s5pv210 之 OV965X 驱动开发

1. 在 “/linux-2.6.35.7 /drivers/media/video”目录下增加两个文件“ov965x.c”和“ov965x.h”。

2. 在 “/linux-2.6.35.7 /include/media”目录下增加一个文件“ov9650_platform.h”。

3. 在 “/linux-2.6.35.7 /drivers/media/video”目录下找到”Makefile”这个文件如下修改

```
    #ifneq ($(wildcard drivers/media/video/ov9650.c),)
    #ifeq ($(FA),1)
    #obj-$(CONFIG_VIDEO_OV9650)     += ov9650.o
    #else
    #obj-m += ov9650.o
    #endif  #FA
    #endif

    obj-$(CONFIG_VIDEO_OV9650)  += ov965x.o
```

4. 在 “/linux-2.6.35.7-android/drivers/media/video”目录下找到”Kconfig”

增加下面 5 行

```
config VIDEO_OV9650
    tristate "OV9650 Camera Sensor"
    depends on I2C && VIDEO_V4L2
    ---help---
      This driver supports OV9650 SoC camera module
```

5. 在“/linux-2.6.35.7 /arch/arm/mach-s5pv210/mach-mini210.c”加入 OV965X 的配置.

```
#ifdef CONFIG_VIDEO_OV9650
static int ov9650_power_en(int onoff)
{
#define CAMA_PWR_EN                 S5PV210_GPJ2(4)
        gpio_request(CAMA_PWR_EN, "GPJ2_4");
        gpio_direction_output(CAMA_PWR_EN, onoff);
        gpio_free(CAMA_PWR_EN);
        printk("ov9650: power %s\n", onoff ? "ON" : "Off");
        return 0;
}
static struct ov9650_platform_data ov9650_plat = {
        .default_width = 1280,
        .default_height = 1024,
        .pixelformat = V4L2_PIX_FMT_YUYV,
        .freq = 40000000,
        .is_mipi = 0,
};
static struct i2c_board_info ov9650_i2c_info = {
        I2C_BOARD_INFO("ov9650", (0x60>>1)),
        .platform_data = &ov9650_plat,
};
static struct s3c_platform_camera ov9650 = {
        #ifdef CAM_ITU_CH_A
        .id             = CAMERA_PAR_A,
        #else
        .id             = CAMERA_PAR_B,
        #endif
        .type           = CAM_TYPE_ITU,
        .fmt                    = ITU_601_YCBCR422_8BIT,
        .order422       = CAM_ORDER422_8BIT_YCBYCR,
        .i2c_busnum     = 0,
        .info           = &ov9650_i2c_info,
        .pixelformat    = V4L2_PIX_FMT_YUYV,
        .srclk_name     = "mout_mpll",
        /* .srclk_name  = "xusbxti", */
        .clk_name       = "sclk_cam1",
        .clk_rate       = 40000000,
        .line_length    = 1920,
        .width          = 1280,
        .height         = 1024,
        .window         = {
                .left   = 0,
                .top    = 0,
                .width  = 1280,
                .height = 1024,
        },
        /* Polarity */
```

```
        .inv_pclk       = 1,
        .inv_vsync      = 1,
        .inv_href       = 0,
        .inv_hsync      = 0,
        .initialized    = 0,
        .cam_power      = ov9650_power_en,
};
#endif
```

在驱动列表中加入 OV965X 驱动

```
/* Interface setting */
static struct s3c_platform_fimc fimc_plat_lsi = {
        .srclk_name     = "mout_mpll",
        .clk_name       = "sclk_fimc",
        .lclk_name      = "sclk_fimc_lclk",
        .clk_rate       = 166750000,
#if defined(CONFIG_VIDEO_S5K4EA)
        .default_cam    = CAMERA_CSI_C,
#else
#ifdef CAM_ITU_CH_A
        .default_cam    = CAMERA_PAR_A,
#else
        .default_cam    = CAMERA_PAR_B,
#endif
#endif
        .camera         = {
#ifdef CONFIG_VIDEO_S5K4ECGX
                        &s5k4ecgx,
#endif
#ifdef CONFIG_VIDEO_S5KA3DFX
                        &s5ka3dfx,
#endif
#ifdef CONFIG_VIDEO_S5K4BA
                        &s5k4ba,
#endif
#ifdef CONFIG_VIDEO_S5K4EA
                        &s5k4ea,
#endif
#ifdef CONFIG_VIDEO_TVP5150
                        &tvp5150,
#endif
#ifdef CONFIG_VIDEO_OV9650
                        &ov9650,
#endif
        },
        .hw_ver         = 0x43,
};
```

6. 在内核源码目录下 输入”make xconfig” 回车,选择 ov965x 之后，make uImage 成功后把 uImage 烧入开发板.打开摄像头测试,出图了.