

## **Circuit Description**

### **1) power supply**

DC 5V power supply go through U14、U15、U16、U17 convert to 3.3V、1.8 V、1.2V voltage,to supply the product

### **2) Minimal System**

U2 (Hi3512) is the control chip of whole system; U3,U4 is DDR2 SDRAM, which mainly responsible for cache of data; U1 is NOR FLASH, which mainly responsible for system files and data storage; X2 is 24MHz crystal oscillator, which provides clock signal to U2; X3(32.768KHz) is a part of RTC crystal oscillator.

### **3) VIDEO**

U11 is image sensor, X1 is 50Mhzcrystal oscillator, optical signal convert to video signal via U11, after encoded and compressed by U2, then the compression video signal through good TCP/IP protocol output; Meanwhile can external SD card stored pictures and video

### **4) Audio**

U5 is audio frequency CODEC chip, MIC collect the sound signal and disposed by U5 coded, then compressed by U2, after that output through TCP/IP protocol; At the same time ,the U5 can decode and magnify the sound signal , output via EARPHONE to achieve the two-way audio communication.

### **5) Ethernet and WIFI**

U11 is network card IC, data signal disposed by U11 and coupled by network transformer, then go through the RJ45 port,output by networkcable to achieve the video monitoring .X5 is 25MHz crystal oscillator, provide clock signal to U11.

J4 is WIFI module, the data signal after disposed by J4 ,then transmission with wireless way to achieve wireless video monitoring.

### **6) I/O**

MOTOR is controlled by pan/tilt, turn up, down, left and right

Host can J17 external alarm, realize through dynamic protection function.