//draft //draft 11/12/2022

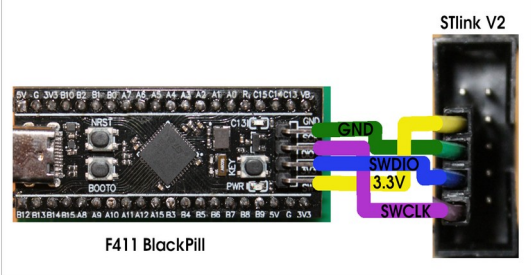
# Kw4kd – Black Pill CW Decoder Project

# Initial .Bin Load And Keeping The Project Software Up-to-date*

Note: while the following instructions were originally prepared for the decoder project; However, this process can be used to “flash” any F411 Blackpill.

**Resources needed to update:**

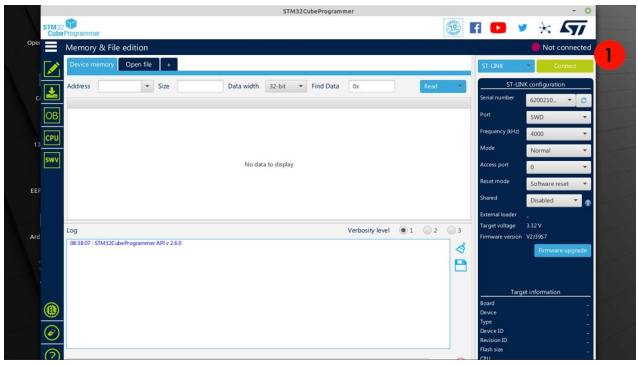
1 STM32F411 Blackpill
2 Stlink-V2, plus dupont jumper wire set
3 Pin configuration of the STlink-V2 connection to Blackpill:



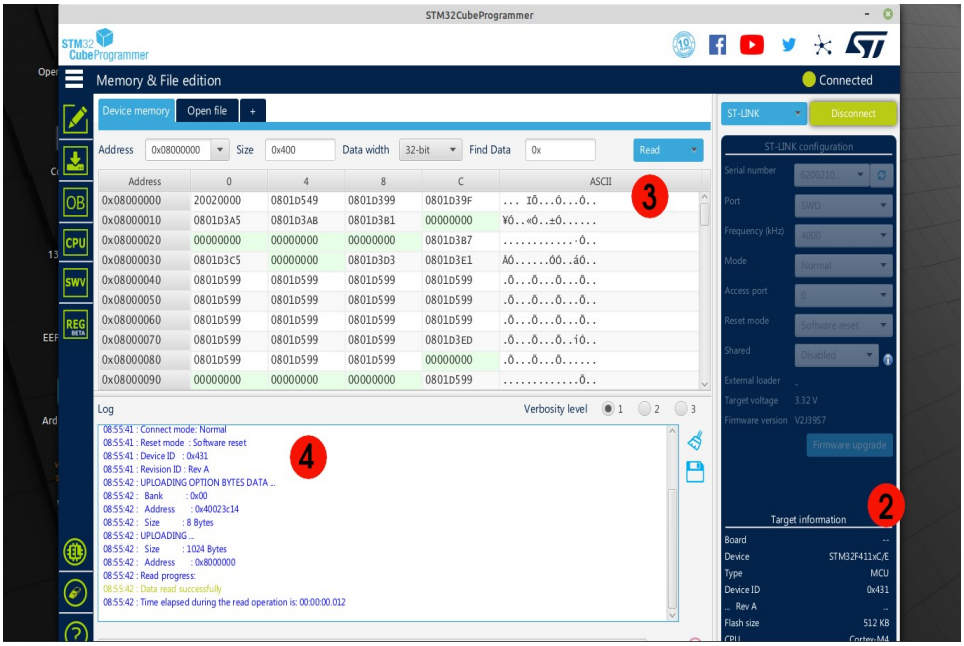

Make jumper connections shown above. (Note: Pay close attention to your Stlink-V2’s “pin-out”. Not all sources use the same sequence, in their pin assignments.)

4 STM’s CubeProgrammer. If not already installed, on your computer, link to their web site, and install it: <https://www.st.com/en/development-tools/stm32cubeprog.html#get-software cc>
5 .Bin file (example, F411…. .bin found in kw4kd email attachment)

**Start CubeProgrammer**



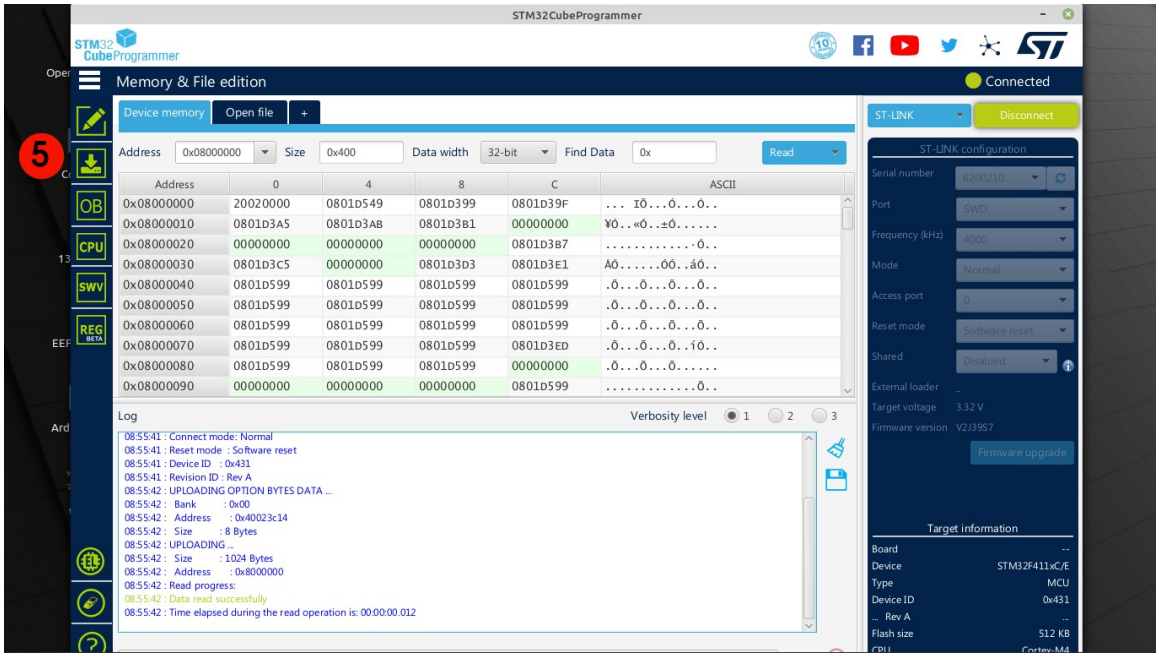

1 Connect (CubeProgrammer via the STlink-V2 to your F411 Blackpill)



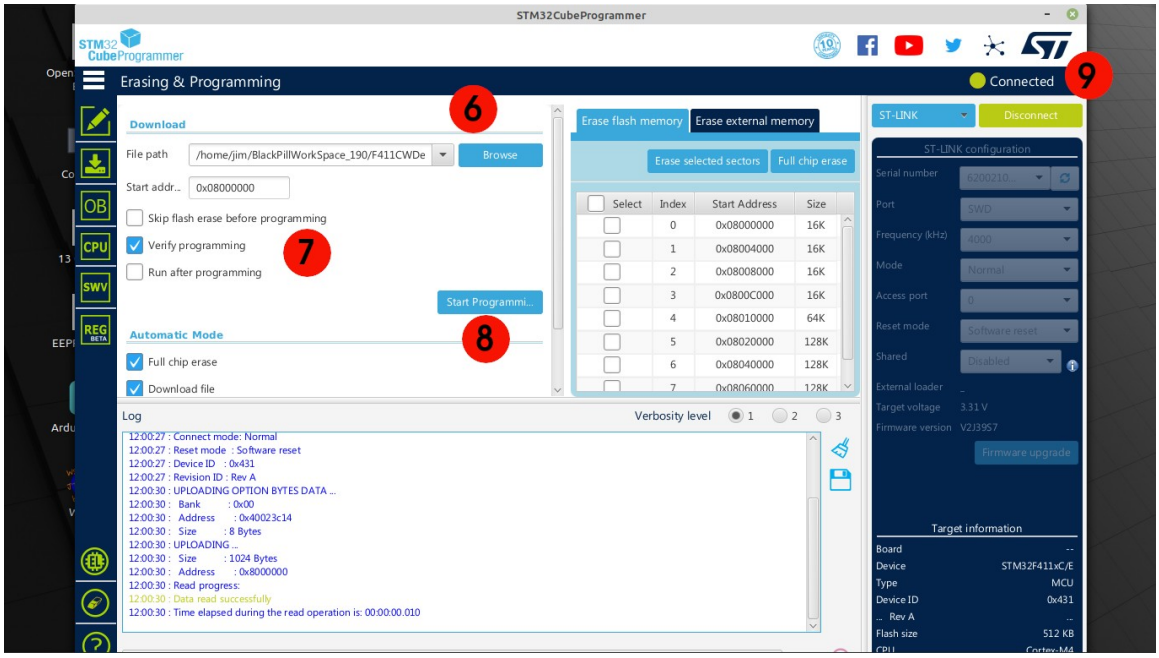

2 Note that “Target Information” reports an STM32F411 w/ 512K of flash was found.

3 Data read can vary depending on the previous state of the MPU

4 Typical “Log” report seen during initial connection




5 Click 2nd Icon down to open the “Erase&Programming” view




6 Use the “Browse” button, to find/set, the “file path” of the .bin file to be flashed to the MPU.
7 Confirm that the “check” boxes are marked as shown.
8 Click the “Start Program” button, to transfer the contents of the .bin file to the MPU. (If a “flashing” error occurs, repeat as needed.)
9 Disconnect, close CubeProgrammer, and remove the STlink-V2 dongle.
10 Power up your black pill project, & confirm the new code runs as intended; i.e., continue at the “First Time Use Initiation” in the kw4kd decoder manual for screen re-calibration and following.

**Done**

**Credits:**

Original draft submitted by KI4EZC

***** *This process erases user settings stored in flash memory. If you’re updating an existing project, be prepared to regenerate your “saved” values.*