The Working Principle of Capacitive Touchscreen

The Structure of Touchscreen

Capacitive touchscreen is a four multi-layer glass. The two sides of the glass substrate are coated with uniform conductive ITO (indium tin oxide) coating. The thickness of 0.0015 millimeter silicon dioxide hard coating are coated on the front side of ITO coating layer. There are electrodes on the four corners for launching electric current.

Working Principle

Small amount of voltage is applied to the electrodes on the four corners. A human body is an electric conductor, so when you touch the screen with a finger, a slight amount of current is drawn, creating a voltage drop. The current respectively drifts to the electrodes on the four corners. Theoretically, the amount of current that drifts through the four electrodes should be proportional to the distance from the touch point to the four corners. The controller precisely calculates the proportion of the current passed through the four electrodes and figures out the X/Y coordinate of a touch point.