

FLI CCD Device Driver I/O Control Documentation

— Version 0.1 —

I/O Control Requests supported by FLI CCD Device Driver

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Introduction

The FLI CCD device driver provides a way to control certain operational characteristics through the `ioctl(2)` system call. The valid `ioctl` request codes are defined in `fli_ioctl.h`. The device driver `ioctl` implementation assumes pass by reference, meaning its third argument should be a pointer from/to which values are passed. For example:

```
#include <stdio.h>
#include <sys/types.h>
#include <sys/stat.h>
#include <fcntl.h>
#include <sys/ioctl.h>
#include "fli_ioctl.h"

#define CCD_CHAR_FILE "/dev/ccd0"

int main(int argc, char *argv[])
{
    int fd, dto = 20;

    if ((fd = open(CCD_CHAR_FILE)) == -1)
    {
        perror("open");
        exit(1);
    }

    if (ioctl(fd, FLI_SET_DTO, &dto))
    {
        perror("ioctl");
        exit(1);
    }

    close(fd);
    exit(0);
}
```

The `ioctl` request codes are described in the following section.

I/O Control Request Codes**FLI_RESET_MODULE**

Reset the FLI CCD device driver module.

FLI_LOCK_MODULE

Lock the FLI CCD device driver module.

FLI_UNLOCK_MODULE

Unlock the FLI CCD device driver module.

FLI_SET_DMABUFFSIZE

Set the DMA buffer size.

FLI_SET_DMATHRESH

Set the DMA threshold.

FLI_SET_DTO

Set the direction timeout.

FLI_SET_RTO

Set the read timeout.

FLI_SET_WTO

Set the write timeout.

FLI_SET_LTL

Set the lock time limit.

FLI_SET_DIR

Set direction of the port.

FLI_SET_NUMREAD

Set the number of bytes read.

FLI_SET_NUMWRITE

Set the number of bytes written.

FLI_SET_NUMDTO

Set the number of direction timeouts.

FLI_SET_NUMRTO

Set the number of read timeouts.

FLI_SET_NUMWTO

Set the number of write timeouts.

FLI_GET_DMABUFFSIZE

Get the DMA buffer size.

FLI_GET_DMATHRESH

Get the DMA threshold.

FLI_GET_DTO

Get the direction timeouts.

FLI_GET_RTO

Get the read timeout.

FLI_GET_WTO

Get the write timeout.

FLI_GET_LTL

Get the lock time limit.

FLI_GET_DIR

Get the port direction.

FLI_GET_NUMREAD

Get the number of bytes read.

FLI_GET_NUMWRITE

Get the number of bytes written.

FLI_GET_NUMDTO

Get the number of direction timeouts.

FLI_GET_NUMRTO

Get the number of read timeouts.

FLI_GET_NUMWTO

Get the number of write timeouts.