

Sapphire Nitro+ Radeon RX 580 4GD5 (UEFI) SKU number: 11265-31

SPECIFICATION

- GPU: AMD Radeon **RX 580** Graphics
- Stream Processors: Up to **2304** unit
- Compute Units: **36**
- Boost Core Clock: Up to **1411** MHz
- Memory Clock: Up to **2000** MHz , Effective **8000** Mbps
(Samsung Memory)
- Memory Size: **4096** MB
- Memory Bus: **256** bit
- Firmware: **Dual** UEFI BIOS
- Form Factor: **2.2** slot, ATX
- Cooler Fan: **Dual** Fan, **95mm15**, **Dual Ball** Bearing
- Cooling Module: **8mm x2 + 6mm x2** Heat-pipes
- Back-Plate: **Yes**
- Power Design: **6** Phase VDDC
- PCB Layers: **8** Layers
- External Power: **1 x 8p + 1 x 6p**
- VR Friendly: **Yes**

SYSTEM REQUIREMENTS

- PCI Express® compliant motherboard with one x16 graphics slot.
- **500W** (or greater) power supply with minimum **one PCIE 8 pin** and **one PCIE 6 pin** power connector is required.
- Minimum 4GB of system memory. Recommended 8GB.
- Supported operating systems include Windows® 10, and Windows® 7.
- 64-bit operating system required.
- See amd.com / VR ready for more information.

PRODUCT FEATURES

- AMD LiquidVR™ Technology (Radeon VR Ready Premium)
- HDR Ready
- DirectX® 12 Optimized
- Vulkan® Optimized
- Radeon Freesync™ 2 Ready
- Next Gen FinFET 14 Technology
- 4th Generation GCN Architecture
- OpenGL® 4.5 support
- OpenCL™ Support
- HDMI™ 4K60 / Display Port 1.4
- AMD Eyefinity technology
- AMD CrossFire™ technology (bridgeless) – **up to 2 GPUs**
- Radeon XConnect™ technology
- Compatible with AMD and Intel Platforms
- Sapphire **Dual-X** Cooling Technology
- Intelligent Fan Control III
- Precision Fan Control
- Fuse Protection
- Long-life Capacitor
- Tri-XX Supported
- **Black Diamond Choke 4th**
- **Fan Quick Connect**
- **Nitro+ Features**

**DIMENSION:**

- **260(L)x 135(W)x 43 (H)**mm
- **5 x** Maximum Display Monitors support
- **2 x DP / 2 x HDMI / 1 x DVI-D**

ACCESSORIES

- Driver DVD

MAXIMUM DISPLAY RESOLUTION

- HDMI: 4096x2160@60Hz
- DisplayPort 1.4: 5120x2880@60Hz
- DL-DVI-D: 2560x1600@60Hz

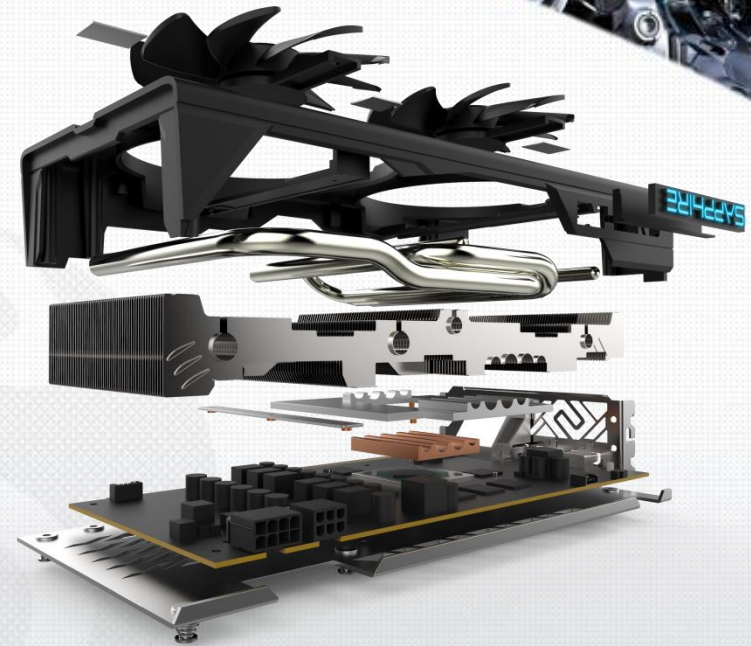
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NITRO Boost Settings(Default)

Engine Clock	Boost Clock 1411 MHz (Default)
Memory Clock	2000 MHz, 8.0 Gbps
Target GPU Temperature	75°C / Fan Start 54°C / Fan Stop 46°C
Fan Speed	Nominal 0~2280 RPM / Maximum 3200 RPM

Silent Mode Settings

Engine Clock	Boost Clock 1340 MHz
Memory Clock	2000 MHz, 8.0 Gbps
Target GPU Temperature	76°C / Fan Start 54°C / Fan Stop 46°C
Fan Speed	Nominal 0~2000 RPM / Maximum 3200 RPM

**Dual-X Cooling**

SAPPHIRE's acclaimed Dual-X Cooling is powered by two massive yet silent fans and state-of-the-art radiator design. The new form of our 95mm blades mean greater airflow and superior heatsink coverage at lower noise compared to standard cooling designs. These feature **Dual Ball bearing** fans, which have an 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.

**Black Diamond 4th Chokes**

Our Black Diamond Chokes are 10% cooler and 25% more power efficient than a normal choke - and these Chokes reduce the coil temperatures by other 15% over the former one. These exclusive chokes will maintain gaming stability using their built-in heatsinks and help minimize coil whine.



Fuse Protection

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

New Tri-XX

New Tri-XX adds two new gaming modes: Power and Stealth. In Power mode Tri-XX relaxes the power limit so that you get the best possible performance with no compromise – ideal for those must win situations.

In Stealth mode you still get the great gaming performance you expect but with greater power efficiency for fully immersive gaming.

VR Friendly

The SAPPHIRE NITRO Gaming Series cards come with Dual HDMI ports, specifically designed to work with VR. By having two HDMI ports, you can have both an HD monitor and cutting-edge VR headset running at the same time. The ports are HDMI 2.0b, the latest update, with an 18Gbps bandwidth, up to 32 audio channels, and is able to support 4K 50/60 resolutions like 2160P, whilst remaining entirely backwards compatible with older HDMI specifications.



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! All the SAPPHIRE NITRO + Radeon RX580 and RX570 fans use our **Quick Connect** system. That means they're easy to remove, clean and replace, with just one screw holding them securely in place.

NITRO Cool Tech - Precision fan control

Standard industry fans may have up to 10% difference between their fan rotation cycles (RPM). With the new Fan IC Control on SAPPHIRE NITRO + graphics cards, this differential is reduced to 3%. This 70% improvement on accuracy ensures that cooling and noise performance of every NITRO + card is up to scratch.





NITRO Cool Tech - Intelligent Fan Control III

With the SAPPHIRE NITRO Gaming Series cards' **Intelligent Fan Control III**, the fan starts precisely at **54** degrees Celsius to smartly balance performance against fan noise.

NITRO Cool Tech - Robust VRM Cooling

The SAPPHIRE NITRO+ cards are designed with robust VRM cooling and have a high thermal conductivity pad on the back-plate to take away the heat efficiently and effectively.



NITRO Boost

The new NITRO Boost switch increases the boost clock and power limit for higher performance to unleash the gaming performance of the card. Planning to overclock or looking for maximum performance? SAPPHIRE NITRO cards come with an 8 pin power connector to plug in and enable Nitro Boost.

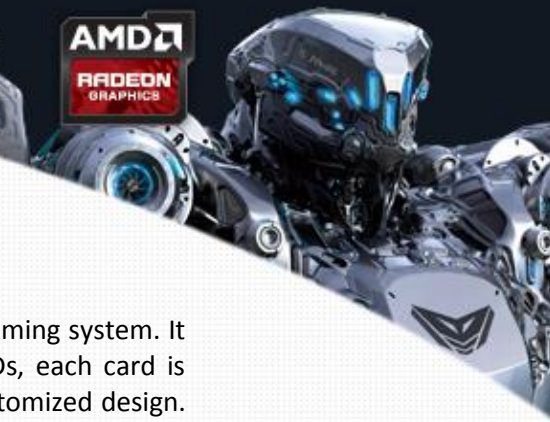
NITRO Free Flow

We looked at the traditional axial fan design system, and found that the way it circulates the hot air back to the fan inlet resulted in a higher temperature over time. With NITRO Free Flow we redesigned the airflow of the entire cooler and board, so that the hot air is expelled through the system fan instead, rapidly dissipating heat.

NITRO Fan Check

Occasionally a graphics card requires servicing, and more often than not it is the fan that needs some love and attention. However, it can be frustrating to return the entire card and wait for a replacement to be authorized. SAPPHIRE's new **Fan Check** allows users to check the cooler's status and immediately contact customer support through **Fan Service** in case of problems. To resolve a specific fan issue, SAPPHIRE provides a quick and easy solution.





NITRO Glow (RGB LED Indicators)

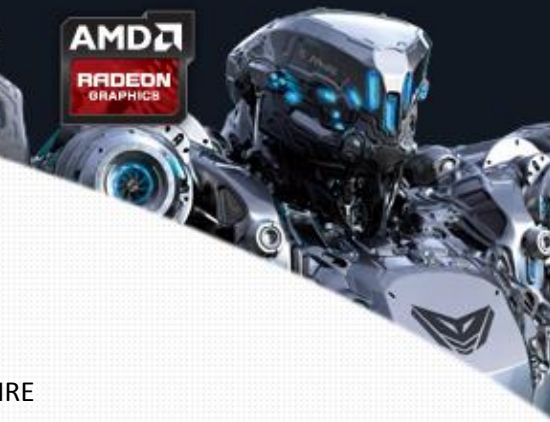
The graphics card is more than another component; it's the beating heart of your gaming system. It should look as good as it costs. With tasteful shroud design augmented by RGB LEDs, each card is practically a piece of art. You can even change the colors of the LED, for your own customized design. This can be controlled via software using the latest version of SAPPHIRE's Award Winning Overclocking Utility - **TriXX 3.0**, Users can choose from a set of five different modes including Fan Speed Mode, PCB Temperature Mode or the colorful rainbow mode. If you prefer, LEDs can also be turned off.



Modes↕	Function/State↕
SAPPHIRE Corporate Blue↕	Static blue (Default Mode)↕
Rainbow↕	Random colors↕
PCB Temperature Indicator↕	<= 60 °C slow breathing blue(6 secs) ; ↓ > 60°C <70 °C mid-slow breathing light purple(3 secs) ; ↓ > 70°C < 80°C mid-slow breathing deep purple(3 secs) ; ↓ > 80°C faster breathing red (2 secs)↕
Fan Speeds ↕	0 ~ 200rpm slow breathing blue(6 secs) ; ↓ > 201 < 1000rpm mid-slow breathing light purple(3 secs) ; ↓ > 1001 <1500rpm mid-slow breathing deep purple(3 secs) ; ↓ > 1501rpm faster breathing red (2 secs)↕
Customized LEDs↕	End user can customize the color. Static State.↕
LEDs off↕	↕

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SAPPHIRE NITRO+ Series

Designed from the ground up, we've crammed in everything you need to truly maximize your gaming experience. The SAPPHIRE NITRO+ series features the highest performing latest technology: cherry-picked, limited edition cores, two Tri-XX gaming modes, the very best cooling technologies and much more. With sleek, elegant contours and unique styling these cards have been designed to suit any build. Featuring the very latest graphics architecture from AMD with NITRO+ you'll have a fast, reliable gaming experience whatever your game. No matter what kind of gamer you are, the SAPPHIRE NITRO series offers you the maximum gaming experience

