Fast Flicks Digital Camera

The basic operation and the ASIC structure description.

The Fast Flicks digital camera has the ASIC (Clarity 2, ARM7, 32 bit RISC) to control all the functions of a digital still camera. The program is stored in the NVRAM (1MB). The supply voltage is 3.3V (the battery supply is 3xAAA = 4.5V).

A. To take a photo by the ASIC of this camera

As you press the shutter, the ASIC will calculate the exposure index (surrounding light intensity) and set the electronic shutter speed of the CMOS sensor to match the light intensity. Then it will start to read the CMOS sensor data. All the data will be stored in the SDRAM (8MB) first.

Then the ASIC will convert the data to image file (bitmap) by a complex formula. And then immediately convert the image file data to a JPEG file. It will store this JPEG file to the SDRAM again. This can save the memory size after compressing the image file to JPEG file (about 15% of original size).

The above process will repeat if you press the shutter again to take another photo.

B. TV mode

The ASIC can convert the image to a TV video signal so that it can review the image immediately if connecting to a TV set. It has the main menu with 5 different languages for different countries.

C. Connect to PC or Mac

The photo stored in the SDRAM can be transferred to the PC or Mac unit by the USB port. The ASIC with this USB port is compatible to USB 1.1 standard.

D. Status LCD

There is a Status LCD which shows the number of photos taken, battery power low, photo quality mode, zoom, movie mode, memory left, waste bin for delete all memory and it will display 'PC' if the camera is connected to a PC or Mac unit.

E. Other special features controlled by the ASIC

- Auto off : preset as 1 minute
- Self timer : 10 seconds
- Movie mode : record up to 25 seconds Quicktime™ movie (5fps).
- 2X zoom. : digital zoom (2X) for review images in the TV mode