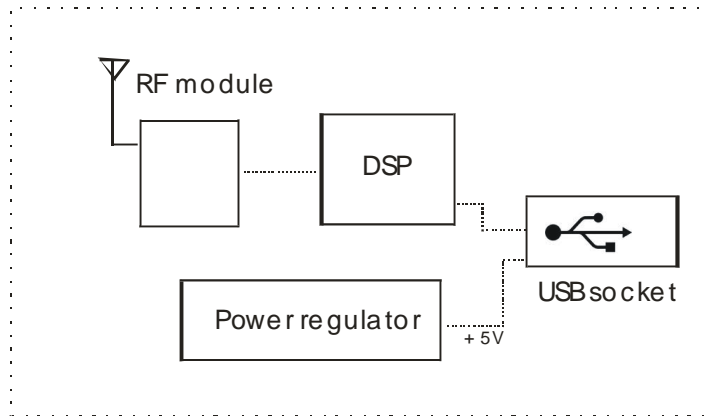# Circuit description

3. USB dongle

RF module –

Is a 2.4GHz transceiver (A7121) with power amplifier and LNA is employed. On Rx cycle, data packet received from the camera side, then feed to the DSP for decoding. . On Rx cycle, acknowledge signal with send back to the camera side   by 2.4GHz carrier and GFSK modulation.

Use L shape on PCB board, no need extra antenna.

built-in PCB antenna, F-type, < 0dB, Omni-directional

The A7121 use 18MHz Crystal

DSP (SN93310) –

  is a single chip processor, which video Codec, RF baseband controller and video DAC built-in.

Video signal feed from the RF module with be decoded using MJPEG algorithm.

Video signal will convert to UVC standard data , then feed to the USB interface.

The DSP use 12MHz Crystal.

USB port –

  An USB1.1 interface also built in the DSP. When the USB port connect to a PC, it acted as a UVC compliant device. Video data stream with feed to the PC.

Power regulator –

The unit is power from the USB port +5V from PC.