ASUS ROG STRIX X870-F GAMING WIFI

Asus ROG Strix X870-F Gaming WiFi AMD X870 Chipset AMD Ryzen AM5 Socket ATX Motherboard with WiFi

Product Overview

ASUS ROG STRIX X870-F GAMING WIFI, AMD Socket AM5 for AMD Ryzen 9000 & 8000 & 7000 Series Desktop Processors*, Memory: 4 x DIMM, Max. 192GB, DDR5, Expansion Slots: 1 x PCIe 5.0 x16 slots, 1 x PCIe 4.0 x16 slots, 1xPCIe 4.0 x16 slot, Storage: 4 x M.2 slots and 2 x SATA 6Gb, RAID, Onboard VGA Output Available: 1xHDMI, 1xHDMI, 2xUSB4





Specifications

Features:

AI OVERCLOCKING
ASUS AI Overclocking profiles the CPU and cooling to predict the optimal configuration and push the system to its limits. Predicted values can be engaged automatically or used as a launching ground for further experimentation.

AI COOLING II
Balance the thermals and acoustics of any build with a single click. A proprietary ASUS algorithm slashes unnecessary noise while running a quick stress test, and then monitors CPU temperatures to dynamically adjust fans to optimal speeds.

AI NETWORKING II
AI Networking II combines intelligent technologies to continuously optimize network performance, provide trustworthy and seamless connectivity, and unleash the full speed of WiFi 7*.

Traffic monitor
Armoury Crate's Traffic Monitor tracks your current WiFi channel usage. Move to a less congested channel by clicking the "Channel Switch" button* for improved network performance.

Fast Vheck
Armoury Crate's Fast Check empowers users to rapidly detect WiFi signal strength.

Direction Finder
Armoury Crate's Direction Finder* helps users detect the optimal antenna orientation for achieving the best WiFi signal strength.

GameFirst
GameFirst is now integrated into Armoury Crate for an even better user experience. GameFirst optimizes networking performance by allocating bandwidth in real time, based on intelligent algorithms designed for various application customizable usage scenarios and corresponding learning algorithms. The latest update includes dedicated support for NVIDIA® GeForce NOW to ensure the lowest latency possible during intense game streamingcloud gaming sessions. To provide a better user's experience, GameFirst is now integrated into Armoury Crate.

Dynamic OC Switcher
Dynamic OC Switcher maximizes CPU performance by letting you set current and temperature thresholds to automatically switch between a manual overlock for heavy multithreaded workloads and Precision Boost Overdrive for single-threaded tasks. The latest Overclocking Load Guard has an enhanced instantaneous current protection mechanism to prevent users from experiencing system crashes during overclocking.

Core Flex
Core Flex empowers you to smash limits farther than ever before by letting you control clock, power, and thermals in creative new ways. In its simplest form, you can maximize base clock during lighter loads and set breakpoints to gradually reduce CPU core frequency as temperature or current increases. But the system is extremely adaptable, supporting multiple user-controlled functions that can manipulate power, current, and temperature limits independently so that you can bend CPU performance to your will.

Asynchronous Clock
For next-level frequency flexibility, the ROG Strix X870-F features a built-in clock generator that isolates CPU base clock from memory, PCIe, and the Infinity Fabric speed. Drive CPU performance to its absolute brink while maintaining the stability of related clock domains.

PBO ENHANCEMENT
AMD Precision Boost Overdrive (PBO) pushes the CPU current and voltage budget to opportunistically increase performance. By aggressively tuning the PBO parameters, AMD's algorithm can leverage the motherboard's robust power solution to ramp up performance even higher.

DDR5 Strength
For those who want to fly past stock DDR5 speeds, the Strix X870-F is primed and ready for enthusiast-grade kits, courtesy of vast AMD Extended Profiles for Overclocking (EXPO) support. Seasoned veterans can further tweak performance via the extensive array of settings in the UEFI.

AEMP
ASUS Enhanced Memory Profile (AEMP) is an exclusive firmware feature for PMIC-restricted memory modules. AEMP automatically detects the memory chips on your kit and then presents optimized frequency, timing and voltage profiles that you can effortlessly apply to unleash performance.

M.2 BACKPLATE
An integrated backplate helps ensure that high-performance drives can deliver peak performance, even when airflow is restricted.

M.2 HEATSINKS
Heatsinks cover every slot to help keep onboard NVME SSDs at optimal temperatures for consistent performance and reliability.

VRM HEATSINK ARRAY
Two thick VRM heatsinks are connected by a heatpipe, sharing cooling capacity across VRMs and providing ample surface area and mass to handle the power needs of high-performance AMD Ryzen™ 9000 Series processors.

CPU FAN HEADERS
A dedicated pair of PWM/DC fan headers provides easy access to CPU coolers.

AIO PUMP FAN HEADER
A dedicated PWM/DC header connects self-contained water-cooling setups.

4-PIN FAN HEADERS
The Strix X870-F features five chassis fan headers, each supporting auto-detection of PWM or DC fans.

WIFI 7
The revolutionary WiFi 7 is up to 4.8X times faster than standard WiFi 6*, thanks to tech like 320 MHz channels** on the 6GHz band and 4K QAM*. Multi-Link Operation (MLO) provides a more stable WiFi connection and lower latency, unlocking the realms of the unknown in gaming, streaming and industrial IoT.

ASUS WiFi Q-Antenna
Dual transceivers support the 2.4, 5 and 6 GHz bands to enable faster throughput, with directional sensitivity to improve signal quality and cover greater distances. Disclaimer: The availability of WiFi 7 160 GHz and 320 GHz varies according to regional regulations.

Intel 2.5Gb Ethernet
Onboard Intel® 2.5Gb Ethernet gives your wired connection a boost, with speeds that are 2.5 times faster than standard Ethernet connections for speedy file transfers, low-latency gaming, and high-res video streaming.

PCIE 5.0
Fully embracing the new standard, the Strix X870-F offers end-to-end PCIe 5.0 support. The topmost x16 expansion slot is also protected with a SafeSlot retention bracket to bear the weight of the latest graphics cards. Meanwhile, two of the onboard M.2 slots are geared for blistering 16 GB/s read and write speeds, while the rest can deliver still-impressive 8 GB/s transfers. Every M.2 slot is covered with substantial heatsinks to dispatch the heat of next-gen drives.

DUAL USB4® PORTS
Each USB4® port delivers up to 40 Gbps of bidirectional bandwidth for the latest super-speed devices and drives. External display support reaches up to 8K output if one of the ports is in use, or both can be employed for dual 4K displays.*

USB WATTAGE WATCHER
USB Wattage Watcher allows users to monitor the current wattage delivered to a device connected to the USB 10Gbps Type-C® rear I/O port. With USB Wattage Watcher, users can glance at their device's charging wattage in real-time and check on their device's Fast-Charging status.

DOLBY ATMOS
ROG and Dolby® have partnered to bring superior gaming audio quality to users. Dolby Atmos expands on traditional surround sound systems by adding height channels, which enables immersive three-dimensional audio to be perceived from above, below and around the listener.

SupremeFX
ROG SupremeFX is a unique blend of hardware and software technologies that provide superior audio. The Strix X870-F implementation features the ALC4080 codec for high-resolution playback up to 32-bit/384 kHz across all channels. Front-panel output is streamed through the integrated Savitech amplifier that can drive high-fidelity acoustics to a wide variety of speakers and headsets.

AUDIO LINE SHIELDING
A specially designed circuit separation reduces electromagnetic interference from the motherboard and attached devices for cleaner audio.

SAVITECH SV3H712 AMPLIFIER
The integrated Hi-Fi Savitech amplifier holds up its end of the signal path with imperceptible levels of distortion at -90dB THD+N and a signal-to-noise ratio of 110dB for extremely clean output.

ALC4080 CODEC
Instead of the conventional high definition audio (HDA) interface, the ALC4080 codec uses a USB interface to deliver studio-level sound reaching up to 32-bit 384 kHz audio resolution.

AUDIO COVER
A metal cover protects against electromagnetic interference, preserving the integrity of audio signals to ensure the best sound quality.

PREMIUM AUDIO CAPACITORS
High-quality components produce a warmer, more natural sound with exceptional clarity and fidelity.

PCIE® SLOT Q-RELEASE SLIM
With PCIe® Slot Q-Release Slim, simply tilt the card toward the latching mechanism to automatically unlock it from the PCIe slot. This makes upgrades and maintenance easier than ever before. Users will no longer need to fiddle with a tricky latch or even press a button to release their graphics card from the slot.

M.2 Q-Release
The M.2 heatsink features a convenient switch* to quickly remove it, eliminating the need for tiny screws during SSD installation. Its strong locking mechanism also provides a snug contact surface, helping to ensure reliable heat dissipation for your SSD.

M.2 Q-Slide
This new sliding M.2 latch design supports sizes 2242, 2260 and 2280 for easy device installation.

NEW M.2 Q-LATCH
The new Q-Latch design allows for tool-free installation or removal of M.2 SSDs with just one press.

Q-ANTENNA
With Q-Antenna, attaching a WiFi antenna to your PC is now easy and fast. Instead of slowly rotating two fasteners until they finally lock in, they just snap into place. Less hassle, and more consistent performance.

Q-LED
The on-board Q-LED troubleshooting lights give PC builders a quick indicator to confirm that key components - CPU, RAM, graphics card, storage devices - are functioning normally during startup. Builders can use the Q-LED feature to correct power delivery issues affecting their motherboard, and it can also alert them when memory modules have not been properly installed--even before attempting to boot a newly built PC.

PCIe® Slot
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CLEAR CMOS & BIOS FLASHBACK
The Clear CMOS button quickly resets BIOS settings to factory default. It can also be used to reboot the PC if incorrect BIOS settings have been selected.
BIOS FlashBack™ is a safe and simple way to update BIOS. Just drop the (UEFI) BIOS file onto a FAT32-formatted USB stick, plug it into the USB BIOS FlashBack port, and press the button. Updates can even be performed without having memory or a CPU installed.

ASUS GLIDEX
ASUS GlideX is a cross-device, cross-platform screen-sharing, screen-control and operation solution for enhanced productivity across PCs, tablets, and smartphones via USB or WiFi. Features include screen mirroring, screen extension, unified control with one keyboard and mouse, easy file transfers, and using mobile cameras as PC webcams. It's compatible with Windows, macOS, Android, and iOS.

HWiNFO
HWiNFO and ROG have collaborated on this comprehensive system information and diagnostic tool that provides detailed information about hardware components and real-time monitoring of system performance in ROG style. It supports a wide range of hardware devices, and it is regularly updated to include the latest technologies.

ASUS DRIVERHUB
ASUS DriverHub streamlines the installation and management of ASUS drivers and utilities to keep your hardware up-to-date and performing optimally. This standalone application automatically detects current driver versions and presents available updates in a list view. By default, it supports ASUS motherboards, and users are invited to install ASUS DriverHub after OS installation. Additionally, ASUS DriverHub offers one-click installation and update checks, making it easier for users to keep their systems running smoothly and efficiently.

AIDA64 EXTREME
The ROG Strix X870-F includes a sixty-day AIDA64 Extreme subscription, a tool that provides detailed information about hardware and software, as well as benchmarks to measure the performance of the entire system or individual components. AIDA64 Extreme includes a monitoring and diagnostics feature to detect and prevent hardware issues. All vital system sensors can be tracked in real time, allowing voltage readings, fan speeds, and temperature information to be displayed on the desktop or sent to dedicated displays or to the LCD panels of ROG AIO liquid coolers*.

ARMOURY CRATE
Armoury Crate is a software utility designed to give you centralized control of supported gaming products, making it easy to tune the look and feel of your system. From a single intuitive interface, Armoury Crate helps you customize RGB lighting and effects for compatible devices and synchronize them with Aura Sync to create a unified lighting scheme across your system. In addition, Armoury Crate's Fan Xpert4 tool provides comprehensive control over fans, water pumps, and all-in-one (AIO) coolers.

UNDENIABLY ROG STRIX
The ROG Strix X870-F is sleek and understated, empowering you to seamlessly combine it with a wide range of system components. Its deep black PCB and matching metallic heatsinks create a dark and intense look, while a touch of RGB lighting on the I/O shroud lets you either stay under the radar or make a bold statement.

OUTSHINE THE COMPETITION
ROG Strix motherboards feature ASUS Aura technology, enabling full lighting control and a variety of presets for both onboard

RGB LEDs and third-party accessories. Effects can be easily synced across compatible ROG graphics cards, monitors, keyboards, and mice to give your setup a unified look.

COOLER COMPATIBILITY
ASUS AIO coolers offer robust performance, high overclocking potential, bold aesthetics and customizable functionality for X870 motherboards, empowering you to build your dream gaming rig.

THE ROG STRIX ECOSYSTEM AWAITS
Level up your game with ROG Strix. Enjoy complimentary aesthetics, control, and compatibility across AIO coolers, cases, peripherals, and much more. ROG offers more choices than any other brand.

BUILD FOR THE MOST ADVANCED PC FOR GAMING AND CREATING
When only the fastest will do, a Strix X870E/X870 motherboard delivers. With USB 4.0 onboard along with robust overclocking[1] capabilities, featuring faster dual-channel DDR5 memory support, AMD EXPO™ technology and PCIe® 5.0 support for both graphics and NVMe, you can play the most demanding games and deliver your biggest projects with the revolutionary performance of an AMD X800-series motherboard and AMD Ryzen™ 9000, 8000, and 7000 Series processors.

Specifications:

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Specifications	
Product Code	ASUS ROG STRIX X870-F GAMING WIFI
Model	ROG STRIX X870-F GAMING WIFI
Graphics	1 x DisplayPort
	1 x HDMI port
	2 x USB4 (40Gbps) ports support USB
	Type-C display outputs
	* Please refer to AMD CPU specifications.
	** Supports max. 8K@30Hz as specified in
	DisplayPort 1.4.
	* Supports 4K@60Hz as specified in HDMI
	2.1.
	**Supports max. 4K@60Hz as specified in
	DisplayPort 1.4a
	** VGA resolution support depends on
	processors' or graphic cards' resolution.

Expansion Slots	AMD Ryzen 9000 & 7000 Series Desktop Processors
	1 x PCIe 5.0 x16 slot (supports x16 mode)
	AMD Ryzen 8000 Series Desktop Processors
	1 x PCIe 4.0 x16 slot (supports x8/x4 mode)
	AMD X870 Chipset
	1 x PCIe 4.0 x16 slot (supports x4 mode)
	** Specifications vary by CPU types.
Storage	Supports 4 x M.2 slots and 2 x SATA 6Gb/s ports
	AMD Ryzen 9000 & 7000 Series Desktop Processors
	M.2_1 slot (Key M), type 2242/2260/2280 (supports PCIe 5.0 x4 mode)
	M.2_2 slot (Key M), type 2242/2260/2280/22110 (supports PCIe 5.0 x4 mode)
	AMD Ryzen 8000 Series Desktop Processors
	M.2_1 slot (Key M), type 2242/2260/2280 (supports PCIe 4.0 x4/x2 mode)
	M.2_2 slot (Key M), type 2242/2260/2280/22110 (Not supports)
	AMD X870 Chipset
	M.2_3 slot (Key M), type 2280 (supports PCIe 4.0 x4 mode)
	M.2_4 slot (Key M), type 2280 (supports PCIe 4.0 x4 mode)
	2 x SATA 6Gb/s ports
	* AMD RAIDXpert2 Technology supports both PCIe RAID 0/1/5/10 and SATA RAID 0/1. RAID 5 Function is only supported by AMD Ryzen 9000 series CPU.
	** M.2_2 shares bandwidth with PCIEX16(G5). When M.2_2 is occupied with SSD device, PCIEX16(G5) will run x8 only.
	* M.2_3 shares bandwidth with PCIEX16(G4). When M.2_3 is occupied with SSD device, PCIEX16(G4) will be disabled.
	** M.2_2 will be disabled when using AMD Ryzen 8000 Series Desktop Processors.
Ethernet	1 x Intel 2.5Gb Ethernet
	ASUS LANGuard

Wireless & Bluetooth	Wi-Fi 7
	2x2 Wi-Fi 7 (802.11be)
	Supports 2.4/5/6GHz frequency band
	Supports Wi-Fi 7 320MHz bandwidth, up to 6.5Gbps transfer rate.
	Bluetooth v5.4
	*Wi-Fi features may vary depending on the operating system
	For Windows 11, Wi-Fi 7 will require 24H2 or later version for full functions, Windows 11 21H2/22H2/23H2 only support Wi-Fi 6E.
	For Windows 10, please note that no driver is available, refer to the Wi-Fi chipset vendor's website for details.
	** Wi-Fi 6GHz frequency band and bandwidth regulatory may vary between countries.
	* The Bluetooth version may vary, please refer to the Wi-Fi module manufacturer's website for the latest specifications.
USB	Rear USB (Total 12 ports)
	2 x USB4 (40Gbps) ports(2 x USB Type-C with DP Alt mode)
	6 x USB 10Gbps ports (5 x Type-A + 1 x USB Type-C with up to 30W PD Fast-charge)
	4 x USB 5Gbps ports (4 x Type-A)
	Front USB (Total 9 ports)
	1 x USB 20Gbps connector (supports USB Type-C)
	2 x USB 5Gbps headers support 4 additional USB 5Gbps ports
	2 x USB 2.0 headers support 4 additional USB 2.0 ports
	* USB Type-C power delivery output: max. 5V/3A
	** USB Type-C power delivery output: 5V/9V max. 3A, 12V max 2.5A, 15V max. 2.0A
Audio	ROG SupremeFX 7.1 Surround Sound High Definition Audio CODEC ALC4080
	- Impedance sense for front and rear headphone outputs
	- Supports: Jack-detection, Multi-streaming, Front Panel MIC Jack-retasking
	- High quality 120 dB SNR stereo playback output and 110 dB SNR recording input
	- Supports up to 32-Bit/384 kHz playback on front panel"
	Audio Features
	- SupremeFX Shielding Technology
	- Savitech SV3H712 AMP
	- Rear optical S/PDIF out port
	- Premium audio capacitors
	- Audio cover
	* The LINE OUT port on the rear panel does not support spatial audio. If you wish to use spatial audio, make sure to connect your audio output device to the audio jack on the front panel of your chassis or use a USB interface audio device.

Back Panel I/O Ports	2 x USB4 (40Gbps) ports (2 x USB Type-C with DP Alt mode)
	6 x USB 10Gbps ports (5 x Type-A + 1 x USB Type-C with up to 30W PD Fast-charge)
	4 x USB 5Gbps ports (4 x Type-A)
	1 x DisplayPort
	1 x HDMI port
	1 x Wi-Fi module
	1 x Intel 2.5Gb Ethernet
	2 x Audio jacks
	1 x Optical S/PDIF out port
	1 x BIOS FlashBack button
	1 x Clear CMOS button
Internal I/O Connectors	Fan and Cooling Related
	1 x 4-pin CPU Fan header
	1 x 4-pin CPU OPT Fan header
	1 x 4-pin AIO Pump header
	5 x 4-pin Chassis Fan headers
	Power Related
	1 x 24-pin Main Power connector
	2 x 8-pin +12V CPU Power connectors
	Storage Related
	4 x M.2 slots (Key M)
	2 x SATA 6Gb/s ports
	USB
	1 x USB 20Gbps connector (supports USB Type-C)
	2 x USB 5Gbps headers support 4 additional USB 5Gbps ports
	2 x USB 2.0 headers support 4 additional USB 2.0 ports
	Miscellaneous
	3 x Addressable Gen 2 headers
	1 x Alteration PCIe mode switch
	1 x Chassis Intrusion header
	1 x CPU Over voltage jumper
	1 x Front Panel Audio header (F_AUDIO)
	1 x Start button
	1 x 10-1 pin System Panel header
	1 x Thermal Sensor header

Special Features	Extreme Engine Digi+
	- 5K Black metallic capacitors
	ASUS Q-Design
	- M.2 Q-Latch
	- M.2 Q-Release
	- M.2 Q-Slide
	- PCIe Slot Q-Release Slim (with PCIe SafeSlot)
	- Q-Antenna
	- Q-Dashboard
	- Q-DIMM
	- Q-LED (CPU [red], DRAM [yellow], VGA [white], Boot Device [yellow green])
	- Q-Slot
	ASUS Thermal Solution
	- M.2 heatsink backplate
	- M.2 heatsink
	ASUS EZ DIY
	- BIOS FlashBack button
	- BIOS FlashBack LED
	- Clear CMOS button
	- ProCool II
	- Pre-mounted I/O shield
	- SafeSlot
	- SafeDIMM
	Aura Sync
	- Addressable Gen 2 headers

Software Features	ROG Exclusive Software
	- ROG CPU-Z
	- Dolby Atmos
	ASUS Exclusive Software
	Armoury Crate
	- AIDA64 Extreme (60 days free trial)
	- Aura Creator
	- Aura Sync
	- Fan Xpert 4 (with AI Cooling II)
	- GameFirst
	- HWiNFO
	- Power Saving
	ASUS Driver Hub
	ASUS GlideX
	USB Wattage Watcher
	TurboV Core
	Adobe Creative Cloud (Free Trial)
	Norton 360 for Gamers (60 Days Free Trial)
	WinRAR (40 Days Free Trial)
	UEFI BIOS
	AI Overclocking Guide
	ASUS EZ DIY
	- ASUS CrashFree BIOS 3
	- ASUS EZ Flash 3
	- ASUS UEFI BIOS EZ Mode
	- ASUS MyHotkey
	Dynamic OC Switcher
	FlexKey
BIOS	256 Mb Flash ROM, UEFI AMI BIOS
Manageability	WOL by PME, PXE

Accessories	Cables
	2 x SATA 6Gb/s cables
	Additional Cooling Kit
	1 x Thermal pad for M.2 22110
	Miscellaneous
	1 x ASUS WiFi Q-Antenna
	1 x Cable ties package
	1 x M.2 Q-Latch package
	1 x M.2 Q-Slide package
	1 x ROG key chain
	1 x ROG Strix stickers
	4 x M.2 rubber packages
	Documentation
	1 x Quick start guide
Operating System	Windows 11
Form Factor	ATX Form Factor
	12 inch x 9.6 inch (30.5 cm x 24.4 cm)

Product Information Online

For the latest product information, availability and purchasing details, please visit the product page:

Product page:
https://www.comx-computers.co.za/ASUS-ROG-STRIX-X870-F-GAMING-WIFI-Asus-ROG-Strix-X870-F-Gaming-WiFi-AMD-X870-Chipset-p-310734.php

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