



SigmaStar Camera Watchdog 使用参考



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REVISION HISTORY

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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_KEEPAIVE 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：



{SigmaStar Part Name}
{Product Description}
{Document Name + Version}

```
#define WATCHDOG_IOCTL_BASE 'W'  
#define WDIOC_KEEPALIVE _IOR(WATCHDOG_IOCTL_BASE, 5, int)  
ioctl(wdt_fd, WDIOC_KEEPALIVE, 0);
```