

系统版本: Ubuntu 20.04.6 LTS

集成开发环境: eclipse cdt

说明:

1、在运行实例程序时请合理设置防火墙, 或者使用以下命令暂时关闭防火墙 `sudo ufw disable`。

2、测试动态库时, 请把动态库安装到系统库目录中, 或者把动态库所在目录添加到环境变量 `LD_LIBRARY_PATH` 中。

3、目录结构:

└── 1_initialize_shared

1. 初始化动态库例程

| └── Debug

| | └── 1_initialize_shared

| | └── makefile

| | └── objects.mk

| | └── sources.mk

| | └── src

| | | └── 1_initialize_shared.d

| | | └── 1_initialize_shared.o

| | | └── subdir.mk

| | └── vk70xmcdllconfig.ini

| | └── vk70xmcsdconfig.ini

| └── src

| └── 1_initialize_shared.c

| └── VK70xNMC_DAQ2.h

└── 1_initialize_static

1. 初始化静态库例程

| └── Debug

| | └── 1_initialize_static

| | └── makefile

| | └── objects.mk

| | └── sources.mk

| | └── src

| | | └── 1_initialize_static.d

| | | └── 1_initialize_static.o

| | | └── subdir.mk

| | └── vk70xmcdllconfig.ini

```

| |   └── vk70xmcsdconfig.ini
| |   └── src
| |       ├── 1_initialize_static.c
| |       └── VK70xNMC_DAQ2.h

```

```

└── 2_continue_sample_shared

```

2. 连续采样动态库例程

```

| |   ├── Debug
| |   |   ├── 2_continue_sample_shared
| |   |   ├── makefile
| |   |   ├── objects.mk
| |   |   ├── sources.mk
| |   |   └── src
| |   |       ├── 2_continue_sample_shared.d
| |   |       ├── 2_continue_sample_shared.o
| |   |       └── subdir.mk
| |   ├── vk70xmcdllconfig.ini
| |   └── vk70xmcsdconfig.ini
|   └── src
|       ├── 2_continue_sample_shared.c
|       └── VK70xNMC_DAQ2.h

```

```

└── 2_continue_sample_static

```

2. 连续采样静态库例程

```

| |   ├── Debug
| |   |   ├── 2_continue_sample_static
| |   |   ├── makefile
| |   |   ├── objects.mk
| |   |   ├── sources.mk
| |   |   └── src
| |   |       ├── 2_continue_sample_static.d
| |   |       ├── 2_continue_sample_static.o
| |   |       └── subdir.mk
| |   ├── vk70xmcdllconfig.ini
| |   └── vk70xmcsdconfig.ini
|   └── src
|       ├── 2_continue_sample_static.c
|       └── VK70xNMC_DAQ2.h
|   ├── vk70xmcdllconfig.ini
|   └── vk70xmcsdconfig.ini

```

```

└── 3_n_points_sample_shared

```

3. N 采样动态库例程

```

| |   ├── Debug
| |   |   ├── 3_n_points_sample_shared
| |   |   ├── makefile
| |   |   └── objects.mk

```

```

| | |—— sources.mk
| | |—— src
| | | |—— 3_n_points_sample_shared.d
| | | |—— 3_n_points_sample_shared.o
| | | |—— subdir.mk
| | |—— vk70xmcdllconfig.ini
| | |—— vk70xmcsdconfig.ini
| |—— src
| |—— 3_n_points_sample_shared.c
| |—— VK70xNMC_DAQ2.h

```

—— 3_n_points_sample_static

3. N 采样静态库例程

```

| |—— Debug
| | |—— 3_n_points_sample_static
| | |—— makefile
| | |—— objects.mk
| | |—— sources.mk
| | |—— src
| | | |—— 3_n_points_sample_static.d
| | | |—— 3_n_points_sample_static.o
| | | |—— subdir.mk
| | |—— vk70xmcdllconfig.ini
| | |—— vk70xmcsdconfig.ini
| |—— src
| |—— 3_n_points_sample_static.c
| |—— VK70xNMC_DAQ2.h

```

—— 4_io4_trigger_n_points_sample_shared

4.IO4 触发 N 采样动态库例程

```

| |—— Debug
| | |—— 4_io4_trigger_n_points_sample_shared
| | |—— makefile
| | |—— objects.mk
| | |—— sources.mk
| | |—— src
| | | |—— 4_io4_trigger_n_points_sample_shared.d
| | | |—— 4_io4_trigger_n_points_sample_shared.o
| | | |—— subdir.mk
| | |—— vk70xmcdllconfig.ini
| | |—— vk70xmcsdconfig.ini
| |—— src
| |—— 4_io4_trigger_n_points_sample_shared.c
| |—— VK70xNMC_DAQ2.h

```

—— 4_io4_trigger_n_points_sample_static

4.IO4 触发 N 采样静态库例程

```

|   ├── Debug
|   |   ├── 4_io4_trigger_n_points_sample_static
|   |   ├── makefile
|   |   ├── objects.mk
|   |   ├── sources.mk
|   |   └── src
|   |       ├── 4_io4_trigger_n_points_sample_static.d
|   |       ├── 4_io4_trigger_n_points_sample_static.o
|   |       └── subdir.mk
|   ├── vk70xmcddlconfig.ini
|   └── vk70xmcsdconfig.ini
└── src
    ├── 4_io4_trigger_n_points_sample_static.c
    └── VK70xNMC_DAQ2.h

```

—— 5_sampling_with_sync_io2_io3_shared

5.带 IO2、IO3 同步采样动态库例程

```

|   ├── Debug
|   |   ├── 5_sampling_with_sync_io2_io3_shared
|   |   ├── makefile
|   |   ├── objects.mk
|   |   ├── sources.mk
|   |   └── src
|   |       ├── 5_sampling_with_sync_io2_io3_shared.d
|   |       ├── 5_sampling_with_sync_io2_io3_shared.o
|   |       └── subdir.mk
|   ├── vk70xmcddlconfig.ini
|   └── vk70xmcsdconfig.ini
└── src
    ├── 5_sampling_with_sync_io2_io3_shared.c
    └── VK70xNMC_DAQ2.h

```

5_sampling_with_sync_io2_io3_static

5.带 IO2、IO3 同步采样静态库例程

```
| |—— Debug
| | |—— 5_sampling_with_sync_io2_io3_static
| | |—— makefile
| | |—— objects.mk
| | |—— sources.mk
| | |—— src
| | | |—— 5_sampling_with_sync_io2_io3_static.d
| | | |—— 5_sampling_with_sync_io2_io3_static.o
| | | |—— subdir.mk
| | |—— vk70xmcdllconfig.ini
| | |—— vk70xmcsdconfig.ini
| |—— src
```

- | | | 5_sampling_with_sync_io2_io3_static.c
- | | | VK70xNMC_DAQ2.h

- | | VK70XNMC_DAQ_SHARED

动态库

- | | | Debug
 - | | | | libVK70XNMC_DAQ_SHARED.so
 - | | | | makefile
 - | | | | objects.mk
 - | | | | sources.mk
 - | | | | | src
 - | | | | | commstr.d
 - | | | | | commstr.o
 - | | | | | dvr_core.d
 - | | | | | dvr_core.o
 - | | | | | dvr_lowlayerinterface.d
 - | | | | | dvr_lowlayerinterface.o
 - | | | | | dvr_sockserver.d
 - | | | | | dvr_sockserver.o
 - | | | | | subdir.mk
 - | | | | | vk_bin2text.d
 - | | | | | vk_bin2text.o
 - | | | | | vk_output_function.d
 - | | | | | vk_output_function.o
 - | | | | | vk_sdfile.d
 - | | | | | vk_sdfile.o
 - | | | | | vk_setting_function.d
 - | | | | | vk_setting_function.o
 - | | | | | vk_upgrade.d
 - | | | | | vk_upgrade.o
- | | | | src
 - | | | | | commstr.c
 - | | | | | dvr_core.c
 - | | | | | dvr_header.h
 - | | | | | dvr_lowlayerinterface.c
 - | | | | | dvr_sockserver.c
 - | | | | | VK70xNMC_DAQ2.def
 - | | | | | VK70xNMC_DAQ2.h
 - | | | | | vk_bin2text.c
 - | | | | | vk_output_function.c
 - | | | | | vk_sdfile.c
 - | | | | | vk_setting_function.c
 - | | | | | vk_upgrade.c

- | | VK70XNMC_DAQ_STATIC

静态库

- ├── Debug
 - | ├── libVK70XNMC_DAQ_STATIC.a
 - | ├── makefile
 - | ├── objects.mk
 - | ├── sources.mk
 - | └── src
 - | ├── commstr.d
 - | ├── commstr.o
 - | ├── dvr_core.d
 - | ├── dvr_core.o
 - | ├── dvr_lowlayerinterface.d
 - | ├── dvr_lowlayerinterface.o
 - | ├── dvr_sockserver.d
 - | ├── dvr_sockserver.o
 - | ├── subdir.mk
 - | ├── vk_bin2text.d
 - | ├── vk_bin2text.o
 - | ├── vk_output_function.d
 - | ├── vk_output_function.o
 - | ├── vk_sdfile.d
 - | ├── vk_sdfile.o
 - | ├── vk_setting_function.d
 - | ├── vk_setting_function.o
 - | ├── vk_upgrade.d
 - | └── vk_upgrade.o
- └── src
 - ├── commstr.c
 - ├── dvr_core.c
 - ├── dvr_header.h
 - ├── dvr_lowlayerinterface.c
 - ├── dvr_sockserver.c
 - ├── VK70xNMC_DAQ2.def
 - ├── VK70xNMC_DAQ2.h
 - ├── vk_bin2text.c
 - ├── vk_output_function.c
 - ├── vk_sdfile.c
 - ├── vk_setting_function.c
 - └── vk_upgrade.c

4、运行效果

4.1、初始化例程

[illegible]

4.2、连续采样例程


```

[arci@localhost Debug]$ ./2_continue_sample_static
Open the Server port, start to search the DAQ device:0
Speed rate: 0 bytes per second
Speed rate: 0 bytes per second
Speed rate: 0 bytes per second
Speed rate: 0 bytes per second
Speed rate: 0 bytes per second
Speed rate: 1055 bytes per second
=====
Found the connected DAQ clients and start sending commands: 1
DAQ-0 Initialize function return status: 【18】
DAQ-0 Start to continous sampling!
Read the DAQ 【0】 continous sampling number: 64
Read the DAQ 【0】 continous sampling number: 64
Read the DAQ 【0】 continous sampling number: 64
Read the DAQ 【0】 continous sampling number: 64
Read the DAQ 【0】 continous sampling number: 64
Read the DAQ 【0】 continous sampling number: 64
Read the DAQ 【0】 continous sampling number: 64
Read the DAQ 【0】 continous sampling number: 64
Read the DAQ 【0】 continous sampling number: 64
Read the DAQ 【0】 continous sampling number: 64
Read the DAQ 【0】 continous sampling number: 64
Read the DAQ 【0】 continous sampling number: 64
Read the DAQ 【0】 continous sampling number: 64
Read the DAQ 【0】 continous sampling number: 64
Speed rate: 14457 bytes per second
Read the DAQ 【0】 continous sampling number: 64
Read the DAQ 【0】 continous sampling number: 64
Read the DAQ 【0】 continous sampling number: 64
Read the DAQ 【0】 continous sampling number: 64
Read the DAQ 【0】 continous sampling number: 64
Read the DAQ 【0】 continous sampling number: 64
Read the DAQ 【0】 continous sampling number: 64
Read the DAQ 【0】 continous sampling number: 64
Read the DAQ 【0】 continous sampling number: 64
Read the DAQ 【0】 continous sampling number: 64
Read the DAQ 【0】 continous sampling number: 64
Read the DAQ 【0】 continous sampling number: 64
Read the DAQ 【0】 continous sampling number: 64
Read the DAQ 【0】 continous sampling number: 64
Read the DAQ 【0】 continous sampling number: 64
Read the DAQ 【0】 continous sampling number: 64
Read the DAQ 【0】 continous sampling number: 64
Read the DAQ 【0】 continous sampling number: 64
Speed rate: 19608 bytes per second
Read the DAQ 【0】 continous sampling number: 64
Read the DAQ 【0】 continous sampling number: 64
Read the DAQ 【0】 continous sampling number: 64
Read the DAQ 【0】 continous sampling number: 64
^C
采集卡 【0】 已停止采样!

```

4.3、N 采样例程

```

[arcia@localhost Debug]$ ./3_n_points_sample_static
Open the Server port, start to search the DAQ device:0
Speed rate: 0 bytes per second
Speed rate: 0 bytes per second
Speed rate: 0 bytes per second
Speed rate: 0 bytes per second
Speed rate: 0 bytes per second
Speed rate: 0 bytes per second
Speed rate: 1055 bytes per second
=====
Found the connected DAQ clients and start sending commands: 1
DAQ-0 Initialize function return status:[18]
DAQ-0 Start to the N point sampling[1]!
Speed rate: 15489 bytes per second
Read the DAQ-[0] N point sampling number: 1000
DAQ-0 Start to the N point sampling[2]!
Speed rate: 15480 bytes per second
Read the DAQ-[0] N point sampling number: 1100
DAQ-0 Start to the N point sampling[3]!
Speed rate: 17544 bytes per second
Read the DAQ-[0] N point sampling number: 1200
DAQ-0 Start to the N point sampling[4]!
Speed rate: 19608 bytes per second
Read the DAQ-[0] N point sampling number: 1300
DAQ-0 Start to the N point sampling[5]!
Speed rate: 16512 bytes per second
Read the DAQ-[0] N point sampling number: 1400
^C
采集卡【0】已停止采样!

```

4.4、IO4 触发 N 采样例程

```
[arci@localhost Debug]$ ./4_io4_trigger_n_points_sample_static
Open the Server port, start to search the DAQ device:0
Speed rate: 0 bytes per second
Speed rate: 0 bytes per second
Speed rate: 0 bytes per second
Speed rate: 0 bytes per second
Speed rate: 151 bytes per second
=====
Found the connected DAQ clients and start sending commands: 1
DAQ-0 Start to IO4 trigger the N point sampling[1]!
Read the DAQ-[0] N point sampling number: 960
Speed rate: 15507 bytes per second
Speed rate: 0 bytes per second
Speed rate: 0 bytes per second
Speed rate: 0 bytes per second
Speed rate: 0 bytes per second
Read the DAQ-[0] N point sampling number: 1
Read the DAQ-[0] N point sampling number: 64
DAQ-0 Start to the N point sampling[2]!
Read the DAQ-[0] N point sampling number: 64
```

4.5、带 IO2、IO3 同步采样例程

