
 <p>Z390 GAMING X (rev. 1.0)</p>	 <p>Z370 AORUS Gaming 7 (rev. 1.0)</p>
Prozessor	<ol style="list-style-type: none"> Support for 9th and 8th Generation Intel® Core™ i9 processors/Intel® Core™ i7 processors/Intel® Core™ i5 processors/Intel® Core™ i3 processors/Intel® Pentium® processors/Intel® Celeron® processors in the LGA1151 package L3 cache varies with CPU <p>(Please refer "CPU Support List" for more information.)</p>	<ol style="list-style-type: none"> Support for 8th Generation Intel® Core™ i7 processors/Intel® Core™ i5 processors/Intel® Core™ i3 processors in the LGA1151 package L3 cache varies with CPU <p>(Please refer "CPU Support List" for more information.)</p>
Socket	Socket 1151	Socket 1151
Chipsatz	1. Intel® Z390 Express Chipset	1. Intel® Z370 Express Chipset
Arbeitsspeicher	<ol style="list-style-type: none"> 4 x DDR4 DIMM sockets supporting up to 128GB (32GB single DIMM capacity) of system memory** ** Please note that the support for system total memory size depends on the CPU installed. Dual channel memory architecture Support for DDR4 4266(O.C.) / 4133(O.C.) / 4000(O.C.) / 3866(O.C.) / 3800(O.C.) / 3733(O.C.) / 3666(O.C.) / 3600(O.C.) / 3466(O.C.) / 3400(O.C.) / 3333(O.C.) / 3300(O.C.) / 3200(O.C.) / 3000(O.C.) / 2800(O.C.) / 2666 / 2400 / 2133 MHz memory modules Support for ECC Un-buffered DIMM 1Rx8/2Rx8 memory modules (operate in non-ECC mode) Support for non-ECC Un-buffered DIMM 1Rx8/2Rx8/1Rx16 memory modules Support for Extreme Memory Profile (XMP) memory modules <p>(Please refer "Memory Support List" for more information.)</p>	<ol style="list-style-type: none"> 4 x DDR4 DIMM sockets supporting up to 64 GB of system memory Dual channel memory architecture Support for DDR4 4133(O.C.) / 4000(O.C.) / 3866(O.C.) / 3800(O.C.) / 3733(O.C.) / 3666(O.C.) / 3600(O.C.) / 3466(O.C.) / 3400(O.C.) / 3333(O.C.) / 3300(O.C.) / 3200(O.C.) / 3000(O.C.) / 2800(O.C.) / 2666 / 2400 / 2133 MHz memory modules Support for ECC Un-buffered DIMM 1Rx8/2Rx8 memory modules (operate in non-ECC mode) Support for non-ECC Un-buffered DIMM 1Rx8/2Rx8/1Rx16 memory modules Support for Extreme Memory Profile (XMP) memory modules <p>(Please refer "Memory Support List" for more information.)</p>

Onboard Graphics	<p>Integrated Graphics Processor-Intel® HD Graphics support:</p> <ol style="list-style-type: none"> 1 x HDMI port, supporting a maximum resolution of 4096x2160@30 Hz * Support for HDMI 1.4 version and HDCP 2.2. <p>Maximum shared memory of 1 GB Actual support may vary by CPU.</p>	<p>Integrated Graphics Processor-Intel® HD Graphics support:</p> <ol style="list-style-type: none"> 1 x DisplayPort, supporting a maximum resolution of 4096x2304@60 Hz * Support for DisplayPort 1.2 version, HDCP 2.2, and HDR. 1 x HDMI port, supporting a maximum resolution of 4096x2160@30 Hz * Support for HDMI 1.4 version and HDCP 2.2. <p>Maximum shared memory of 1 GB</p>
Audio	<ol style="list-style-type: none"> Realtek® ALC892 codec High Definition Audio 2/4/5.1/7.1-channel Support for S/PDIF Out 	<ol style="list-style-type: none"> Realtek® ALC1220 codec ESS9018Q2C chip Support for Sound BlasterX 720° High Definition Audio 2/4/5.1/7.1-channel Support for S/PDIF Out
LAN	<ol style="list-style-type: none"> Intel® GbE LAN chip (10/100/1000 Mbit) 	<ol style="list-style-type: none"> 1 x Intel® GbE LAN chip (10/100/1000 Mbit) (LAN1) 1 x Rivet Networks Killer™ E2500 LAN chip (10/100/1000 Mbit) (LAN2)
Erweiterungs Steckplätze	<ol style="list-style-type: none"> 1 x PCI Express x16 slot, running at x16 (PCIEX16) * For optimum performance, if only one PCI Express graphics card is to be installed, be sure to install it in the PCIEX16 slot. 1 x PCI Express x16 slot, running at x4 (PCIEX4) 4 x PCI Express x1 slots (All of the PCI Express slots conform to PCI Express 3.0 standard.) 	<ol style="list-style-type: none"> 1 x PCI Express x16 slot, running at x16 (PCIEX16) * For optimum performance, if only one PCI Express graphics card is to be installed, be sure to install it in the PCIEX16 slot. 1 x PCI Express x16 slot, running at x8 (PCIEX8) * The PCIEX8 slot shares bandwidth with the PCIEX16 slot. When the PCIEX8 slot is populated, the PCIEX16 slot operates at up to x8 mode. 1 x PCI Express x16 slot, running at x4 (PCIEX4) * The PCIEX4 slot shares bandwidth with the M2P_32G connector. The PCIEX4 slot operates at up to x2 mode when a PCIe SSD is installed in the M2P_32G connector. 3 x PCI Express x1 slots * The PCIEX1_3 slot shares bandwidth with the SATA3 1 connector. The SATA3 1 connector becomes unavailable when the PCIEX1_3 is populated. <p>(All of the PCI Express slots conform to PCI Express 3.0 standard.)</p>

Multi-Graphics Technology	1. Support for AMD Quad-GPU CrossFire™ and 2-Way AMD CrossFire™ technologies	1. Support for NVIDIA® Quad-GPU SLI™ and 2-Way NVIDIA® SLI™ technologies 2. Support for AMD Quad-GPU CrossFire™ and 3-Way/2-Way AMD CrossFire™ technologies
IDE ATA	<p>Chipset:</p> <ol style="list-style-type: none"> 1 x M.2 connector (Socket 3, M key, type 2242/2260/2280/22110 SATA and PCIe x4/x2 SSD support) (M2A) 1 x M.2 connector (Socket 3, M key, type 2242/2260/2280 SATA and PCIe x4/x2 SSD support) (M2M) 6 x SATA 6Gb/s connectors Support for RAID 0, RAID 1, RAID 5, and RAID 10 * Refer to "1-7 Internal Connectors," for the installation notices for the M.2 and SATA connectors. <p>Intel® Optane™ Memory Ready</p>	<p>Chipset:</p> <ol style="list-style-type: none"> 2 x M.2 connectors (Socket 3, M key, type 2242/2260/2280/22110 SATA and PCIe x4/x2 SSD support) (M2M_32G) (M2A_32G) 1 x M.2 connector (Socket 3, M key, type 2242/2260/2280 PCIe x4/x2 SSD support) (M2P_32G) 6 x SATA 6Gb/s connectors Support for RAID 0, RAID 1, RAID 5, and RAID 10 * Refer to "1-9 Internal Connectors," for the installation notices for the PCIEX4, M.2, and SATA connectors. <p>Intel® Optane™ Memory Ready</p>
USB	<p>Chipset:</p> <ol style="list-style-type: none"> 1 x USB 3.1 Gen 2 Type-A port (red) on the back panel 7 x USB 3.1 Gen 1 ports (5 ports on the back panel, 2 ports available through the internal USB header) 4 x USB 2.0/1.1 ports (2 ports on the back panel, 2 ports available through the internal USB header) 	<p>Chipset+2 ASMedia® USB 3.1 Gen 2 Controllers:</p> <ol style="list-style-type: none"> 1 x USB Type-C™ port with USB 3.1 Gen 2 support, available through the internal USB header 1 x USB Type-C™ port on the back panel, with USB 3.1 Gen 2 support 1 x USB 3.1 Gen 2 Type-A port (red) on the back panel <p>Chipset+Realtek® USB 3.1 Gen 1 Hub:</p> <ol style="list-style-type: none"> 2 x USB 3.1 Gen 1 ports available through the internal USB header <p>Chipset:</p> <ol style="list-style-type: none"> 5 x USB 3.1 Gen 1 ports on the back panel 4 x USB 2.0/1.1 ports available through the internal USB headers

Interne I/O Anschlüsse	<ol style="list-style-type: none"> 1 x 24-pin ATX main power connector 1 x 4-pin ATX 12V power connector 1 x 8-pin ATX 12V power connector 1 x CPU fan header 3 x system fan headers 1 x RGB LED strip header 6 x SATA 6Gb/s connectors 2 x M.2 Socket 3 connectors 1 x front panel header 1 x front panel audio header 1 x S/PDIF Out header 1 x USB 3.1 Gen 1 header 1 x USB 2.0/1.1 header 1 x Trusted Platform Module (TPM) header (2x6 pin, for the GC-TPM2.0_S module only) 1 x Thunderbolt™ add-in card connector 1 x serial port header 1 x Clear CMOS jumper 	<ol style="list-style-type: none"> 1 x 24-pin ATX main power connector 1 x 8-pin ATX 12V power connector 1 x CPU fan header 1 x water cooling CPU fan header 4 x system fan headers 1 x 3 Amp fan/water cooling pump header 1 x system fan/water cooling pump header 2 x digital LED strip headers 2 x digital LED strip power select jumpers 2 x RGB (RGBW) LED strip headers 3 x M.2 Socket 3 connectors 6 x SATA 6Gb/s connectors 1 x front panel header 1 x front panel audio header 1 x S/PDIF Out header 1 x USB Type-C™ header, with USB 3.1 Gen 2 support 1 x USB 3.1 Gen 1 header 2 x USB 2.0/1.1 headers 1 x Thunderbolt™ add-in card connector 1 x Trusted Platform Module (TPM) header (2x6 pin, for the GC-TPM2.0_S module only) 1 x power button 1 x reset button 1 x Clear CMOS button 1 x OC button 2 x temperature sensor headers
Rear Panel I/O	<ol style="list-style-type: none"> 1 x PS/2 keyboard/mouse port 1 x HDMI port 1 x USB 3.1 Gen 2 Type-A port (red) 5 x USB 3.1 Gen 1 ports 2 x USB 2.0/1.1 ports 1 x RJ-45 port 6 x audio jacks 	<ol style="list-style-type: none"> 1 x PS/2 keyboard/mouse port 1 x DisplayPort 1 x HDMI port 5 x USB 3.1 Gen 1 ports 1 x USB Type-C™ port, with USB 3.1 Gen 2 support 1 x USB 3.1 Gen 2 Type-A port (red) 2 x RJ-45 ports 1 x optical S/PDIF Out connector 5 x audio jacks (Center/Subwoofer Speaker Out, Rear Speaker Out, Line In, Line Out, Mic In)
Operating System	<ol style="list-style-type: none"> Support for Windows 10 64-bit 	<ol style="list-style-type: none"> Support for Windows 10 64-bit
Form Factor	<ol style="list-style-type: none"> ATX Form Factor; 30.5cm x 22.5cm 	<ol style="list-style-type: none"> ATX Form Factor; 30.5cm x 24.4cm