Sapphire Nitro+ RX 480 8GD5 (UEFI) SKU number: 11260-01

**SPECIFICATION**
- GPU: AMD Radeon RX 480 Graphics
- Stream Processors: Up to 2304 unit
- Compute Units: 36
- Boost Clock: Up to 1342 MHz
- Base Clock: 1208 MHz
- Memory Clock: Up to 2000 MHz, Effective 8000Mbps
- Memory Type: 8192MB
- Bus Interface: PCI-E 3.0 x 16
- HDCP support: Yes
- Firmware: Dual UEFI BIOS
- External Power: PCIe Graphic External 1 x 8 pin
- Cooling System: Dual slot, Dual Fan
- Bracket: Full Height
- Software: Driver DVD
- Crossfire Support: Crossfire up to 2 GPUs (Bridgeless)

**PRODUCT FEATURES**
- AMD Blower Cooling Technology
- FinFET 14 Technology
- Microsoft DirectX® 12 Support (DirectX®12 OPTIMIZED)
- 4th GCN Architecture (Powered by Polaris Architecture)
- Vulkan™ API support
- Virtual Super Resolution (VSR)
- AMD LiquidVR™ Technology (VR Ready Premium RX480)
- AMD FreeSync™ Technology
- AMD Eyefinity
- OpenGL® 4.5 support
- OpenCL™ Support
- XConnect Support
- HDMI™ 2.0b / Display Port 1.4 (DisplayPort 1.2 Certified, DisplayPort 1.3/1.4 Ready)
- Dolby® TrueHD and DTS-HD Master Audio™ Support
- AMD TrueAudio™ Next Technology
- Frame Rate Target Control (FRTC)

**SYSTEM REQUIREMENTS**
- PCI Express® based PC is required with one X16 lane graphics slot available on the motherboard.
- 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.
- 500W (or greater) power supply with minimum one PCIe 8 pin power connector is required.
- OEM and other pre-assembled PCs may have different power requirements.
- Minimum 4GB of system memory. Recommended 8GB.
- Installation software requires a keyboard, a mouse, and a display.
- DVD playback requires DVD drive and a DVD.
- A display with digital input (HDMI™ or DisplayPort) is required.
- Blu-ray™ playback requires Blu-ray drive a
- Supported operating systems include Windows® 10, and Windows® 7.
- 64-bit operating system required.

**DIMENSION:**
- 240(L) x 125(W) x 41 (H) mm
- 5 x Maximum Display Monitors support
- 2 x DP / 2 x HDMI / 1 x DVI-D

**ACCESSORIES**
- NA

**MAXIMUM DISPLAY RESOLUTION**
- HDMI 2.0: 3840x2160p (60 Hz)
- DisplayPort 1.4: 3840x2160 (120Hz)
- DL-DVI-D: 2560x1600 (60Hz)
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### Cooling System (Dual-X Cooling)

<table>
<thead>
<tr>
<th>Component</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cooling Fan</td>
<td>95mm x 2</td>
</tr>
<tr>
<td></td>
<td>Dual Ball Bearing</td>
</tr>
<tr>
<td></td>
<td>Quick Connect Support</td>
</tr>
<tr>
<td>Cooling Module</td>
<td>8mm Heat-Pipe x2 + 6mm Heat-Pipe x1</td>
</tr>
<tr>
<td>NITRO Back-Plate</td>
<td>Yes</td>
</tr>
</tbody>
</table>

### Board Design

<table>
<thead>
<tr>
<th>Component</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Power Design</td>
<td>5 Phase Digital Power</td>
</tr>
<tr>
<td>PCB Layer</td>
<td>8 Layers</td>
</tr>
<tr>
<td>RGB LED</td>
<td>Yes</td>
</tr>
<tr>
<td>External Power Connector</td>
<td>PCI-Express x 8 pin power connector</td>
</tr>
<tr>
<td>Product Positioning</td>
<td>GTX 980/R9 390X performance</td>
</tr>
</tbody>
</table>

### NITRO Boost settings (Default)

<table>
<thead>
<tr>
<th>Feature</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Engine Clock</td>
<td>Boost Clock 1342 MHz / Base Clock 1208 MHz</td>
</tr>
<tr>
<td>Memory Clock</td>
<td>2000 MHz, 8.0 Gbps</td>
</tr>
<tr>
<td>Target GPU Temperature</td>
<td>75°C</td>
</tr>
<tr>
<td>Fan Speed</td>
<td>Nominal 0~2300 RPM / Maximum 3200 RPM</td>
</tr>
</tbody>
</table>

### Silent Mode Settings

<table>
<thead>
<tr>
<th>Feature</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Engine Clock</td>
<td>Boost Clock 1266 MHz / Base Clock 1120 MHz</td>
</tr>
<tr>
<td>Memory Clock</td>
<td>2000 MHz, 8.0 Gbps</td>
</tr>
<tr>
<td>Target GPU Temperature</td>
<td>75°C</td>
</tr>
<tr>
<td>Fan Speed</td>
<td>Nominal 0~2000 RPM / Maximum 3200 RPM</td>
</tr>
</tbody>
</table>

### 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.

### 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.

### Black Diamond 4 Chokes

Our Black Diamond Chokes are 10% cooler and 25% more power efficient than a normal choke - and these Mark 4 Chokes reduce the coil temperatures by other 15% over the Mark 3s. These exclusive chokes will maintain gaming stability using their built-in heatsinks and help minimize coil whine.
**Fan Check**
Fan Check allows users to check the cooler’s status and immediately contact customer support through Fan Service in case of problems.

**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!

**NITRO Cool Tech**
With the SAPPHIRE NITRO Gaming Series cards’ Intelligent Fan Control III, the fan starts precisely at 52 degrees Celsius to smartly balance performance against fan noise.

**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.

**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.

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**NITRO Glow**
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, or through hardware by pressing the red button on the back of your SAPPHIRE NITRO Gaming Series card. 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.

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<table>
<thead>
<tr>
<th>Modes</th>
<th>Function/State</th>
<th>Note</th>
</tr>
</thead>
<tbody>
<tr>
<td>SAPPHIRE Corporate Blue</td>
<td>Static blue</td>
<td>default</td>
</tr>
<tr>
<td>Rainbow</td>
<td>Random colors</td>
<td></td>
</tr>
<tr>
<td>PCB Temperature Indicator</td>
<td>&lt; 60 °C slow breathing blue(6 secs) ; &gt; 60°C &lt;70°C mid-slow breathing light purple(3 secs)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>&gt; 70°C &lt; 80°C mid-slow breathing deep purple(3 secs)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>&gt; 80°C faster breathing red (2 secs)</td>
<td></td>
</tr>
<tr>
<td>Fan Speeds</td>
<td>0 ~ 200rpm slow breathing blue(6 secs) ; &gt; 201 &lt; 1000rpm mid-slow breathing light purple(3 secs)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>&gt; 1001 &lt;1500rpm mid-slow breathing deep purple(3 secs)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>&gt; 1501rpm faster breathing red (2 secs)</td>
<td></td>
</tr>
<tr>
<td>Customized LEDs</td>
<td>End user can customize the color. Static State.</td>
<td>Control by New TRIXX</td>
</tr>
<tr>
<td>LEDs off</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
**AMD LiquidVR™ Technology**
AMD’s pioneering Virtual Reality technology is poised to enable better content, comfort, and compatibility to VR applications – from simulations, gaming, entertainment, education, social media, travel and medicine to real estate, ecommerce and more – for a whole new level of presence.

**AMD 4th GCN Architecture**
4th Gen GCN Architecture for AMD’s unified graphics processing and compute cores features enhanced shader performance, a new Geometry Engine, and new memory compression technology that allows for improved performance and efficiency.

**AMD Free-Sync™ Technology**
AMD FreeSync™ technology in select AMD APUs and GPUs synchronizes the update rate of a monitor to your favorite game, eliminating tears and choppiness for effortlessly smooth gameplay.

**AMD Eyefinity Technology**
Expand your territory and customize your field of vision. Connect up to six displays on a single GPU for dynamic, panoramic multi-screen gaming.

**AMD CrossFire™**
Multi-GPU support offers superior scalability.
AMD CrossFire™ technology enables a bridgeless AMD CrossFire multi-GPU configuration.

**AMD TrueAudio™ Next Technology**
A revolutionary audio processing environment utilizing the 4th Generation GCN compute units to create the most realistic 3D surround environments for VR gaming.

**Virtual Super Resolution (VSR)**
VSR automatically re-renders games at higher resolutions (up to 4K-quality) and then dynamically rescales them for HD displays at higher quality and details.

**Microsoft DirectX® 12 Support**
RADEON™ RX 400 Series Graphics fully support Microsoft® DirectX® 12, with the following enhancements:
- Faster Tessellation
- Tiled Resources: Support for massive virtual textures, enabling dynamic loading of tiles into graphics RAM for expansive game world details.

**DirectX®12 OPTIMIZED**
AMD’s key advantage of Async Shaders bring increased levels of utilization for graphics, compute, and memory workloads to ensure your games don’t miss a beat.

**Powered by Polaris Architecture**
Radeon™ RX graphics cards feature the latest Polaris architecture which includes the 4th Gen GCN graphics cores, a brand new display engine, new multimedia cores, all on the revolutionary FinFET 14 process technology for enhanced performance and efficiency.

**Dolby® TrueHD and DTS-HD Master Audio™ Support**
Support of content-protected, high-bandwidth, 7.1 channels of surround sound over HDMI™ and DisplayPort.
NOTE: Receiver or HDTV that supports these audio formats required.

**FinFET 14**
The FinFet 14 process technology puts more transistors in less space, enabling dramatic increases in processing power and power efficiency.

**Frame Rate Target Control (FRTC)**
Allows users to set a frame rate target when playing an application; the benefit being that users can reduce GPU power consumption (great for games running at frame rates much higher than the display refresh rate).

**Vulkan™**
Next generation multi-platform API enables improved graphics and fluid visuals for next generation gaming

**Ready for AMD XConnect™ Technology**
Should a PC gamer on the go buy a gaming notebook that’s tough to carry, or a thin notebook that’s tough to game on? AMD XConnect™ unlocks the best of both worlds on systems designed for Thunderbolt™ 3 eGFX enclosures—an ideal form factor for fast and efficient Polaris-powered GPUs.