

Upon opening the Oneplus 3, immediately the team saw the exceptional build quality that Oneplus had for their product. After removing 2 screws at the bottom of the phone, the back of the phone; a solid slab of aluminum; popped off with ease allowing to view the internals of the phone such as the battery, charging PCB and the motherboard.

At first glance, the phone looked to very simple but the camera glared to be the one to investigate first. Removing the motherboard was very simple with a few screws at the top of the phone near the water damage and warranty stickers. Removing those would allow the motherboard to be removed from the chassis of the phone. Doing this you will find the two cameras, the front facing camera produced by Sony running 8 megapixels and the rear camera of 16 megapixels which used a protocol to stabilize motion known as OIS or Optical Image Stabilization.

The structural integrity of the phone is held using a battery which was a very interesting design choice by OnePlus. Rather than reinforcing the sides of the middle of the back, the design team used the battery that was rated at 3000 mAh, using a classic black color, rather than the red colors previously used in the OnePlus One and Two. The battery pushes against the side of the chassis removing any need for adding an aluminum support in the area, lowering weight, while also making the phone very robust.

On the same motherboard, the system chip was found which is a Qualcomm Snapdragon 820 which, at the time, was the best in the market for the phones in the generation. On top of that, on the motherboard you can find both the GPU and the 6 gigabytes of RAM. The RAM is rated at a very high speed and is rated at LPDDR4.

The GPU is an Adreno 530 which is a very high power GPU for the type of phone that this is.

Overall, the OnePlus 3 was one of the most powerful phones in the time that it came out and for the price and the parts that were discovered during our teardown, the worth of the phone was definitely worth it in comparison to other phones that costed 2x or even more than that of the price of this phone.

This Online Challenge provided our team the opportunity to be able to take apart the phone with reason, that was already broken due to the screen, and overall get an experience when dealing with mechanical hardware and how the phone works from an internal perspective. Although no Texas Instruments parts were found, our research showed a lot of developmental things that spurred from concepts brought into the world by Texas Instruments which taught us that Texas Instruments is an influential part of the computer and micro-computer space and industry; to that we say thank you for the contributions made, but also for the experience given.

