

SigmaStar Camera Watchdog 使用参考



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{Product Description} {Document Name + Version}

REVISION HISTORY

Revision No.	Description	Date
{000001}	• {Initial release}	{07/28/2018}

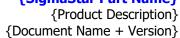




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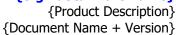
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1. 概述

1.1. 概述

Watchdog 采用标准的 linux 框架,提供硬件的 watchdog,上层应用可以设定 time out 时间,自己来 keep alive。

Watchdog 默认是关闭的,客户可自行决定是否开启。开启建议在主线程中操作,如果在其他线程中操作,watchdog 会随着线程的关闭而关闭。





2. WATCHDOG 控制

2.1. 打开 WATCHDOG

```
打开/dev/watchdog 设备,watchdog 将被启动。

参考代码如下:
int wdt_fd = -1;
wdt_fd = open("/dev/watchdog", O_WRONLY);
if (wdt_fd == -1)
{
    // fail to open watchdog device
}
```

2.2. 关闭 WATCHDOG

```
参考代码如下:
int option = WDIOS_DISABLECARD;
ioctl(wdt_fd, WDIOC_SETOPTIONS, & option);
if (wdt_fd != -1)
{
    close(wdt_fd);
    wdt_fd = -1;
}
```

2.3. 设定 TIMEOUT

通过标准的 IOCTL 命令 WDIOC_SETTIMEOUT,来设定 timeout,单位是 second, timeout 的时间建议大于5s,参考代码如下:

```
#define WATCHDOG_IOCTL_BASE 'W'
#define WDIOC_SETTIMEOUT _IOWR(WATCHDOG_IOCTL_BASE, 6, int)
int timeout = 20;
ioctl(wdt_fd, WDIOC_SETTIMEOUT, &timeout);
```

2.4. KEEP ALIVE

通过标准的 IOCTL 命令 WDIOC_KEEPALIVE 来喂狗,喂狗时间按照设定的 timeout 来决定,喂狗时间应该比 timeout 小,参考代码如下:



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#define WATCHDOG_IOCTL_BASE 'W'

#define WDIOC_KEEPALIVE _IOR(WATCHDOG_IOCTL_BASE, 5, int)

ioctl(wdt_fd, WDIOC_KEEPALIVE, 0);