

DFU Test on the STM32

Build QAT demo

1. Modify config file

```
/demo/qat_demo/prj.conf
```

```
CONFIG_UART_SHELL=n
```

```
CONFIG_RTT_VIEW_CLI=n
```

```
CONFIG_RING_IF_ONLY=y
```

```
CONFIG_QCSPI_HFC_TEST=n
```

```
CONFIG_QCSPI_HFC_ATCMD_ENABLE=y
```

```
CONFIG_QAT_TRANSMISSION_MODULE=1
```

2. Build for IPA board: mqm730i

For XPA board: board name is mqm730x

```
python qccsdk.py set --board=mqm730i --appdir=prg build
```

```
python build.py -i FERMION_HOSTED_SBL -b mqm730i -o output/mqm730i
```

```
python build.py -i FERMION_QAT_DEMO -b mqm730i -o output/mqm730i
```

Flash QAT demo

1. Load QCC730 firmware without flash

```
cd tools\nvm_programmer\scripts
```

```
python nvmm_programmer.py -s ch347 --nvm-name rram -b 0x208000 -f ..\..\storage\firmware_desc_table\curr_age_fdt\fm_curr_age_with_app_bin.bin
```

```
py nvmm_programmer.py -s ch347 --nvm-name rram -b 0x20a400 -f
```

```
..\..\output\mqm730\FERMION_HOSTED_SBL\DEBUG\bin\FERMION_HOSTED_SBL_HASHED.elf
```

```
py nvmm_programmer.py -s ch347 --nvm-name rram -b 0x212400 -f
```

```
..\..\output\mqm730\FERMION_HOSTED_SBL\DEBUG\bin\FERMION_HOSTED_SBL_HASHED.elf
```

```
py nvmm_programmer.py -s ch347 --nvm-name rram -b 0x21a400 -f
```

```
..\..\output\mqm730\FERMION_QAT_DEMO\DEBUG\bin\FERMION_QAT_DEMO.bin --reset
```

2. Load QCC730 firmware to flash

```
cd tools\nvm_programmer\scripts
```

```
python nvmm_programmer.py -s ch347 --nvm-name rram -b 0x208000 -f ..\..\storage\firmware_desc_table\curr_age_fdt\fm_curr_age_default.bin
```

```
py nvmm_programmer.py -s ch347 --nvm-name rram -b 0x20a400 -f
```

```
..\..\output\mqm730\FERMION_HOSTED_SBL\DEBUG\bin\FERMION_HOSTED_SBL_HASHED.elf
```

```
py nvm_programmer.py -s ch347 --nvm-name nram -b 0x212400 -f
..\..\output\mqm730\FERMIION_HOSTED_SBL\DEBUG\bin\FERMIION_HOSTED_SBL_HASHED.elf
```

```
python nvm_programmer.py -s ch347 --nvm-name flash -b 0x043000 -P -f
..\..\output\mqm730\FERMIION_QAT_DEMO\DEBUG\bin\FERMIION_QAT_DEMO_HASHED.elf --reset
```

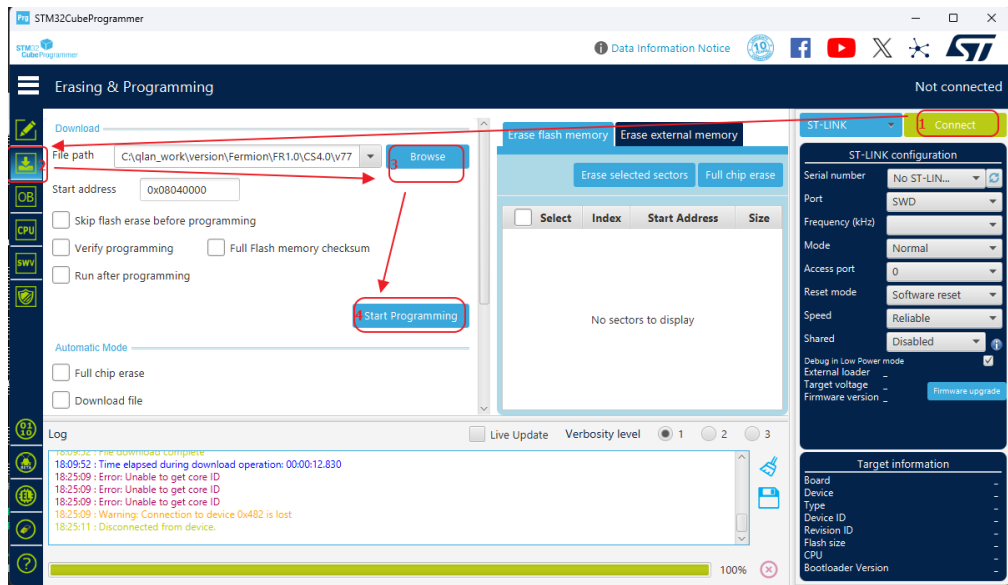
3. QCC730 will boot waiting STM32 commands

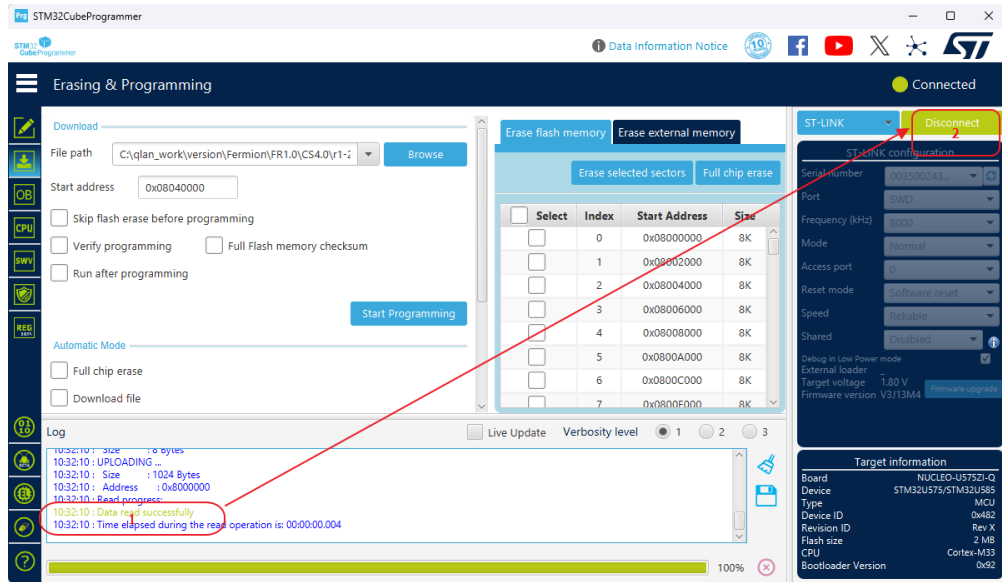
```
Program: Address = 0x32a400 Size = 32768 Result = 0
Program: Address = 0x332400 Size = 32768 Result = 0
Program: Address = 0x33a400 Size = 32768 Result = 0
Program: Address = 0x342400 Size = 32768 Result = 0
Program: Address = 0x34a400 Size = 32768 Result = 0
Program: Address = 0x352400 Size = 1240 Result = 0
Check Sum: Address = 0x21a400 Size = 1279192 Result = 8cd07cd8
SBL qcsapi slave init
SBL
    Fernion Hosted SBL - v00.01.0008
SBL PBL version 0x10020003
SBL Get PBL share from CS PBL
PBL [LOG]:<boot_log_show_system:107> Boot system:
PBL [LOG]:<boot_log_show_system:108>     start_tick      0
PBL [LOG]:<boot_log_show_system:109>     end_tick        20
PBL [LOG]:<boot_log_show_system:110>     pwr_req 0x007fffd5
PBL [LOG]:<boot_log_show_handler:119> Boot handler:
PBL [LOG]:<boot_log_show_handler:120>     Type 1
PBL [LOG]:<boot_log_show_handler:121>     Subtype 8
PBL [LOG]:<boot_log_show_handler:122>     sys_status 0x00001000
PBL [LOG]:<boot_log_show_elf_load:131> Boot elf load:
PBL [LOG]:<boot_log_show_elf_load:132>     load type 0
SBL SBL wait host CMD
```

Prepare upgrade image

Install STM32CubeProgrammer

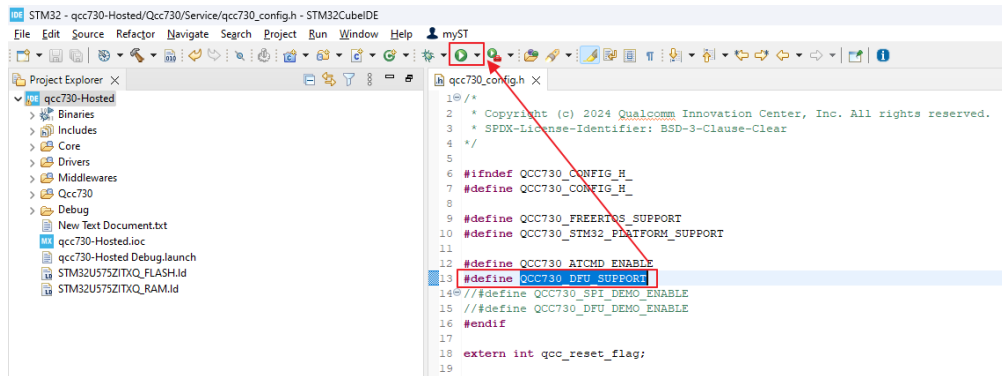
Use STM32CubeProgrammer to flash the image to BIN_ADDR_AT_FLASH(0x08040000) to STM32 board





Build STM32 demo

1. Install en.st-stm32cubeide
2. Replace the Qcc730 folder from SDK to STM32 project
3. Enable DFU support on STM32 in the latest build then flash STM32



DFU Process

AT+DFUAPP=1279192 (Image size)

