

The Technical Description Of The PlayStation 4 (PS4)  
The City College of New York  
Humayara Karim



**Table of Contents**

Introduction	3-4
Exterior components	4-5
Interior Components	6-8
Game Controller	8-9
Additional Information	9
Conclusion	10
References	11

## Introduction to Your PlayStation

### *Historical Background Information*



Original PlayStation from 1994 (Thang, 2016)

The PlayStation 4 (PS4) is a very famous gaming console owned by Sony. The first ever Playstation was created on December 3, 1994. This 26-year old gaming console brand is still very popular today. PlayStation became one of the first video gaming consoles to sell over 100 million units because of how revolutionary this product was for its time (Thang, 2016). In fact, the original PlayStation delivered “a dual-speed CD-ROM drive, a one-core CPU that had 2MB of RAM along with 1MB of video RAM with graphics that could deliver up to 360,000 polygons per second” (Thang, 2016). RAM stands for Random Access Memory, and is a short-term digital storage. The reason why RAM is so important for gaming, is because it allows you to access data more quickly making the game console stream your video game much more efficiently. Back then, having even 2MB of RAM, like the original PS did, changed the way gaming was done because it had clearer and an efficient functioning gaming performance.

The original PlayStation also transitioned the gaming industry into real-time 3D rendering and away from 2D graphics. Another component that made the original PlayStation revolutionary, was its use of the compact disc. This allowed the gaming console to provide full

motion video, something competitors like Nintendo 64 couldn't do because of its space-limited cartridges (Thang, 2016). Unlike today, the original PlayStation didn't even have an internal hard drive, instead the games were saved in memory cards there were only about 128KB (kilobyte) in size. Through this technical description, you'll be able to see the state of the art components the PS4 contains today!

## Exterior Components



Figure 1. Different portages of the PS4. Parts are not highlighted this color in reality (iFixit, 2019). This figure shows the digital optical audio out (orange), HDMI port (yellow), ethernet (green), the proprietary auxiliary port (blue) and the power inlet (red).

Figure 1, shows the different types of portages the PS4 has. The port that is outlined in orange represents the digital optical audio out. This port is used to send sound to your connected device. For example, when you connect your PS4 to a device like a TV, you would need to connect the optical audio out to your TV as well so that it can amplify the sounds of your PS4.

Right next to the digital optical audio out is the HDMI (highlighted yellow), High-Definition Multimedia Interface, port. This is the port that transmits digital video and digital audio signals between devices. In other words, it is the port that allows you to display your games/videos onto another screen. Then next to the HDMI port, there's the ethernet (highlighted in green). The ethernet is used to connect a device to a wired network (Mitchell,

2019), so you can be connected to the internet. The last two ports are the proprietary auxiliary port (highlighted in blue) and the power inlet (highlighted in red). The proprietary auxiliary port is used to connect external devices like the PS4 camera (iFixit, 2019) and the power inlet is the port that is connected to any type of electricity outlet so that the device can be powered to run.



Figure 2. Disk Drive (iFixit, 2019)



Figure 3. Power & Eject button (BosSin, 2014)

The PS4 has a Blu-ray/DVD disc drive located in the front middle section of the console. In order to put a disk in or take a disk out, one would press the eject button that is labeled in figure 3. Conveniently, the power button is also located near the disk drive and is above the eject button. Look at figure 3 for reference. Although there is a disc drive located in the console, PS4 users can also download games and videos, so that Blu-ray/DVD disc aren't needed. But the PS4 still gives you the option to use the disks if you wanted to. The same idea goes for the power button, it's there but you don't need it because you can turn the console on and off with the PS4 controller.

## Interior Components



Figure 4. PS4 Caddy (iFixit, 2019)



Figure 5. PS4 hard drive (iFixit, 2019)

The PS4 contains a 500GB 5400 RPM SATA II hard drive (refer to fig. 5). This hard drive not only stores the things you save while playing your game, but it also saves all the codes required for your operating system, the framework browsers used to connect to the internet, and drivers for your accessories (Lacoma, 2019). Since there is only a single screw securing the caddy (look at fig. 4), and it's standard 2.5", it is very easy to replace the hard drive and upgrade your storage with any drive you like, as long as it's no thicker than 9.55 mm and not smaller than 160 gigabytes (iFixit, 2019) .

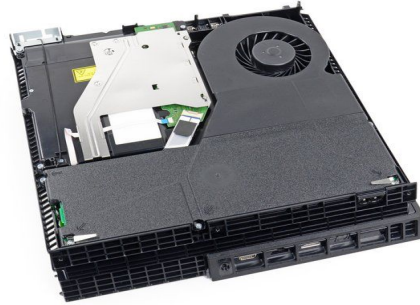


Figure 6. PS4 fan (iFixit, 2019)

The PS4 also has a fan built into the console. The PS4 gives off a lot of heat and needs a cooling system so that the console does not explode, this is where the fan comes into place. The fan has a snail shell design and this allows it to be placed in such a way that the hard drive can be kept away from the excess heat the console gives off (Renars, 2017). The shape of the fan also allows there to be a reduction in the amount of noise that is produced by the machine running (Renars, 2017). So, you can play your games in peace!



Figure 7. PS4 Motherboard (iFixit, 2019)

Fig.7 shows the PS4's motherboard. The purpose of the motherboard is to hold the microprocessor chip and play as a connection to all the computer parts. The PS4 has a green plain of fiberglass and contains an 8-bit micro-processor (Inside the PlayStation 4). Another importance the motherboard has, is that it contains the central processing unit and the graphics processing unit. The central processing unit carries out millions of transistors that are manipulated to perform various calculations, it essentially reads the programmed codes and tells the PS4 what to do and when (Fox, 2017). As for the graphics processing unit, it's what allows the PS4 to display graphics and perform very specific computational tasks (Fox, 2017). It's because of the graphics processing unit that the PS4 has such amazing high definition gaming graphics (Fox, 2017).

### Game Controller

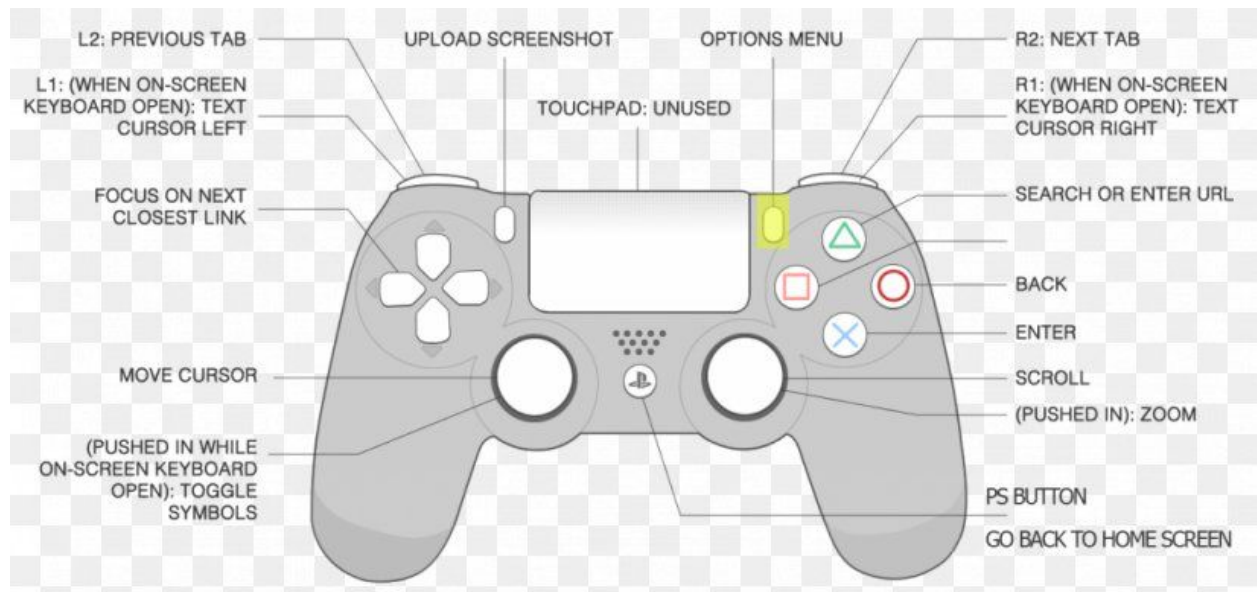


Figure 8. Image of a PS4 game controller (FAVPNG.com)

The PS4 game controller comes in numerous colors and has many functions (as shown in fig. 8). This is an important component that comes along when you purchase the PS4 because without it, you cannot use the gaming console. Some of the components of the controller includes two joysticks that allows users to move the arrow icon and click on what they want to.



The small circle that has the PS4 logo (labeled PS button) allows users to go back to the home screen and by pressing the button for a couple of seconds, it allows users to turn the PS4 on and off. On the right side of the controller, there are 4 buttons that include the shape of a triangle, circle, x, and a square. Each of the shapes signifies a different function depending on what game is being played. Generally, the triangle gives a search function, the circle allows users to go back, the x gives an enter function, and the function of the square depends on the game. The four buttons organized in the shape of a circle, on the left, also allows you to move the cursor like the joysticks. There is also a R1/L1 and R2/L2 button on the top that allows one to open tabs, go back to tabs, and open the keyboard. For more options the controller entails, please refer to figure 8.

### **Additional Information**

#### *Software features*

One of the perks of having a PS4 is that you can create a PSN (PlayStation Network) account. With your PSN account, you can create a custom avatar to share with your friends list and you can also create your own dashboard from screenshots of your favorite pictures (PS4 Features). Your PSN account will also allow you to connect with friends and see their profiles from your “Friends List”. You can also follow anyone you want such as content creators to keep up to date with them, as well as sending private messages and creating group chats. What a great/easy way to socialize with others!

Not only that, but you can download and stream other apps as well. For instance, the PS4 can stream video streaming services like Netflix, Amazon Video, Hulu, HBO Now, Twitch, and YouTube.

#### *Support*

If you are facing any trouble or have any questions about the PS4, please feel free to utilize our free resources. This includes calling us at : 1-800-345-7669 or going on our PlayStation Support site ([https://support.playstation.com/s/?language=en\\_US](https://support.playstation.com/s/?language=en_US)). We’re also on twitter and you can tweet us @AskPlayStation and we will do our best to help you.

**Conclusion**

Thank you for purchasing the PlayStation 4. As you can see, the PS4 is a gaming console that involves state of the art technology. Through the description of the console's history and the description about the components the PS4 has to offer, we hope you have a greater appreciation for this great gaming console. Just remember, you can do so much more than playing video games on this console, you can stream videos from your favorite platforms such as Netflix and Youtube and you can connect with your friends to chat. We hope you enjoy your time with your PS4!

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### **Reflection**

For this assignment, I had to choose a technological item to describe. At first I was unsure what type of device I wanted to talk about but then I decided to choose something I use almost everyday, my PlayStation 4 (PS4). The PS4 is a very popular gaming console in today's world and it helps me relax when I go on it after a stressful day of studying and doing homework. Another reason why I chose to talk about the PS4 is because I would be given the chance to talk about the hardware components in my technical description, which relates to my computer engineering major.

The genre of this assignment is a technical description. The intended audience for my technical description are people who are interested in Sony products and are looking to buy the PS4 and computer engineers who want to learn more about the technical parts this system has to offer. The purpose of a technical description is to describe the PS4's characteristics in depth and clearly. So, in my case I had to describe the characteristics of a PS4 which led me to my first obstacle in writing this assignment. I had to decide how I was going to organize my information and how I was going to give an analysis in a way that everyone will understand, and not just those who have a computer science/engineering background.

After I gathered all my resources, I decided on how I was going to start my technical description. I first started off with an introduction, that gave relevant background information about the product, then divided the components of the PS4 into internal and external components. For instance, some of the external components I decided to talk about are all the ports that are located on the back of the PS4 and for the internal components, I decided to talk

about items such as the hard drive. I also decided to talk about the game controller as well because it is an important component of the PS4, without it users cannot use the console.

With my descriptions I included numerous images and referred back to them so that the audience can get a better understanding of what I am talking about. This style of writing, where I break down certain characteristics of an item and give a full depth analysis is what makes my assignment a technical description.

The media of this assignment is both a form of print and digital media. This is because when we did peer reviewing we had to submit our drafts on Blackboard, which was a digital copy. Also one of the requirements for this assignment was to submit both a digital copy on Blackboard and hand in a physical copy in class. Since, I am also giving a printed copy of this assignment, it also makes my writing assignment a form of print media.

The exigence for this technical description is how some people don't know what makes the PS4 one of the best gaming consoles out there and need to be more informed. So, by explaining the features the PS4 has, people can have a greater appreciation for how even though the console itself is complex it is very easy to use. This is also why my stance for this assignment is in support for people purchasing this gaming console.

Lastly, as for the Course Learning Outcomes, I have met #3,4, and 8. Since, I got to choose what my stance and purpose was, this helped me reach my writing goal and meet Outcome #3. My writing goal was to give an easy to understand analysis of the PS4 so the audience can in a way be persuaded to get this product/ have a better understanding on how to use this product. I met Outcome #4 as my group and I collaborated on Blackboard to edit each other's papers and evaluate how well we did this assignment, so we can fix any problems we had

in our technical descriptions. As for how I met Outcome #8, I used information from various sources and incorporated them into my analysis by citing them in APA format, which made my writing to be more effective.