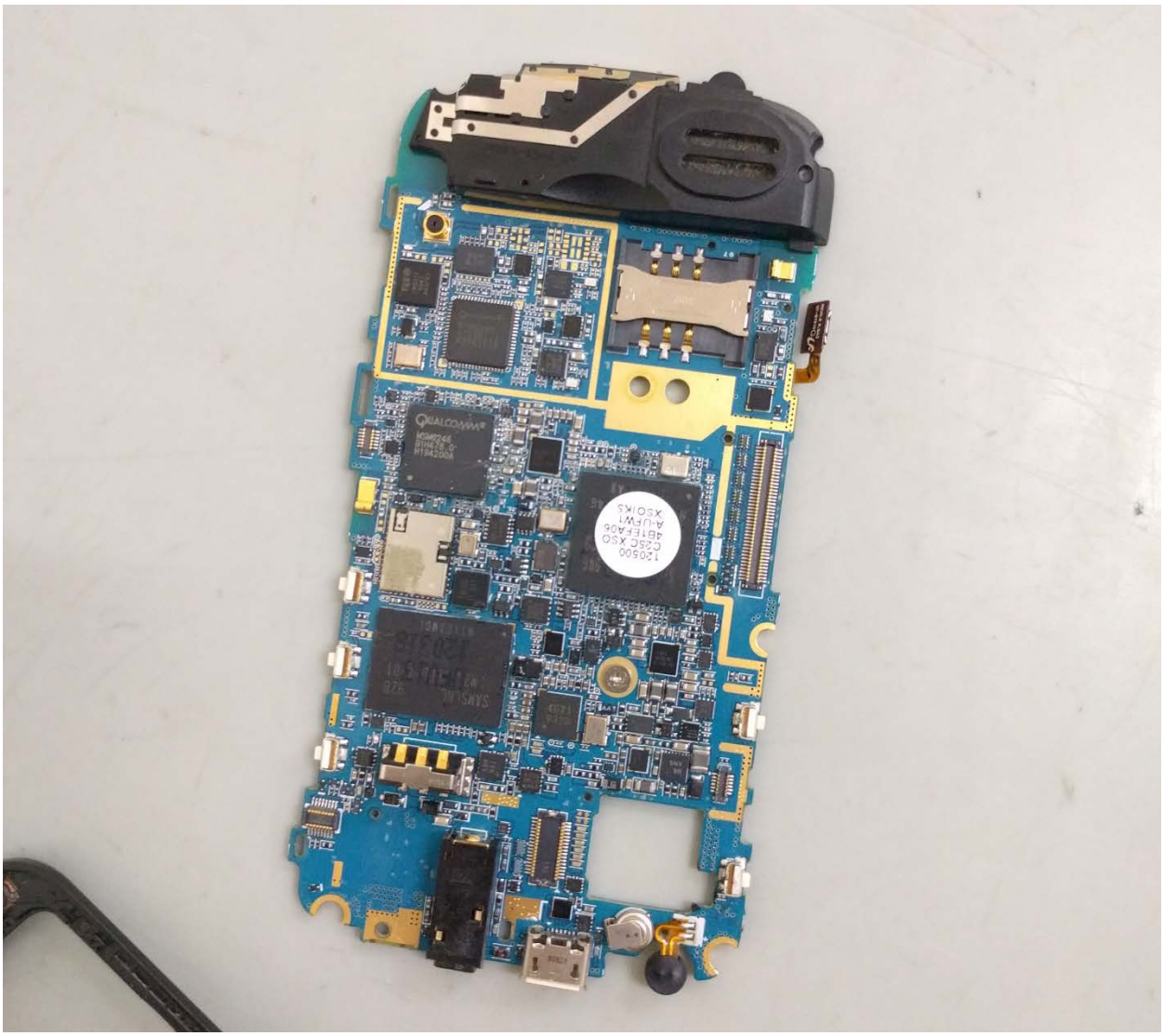
Introduction

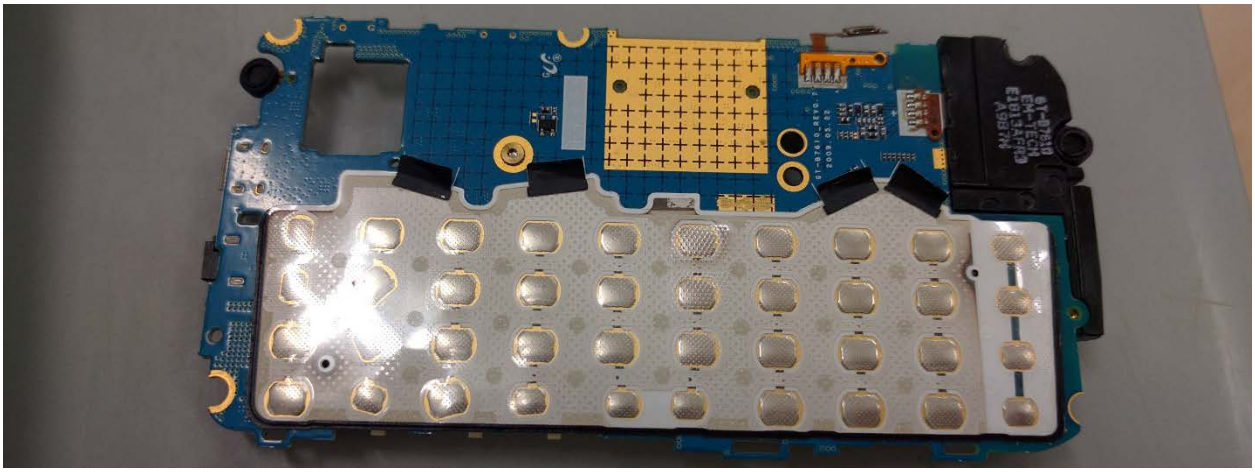
The early smartphone (2007-2010) era was an interesting one. Companies tried their best to tap into the growing smartphone market. Innovation in the phone industry was at its peak then, resulting in unique designs. Wanting to explore these designs, I picked the Samsung Omnia B7610. Released in 2009, it sports a 3.5” touchscreen and a physical keyboard.

Findings

Opening Up

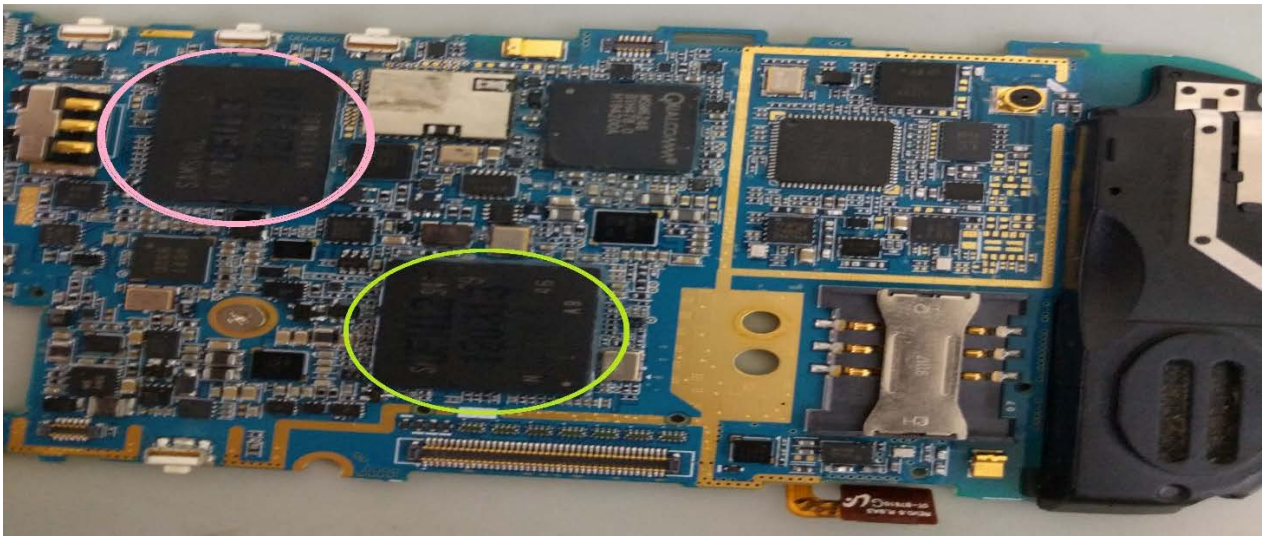


Main PCB (Front)

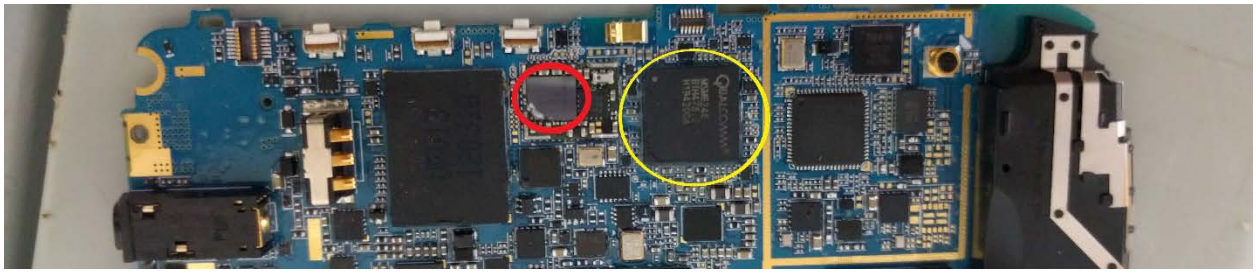


Main PCB (Back)

The first distinction I noticed from this phone was the lack of a SOC (System on Chip). Instead, there were dedicated chips for each component, notably the central processor (circled in green) the graphics processor (circled in pink), both manufactured by Samsung.



On the networking side, the WL 1271A Chip (circled in Red) by Texas Instruments, functions as a dedicated wireless receiver for the phone (supporting the IEEE 802.11n standard). The Qualcomm MSM6246 Chipset (circled in yellow) handles the 3G communications. WLAN and Cellular Data capability were some of the defining features of the smartphone era, with the ability to access the internet on your palm being a selling point to consumers.



Another unique feature of this device is its keyboard. The keys are soldered on to the main PCB, which was interesting as it showed how the keyboard was incorporated into this device. This keyboard is a testament to the kind of innovation the early smartphone era pushed.

Conclusion

While examining the phone's internals, I saw myself identifying the components and relating them to their significance in the shaping of the smartphones. I also observe the kind of innovation the smartphone industry sparked initially, seeing unique designs (in this case the physical keyboard) implemented in bold ways current smartphones dare not do. This phone prides itself on being a showcase to the early innovativeness of manufacturers, and I am able to appreciate its impact on phones today through this breakdown.