

Contents

| | |
|---|---|
| STM32-P407 board | 2 |
| 1) STM32CubeProgrammer: Un-Successful connection to board | 2 |
| STM32-E407 board | 3 |
| 2) Settings in STM32CubeIDE 1.3.0:..... | 3 |
| 3) STM32CubeIDE 1.3.0: Successful build | 4 |
| 4) STM32CubeIDE 1.3.0: Successful connection to board | 5 |
| 5) STM32 ST-LINK: Successful connection to board..... | 6 |
| 6) STM32CubeProgrammer: Successful connection to board | 7 |

STM32-P407 board

1) STM32CubeProgrammer: **Un-Successful** connection to board

The screenshot displays the STM32CubeProgrammer software interface. The main window is titled "Memory & File edition" and shows a "Device memory" view with fields for Address (0x08000000), Size (0x400), and Data width (32-bit). The central area is empty with the text "No data to display".

On the right side, the "ST-LINK" configuration panel is visible, showing a "Not connected" status. The configuration includes:

- Serial number: 34FF7306...
- Port: SWD
- Frequency (kHz): 4000
- Mode: Normal
- Access port: 0
- Reset mode: Software reset
- Shared: Disabled
- External loader: -
- Target voltage: 0.74 V
- Firmware version: V2J3657

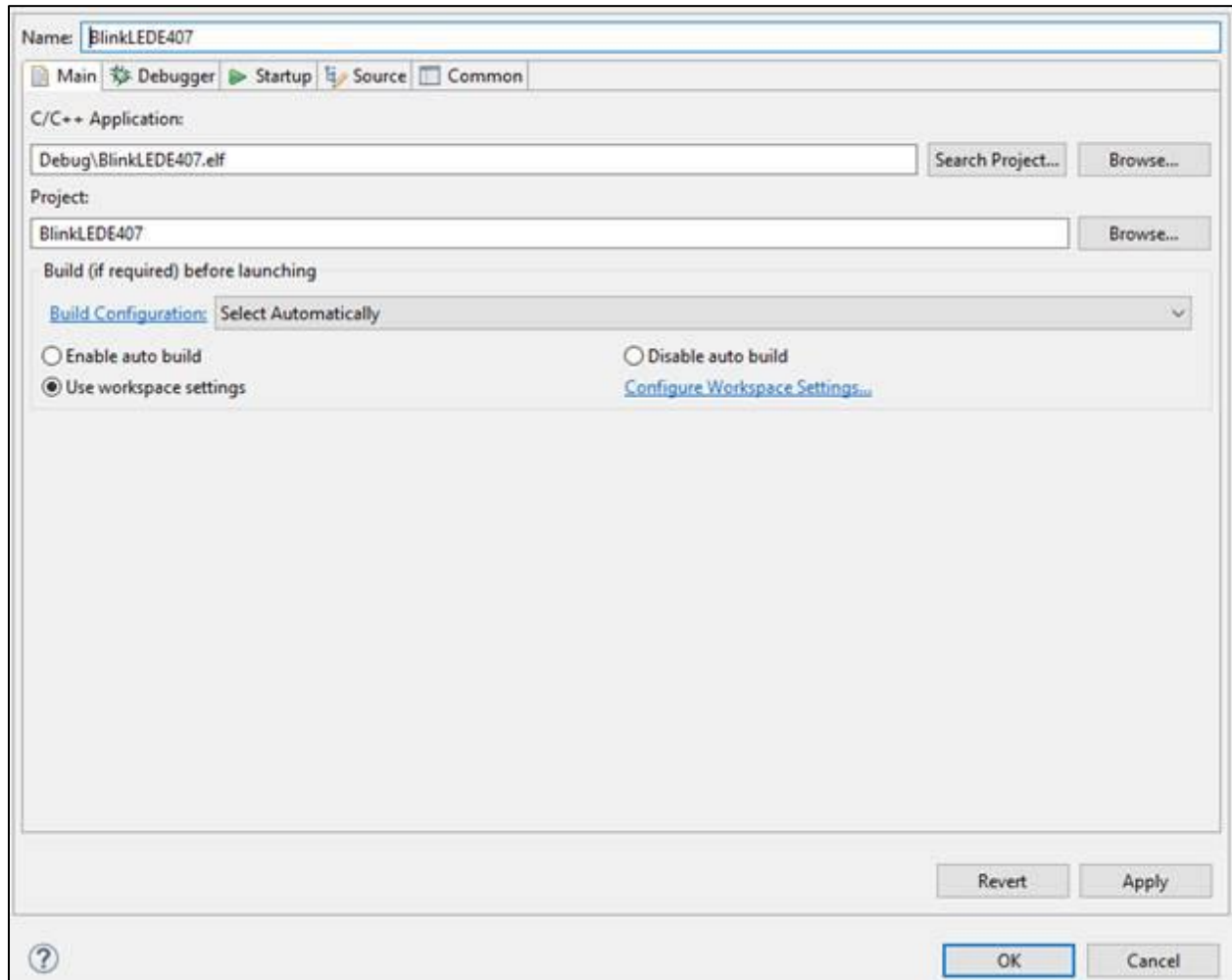
A "Firmware upgrade" button is present at the bottom of the configuration panel.

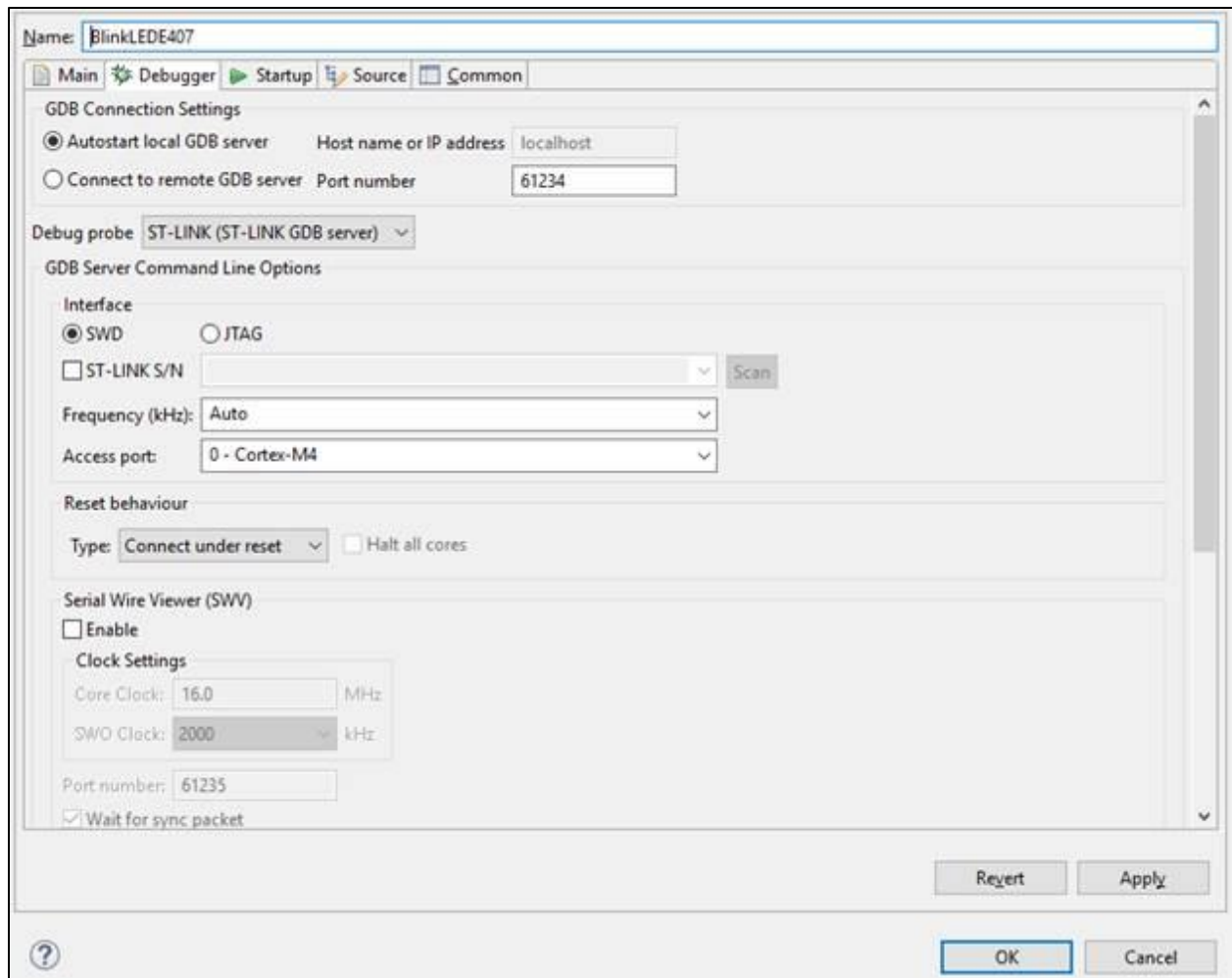
At the bottom, the "Log" window shows the following messages:

```
13:48:34 : Disconnected from device.  
13:48:37 : Warning: Device changed, refreshing...  
13:48:37 : ST-LINK SN : 34FF73065250343845580743  
13:48:37 : ST-LINK Fw : V2J3657  
13:48:37 : Voltage : 0.69V  
13:48:37 : Error: No STM32 target found!
```

STM32-E407 board

2) Settings in STM32CubeIDE 1.3.0:





3) STM32CubeIDE 1.3.0: Successful build

```
arm-none-eabi-size BlinkLEDE407.elf
arm-none-eabi-objdump -h -S BlinkLEDE407.elf > "BlinkLEDE407.list"
arm-none-eabi-objcopy -O binary BlinkLEDE407.elf "BlinkLEDE407.bin"
  text  data  bss  dec  hex filename
 8800   28  1600  10428  28bc BlinkLEDE407.elf
Finished building: default.size.stdout

Finished building: BlinkLEDE407.bin
Finished building: BlinkLEDE407.list

11:53:14 Build Finished. 0 errors, 0 warnings. (took 6s.246ms)
```

4) STM32CubeIDE 1.3.0: Successful connection to board

BlinkLEDE407 [STM32 Cortex-M C/C++ Application] ST-LINK (ST-LINK GDB server)

STMicroelectronics ST-LINK GDB server. Version 5.5.0
Copyright (c) 2019, STMicroelectronics. All rights reserved.

Starting server with the following options:

| | |
|----------------------|------------|
| Persistent Mode | : Disabled |
| Logging Level | : 1 |
| Listen Port Number | : 61234 |
| Status Refresh Delay | : 15s |
| Verbose Mode | : Disabled |
| SWD Debug | : Enabled |
| InitWhile | : Enabled |

Waiting for debugger connection...

Debugger connected

STM32CubeProgrammer v2.4.0

ST-LINK SN : 34FF73065250343845580743
ST-LINK FW : V2J36S7
Voltage : 3.30V
SWD freq : 4000 KHz
Connect mode: Under Reset
Reset mode : Hardware reset
Device ID : 0x413
Device name : STM32F405xx/F407xx/F415xx/F417xx
Flash size : 1 MBytes (default)
Device type : MCU
Device CPU : Cortex-M4

Memory Programming ...

Opening and parsing file: ST-LINK_GDB_server_a03232.srec

| | |
|---------|----------------------------------|
| File | : ST-LINK_GDB_server_a03232.srec |
| Size | : 8828 Bytes |
| Address | : 0x08000000 |

Erasing memory corresponding to segment 0:

Erasing internal memory sector 0

Download in Progress:

File download complete

Time elapsed during download operation: 00:00:00.617

5) STM32 ST-LINK: Successful connection to board

The screenshot displays the STM32 ST-LINK Utility application window. The title bar reads "STM32 ST-LINK Utility". The menu bar includes "File", "Edit", "View", "Target", "ST-LINK", "External Loader", and "Help". Below the menu bar is a toolbar with icons for file operations and connection management. The "Memory display" section shows the "Address" set to 0x08000000, "Size" at 0x2280, and "Data Width" at 32 bits. To the right, a "Device" information box lists: Device: STM32F405xx/F407xx/F415xx/F417xx, Device ID: 0x413, Revision ID: Rev 2.0, and Flash size: 1MBytes. A "LiveUpdate" checkbox is present and unchecked. The main area shows "Device Memory @ 0x08000000 : Binary File" and "Target memory, Address range: [0x08000000 0x08002280]". A table displays memory contents with columns for Address, 0, 4, 8, C, and ASCII. The ASCII column shows the start of a string: "... Y...-!...;!... A!...G!...M!...". Below the table is a log window with the following text:


```

11:56:31 : ST-LINK SN : 34FF73065250343845580743
11:56:31 : V2J36S7
11:56:31 : Connected via SWD.
11:56:31 : SWD Frequency = 4,0 MHz.
11:56:31 : Connection mode : Normal.
11:56:31 : Debug in Low Power mode enabled.
11:56:31 : Device ID:0x413
11:56:31 : Device flash Size : 1MBytes
11:56:31 : Device family :STM32F405xx/F407xx/F415xx/F417xx
    
```

 At the bottom, a status bar shows "Debug in Low Power mode enabled.", "Device ID:0x413", and "Core State : Live Update Disabled".

| Address | 0 | 4 | 8 | C | ASCII |
|------------|----------|----------|----------|----------|----------------------|
| 0x08000000 | 20020000 | 08001D59 | 0800212D | 0800213B | ... Y...-!...;!... |
| 0x08000010 | 08002141 | 08002147 | 0800214D | 00000000 | A!...G!...M!..... |
| 0x08000020 | 00000000 | 00000000 | 00000000 | 08002153 |S!.. |
| 0x08000030 | 08002161 | 00000000 | 0800216F | 0800217D | a!.....o!..}!.. |
| 0x08000040 | 08001DA9 | 08001DA9 | 08001DA9 | 08001DA9 | @...@...@...@...@... |
| 0x08000050 | 08001DA9 | 08001DA9 | 08001DA9 | 08001DA9 | @...@...@...@...@... |
| 0x08000060 | 08001DA9 | 08001DA9 | 08001DA9 | 08001DA9 | @...@...@...@...@... |
| 0x08000070 | 08001DA9 | 08001DA9 | 08001DA9 | 08001DA9 | @...@...@...@...@... |
| 0x08000080 | 08001DA9 | 08001DA9 | 08001DA9 | 08001DA9 | @...@...@...@...@... |
| 0x08000090 | 08001DA9 | 08001DA9 | 08001DA9 | 08001DA9 | @...@...@...@...@... |

6) STM32CubeProgrammer: Successful connection to board

The screenshot shows the STM32CubeProgrammer interface. The main window is titled "Memory & File edition" and displays a table of memory addresses and their contents. The table has columns for Address, 0, 4, 8, C, and ASCII. The log window at the bottom shows the connection process details, including ST-LINK SN, SWD frequency, and device ID. The right sidebar shows ST-LINK configuration and device information.

| Address | 0 | 4 | 8 | C | ASCII |
|------------|----------|----------|----------|----------|-------------------|
| 0x08000000 | 20020000 | 08001D59 | 0800212D | 0800213B | ... Y...-!...;!.. |
| 0x08000010 | 08002141 | 08002147 | 0800214D | 00000000 | A!..G!..M!..... |
| 0x08000020 | 00000000 | 00000000 | 00000000 | 08002153 |S!.. |
| 0x08000030 | 08002161 | 00000000 | 0800216F | 0800217D | a!.....o!..}!.. |
| 0x08000040 | 08001DA9 | 08001DA9 | 08001DA9 | 08001DA9 | 0...0...0...0... |
| 0x08000050 | 08001DA9 | 08001DA9 | 08001DA9 | 08001DA9 | 0...0...0...0... |
| 0x08000060 | 08001DA9 | 08001DA9 | 08001DA9 | 08001DA9 | 0...0...0...0... |
| 0x08000070 | 08001DA9 | 08001DA9 | 08001DA9 | 08001DA9 | 0...0...0...0... |
| 0x08000080 | 08001DA9 | 08001DA9 | 08001DA9 | 08001DA9 | 0...0...0...0... |
| 0x08000090 | 08001DA9 | 08001DA9 | 08001DA9 | 08001DA9 | 0...0...0...0... |
| 0x080000A0 | 08001DA9 | 08001DA9 | 08001DA9 | 08001DA9 | 0...0...0...0... |

Log

```

13:47:07 : ST-LINK SN : 34FF73065250343845580743
13:47:07 : ST-LINK FW : V2J3657
13:47:07 : Voltage : 3.32V
13:47:07 : SWD Freq : 4000 KHz
13:47:07 : Connect mode: Normal
13:47:07 : Reset mode : Software reset
13:47:07 : Device ID : 0x413
13:47:07 : UPLOADING OPTION BYTES DATA ...
13:47:07 : Bank : 0x00
13:47:07 : Address : 0x40023c14
13:47:07 : Size : 4 Bytes
13:47:07 : UPLOADING ...
13:47:07 : Size : 1024 Bytes
13:47:07 : Address : 0x8000000
13:47:07 : Read progress:
13:47:07 : Data read successfully
13:47:07 : Time elapsed during the read operation is: 00:00:00.007
    
```

ST-LINK configuration

- Serial number: 34FF7306...
- Port: SWD
- Frequency (kHz): 4000
- Mode: Normal
- Access port: 0
- Reset mode: Software reset
- Shared: Disabled
- External loader: _
- Target voltage: 3.32 V
- Firmware version: V2J3657

Device information

- Device: STM32F405xx/F407xx/F415xx/F...
- Type: MCU
- Device ID: 0x413
- Flash size: 1 MB
- CPU: Cortex-M4