Circuit operation description:

1. CMOS & Microphone module (Attached schematic page 1 of 3):
   (1) OV7910 is a single-chip CMOS color NTSC/PAL camera working frequency is 14.318MHz. The array size is 510 x 492 pixels for NTSC. Operation in +5V +/- 5% power supply.
   (2) Y1 is a 14.318MHz crystal that connected to U1 OV7910 and provided the clock for U1. The internal frequency of U1 is 14.318MHz / 4 to meet NTSC subcarrier standards.
   (3) X1 is a high sensitive microphone. It is transfer sound/voice to electrical signal.
   (4) U2 is a low power dual operation amplifier which provided audio amplify function from X1(Microphone). The working voltage is +5V +/- 5%.
2. RF module & Power Supply(Attached schematic page 2 & 3):
   (1) Page 2, U6 PI5V331 is a wideband video Mux/Demux. There are two signal channels, one is from CMOS sensor and the other is from external device. U6 will change the output automatically by AV cable exist or not.
   (2) Page 3, U1 U2 U5 Q1 Q4 D12 are the key components of power supply for this module. It provided battery trickle charge, step-up from 2.4V battery to +5.2V, +5V & +3.3V low dropout regulator.
   (3) Page 3, TX1 VMT15T/D is a 2.4GHz A/V module use FM modulation technology to provide ISM band video and audio transmission. The operation voltage is +3.3V +/-0.05V.
   (4) The antenna port impedance is 50ohm for TX1 module.
   (5) 3mm-wide microstrip line is 50 ohm under 1.6mm FR-4 PCB. Microstrip is a transmission line on PCB with grounded backside. Since the placement and routing limitation, it is difficult to meet above policy. Base on the PCB antenna port real impedance, the antenna vendor adjusted its impedance to meets the specification for PCB trace and requirement of RF module.