

## Exploring the Insides of a Samsung Galaxy S3

Millions of people around the world use technology daily, but most of these people don't actually know what exactly is inside of them. Inside each and every device there is a vast complicated network of little micro electronic devices working together to perform simple, small tasks every day. The Samsung Galaxy S3 is a great example of the little components of a phone working together to accomplish big things. Through the easy disassembly process, I was able to observe and identify the inside of the Samsung Galaxy S3.

Inside the Samsung Galaxy S3, there were a lot of components that were easily identifiable. For example, the front and back cameras, motherboard, battery, and microphone. The components on the motherboard were a bit more challenging to identify due to smudges and outside markings on the chips. Luckily, I was able to identify a good amount of the chips and other components on the motherboard. After doing research, I came to the conclusion that there were any TI components included in this specific phone.

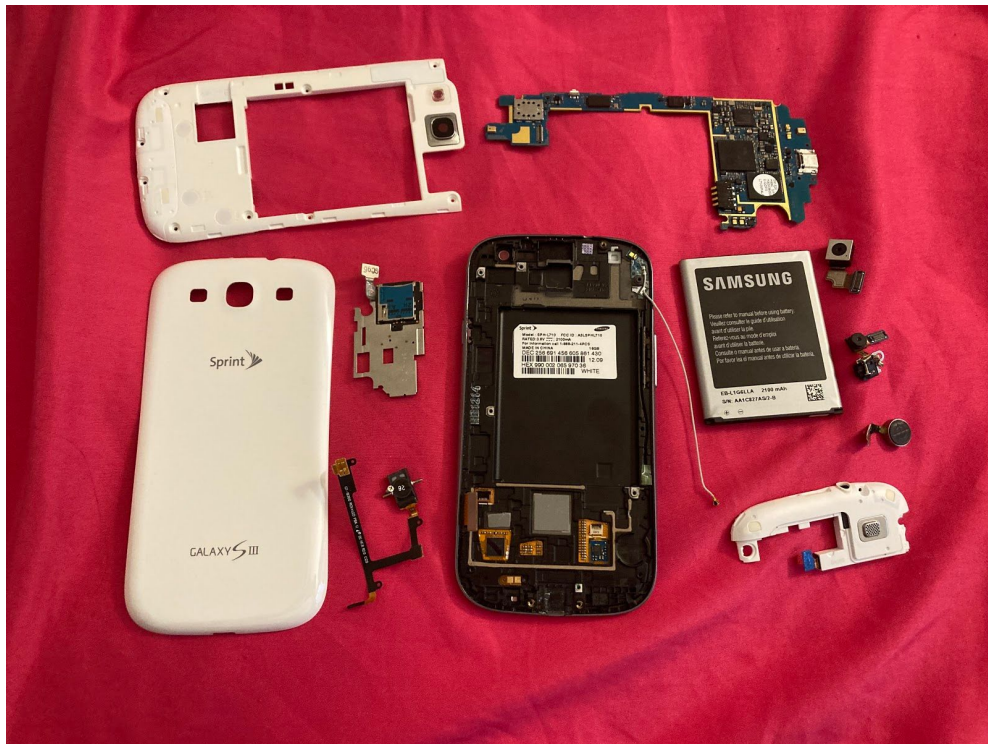
Each and every component of this device has their own purpose in making the phone be as efficient as possible. Below is a table listing the components I was able to identify and its role in the phone:

Component	Role
NAND Flash Memory Chip	The place where all of the phone's data is stored without using power

Power IC	In charge of taking the power from the battery and distributing it to the other parts of the phone
Baseband Processor	Receives and executes all of the commands of the phone
Sim Card	Holds the phone's information as well as allows the phone to connect to networks
RF Transceiver	Used to transmit and receive radio signals from other devices
Wifi module	Gives the phone access to the Wifi networks in range
GNSS Receiver	Finds out the phone's position, velocity, and peice time through signals from satellites
Audio Codec	Compresses and decompresses digital audio signals
Multi-Band Power amplifier	Amplifies low power electronic audio signals to a volume that is able to be heard by people
MHL Transmitter	Able to connect the phone to other larger devices such as HD TVs and projectors.

In conclusion, I have learned many things from this challenge. I was able to learn how to identify components in a phone. I have also learned the basics on how to disassemble electronic devices. This challenge has inspired me to disassemble more devices to learn more about the components within them.

These are all of the different components found on the inside of the Samsung Galaxy S3.

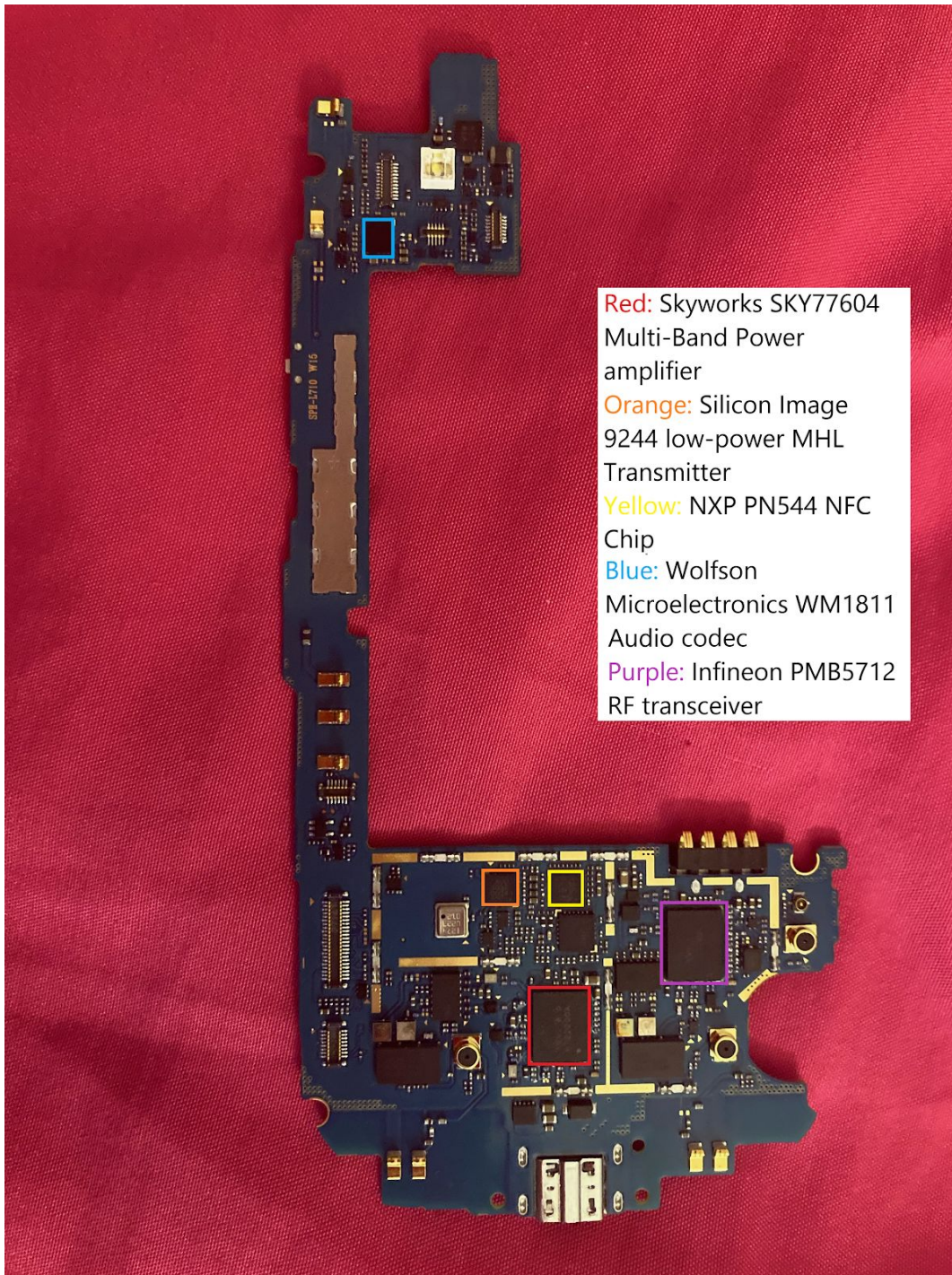


(top to bottom, left to right) These are the rear camera, vibrator, and front camera.



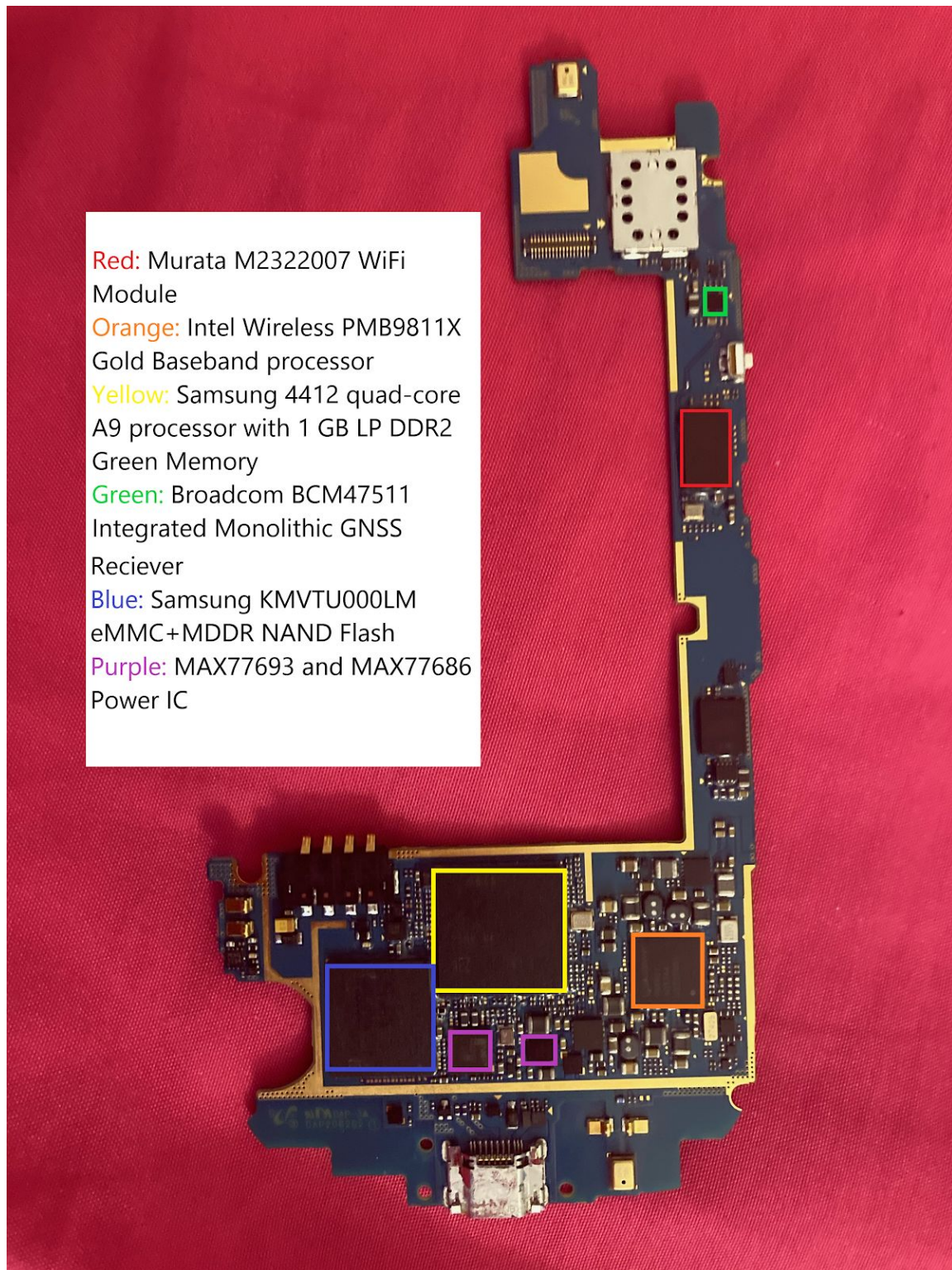


This is the bottom of the Motherboard with its labeled components.





This is the top of the motherboard with its components labeled



## Works Cited

Galan , Walter. Samsung Galaxy S III Teardown. 2012,  
[www.ifixit.com/Teardown/Samsung+Galaxy+S+III+Teardown/9391](http://www.ifixit.com/Teardown/Samsung+Galaxy+S+III+Teardown/9391).

Marshall Brain, Jeff Tyson & Julia Layton. “How Cell Phones Work.” HowStuffWorks, HowStuffWorks, 14 Nov. 2000, [electronics.howstuffworks.com/cell-phone6.htm](http://electronics.howstuffworks.com/cell-phone6.htm).

Das, Santosh. “Parts of a Mobile Cell Phone and Their Function (IC / Big Parts).” Mobile Phone Repairing, 27 June 2020,  
[www.mobilecellphonerepairing.com/parts-of-a-mobile-cell-phone-and-their-function-big-parts.html](http://www.mobilecellphonerepairing.com/parts-of-a-mobile-cell-phone-and-their-function-big-parts.html).