

ROG MAXIMUS XIII EXTREME GLACIAL_One Page Spec

Note: The specifications are subject to change without notice.

CPU	Intel® Socket LGA1200 for 11 th Gen Intel® Core™ processors & 10 th Gen Intel® Core™, Pentium® Gold and Celeron® Processors 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.
Chipset	Intel® Z590 Chipset
Memory	4 x DIMM, Max. 128GB, DDR4 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 III * 10 th Gen Intel® Core™ i7/i9 processors support 2933/2800/2666/2400/2133 natively, others will run at the maximum transfer rate of DDR4 2666MHz. * 11 th 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.
Graphics	1 x HDMI™ 2.0** 2 x Intel® Thunderbolt™ 4 ports (USB Type-C®) support DisplayPort 1.4 and Thunderbolt™ video outputs** * Graphics specifications may vary between CPU types. ** Only Intel® 11 th 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.
Expansion Slots	Intel® 11th & 10th Gen Processors 2 x PCIe 4.0/3.0 x16 slot(s) - Intel® 11 th Core™ processors support PCIe 4.0 x16 or x8/x8 mode(s) - Intel® 10 th processors support PCIe 3.0 x16 or x8/x8 mode(s) Intel® Z590 Chipset 1 x PCIe 3.0 x4 slot* * PCIe4 slot shares bandwidth with SATA6G_12 and PCIe4 slot is default set at x2 mode.
Multi-GPU Support	NVIDIA 2-Way SLI® Technology* *Support varies with different graphics cards
Storage	Total supports 5 x M.2 slots and 6 x SATA 6Gb/s ports Intel® 11th & 10th Gen Processors M.2_1 slot (Key M), type 2242/2260/2280 - Intel® 11 th Core™ processors support PCIe 4.0 x4 mode - Intel® 10 th processors support PCIe 3.0 x4 mode M.2_2 slot (Key M), type 2242/2260/2280 - Intel® 11 th Core™ processors support PCIe 4.0 x4 mode - Intel® 10 th processors support PCIe 3.0 x4 mode M.2_3 slot (Key M), type 2242/2260/2280 - Only Intel® 11 th Core™ processors support PCIe 4.0 x4 mode, this slot will be disabled for other CPUs Intel® Z590 Chipset DIMM.2_1 slot (Key M) via ROG DIMM.2, type 2242/2260/2280/22110 (supports PCIe 3.0 x4 & SATA modes) DIMM.2_2 slot (Key M) via ROG DIMM.2, type 2242/2260/2280/22110 (supports PCIe 3.0 x4 mode)* 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. * DIMM.2_2 shares bandwidth with SATA6G_34 and DIMM.2_2 is default set at x2 mode.
Ethernet	1 x Intel® I225-V 2.5Gb Ethernet 1 x Marvell® AQtion AQC113CS 10Gb Ethernet ASUS LANGuard
Wireless & Bluetooth	Intel® Wi-Fi 6E 2x2 Wi-Fi 6E (802.11 a/b/g/n/ac/ax) Supports 2.4/5/6GHz frequency band* Bluetooth v5.2 hardware ready** * WiFi 6E 6GHz regulatory may vary between countries, and function will be ready in Windows 10 build 21H1 or later. ** Bluetooth v5.2 function will be ready in Windows 10 build 21H1 or later.
USB	Rear USB (Total 10 ports) 2 x Thunderbolt™ 4 port(s) (2 x USB Type-C®) with up to 5V/3A, 15W charging support 8 x USB 3.2 Gen 2 port(s) (8 x Type-A) Front USB (Total 10 ports) 1 x USB 3.2 Gen 2x2 connector(s) (support(s) USB Type-C®) 1 x USB 3.2 Gen 2 Front Panel connector(s) (support(s) USB Type-C®) 2 x USB 3.2 Gen 1 header(s) support(s) additional 4 USB 3.2 Gen 1 ports 2 x USB 2.0 header(s) support(s) additional 4 USB 2.0 ports
Audio	ROG SupremeFX 7.1 Surround Sound High Definition Audio CODEC ALC4082 - Impedance sense for front and rear headphone outputs - Supports: Jack-detection, Multi-streaming, Front Panel Jack-retasking - High quality 120 dB SNR stereo playback output and 113 dB SNR recording input - Supports up to 32-Bit/384 kHz playback Audio Features - SupremeFX Shielding Technology - ESS® SABRE9018Q2C DAC/AMP - LED-illuminated audio jacks - Rear optical S/PDIF out port - Premium Japanese audio capacitors - Audio cover
Back Panel I/O Ports	2 x Thunderbolt™ 4 USB Type-C® port(s) 8 x USB 3.2 Gen 2 port(s) (8 x Type-A) 1 x HDMI™ port 1 x ASUS Wi-Fi Module 1 x Marvell® AQtion AQC113CS 10Gb Ethernet 1 x Intel® I225-V 2.5Gb Ethernet 5 x LED-illuminated audio jacks 1 x Optical S/PDIF out port 1 x BIOS FlashBack™ button 1 x Clear CMOS button

<p>Internal I/O Connectors</p>	<p>Fan and Cooling related 2 x 4-pin Chassis Fan header(s) 2 x 4-pin Radiator Fan header(s) 2 x W_PUMP+ header(s) 1 x WB_SENSOR header(s) 1 x 2-pin Water In header 1 x 2-pin Water Out header 1 x 3-pin Water Flow header</p> <p>Power related 1 x 24-pin Main Power connector 2 x 8-pin +12V Power connector 1 x 6-pin PCIe Graphics Card connector</p> <p>Storage related 3 x M.2 slots (Key M) 1 x DIMM.2 slot supports 2 x M.2 slots (Key M) 6 x SATA 6Gb/s ports</p> <p>USB 1 x USB 3.2 Gen 2x2 connector (support(s) USB Type-C®) 1 x USB 3.2 Gen 2 connector (support(s) USB Type-C®) 2 x USB 3.2 Gen 1 header(s) support(s) additional 4 USB 3.2 Gen 1 ports 2 x USB 2.0 header(s) support(s) additional 4 USB 2.0 ports</p> <p>Miscellaneous 3 x AURA Addressable Gen 2 header(s) 1 x AURA RGB header(s) 1 x WB_ADD header(s) 1 x BIOS Switch button 1 x FlexKey button 1 x Front Panel Audio header (AAFP) 1 x LN2 Mode jumper 8 x ProbelT Measurement Points 1 x ReTry button 2 x RSVD switch 1 x RSVD header 1 x Safe Boot button 1 x Slow Mode switch 1 x Speaker header 1 x Start button 1 x V_LATCH switch 1 x 10-1 pin System Panel header 1 x Thermal Sensor header</p>
<p>Special Features</p>	<p>Extreme OC Kit - FlexKey button - LN2 Mode - ProbelT - ReTry button - Safe boot button - Start button - Slow Mode</p> <p>Extreme Engine Digi+ - 10K Black Metallic Capacitors - MicroFine Alloy Choke</p> <p>ASUS Q-Design - Q-Code - Q-Connector - Q-DIMM - Q-LED (CPU [red], DRAM [yellow], VGA [white], Boot Device [yellow green]) - Q-Slot</p> <p>ASUS Thermal Solution - M.2 heatsink backplate - M.2 heatsink - VRM heatsink design</p> <p>ASUS EZ DIY - BIOS FlashBack™ button - Clear CMOS button - ProCool II - Pre-mounted I/O shield - SafeSlot</p> <p>AURA Sync - ROG AURA sync backplate - AURA RGB header(s) - Addressable Gen 2 RGB header(s)</p> <p>Dual BIOS</p> <p>Color OLED 1.77"</p> <p>ASUS HYDRANODE - 2 x Chassis fan support* (CHA_FAN1P,CHA_FAN2P) - 2 x USB2.0 port support* (USB_EP1,USB_EP2)</p> <p>* Visit ASUS Website for the latest compatibility list.</p>

Software Features	<p>ROG Exclusive Software</p> <ul style="list-style-type: none"> - Mem Tweakit - RAMCache III - ROG CPU-Z - GameFirst VI - Sonic Studio III + Sonic Studio Virtual Mixer - Sonic Radar III - DTS[®] Sound Unbound - Overwolf - BullGuard Internet Security (1-year full version) <p>ASUS Exclusive Software</p> <p>Armoury Crate</p> <ul style="list-style-type: none"> - AIDA64 Extreme (1 year full version) - AURA Creator - AURA Sync - Two-Way AI Noise Cancellation - OLED Display <p>AI Suite 3</p> <ul style="list-style-type: none"> - 5-Way Optimization with AI Overclocking <p>TPU EPU</p> <p>Digi+ Power Control</p> <p>Fan Xpert 4</p> <p>Turbo app</p> <ul style="list-style-type: none"> - EZ update <p>AI Charger</p> <p>DAEMON Tools</p> <p>MyAsus</p> <p>WinRAR</p> <p>UEFI BIOS</p> <p>MemTest86</p> <p>AI Overclocking Guide</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
BIOS	2 x 256 Mb Flash ROM, UEFI AMI BIOS
Manageability	WOL by PME, PXE
Accessories	<p>Cables</p> <ul style="list-style-type: none"> 1 x 1-to-3 ARGB splitter cable 2 x 1-to-4 fan splitter cable 1 x RGB extension cable 3 x ROG weave SATA 6G cables 1 x 3-in-1 Thermistor cables pack <p>ROG Fan Controller</p> <ul style="list-style-type: none"> 1 x ROG Fan Controller 1 x Fan EXT PWR cable 1 x ARGB input cable 1 x USB input cable 1 x ROG Fan Controller 3M Mounting tape 1 x Fan Controller manual <p>ROG DIMM.2 with Heatsink</p> <ul style="list-style-type: none"> 1 x ROG DIMM.2 with heatsink 1 x M.2 pad for ROG DIMM.2 2 x M.2 screw package for ROG DIMM.2 <p>Additional Cooling Kit</p> <ul style="list-style-type: none"> 1 x Monoblock 3 x Screw package for monoblock 1 x Thermal pad for monoblock 1 x Fittings for monoblock <p>Miscellaneous</p> <ul style="list-style-type: none"> 1 x ASUS Wi-Fi moving antennas 1 x M.2 Rubber Package(s) 1 x M.2 SSD screw package(s) 1 x Q-connector 1 x ROG CLAVIS DAC 1 x ROG key chain 1 x ROG logo plate stickers 1 x ROG screwdriver 1 x ROG stickers 1 x ROG thank you card 1 x ROG Graphics card holder <p>Installation Media</p> <ul style="list-style-type: none"> 1 x USB drive with utilities and drivers <p>Documentation</p> <ul style="list-style-type: none"> 1 x User manual
Operating System	Windows [®] 10 64-bit
Form Factor	EATX Form Factor 12 inch x 10.9 inch (30.5 cm x 27.7 cm)