X370GT7 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
- Lightning Charger Technology
- Digital Power+ Technology
- Realtek Dragon LAN
- Support USB 3.1 Gen2 Type C
- Support M.2(32Gb/s)
- Support HDMI® 4K@60Hz(HDMI® 2.0) resolution

Specifcation

CPU SUPPORT	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
MEMORY	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.)

Maximum	DIMMA1	DIMMA2	DIMMB1	DIMMB2
DDR4-2667	-	SR	-	-
DDR4-2667	-	DR	-	-
DDR4-2667	-	SR	-	SR
DDR4-2400	-	DR	-	DR
DDR4-2133	SR	SR	SR	SR
DDR4-1866	DR	DR	DR	DR

SR:Single-rank DIMM, 1R x4 or 1R x8
DR:Dual-rank DIMMs, 2R x4 or 2R x8

INTEGRATED VIDEO	By CPU model Supports DX12 Supports HDCP
STORAGE	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.

BIOSTAR
BIOSTAR International Corp.
ESG

LAN	Realtek RTL8118AS - 10/100/1000Mb/s Controller Support Super LAN Surge Protection
AUDIO CODEC	Realtek ALC1220 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	2 x PCI-E 3.0 x16 Slot(x16 + NA or x8 + x8 for Ryzen CPU, x8 + NA for APU / NPU) 1 x PCI-E 2.0 x16 Slot(x4) 3 x PCI-E 2.0 x1 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 DisplayPort Connector, resolution up to 4096 x 2160 @60Hz 1 x HDMI® Connector, resolution up to 4096 x 2160 @60Hz 1 x DVI-D Connector, resolution up to 1920 x 1200 @60Hz 1 x LAN Port 5 x Audio Jacks 1 x S/PDIF Out Port
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 2 x CPU Fan Connector 3 x System Fan Connector 1 x LN2 Switch 2 x 5050 LED 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

BIOSTAR
BIOSTAR Microtech International Corp.
ESG

FEATURES	VIVID LED DJ VIVID LED ARMOR 5050 LED FUN ZONE Digital Power+ Lightning Charger M.2 Cooling Protection Supports Double Hi-Fi GT TOUCH Dual BIOS Supports 100% Solid capacitor Rapid Debug3 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.

BIOSTAR
BIOSTAR Technologies International Corp

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® 2.0

HDMI® 2.0 supports true 4K resolution- 4096*2160@60hz. A significant increase in bandwidth is up to 18mbps, and significant enhancements are added to support the continued increase consumer demands on video and audio experience.

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.

DisplayPort

DisplayPort is a digital display interface developed by the Video Electronics Standards Association (VESA). The interface is primarily used to connect a video source to a display device such as a computer monitor, though it can also be used to carry audio.

Lightning Charger

BIOSTAR new H/W design Lightning Charger supports the functions of USB port and quick charge with the amazingly fast charging time to help your mobile devices achieve up to a 75% charge in just 30 minutes; meanwhile, it supports QC2.0 (up to 12V/1.5A output), APPLE mode (5V/2.4A), and BC1.2.

BIOSTAR Microtech International Corp.

	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.
	Digital PWM Digital PWM controller is with dual-output multiphase that faster transient performance and accurately regulated frequency control. It can be enabled to greatly increase system efficiency.
	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.

BIOSTAR
BIOSTAR Microtech International Corp.

	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.
	VIVID LED ARMOR The new VIVID LED Armor comes with I/O Armor and Audio Armor to protect the I/O interfaces and audio electronic components from static electricity. What's better, it exclusively features the onboard RGB full-color LED lightings with BIOSTAR VIVID LED DJ application for DIY lovers to create their unique personal styles by changing PC color schemes.
	M.2 Cooling Protection M.2 heatsink features ultra-high cooling efficiency for protecting the M.2 SSD from thermal problems, extending the M.2 SSD lifespan for long-term usage and stable operation. To top it off, this cooling design makes the performance of certain M.2 (PCI-e 3.0x4) products most efficient even under high-temperature operating.
	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.
	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.

BIOSTAR
BIOSTAR Microtech International Corp.

	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.
	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.
	Super Rapid Debug 3 Super Rapid Debug 3 posts critical POST code information on a vivid digital LED display.
	Super Durable Box Header Super Durable Box Header provides solid, secure and durable connections between motherboard and peripheral cables.
	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!

BIOSTAR Microcomputer International Corp.