# Claims

**What is claimed is:**

1. An electronic device, comprising:

a housing;

at least one screen, received in the housing;

at least one screen protector connected to the housing and capable of moving between a stretchable state and a retractable state, so that when the at least one screen protector is in the retractable state, the at least one screen protector is leveled with or below the at least one screen, and when the at least one screen protector is in the stretchable state, the at least one screen protector is above the at least one screen;

a drive assembly, comprising a first magnetic component and a second magnetic component arranged opposite to the first magnetic component, wherein the first magnetic component being received in the housing, the second magnetic component being received in the at least one screen protector, the drive assembly being configured to drive the at least one screen protector to move between the stretchable state and the retractable state by magnetic force between the first magnetic component and the second magnetic component; and

a controller, received in the housing and electrically connected with a sensor, the controller being configured to control the at least one screen protector to move between the retractable state and the stretchable state in response to an output of the sensor.

2. The electronic device of claim 1, wherein the at least one screen is flat and comprises a top surface; the at least one screen protector comprises a top surface and a bottom surface opposite to the top surface along a direction substantially perpendicular to the at least one screen, the top surface of the at least one screen

protector is farther from a bottom surface of the housing than the bottom surface of the at least one screen protector; when the at least one screen protector is in the retractable state, a first distance from the top surface of the at least one screen protector to the bottom surface of the housing is less than or equal to a second distance from the top surface of the at least one screen to the bottom surface of the housing; when the at least one screen protector is in the stretchable state, the first distance is greater than the second distance.

3. The electronic device of claim 1 or 2, further comprising a plurality of locking mechanisms between the at least one screen protector and the housing to buckle the at least one screen protector with the housing.

4. The electronic device of claim 3, wherein the housing defines a plurality of grooves along a circumference thereof, the at least one screen protector surrounds the at least one screen and defines a plurality of slots arranged along a circumference thereof, the plurality of grooves and the plurality of slots have a one-on-one correspondence, each of the grooves is communicated with a corresponding slot, the housing has a bottom inner surface in the groove;

each of the locking mechanisms comprises:

a latching portion arranged on the at least one of the screen protector;

a hook comprising a main body arranged in the groove and contacting with the bottom inner surface and a hook body engaged in the corresponding slot and matching with the latching portion; and

a supporting portion arranged on the housing and in contact with the latching portion such that the latching portion is located between the hook body and the supporting portion.

5. The electronic device of claim 4, wherein each of the locking mechanisms further comprises a first elastic element and a second elastic element which are received in the groove; wherein

the first elastic element has a first end abutting against the hook body and a second end abutting against a bottom surface of the at least one screen, the first elastic element is configured to provide a pressure force toward the hook along a direction substantially perpendicular to the at least one screen; and

the second elastic element has a first end fixed on the housing and a second end abutting against a surface of the main body to press the main body toward the supporting portion along a direction substantially parallel to the at least one screen.

6. The electronic device of claim 5, wherein each of the locking mechanisms further comprises a positioning pin arranged on one of the supporting portion and the at least one screen protector; the other one of the supporting portion and the at least one screen protector defines a plurality of positioning slots; wherein the positioning pin is engaged in a corresponding positioning slot, an extending direction of the positioning pin is substantially perpendicular to the at least one screen.

7. The electronic device of claim 6, wherein when the at least one screen protector is in the stretchable state, the at least one screen protector moves toward a direction away from the bottom surface of the housing with the hook detachable from the bottom inner surface of the housing, the hook presses the first elastic element toward the at least one screen.

8. The electronic device of any one of the foregoing claims, wherein the first magnetic component comprises a plurality of electromagnetic components received in the housing, the plurality of electromagnetic components are arranged along a circumference of the housing and spaced apart from each other;

the second magnetic component comprises a plurality of permanent magnets provided on the at least one screen protector, the plurality of permanent magnets and the plurality of electromagnetic components have a one-on-one correspondence.

9. The electronic device of claim 8, wherein the first magnetic component is a magnetic coil.

10. The electronic device of any one of claims 1 to 7, wherein the first magnetic component comprises a plurality of first permanent magnets, the second magnetic component comprises a plurality of second permanent magnets;

the drive assembly further comprises at least one motor connected to the plurality of first permanent magnets, wherein the at least one motor is configured to drive the plurality of first permanent magnets to rotate to change directions of magnetic fields generated by the plurality of first permanent magnets, so as to switch the at least one screen protector between the stretchable state and the retractable state.

11. The electronic device of any one of the foregoing claims, wherein the sensor is configured to detect whether the at least one screen is getting close toward an object at a speed greater than a preset value;

when the sensor detects that the at least one screen is getting close toward the object at a speed greater than a preset value, the controller controls the at least one screen protector to stretch relative to the at least one screen to be in the stretchable state, such that the at least one screen protector touches the object to protect the at least one screen from touching the object.

12. The electronic device of any one of the foregoing claims, wherein the at least one sensor comprises at least one of gyroscope, accelerometer, gravity sensor, inertial sensor, camera, height sensor and motion sensor.

13. The electronic device of any one of the foregoing claims, further comprising a sealing element arranged between the at least one screen protector and the housing.

14. The electronic device of any one of the foregoing claims, wherein the at least one screen protector comprises a plurality of sub-protectors, the plurality of sub-protectors are arranged along a circumference of the at least one screen and spaced apart from each other, each of the plurality of sub-protectors corresponds to the first magnetic component and the second magnetic component.

15. The electronic device of any one of the foregoing claims, wherein the at least one screen protector is arranged at a periphery of the at least one screen, an inner surface of the at least one screen protector contacts with an outer side surface of the at least one screen.