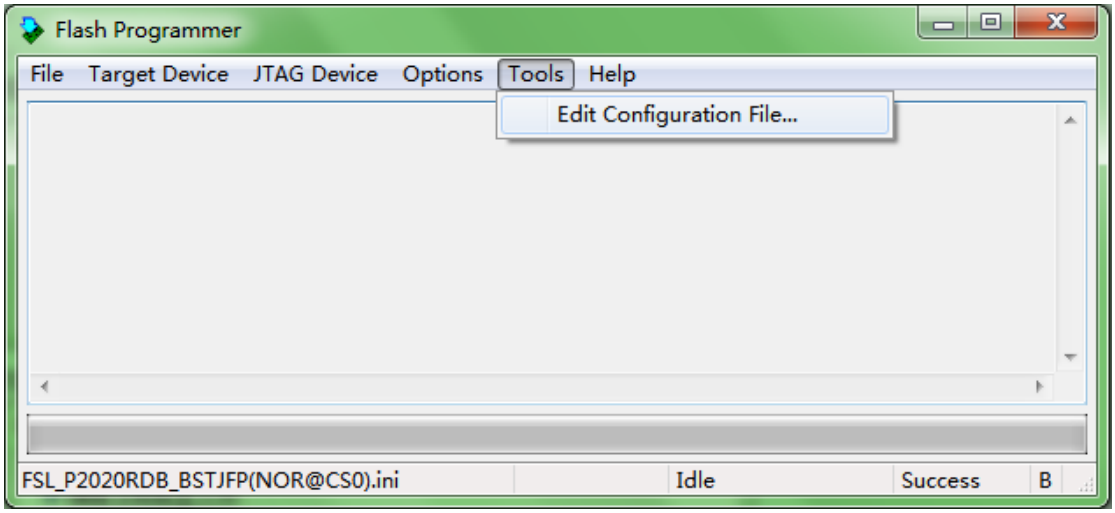
Contents

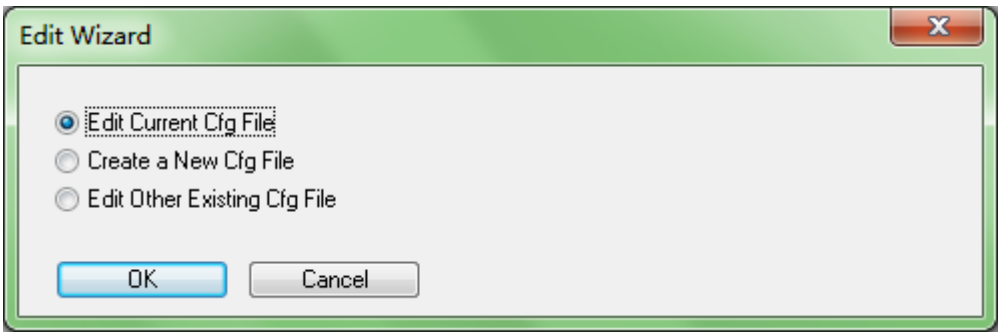
Note: There may be some changes between versions. So, your software may look a bit different from this manual.

Startup

After software launched, select Menu **Tools** / **Edit Configuration File...** . See screenshot below:



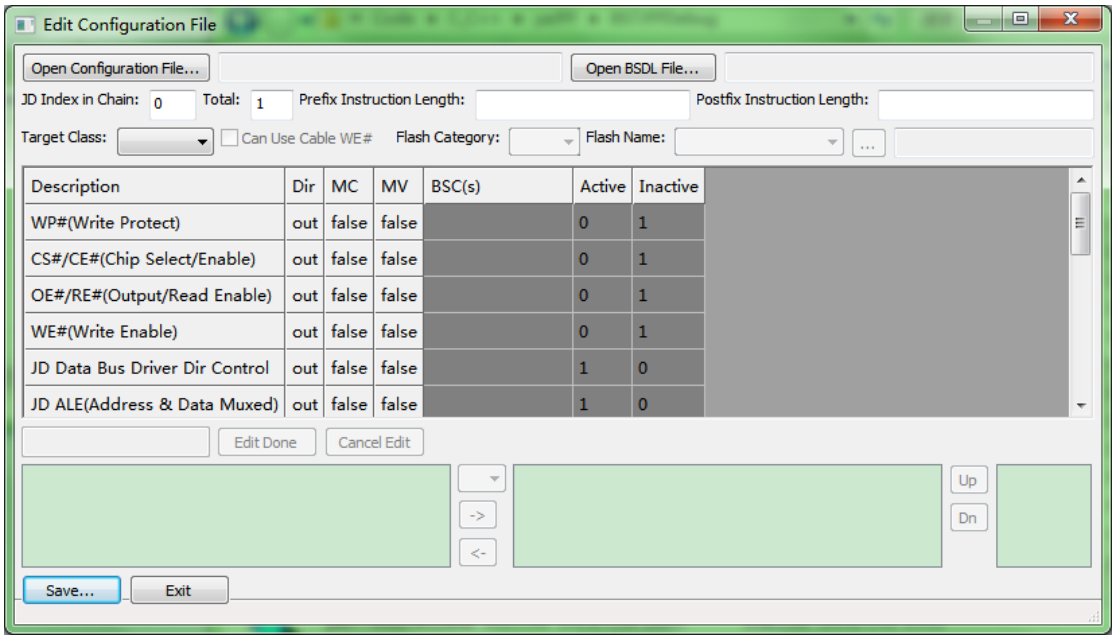
A wizard is shown as below:



Please choose:

- **Edit Current Cfg File**: The software will open currently loaded configuration file for editing. *Note: If no configuration file loaded successfully, this operation is invisible.*
- **Create a New Cfg File**: Create a new configuration file.
- **Edit Other Existing Cfg File**: Please select an existed file to edit.

UI screenshot:



Generally speaking, if you are creating a new configuration file, you should follow steps listed below one by one. If you are editing an existed file, you may choose items you want to edit.

JD (JTAG Device) Index in Chain

Please input index of JTAG device that the Flash is attached. Index begins from 0.
If not mentioned, JD or 'JTAG device' means the unique device in chain that is connected with Flash.

Total (Devices in JTAG Chains)

Please input number of total devices in the JTAG chain. The number begins with 1.

BSDL File

Click Button **Open BSDL file...** and select BSDL file for JTAG device.
We'll use mcf54450.bsd as an example in this manual.

Other Devices in JTAG Chain

If there's only one device in chain, or you have all BSDL files of all devices in chain, please skip this section.

Prefix Instruction Length

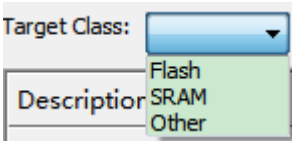
Please input JTAG instruction length of all other devices ahead of JTAG device. If there are more than one device, please split them with '|' character. For example, '4|5' means there are two devices ahead of JTAG device in JTAG chain, and device at index 0 has a 4-bit JTAG instruction while device at index 1 has a 5-bit JTAG instruction. And you could find that the JTAG device is at index 2.

Post Instruction Length

Please input JTAG instruction length of all other devices behind of JTAG device. Refer to Prefix Instruction Length.

Target Class

It may be **Flash**, **SRAM** or **Other**.



'**SRAM**' means IC who has a SRAM style CPU interface, such as a CPLD, FPGA or ASIC.
'**Other**' means component that has no CPU interface.

Can Use Cable WE

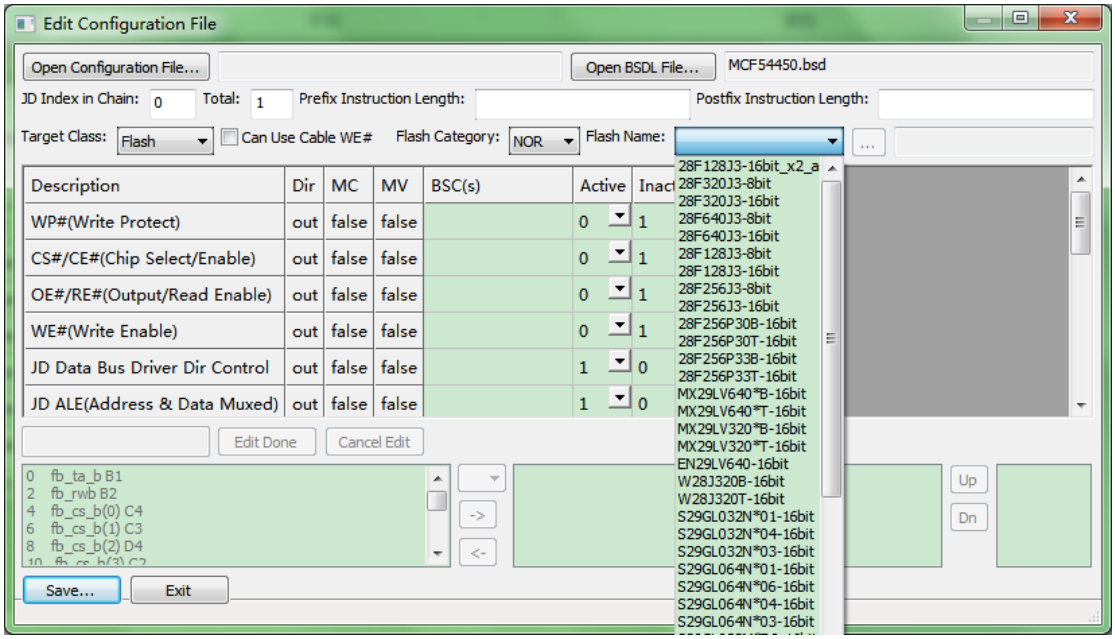
Reserved. Left unchecked.

Flash Category

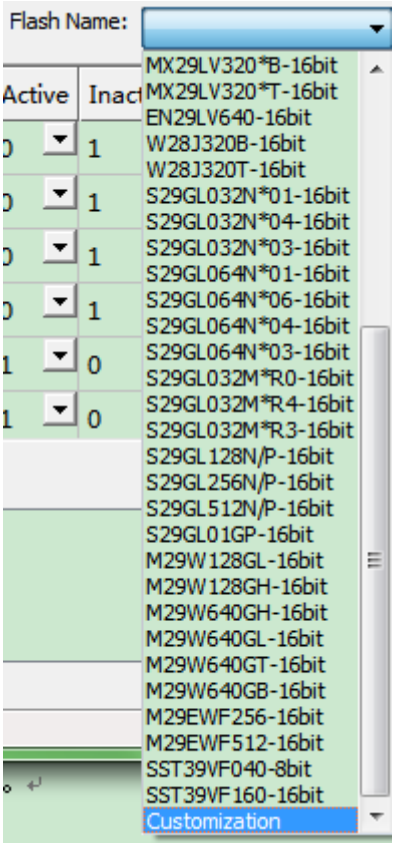
NOR or NAND.

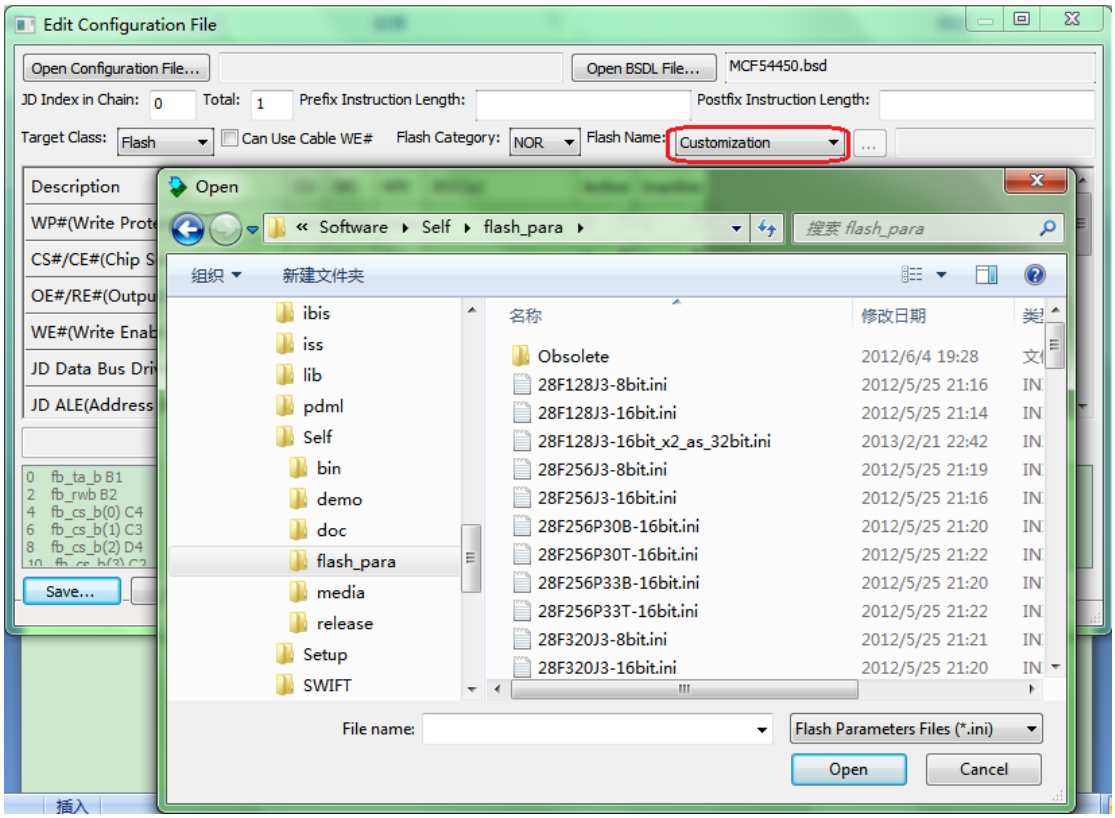
Flash Name

Click the dropdown icon to select correct Flash.



If you could not find Flash you want in the list, please select '**Customization**' and then select a Flash parameter file. See screenshot below:



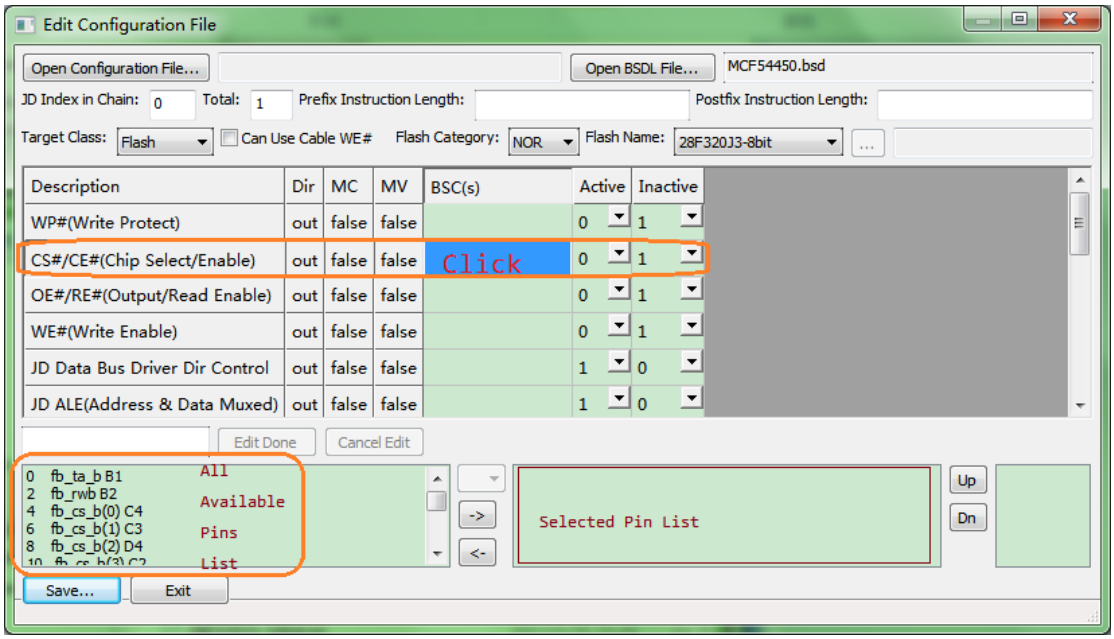


If you could not find Flash parameter file, please contact us.

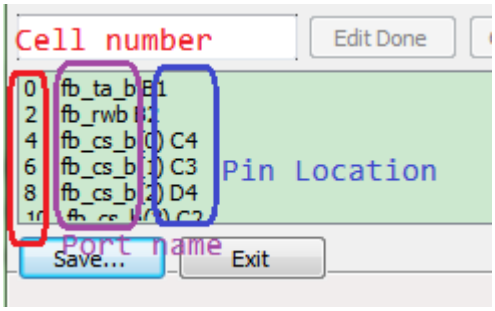
CS, OE, WE

Set chip select pin for Flash.

Click **CS#/CE#** row, you will see all available pins for CS. See screenshot below:



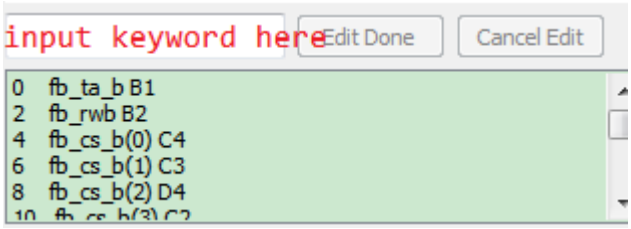
Each line of pin in list contains three items:



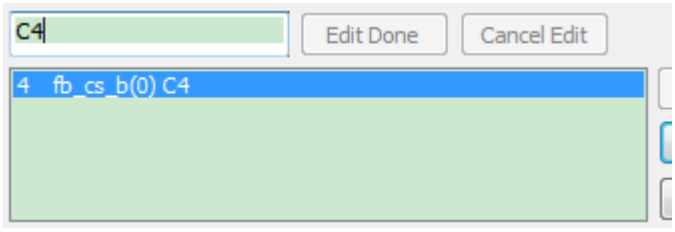
For example: '`0 fb_ta_b B1`' means cell number `0`, port name (pin name in most cases) is `fb_ta_b`, and pin location is `B1`.

Text in difference color corresponds with difference item in screenshot above.

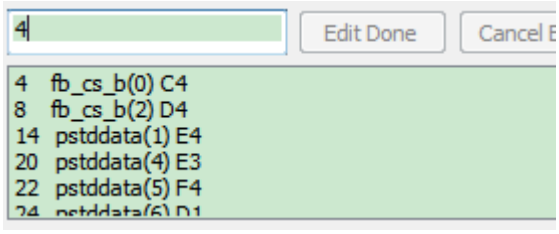
Supposed Flash CS pin is connected to CPU pin `fb_cs_b(0)` (pin location `C2`). You can use a filter to find target pin very quickly. The keyword could be cell number, port name or pin location.



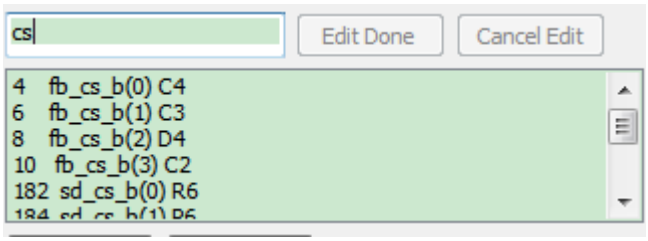
You could input '`C4`', you will see:



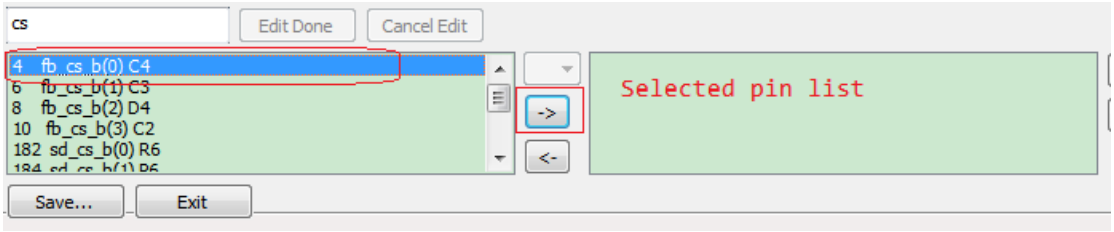
You could also input '`4`', and then you will see:



Of course, you may input pin name '`cs`'. See screenshot below:



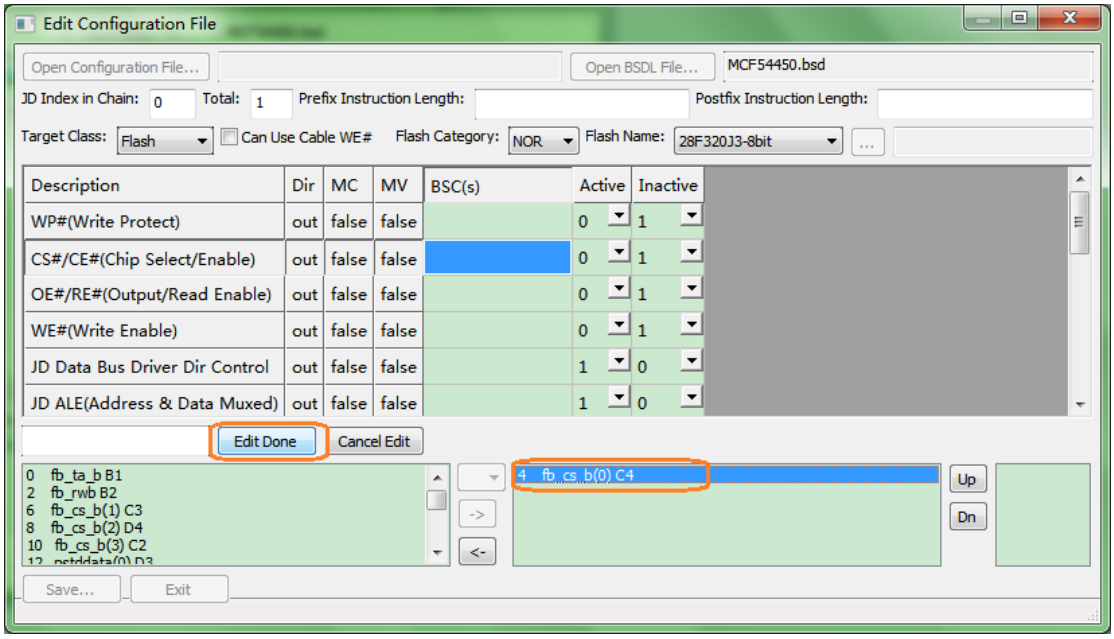
After you have found '`4 fb_cs_b(0) C2`', select it and click '->' button to add it to selected pin list.



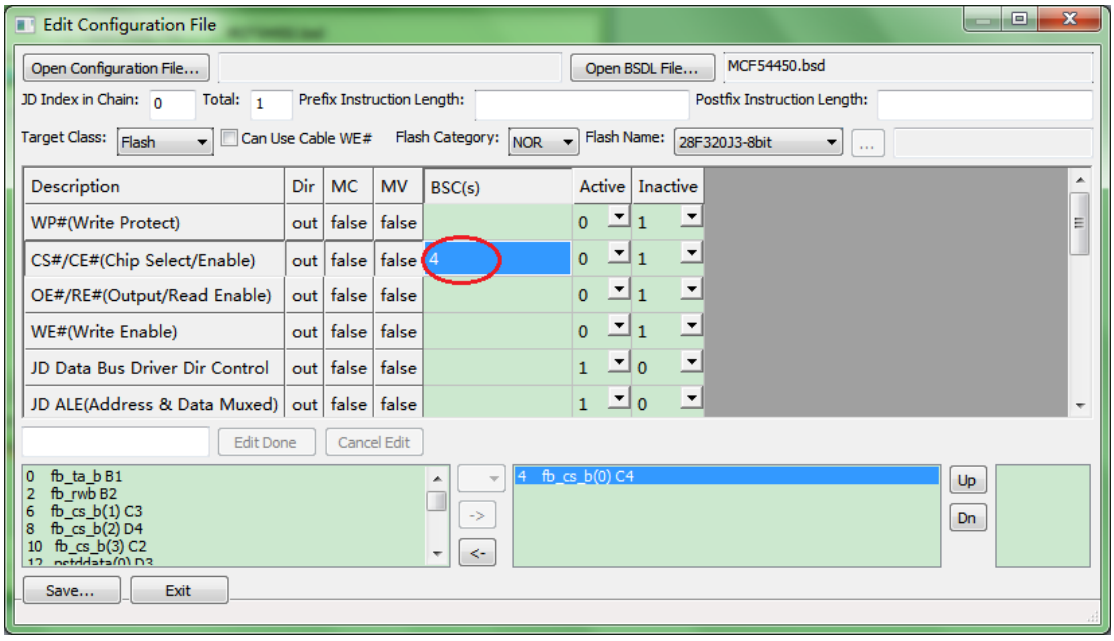
Tips: Double click also works.

Tips: If there is only one line in all pin lists, you could press 'Enter' key to add it to selected pin list.

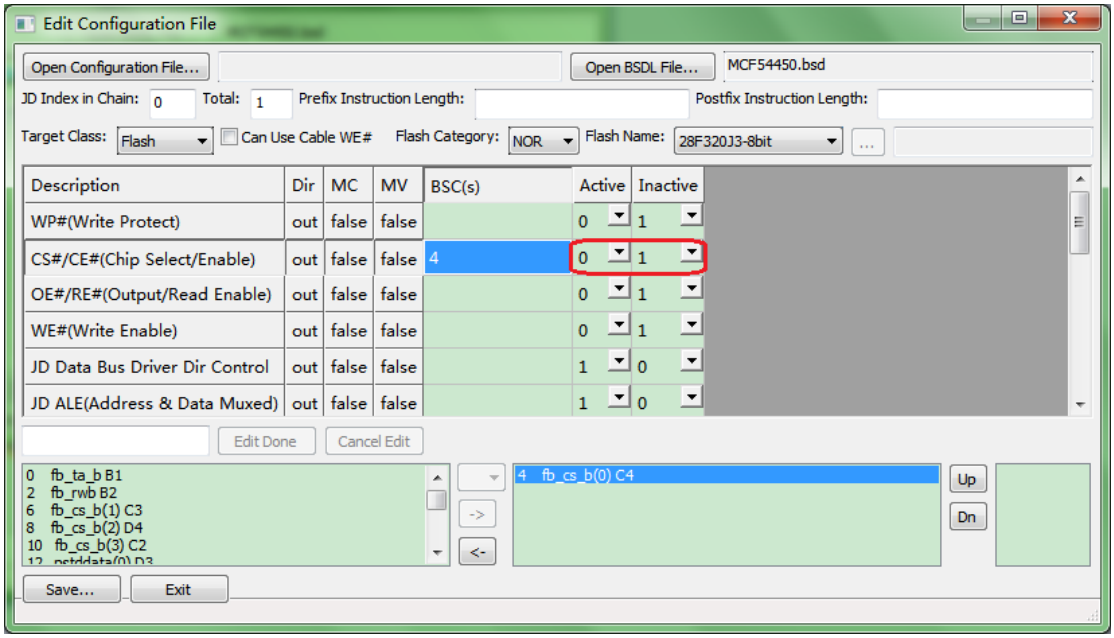
You will see that '`4 fb_cs_b(0) C2`' now added. Then click '**Edit Done**' button. See screenshot below:



In the table, CS is assigned a pin whose BSC cell number is 4. See screenshot below:

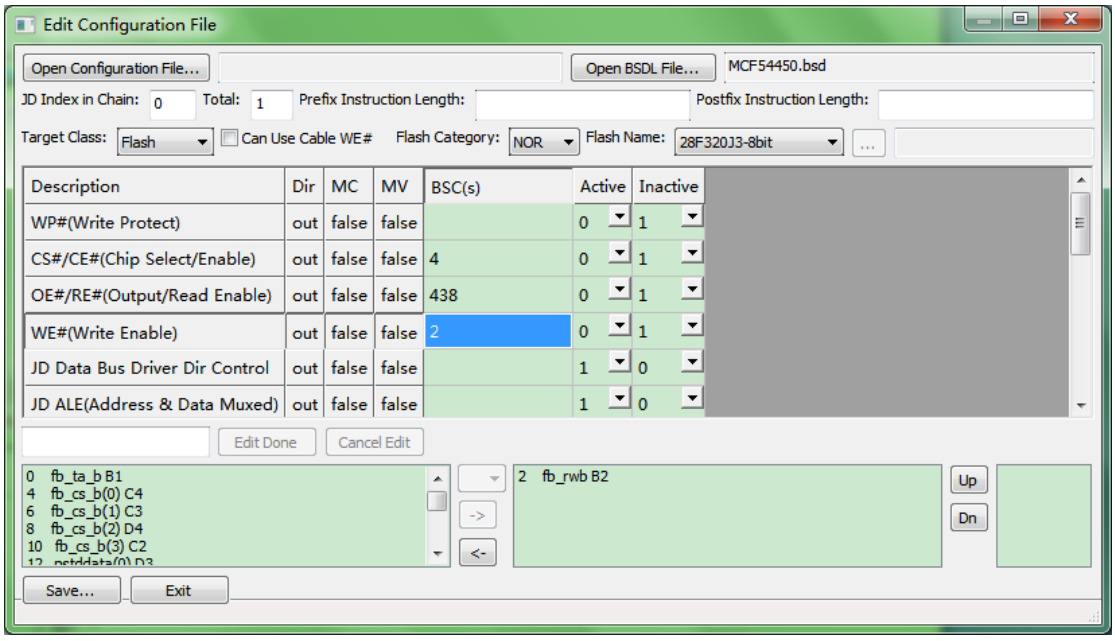


Please check whether **Active** value for CS is right or not. See screenshot below:



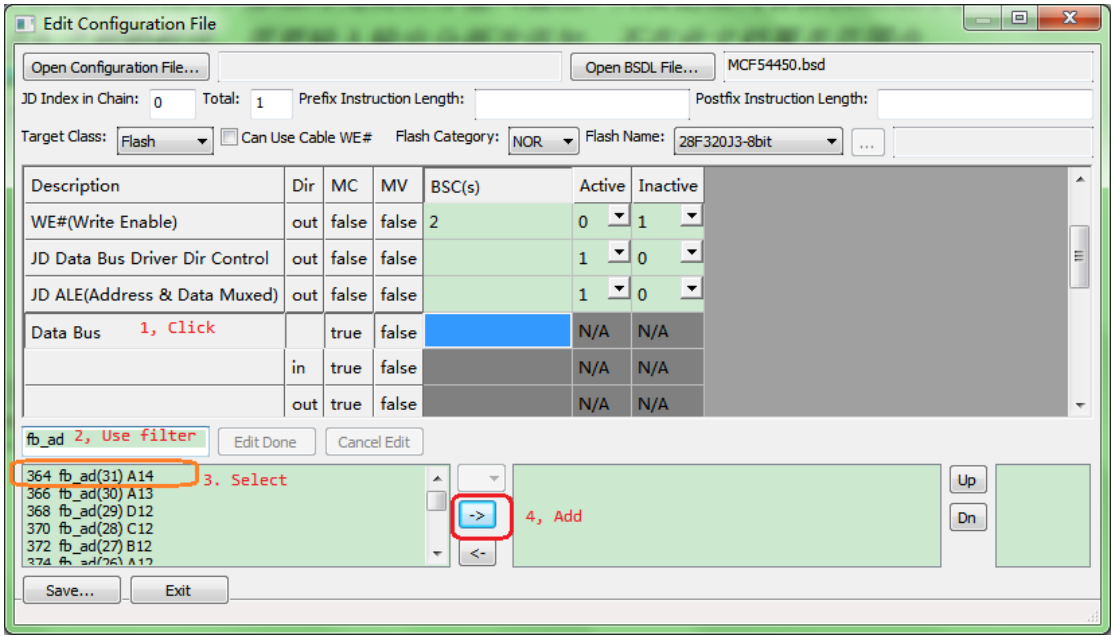
Please set **OE#** and **WE#** in similar steps as **CS#/CE#**.

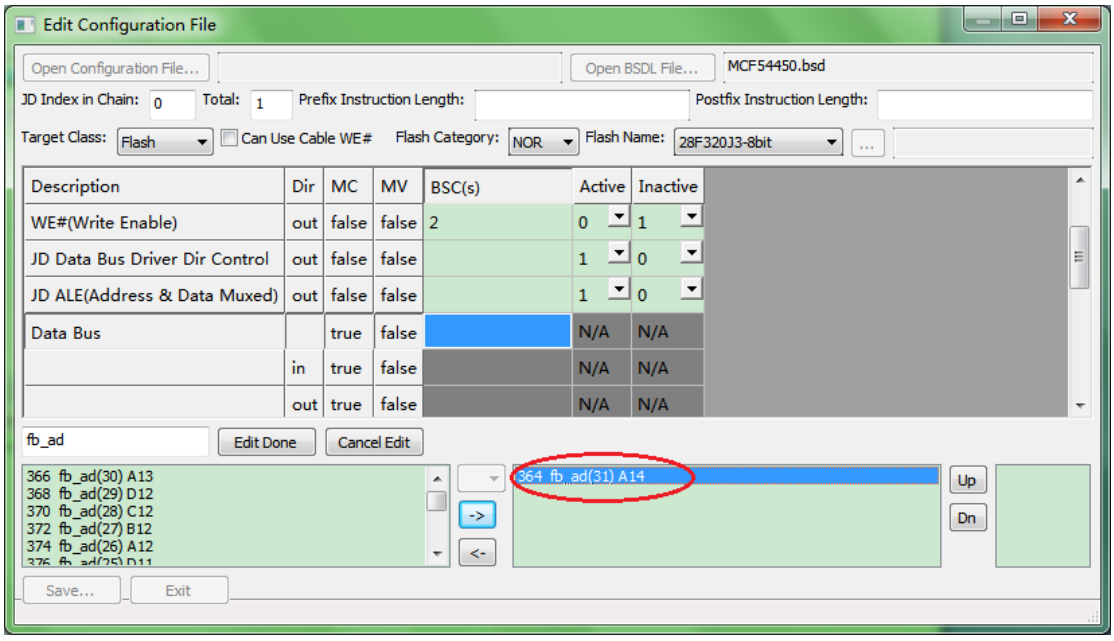
Screenshot below is a reference that both **OE#** and **WE#** are set.



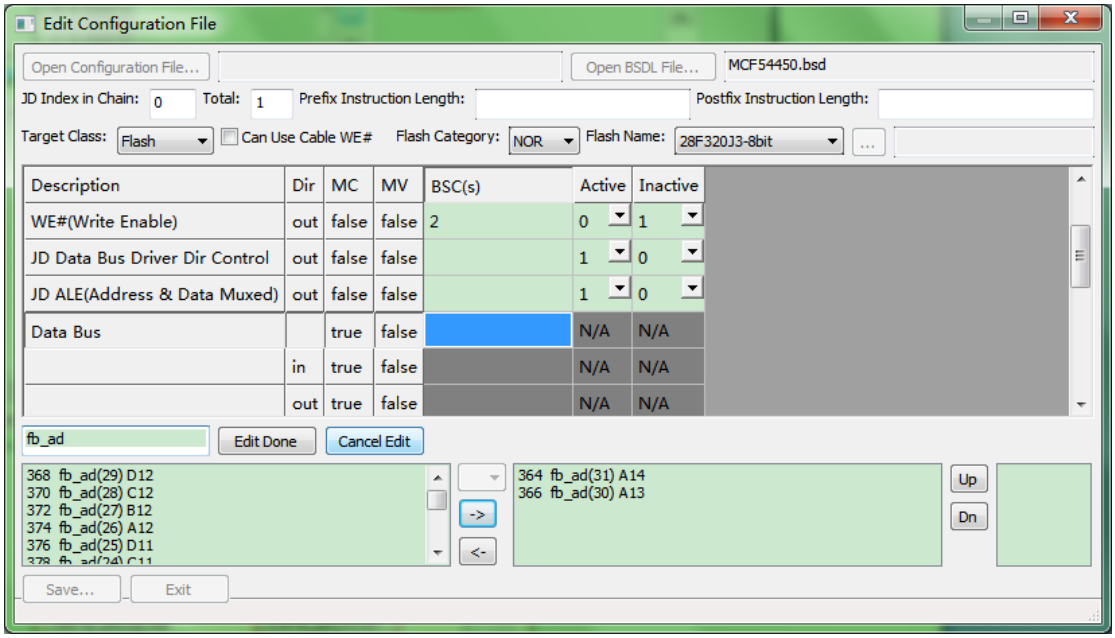
Data and Address Buses

Click **Data Bus** row, and now we'll add data bus from MSB to LSB (as far as Flash is concerned). In example of this manual, Flash pin `D7` is connected to CPU pin `fb_ad(31)`. So we must find `fb_ad(31)` and add it first. See screenshot below:

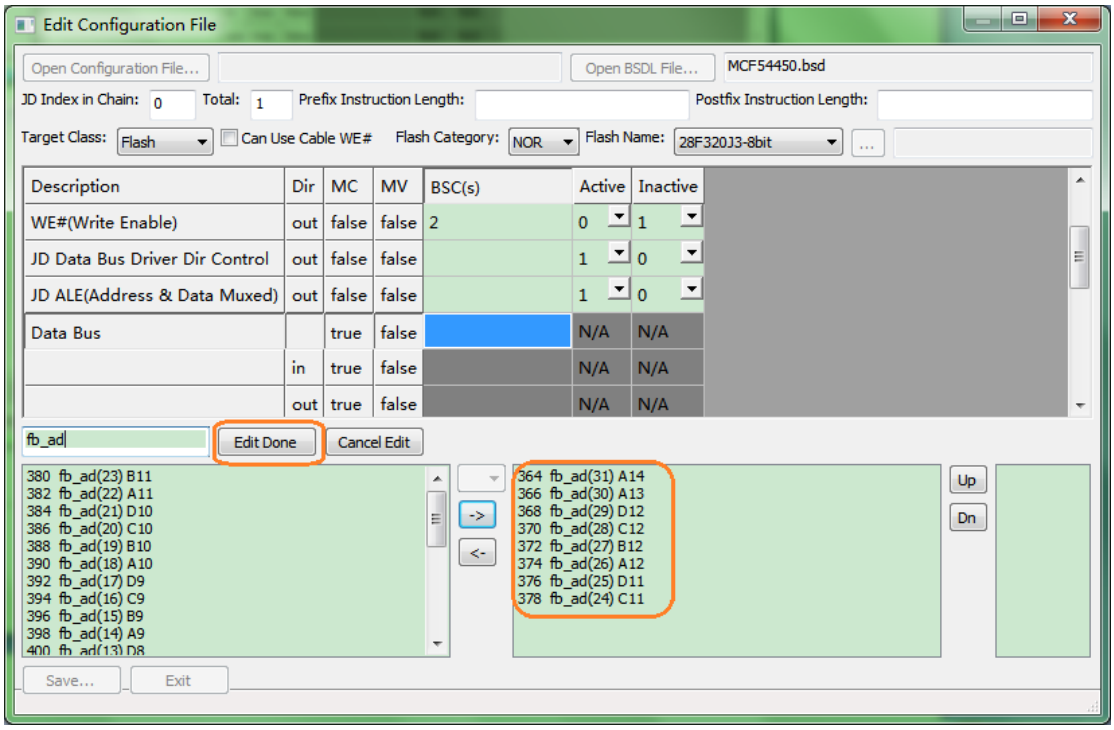




Then `fb_ad(30)`. See screenshot below.



After all eight data buses are added, click '**Edit Done**' button.



Address Bus row is edited similarly as **Data Bus.**

Attention: If Flash data bus width is not 8-bit, please add the LSB address bus of CPU in '**Address Bus**' row. If 16-bit mode, Flash address bus pin A0(maybe A-1) is not connected with LSB address bus pin of CPU, but you should add the LSB in the list. To 32-bit mode, last tow LSB pins should be added. In fact, you could specify any output pin as the last pin(s), because it's not really used.

NAND Flash

ALE, CLE and **I/O Bus** are for NAND Flash. Please left blank if you are using NOR Flash. Otherwise, please set them.

Optional Settings

Data Bus Driver Dir Control

If any data bus driver exists between CPU and Flash, please let the software know which pin is controlling the direction of the buffer driver.
Active means from CPU to peripheral bus ('Write'), **Inactive** means peripheral bus to CPU ('Read').

Left blank if you are not using any bus driver.

For example: The 245 driver's DIR pin is controlled by CPU's R/W pin. We know R/W pin will output 'High' when reading and 'Low' when writing. On the other hand, 'Active' value is for 'Write' operation, so the 'Active' value should be 0, and 'Inactive' value should be '1'.

WP (Write Protect)

Set which pin of JTAG device is controlling WP pin of Flash.
Active means Flash is protected from writing, **Inactive** means no write protection.
If WP is not controlled or Flash has no WP pin, left this row blank.

ALE (When Address & Data Bus are Multiplexed)

To some CPU (e.g. MPC8548, MPC8313), their address bus and data bus are multiplexed.
You should select which pin is used to the address bus latch.
Active means latch IC is able to latch address.

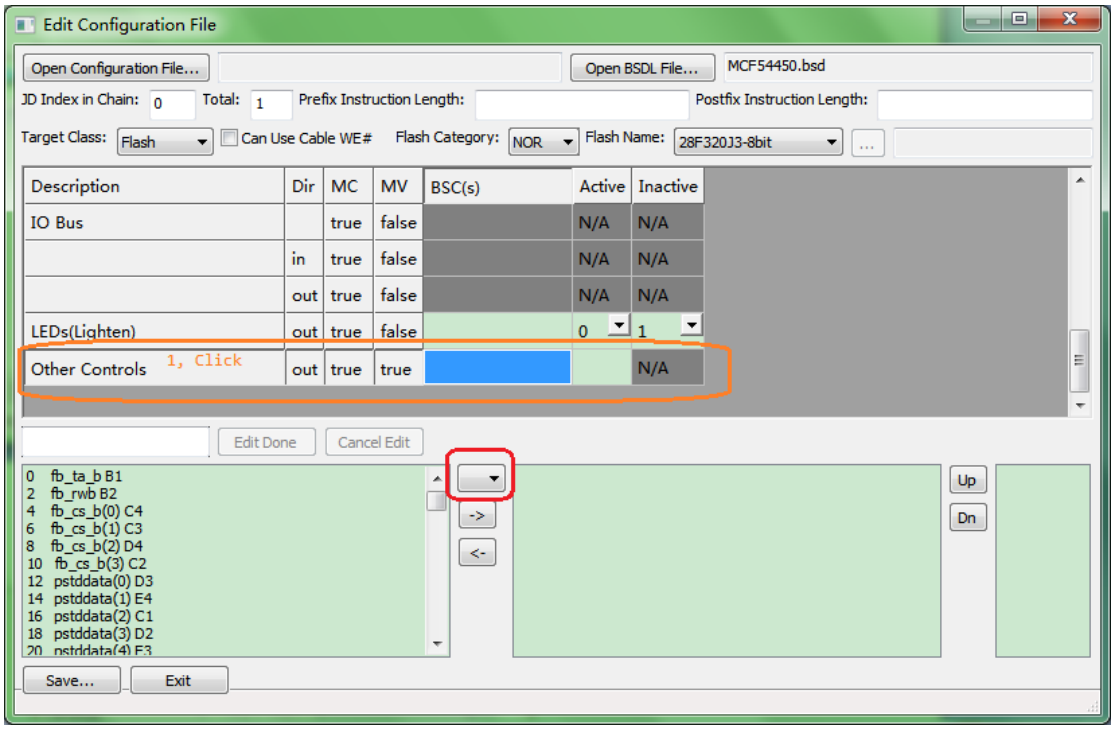
LEDs (Lighten)

If there are LEDs connected to JTAG device directly, please add them to the list.
Active means lighten, **Inactive** means darken.
You may add multi LEDs.

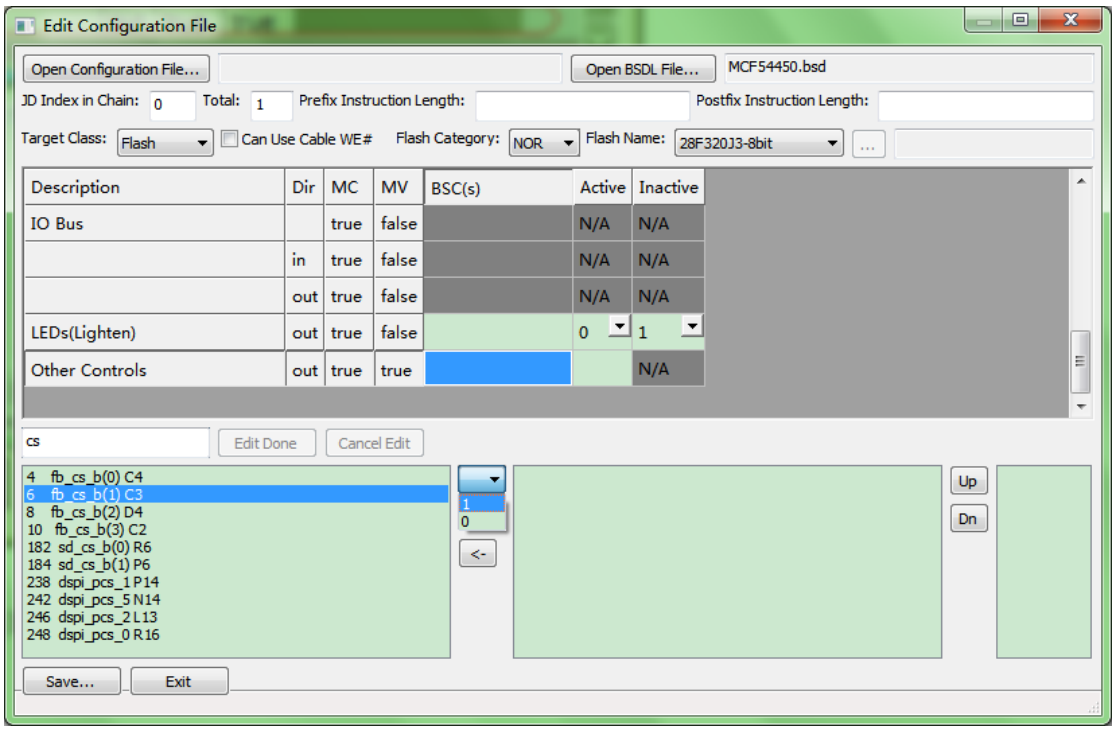
Note: If LEDs are controlled by some data bus driver or flip-flops, do not set them.

Other Controls

In example in this manual, we want to control other chip select pins to high.
There are five pins: `fb_cs_b(1)`, `fb_cs_b(2)`, `fb_cs_b(3)`, `sd_cs_b(0)`, `sd_cs_b(1)` .
You must set the value at the same time.
Click '**Other Controls**' row, and you will see a drop list is ready for your choice. See screenshot below:

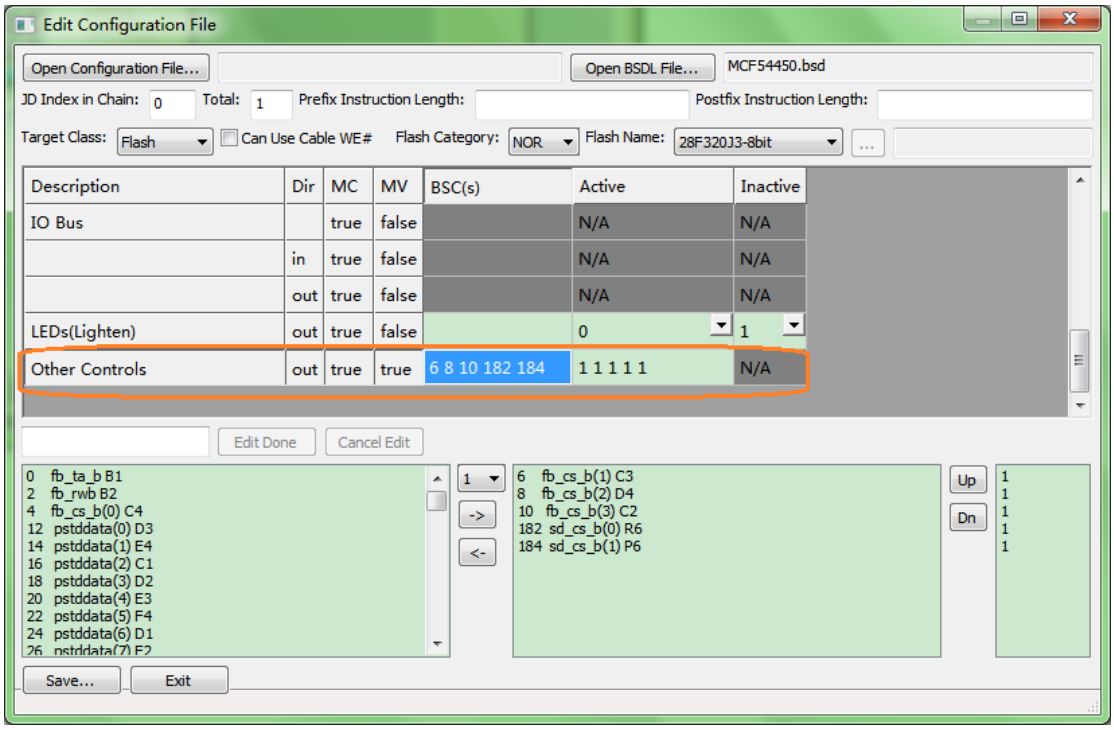


Select pin `fb_cs_b(1)` and set the value to '`1`' to disable the chip select signal connected to other component. Then click '->' button. See screenshot below:



You know, to a given pin, you should know which state ('0' or '1') is that you want. We want to disable chip select `fb_cs_b(1)`, so we set it to '`1`'.

Add left pins. Screenshot shows all pins are set.

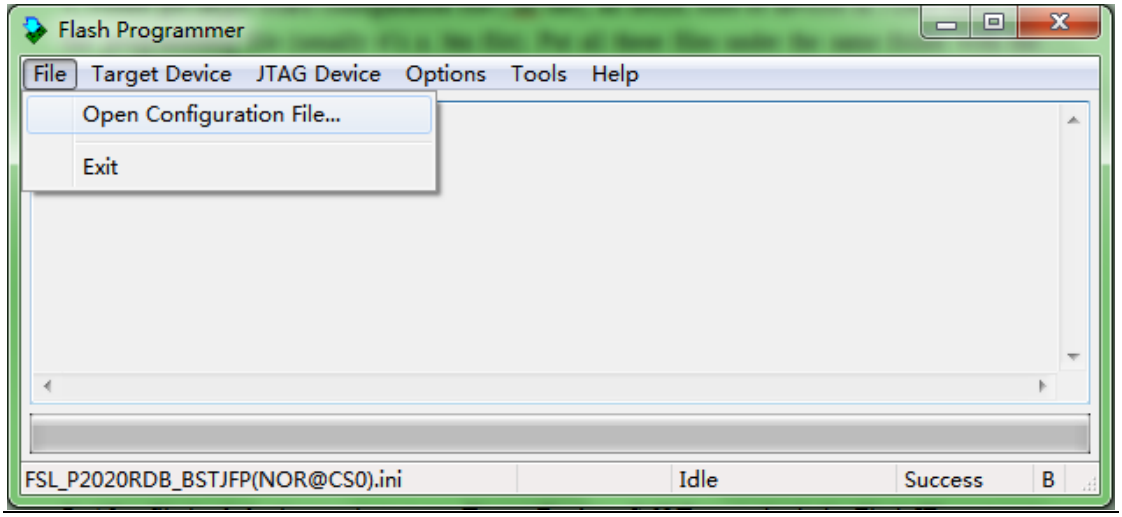


Save

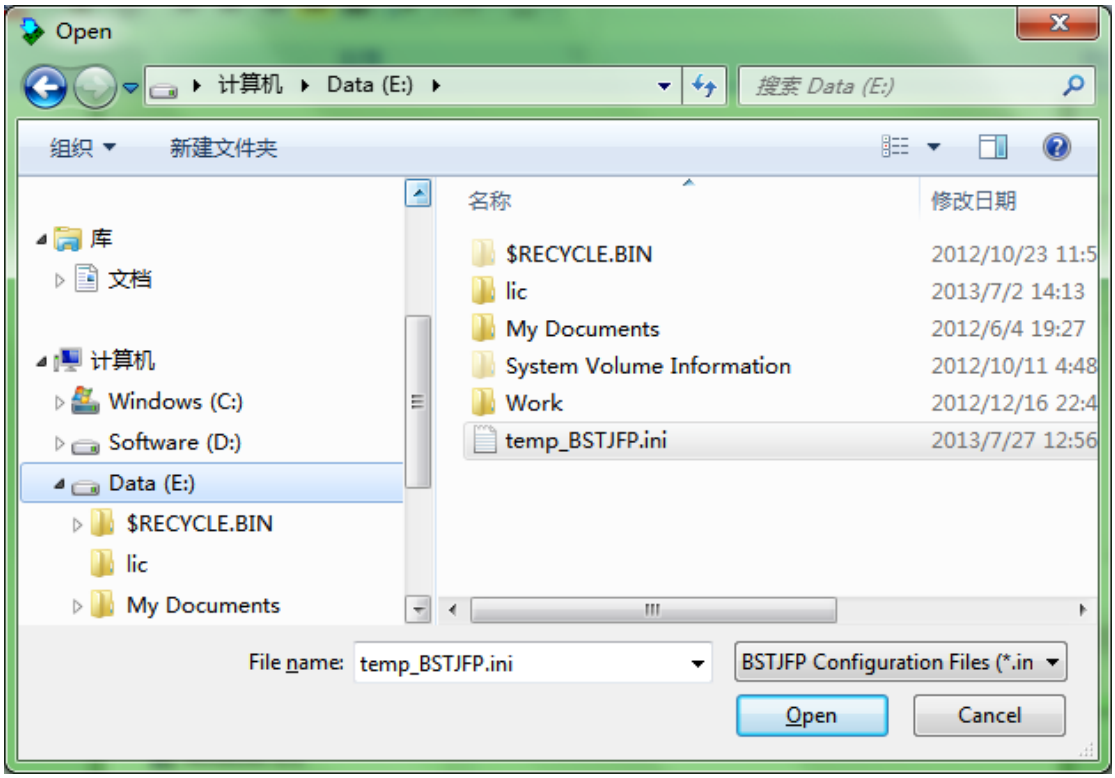
Click **Save...** button to save your editing.

Verification

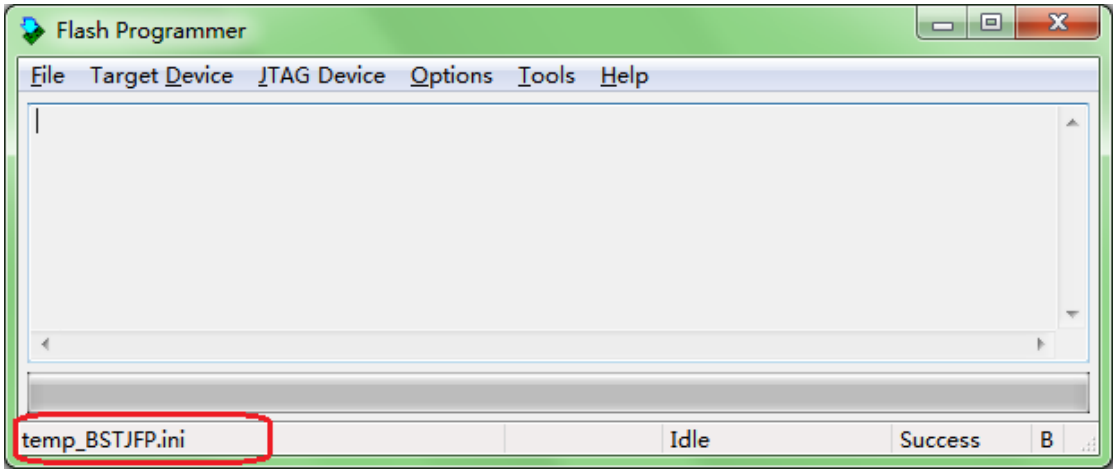
Close **Edit Configuration File** dialog and return to main UI.
Select menu **File** / **Open Configuration File…** . See screenshot below:



Select the file saved just now. It's `e:\temp_BSTJFP.ini` in this example.



If this operation finished without any error, you will see configuration filename is showed in status bar. It's `temp_BSTJFP.ini` in this example.



Please continue 'Modify' in next section if there is any error.

Modify

Select menu **Tools / Edit Configuration File...** .

Then check row by row.

Note: If your BSDL file in configuration file is parsed successfully, you should not to select BSDL file again.

Save after modification is done.

Revision History

Date	Version	Author	Changes
2020/1/5			Remove file format section when saving file;
2019/6/7			Add ‘Maybe A-1’ to A0;
2016/5/12			Add an example for DIR control of data buffer;
2014/6/9			Add line above footer;
2013/10/14			Optimization for easier reading;
2013/7/30			Mistyping correction;
2013/7/27			First Release