

PRIME Z590-V One Page Spec

Note: The specifications are subject to change without notice.

CPU	<p>Intel® Socket LGA1200 for 11th Gen Intel® Core™ processors & 10th Gen Intel® Core™, Pentium® Gold and Celeron® Processors*</p> <p>Supports Intel® 14 nm CPU</p> <p>Supports Intel® Turbo Boost Technology 2.0 and Intel® Turbo Boost Max Technology 3.0**</p> <p>* Refer to www.asus.com for CPU support list.</p> <p>** Intel® Turbo Boost Max Technology 3.0 support depends on the CPU types.</p>
Chipset	Intel® Z590 Chipset
Memory	<p>4 x DIMM, Max. 128GB, DDR4</p> <p>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*</p> <p>Dual Channel Memory Architecture</p> <p>Supports Intel® Extreme Memory Profile (XMP)</p> <p>OptiMem II</p> <p>* 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.</p> <p>* 11th Gen Intel® processors support 3200/2933/2800/2666/2400/2133 natively.</p> <p>* Refer to www.asus.com for the Memory QVL (Qualified Vendors Lists), and memory frequency support depends on the CPU types.</p>
Graphics	<p>1 x DisplayPort 1.4**</p> <p>1 x HDMI™ 1.4 / 2.0***</p> <p>* Graphics specifications may vary between CPU types.</p> <p>** Intel® 11th & 10th Gen processors support DisplayPort 1.4 with max. resolution of 4096 x 2304 @60Hz. Please refer to www.intel.com for any updates.</p> <p>*** Only Intel® 11th Gen processors support HDMI™ 2.0 with max. resolution of 4K@60Hz, others will only support HDMI™ 1.4 with max. resolution of 4K@30Hz. Please refer to www.intel.com for any updates.</p>
Expansion Slots	<p>Intel® 11th & 10th Gen Processors*</p> <p>1 x PCIe 4.0/3.0 x16 slot</p> <ul style="list-style-type: none"> - Intel® 11th Gen processors support PCIe 4.0 x16 or x8/x8 or x8/x4/x4 modes - Intel® 10th Gen processors support PCIe 3.0 x16 or x8/x8 or x8/x4/x4 modes <p>Intel® Z590 Chipset</p> <p>1 x PCIe 3.0 x16 slot (supports x4 mode)</p> <p>3 x PCIe 3.0 x1 slots</p>

	<p>* Supports PCIe bandwidth bifurcation for RAID on CPU function.</p>
Storage	<p>Total supports 3 x M.2 slots and 4 x SATA 6Gb/s ports</p> <p>Intel® 11th Gen Processors M.2_1 slot (Key M), type 2242/2260/2280/22110 - Only Intel® 11th Gen processors support PCIe 4.0 x4 mode, this slot will be disabled for other CPUs</p> <p>Intel® Z590 Chipset M.2_2 slot (Key M), type 2242/2260/2280 (supports PCIe 3.0 x4 & SATA modes)* M.2_3 slot (Key M), type 2242/2260/2280/22110 (supports PCIe 3.0 x4 & SATA modes) 4 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.</p> <p>* When a device in SATA mode is installed on the M.2_2 slot, SATA6G_2 port cannot be used.</p>
Ethernet	1 x Intel® I219-V 1Gb Ethernet
Wireless & Bluetooth	<p>V-M.2 slot only (Key E, CNVi & PCIe)*</p> <p>* Wi-Fi module and vertical M.2 Key E bracket set are purchased separately.</p>
USB	<p>Rear USB (Total 6 ports) 1 x USB 3.2 Gen 2 port (1 x USB Type-C®) 1 x USB 3.2 Gen 2 port (1 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)</p> <p>Front USB (Total 8 ports) 2 x USB 3.2 Gen 1 headers support additional 4 USB 3.2 Gen 1 ports 2 x USB 2.0 headers support additional 4 USB 2.0 ports*</p> <p>* USB_E1 port, USB_E2 port, USB_E3 port and USB_E4 port share the bandwidth.</p>
Audio	<p>Realtek ALC897 7.1 Surround Sound High Definition Audio CODEC</p> <ul style="list-style-type: none"> - Supports: Jack-detection, Multi-streaming, Front Panel Jack-retasking - Supports up to 24-Bit/192 kHz playback <p>Audio Features</p> <ul style="list-style-type: none"> - Audio Shielding - Rear optical S/PDIF out port - Premium Japanese audio capacitors - Dedicated audio PCB layers

Back Panel I/O Ports	1 x USB 3.2 Gen 2 port (1 x USB Type-C®) 1 x USB 3.2 Gen 2 port (1 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 V-M.2 slot (Key E) 1 x Intel® I219-V 1Gb Ethernet 5 x Audio jacks 1 x Optical S/PDIF out port 1 x PS/2 Keyboard/Mouse combo port
Internal I/O Connectors	Fan and Cooling related 1 x 4-pin CPU Fan header 1 x 4-pin AIO Pump header 2 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) 4 x SATA 6Gb/s ports USB 2 x USB 3.2 Gen 1 headers support additional 4 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 SPI TPM header (14-1pin) 1 x 20-5pin System Panel header 1 x Thunderbolt™ header
	ASUS 5X PROTECTION III - DIGI+ VRM (- Digital power design with DrMOS)

<p>Special Features</p>	<ul style="list-style-type: none"> - LANGuard - Overvoltage Protection - SafeSlot Core - Stainless-Steel Back I/O <p>ASUS Q-Design</p> <ul style="list-style-type: none"> - Q-DIMM - Q-Slot <p>ASUS Thermal Solution</p> <ul style="list-style-type: none"> - VRM heatsink design <p>ASUS EZ DIY</p> <ul style="list-style-type: none"> - ProCool <p>AURA Sync</p> <ul style="list-style-type: none"> - AURA RGB headers - Addressable Gen 2 RGB headers
<p>Software Features</p>	<p>ASUS Exclusive Software</p> <p>Armoury Crate</p> <ul style="list-style-type: none"> - AURA Sync <p>AI Suite 3</p> <ul style="list-style-type: none"> - Performance And Power Saving Utility <p>TurboV EVO</p> <p>EPU</p> <p>DIGI+ VRM</p> <p>Fan Xpert 4</p> <ul style="list-style-type: none"> - EZ update <p>ASUS CPU-Z</p> <p>AI Charger</p> <p>DAEMON Tools</p> <p>Norton Anti-virus software (Free Trial version)</p> <p>WinRAR</p> <p>UEFI BIOS</p> <p>ASUS EZ DIY</p> <ul style="list-style-type: none"> - ASUS CrashFree BIOS 3 - ASUS EZ Flash 3 - ASUS UEFI BIOS EZ Mode
<p>BIOS</p>	<p>192 (128+64) Mb Flash ROM, UEFI AMI BIOS</p>
<p>Manageability</p>	<p>WOL by PME, PXE</p>

Accessories	Cables 2 x SATA 6Gb/s cables Miscellaneous 1 x I/O Shield 2 x M.2 SSD screw packages Installation Media 1 x Support DVD Documentation 1 x User manual
Operating System	Windows® 10 64-bit
Form Factor	ATX Form Factor 12 inch x 9.2 inch (30.5 cm x 23.4 cm)