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COUPLING CONCEPT FOR SWITCH GROUNDING SYSTEM

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Coupling concept for switch grounding system

Abstract:

Currently studied WLAN antenna combo camera in camera box for AIO product.

The antenna dimension around 20 x 10 mm and with cable part and copper foil part to assembly.

At pop out mode has good wireless performance to connect.

The total camera box dimension length around 110 mm is too big, ME team want to small camera box.

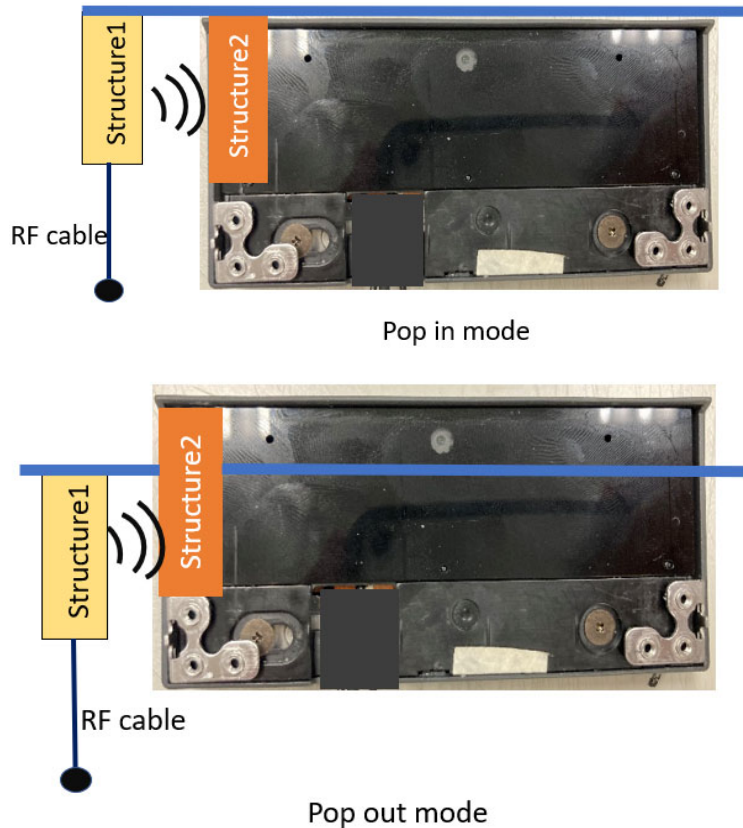
To move antenna location to outside of camera box by design coupling concept.

Description of Invention -1:

- 1. Antenna radiation system includes 2 key part structure1 and structure2*
- 2. Structure1 will connect to the RF signal and a layout to coupling the antenna energy to the structure2.*
- 3. The structure2 will be a floating part or a layout connect to the ground plan of the moving part.*
- 4. In this case the moving part (camera module) will have the vertical shift called Pop out.*
- 5. The structure1 will both coupling the emerging to the structure2 at pop in mode and pop out mode.*

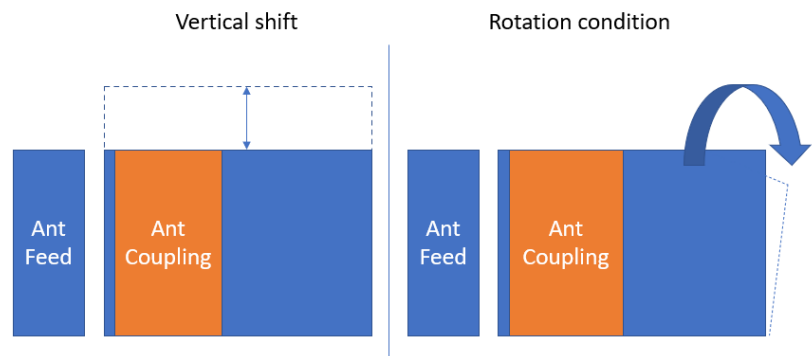
Structure 1 element is coupling antenna with RF cable part.

Structure 2 element is camera module part or camera module system grounding coupling pattern layout.



Description of Invention -2:

- 1. Antenna coupling concept to keep original camera box dimension or smaller.*
- 2. Camera box can be easy to assembly, do not consider antenna cable routing issue.*
- 3. By coupling concept we can reduce keep out area or clearness area at antenna layout pattern require.*
- 4. Antenna coupling concept can be extend other condition, please refer below picture.*



Disclosed by Albert Ma, Jimmy Lin, Lone Yen, Pat Chen, Wallace Huang, HP Inc.