

Z170-A

Note: The specifications are subject to change without notice.

CPU	<p>LGA1151 socket for 6th Generation Intel® Core™ i7/ i5/ i3/Pentium®/Celeron® Processors</p> <p>Supports 14nm CPU</p> <p>Supports Intel® Turbo Boost Technology 2.0*</p> <p>* The Intel® Turbo Boost Technology 2.0 support depends on the CPU types.</p>
Chipset	<p>Intel® Z170 Express Chipset</p>
Memory	<p>4 x DIMM, max. 64GB, DDR4 3400(O.C.)*/3333(O.C.)*/3200(O.C.)*/3100(O.C.)*/3000(O.C.)*/2933(O.C.)*/2800(O.C.)*/2666(O.C.)*/2600(O.C.)*/2400(O.C.)*/2133 MHz, non-ECC, un-buffered memory</p> <p>Dual channel memory architecture</p> <p>Supports Intel® Extreme Memory Profile (XMP)</p> <p>* Hyper DIMM support is subject to the physical characteristics of individual CPUs. Please refer to Memory QVL(Qualified Vendors List) for details.</p>
Expansion Slots	<p>2 x PCI Express 3.0/2.0 x16 slots (single at x16 or dual at x8/x8 mode)</p> <p>1 x PCI Express 3.0/2.0 x16 slot* (max. at x4 mode, compatible with PCIe x1 and x4 devices)</p> <p>3 x PCI Express 3.0/2.0 x1 slots</p> <p>1 x PCI slot</p> <p>*The PCIe x16_3 slot shares bandwidth with SATA6G_56. The PCIe x16_3 is default set at x2 mode.</p>
VGA	<p>Integrated Graphics Processor- Intel® HD Graphics support</p> <p>Multi-VGA output support: DisplayPort/HDMI/DVI-D/VGA ports</p> <p>Supports DisplayPort 1.2* with max. resolution 4096 x 2304 @60Hz/24Hz</p> <p>Supports HDMI 1.4b with max. resolution 4096 x 2160 @24Hz / 2560 x 1600 @60Hz</p> <p>Supports DVI-D with max. resolution 1920 x 1200 @60Hz</p> <p>Supports RGB with max. resolution 1920 x 1200 @60Hz</p> <p>Supports Intel® InTru™ 3D/Quick Sync Video/Clear Video HD Technology/Insider™</p> <p>Supports up to 3 displays simultaneously</p> <p>Maximum shared memory of 512MB</p> <p>*DP 1.2 Multi-Stream Transport compliant, supports DP 1.2 monitor daisy chain up to 3 displays</p>
Multi-GPU support	<p>Supports NVIDIA® 2-Way/Quad-GPU SLI™ Technology (with 2 PCIe x16 graphics card)</p> <p>Supports AMD® 3-Way/Quad-GPU CrossFireX™ Technology</p>
Storage	<p>Intel® Z170 Express Chipset with RAID 0, 1, 5, 10 and Intel Rapid Storage Technology 14 support</p> <ul style="list-style-type: none"> - 1 x SATA Express port (compatible with 2 x SATA 6.0 Gb/s ports) - 6 x SATA 6.0 Gb/s ports(gray, 2 from SATA Express) - Supports Intel® Smart Response Technology* - 1 x M.2 Socket 3 with M Key** type 2242/2260/2280/22110 storage devices support (both SATA & PCIe mode)*** <p>* These functions will work depending on the CPU installed.</p> <p>** Supports PCIe RAID configurations via onboard M.2 and PCIe x16_3.</p> <p>*** M.2 shares SATA mode with SATA Express. Change this item before installing M.2 SATA devices.</p>
LAN	<p>Gigabit Intel LAN connection- 802.3az Energy Efficient Ethernet (EEE) appliance</p> <p>Intel® I219-V Gigabit LAN- Dual interconnect between the integrated Media Access Controller (MAC) and physical layer (PHY)</p> <p>ASUS LAN Guard</p> <p>ASUS Turbo LAN Utility</p>
Audio	<p>Realtek® ALC892 8-channel high definition audio CODEC featuring Crystal Sound 3</p> <ul style="list-style-type: none"> - Power pre-regulator reduces power input noise to ensure consistent performance - Separate layer for left and right track, ensuring both sound deliver equal quality - Top notch audio sensation delivers according to the audio configuration - Audio shielding ensures precise analog/digital separation and greatly reduced multi-lateral interference - EMI protection cover to prevent electrical noise to affect the amplifier quality - Audio Amplifier to enhance the highest quality sound for headphone and speakers - Unique de-pop circuit to reduce start-up popping noise to audio outputs - Premium Japan-made audio capacitors provides warm, natural, and immersive sound with exceptional clarity and fidelity - Absolute Pitch 192khz/24bit true BD lossless sound - DTS® Studio Sound™ - DTS® Connect - Supports jack-detection, multi-streaming, front panel jack-retasking (MIC) - Optical S/PDIF out port at back I/O
USB	<p>Intel® Z170 Express Chipset- supports ASUS USB 3.1 Boost</p> <ul style="list-style-type: none"> - 6 x USB 3.0/2.0 ports (4 ports at mid-board, 2 ports at back panel, blue) - 6 x USB 2.0/1.1 ports (4 ports at mid-board, 2 ports at back panel) <p>ASMedia® USB 3.1 controllers- supports ASUS USB 3.1 Boost and 3A power output</p> <ul style="list-style-type: none"> - 1 x USB 3.1/3.0/2.0 port at back panel (teal blue, Type-A) - 1 x USB 3.1/3.0/2.0 port at back panel (Type-C)
	<p><Superb Performance></p> <p>OC Design - ASUS PRO Clock Technology</p> <ul style="list-style-type: none"> - Full BCLK range for extreme overclocking performance <p>5-Way Optimization</p> <ul style="list-style-type: none"> - Whole system optimization with a single click! Perfectly consolidates better CPU performance, power saving, digital power control, system cooling and app usages. <p>DIGI+ VRM</p> <ul style="list-style-type: none"> -CPU Power: Digital 8-phase power design -GPU Power: Digital 2-phase power design <p>TPU</p> <ul style="list-style-type: none"> - Auto Tuning, TPU, GPU Boost, 2-level TPU switch <p>EPU</p> <ul style="list-style-type: none"> - EPU <p>Fan Xpert 3 featuring Fan Auto Tuning function and multiple thermistors selection for optimized system cooling control</p> <p>Turbo App featuring system performance tuning, network priority, and audio scene configuration for selected applications.</p> <p>UEFI BIOS</p> <ul style="list-style-type: none"> - Most advanced options with fast response time

ASUS Exclusive Features	Special Memory O.C. Design - Superb memory O.C. capability under full load by minimizing the coupling noise and signal reflection effect	
	PC Cleaner - Fast and easy way to get rid of unnecessary junk files.	
	<Remote Entertainment>	
	Remote GO! - Remote GO! Function: Cloud GO!, Remote Desktop, Remote Keyboard & Mouse, File Transfer - Wi-Fi GO! & NFC Remote app for portable smartphone/tablet, supporting iOS 7 & Android 4.0 systems	
	Media Streamer - Pipe music or movies from your PC to a smart TV, your entertainment goes wherever you go! - Media Streamer app for portable smartphone/tablet, supporting iOS 7 & Android 4.0 systems	
	HyStream - Stream iOS devices' screen on your PC screen.* * Contact your device vendor for supporting information.	
	<eSports Champions>	
	Turbo LAN - Fast and smooth online gaming with lower pings and less lags	
	Crystal Sound 3 - Hear the cleanest sound with dedicated audio design onboard!	
	Turbo APP - Tailored app performance, network priority and audio configuration for your needs	
	<EZ DIY>	
	Push Notice - Monitor your PC status with smart devices in real time	
	USB BIOS Flashback Card supported UEFI BIOS EZ Mode featuring friendly graphics user interface - CrashFree BIOS 3 - EZ Flash 3	
	ASUS Q-Design - ASUS Q-LED (CPU, DRAM, VGA, Boot Device LED) - ASUS Q-Slot - ASUS Q-DIMM - ASUS Q-Connector	
	ASUS Special Features	Special Features: ASUS 5X Protection - ASUS DIGI+ VRM - 8 Phase digital power design - ASUS Enhanced DRAM Overcurrent Protection - Short circuit damage prevention - ASUS ESD Guards - Enhanced ESD protection - ASUS High-Quality 5K-Hour Solid Capacitors - 2.5x long lifespan with excellent durability - ASUS Stainless Steel Back I/O - 3x more durable corrosion-resistant coating
- Mobo Connect - LAN Guard - USB 3.1 Boost - Ai Charger - AI Suite 3 - MemOK! - EZ XMP		
ASUS Quiet Thermal Solution Quiet Thermal Design: - ASUS Fan Xpert 3 - ASUS Fanless Design: Heat-sink solution		
ASUS Exclusive Overclocking Features Precision Tweaker 2: - CPU Core/Cache Voltage: Adjustable CPU Core/Cache Voltage at 0.005V increment - CPU Graphics Voltage: Adjustable CPU Graphics voltage at 0.005V increment - CPU VCCIO Voltage: Adjustable CPU VCCIO Voltage at 0.0125V increment - CPU System Agent Voltage: Adjustable CPU System Agent Voltage at 0.0125V increment - DRAM Voltage: 152-step Memory voltage control - PCH Core Voltage: 88-step Chipset voltage control SFS (Stepless Frequency Selection) - BCLK/PCIE frequency tuning from 40MHz up to 500MHz at 0.01MHz increment Overclocking Protection: - ASUS C.P.R.(CPU Parameter Recall)		
Back Panel I/O Ports		1 x PS/2 Keyboard/mouse combo port 1 x DisplayPort 1 x HDMI port 1 x DVI-D 1 x RGB 1 x Optical S/PDIF out 1 x Intel LAN (RJ45) port 1 x USB 3.1/3.0/2.0 ports (teal blue, Type A) 1 x USB 3.1/3.0/2.0 ports (Type C) 2 x USB 3.0/2.0 ports (blue) 2 x USB 2.0 ports 8-channel Audio I/O ports

Internal I/O Connectors	2 x USB 3.0/2.0 connectors support additional 4 USB ports (19-pin)
	2 x USB 2.0/1/1 connectors support additional 4 USB ports
	1 x M.2 Socket 3 (for M Key, type 2242/2260/2280/22110 storage devices)
	1 x SATA Express connectors (gray)
	4 x SATA 6.0Gb/s connectors (gray)
	1 x CPU Fan connector (4-pin) for both 3-pin(DC mode) and 4-pin(PWM mode) CPU coolers control with auto detection support
	1 x CPU OPT Fan connector (4-pin)
	1 x Water Pump header (4-pin)
	4 x Chassis Fan connectors (4-pin) for both 3-pin(DC mode) and 4-pin(PWM mode) coolers control
	1 x Front panel audio connector (AAFP)
	1 x BIOS Flashback connector
	1 x S/PDIF out header
	1 x Thunderbolt header (5-pin) for ASUS ThunderboltEX series support
	1 x TPM connector
	1 x COM port
	1 x 24-pin EATX Power connector
	1 x 8-pin EATX 12V Power connector
	1 x System Panel(Q-Connector)
	1 x MemOK! button
	1 x Clear CMOS jumper
	1 x DRCT(Direct Key) connector
	1 x TPU switch (advanced two-stage adjustments)
	1 x EZ XMP switch
1 x Power-on button	
1 x 5-pin EXT_FAN(Extension Fan) connector	
BIOS	128 Mb Flash ROM, UEFI AMI BIOS, PnP, DMI3.0, WfM2.0, SM BIOS 3.0, ACPI 5.0, Multi-language BIOS, ASUS EZ Flash 3, CrashFree BIOS 3, F11 EZ Tuning Wizard, F6 Qfan Control, F3 My Favorites, Quick Note, Last Modified log, F12 PrintScreen and ASUS DRAM SPD (Serial Presence Detect) memory information
Manageability	WiM 2.0, DMI 3.0, WOL by PME, PXE
Accessories	3 x Serial ATA 6.0Gb/s cables
	1 x ASUS SLI bridge connector
	1 x Q-connector
	1 x M.2 screw package
	1 x CPU installation tool
	1 x User's manual
Support DVD	1 x Z170 Series Exclusive Feature manual
	Drivers
	ASUS Utilities
	EZ Update
Operating System Support	Anti-virus software (OEM version)
	Windows® 10*
	Windows® 8.1*
	Windows® 7
Form Factor	*64-bit supported only ATX Form Factor, 12"x 9.6" (30.5cm x 24.4cm)