



STAY COOL
BE TUF



SABERTOOTH Z170 S ARCTIC CAMO. TUF CORE.

No. 1 GAMING BRAND WORLDWIDE



ASUS Hotline: 03-7724 3495

Monday - Friday, 10am - 7pm

Web ASUS: my.asus.com



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ASUS®
No.1 in Quality and Services
-The Wall Street Journal Asia



ASUS Motherboards
Product Guide 2016



ROG Z170 MOTHERBOARD - MAXIMUS VIII FORMULA ACCEPT ALL CHALLENGES

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THE BEST MOTHERBOARD BRAND

BREAKTHROUGH

- ▶ Over 900 patents to push technology's boundaries.
- ▶ One-click performance boost with 5-Way Optimization.
- ▶ No.1 Choice of Enthusiats*

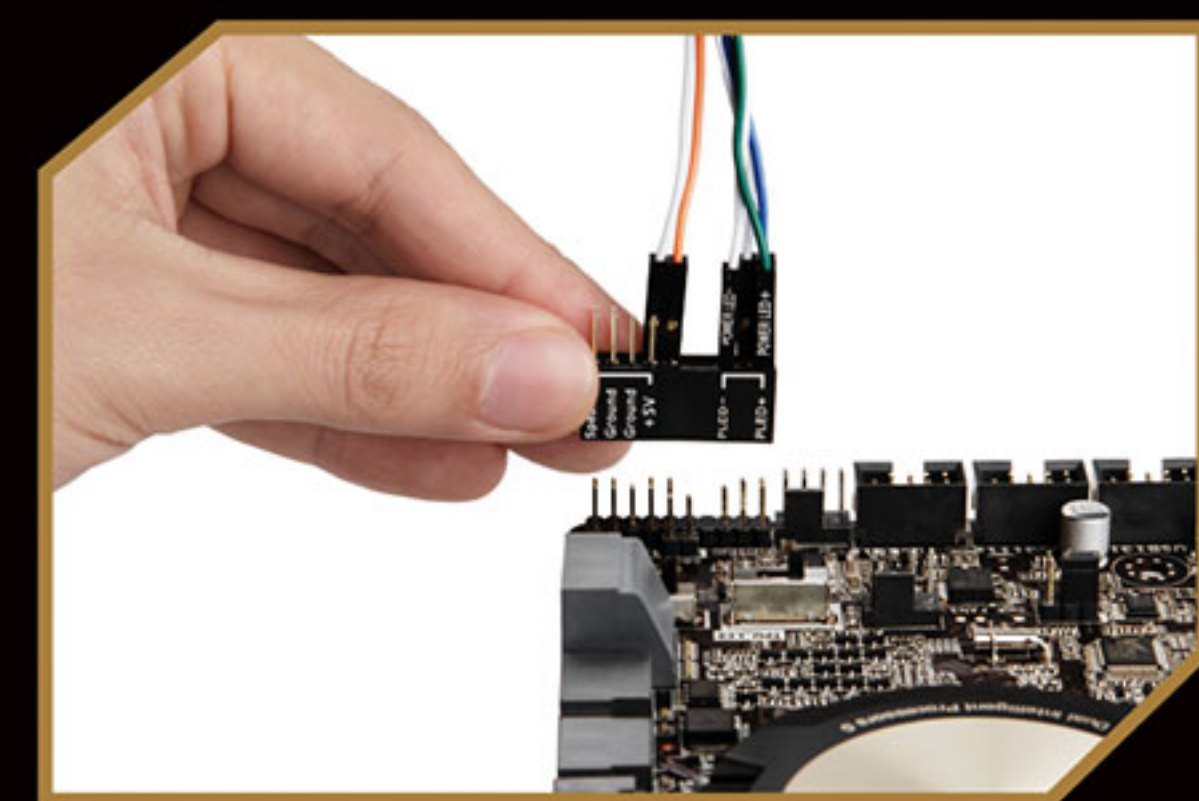
*on HWBOT, the biggest overclocking community

EASY TO USE

- ▶ Media-acclaimed intuitive UEFI BIOS.
- ▶ Q-Design features for hassle-free DIY experience.
- ▶ Easiest BIOS update with USB BIOS Flashback or EZ Flash 3.



900+
MOTHERBOARD PATENTS



STABLE

- ▶ 5X Protection II ensures long-term system reliability.
- ▶ Extensive testing and proven compatibility with hundreds of devices, plus leading UEFI stability and support.

5X
PROTECTION II

TRUSTED

- ▶ With over 500-million motherboards sold, ASUS is the brand you trust.
- ▶ Over 1000 media awards in 2014, ASUS is the most award-winning motherboard maker.

500+
MILLION SOLD
SINCE 1989



8 WORLD RECORDS &
12 GLOBAL FIRST PLACES
ON ROG MAXIMUS VIII SERIES MOTHERBOARDS

6.808GHZ
4 cores / 8 threads CPU

552.7MHZ
Reference Clock BCLK



Benchmark	1 x GPU	2 x GPU
Aquamark		
3DMark 2001 SE		
3DMark03		
3DMark05		
3DMark06		
Unigine Heaven-Xtreme Preset		

Cinebench R11.5 x 4	Cinebench R11.5 x 4	GPUi for CPU 1B x 4	Geekbench 3 Single Core	Geekbench 3 x 4
HWBOT Prime x 4	PiFast	wPrime 32M x 4	wPrime 1024M x 4	XTU x 4

World Record Global First Place



Z97 Deluxe USB 3.1
Brand New Deluxe
CHIP Outstanding Award
August 2015



Z97-Pro Gamer
Gaming Wisely
PC.COM Choice Award
July 2015



X99 Sabertooth USB 3.1
USB 3.1 Corneth
CHIP Outstanding Award
July 2015



Z97-A/USB 3.1
Here Comes USB3.1
CHIP Recommended Award
June 2015



X99-Pro
Unboxing & Review
ASUS X99-Pro
Silver & Recommended Award
May 2015



Z97 - Pro Gamer
Gaming Made Easy
CHIP Outstanding Award
May 2015



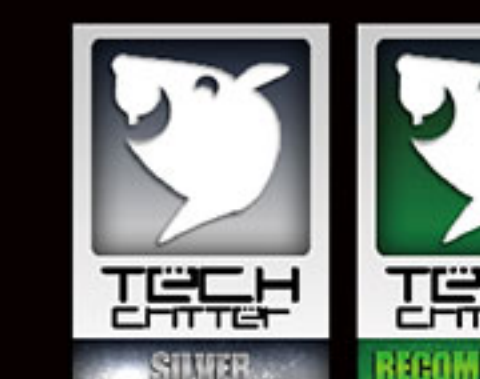
X99 Sabertooth USB 3.1
Unboxing & Review:
ASUS Sabertooth X99
Gold & Recommended Award
April 2015



Z97-A/USB 3.1
Straight A
9.6 Platinum PC.COM
Excellence Award
April 2015



Sabertooth Z97 Mark S
Cool Story Bro ASUS X99-Pro
10.0 Platinum PC.COM
Excellence Award
March 2015



A88X-Gamer
Unboxing & Review:
ASUS A88X-Gamer
Gaming Motherboard
Silver & Recommended Award
March 2015



Sabertooth Z97 Mark 1
ASUS Sabertooth Z97
Mark 1 Motherboard Review
Gold & Recommended Award
January 2015



X99-A
The White Beast
CHIP Outstanding Award
January 2015

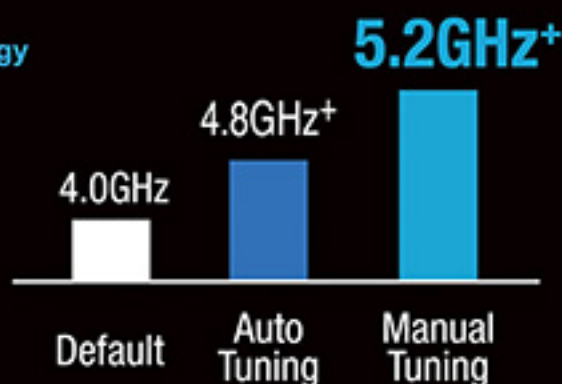
HIT UNLEASH PERFORMANCE YOUR TARGET

ASUS Z170 Signature series motherboards deliver fully featured design and devote to provide wide-range solutions to give the highest flexibility to all PC enthusiasts. Your PC is perfect for gaming, entertainment productivity or just about anything else!

OVERCLOCK YOUR WAY

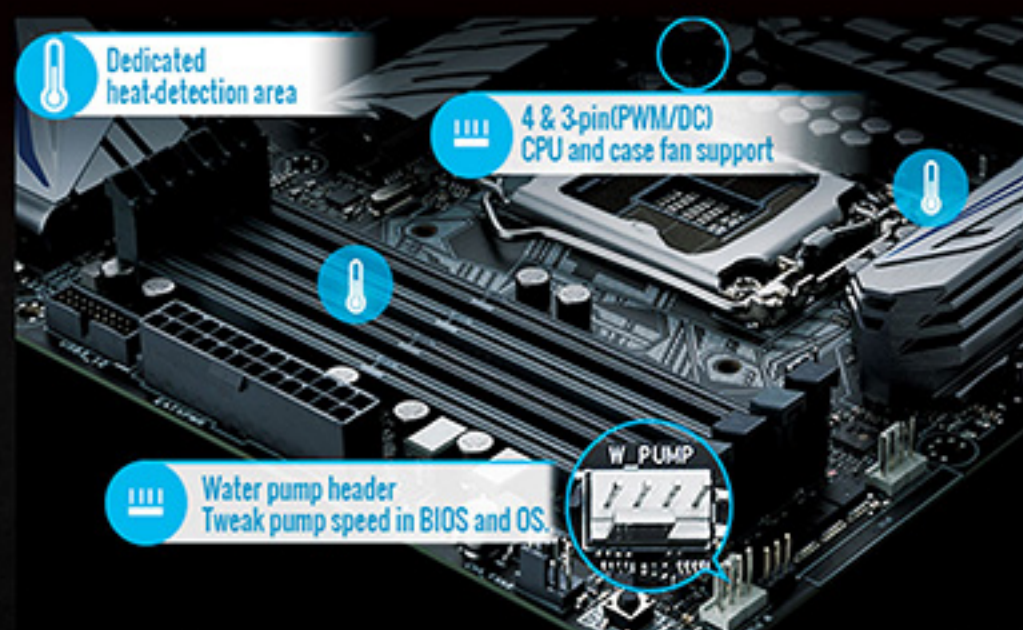
5-Way Optimization & ASUS PRO Clock Technology

Everyone can overclock with intelligent auto-tuning from ASUS, so you'll achieve speeds upwards of 4.8GHz or beyond with a single click*. For serious tweekers, Pro Clock extends base clocks up to and beyond 400MHz and improves stability for extreme over-clocking!



SPECIAL HIGHLIGHT, FAN XPERT 3

Long overdue for custom and self-contained water-cooling users, Fan Xpert 3 has been upgraded to include a dedicated water pump header to let you tweak pump speed in UEFI or Windows. Combined with 4-pin/3pin CPU and case fan controls that support hardware level PWM/DC modes and the ability to automatically calibrate fans, Fan Xpert 3 achieves the ultimate balance of cooling and quiet.



*Overclocking range will vary according to CPU capabilities, cooling, motherboard support and tuning options.

*Testing configuration: Intel LGA1151 i7 6700K | Z170-DELUXE | DDR4 G.Skill 3400C16 | ENERMAX 1050W | Corsair H100i | Intel SSD 80Gi Win 8.1

GAME ON INCREDIBLE

Crystal Sound 3

Unique audio shielding and de-pop circuit design combine with a new power pre-regulator to reduce input power noise, an audio amplifier and premium Japanese-made audio capacitors to achieve superior immersive gaming audio.



Intel Ethernet & Turbo LAN

Low-latency networking and customizable packet prioritization provide an uninterrupted gaming environment suitable for vanquishing opponents.



Lighting Control

Customizable LED lighting creates a unique glow across your build. You can even set the lighting to change shades to indicate CPU temperature, or pulse to the beat of your music.



UPGRADE TO Z170-DELUXE

Achieve the most complete Z170 experience with the Z170-Deluxe, which includes the following performance-enhancing accessories.



Hyper Kit

An M.2 to U.2 adapter supports 2.5-inch NVMe SSDs.



Hyper M.2 x 4 Mini

Offer 32Gbit/s ultrafast speed with PCIe slot flexibility.



3 x 3 802.11ac Wi-Fi

Fastest onboard Wi-Fi up to 1300Mb*s*.

* Actual speed may vary and Wi-Fi Hotspot use 802.11a/b/g/n. Windows 10 does not currently support Wi-Fi hotspot functionality.



ADVANCED HARDWARE SAFEGUARDS

ASUS Z170 Signature series motherboards are ramped up with multiple advanced technologies. Benefit from 5X Protection II for dependable stability, and experience the exhilarating performance of DDR4 memory. You'll also enjoy LED-illuminated audio and reversible USB Type-C connectivity, adding up to a great-value package that delivers outstanding productivity, lightning-fast transfer speeds, and superb gaming experiences for you!

5X PROTECTION II

Industry-leading 5X Protection II employs the finest components, excellent circuit design, and exacting standards to guarantee quality and long-term durability of your motherboard with all-round protection. For you, that means exceptional protection and stability for your build - the result of decades of engineering experience from the world's leading motherboard brand.



LANGuard

Unique networking protection delivers higher reliability and greater throughput, combatting static electricity and fending off power surges!



Overvoltage Protection

Exclusive circuitry with built-in voltage regulators protect your chipset, connectivity ports and audio codecs from damage caused by voltage spikes!



DDR4 O.C. MASTER

DDR4 Overclocking Strength in numbers

Second-gen ASUS T-Topology's custom trace path, reduced crosstalk and time-aligned signaling enables DDR4-memory overclocking to 3466MHz and beyond!



USB TYPE-C

Convenient Connectivity

USB Type-C (USB-C) delivers future device compatibility and high-speed USB connectivity of 5Gbit/s from a slim, reversible port.

GAMING AUDIO

Ultimate LED-Illuminated Design

Beautiful LED-illuminated trace paths brighten your build and high-gain noise-isolated, precision-shielded, interference-eliminated onboard audio like you've never before experienced!

PLAY YOUR STRENGTHS

ASUS ProGaming series is dedicated to give gamers the most value-packed motherboards with performance-optimized features and appealing aesthetics including immersive audio, fast networking, illuminated accents - and it's engineered for all-round protection. Turn a new gaming chapter and win with the new Z170 Pro Gaming - Now!

FLAWLESS AUDIO

SupremeFX

Interference-isolating technology, premium Nichicon capacitors and built-in amplifier deliver impeccable audio that make you part of the game.



BREAKNECK NETWORKING

Intel Ethernet 1219-V

Blazing-fast data transfer, low processor use and superb stability means smoother gaming and more triumphs.

LANGuard

Signal-coupling technology and premium surface mounting for anti-surge, a reliable connection and better throughput.

GameFirst III

Exclusive web-traffic-prioritizing technology intelligently lowers pings and allocating more gaming bandwidth.



OVERCLOCK YOUR WAY

5-Way Optimization

Dynamic auto-tuning overclocking, fan calibration, energy saving, digital power delivery, networking and audio settings - all with a single click!



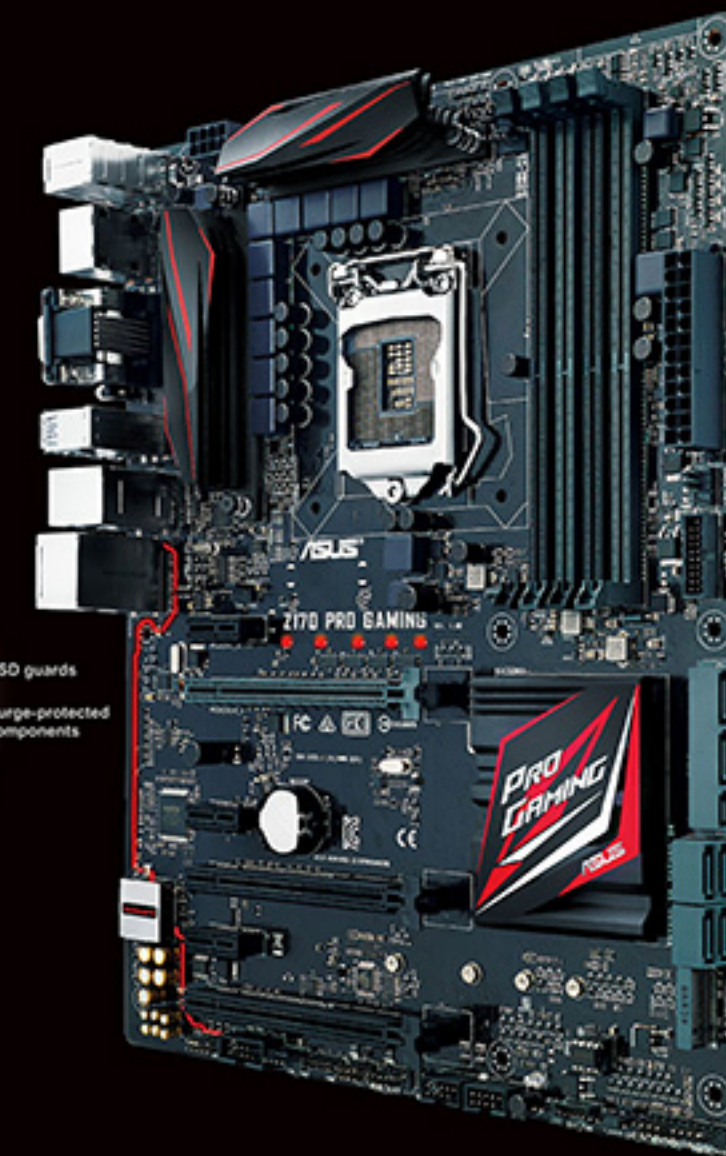
ASUS PRO Clock Technology

A base-clock (BCLK) for 6th-Generation Intel processors that extends overclocked BCLK frequencies up to 400MHz, minimizing boot times, jitter and voltage and more stability for extreme overclocking.

*BCLK overclocking range varies according to CPU capabilities, cooling, motherboard support and tuning options.

DDR Memory OC

Second-Gen ASUS T-Topology takes DDR4 memory overclocking up to 3466MHz with all memory slots populated, with improved stability and compatibility.



GAMER'S GUARDIAN

Marathon gaming requires rock-solid components. Premium-quality chokes and capacitors, advanced DRAM overcurrent protection and ASUS-exclusive smart DIY features ensure long-term gaming is in your future.

INTEL ETHERNET



USB 3.1 TYPE-A, C (10GB/S)

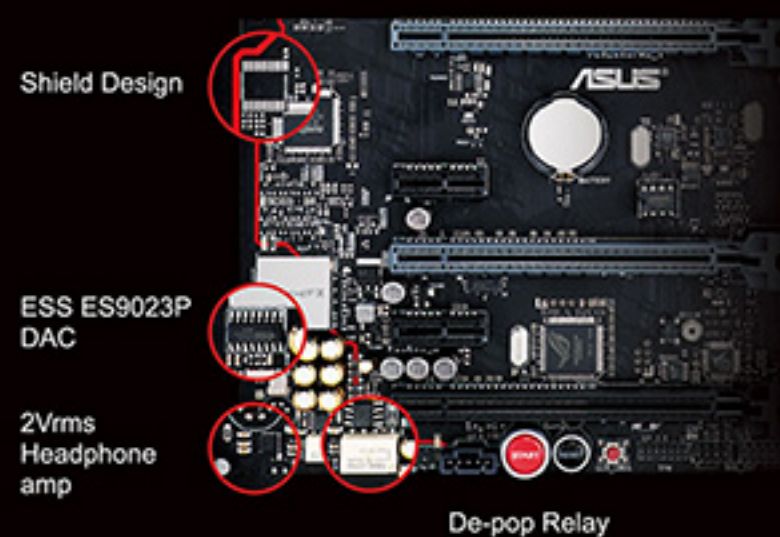
ACCEPT ALL CHALLENGES

The Republic of Gamers (ROG) is closing in on its 10th year of delivering exemplary design and performance to gamers and enthusiasts. With Maximus VIII Series Z170 motherboards, ROG once again is ready to accept all challenges, be it from competitors or enthusiasts ready to push hardware to the limits.

BEST GAMING AUDIO

SupremeFX 2015

Best-in-class integrated audio utilizes a special shield design, ESS ES9023P DAC and an exhaustive list of professional-grade audio components, with op-amps powerful enough to drive 2Vrms to any headset.



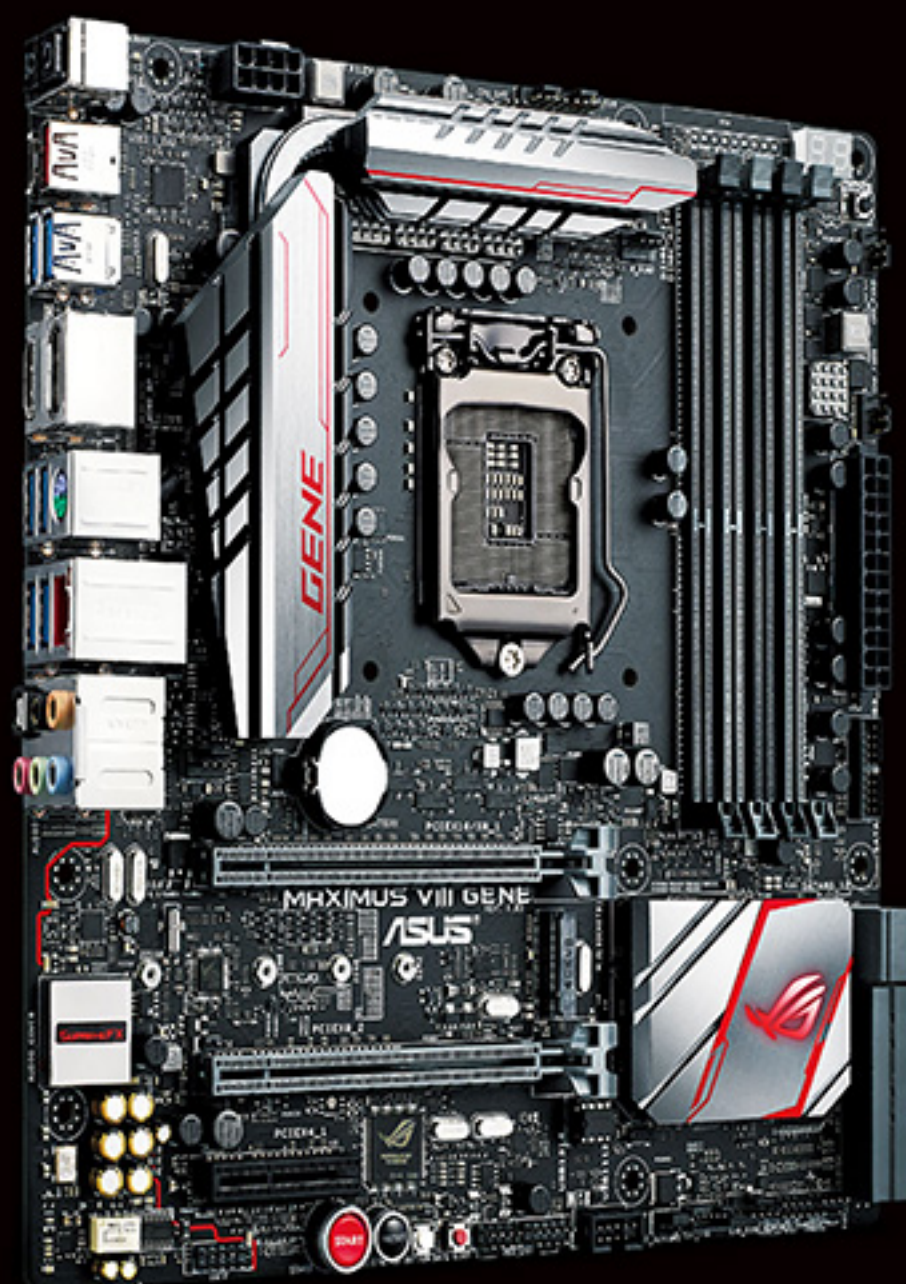
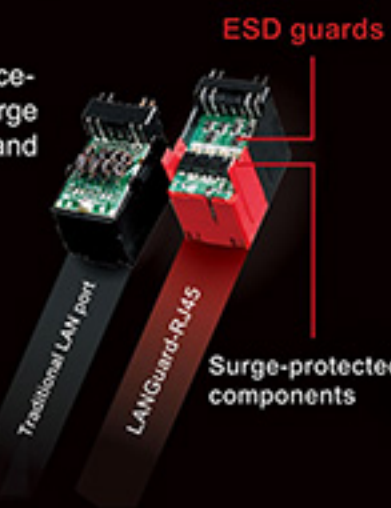
BEST GAMING NETWORKING

Intel Gigabit Ethernet (I219-V)

The latest Intel Ethernet ensures higher throughput and lower CPU overhead for minimal ping and maximum game performance.

LANGuard

Signal-coupling technology, premium surface-mounting and electrostatically-guarded & surge-protected components for better reliability and throughput.



MAXIMUS VIII RANGER

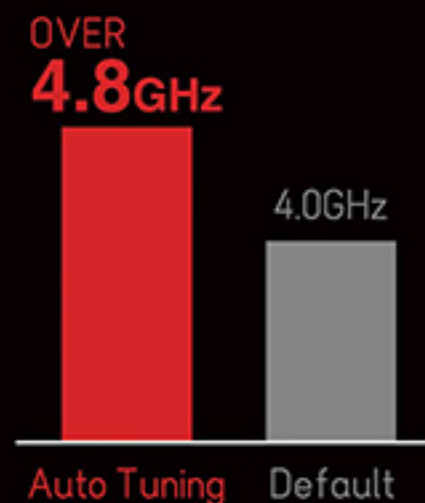
A more affordable ROG Z170 gaming motherboard packed with great overclocking capability and gaming-oriented features.



BEST GAMING PERFORMANCE

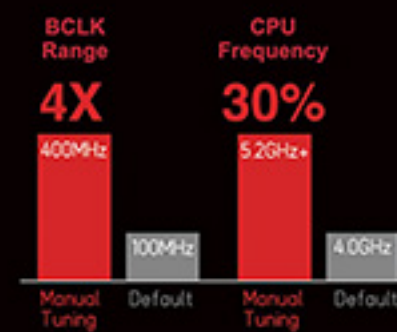
5-Way Optimization

Easily tune complex settings with just one click and access automated overclocking, fan calibration, improved energy-efficiency, digital power delivery and customizable per-application settings.



OC Design - ASUS Pro Lock Technology

A dedicated base-clock (BCLK) generator designed for 6th-Generation Intel processors minimizes boot times, jitter and voltages for more stable overclocking - and even - more - extreme performance.



DDR4 Overclocking Strength in Numbers

Second-Generation ASUS T-Topology reduces crosstalk and coupling noise enables, enabling DDR4 memory overclocking to reach new heights - over DDR4 - 3733MHz with all memory slots populated.



Cooler by Design

4/3-pin (PWM/DC) combo fan headers, a dedicated water-pump header, four intelligent onboard sensors plus a fan-extension header for fan card upgrades provide flexibility for virtually any cooling configuration.



UNDENIABLY TOUGH. 24/7 DURABILITY.

The Most Advance Motherboard Ever Fortified

With the next era of technological progress, we challenge ourselves to evolve into bringing a completely new design language to TUF. Present to you the most advanced motherboard ever in our line, the SABERTOOTH Z170 Mark 1.

THERMAL ARMOR STRENGTHEN YOUR ABILITY. TOTALLY BOOSTED AIRFLOW.

TUF Thermal Armor is more than a futuristic shield: It employs dual fans to provide maximum airflow and rapid cooling board-wide, and a new interior shunt design to boost air cooling to the M.2 slot. Reversible-airflow technology blows dust up and away from the heatsink VRM, while the exclusive flow-valve design controls the heat-pipe's air contact - great for liquid-cooling setups.



DUST DE-FAN & FLOW VALVE



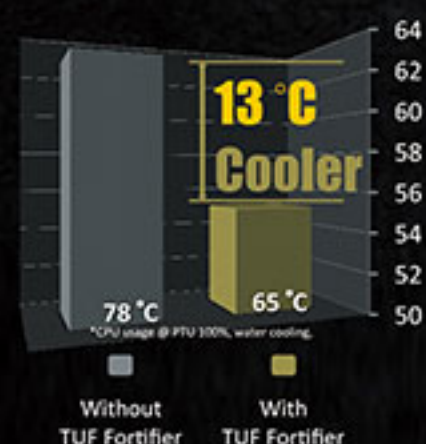
Reverse air to carry particulate out of the case



Exclusive flow-valve design controls the heat-pipe's air contact - great for liquid-cooling setups

TUF FORTIFIER IMPROVES RIGIDITY AND COOLING BEHIND THE BOARD

10kgs Improve Rigidity and prevent Bending. Bolster boards against bending damage. Make the whole back plate become a powerful heat-sink. Prevent injuries from solder pins and other sharp motherboard components.



Enhances Heat Conduction!

THE ULTIMATE FORCE. THE ULTIMATE SPIRITS- THE TUF BADGE

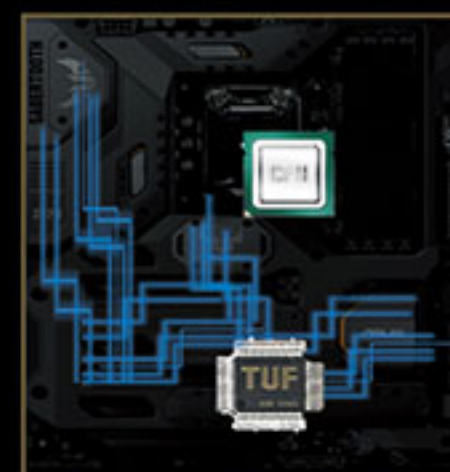
Removable metal plate when you install the assistant fan onboard. It represents the undefeated spirit of TUF.



DIRECTING HEAT AWAY!!
Reduce key components operating temperature up to 13°C!

TUF ICE

THE TOTAL COOLING COMMANDER



ASUS TUF engineers have forged TUF ICE, a dedicated processor that monitors onboard temperature sensors and fan speeds for ultra-accurate cooling - whether you're adjusting settings manually or using the automatic one-click optimization via Thermal Radar 2 and TUF Detective 2.

THERMAL RADAR 2

HARDWARE LEVEL FAN CONTROL GETS UPGRADED

Instant fan tuning. Complete system cooling.

- 2 CPU Fans
- 1 Water Pump Fan
- 6 Chassis Fans
- 3 Assistant Fans



Thermal Radar 2 now has 12 fan connectors and is able to connect with TUF Detective 2 wireless for fan control via your smartphone or tablet. Moreover, multiple onboard sensors and the bundled thermistor cable let you monitor graphics card temperatures and other key components in real time, so you can adjust manually or optimize automatically with one click.

TUF DETECTIVE 2



System Management at your fingertips

DURABILITY GUARANTEED

TUF COMPONENTS

TUF ALLOY CHOKES

13.6% Cooler for extra-unbeatable durability



TUF 10K Ti-Caps:

+20% temp. tolerance and 5X longer lifetime usage



TUF MOSFET:

Military-grade certified MOSFETs with lower RDS(on)*









	Military Standard	Low RDS(on)
TUF MOSFETs	v	v
Other MOSFETs	x	x



TUF GUARANTEED RELIABILITY

Proven by Multiple Rigorous Tests

7000+ Hours of compatibility checks	1000+ Compatible devices	60% more times* IO ports indertion test	20% Strengthen Temperature & humidity test
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Product Image					Product Image					
Brand	ASUS ROG	ASUS	ASUS	ASUS		MAXIMUS VIII EXTREME	MAXIMUS VIII Formula	MAXIMUS VIII HERO	MAXIMUS VIII RANGER	
Model	RAMPAGE V EXTREME	SABERTOOTH X99	X99-DELUXE/U3.1	X99-A/USB 3.1						
Chipset	X99	X99	X99	X99	CPU	Intel® Socket 1151 for 6th Generation Core™ i7/Core™ i5/Core™ i3/Pentium®/Celeron® Processors				
Form Factor	EATX (30.5*27.2)	ATX (30.5*24.4) (Standard ATX, 100% compatible)	ATX (30.5*24.4) (Standard ATX, 100% compatible)	ATX (30.5*24.4)	Chipset	Intel® Z170 Express Chipset				
Power Phase	Extreme engine Digi + IV DIGI+2+2-Phase DRAM PowIRstage MicroFine Alloy Chokes	DIGI + 8-Phase VRM, DIGI+2+2-Phase DRAM TUF Components	DIGI + 8-Phase VRM, DIGI+2+2-Phase DRAM Server-grade Choke	DIGI + 8-Phase VRM, DIGI+2+2-Phase DRAM Server-grade Choke	Form Factor	EATX	ATX	ATX	ATX	
OC Socket for Extreme CPU/DRAM	Yes	Yes	Yes	Yes	Memory	4 x DIMM, Max. 64Gb DDR4	4 x DIMM, Max. 64Gb DDR4	4 x DIMM, Max. 64Gb DDR4X	4 x DIMM, Max. 64Gb DDR4	
DRAM	DDR4 3333 O.C., 8 DIMM	DDR4 2400MHz, 8 DIMM	DDR4 3333 O.C., 8 DIMM	DDR4 3300 O.C., 8 DIMM	Memory Slot/ Maximum	4 x DIMM, Max. 64Gb DDR4	4 x DIMM, Max. 64Gb DDR4	4 x DIMM, Max. 64Gb DDR4X	4 x DIMM, Max. 64Gb DDR4	
Thunderbolt2 Support	Yes, with ThunderboltEX II Support	Yes, with ThunderboltEX II Support	Yes, with ThunderboltEX II Support	Yes, with ThunderboltEX II Support	Memory Frequency (MHz)	3800 (OC)	3733 (OC)	3733 (OC)	3466 (OC)	
SLI/CrossFire	4-Way SLI/CrossFireX	3-Way SLI/CrossFireX	3-Way SLI/CrossFireX	3-Way SLI/CrossFireX	Graphics Output	1 x DP , 1 x HDMI	1 x DP , 1 x HDMI	1 x DP , 1 x HDMI	1 x DP , 1 x HDMI	
Graphics	40-lane CPU: 4*PCIe 3.0/2.0 x 16 slots (4@16/8/8, 3@16/8/8, 2@16/16) 28-lane CPU: 3*PCIe 3.0/2.0 x 16 slots (3@x8 or 2@16/8)	40-lane CPU: 3*PCIe 3.0/2.0 x 16 slots (2@x16/x16, 3@16/x16/x8) 28-lane CPU: 3*PCIe 3.0/2.0 x 16 slots (2@x16/x8 or 3@x8)	40-lane CPU: 5*PCIe 3.0/2.0 x 16 slots (3@x16/x16, 4@8/8/16/8 or 5@x8) 28-lane CPU: 3*PCIe 3.0/2.0 x 16 slots (2@x16/x8 or 3@x8) 2*PCIe 2.0x16 slot (@x1) PCIe bridge embedded	40-lane CPU: 3*PCIe 3.0/2.0 x 16 slots (2@x16/x16, 3@x16/x16/x8) 1*PCIe 2.0x16 slot (max.@x4) 28-lane CPU: 3*PCIe 3.0/2.0 x 16 slots (2@x16/x8 or 3@x16/x8/x4) 1*PCIe 2.0x16 slot (max.@x4) 1*PCIe 2.0x16 slot (max.@x4)	Graphics (Expansion) Slot	PCIe 3.0 x 16	3 x PCIe 3.0 x 16 (@ x16 or x8/x8/x4/x4) 1 x PCIe 3.0 x 16 (max.@x4)	2 x PCIe 3.0 x16 (x16 or dual x8, gray) 1 PCIe 3.0 x 16 (max.@x4)	2 x PCIe 3.0 x 16 (@ x16 or x8/x8) 1 x PCIe 3.0 x 16 (max.@x4)	2 x PCIe 3.0 x 16 (@ x16 or x8/x8) 1 x PCIe 3.0 x 16 (max.@x4)
						PCIe 3.0 x 4	N/A	N/A	N/A	N/A
						PCIe x 1	2	2	3	3
						PCI	N/A	N/A	N/A	N/A
Storage	12*SATA 6Gb/s (4 from SATAe) 2*SATA Express	10*SATA 6Gb/s (2 from SATAe) 1*SATA Express	12*SATA 6Gb/s (4 from SATAe) 2*SATA Express	10*SATA 6Gb/s (2 from SATAe) 1*SATA Express	Storage & Connectivity	SATA 6Gb/s	8	6	8	6
M.2 Slot	1* M.2 (PCIe 3.0 x 4, up to 32Gb/s)	1*PCIe3.0M.2x4, up to 32Gb/s	2*PCIe M.2x4, up to 32Gb/s per port (1@ onboard, 1@ bundled add-on card)	1*PCIe 3.0M.2x4, up to 32Gb/s		M.2	1 x PCIe 3.0 x 4 up to 22110 (PCIe & SATA mode)	1 x M.2 Socket 3, with M Key, type 2242/2260/ 2280/22110	1 x PCIe 3.0 x 4 up to 22110 (PCIe & SATA mode)	1 x PCIe 3.0 x 4 up to 22110 (PCIe & SATA mode)
LAN	1*Intel Gb LAN GameFirst III ROG LAN Guard	1*Intel Gb LAN 1*Realtek Gb LAN ASUS Turbo LAN Support	2*Intel Gb LAN (the latest 1218-V adopted) ASUS Turbo LAN Support	1*Intel Gb LAN ASUS Turbo LAN Support		U.2 (Hyper Kit Support)	√	√	√	√
USB	14*USB 3.0 (4@front) 6* USB 2.0	2*USB 3.1(Type-A) 8*USB 3.0 (4@front) 8*USB 2.0 (4@front)	2*USB 3.1(Type-A, add-on card) 14*USB 3.0 (4@front) 6*USB 2.0	2*USB 3.1(Type-A) 8*USB 3.0 (4@front) 8*USB 2.0		USB 3.1 (Type A/C)	3 x Type-A 1 x Type-C	1 x Type-A 1 x Type-C	1 x Type-A 1 x Type-C	1 x Type-A 1 x Type-C
Wi-Fi Onboard	Refined design, ready in back I/O The fastest 3T3R Wi-Fi 802.11 a/b/g/n/ac Dual-band 2.4/5GHz & BT v4.0, up to 1300Mbps	N/A	Refined design, ready in back I/O The fastest 3T3R Wi-Fi 802.11 a/b/g/n/ac Dual-band 2.4/5GHz & BT v4.0, up to 1300Mbps	N/A	USB 3.0	8	8	6	6	
Audio Codec	SupremeFX 2014 SupremeFX Shielding Technology DTS Connect Sonic SoundStage, Sonic SenseAmp, Sonic Studio, Sonic Radar II	ALC1150 (dedicated audio PCB layers, unique de-pop circuit, top notch audio profile)	ALC1150 DTS UltraPC II/DTS Connect Crystal Sound 2 (dedicated audio PCB layers, premium Japanese-made audio cap, unique de-pop circuit, top notch audio profile)	ALC1150 DTS UltraPC II/DTS Connect Crystal Sound 2 (dedicated audio PCB layers, premium Japanese-made audio cap, unique de-pop circuit, top notch audio profile)	LAN	Gigabit Ethernet	Intel® 1219-V	Intel® 1219-V	Intel® 1219-V	Intel® 1219-V
Audio Shielding	Yes	Yes	Yes	Yes	LANGuard	√	√	√	√	
Audio EMI Cover	Yes	N/A	Yes	Yes	Audio	GameFirst Technology	ROG GameFirst Technology	ROG GameFirst Technology	ROG GameFirst Technology	ROG GameFirst Technology
Audio AMP	Yes	Yes	Yes	Yes	Audio Codec	SupremeFX 2015	SupremeFX 2015	SupremeFX 2015	SupremeFX 2015	
COM	N/A	1*header	N/A	1*header	DTS Support	√	√	√	√	
Accessories	1*OC Panel w/kits 1*3T3R Dual band Wi-Fi antennas (Wi-Fi 802.11a/b/g/n/ac compliant) 3*thermistor cables 1*X-socket II 10*SATA 6Gb/s cables ROG 2-Way/3-Way/4-Way SLI bridges ROG 2-Way CrossFireX bridge 1*Q-Connector 1*Q-Shield 1*ROG door Hanger 1*ROG 12-in-1 cable	6*SATA 6G Cables 1*2-Way/3-Way SLI Bridge 1*Q-Connector 1*Q-Shield 1*TUF Package (Dust Defenders, 40mm assistant fan)	1*USB 3.1 Type-A Card (Dual) bundled 1*Exclusive Fan Extension Card (L-Type screws, thermal sensor cable) 1*Hyper M.2 x 4 card 1*M.2 bracket for onboard vertical M.2 connector 1*3T3R Dual Band Wi-Fi antennas (Wi-Fi 802.11a/b/g/n/ac compliant) 8*SATA 6G Cables 1*3-Way/2-Way SLI bridge 1*Q-Connector 1*Q-Shield	4*SATA 6G Cables 1*2-Way SLI bridge 1*Q-Connector 1*Q-Shield	Pro CLOCK	√	√	√	√	
					5-Way Optimization	√	√	√	√	
					5 x Protection II/ Gamer's Guardian	√	√	√	√	
					Fan Expert 3	√	√	√	√	
Water Pump Header (4-pin)	√	√	√	√						
OC Socket	√	√	√	√	Q-Design	Q-Shield, Q-Code, Q-LED, Q-Slot, Q-DIMM, Q-Connector	Q-Shield, Q-Code, Q-LED, Q-Slot, Q-DIMM, Q-Connector	Q-Dimm, Q-Slot, Q-Connector, Q-Shield, Q-LED, Q-Code, CPU Installation Kit	Q-Dimm, Q-Slot, Q-Connector, Q-Shield, Q-LED, Q-Code, CPU Installation Kit	
OC Panel	√	N/A	N/A	N/A						
X-Socket II	√	N/A	N/A	N/A						
GameFirst III	Intel LAN + GameFirst III + LANGuard	N/A	Turbo LAN for faster	Turbo LAN for faster						
FanXpert III	√	N/A	√	N/A	ASUS Exclusive Features	USB BIOS Flashback	√	√	√	√
5-Way Optimization	√	N/A	√	√		EZ Flash 3	√	√	√	√
TUF Features	N/A	TUF Engine! Power Design Ultimate Cool! Thermal Solution	N/A	N/A		USB 3.1 Boost	√	√	√	√
BIOS	USB BIOS Flashback Dual BIOS, UEFI BIOS	USB BIOS Flashback UEFI BIOS	USB BIOS Flashback UEFI BIOS	USB BIOS Flashback UEFI BIOS		EZ XMP	√	√	√	√
					RAM Cache*	√	√	√	√	

Product Image													
		MAXIMUS VIII GENE	MAXIMUS VIII IMPACT	SABERTOOTH Z170 MARK 1	Z170 PRO GAMING	Z170-DELUXE	Z170-K	Z170-P D3	Z170M-PLUS	Z170M-E D3	H170 PRO GAMING	H170 PRO	
CPU		6th-generation Intel® LGA1151 Core™ i5/Core™ i3/Pentium™ / Celeron® processors										6th-generation Intel® LGA1151 Core™ i7/Core™ i5/Core™ i3/Pentium™ / Celeron® processors	
Chipset		Intel® Z170 Express Chipset										Intel® H170 Express Chipset	
Form Factor		mATX	Mini ITX	ATX	ATX	ATX	ATX	ATX	ATX	mATX	mATX	ATX	ATX
Memory	Memory Slot/ Maximum	4 x DIMM, Max. 64Gb DDR4	2 x DIMM, Max. 32Gb DDR4	ATA4 x DIMM, Max. 64Gb DDR4	4 x DIMM, Max. 64Gb DDR4	4 x DIMM, Max. 64Gb DDR4	4 x DIMM, Max. 64Gb DDR4	4 x DIMM, Max. 64Gb DDR3	4 x DIMM, Max. 64Gb DDR4	4 x DIMM, Max. 64Gb DDR3	4 x DIMM, Max. 64Gb DDR4	4 x DIMM, Max. 64Gb DDR4	
	Memory Frequency (MHz)	3733(OC)	4133 (OC)	2400 (OC)	3466 (OC)	3733(OC)	3466 (OC)	DDR3 3100 (OC)	3466 (OC)	DDR3 3100 (OC)	2133 (OC)	2133 (OC)	
Graphics Output		1 x DP , 1 x HDMI	1 x HDMI	1 x HDMI + 1 x DP	DP/HDMI/DVI/VGA	DP/HDMI 2.0	HDMI/DVI/VGA	HDMI/DVI	HDMI/DVI/VGA	HDMI/DVI/VGA	1 x D-Sub + 1 x DVI + 1 x HDMI + 1 x DP	1 x DVI + 1 x HDMI + 1 x RGB	
Multi-GPU Support		2-Way SLI & 3-Way CFX	N/A	2-Way SLI & 3-Way CFX	2-Way SLI & 3-Way CFX	2-Way SLI & 3-Way CFX	2-Way CFX	2-Way CFX	2-Way CFX	2-Way CFX	CrossFire® @x16/x4	Quad-GPU CFX	
Graphics (Expansion) Slot	PCIe 3.0 x 16	2 x PCIe 3.0 x 16 (@ x 16 or x8/x8)	1 x PCIe 3.0/2.0 x 16 (x 16 mode, black)	2 x PCIe 3.0/2.0 x 16 (@ x 16 or Dual at x8/x8)	2 x PCIe 3.0 x 16 (@ x 16 or x8/x8) 1 x PCIe 3.0 x 16 (max.@x4)	2 x PCIe 3.0 x 16 (@ x 16 or x8/x8) 1 x PCIe 3.0 x 16 (max.@x4)	1 x PCIe 3.0 x 16 (@ x 16) 1 x PCIe 3.0 x 16 (max.@x4)	1 x PCIe 3.0 x 16 (@ x 16) 1 x PCIe 3.0 x 16 (max.@x4)	1 x PCIe 3.0 x 16 (@ x 16) 1 x PCIe 3.0 x 16 (max.@x4)	1 x PCIe 3.0 x 16 (@ x 16) 1 x PCIe 3.0 x 16 (max.@x4)	1 x PCIe 3.0/2.0 x 16 (@x16 mode) 1 x PCIe 3.0 x 16 (@x4 mode)	1 x PCIe 3.0/2.0 x 16 (@x16 mode) 1 x PCIe 3.0/2.0 x 16 (max at x4 mode)	
	PCIe 3.0 x 4	1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
	PCIe x 1	N/A	N/A	3	3	4	2	2	2	1	4	2	
	PCI	N/A	N/A	N/A	N/A	N/A	2	2	0	1	N/A	2	
Storage & Connectivity	SATA 6Gb/s	6	4	8	6	8	6	4	6	4	4	6	
	SATA Express	2	N/A	2	1	1	1	N/A	1	N/A	1	1	
	M.2	1 x PCIe 3.0 x 4 up to 22110 (PCIe & SATA mode)	N/A	1 x PCIe 3.0 x 4 up to 22110 (PCIe & SATA mode)	1 x PCIe 3.0 x 4 up to 22110 (PCIe & SATA mode)	1 x M.2 (PCIe 3.0 x 4 & SATA mode) 1 x Hyper M.2 x 4 Mini Card (PCIe 3.0 x 4 mode)	1 x PCIe 3.0 x 4 up to 2280 (PCIe & SATA mode)	1 x PCIe 3.0 x 4 up to 2280 (PCIe & SATA mode)	1 x PCIe 3.0 x 4 up to 2280 (PCIe & SATA mode)	1 x PCIe 3.0 x 4 up to 2280 (PCIe & SATA mode)	1 x PCIe 3.0 x 4 up to 22110 (PCIe & SATA mode)	1 x PCIe 3.0 x 4 up to 22110 (PCIe & SATA mode)	
	U.2 (Hyper Kit Support)	√	1	N/A	√	Hyper Kit Bundled	√	√	√	√	N/A	N/A	
	USB 3.1 (Type A/C)	1 x Type-A 1 x Type-C	2	1 x Type-A 1 x Type-C	1 x Type-A 1 x Type-C	5 x Type-A 1 x Type-C	2 x Type-A	N/A	N/A	N/A	1 x Type-A 1 x Type-C	1 x Type-C	
	USB 3.0	8	6	6	6	5	5 (1 x Type-C)	8	7 (1 x Type-C)	8	6	6	
LAN	Gigabit Ethernet	Intel® 1219-V	Intel® 1219-V	Intel® 1219-V Realtek® 8111H	Intel® 1219-V	Intel® 1219-V+ Intel 1211AT 1 x 3T3R Dualband WiFi	Realtek® 8111H	Realtek® 8111GR	Intel® 1219-V	Realtek® 8111H	Intel® 1219-V	Realtek® RTL8111H	
	LANGuard	√	√	√	√	√	√	√	√	√	√	√	
Audio	GameFirst Technology	ROG GameFirst Technology	SupremeFX Shielding Technology	Turbo LAN Utility	Turbo LAN Utility	Turbo LAN Utility Realtek® Acc1150	N/A	N/A	N/A	N/A	√	N/A	
	Audio Codec DTS Support	SupremeFX 2015	ROG SupremeFX Impact III 5.1 Channel	ASUS Turbo LAN Utility	SupremeFX	Realtek® ALC1150	Realtek® ALC887	Realtek® ALC887	Realtek® ALC887	Realtek® ALC887	SupremeFX 2015	Realtek® ALC887	
Pro CLOCK		√	√	N/A	√	√	N/A	N/A	N/A	N/A	N/A	N/A	
5-Way Optimization		√	√	N/A	√	√	N/A	N/A	N/A	N/A	√	N/A	
5 x Protection II/ Gamer's Guardian		√	√	"Safe & Stable!" Guardian Angel	√	√	√	√	√	√	√	√	
Fan Expert 3		√	√	TUF Thermal Armor Flow Valve TUF Radar 2 TUF Ice	√	√	√	Fan Xpert 2+	√	Fan Xpert 2+	√	√	
Water Pump Header (4-pin)		√	√	√	N/A	√	N/A	N/A	N/A	N/A	N/A	N/A	
Q-Design		Q-Dimm, Q-Slot, Q-Connector, Q-Shield, Q-LED, Q-Code, CPU Installation Kit	Q-Shield, Q-Code, Q-LED, Q-Slot, Q-DIMM	Q-Dimm, Q-Slot, Q-Shield, Q-LED	Q-Dimm, Q-Slot, Q-Shield, Q-LED, CPU Installation Kit	Q-Dimm, Q-Slot, Q-Connector, Q-Shield, Q-LED, Q-Code, CPU Installation Kit	Q-Slot, Q-Dimm	Q-Slot	Q-Slot Q-Dimm	Q-Slot Q-Dimm	Q-Dimm, Q-Slot Q-Shield, Q-LED	Q-Slot, Q-DIMM	
ASUS Exclusive Features	USB BIOS Flashback	√	√	√	N/A	√	N/A	N/A	N/A	N/A	√	N/A	
	EZ Flash 3	√	√	√	√	√	√	√	√	√	√	√	
	USB 3.1 Boost	√	√	√	√	√	√	USB 3.0 Boost	USB 3.0 Boost	USB 3.0 Boost	√	USB 3.0 Boost	
	EZ XMP	√	√	√	√	√	√	√	√	√	√	√	
	RAM Cache*	√	√	√	√	√	N/A	N/A	N/A	N/A	√	N/A	

Product Image							Product Image						
		H170-PLUS D3	H110M-D	H110M-D D3	B150 PRO GAMING D3	B150M-A	Brand	ASUS	ASUS	ASUS GAMER	ASUS	ASUS	
CPU		Intel® Socket 1151 for 6th Generation Core™ i7/Core™ i5/Core™ i3/Pentium®/Celeron® Processors						Model	B85 PRO GAMER (SUPREMEFX AUDIO)	B85M-G	H81 GAMER	H81M-D	H81M-K
Chipset		Intel® H170 Express Chipset	Intel® H110 Express Chipset	Intel® H110 Express Chipset	Intel® B150 Express Chipset	Intel® B150 Express Chipset	Chipset	Intel® B85 Express Chipset	Intel® B85 Express Chipset	Intel® H81 Express Chipset	Intel® H81 Express Chipset	Intel® H81 Express Chipset	
Form Factor		ATX	8.9 inch x 7.3 inch	uATX	ATX	mATX	Power Phase	Digi + VRM	Digital 3 phase	Digi + VRM	3 phase	Digital 3 phase	
Memory	Memory Slot/ Maximum	4 x DIMM, Max. 64Gb DDR4	2 x DIMM, Max. 32Gb, DDR4	2 x DIMM, Max. 32Gb DDR4	4 x DIMM, Max. 64Gb DDR4	4 x DIMM, Max. 64Gb DDR4	DRAM	DDR3 1600, 4DIMM	DDR3 1600, 4DIMM	DDR3 1600, 4DIMM	DDR3 1600, 2DIMM	DDR3 1600, 2DIMM	
	Memory Frequency (MHz)	1866 (OC)	2133	1866(OC)	1866(OC)	2133(OC)	VGA	HDMI/DVI/VGA	HDMI/DVI/VGA	DVI/D-Sub	HDMI/DVI/D-Sub	HDMI/DVI/D-Sub	
Graphics Output		1 x D-Sub + 1 x DVI + 1 x HDMI	1 x D-Sub, 1 x HDMI, 1 x COM	1 x D-Sub, 1 x HDMI, 1 x COM	1 x D-Dub + 1 x DVI + 1 x HDMI	1 x RGB + 1 x DVI + 1 x HDMI	SLI/CrossFire	CFX	N/A	N/A	N/A	N/A	
Multi-GPU Support		CrossFire @x16/x4	N/A	N/A	CrossFire @x16/x4	N/A	Graphics	1 x PCIe 3.0/2.0 x 16 1 x PCIe 2.0 x 16 (@x4)	1 x PCIe 3.0/2.0 x 16	1 x PCIe x 16 Slot	1 x PCIe x 16 Slot	1 x PCIe x 16 Slot	
Graphics (Expansion) Slot	PCIe 3.0 x 16	1 x PCIe 3.0/2.0 x 16 1 x PCIe 3.0/2.0 x 16 (@x4 mode)	1 x PCIe 3.0/2.0 x 1 (x16 mode)	1 x PCIe 3.0/2.0 x 1 (x16 mode)	1 x PCIe 3.0/2.0 x 16 + 1 x PCIe 3.0/2.0 x 16 (max.@x4)	1 x PCIe 3.0/2.0 x 16 (x16 mode)	PCIe x 1	2	2	3	2	3	
	PCIe 3.0 x 4	N/A	N/A	N/A	N/A	N/A	PCI	3	N/A	3	0	0	
	PCIe x 1	2 x PCIe 2.0 x 1	2 x PCIe 2.0 x 1	2 x PCIe 2.0 x 1	2 x PCIe 2.0 x 1	2 x PCIe 2.0 x 1	Storage	4 x SATA 6Gb/s 2 x SATA 3Gb/s					
	PCI	N/A	N/A	N/A	2	N/A		LAN	Intel® Gb LAN	Realtek® Gb LAN	Intel® Gb LAN	1 x Intel® 1218V Gb LAN	1 x Realtek Gb LAN
Storage & Connectivity	SATA 6Gb/s	4	4	4	6	6	USB	4 x USB 3.0 8 x USB 2.0					
	SATA Express	N/A	N/A	N/A	N/A	N/A		Audio	SupremeFX HD 8-ch audio				
	M.2	1 x PCIe 3.0 x 4 up to 22110 (PCIe & SATA mode)	N/A	N/A	1 x PCIe 3.0 x 4 up to 22110 (PCIe & SATA mode)	N/A	COM		1 x Header				
	U.2 (Hyper Kit Support)	N/A	N/A	N/A	N/A	N/A	LPT		N/A				
	USB 3.1 (Type A/C)	N/A	N/A	N/A	1 x Type-A 1 x Type-C	1 x Type-C	Accessories	2 x SATA 6G Cables					
USB 3.0	8	4	4	6	4	Solid Capacitor	ELNA premium audio capacitors 10K JP-made Black Metallic Caps						
LAN	Gigabit Ethernet	Realtek® 8111H Gigabit LAN	Realtek® RTL8111H	Realtek® RTL8111H	Intel® Gigabit LAN	Realtek® RTL8111H	SupremeFX	v					
	LANGuard	v	v	v	v	v	Gamer's Guardian	v					
Audio	GameFirst Technology	N/A	N/A	N/A	v	N/A	GameFirst II	v					
	Audio Codec	Realtek® ALC887-VD2 8-Channel	Realtek® ALC887-VD2 8-Channel	Realtek® ALC887-VD2 8-Channel	SupremeFX	Realtek® ALC887	UEFI BIOS	v					
	DTS Support	N/A	N/A	N/A	N/A	N/A	FAN Xpert	v					
Pro CLOCK		N/A	N/A	N/A	N/A	N/A	GPU Boost	v					
5-Way Optimization		N/A	N/A	N/A	v	N/A	Form Factor	ATX (305 x 228)					
5 x Protection II/ Gamer's Guardian		v	v	v	v	v	mATX (234 x 193)						
Fan Expert 3		Fan Xpert 2+	Fan Xpert	Fan Xpert	v	N/A	ATX (305 x 214)						
Water Pump Header (4-pin)		N/A	N/A	N/A	N/A	N/A	mATX (226 x 174)						
Q-Design		Q-Slot	Q-Slot, Q-Dimm	Q-Slot, Q-Dimm	Q-Shield, Q-Dimm, Q-LED, Q-Slot	Q-Slot	mATX (244 x 183)						
ASUS Exclusive Features	USB BIOS Flashback	v	UEFI BIOS	UEFI BIOS	v	N/A							
	EZ Flash 3	v	v	v	v	v							
	USB 3.1 Boost	USB3.0 Boost	USB 3.0 Boost	USB 3.0 Boost	USB 3.0 Boost	USB 3.0 Boost							
	EZ XMP	v	v	v	v	v							
	RAM Cache*	N/A	N/A	N/A	v	N/A							

Product Image											
Brand	ASUS	ASUS	ASUS	ASUS	ASUS	ASUS	ASUS	ASUS	ASUS	ASUS	ASUS
Model	SABERTOOTH 990FX R2.0	M5A99X EVO R2.0	M5A97 R2.0	M5A78L-M LX V2	CROSSHAIR V FORMULA-Z	CROSSBLADE RANGER	A88X-GAMER	A88X-PLUS	A88XM-A	A68HM-E	AM1M-A
Chipset	990FX/SB950	990FX/SB950	970/SB950	AMD® 760G + SB710	990FX/SB950	A88X	A88X	A88X	A88X	A68H	AM1 Socket for AMD Sempron & Athlon-Series APUs
Power Phase	Digital 8 + 2 phase	Digital 6 + 2 phase	Digital 4 + 2 phase	3 + 1 3(2+2) + 1(1+2)mos	Digital 8 + 2 phase	Extreme Engine Digi + III	Digital 4 + 2 phase	Digital 4 + 2 phase	Digital, 3 + 2 phase	Digital, 3 + 2 phase	N/A
Memory	4 DIMM, DDR3 1866 DDR3 2400 + QVL'd	4 DIMM, DDR3 1600, DDR3 2400 + O.C. QVL'd	4 DIMM, DDR3 2133(O.C.), DDR3 2400 + O.C. QVL'd	2 x 4 DIMM, Max, 16GB, DDR3 1866(O.C.)	4 DIMM, DDR3 2400(O.C.), DDR3 2400 + O.C. QVL'd	4 DIMM, DDR3 2666(O.C.)	4 DIMM, DDR3 2400(O.C.)	4 DIMM, DDR3 2400(O.C.)	4 DIMM, DDR3 2400(O.C.)	2 DIMM, DDR3 2400(O.C.)	DDR3 1600(O.C.), 2 DIMM
Graphics	3 x PCIe 2.0 x 16 (2@x16 or 3@x16/x8/x8) 1 x PCIe 2.0 x 16 (@x4)	2 x PCIe 2.0 x 16 (2@x8) 1 x PCIe 2.0 x 16 (@x4)	1 x PCIe 2.0 x 16 1 x PCIe 2.0 x 16 (@x4)	1 x PCIe 2.0 x 16	3 x PCIe 2.0 x 16 (2@x16 or 3@x16/x8/x8) 1 x PCIe 2.0 x 16 (@x4)	2 x PCIe 3.0/2.0 x 16 (@x16 or @x8) 1 x PCIe 2.0 x 16 (@x4)	1 x PCIe 3.0/2.0 x 16 (@x16) 1 x PCIe 2.0 x 16 (@x4)	1 x PCIe 3.0/2.0 x 16 (@x16) 1 x PCIe 2.0 x 16 (@x4)	1 x PCIe 3.0/2.0 x 16	1 x PCIe 3.0/2.0 x 16	1 (@x4)
VGA	N/A	N/A	N/A	N/A	N/A	HDMI / DVI / D-Sub	HDMI / DVI / D-Sub	HDMI / DVI / D-Sub	HDMI / DVI / D-Sub	DVI / D-Sub	HDMI / DVI / VGA
SLI/CrossFire	SLI / CrossFireX	SLI / CrossFireX	CrossFireX	Hybrid CrossFireX	SLI / CrossFireX	CrossFireX	CrossFireX	CrossFireX	N/A	N/A	N/A
PCIe x 1	1	2	2	2	2	2	2	2	1	1	2
PCI	1	1	2	1	N/A	2	3	3	1	1	N/A
Storage	8 x SATA 6Gb/s 2 x eSATA 6Gb/s	6 x SATA 6Gb/s 2 x eSATA 6Gb/s	6 x SATA 6Gb/s	6 x SATA 3Gb/s	8 x SATA 6Gb/s 2 x eSATA 6Gb/s	8 x SATA 6Gb/s	8 x SATA 6Gb/s	8 x SATA 6Gb/s	6 x SATA 6Gb/s	4 x SATA 6Gb/s	2 x SATA 6Gb/s
LAN	1 x Realtek® 8111F Gb LAN	1 x Realtek® 8111F Gb LAN	1 x Realtek 8111F® Gb LAN	1 x Realtek 8111E® Gb LAN	1 x Intel® LAN	1 x Intel® Gb LAN	1 x Intel® Gb LAN	RTL8111G Gb LAN	RTL8111G Gb LAN	RTL8111GR Gb LAN	RTL 8111GR Gb LAN
USB	6 x USB 3.0 12 x USB 2.0	4 x USB 3.0 14 x USB 2.0	4 x USB 3.0 12 x USB 2.0	10 x USB 2.0	6 x USB 3.0 12 x USB 2.0	6 x USB 3.0 (4@back, 2@mid) 8 x USB 2.0 (2@back, 6@mid)	4 x USB 3.0 (2@back, 2@mid) 10 x USB 2.0 (2@back, 6@mid)	4 x USB 3.0 (2@back, 2@mid) 10 x USB 2.0 (2@back, 8@mid)	4 x USB 3.0 (2@back, 2@mid) 6 x USB 2.0 (2@back, 4@mid)	2 x USB 3.0 (2@back) 6 x USB 2.0 (2@back, 4@mid)	4 x USB 3.0 (2@back, 2@mid) 8 x USB 2.0 (4@back, 4@mid)
Audio	ALC892	ALC 892	ALC887	ALC887	SupremeFXIII	N/A	SupremeFX ALC1150 8ch, 6jack	ALC887 8ch, 5 jack+S/PDIF	ALC887 8ch, 3 jack	ALC887 8ch, 3 jack	Realtek ALC887 8ch, 3 jack
COM (Header/Port)	1	1	1	1	N/A	N/A	1 x header	1 x header	1 x header	1 x header	1 x header
LPT (Header/Port)	N/A	N/A	N/A	v	N/A	N/A	N/A	N/A	N/A	N/A	1 x header
All Solid Capacitors	v	v	v	N/A	v	10K Black Metallic Capacitors ELNA audio capacitors	Japanese-made Nichicon-GT Series Solid state Caps & ELNA audio capacitors	v	v	v	v
BIOS	USB BIOS Flashback UEFI BIOS	USB BIOS Flashback UEFI BIOS	USB BIOS Flashback UEFI BIOS	EZ-Flash 2	UEFI BIOS	NEW UEFI BIOS	NEW UEFI BIOS	NEW UEFI BIOS	NEW UEFI BIOS	NEW UEFI BIOS	1 x header
Form Factor	ATX (30.5 x 24.4)	ATX (30.5 x 24.4)	ATX (30.5 x 22.9)	µATX	ATX (30.5 x 24.4)	ATX (30.5 x 24.4)	ATX (30.5 x 22.9)	ATX (30.5 x 22.6)	mATX (23.6 x 20.8)	mATX (22.6 x 18)	mATX (22.6 x 17)
Unique Features	CeraMIX TUF Thermal Radar New DIGI+ Power Control UEFI BIOS TUF Components [TUF 10K Ti-Caps, TUF New Alloy Choke & MOSFET; Certified by Military standard] E.S.P MsmOK! ESD Guards USB BIOS Flashback AI Suite II USB 3.0 Boost Remote GO! DirectKey Network iControl	D.I.P.3 New DIGI+ Power Control Remote GO! USB 3.0 Boost USB BIOS Flashback DirectKey Network iControl UEFI BIOS DTS Connect DTS UltraPC II	D.I.P. Remote GO! USB 3.0 Boost USB BIOS Flashback DirectKey Network iControl UEFI BIOS	ASUS Power Design: ASUS EPU-4 Engine Turbo Key Core Unlocker ASUS Exclusive Features: Ai Charger Anti-Surge ASUS Quiet Thermal Solution ASUS Q-Fan ASUS EZ DIY: ASUS EZ Flash 2 ASUS MyLogo 2	RC Diagram RC Remote RC Poster GPU Tweakit New DIGI+ Power Control ROG BIOS Print GPU, DIMM Post UEFI BIOS AI Suite II USB 3.0 Boost DirectKey	Best Networking: Intel Ethernet + GameFirst III + LANGuard Best Audio: SupremeFX 2014 + Sonic Radar II Sonic Studio Sonic SenseAmp Sonic SoundStage Best Interface: KeyBot Best Performance: Auto-tuning ROG Gives You More: RAMDisk Secure Erase Compatible with Front Base ROG Mouse Mat Inside	Gamer's Guardian SupremeFX 8-Channel High Definition Audio CODEC AI Suite 3 GPU Boost EPU New UEFI BIOS USB 3.0 Boost Fan Xpert2	5X Protection AI Suite 3 GPU Boost EPU The New UEFI BIOS USB 3.0 Boost MemOK! Network iControl	5X protection AI Suite 3 Fan Xpert EPU The New UEFI BIOS USB 3.0 Boost MemOK! Network iControl	5X protection Audio Solution AI Suite 3 FAN Xpert EPU The New UEFI BIOS USB 3.0 Boost AI Charger Disk Unlocker	N/A