

The background is a dark blue gradient. On the left side, there are several vertical teal lines of varying thicknesses. On the right side, there are several diagonal teal lines sloping upwards from left to right. At the bottom, there are several horizontal and diagonal teal lines forming a stepped, geometric pattern.

TEXAS INSTRUMENTS CHALLENGE

INTRODUCTION :

- Texas instruments (TI) is one of the largest semi-conductor companies in the world so it wasn't hard to find a device that is integrated with a TI-product . TI has many divisions like : analog products , embedded processing , wireless , microcontrollers and processors . so I decided to deconstruct a CTRONIQ tablet ; because it's integrated with a calculator , wireless module and processor .

LIST OF COMPONENTS :

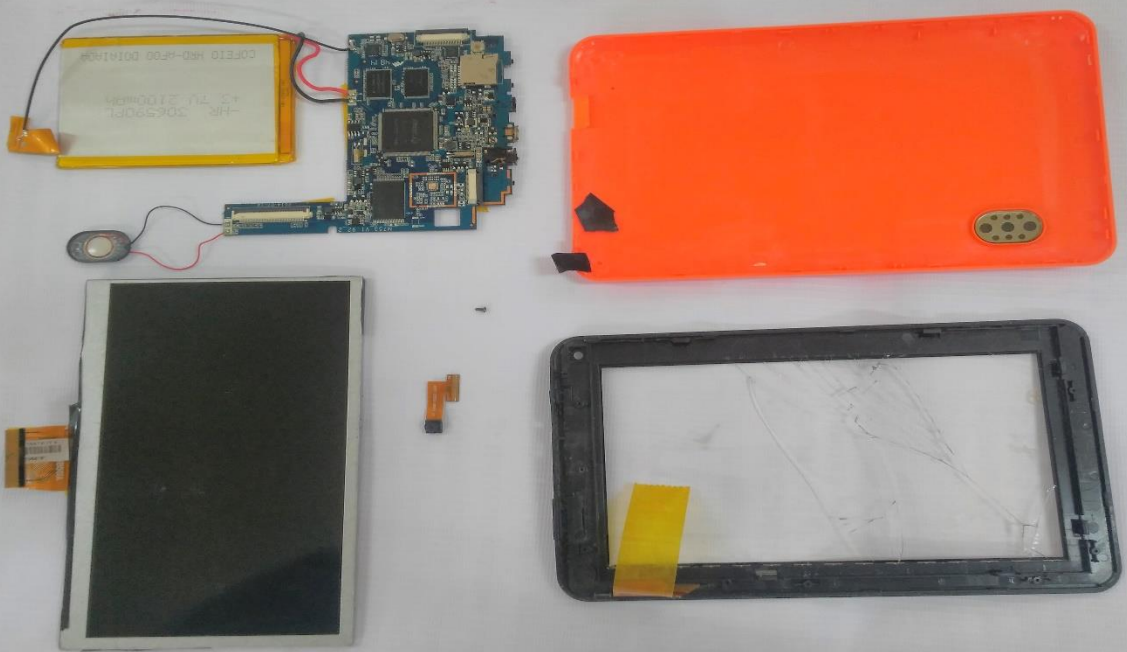
- 1-SMD Capacitor
- 2-SMD Coil
- 3-SMD Transistors
- 4--SMD Diodes
- 5-SMD ICs
- 6-SMD Resistors
- 7-cam
- 8-battery
- 9-flash memory
- 10-memory chip (Rockchip)



First Image of CTRONIQ tablet
that I am going to deconstruct



The first view after taking the cover off

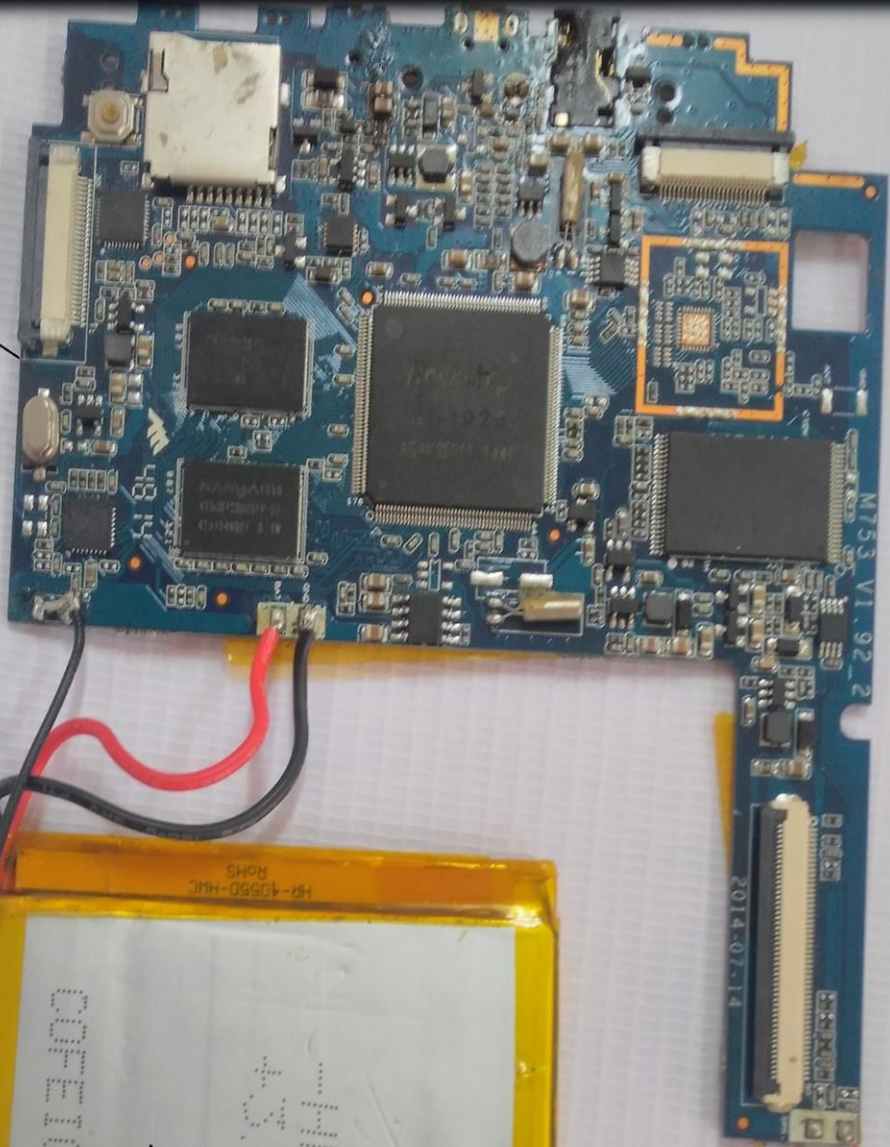


All components after disassembly

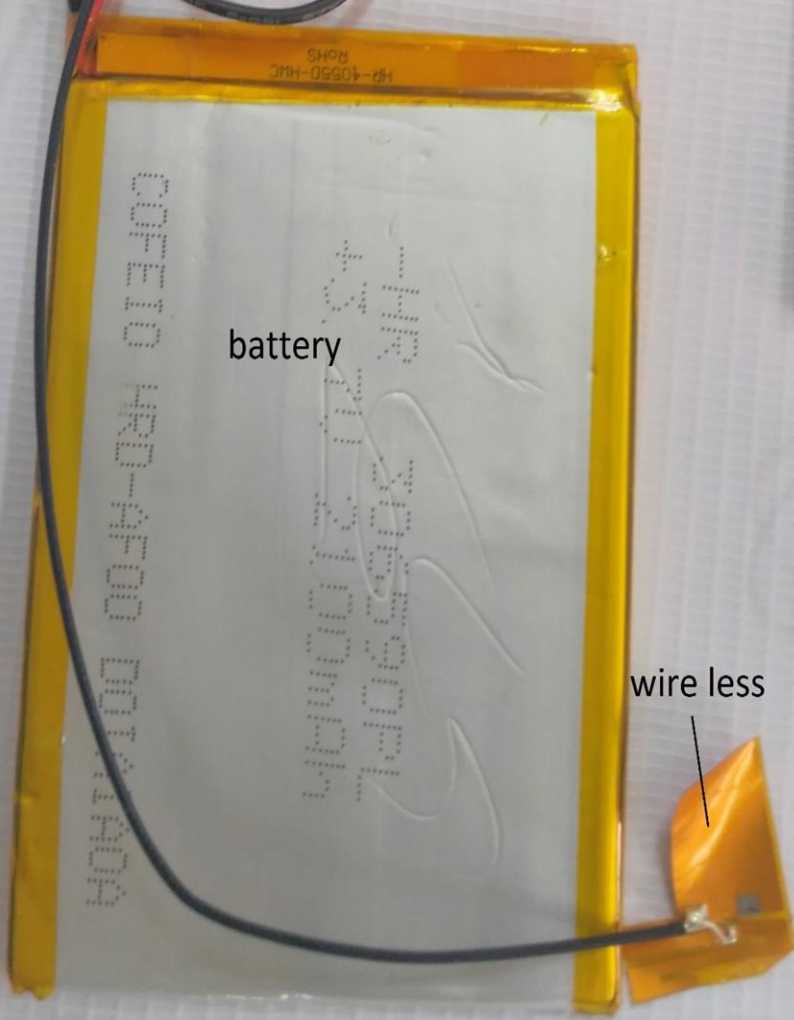


BF695B50IA LCD Display Screen
Replacement for 7 Inch Tablet PC

the whole component



battery



speaker



wire less



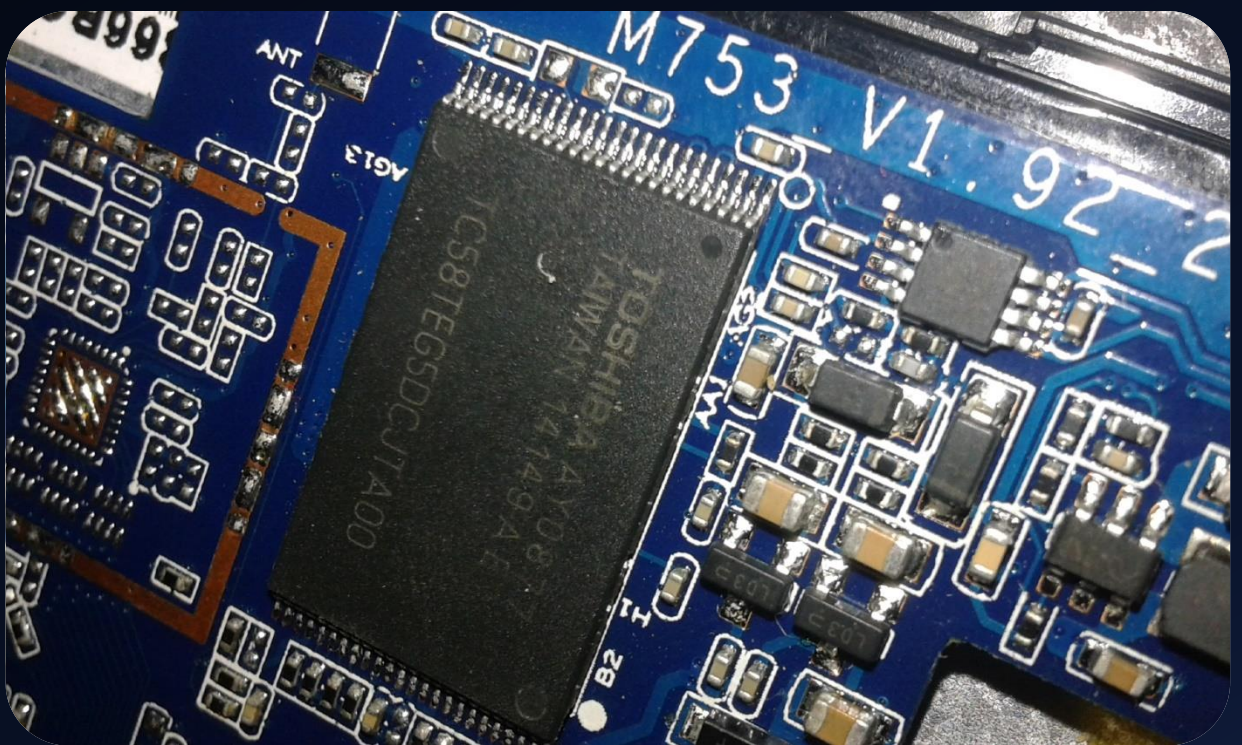


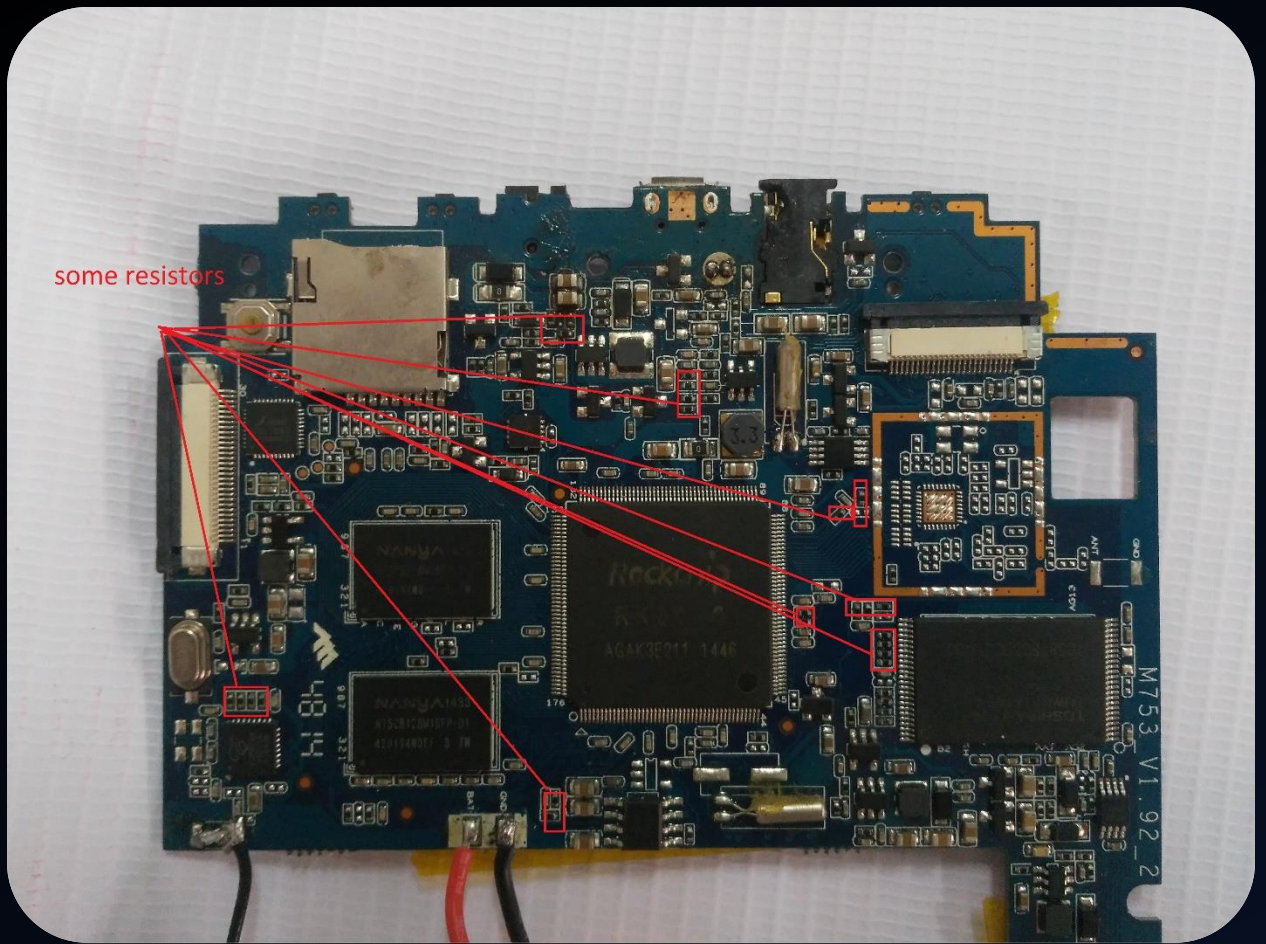
A capacitive touch screen is a control display that uses the conductive touch of a human finger or a specialized device for input.

When a capacitive panel is touched, a small amount of charge is drawn to the point of contact, which becomes a functional capacitor. The change in the electrostatic field is measured to find the location. In some designs, circuits located at each corner of the panel measure the charge and send the information to the controller for processing. In multi-touch screens, sensors are arranged in a grid to enable more complex input.



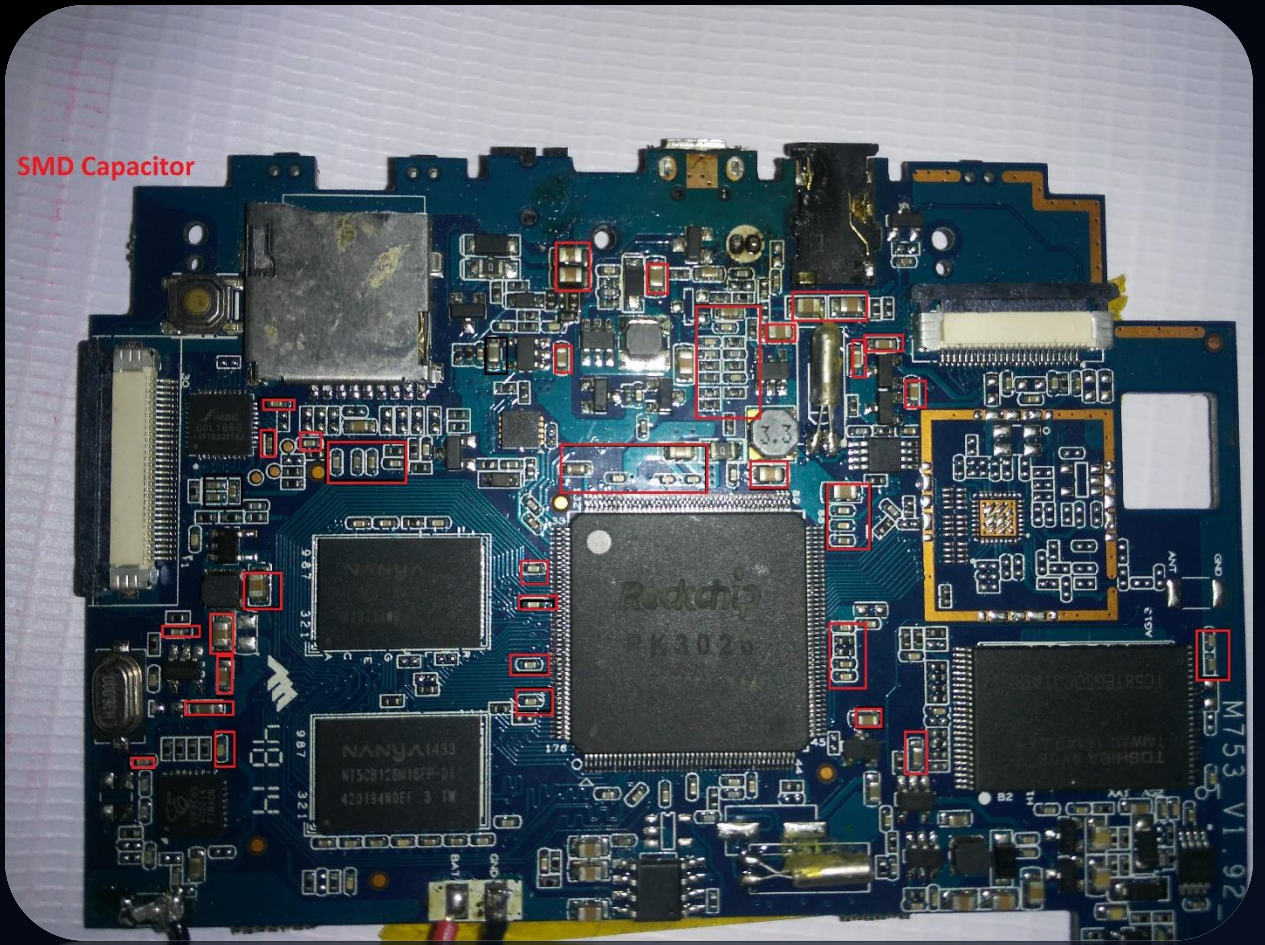
bcf-oodv-086v v1 camera



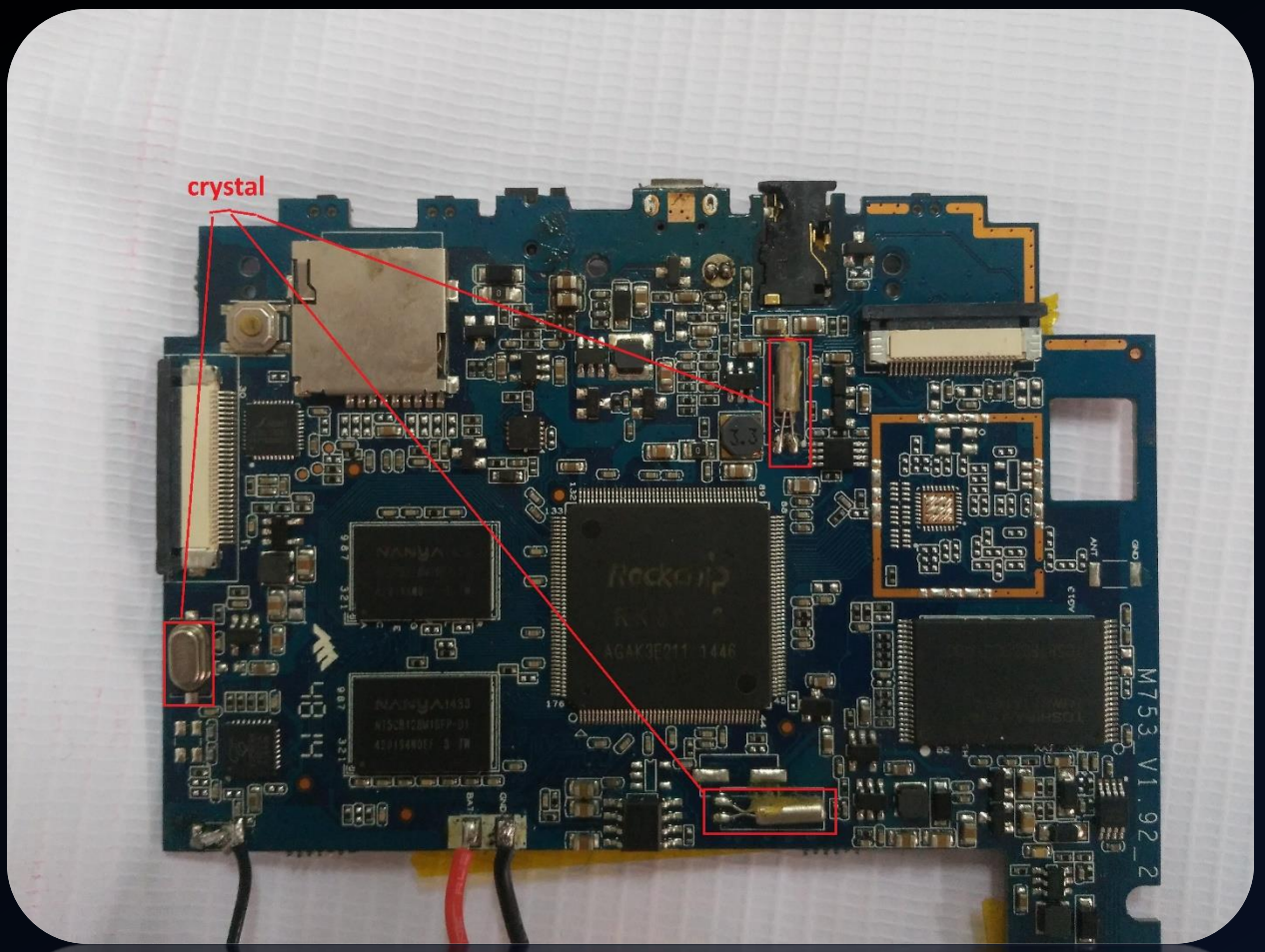


A resistor is a small component that's designed to provide a specific amount of resistance in an electronic circuit. Because resistance is an essential element of nearly every electronic circuit, you'll use resistors in just about every circuit that you build

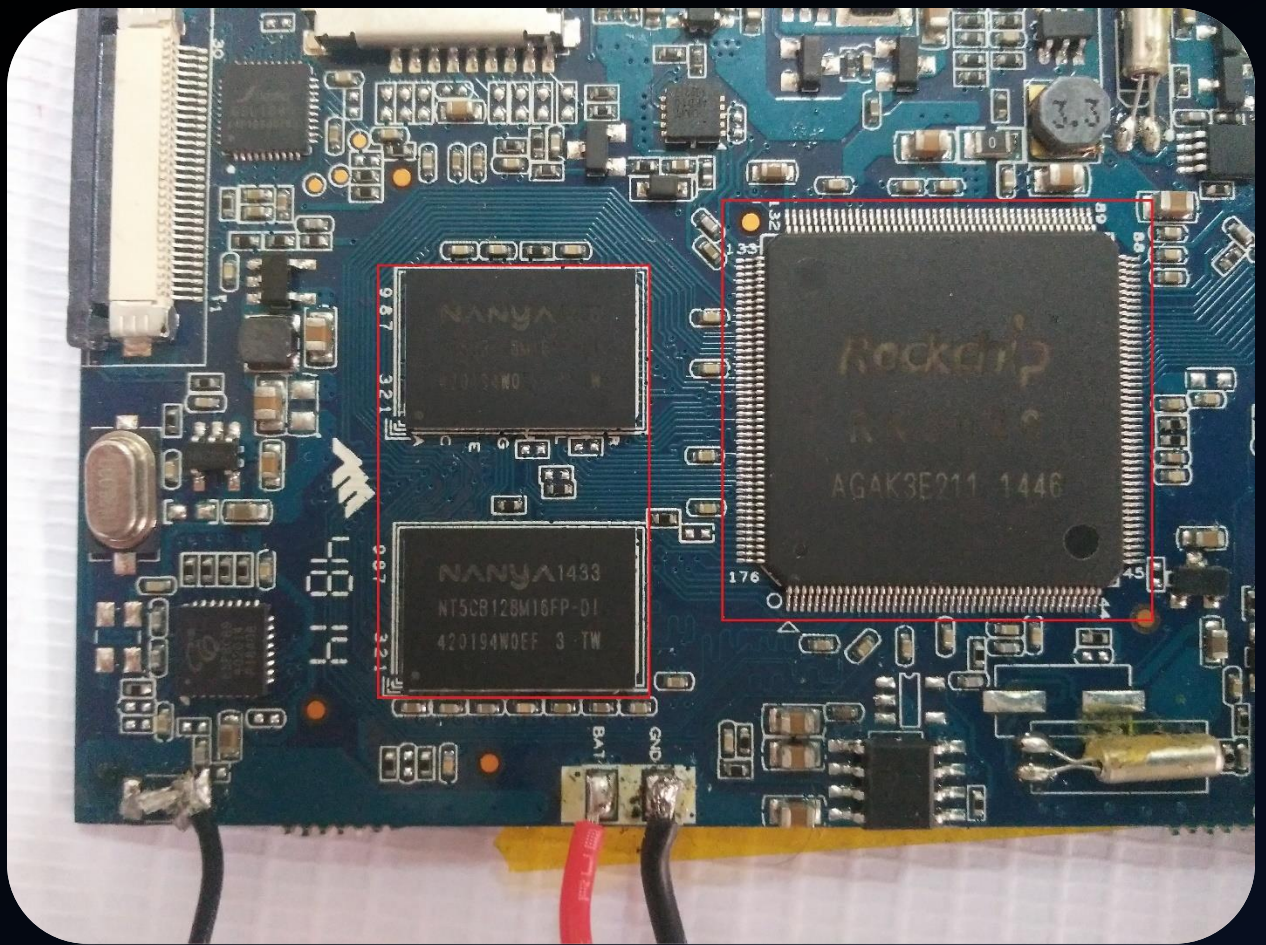
SMD Capacitor



A capacitor is a passive two-terminal electrical component that stores electrical energy in an electric field. The effect of a capacitor is known as capacitance. While capacitance exists between any two electrical conductors of a circuit in sufficiently close proximity, a capacitor is specifically designed to provide and enhance this effect for a variety of practical applications by consideration of size, shape, and positioning of closely spaced conductors, and the intervening dielectric material. A capacitor was there for historically first known as an electric condenser.



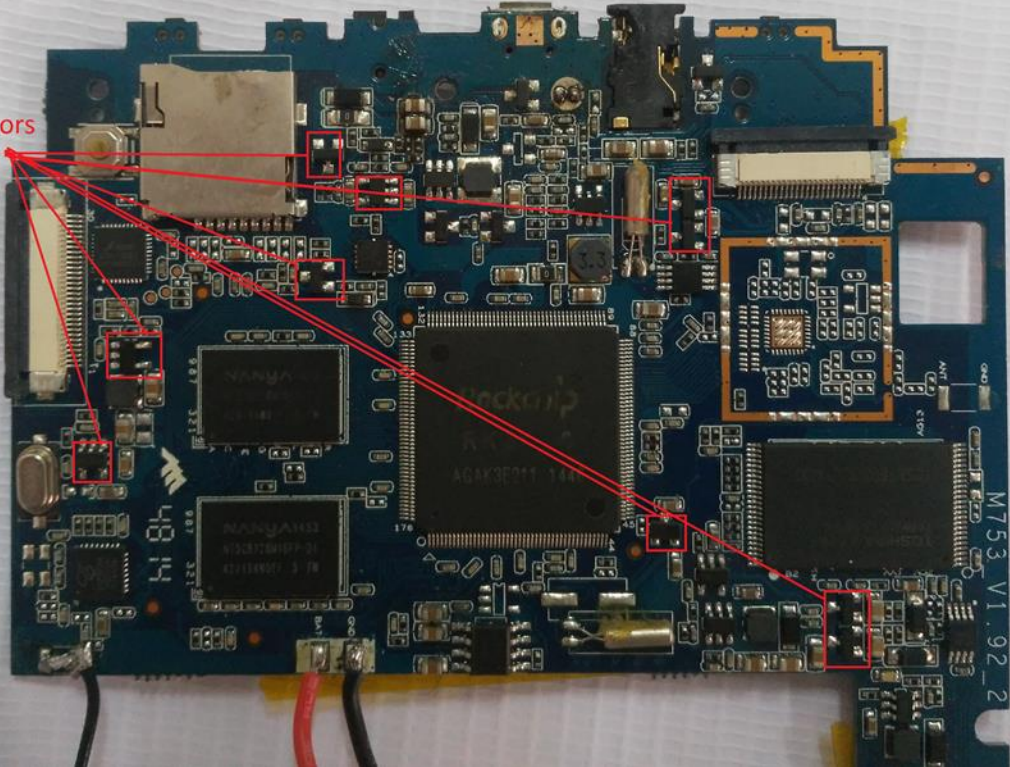
A crystal oscillator is an electronic oscillator circuit that uses the mechanical resonance of a vibrating crystal of piezoelectric material to create an electrical signal with a precise frequency. This frequency is commonly used to keep track of time, as in quartz wristwatches, to provide a stable clock signal for digital integrated circuits, and to stabilize frequencies for radio transmitters and receivers



A small piece of semiconducting material (usually silicon) on which an integrated circuit is embedded. A typical chip is less than $\frac{1}{4}$ square inches and can contain millions of electronic components (transistors). Computers consist of many chips placed on electronic boards called printed circuit boards.

There are different types of chips. For example, CPU chips (also called microprocessors) contain an entire processing unit, whereas Memory chips contain blank memory.

transistors



A transistor is a semiconductor device used to amplify or switch electronic signals and electrical power. It is composed of semiconductor material usually with at least three terminals for connection to an external circuit.

CONCLUSION :

When I deconstruct this tablet I knew that there is a lot of electronic components and I learn about capacitors, resistors, memory chip,and knew the idea of how the touch screen works .

I want to know more about electronics and how things around me work .

This project make me more interest in electronic side of my life