概述

VEYE-MIPI-290 摄像机模组连接到树莓派时，我们提供了一个shell脚本来对模组进行参数配置。

配置i2c-dev0

1. 在/boot/config.txt中需要打开或添加以下行

```
dtparam = i2c_arm = on
dtparam=i2c_vc=on
```

1. 在/etc/modules中需要添加以下行
   `i2c-dev`
2. 检查设备文件
   `ls /dev/i2c-0`
3. i2cdetect -y 0
   可以看到VEYE-MIPI-290的I2C地址为0x3b。

veye_mipi_290_i2c.sh详细说明

介绍

目录下总共4个文件，camera_i2c_config、i2c_read、i2c_write、
veye_mipi_290_i2c.sh。
veye_mipi_290_i2c.sh 是一个shell脚本，调用其他的程序。

USAGE

Usage: ./veye_mipi_290_i2c.sh [-r/w] [-f] function name -p1 param1 -p2 param2
options:
-r read
-w write
-f [function name] function name
-p1 [param1] param1 of each function
-p2 [param1] param2 of each function
function list and param,ref to [veye_mipi_290_isp_function_and_param.pdf]

support functions:
devid,hdver,wdrmode,videoformat,mirrormode,denoise,agc,lowlight

使用详解

- devid

```
./veye_mipi_290_i2c.sh -r -f devid
```

value	description
0x02	MIPI, WDRDisable, 2Lane
0x22	MIPI, WDREnable, 2Lane
0x13	LVDS,WDRDisable,3Lane
0x33	LVDS,WDREnable,3Lane

- hdver

```
./veye_mipi_290_i2c.sh -r -f devid
```

value	description
0xXX	Version

- wdrmode

```
./veye_mipi_290_i2c.sh -r -f wdrmode
./veye_mipi_290_i2c.sh -w -f wdrmode -p1 [value]
```

value	description
0x00	Back Light Mode OFF
0x01	Back Light Mode ON, LOW
0x02	Back Light Mode ON, HIGH
0x03	WDR Enable

- videoformat

```
./veye_mipi_290_i2c.sh -r -f videoformat
./veye_mipi_290_i2c.sh -w -f videoformat -p1 [value]
```

WARNING:THIS FUNCTION MUST BE CALLED BEFORE ANY video applications

value	description
PAL	PAL(50Hz)
NTSC	NTSC(60Hz)

- mirrormode

```
./veye_mipi_290_i2c.sh -r -f mirrormode
./veye_mipi_290_i2c.sh -w -f mirrormode -p1 [value]
```

value	description
0x00	Normal
0x01	Mirror
0x02	V-Flip
0x03	Mirror And V-Flip(180 Degree Rotate)

- denoise

```
./veye_mipi_290_i2c.sh -r -f denoise
./veye_mipi_290_i2c.sh -w -f denoise -p1 [value]
```

value	description
0x00	NR 2D Mode = OFF; NR 3D Mode = OFF
0x01	NR 2D Mode = OFF; NR 3D Mode = LOW
0x02	NR 2D Mode = OFF; NR 3D Mode = MIDDLE
0x03	NR 2D Mode = OFF; NR 3D Mode = HIGH
0x04	NR 2D Mode = LOW; NR 3D Mode = OFF
0x05	NR 2D Mode = LOW; NR 3D Mode = LOW
0x06	NR 2D Mode = LOW; NR 3D Mode = MIDDLE
0x07	NR 2D Mode = LOW; NR 3D Mode = HIGH
0x08	NR 2D Mode =MIDDLE; NR 3D Mode = OFF
0x09	NR 2D Mode =MIDDLE; NR 3D Mode = LOW
0x0A	NR 2D Mode = MIDDLE; NR 3D Mode = MIDDLE
0x0B	NR 2D Mode = MIDDLE; NR 3D Mode = HIGH
0x0C	NR 2D Mode =HIGH; NR 3D Mode = OFF
0x0D	NR 2D Mode =HIGH; NR 3D Mode = LOW
0x0E	NR 2D Mode = HIGH; NR 3D Mode = MIDDLE
0x0F	NR 2D Mode = HIGH; NR 3D Mode = HIGH

- agc

```
./veye_mipi_290_i2c.sh -r -f agc
./veye_mipi_290_i2c.sh -w -f agc -p1 [value]
```

value	description
0x00~0x0F	AGC intensity

- lowlight

```
./veye_mipi_290_i2c.sh -r -f lowlight
./veye_mipi_290_i2c.sh -w -f lowlight -p1 [value]
```

value	description
0x01	1/2*(FRAME RATE)
0x03	1/4*(FRAME RATE)
0x05	1/6*(FRAME RATE)
0x07	1/8*(FRAME RATE)
0x09	1/10*(FRAME RATE)
0x0B	1/15*(FRAME RATE)
0x0D	1/20*(FRAME RATE)
0x0F	1/25*(FRAME RATE)
0x11	1/30*(FRAME RATE)
0x00	Fixed frame rate (25/30)