SPECIFICATION

- GPU: Radeon™ RX 7900GRE Graphics
- Stream Processors: Up to 5120 unit
- Compute Units: 80
- Ray Accelerators: 80
- Infinity Cache: 64MB
- Game Clock: 2052 MHz
- Boost Clock: Up to 2391 MHz
- Memory Speed: 18 Gbps
- Memory Size: 16384 MB
- Memory Interface: 256 bit GDDR6
- Firmware: UEFI BIOS
- Form Factor: 3 slot, ATX
- Cooler Fan: Triple Axial Fan, Two ball bearing
- Bus Support: x16 PCIe4.0
- External Power: 2 x 8p

PRODUCT FEATURES

- AMD RDNA™ 3 architecture
- AMD Radiance Display™ Engine
- AMD Radeon™ Boost technology
- AMD Radeon™ Anti-Lag technology
- PCI® Express 4.0 ready
- AMD Fidelity FX™ technologies
- AMD Fidelity FX™ Super Resolution technology
- Microsoft® DirectX® 12 Ultimate
- Microsoft® Direct Storage
- Vulkan® Optimized
- AMD smart technologies
- AMD Software: Adrenalin Edition™ application
- AMD Noise Suppression
- AMD Privacy View
- AMD Radeon™ Super Resolution technology
- AMD Freesync™ technology

NITRO+ PRODUCT FEATURES

- **Assisted System Fan Control**
- **NITRO Glow ARGB**
- External RGB LED Synchronization
- Software BIOS Switch / Dual BIOS
- Fan Check / Quick Connect Fan
- TriXX Boost
- Max Boost
- Angular Velocity Fan Blade
- Wave Fin Design / V-Shape Fin Design / Back Plate
- Cold Rolled Steel Frame

SYSTEM REQUIREMENTS

- PCI® Express© compatible motherboard with one x16 PCIe slot
- Minimum 700w 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.
- Supported operating systems include Linux®, Windows 10/11. 64-bit operating system required

DIMENSION:

- 320(L)x 134.85(W)x 61.57(H)mm
- 4 x Maximum Display Monitors support
- 2 x DP / 2 x HDMI

MAXIMUM DISPLAY RESOLUTION

- HDMI™: 7680×4320
- DisplayPort2.1: 7680×4320

ACCESSORIES

- L Shape Supporter
- 3pin 5V ARGB Cable

Primary Settings	
Game Clock*	2052 MHz
Boost Clock	2391 MHz
Memory Clock	18 Gbps
TGP	244w
Secondary Settings	
Game Clock*	1880 MHz
Boost Clock	2245 MHz
Memory Clock	18 Gbps
TGP	212w
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.***

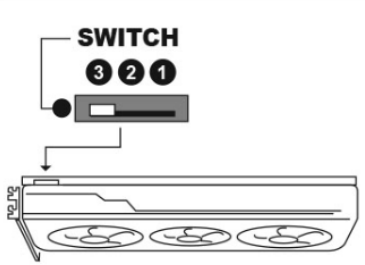
OC BIOS

SAPPHIRE NITRO+ AMD Radeon™ RX 7900 GRE has the primary BIOS set to the maximum TGP setting for optimal performance.

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 7900 GRE Graphics Card, 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 7900 GRE Graphics Card is designed with 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.

High TG Copper PCB

The GPU is mounted on to the high-density 14 layer 2oz Copper PCB with a high TG temperature value PCB to match the power requirements of the GPU and memory and guarantee mechanical stability of the PCB during operation.

NITRO Cool Tech

NITRO Cool Tech is a combination of various SAPPHIRE cooling technologies with the goal to keep the product in the balance of cooling performance and noise level. It does not only cool GPU and memory but also take other heat sources into account on the graphics card.

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.

Metal Back-plate with thermal pad

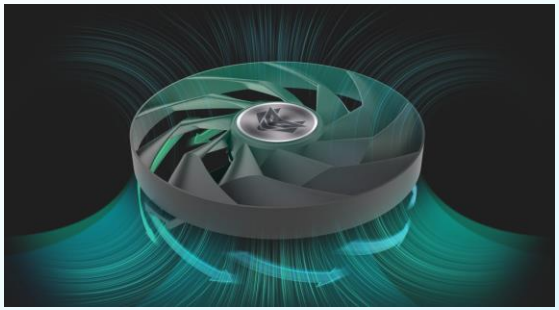
The high quality aluminum back-plate is not just for styling, it also protects the components on the back side of the PCB and help dissipate the heat from the PCB with high performance thermal pad in between.

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.

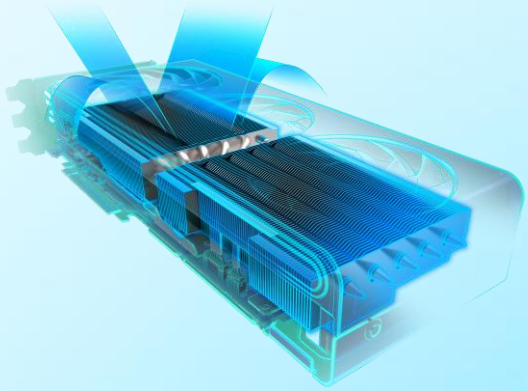
Optimized Composite Heat-pipe

The composite heat-pipes on SAPPHIRE NITRO+ AMD Radeon™ RX 7000 Series are fine-tuned for each individual cooling design with optimal heat flow, efficiently and evenly spreading out the heat to the whole cooling module.



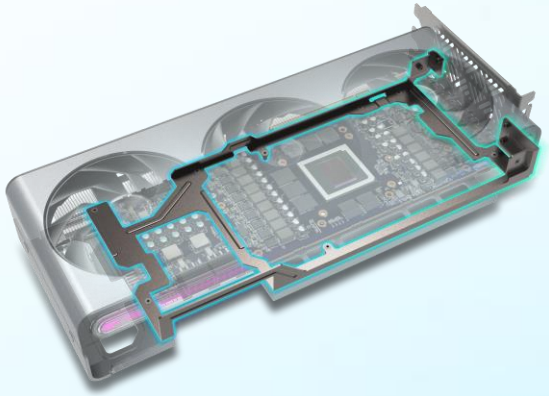
Angular Velocity Fan Blade

The Angular Velocity Fan Blade provides a double layer of downward air pressure which alongside the air pressure on the outer ring of the Axial fan, results in up to 44% more downward air pressure and up to 19% more airflow for a quieter and cooler operation



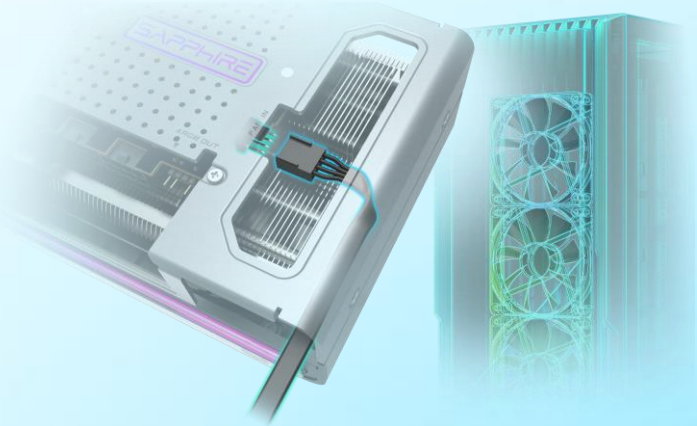
Wave Fin Design & V Shape Fin Design for Improved GPU Cooling

The all-new innovative Wave Fin Design working in tandem with our V-Shape Fin Design for GPU Cooling reduces wind friction and centralises the
airflow around the GPU to dissipate heat efficiently to produce lower thermal temperatures.



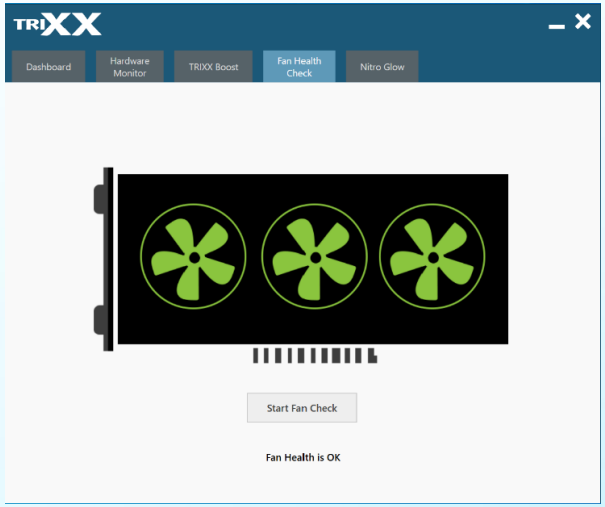
Cold Rolled Steel Frame

Experience a superior and beautifully crafted frame on the NITRO+ AMD Radeon™ RX 7900 GRE Graphics Card with a Cold Rolled Steel Frame that fortifies the shroud structure and durability while encasing the sides of the PCB for a strong encasement alongside the all metal back plate.



Assistive System Fan Control

When the temperature of the GPU increases, the graphics card fans speed up accordingly. To further help with cooling and heat dissipation, the Assistive System Fan Control feature controls the speed of a system fan to automatically increase at the same time as the graphics card fans, this assists in expelling the heated air from the entire system faster.



TriXX Supported

The TriXX Software includes 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

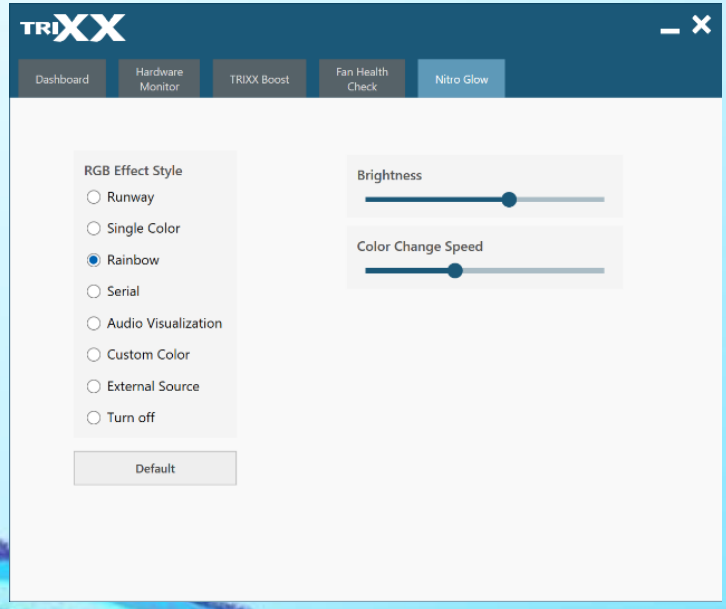
At times fans need a service but it can be frustrating to return the entire card and wait for a replacement to be authorized. The fan Check feature allows users to check the cooler's status and immediately contact customer support through Fan Service in case of problems.

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 Colourful Rainbow Mode or turn off the LEDs.



External RGB LED MB Synchronization

Synchronize addressable RGB LED effects with the motherboard by selecting “External” in TriXX software.