

---

# **Texas Instruments Vex Online Challenge 5203 - Compaq Presario cq57 Laptop**

Bryce Outten, Justin Theophile, Dexter Wesley

---

---

# Why We Chose This Laptop

We chose this device because one of our team members has used this laptop for four years and it has served him well until it was rendered useless because of a virus and old age. Laptops have been one of the biggest markets in technology since the turn of the century. People may say that laptops are better than desktops because they are portable, and more customizable aesthetically and internally, plus they are cheaper and can grow interns of specs.

The great thing about this laptop is that it was not produced and manufactured just in one country. Parts have come from other countries and companies dispersed across Asia.

The one thing that we learned about as we took apart the laptop was that, laptops as a design is not that hard to put together and assemble. There is not complicated wiring or fabricated parts, there are just a list of parts that one may need that is put together to make the whole device Which makes parts easy to take out and replace.

---

# Laptop keyboard

- Top Plate of keyboard; Most laptop keyboards only contain the connectors, the motherboard contains the drivers to allow the keyboard the function



# WiFi card: 802.11bgn

- Contains the capability to connect to the b g and n wifi bands. The “n” band being the newest and fastest.



Source: <http://www.amazon.com/RT5390-Half-height-Mini-Pci-802-11bgn/dp/B00CFXT2VS>

# Cooling Fan

- 3 pin cooling fan and heatsink. The copper bar draws heat toward the fan where the hot air is blown out of the laptop.



Source: <http://www.ebay.com/itm/New-Original-CPU-Cooling-FAN-For-HP-2000-Series-2000-2xx-647316-001-/191011716828>



# Hard Drive

- 250GB 5400 RPM  
8MB Cache SATA  
3.0Gb/s



Source:

<http://www.amazon.com/Western-Digital-Scorpio-Cache-Notebook/dp/B001IKRKO0>

# HP Laptop Screen:

- 1366x768 HD laptop screen 40-pin connector



Source: <http://www.amazon.com/HP-645095-001-Laptop-Screen-1366x768/dp/B005MM4IHM>

# Samsung (SODIMM 2GB PC10600)

- RAM: 2GB of 204 pin  
ddr3 ram



Source: <http://www.amazon.com/M471B5773DH0-CH9-SAMSUNG-1333MHZ-PC3-10600-UNBUFFERED/dp/B004UG17MK>



# HP 647315-001 Speaker kit

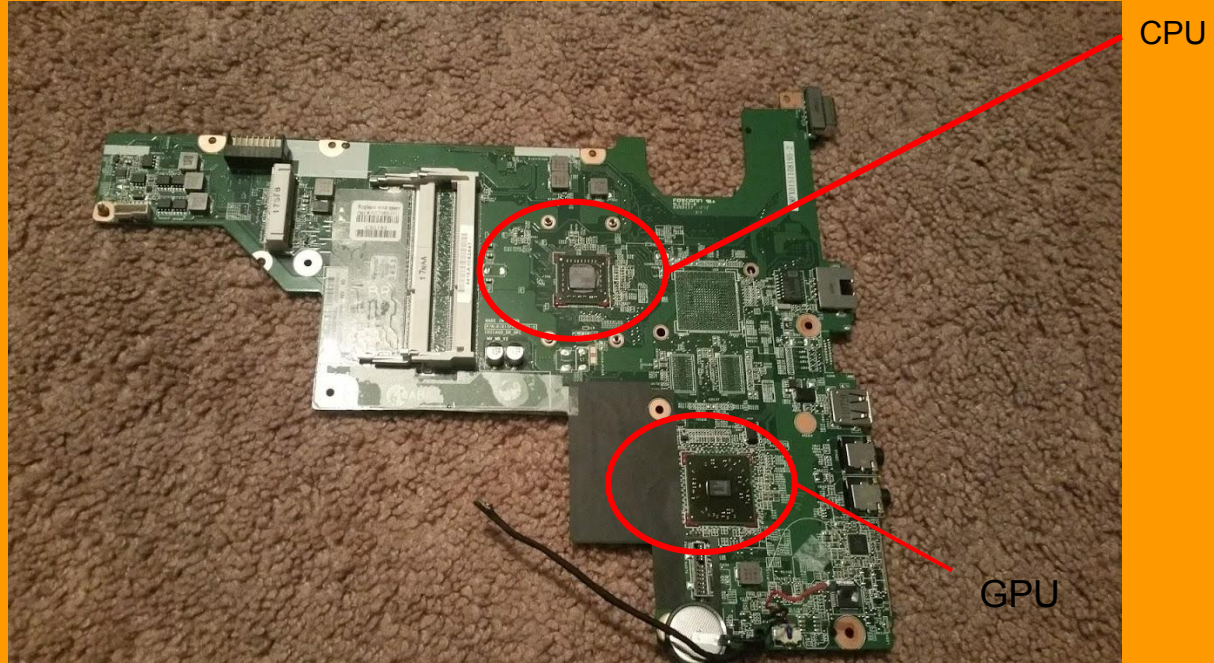
- Used to play sound



Source:  
<http://partsurfer.hp.com/ShowPhoto.aspx?partnumber=647315-001>

# Motherboard

- The motherboard houses the CPU, GPU, RAM and pretty much everything else.

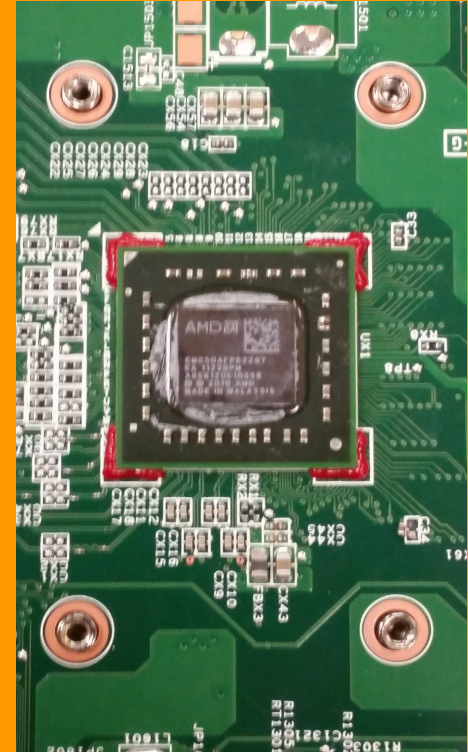
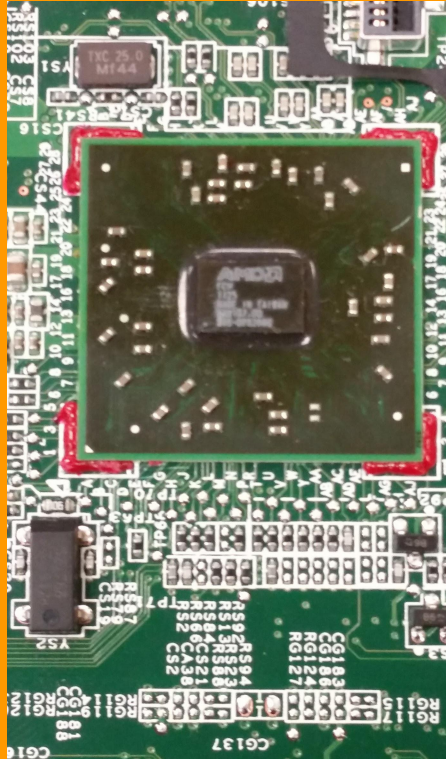


## The GPU (Left):

- Processes Graphical information and outputs the result to the screen.

## The CPU (Right):

- Computes logic and runs computational for programs. This Cpu is clocked at 1.3Ghz which means it performs 1.3 billion cycles of logic every second.



Source:

<http://www.cnet.com/products/compaq-presario-cq57-410us-15-6-e-300-windows-7-home-premium-64-bit-2-gb-ram-320-gb-hdd/specs/>



# Battery

- Holds the charge that powers the laptop. Is a lithium battery, and holds 47 watt hours of charge or 169.2 kilojoules of power, 3 hours of battery life



# Summary

The one thing that we learned about as we took apart the laptop was that, laptops as a design is not that hard to put together and assemble. There is not complicated wiring or fabricated parts, there are just a list of parts that one may need that is put together to make the whole device Which makes parts easy to take out and replace.