

OACIS

Open Architecture Control Integrated System

How to Update Firmware

Version 01.08



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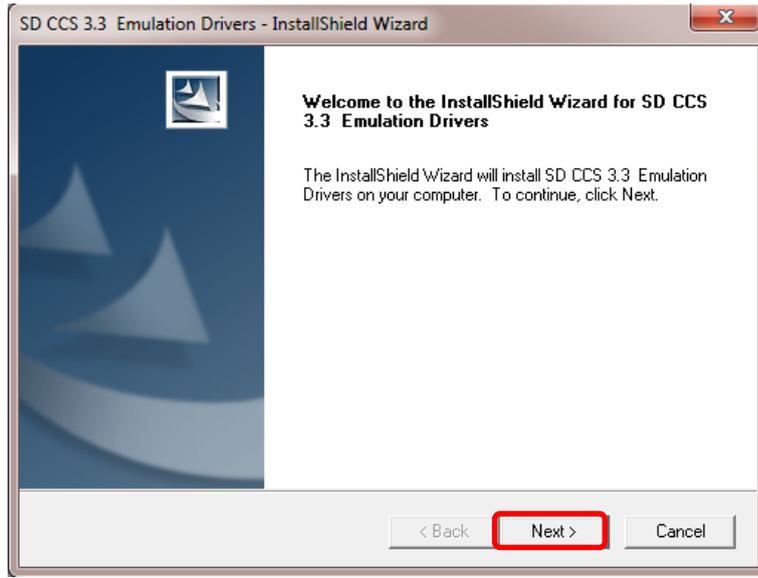
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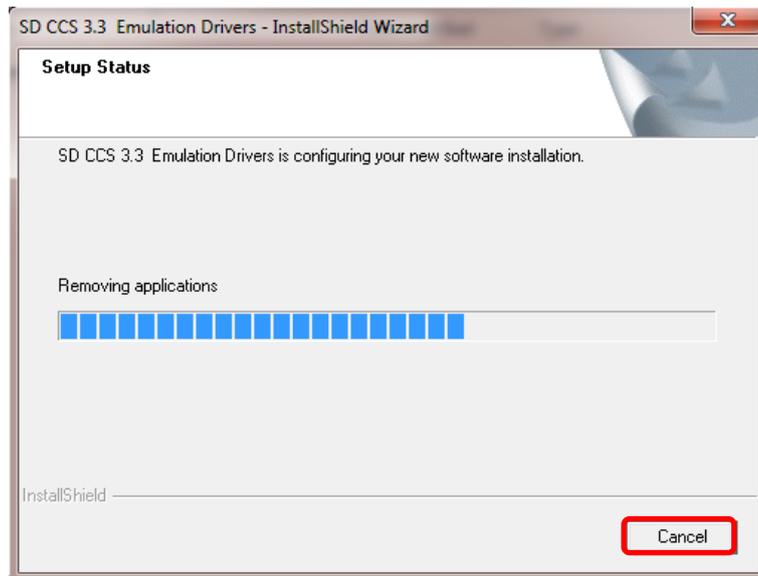
I. SOFTWARE PREPARATION

A. Install the Emulation Driver

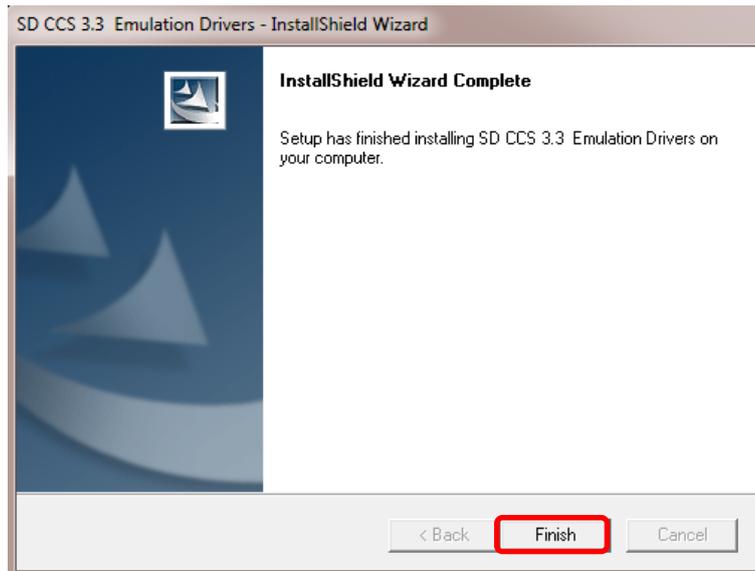
- Find the driver file “setupCCSPlatinum_v30330.exe” and run it. You can also get the driver from www.spectrumdigital.com >> Support (Downloads/Drivers) >> JTAG Emulators & Drivers (Installation under CCS3.3) >> Download Spectrum Digital Driver Release 3.03.30[25_June_2009]
- Run the file “setupCCSPlatinum_v30330.exe”



- Continue to install

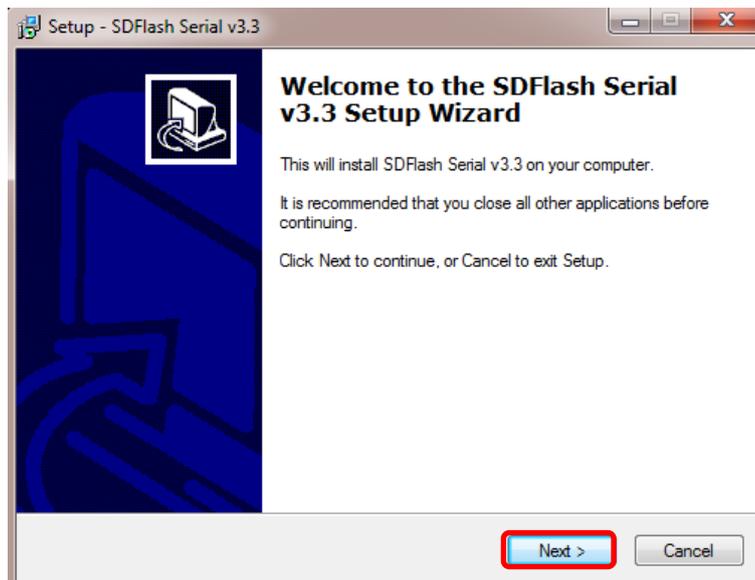


- Complete to install

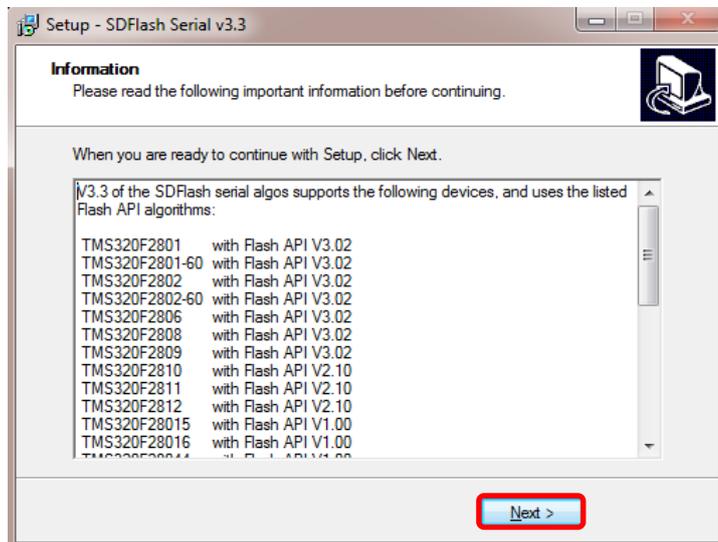
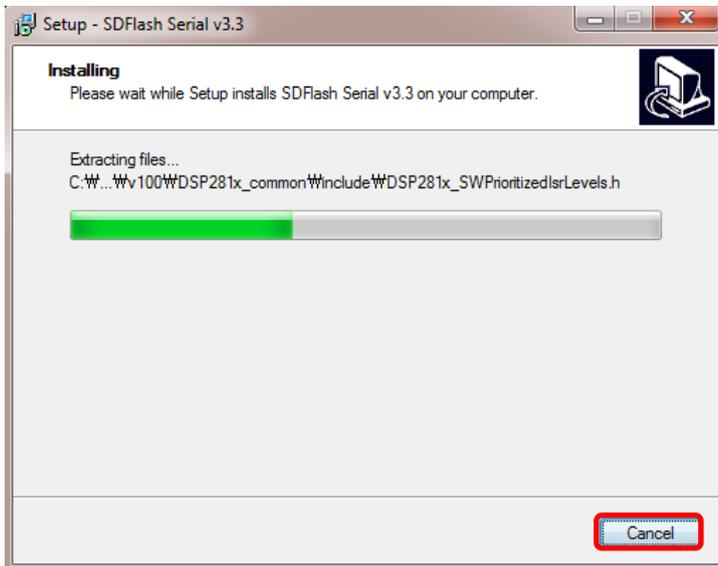
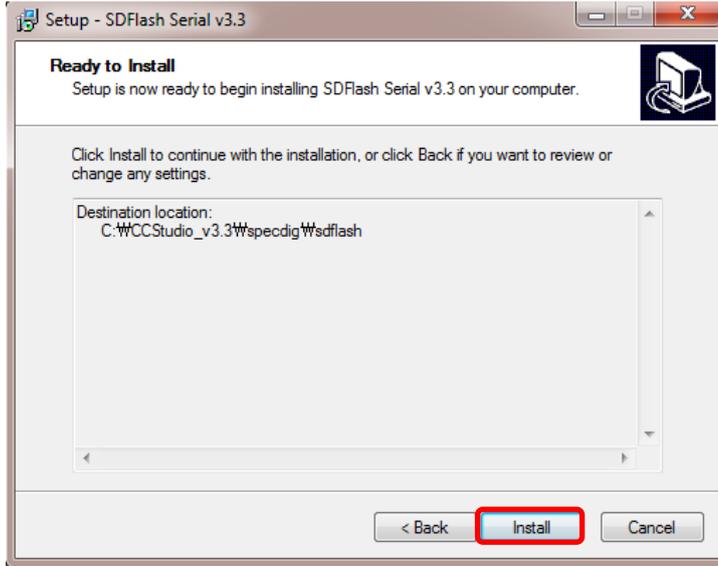


B. Install the Emulator Utility

- Find the driver file “sdf28xx_v3_3_serial.exe” and run it. You can also get the driver from www.spectrumdigital.com >> Support (Downloads/Drivers) >> JTAG Emulators & Drivers (JTAG Emulator Utilities) >> SDFlash (Link) >> V3.3 SDFlash serial patch for flash programming via an RS232 serial link
- Run the file “sdf28xx_v3_3_serial.exe”

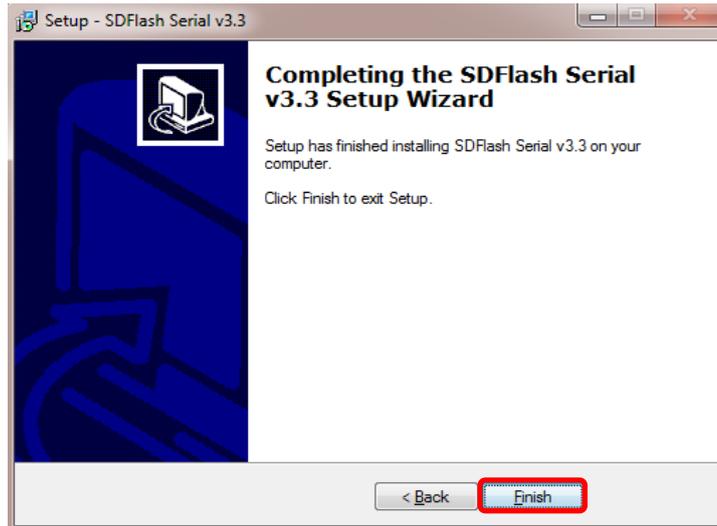


- Continue to install



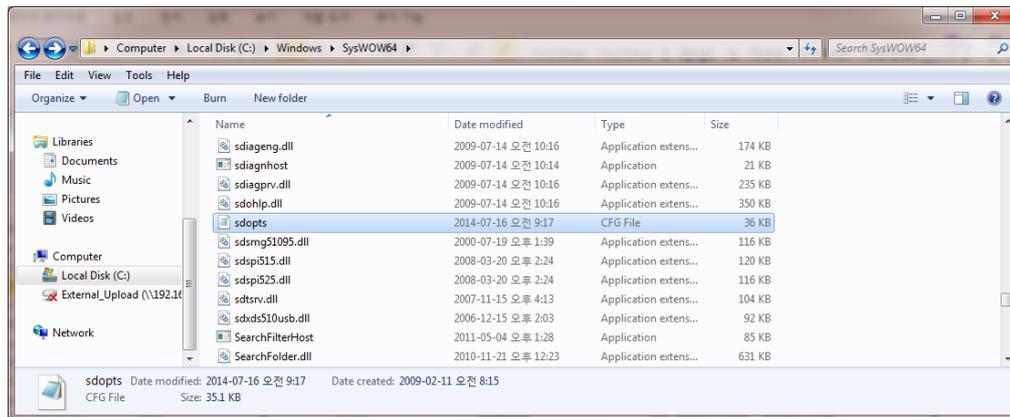
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- Complete to install

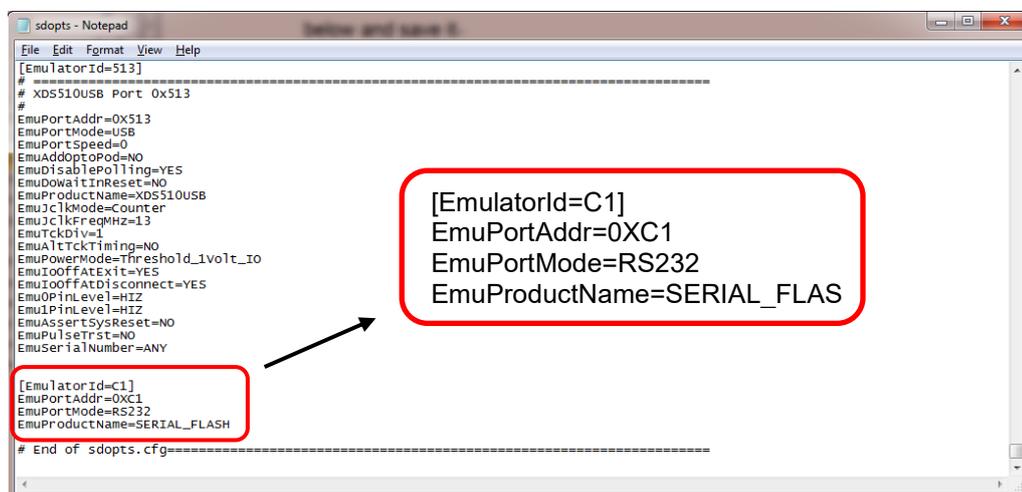


C. Assign COM1 as an Emulator Port

- Open the file "sdopts.cfg", then Add the Command Statements in the red box below and save it. You can find the file "sdopts.cfg" in C:\WINDOWS\system32(for 32bits) or C:\WINDOWS\sysWOW64(for 64bits). If you have to use a USB Converter cable, you need to install a proper USB-to-Serial driver to the USB cable.
- Open the file "sdopts.cfg"

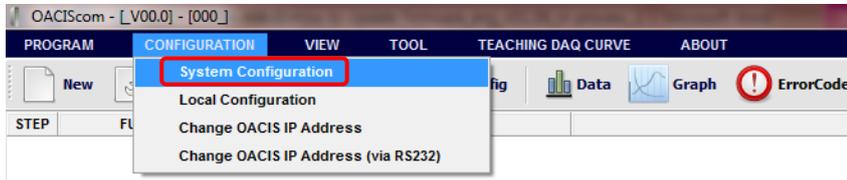


- Add the four lines of command statements in the red box to the end of the file as seen below and save it

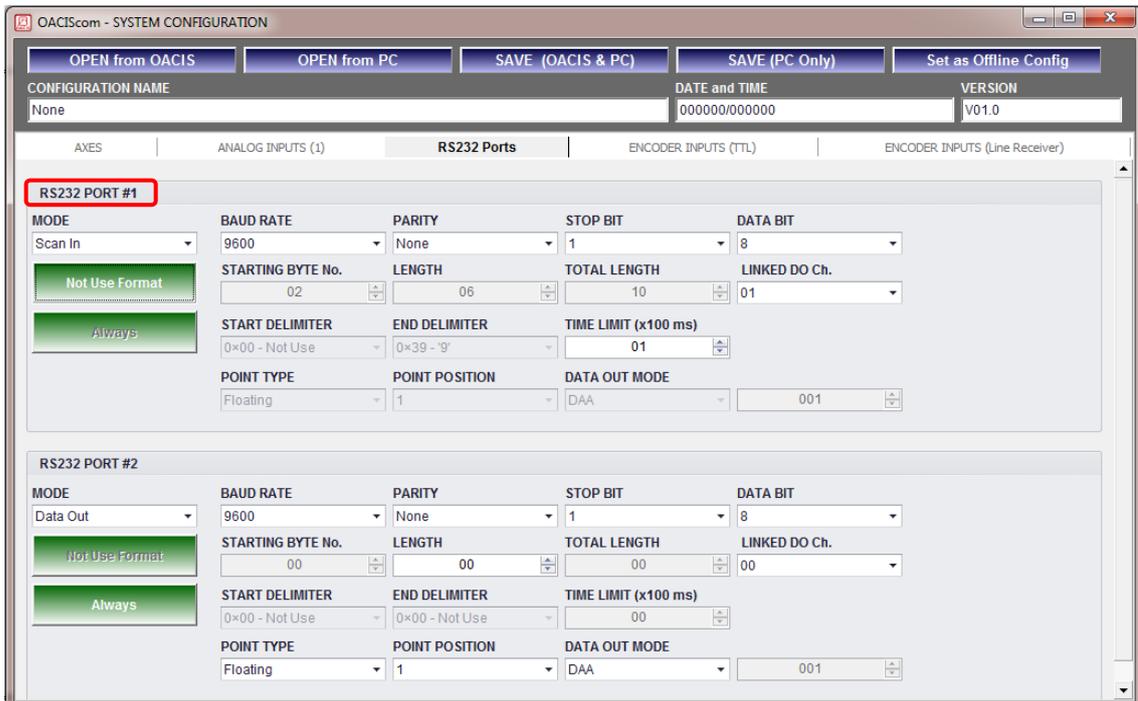


D. Change the mode of the RS232 Port.

- Run the OACIS program(OACIScom.exe), then Go to the system configuration >> RS232 Ports. Check "Data Out" mode in RS232 Port #1. If "Scan In" mode is set, change it to "Data Out" mode.
- Open the System Configuration (Password is 1)



- Check "Data Out" mode in RS232 Port #1

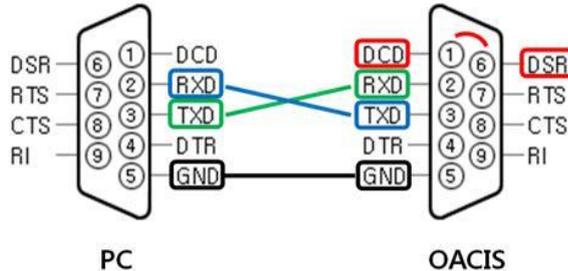


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II. HARDWARE PREPARATION

A. Prepare the RS232 cable

- You need a RS232 cable to connect PC to OACIS. If you have to use a USB Converter cable on the PC side, you will need to install a proper USB-to-Serial driver to the USB cable. The cable PinMap is shown as follows:

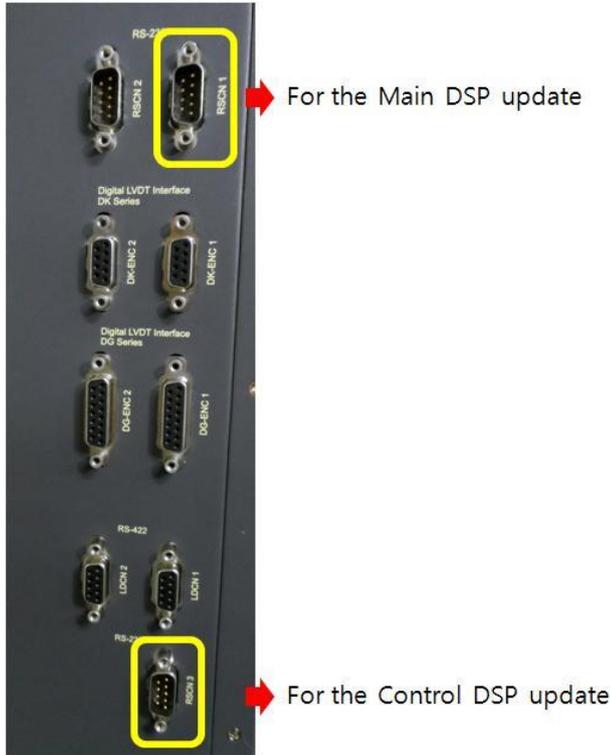


- Caution #1 : You should follow the instructions below. Or severe problems might happen in your OACIS system.**
 - ①DCD and ⑥DSR on the OACIS side must be connected as shown above (red line).
 - ②RXD on the PC side and ③TXD on the OACIS side must be connected (blue line).
 - ③TXD on the PC side and ②RXD on the OACIS side must be connected (green line).
 - ⑤GND on the PC side and ⑤GND on the OACIS side must be connected (black line)
 - All other pins that are not used must be left open.

B. Connect PC to OACIS via the RS232 cable

- After PC is connected to OACIS via the RS232 cable, Turn on the OACIS power. On the OACIS side, **RSCN1** is connected for the Main DSP update and **RSCN3** for the Control DSP update. When the OACIS power is on, check the top panel of the OACIS box that is Program No and Step No. If it is normal, the panel shows “Nothing” for Main DSP updating and “000 000” for Control DSP updating.

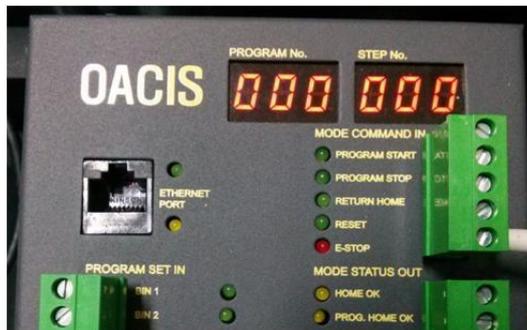
- Connection ports on the side of OACIS



- **Caution #2 :** When the OACIS power is off, you should connect PC and OACIS with the RS232 cable. Or severe problems might happen in your OACIS system.
- When the Main DSP is updating, the panel of OACIS shows as follows:



- When the Control DSP is updating, the panel of OACIS shows as follows:

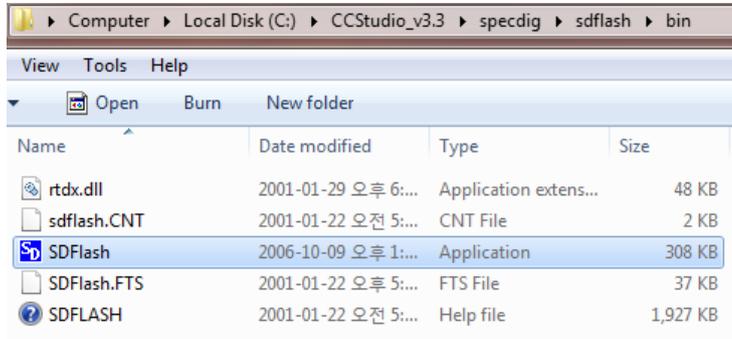


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III. FIRMWARE UPDATES FOR MAIN AND CONTROL DSP

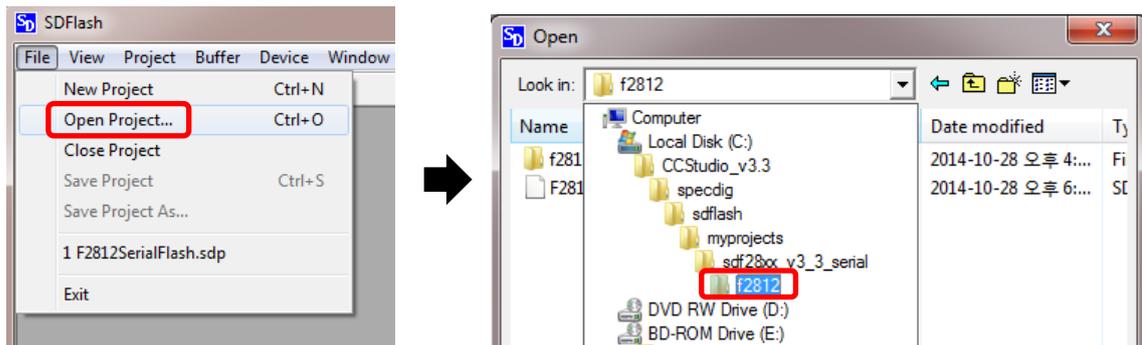
A. Run the file “SDFlash.exe”

- You can find it in this directory, C:\WCCStudio_v3.3\specdig\Wsdflash\bin\.



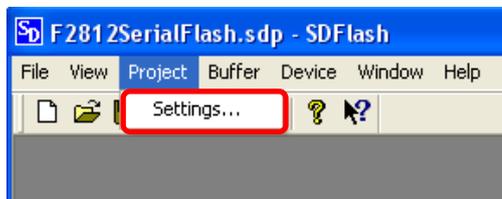
B. Open the file “F2812SerialFlash.sdp”

- Click File >> Open Project and you can find “F2812SerialFlash.sdp” in this directory, C:\WCCStudio_v3.3\specdig\Wsdflash\myprojects\Wsd28xx_v3_3_serial\Wf2812\.

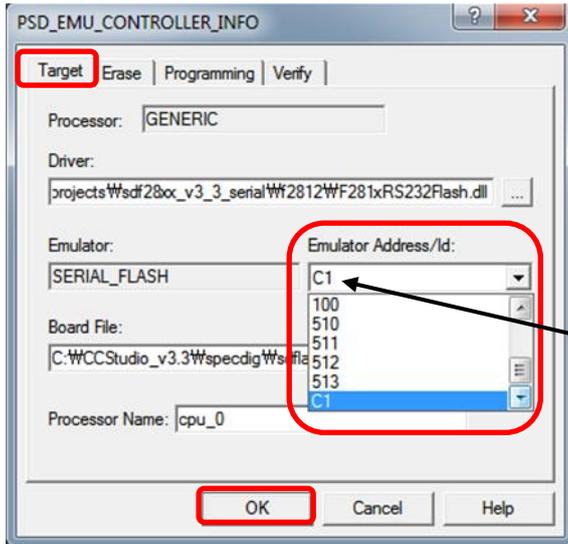


C. Load the Firmware file(*.out)

- Click “Project/Settings

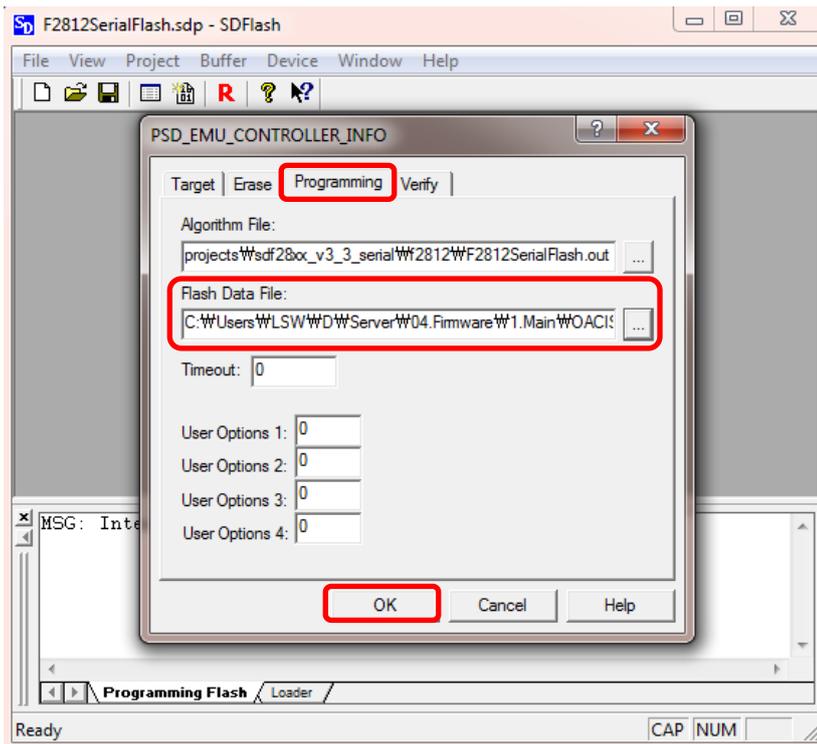


- Click "Project/Settings/Target" and Set "Emulator Address/Id as EmulatorId on the file of "sdopts.cfg"



[EmulatorId=C1
 EmuPortAddr=0XC1
 EmuPortMode=RS232
 EmuProductName=SERIAL_FLASH

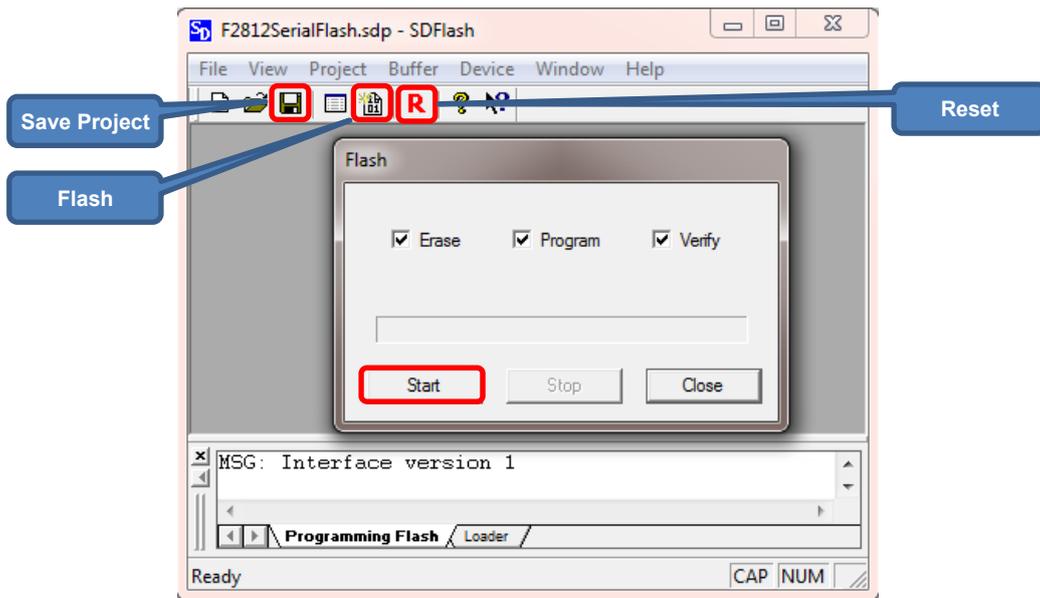
- Click "Project/Settings/Programming" and Open "Flash Data File". Then Find the Firmware file(*.out) and Click OK



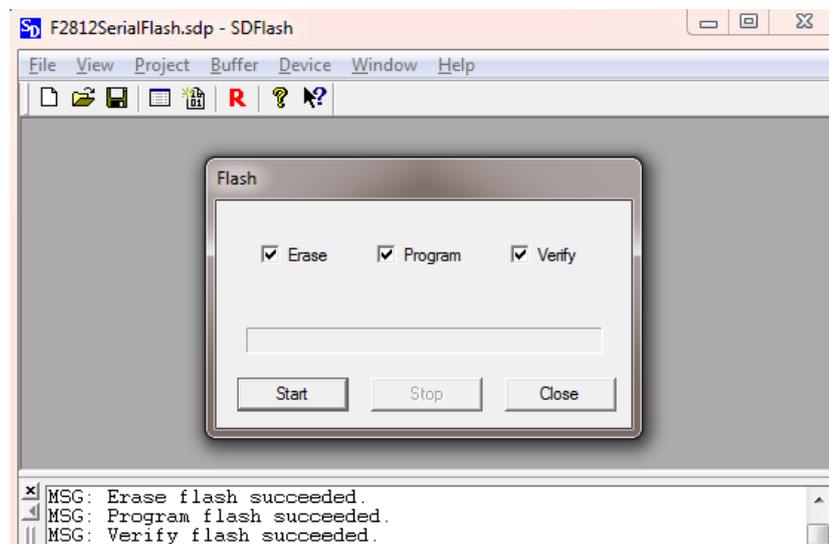
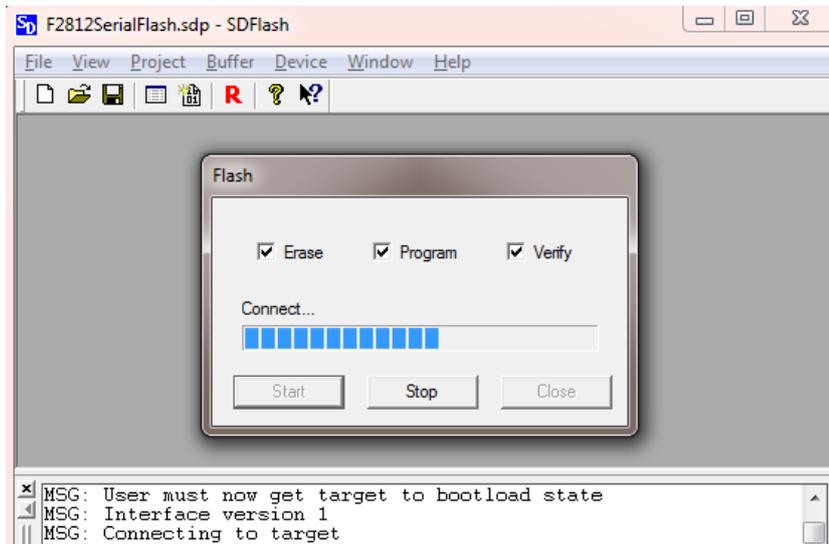
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D. Start to update the Firmware

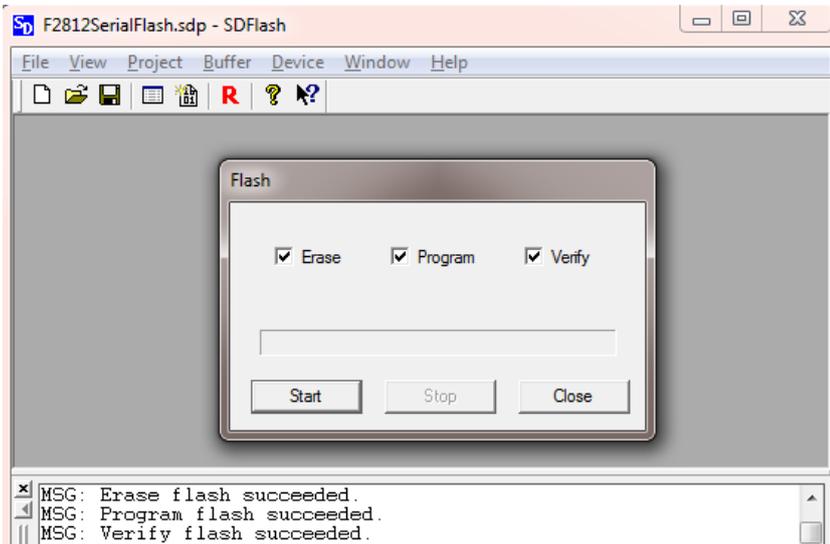
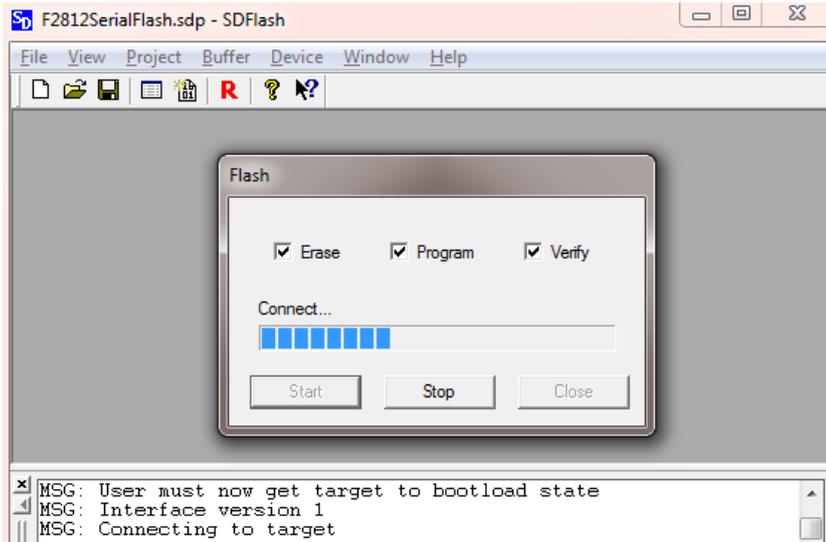
- Click the following icons in this order, "Save Project" >> "Reset" >> "Flash", then Run "Start" with OACIS turned on. This process can take several minutes to be done. You should update for both Main and Control DSP in the same manner, respectively. You need to load the different firmware file according to the Main or Control DSP update



- In case of the Main DSP Update.



- In case of the Control DSP Update.

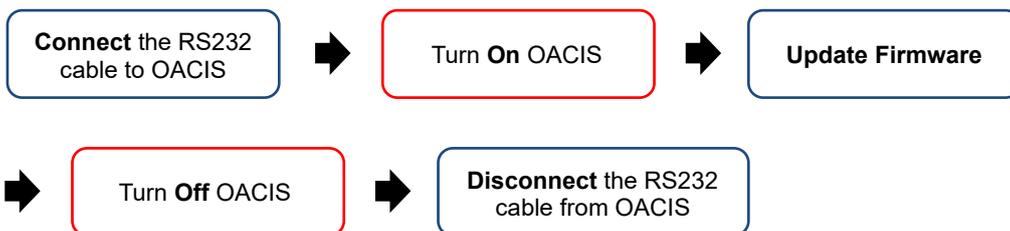


- After the successful update, make sure to read next “Terminate to update the Firmware”.

E. Terminate to update the Firmware

- When the Firmware update is finished, Turn on and Restart OACIS after removing the RS232 cable.

When the Firmware Update is done, you should first turn off the OACIS power before the removal of the RS232 cable. Or severe problems might happen in your OACIS system.



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