

SigmaStar Camera SAR 使用参考



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{SigmaStar Part Name}



{Product Description} {Document Name + Version}

REVISION HISTORY

Revision No.	Description	Date
{000001}	• {Initial release}	{12/25/2019}

{SigmaStar Part Name}

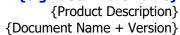




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1. 概述

1.1. 概述

SAR 口一共四个,10bit 精度,获取到的值范围在 $0\sim0x3ff$ 之间,参考电压为 3.3V,即如果你读到的值是 0x1D2,得到的电压就是 0x1D2/0x3FF *3.3=1.5v 左右。



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2. 内核使用 SAR

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<i>/</i> .	1 . <i>*</i> /	14m1	r, M	SAK	ш

先申明一下 extern void ms sar hw init (void)函数,再通过这个函数初始的	始化 SAK
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【目的】

初始化

【语法】

void ms_sar_hw_init ();

【参数】

参数名称	描述
无	

【返回值】

返回值	描述
无	

2.2. 取 SAR 值

先申明一下 extern int ms_sar_get (int ch)函数,再通过这个函数读取 sar 口电平

【目的】

获取 SAR 口电平

【语法】

int ms_sar_get (int ch)

【参数】

参数名称	描述
ch	SAR 通道,值范围为 0~3

【返回值】

返回值	描述
int	当前 SAR 口的电平



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3. 用户空间使用 SAR

3.1. 概述

用户空间访问 sar,通过 IOCTL 的方式,首先 open /dev/sar,通过 IOCTL 初始化 SAR 和读取电平。

3.2. IOCTL 初始化 SAR

```
#define MS_SAR_INIT _IO(SARADC_IOC_MAGIC, 0)
sar_fd= open("/dev/sar", /*O_RDONLY*/O_RDWR);
ioctl(sar_fd, MS_SAR_INIT, 0);
```

3.3. IOCTL 读取 SAR 值

```
#define SARADC_IOC_MAGIC 'a'
#define MS_SAR_SET_CHANNEL_READ_VALUE _IO(SARADC_IOC_MAGIC, 1)

typedef struct
{
    int channel_value; ///0~3
        int adc_value; ///读取到的值
}ADC_CONFIG_READ_ADC;

stCfg.channel_value=0; ///SAR0
ioctl(sar_fd, MS_SAR_SET_CHANNEL_READ_VALUE, &stCfg);
printf("0: read stCfg.adc_value=:%x\n", stCfg.adc_value);
```