X370GT5 Motherboard



- Support AMD Ryzen CPU / APU
- AMD X370 single chip architecture
- Support 4-DIMM DDR4-3200(OC)/ 2933(OC)/ 2667/ 2400 up to 64G maximum capacity
- BIOSTAR Double Hi-Fi Technology inside
- Realtek Dragon LAN
- Support USB 3.1 Gen2 Type C
- Support M.2(32Gb/s)
- Support HDMI 4K resolution

Specifcation

<table>
<tr><td>CPU SUPPORT</td><td>Supports AMD AM4 Socket for 3rd, 2nd and 1st Gen Ryzen/2nd and 1st Gen Ryzen with Radeon Vega
Graphics/Athlon with Radeon Vega Graphics/7th Gen A-Series/Athlon X4 Processors</td></tr>
<tr><td>MEMORY</td><td>Support Dual Channel DDR4 3200(OC)/ 2933(OC)/ 2667/ 2400/ 2133/ 1866 MHz
Support Non-ECC & ECC Un-buffered DIMM Memory modules
4 x DDR4 DIMM Memory Slot
Max. Supports up to 64GB Memory
* DDR4 2667 for AMD Ryzen CPU
Ryzen - DDR Maximum Frequency Support Table(For better DDR4 compatibility, it is recommended to follow the table below to install DDR4 modules. Please refer to memory support list for more details.)
<table>
<tr><td>Maximum</td><td>DIMMA1</td><td>DIMMA2</td><td>DIMMB1</td><td>DIMMB2</td></tr>
<tr><td>DDR4-2667</td><td>-</td><td>SR</td><td>-</td><td>-</td></tr>
<tr><td>DDR4-2667</td><td>-</td><td>DR</td><td>-</td><td>-</td></tr>
<tr><td>DDR4-2667</td><td>-</td><td>SR</td><td>-</td><td>SR</td></tr>
<tr><td>DDR4-2400</td><td>-</td><td>DR</td><td>-</td><td>DR</td></tr>
<tr><td>DDR4-2133</td><td>SR</td><td>SR</td><td>SR</td><td>SR</td></tr>
<tr><td>DDR4-1866</td><td>DR</td><td>DR</td><td>DR</td><td>DR</td></tr>
</table>
SR:Single-rank DIMM, 1R x4 or 1R x8
DR:Dual-rank DIMMs, 2R x4 or 2R x8</td></tr>
<tr><td>INTEGRATED VIDEO</td><td>By CPU model
Supports DX12
Supports HDCP</td></tr>
<tr><td>STORAGE</td><td>6 x SATA III Connector
Support SATA RAID: 0,1,10
1 x M.2 (M Key) 32Gb/s Connector, support M.2 type 2242/ 2260/ 2280 SATA 6Gb/s & PCI-E Storage
* M.2 (32Gb/s) : The bandwidth is depended on CPU, Ryzen is 32Gb/s ; APU & NPU is 16Gb/s.</td></tr>
</table>

LAN	Realtek RTL8118AS - 10/100/1000Mb/s Controller Support Super LAN Surge Protection
AUDIO CODEC	Realtek ALC892 8-Channel Blu-ray Audio Support Biostar Hi-Fi
USB	1 x USB 3.1 Gen2 Type-C Port 1 x USB 3.1 Gen2 Type-A Port 4 x USB 3.1 Gen1 Port 2 x USB 3.1 Gen1 Header 2 x USB 2.0 Header
EXPANSION SLOT	1 x PCI-E 3.0 x16 Slot(x16 for Ryzen CPU only, NPU/APU run at x8 speed) 1 x PCI-E 2.0 x16 Slot(x4)(share bandwidth w/ PCI-E x1 slot, when PCI-E x1 is occupied, PCI-E x16(x4) will run at x1 speed) 2 x PCI-E 2.0 x1 Slot 2 x PCI Slot
REAR I/O	1 x PS/2 1 x USB 3.1 Gen2 Type-C Port 1 x USB 3.1 Gen2 Type-A Port 4 x USB 3.1 Gen1 Port 1 x HDMI Connector, resolution up to 4096 x 2160 @24Hz or 3840 x 2160 @30Hz 1 x DVI-D Connector, resolution up to 1920 x 1200 @60Hz 1 x LAN Port 6 x Audio Jacks
INTERNAL I/O	2 x USB 3.1 Gen1 Header 2 x USB 2.0 Header 6 x SATA III Connector (6Gb/s) 1 x M.2 Key M 32Gb/s Connector, support M.2 type 2242/ 2260/ 2280 SATA 6Gb/s & PCI-E Storage 1 x Front Audio Header 1 x Front Panel Header 1 x S/PDIF-Out Header 2 x CPU Fan Connector 2 x System Fan Connector 2 x 5050 LED Header 1 x COM Port Header
H/W MONITORING	CPU / System Temperature Monitoring CPU / System Fan Monitoring Smart / Manual CPU / System Fan Control System Voltage Monitoring
DIMENSION	ATX Form Factor Dimension: 30.5cm x 24.4cm (W x L)
OS SUPPORT	Supports Windows 10(x64) / 11(x64) Support Windows 7 (x64) for Bristol / Summit /Pinnacle Ridge only ※Biostar reserves the right to add or remove support for any OS with or without notice.
BUNDLE SOFTWARE	Racing GT Utility FLY.NET BullGuard
ACCESSORIES	4 x SATA Cable 1 x I/O Shield 1 x DVD Driver 1 x User Manual

FEATURES	VIVID LED DJ 5050 LED FUN ZONE Supports Double Hi-Fi GT TOUCH Dual BIOS Supports 100% Solid capacitor BIO-FLASHER Supports BIOS Online Update

OVERVIEW



AMD X370 chipset

AMD X370 is the high-end chipset for overclockers and tweakers who need robust platforms. This chip provides the ultimate low-level control to its users and delivers ultimate graphics card bandwidth.



AMD AM4 Ryzen CPU support

AMD's new AM4 platform will accompany Ryzen. It brings all of the new tech that you'd expect, including DDR4 RAM, PCI-E Gen 3, USB 3.1 Gen 2, NVMe and SATA Express.



Hi-Fi

A combination of exclusive hardware & software design including "ground-isolation circuit design","an independent audio power", and "a built=on-board amplifier", with all these hardware features gives you the best audio quality and performance. As for software, we offer you a free bundle utility "Multi-Channel Calibration" which normally you'll find in high level sound systems; this feature allows you to auto detect your location; with a user friendly interface, you can easily adjust the volume of every speakers to make a well balanced surround sound. And of course, the built-on-board amplifier always gives you a super powerful sound comparing to other motherboards.



Blu-ray Audio

Upgrading your Audio performance in the easiest way is choosing BIOSTAR ultimate Motherboard. It does support Blu-ray audio DRM (compatible driver/software) and provide the higher audio output of 24 bit/ 192KHz than the 16 bit/ 48KHz from the normal MB. You will experience the high quality sound effect with pure Blu-Ray Audio.



Hi-Fi Power

Audio power is an important factor in audio quality. Most AV equipment isolates the power supply for each analog and digital signal to gather high-quality sound reproduction. Equipped with BIOSTAR Hi-Fi Power technology, it will utilize audio components with independent power design for a significant reduction in electronic noise and superb sound quality.



Hi-Fi Ground

BIOSTAR Hi-Fi Ground (Golden Line) is noise-blocking multi-layer PCB design to isolates analog audio signals from digital sources. Unique PCB layout is ideal for exceptional clarity and high fidelity sound.



Hi-Fi Sound

BIOSTAR Hi-Fi series motherboards have a sampling rate of 192kHz/24-bit which delivers a high quality audio through an analog connection to your home theater system, multi-channel speakers and high-end headphone. You can enjoy real Blu-ray grade high-definition sound that you've never experienced before.

	## Hi-Fi AMP The built-in amplifier can drive major high-end headphones with over 100dB loads and offer wide band-width, low noise, high slew rate and low distortion audio source from front panel I/O. Gaming enthusiasts can enjoy a fuller range of dynamic sound with crisper details and less distortion.
	## Smart Ear Smart EAR is a windows-based audio utility which allows you to easily adjust system volume. With its user-friendly GUI, you can also increase or decrease impedance setting (Low/High Gain) to optimize your headphone performance. You can easily enjoy high-quality and awesome sound.
	## Hi-Fi Resistor Metal-oxide film resistors are made of metal oxides such as tin oxide. The electric characteristics are greater stability and reliability than regular metal film resistors when operating in an extremely broad working temperature range. This special component is used in applications with high endurance audio demands.
	## Hi-Fi Cap BIOSTAR Hi-Fi series motherboards come with high quality 'Non-Polarized Electrolysis Electric audio capacitors' for each audio channel circuit. The customized audio capacitors deliver low noise, low distortion, and wide bandwidth to achieve the highest sound resolution and sound expansion. The critical component will ensure the most realistic sound effects to gaming enthusiasts.
	## HDMI 4K2K The new 4K2K resolution enables high-definition image display with four times the resolution of full HD, 4K2K display is faithfully express bright, highly detailed content that fills the entire screen with lifelike images. Connectivity with PCs via a single HDMI cable for displaying 4K2K data.
	## DVI DVI is better than VGA for LCD displays since it is digital while VGA is analog. For LCD displays, the picture is digitized pixel per pixel. Through DVI, the panel gets data for each pixel, so the picture generated in the Graphics device matches the pixels on the panel itself.
	## DX12 DirectX 12 introduces the next version of Direct3D, the graphics API at the heart of DirectX. Direct3D is one of the most critical pieces of a game or game engine, and we've redesigned it to be faster and more efficient than ever before. Direct3D 12 enables richer scenes, more objects, and full utilization of modern GPU hardware.
	## FLY.NET This exclusive utility will automatically detect the bandwidth of other software and increase the internet speed for online games.
	## USB 3.1 Type-C USB 3.1 doubles the data transfer rate from 5Gbps to 10Gbps compared with USB3.0, and also is backward compatible with all existing USB3.0 & USB2.0 devices. The Type-C connector is fully reversible which makes it convenient, and it also can save your charging time on portable devices up to 50% compared with Type-A connector.



USB 3.0

Experience Fastest data transfers at 5 Gbps with USB 3.0--the new latest connectivity standard. Built to connect easily with next-generation components and peripherals, USB 3.0 transfers data 10X faster and backward compatible with previous USB 2.0 components.



USB 3.1

USB 3.1 is a new standard known as SuperSpeed +, in order to highlight the improvement from USB3.0 (SuperSpeed) transmission speed. The new standard doubles data transfer rate from 5Gbps to 10Gbps. It is also backward compatible with existing USB3.0 connectors and all the USB 2.0 devices.



PCIe M.2 32Gb/s

PCI-e M.2 32Gb/s delivers the highest bandwidth and lower latency. It is 3 times faster compared with PCI-e M.2 10Gb/s.



PCIe 3.0

PCIe 3.0 is the ubiquitous and general-purpose PCI Express I/O standard. At 8GT/s bit rate, the interconnect performance bandwidth is doubled over PCIe 2.0, while preserving compatibility with software and mechanical interfaces.



Dual DDR4

The primary advantages of DDR4 over DDR3, include higher module density, lower voltage requirements, coupled with higher data transfer rate.



Super Durable Ferrite Choke

Super Durable Ferrite Choke brings the benefits of higher current capacity, lower energy loss and better power stability.



Super Durable Solid Caps

The best quality solid state capacitors with ultra low ESR design, the Super Durable Solid Caps doubles the lifespan.



Moistureproof of PCB

The popularity of PC usage and working environment is getting deteriorating and moist (rural, coastal, etc.). The PCB will be oxidizing easily by damp or absorbed moisture, and ionic migration or CAF (Conductive Anodic Filament) will be generated. Moisture-proof PCB meets high density and high reliability requirements for moisture proof.



Low RdsOn P-Pak MOS

Low resistance design can significantly reduce the current out of energy loss. Low temperature, small size, excellent thermal conductivity.



100% Solid Caps

With armor-plated Biostar Technology, all capacitors are placed with 100% solid capacitors that have a lasting life cycle, durability and stability for crucial components.



Dual BIOS

Dual BIOS technology offers a backup BIOS chip to take over the failed main BIOS and recover the system automatically without factory repair.

Super Anti-Surge Protection

BIOSTAR exclusive Anti-Surge design provides the best protection of board and extends the product life. Having the latest model of "Transient Voltage Suppressor" on- board can effectively protect the board circuit, reducing the shocks caused by ESD as well as other damages arising from overvoltage transients to enhance system durability.

Super LAN Surge Protection

Super LAN Surge Protection, providing LAN port with more advanced antistatic protection capabilities by adding an integrated chip to strengthen electrical stability and prevent damage from lightning strikes and electrical surges. SLSP (Super LAN Surge Protection) series motherboard upgrades the existing system protection standards with maximum 4X protection comparing to other board makers.

ESD Protection

ESD (Electrostatic Discharge) is the major factor to destroy the PC by electrical overstress (EOS) condition. ESD occurred by PC users when touch any devices connect to a PC, which may result in damage to the motherboard or parts. ESD protection is designed to protect the motherboard and equipment from damage by EOS.

USB Polyswitch

On board dedicated power fuse to help prevent USB port failure. It prevents USB Port overcurrent and safe guard your system and device lifespan.



BIOS Virus Protection

When enabled, the BIOS will protect the boot sector and partition table by halting the system and flashing a warning message whether there's an attempt to write to these areas.

OC / OV / OH Protection

OC / OV / OH Protection design detects overvoltage conditions and prevents voltage surges from spreading in real time. It also actively cuts off the overvoltage supply to protect your system.

VIVID LED DJ

Racing Series exclusively features on-board LED design. Via the creative Vivid LED DJ application, you can control and modify the colours of LED on MOS heatsink and on the edge of board. When you play music, it can perform LED light show, following melody. Moreover, Vivid LED DJ features options for designing LED visual effect, including Normal, Eco, and Sports mode on your own. Racing Series with Vivid LED DJ make your PC a coolest gaming base ever.

5050 LED Fun ZONE

The brand-new 5050 LED FUN ZONE comes with two 5050 LED headers to bring more colorful lighting options to DIY lovers. They can fully enjoy the DIY fun of modding their PCs with uniquely personal style and LED strip or any kind of LED product to adjust the color of LED and change system color scheme by VIVID LED DJ application. Vivid LED DJ fun, Vivid LED lighting style!

	**GT TOUCH** GT Touch features exclusive Sport and ECO Mode. Under Sport mode, the system boosts the performance automatically. Under ECO mode, the system optimizes energy consumption. Besides, users could define onboard LED configuration for ECO and Sport Mode respectively via Vivid LED DJ.
	**UEFI BIOS** Unified Extensible Firmware Interface (UEFI) is a brand new framework that provides a revolutionary interface. It is a modern clear and easy-to-use graphical user interface. The UEFI comes with a colorful easy-understand icons leads users into the setup layer directly.
	**Header Zone** Users can easily assemble their own computer, a simple-swap data discs and other accessories.
	**HDMI** The terms HDMI and HDMI High-Definition Multimedia Interface, and the HDMI Logo are trademarks or registered trademarks of HDMI Licensing Administrator, Inc. in the United States and other countries.

*The specification and pictures are subject to change without notice and the package contents may differ by area or your motherboard version!