【CLAIMS】

【Claim 1】

An electronic device comprising:

a housing;

a first printed circuit board (PCB) disposed in the housing;

a plurality of coil antennas for generating magnetic fields, wherein the plurality of coil antennas comprise a first antenna and a second antenna;

a shielding layer disposed to overlap with at least a portion of the first antenna and disposed not to overlap with the second antenna;

a flexible printed circuit board (FPCB) electrically connected to the first PCB and disposed to overlap with at least a portion of the second antenna; and

a metal shield disposed to surround the plurality of coil antennas for shielding at least a portion of the magnetic fields.

【Claim 2】

The electronic device of claim 1, further comprising:

a battery,

wherein the shielding layer is disposed between the first antenna and the battery, and

wherein the first FPCB is disposed between the second antenna and the battery.

【Claim 3】

The electronic device of claim 2, further comprising:

a second PCB; and

a second FPCB,

wherein the second FPCB is disposed between the second antenna and the battery, and

wherein each of the first FPCB and the second FPCB electrically connects the first PCB and the second PCB.

【Claim 4】

The electronic device of claim 3, wherein the metal shield is disposed to surround the plurality of coil antennas, the first FPCB and the second FPCB.

【Claim 5】

The electronic device of claim 3, wherein the shielding layer is disposed between

the first FPCB and the second FPCB.

【Claim 6】

The electronic device of claim 1, wherein the metal shield is spaced apart from the first antenna by a specific distance.

【Claim 7】

The electronic device of claim 1, wherein the housing includes a first housing and a second housing which is rotatable with respect to the first housing, and

wherein the plurality of coil antennas are disposed in the second housing.

【Claim 8】

The electronic device of claim 1, wherein the metal shield is configured to shield a magnetic field in a first direction from the first antenna toward the shielding layer.

【Claim 9】

The electronic device of claim 1, further comprising:

a battery,

wherein the battery is surrounded by the metal shield.

【Claim 10】

The electronic device of claim 1, wherein the plurality of coil antennas comprise a third antenna.

【Claim 11】

The electronic device of claim 10, wherein the first antenna includes a wireless charging antenna,

wherein the second antenna includes a near field communication (NFC) antenna, and

wherein the third antenna includes a magnetic secure transmission (MST) antenna.

【Claim 12】

The electronic device of claim 1, wherein the metal shield comprises one of a paramagnetic material, a diamagnetic material, and a ferromagnetic material.

【Claim 13】

The electronic device of claim 1, wherein the first antenna is disposed on the shielding layer, and

wherein the second antenna is disposed above the first FPCB.

【Claim 14】

The electronic device of claim 1, wherein the shielding layer is disposed on a same face as the first FPCB.

【Claim 15】

The electronic device of claim 1, further comprising:

a plurality of circuits for driving the plurality of coil antennas, wherein the plurality of circuits are disposed on the first PCB; and

a connector included in the first PCB,

wherein the plurality of coil antennas are electrically connected with the plurality of circuits via the connector.