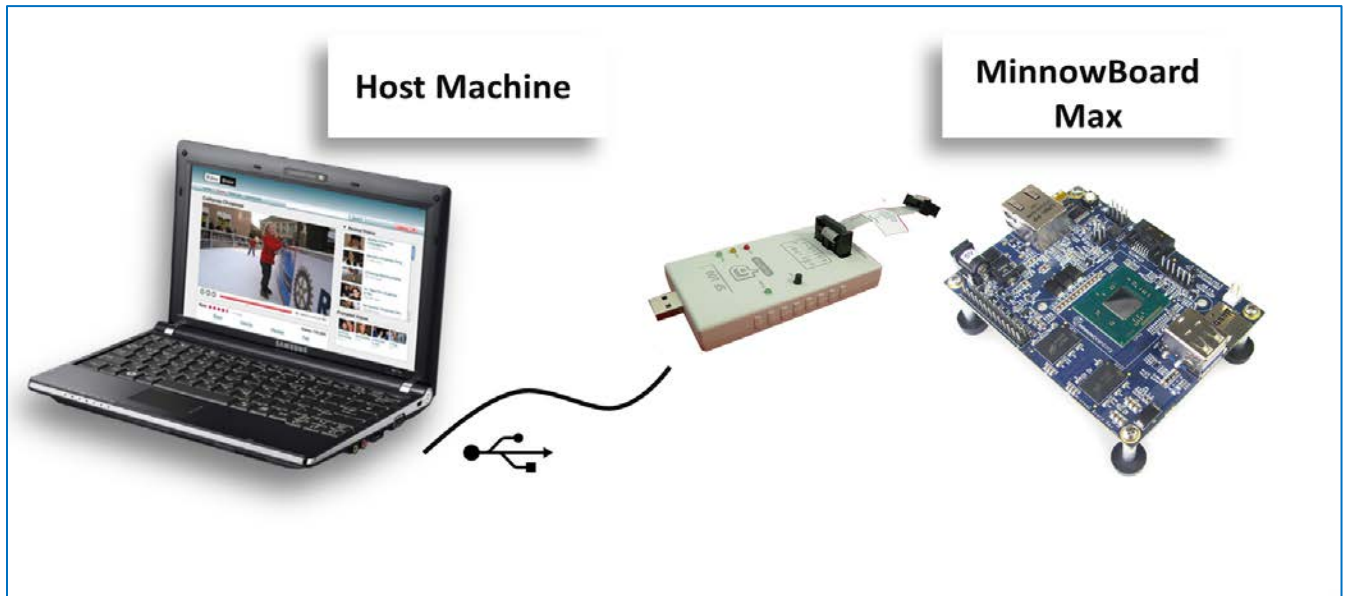


# Flashing MinnowBoard Max with DediProg SF-100 in Windows

This firmware installation procedure uses a hardware-based SPI programmer (DediProg SF-100) to flash the MinnowBoard Max firmware using a host computer running a Windows operating system. We recommend this procedure for systems that fail to boot or cannot be updated using a software utility.

## Connection Between Host and Target

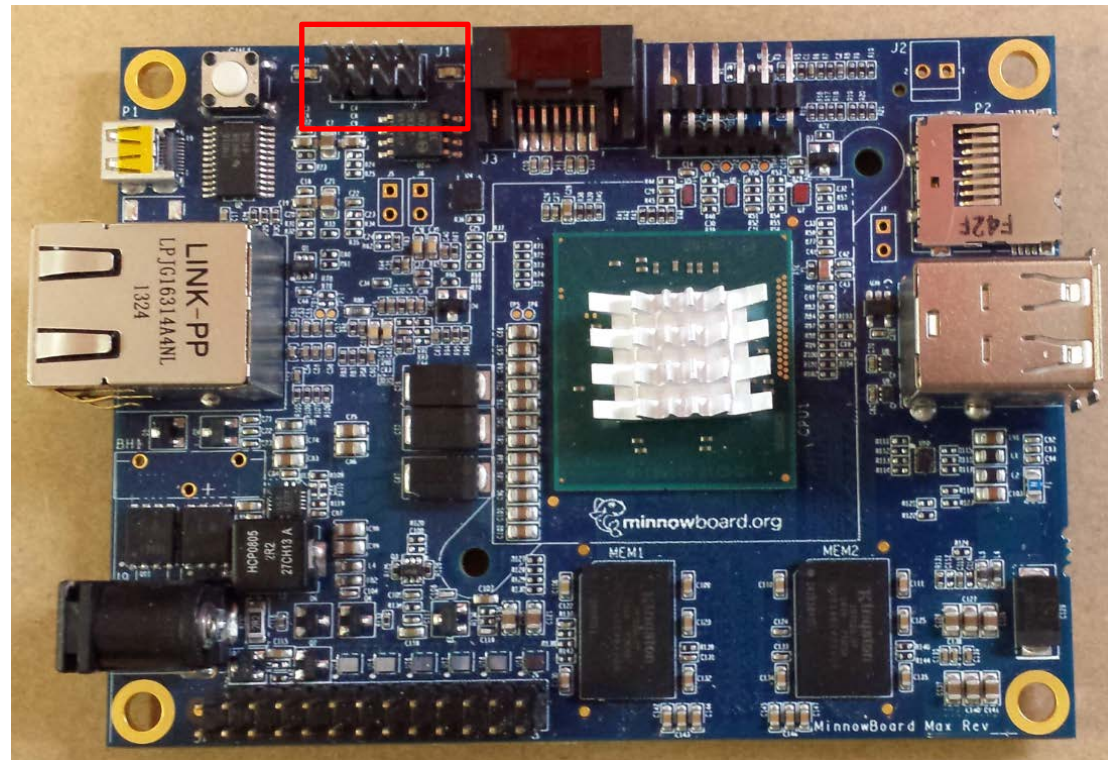


1. **Disconnect the power supply** from the MinnowBoard Max.

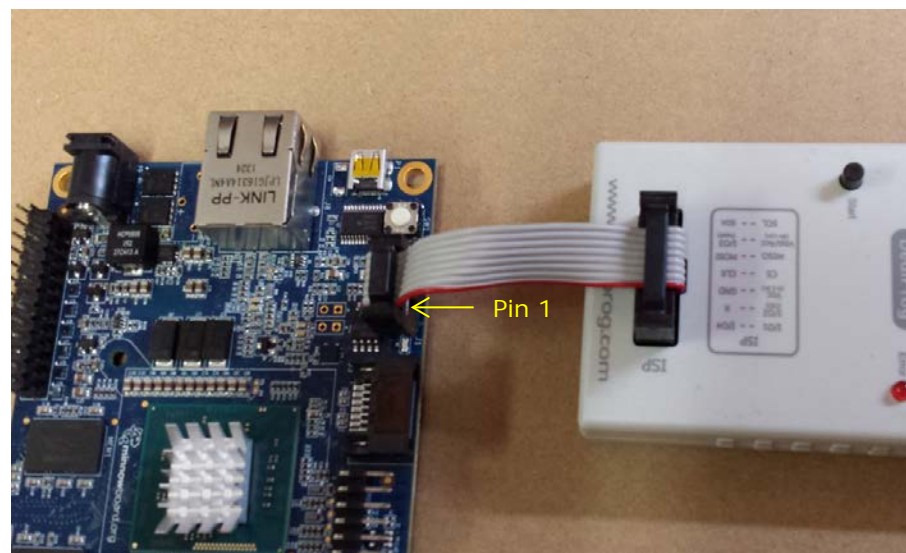
The DediProg (SF-100) is unable to flash while the MinnowBoard Max power supply is connected.

**CAUTION:** There is the possibility of damaging the SF-100 if it and the MinnowBoard Max power supply are connected simultaneously.

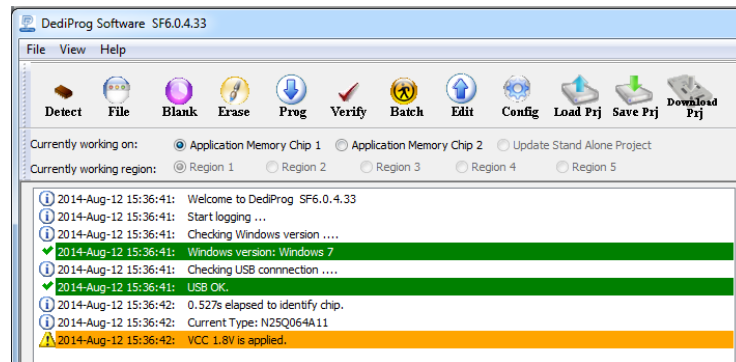
2. **Locate the grouping of headers just beside the SATA connector and the Power Switch,** on the top of the MinnowBoard Max (the side with the processor). The 2x4 grouping of pins labeled (J1) is where the SF-100 will connect.



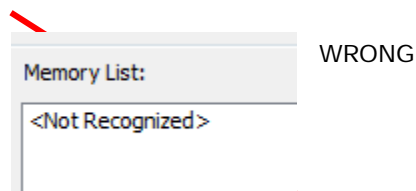
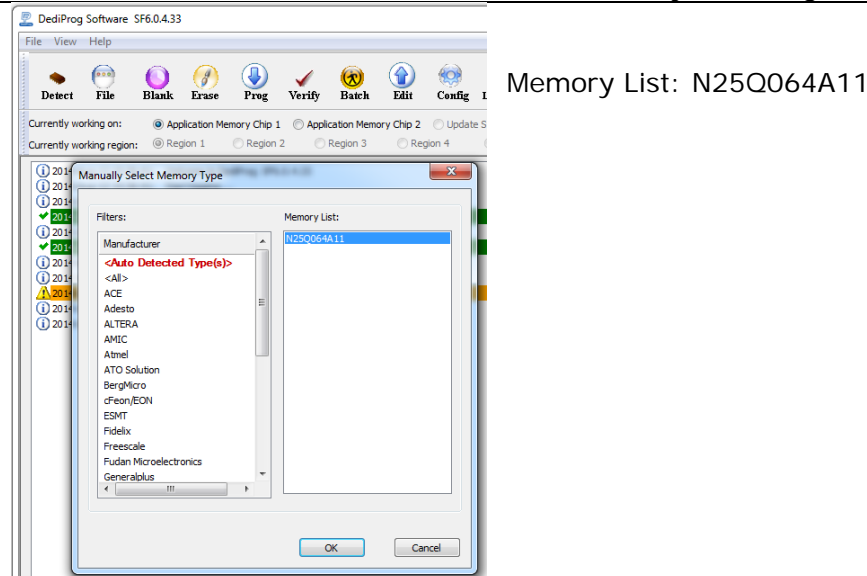
3. **Connect the DediProg cable to the 2x4 PROG header** so that the red wire of the cable is on the pin 1 side of the header that is furthest from the power switch. Pin 1 is next to the SATA connector



#### 4. Open the "DediProg Engineering" software



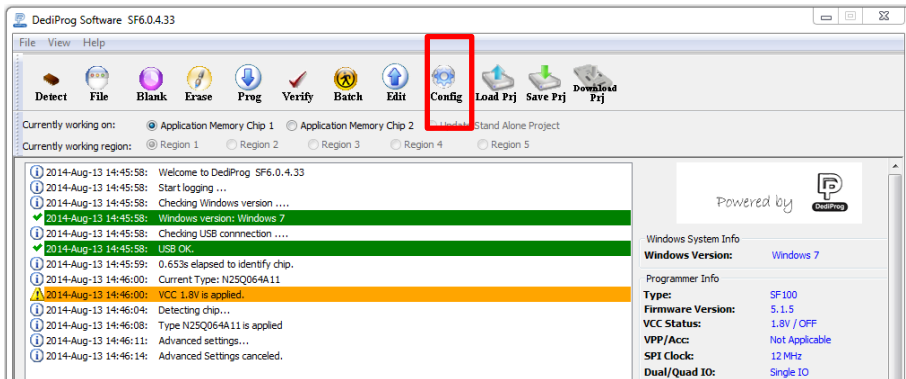
#### 5. Check to see that the Flash Part is detected by Selecting the Detect Button



**NOTE:** If you see this, this is WRONG. Be sure to check that the DediProg is connected to the computer and that your DediProg driver is installed. The driver is bundled with the DediProg software installer downloaded from the DediProg website in the WinUSB driver folder.

Also verify that the power is disconnected from the MinnowBoard Max and the connector is in the correct orientation.

6. If this is your first time opening the DediProg software, enter the configuration menu by clicking the config icon



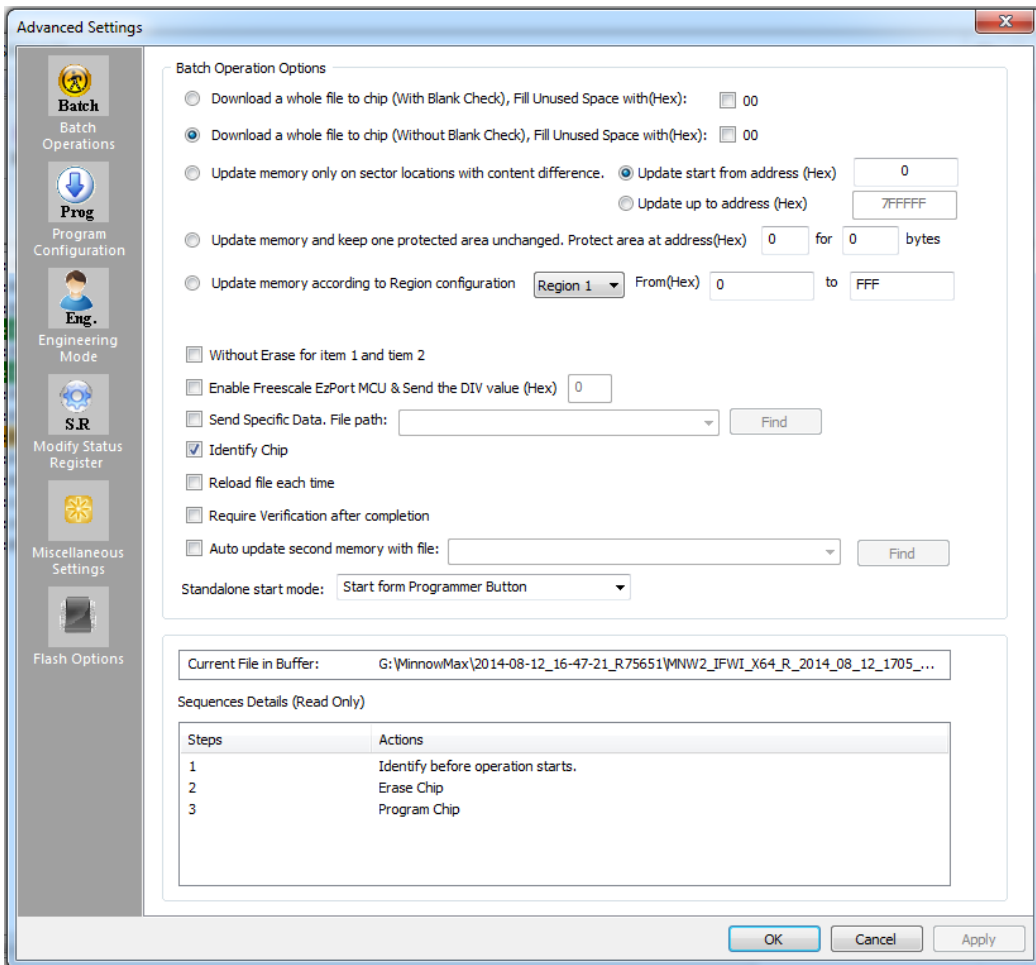
7. Click the Batch icon (in the Advanced Settings window that will pop-up) to access the Batch Operations Options.

Select the "Download a whole file to chip (Without Blank Check)" option.

Check the checkbox "Reload file each time".

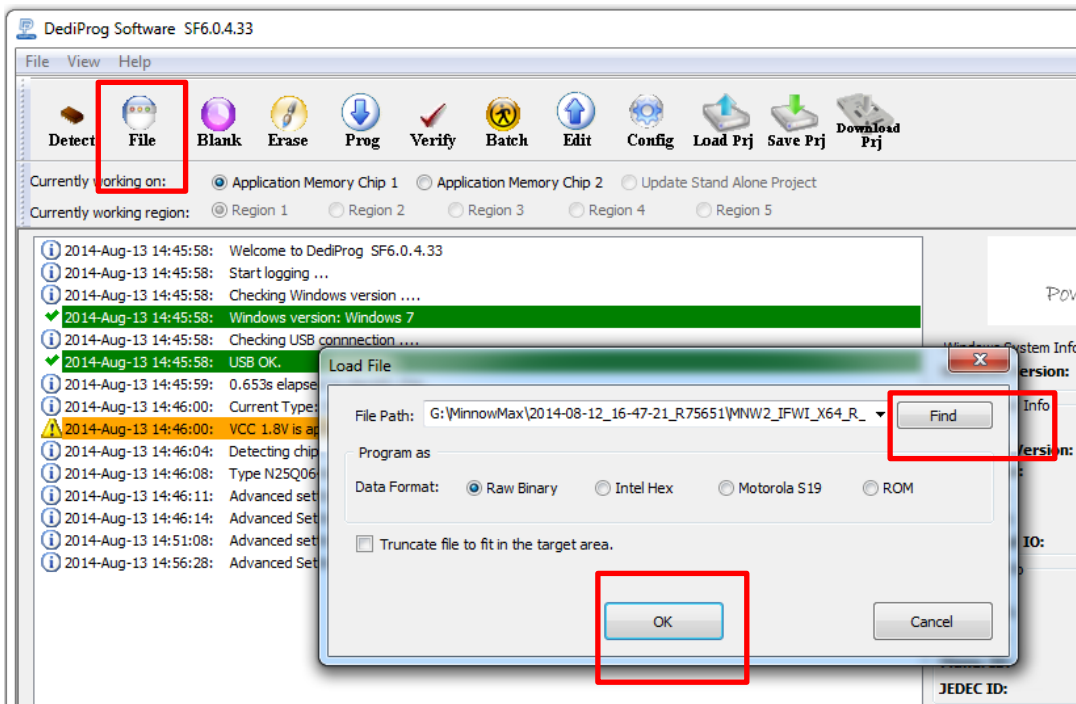
Select any other options that may be useful to your workflow.

Click on the OK button.

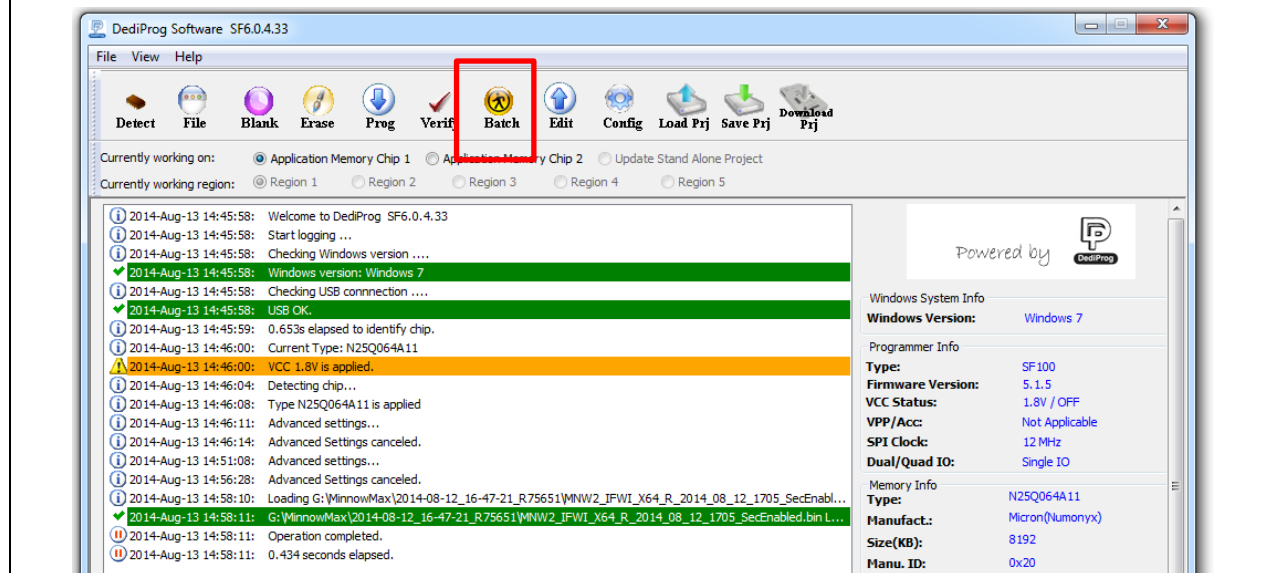


8. Click the File icon.

- Click the Find button and locate your firmware image file from the windows browser which will pop up.
- Click on the file to select it then hit the open button.
- Set the Data Format to Raw Binary.
- Leave unchecked the "Truncate file to fit in the target area" check box.
- Click OK.

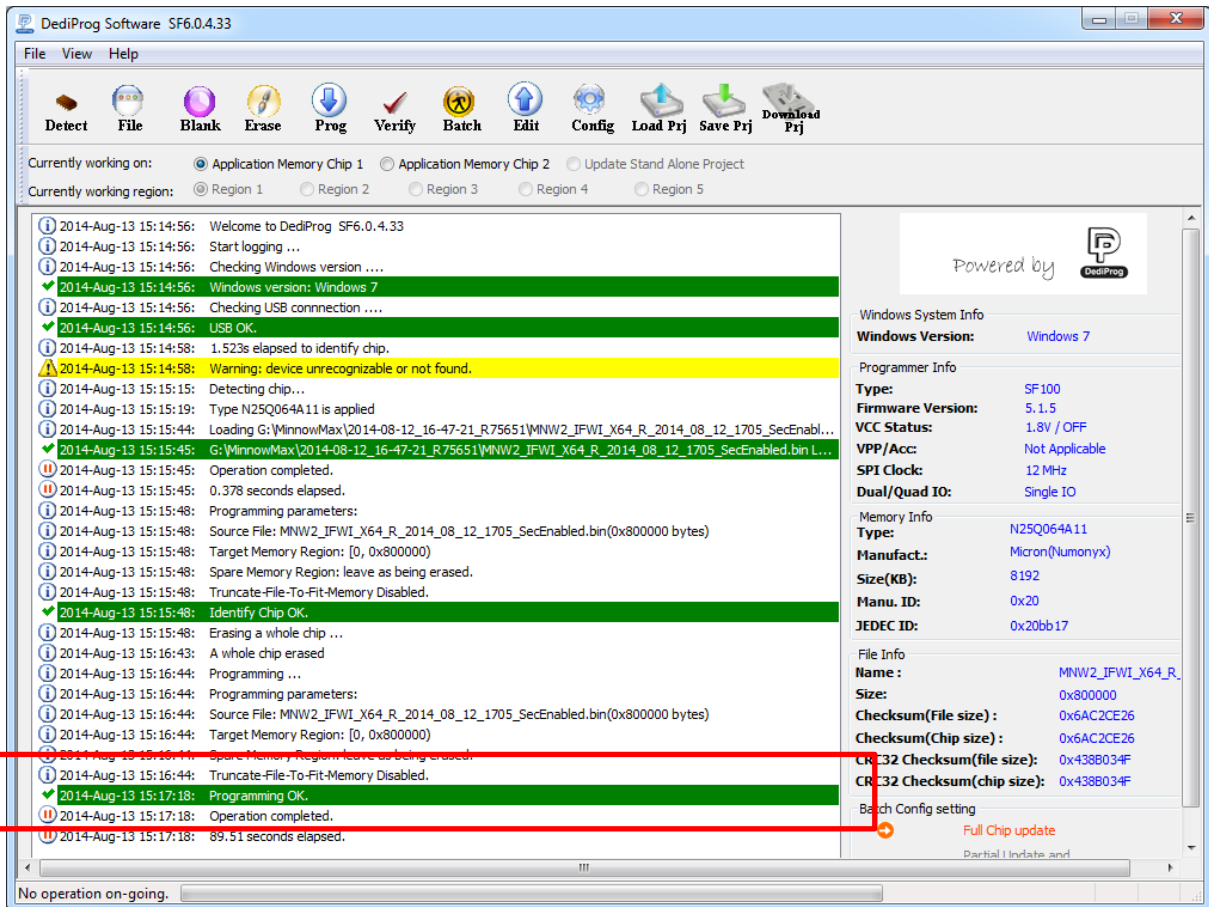


9. Click the Batch icon to start the erase and program sequence.





10. Wait until the programming is finished. Your MinnowBoard Max is now flashed.



11. Disconnect the programmer.

12. Reconnect the power supply to boot the MinnowBoard Max.

Two Blue LED lights will turn on indicating that the MinnowBoard Max is powered on and in its boot-up sequence.