

Instruction

A. Download files to offline downloader

1. Download the latest PC software "Downloader.exe"



2. Connect the offline downloader to the computer. The offline downloader does not need to install the driver. When the computer is connected to the computer for the first time, it will take a while to automatically install the driver.

3. After the PC driver is installed, the upper computer software will display the following picture (the offline downloader has been plugged into the computer USB).



Series: "STM32 Series" is displayed after the offline downloader is connected.
Information: Displays the file information in the offline downloader.

Settings:

1) "Read protection": Read protection is enabled on the target CPU's SWD port. The debugger (ULINK, Jlink, STlink) cannot be connected to debug. The debugger must be removed after read protection.

2) "Restart Run": After the file is flashed to the target CPU, the target CPU starts to restart (the restart operation is invalid after read protection).

3) "Erase whole chip": The target CPU flash is completely erased.

4) "Erase sector": Erases the target CPU flash memory according to the size of the program file.

5) "Programs": Set the downloader to write the file.

6) "Verification": After the file is written, verify the programming.

4. Drag the "Hex" and "bin" files to be downloaded into the "Downloader" software.

5. Set the corresponding options.

6. Click the "Program..." button and the file is downloaded to the offline downloader.

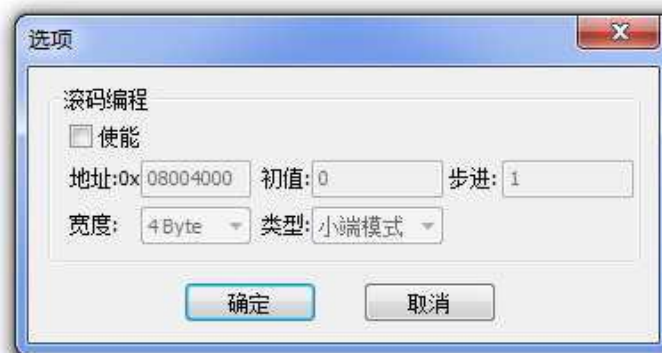
7. The list box will display the latest download file information after the file download is complete.

B. Special features

1. Rolling code writing

Downloader-Mini series support rolling code writing function

1) Click "Tools" -> "Options" to open the "Options" dialog box.



2) Click the "Enable" check box.

1. "Address": Rolling start address, this edit box is hexadecimal data type, input range

(0x00000000-0xFFFFFFFF). Note: This address cannot be set to coincide with the download file address. Otherwise, the download will fail or the Flash data will be abnormal.

2. "Initial value": Rolling code initial value.

3. "Stepping": Success in programming and rolling.

4. "Type": Select size end mode.

B. Remote function

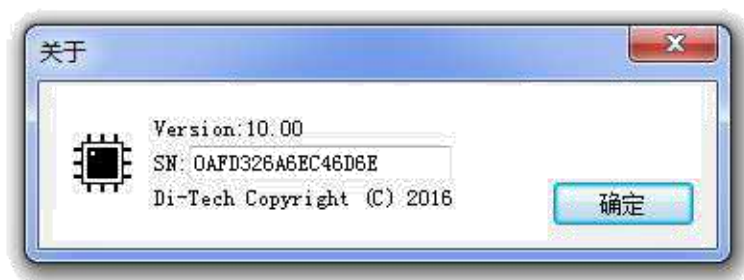
When the downloader is in the hands of the customer and needs to update the flash file, and does not want to send the source Hex/bin file to the guest

When the user (limited number of writes) can use the remote function, the specific operation steps are as follows:

1) Customer operation

1. Open the "DownLoader.exe" software and plug in the offline downloader

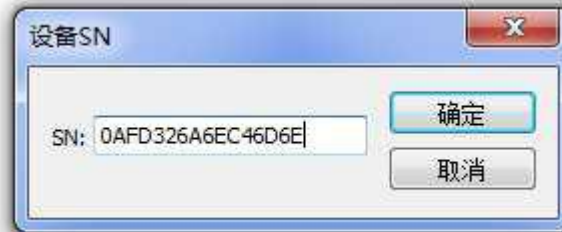
2. Click on the "Help - About" menu to open the "About" dialog box



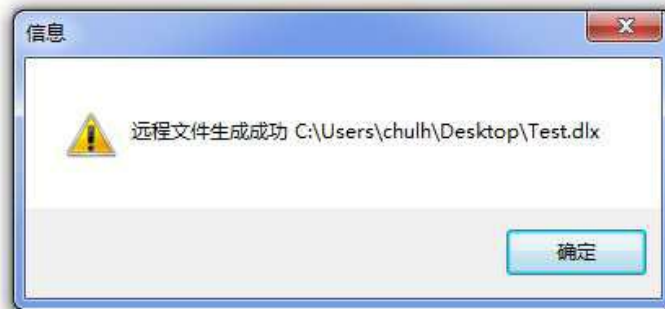
3. Record the "SN" code value and send it to the local through other communication means. The "SN" code is randomly generated each time it is plugged into the offline downloader, so the customer cannot remove the offline downloader from the computer at this time.

2) Local operation

1. Open "Downloader.exe" and load the burning file.
2. Set the "Settings" option as required.
3. Click the "Remote" button.
4. Enter "SN" to the prompt code in the prompt box.



5. Click the "OK" button to generate a ".dlx" file that matches the customer "SN".



6. Locally send the generated ".dlx" file to the customer through other communication means.

3) Customer operation

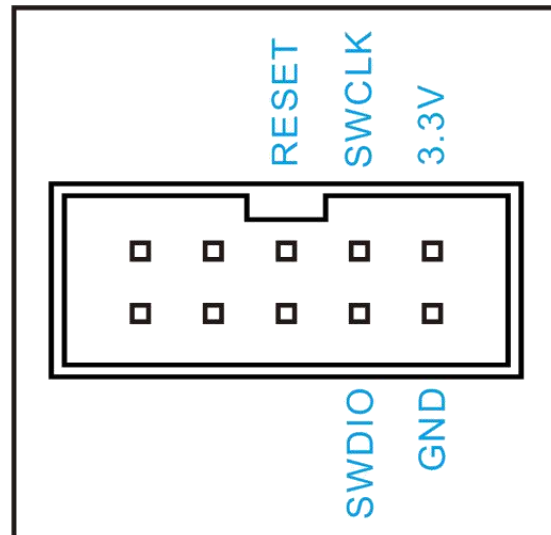
1. Load "dlx file" (Setting option is useless when loading "dlx" file).
2. Click the "Program" button to download the file to the offline downloader.
3. Remove Offline Downloader

C. Offline Downloader Programs the Target CPU

1) Offline Downloader connects to the target CPU

1. The offline downloader connects to the target CPU's SWD. The offline downloader port is defined as follows:

- 3.3V->Target Board Power Supply
 - GND-> Target board ground
 - SWCLK->Target Board
 - SWD clock
 - SWDIO->Target Board
 - SWD data
 - RESET->Target board RESET pin
- (If the target CPU's SWD port is not multiplexed, it cannot be disconnected without being disabled)



2. The offline downloader connects to the JTAG port of the target CPU

- 3.3V-> target board power supply GND-> target board ground wire
- SWCLK->Target Board JTAG's TCK SWDIO->Target Board JTAG's TMS
- RESET->Target board nSRST pin (If the target CPU's SWD port is not multiplexed, it cannot be disconnected without being disabled)

2) The offline downloader burns the target CPU

1. When the offline downloader download button is pressed, the LED on the offline downloader will have a status indication

- Red LED flashing: file is being flashed
- Blue LED flashing: offline downloader to the target CPU wiring error, please check the wiring of offline downloader to the target CPU , or CPU series selection error, please check whether the target CPU series selection is consistent with the target CPU type
- Blue LED blinks after the red LED flashes: Downloaded successfully
- Red LED blinks after the red LED flashes: download failed
- Red LED Blue LED flashes alternately: download limit

D. Use question:

1. Q: How does the offline downloader supply power?

A: The offline downloader is a standard USB interface, and all standard USB powered devices can power the offline downloader.

E.g:

USB port phone power adapter, power bank, computer USB port

In addition, the offline downloader interface has a "+3.3V" power port, which can supply power to the target board. Up to 300ma, the target board can also use this interface to power the offline downloader.

2. Q: Offline downloader can be downloaded via serial port (ISP download, need jumper BOOT)?

A: This offline downloader currently only supports the "SWD" / "JTAG" interface. At present, it does not support the serial port (ISP) interface download.

3. Q: Whether the offline loader has protection function?

A: This offline downloader has over-current and anti-connection protection.

4. Q: Why does the "Blue LED" flash while the offline downloader is downloading?

A: Check if the offline downloader is connected to the target CPU correctly.

Check whether the "CPU Series" selection is consistent with the target CPU.

If the "SWD" pin is disabled or multiplexed in the program, please connect the offline downloader pin 5 "RESET" to the target CPU "RESET" pin.

5. Q: Is offline downloader supports hot pluggable?

A: The theory supports hot plugging, but we does not recommend it.

6. Q: Is offline downloader able to connect "JTAG" burning chip?

A: Because the "JTAG" pin already contains the "SWD" pin, the chip can be programmed via "JTAG"