

50-word:

The ASUS Prime Z790-A WiFi 6E is expertly engineered to unleash the full potential of 13th Gen Intel® Core™ processors. Boasting a robust power design, comprehensive cooling solutions and intelligent tuning options, the ASUS Prime Z790-A WiFi 6E provides daily users and DIY PC builders a range of performance tuning options via intuitive software and firmware features. ASUS Prime Z790-A WiFi 6E is perfect for those seeking to create a sleek, futuristic-looking build, thanks to its black and white finish and iridescent metallic nameplate and PCB cover.



- **Web Link:** TBD
- **Image Link:** <https://www.dropbox.com/sh/peodt2i3u2bn3v8/AADwjAjdK27VP8nx0egLnmiUa?dl=0>
- **Part Number:** 90MB1CS0-M0AAY0
- **UPC Code:** 195553939324
- **Box Dimension:** 13.31*10.75*2.68 inches
- **Gross Weight:** 4.55 lbs
- **Quantity per Carton:** 4 pcs
- **Quantity per Pallet:** 252 pcs
- **Warranty:** 3 Years

< Product Specification Summary >

1. Intel® LGA 1700 socket: Ready for 13th & 12th Gen Intel® Core™ processors and Windows 11, support PCIe 5.0 and DDR5
2. AI Motherboard: AI overclocking, AI cooling II and Two-way AI noise cancellation
3. Enhanced Power Solution: 16+1 DrMOS, ProCool sockets, alloy chokes and durable capacitors for stable power delivery
4. Comprehensive Cooling: Large VRM heatsink, M.2 heatsink, M.2 backplate with Q-Latch, hybrid fan headers and Fan Xpert 4
5. Next-gen connectivity: DDR5 memory, PCIe 5.0, Intel® 2.5 Gb Ethernet, USB 3.2 Gen2x2 Type-C®, front panel USB 3.2 Gen 2 Type-C®, Thunderbolt™ 4 header support
6. Boosted Memory Performance: Careful routing of traces and vias, plus ground layer optimizations to preserve signal integrity for improved memory overclocking with ASUS OptiMem II
7. PC DIY design: PCIe Slot Q-Release, M.2 Q-Latch, Q-LED Core, and SafeSlot

<Spec>

PRIME Z790-A WIFI	
Note: The specifications are subject to change without notice.	
CPU	Intel® Socket LGA1700 for 13 th & 12 th Gen Intel® Core™, Pentium® Gold and Celeron® Processor 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.
Chipset	Intel® Z790 Chipset
Memory	4 x DIMM, Max. 128GB, DDR5 7000(OC)/6800(OC)/6600(OC)/6400(OC)/6200(OC)/6000(OC)/5800(OC)/5600/5400/5200/5000/4800, Un-buffered Memory* Dual Channel Memory Architecture Supports Intel® Extreme Memory Profile (XMP) OptiMem II * Supported memory types, data rate(Speed), and number of DRAM modules vary depending on the CPU and memory configuration, for more information refer to www.asus.com for memory support list. * Non-ECC, un-buffered DDR5 memory supports On-Die ECC function.
Graphics	1 x DisplayPort** 1 x HDMI® port*** * Graphics specifications may vary between CPU types. Please refer to www.intel.com for any updates.

	<p>**Supports max. 8K@60Hz as specified in DisplayPort 1.4.</p> <p>***Supports 4K@60Hz as specified in HDMI 2.1.</p> <p>**** VGA resolution support depends on processors' or graphic cards' resolution.</p>
Expansion Slots	<p>Intel® 13th & 12th Gen Processors*</p> <p>1 x PCIe 5.0 x16 slot</p> <p>Intel® Z790 Chipset</p> <p>1 x PCIe 4.0 x16 slot (supports x4 mode)</p> <p>1 x PCIe 4.0 x4 slot</p> <p>2 x PCIe 3.0 x1 slots</p> <p>* Please check the PCIe bifurcation table on the support site (https://www.asus.com/support/FAQ/1037507/).</p> <p>Note: To ensure compatibility of the device installed, please refer to https://www.asus.com/support/ for the list of supported peripherals.</p>
Storage	<p>Total supports 4 x M.2 slots and 4 x SATA 6Gb/s ports*</p> <p>Intel® 13th & 12th Gen Processors</p> <p>M.2_1 slot (Key M), type 2242/2260/2280/22110 (support PCIe 4.0 x4 mode)</p> <p>Intel® Z790 Chipset</p> <p>M.2_2 slot (Key M), type 2242/2260/2280 (supports PCIe 4.0 x4)</p> <p>M.2_3 slot (Key M), type 2242/2260/2280/22110 (supports PCIe 4.0 x4)</p> <p>M.2_4 slot (Key M), type 2242/2260/2280 (supports PCIe 4.0 x4 & SATA modes)</p> <p>4 x SATA 6Gb/s ports</p> <p>* Intel® Rapid Storage Technology supports PCIe RAID 0/1/5/10, SATA RAID 0/1/5/10.</p>
Ethernet	<p>1 x Intel® 2.5Gb Ethernet</p> <p>ASUS LANGuard</p>
Wireless & Bluetooth®	<p>Wi-Fi 6E</p> <p>2x2 Wi-Fi 6E (802.11 a/b/g/n/ac/ax)</p> <p>Supports 2.4/5/6GHz frequency band*</p> <p>Bluetooth® v5.2</p> <p>* WiFi 6E 6GHz regulatory may vary between countries.</p>
USB	<p>Rear USB (Total 8 ports)</p> <p>1 x USB 3.2 Gen 2x2 port (1 x USB Type-C®)</p> <p>3 x USB 3.2 Gen 2 ports (2 x Type-A, 1 x USB Type-C®)</p> <p>4 x USB 3.2 Gen 1 ports (4 x Type-A)</p> <p>Front USB (Total 7 ports)</p> <p>1 x USB 3.2 Gen 2 connector (supports USB Type-C®)</p> <p>1 x USB 3.2 Gen 1 header supports additional 2 USB 3.2 Gen 1 ports</p> <p>2 x USB 2.0 headers support additional 4 USB 2.0 ports</p>

<p>Audio</p>	<p>Realtek S1220A 7.1 Surround Sound High Definition Audio CODEC*</p> <ul style="list-style-type: none"> - 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* <p>Audio Features</p> <ul style="list-style-type: none"> - Audio Shielding - Power pre-regulator reduces power input noise to ensure consistent performance - Premium audio capacitors - Dedicated audio PCB layers - Audio cover - Unique de-pop circuit <p>* Due to limitations in HDA bandwidth, 32-Bit/192 kHz is not supported for 7.1 Surround Sound audio.</p>
<p>Back Panel I/O Ports</p>	<p>1 x USB 3.2 Gen 2x2 port (1 x USB Type-C®)</p> <p>3 x USB 3.2 Gen 2 ports (2 x Type-A, 1 x Type-C®)</p> <p>4 x USB 3.2 Gen 1 ports (4 x Type-A)</p> <p>1 x DisplayPort</p> <p>1 x HDMI® port</p> <p>1 x Wi-Fi Module</p> <p>1 x Intel® 2.5Gb Ethernet port</p> <p>3 x Audio jacks</p>
<p>Internal I/O Connectors</p>	<p>Fan and Cooling related</p> <p>1 x 4-pin CPU Fan header</p> <p>1 x 4-pin CPU OPT Fan header</p> <p>1 x 4-pin AIO Pump header</p> <p>4 x 4-pin Chassis Fan headers</p> <p>Power related</p> <p>1 x 24-pin Main Power connector</p> <p>2 x 8-pin +12V Power connectors</p> <p>Storage related</p> <p>4 x M.2 slots (Key M)</p> <p>4 x SATA 6Gb/s ports</p> <p>USB</p> <p>1 x USB 3.2 Gen 2 connector (supports USB Type-C®)</p> <p>1 x USB 3.2 Gen 1 header supports 2 additional USB 3.2 Gen 1 ports</p> <p>2 x USB 2.0 headers support 4 additional USB 2.0 ports</p> <p>Miscellaneous</p> <p>3 x Addressable Gen 2 headers</p>

	1 x Aura RGB header 1 x Clear CMOS header 1 x COM Port header 1 x CPU Over Voltage jumper 1 x Front Panel Audio header (AAFP) 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 Thunderbolt™ header
Special Features	<p>ASUS 5X PROTECTION III</p> <ul style="list-style-type: none"> - DIGI+ VRM (- Digital power design with DrMOS) - ESD Guards - LANGuard - Overvoltage Protection - Safeslot - Stainless-Steel Back I/O <p>ASUS Q-Design</p> <ul style="list-style-type: none"> - M.2 Q-Latch - PCIe Slot Q-Release - Q-Connector - Q-DIMM - Q-LED (CPU [red], DRAM [yellow], VGA [white], Boot Device [yellow green]) - Q-Slot <p>ASUS Thermal Solution</p> <ul style="list-style-type: none"> - M.2 heatsink - VRM heatsink design <p>ASUS EZ DIY</p> <ul style="list-style-type: none"> - Box Headers - Clear CMOS button - CPU Socket lever protector - ProCool - Pre-mounted I/O shield - SafeDIMM <p>Aura Sync</p> <ul style="list-style-type: none"> - Aura RGB header - Addressable Gen 2 headers
Software Features	<p>ASUS Exclusive Software</p> Armoury Crate <ul style="list-style-type: none"> - Aura Creator - Aura Sync - Fan Xpert 4 (with AI Cooling II)

	<ul style="list-style-type: none"> - Power Saving - Two-Way AI Noise Cancellation <p>AI Suite 3</p> <ul style="list-style-type: none"> - TurboV EVO - DIGI+ VRM - PC Cleaner <p>ASUS CPU-Z DTS:X® Ultra MyASUS Norton 360 Deluxe (60 Days Free Trial) WinRAR</p> <p>UEFI BIOS ASUS EZ DIY</p> <ul style="list-style-type: none"> - ASUS CrashFree BIOS 3 - ASUS EZ Flash 3 - ASUS UEFI BIOS EZ Mode <p>MemTest86</p>
BIOS	256 Mb Flash ROM, UEFI AMI BIOS
Manageability	WOL by PME, PXE
Accessories	<p>Cables 2 x SATA 6Gb/s cables</p> <p>Miscellaneous 1 x ASUS Wi-Fi moving antenna 1 x Q-connector 2 x M.2 Rubber Packages 1 x Screw package for M.2 SSD</p> <p>Documentation 1 x User guide</p>
Operating System	Windows® 11, Windows® 10 64-bit
Form Factor	<p>ATX Form Factor</p> <p>12 inch x 9.6 inch (30.5 cm x 24.4 cm)</p>