What is claimed is:

1. An electronic device, comprising

a first metal mesh layer comprising a plurality of first electrode pattern units;

a second metal mesh layer disposed on one side of the first metal mesh layer, and made up of a plurality of second electrode pattern units and a plurality of third electrode pattern units, wherein

a pattern of the first electrode pattern units and a pattern of the second electrode pattern units are at least partially identical in shape; and

an insulator at least partially disposed between the first metal mesh layer and the second metal mesh layer; wherein

the second metal mesh layer is electrically connected to the first metal mesh layer via the third electrode pattern units passing through the insulator; and

on a virtual projection surface parallel to the first metal mesh layer, a first vertical projection range projected from the shape of a first electrode pattern units distribution area and a second vertical projection range projected from the shape of a second electrode pattern units distribution area are non-overlapping.

2. The electronic device according to claim 1, wherein

the first electrode pattern units comprise a first mesh, the second electrode pattern units comprise a second mesh, and the shape of the first mesh is identical to the shape of the second mesh.

3. The electronic device according to claim 1, wherein

the first electrode pattern units respectively form a plurality of drive electrodes and a plurality of detection electrodes, the drive electrodes and the detection electrodes are staggered and distributed in an array, and the each adjacent drive electrode and detecting electrode are disconnected from each other.

4. The electronic device according to claim 3, wherein

the first metal mesh layer comprises a plurality of touch electrode units distributed in an array, and each touch electrode unit comprises a plurality of partial drive electrodes and a plurality of partial detection electrodes; and

5. The electronic device according to claim 1, wherein

the third electrode pattern units are distributed in an array on the second metal mesh layer.

6. The electronic device according to claim 3, wherein

the first metal mesh layer further comprises a plurality of connection points, and every two drive electrodes with adjacent endpoint are electrically connected via one of the connection points; and

every two detection electrodes with adjacent endpoints are electrically connected via one of the of third electrode pattern units.

7. The electronic device according to claim 3, wherein

the first metal mesh layer further comprises a plurality of connection points, and every two detection electrodes with adjacent endpoints are electrically connected via one of the connection points; and

every two drive electrodes with adjacent endpoints are electrically connected via one of the of third electrode pattern units.

8. The electronic device according to claim 4, wherein

the first metal mesh layer within a non-first electrode pattern units distribution area comprises a plurality of thin metal wires, and the thin metal wires are respectively connected to the touch electrode units located at both sides of the non-first electrode pattern units distribution area.

9. The electronic device according to claim 1, wherein

the first metal mesh layer and the second metal mesh layer are separated by a retreat distance, and the retreat distance is less than 1 mm.

10. The electronic device according to claim 1, wherein

the first metal mesh layer has a first layer thickness, the second metal mesh layer has a second layer thickness, and the second layer thickness is bigger than the first layer thickness.

11. The electronic device according to claim 10, wherein

the first layer thickness is between 0.1 μm and 0.5 μm.

12. The electronic device according to claim 10, wherein

the first metal mesh layer has a first wire width, the second layer thickness is 1 to 2 times the first wire width.