

CLAIMS

What is claimed is:

- 5 1. A display screen component (20) for an electronic device (100), comprising:
a display screen (21) comprising a display area (215) and a non-display area (216); and
a sensor unit (22) disposed at a side of the display screen (21), and comprising a signal
emitter (221) and a signal receiver (222), the signal emitter (221) being arranged at a side of the
non-display area (216), and the signal receiver (222) being arranged at a side of the display area
10 (215),
wherein the non-display area (216) comprises a functional portion (2160) configured to
achieve a function of the electronic device (100), the signal emitter (221) is configured to emit a
detecting signal to outside through the functional portion (2160), and the signal receiver (222) is
configured to receive a reflected signal from the outside through the display screen (21), in which
15 the detecting signal is changed into the reflected signal after being reflected by an external object.
2. The display screen component (20) according to claim 1, wherein the signal emitter (221)
has a signal-emission surface (2210) facing the functional portion (2160).
3. The display screen component (20) according to claim 1 or 2, wherein the functional
portion (2160) defines an opening (2160a) therein.
- 20 4. The display screen component (20) according to claim 3, further comprising a functional
unit (25), wherein the functional unit (25) shares the opening (2160a) with the signal emitter (221).
5. The display screen component according to claim 4, wherein both centers of the functional
unit (25) and the signal emitter (221) are arranged in a horizontal direction.
6. The display screen component (20) according to claim 4 or 5, wherein the functional unit
25 (25) comprises at least one of a camera and a telephone receiver.
7. The display screen component (20) according to any one of claims 3-6, wherein the
non-display area (216) defines a notch (2161) at an edge thereof, and the notch (2161) is enclosed
by a housing of the electronic device (100) to define the opening (2160a).
8. The display screen component (20) according to any one of claims 3-7, wherein the
30 opening (2160a) is a round hole and has a diameter of 2-4 millimeters.
9. The display screen component (20) according to any one of claims 1-8, wherein a distance
between the signal emitter (221) and the signal receiver (222) is in a range of 2-14 millimeters.

10. The display screen component (20) according to any one of claims 1-9, wherein the display screen (21) is provided with a light shield layer (210) at a side thereof facing the sensor unit (22), and the light shield layer (210) defines a signal receiving hole (213) therein;

the signal receiver (222) is configured to receive the reflected signal through the display
5 screen (21) and the signal receiving hole (213).

11. The display screen component (20) according to any one of claims 1-10, wherein the sensor unit (22) further comprises an ambient-light sensor (223) disposed at the side of the display area (215), and the ambient-light sensor (223) is configured to sense an external ambient light signal.

10 12. The display screen component (20) according to claim 11, wherein the ambient-light sensor (223) has a light sensing surface facing the display area (215) of the display screen (21).

13. An electronic device (100), comprising:

a housing (40);

a display screen component (20) according to any one of claims 1-12, the display screen
15 component (20) being coupled to the housing (40); and

a cover plate (10) coupled to the display screen component (20) and configured to cover the display screen component (20).

14. The electronic device (100) according to claim 13, wherein the cover plate (10) is configured as a glass cover plate.

20 15. The electronic device (100) according to claim 13 or 14, further comprising a circuit board (30) received in the housing (40) and coupled to the display screen component (20).