AMD RADEON RX 6800 | SAPPHIRE

NITRO+

SAPPHIRE NITRO+ AMD Radeon™ RX 6800 Gaming Graphics Card with 16GB GDDR6, AMD RDNA™ 2. SKU Number: 11305-01

Specification

- GPU: AMD Radeon™ RX 6800
- Stream Processors: Up to 3840 unit
- Compute Units: 60
- Game Clock: TBA MHz
- Boost Clock: Up to TBA MHz
- Memory Speed: 16 Gbps
- Memory Size: 16384 MB
- Memory Interface: 256 bit DDR6
- Firmware: Dual UEFI BIOS
- Form Factor: 2.7 slot, ATX
- Cooler Fan: 3 Axial Fan, Two-Ball bearing
- Back Plate: Yes
- Bus Support: x16 PCIe4.0
- External Power: 2 x 8p

NITRO+ Product Features

- Software BIOS Switch
- NITRO Glow ARGB
- Fan Check
- Max Boost
- Quick Connect Fan
- External RGB LED Synchronization
- Hybrid Fan Blade
- Wave Fin Design
- V-Shape Fin Design
- Integrated Cooling Module

AMD Radeon™ Product Features

- AMD RDNA™ 2 Architecture
- DirectX® 12 Ultimate
- Hardware Raytracing
- 7nm GPU
- GDDR6 Memory
- PCI® Express 4.0 Support
- AMD FreeSync™ Technology
- DisplayPort™ 1.4 with DSC
- HDMI™ 2.1 VRR
- Video Streaming up to 8K
- Radeon™ VR Ready Premium
- AMD FidelityFX
- Radeon™ Image Sharpening
- Radeon™ Anti-Lag
- Radeon™ Software
- Game Driver Optimizations
- High Performance 4K Gaming

DIMENSIONS:
310.5(L)X 134.2(W)X 55.2(H)mm
4 x Maximum Display Monitors support
3 x DP / 1 x HDMI

MAXIMUM DISPLAY RESOLUTION
• HDMI™: 7680×4320
• DisplayPort1.4: 7680×4320

HDMI™ HIGH DEFINITION MULTIMEDIA INTERFACE

SYSTEM REQUIREMENTS

- PCI® Express© compatible motherboard with one x16 PCIe slot.
- Minimum 750W or greater power supply NOTE: Minimum recommended system power supply wattage is based on the specific graphics card and the typical power requirements of other system components. Your system may require more or less power. OEM and other pre-assembled PCs may have different power requirements.
- Minimum 8GB of system memory. Recommended 16GB.
- Installation software requires a keyboard, a mouse, and a display.
- A display with HDMI, or DisplayPort, or USB-C is required.
- Supported operating systems include Linux®, Windows® 7*, Windows® 10, and Windows 8.1. 64-bit operating system required. (*Does not support all features including but not limited to Hardware Raytracing.)
- DirectX® 12 and Vulkan® support
- For information on AMD Radeon™ VR Ready Premium visit amd.com/VRready.

Primary Settings

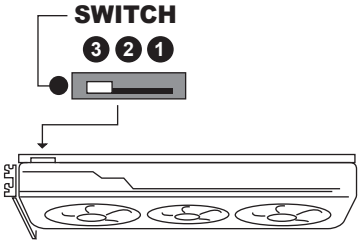
Game Clock*	Up to TBA MHz
Boost Clock	Up to TBA MHz
Memory Clock	16 Gbps
Typical GPU Temperature	°C~°C
Secondary Settings	
Game Clock*	Up to TBA MHz
Boost Clock	Up to TBA MHz
Memory Clock	16 Gbps
Typical GPU Temperature	°C~°C
Software Switch Mode	
Primary setting (Default)	Secondary Setting

** Game Clock is the expected GPU clock when running typical gaming applications, set to typical TGP (Total Graphics Power). Actual individual game clock results may vary.*

Dual BIOS
Choose between performance mode and silent mode to enhance your gaming experience

Max Boost
The Max Boost switch increases the boost clock and power limit to unleash the gaming performance of the card. Planning to overclock or looking for maximum performance?

BIOS switch setting



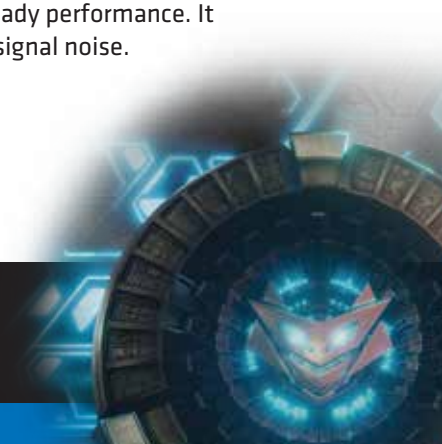
POSITION	MODE
1	Primary Setting
2	Secondary Setting
3	Software Switch Mode Please Switch BIOS via TriXX Primary Setting (Default) / Secondary Setting

TriXX Software: BIOS Switch
With the NITRO+ AMD Radeon™ RX 6800, gamers can switch from Primary setting to Secondary setting or back using our TriXX software for a quick and easy switch between your dual BIOS modes.

Power Design
The NITRO+ AMD Radeon™ RX 6800 card is designed with 13+1+2 Phase Digital Power specifically for GPU and memory to aid in overclocking, balancing current distribution and averaging thermal dissipation for each power phase.

Fuse Protection
In order to protect your card, the SAPPHIRE cards have fuse protection built into the circuit of the external PCI-E power connector to keep the components safe.

PCB
The exquisite PCB design delivers stable, reliable, and steady performance. It could efficiently lower PCB temperature and component signal noise.



Tri-X Cooling Technology

The Tri-X Cooling Solution is powered by two larger fans on the outside and one smaller fan in the middle with reverse spinning direction to boost wind flow beneath the fans. The tunneled fins on the fans aid in increasing the convection of airflow to ensure that Tri-X cooling is a low temperature and low noise cooling solution.

Intelligent Fan Control

Fan speed is intelligently controlled to keep the GPU, memory, PWM IC and other components as low as possible in temperature to balance performance, and fan noise.

Precision fan control

Standard industry fans may have up to 10% difference between fan rotation cycles (RPM). The Fan IC Control on SAPPHIRE graphics cards reduce differential at approximately 3%. This up to 70% improvement on accuracy ensures that cooling and noise performance of every graphics card is up to scratch.

Two-Ball Bearing Fans

These feature Dual Ball bearing fans, which have an approximately 85% longer lifespan than sleeve bearings in our tests. The improvements to the fan blades means the solution is up to 10% quieter than the previous generation.

Back Plate

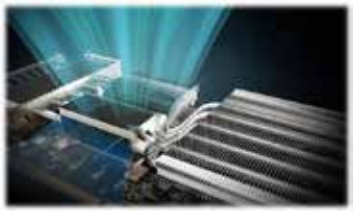
The all-aluminum back plate provides additional rigidity that guarantees nothing bends and dust stays out. It also helps cool your card by increasing heat dissipation.

Hybrid Fan Blade

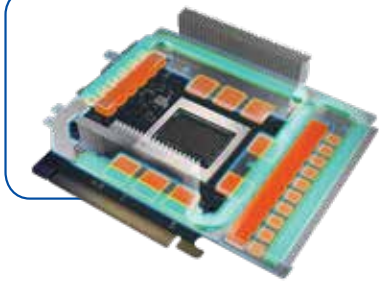
Traditional axial fan is quiet but lacks of the air pressure to push down the air to the components. Blower fan has strong air pressure but is noisy at high speed. The new hybrid fan design combines the strengths by improving the downward air pressure of axial fan design while keeping the fan noise low.

Wave Fin Design & V Shape Fin Design for Improved GPU Cooling

The all-new innovative Wave Fin Design working in tandem with our V-Shape Fin Design for GPU Cooling reduces wind friction and centralizes



Integrated Cooling Module



Cutting edge Memory & VRM Cooling with Heat-Pipes ensures you can push your performance to new limits while keeping the SAPPHIRE NITRO+ AMD Radeon™ RX 6800 components icy cool. The new stand-alone memory/VRM cooling module cools the memory, mosfet, and the chokes. A heat pipe has been added underneath the module to dissipate the heat from the components with improved efficiency. When compared to K5 memory pad, K6.5 thermal pad has delivers 38% improved thermal conductivity between components and the cooler.

TriXX Supported

The TriXX Software will open you up to a range of features such as TriXX Boost, Software BIOS Switch and NITRO Glow ARGB LED Effect which can only be controlled via TriXX. Customize your individual style with TriXX Software and heighten your gaming experience!

Fan Check

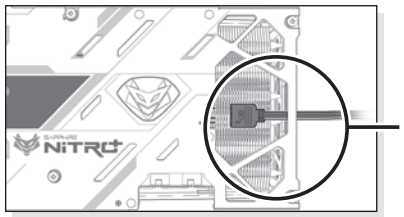
At times fans need a service but it can be frustrating to return the entire card and wait for a replacement to be authorized. The fan Check feature allows users to check the cooler's status and immediately contact customer support through Fan Service in case of problems.

Fan Quick Connect

If there's a fan problem, you don't have to return the entire card. SAPPHIRE or our channel partners will send out a replacement fan directly to you! That means they're easy to remove, clean and replace, with just one screw holding them securely in place.

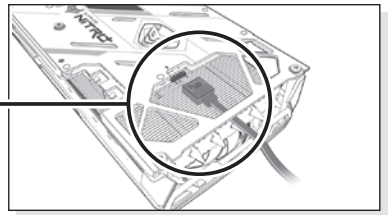
NITRO GLOW

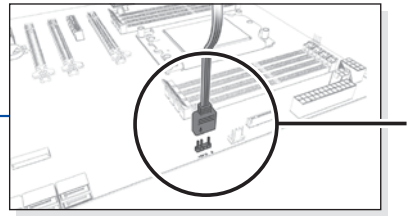
With tasteful shroud design augmented by ARGB LEDs, you can change the colors of the LEDs, for a customized design. This can be controlled via TriXX software. Choose from various different modes including Fan Speed Mode, PCB Temperature Mode or the colorful rainbow mode or turn off the LEDs.



RGB cable (3-pin) required. Connect to the reserved 5V RGB 3-pin header on the VGA card with the RGB cable (3-pin).

Make sure the RGB cable is connected properly.





The opposite side of the RGB cable (3-pin) connects to the 5V RGB 3-pin header on the motherboard.

External RGB LED MB Synchronization

Synchronize addressable RGB LED effects with the Motherboard by selecting “External” in TriXX Software.

AMD RDNA™ 2 Architecture with Hardware Raytracing
With enhanced compute units, delivering hardware raytracing and variable rate shading, AMD RDNA™ 2 Architecture is the foundation of the next generation of enthusiast gaming platforms from desktops to gaming consoles.

High Performance 4K Gaming
With enhanced compute units delivering powerhouse performance, 4K gaming is now easily possible at smooth framerates and maximum visual settings.

AMD FidelityFX
AMD FidelityFX enables a plethora of lighting, shadow, and reflection effects in the latest games with minimal performance overhead, freeing up your graphics card to power the intense gaming experiences you demand.

Radeon™ Anti-Lag
Less lag equals more wins. Radeon Anti-Lag reduces latency, providing ultra-fast response time giving you a dynamic edge over your competition

AMD FreeSync™ Technology
Take full advantage of the AMD Radeon™ RX 6800 series graphics cards by pairing with a certified AMD FreeSync technology-enabled monitor to enable an exceptional stutter and tear-free gaming experience with high refresh rates, low latency, and stunning HDR.

HDMI™ 2.1 VRR
HDMI 2.1 VRR expands tear free gaming experiences to all HDMI 2.1 VRR enabled displays delivering fluid gaming for all AMD Radeon RX 6800 graphics card users. Get the bandwidth needed to power up to 8K HDR experiences.

PCI® Express 4.0 Support
Features PCI® Express 4.0 support, with a throughput of 16 GT/s and enables two times the bandwidth compared to PCI® Express 3.0.

The SAPPHIRE NITRO+ AMD Radeon™ RX 6800 delivers powerhouse 4K gaming performance with vivid visuals for an elevated experience. The all-new innovative Wave Fin Design working in tandem with our V-Shape Fin Design for GPU Cooling reduces wind friction and centralizes airflow for optimal heat dissipation and a virtually silent system. Cutting edge Memory & VRM Cooling with Heat-Pipes and next gen K6.5 Memory Pad ensures you can push your performance to new limits while keeping the SAPPHIRE NITRO+ AMD Radeon™ RX 6800 components icy cool. The brand new Hybrid Fan Design combines the tranquility and strong air pressure features that exhibit ultimate levels of downward air pressure through the fan while keeping fan noise low. Incredible ARGB Lighting across the graphics card boosted with striking ARGB fans using our SAPPHIRE TriXX software fused with beautiful aesthetic styling will ensure the SAPPHIRE NITRO+ AMD Radeon™ RX 6800 is a stunning addition to every enthusiast gamer's PC. NITRO Charge your PC with the SAPPHIRE NITRO+ AMD Radeon™ RX 6800 and elevate your gaming experience to the next level!