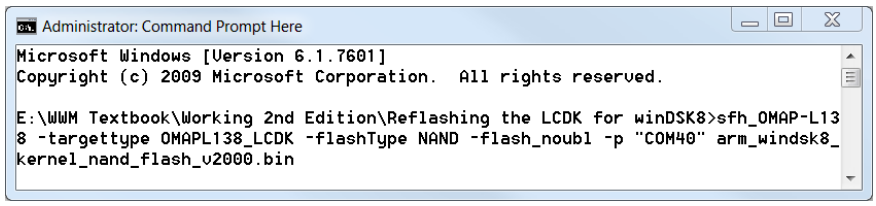
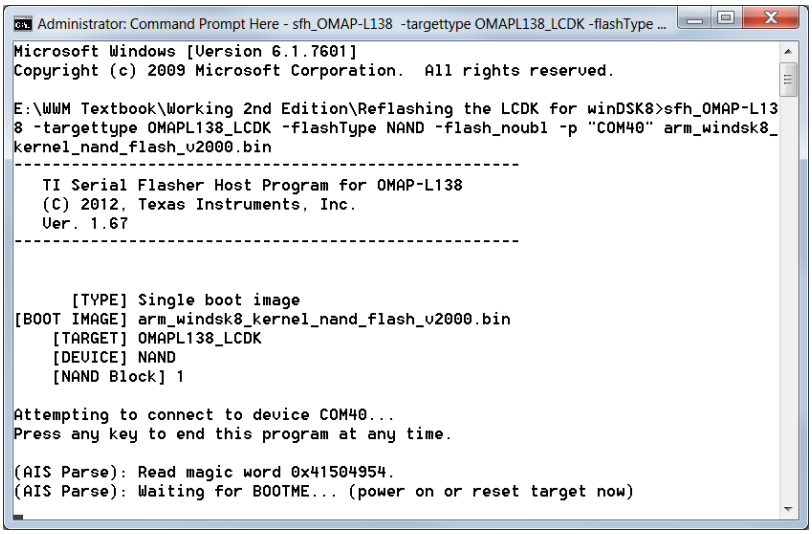
Reflashing the LCDK for winDSK8 (Kernel Version 2000)

The instructions below explain how to program the winDSK8 kernel into the flash memory on the OMAP-L138 Low Cost Development Kit (LCDK) board. The winDSK8 kernel code is run by the ARM9 processor and supports the winDSK8 application, as well as the applications based on winDSK8 communications (i.e. C8X_CONTROL, etc.). The winDSK8 kernel can also be placed in a standby mode for more stable access to the DSP when developing applications with Code Composer Studio. This process will overwrite the UBL bootloader installed in the board's flash memory at the factory. The UBL bootloader can be reinstalled later if desired.

- Connect the LCDK board UART-USB connector (J3) to a USB port on your computer. (The drivers for the UART-USB interface should already be loaded on a computer with Code Composer Studio installed.)
- Set the LCDK board for a UART2 boot by setting the DIP switch SW1 to (1-OFF, 2-ON, 3-OFF, 4-ON).
- Connect the power supply to the LCDK board and plug the power supply into an AC outlet.
- On the computer, open a command window in the directory containing ***sfh_OMAP-L138.exe*** and ***arm_windsk8_kernel_nand_flash_v2000.bin***. A "Command Prompt Here" shortcut is provided in the directory to simplify this process.
- Copy and paste the text shown below into the command window after editing "COM3" to match the computer COM port number you connected the OMAP-L138 board to. You can find the text in the file ***command.txt*** so you can easily edit it for the correct COM port and then paste it into the command window.
    - **sfh_OMAP-L138 -targettype OMAPL138_LCDK -flashType NAND -flash_noubl -p "COM3" arm_windsk8_kernel_nand_flash_v2000.bin**
    - The screen captures below shows the command edited for use with COM40.

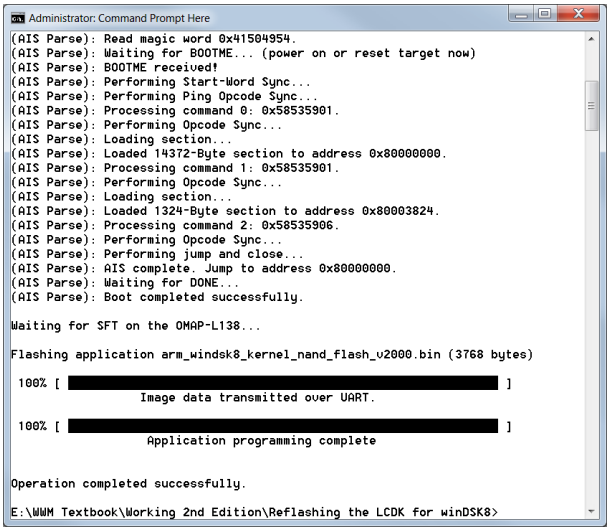


- Execute the command. You should see the "Waiting for BOOTME" message as shown below.



- Press the reset switch (S1) on the LCDK board. You should immediately see the "BOOTME received" message. There will be a short delay, and then the LCDK board will be programmed and the application

will terminate. Note that if you do not press the reset switch within a short time of executing the command, periodic error messages may appear in the command window indicating a time-out occurred. This only indicates that the application has not received the BOOTME message from the board yet, so just go ahead and press the reset switch.



- Set the LCDK board for a NAND Flash boot by setting the DIP switch SW1 to (1-OFF, 2-ON, 3-ON, 4-ON).
- Three switches on SW1 are read on reset to control the operation of the winDSK8 kernel. The switches are only read on reset, so changes to the switches while the winDSK8 kernel is running will not have any effect.
    - SW1-8 : Turn ON to enable the winDSK8 kernel. If SW1-8 is OFF, the winDSK8 kernel will remain idle, allowing the DSP program to use UART2, the user LEDs, and the user switches (SW1). This switch should be OFF when you are downloading and running DSP code with Code Composer Studio.
    - SW1-6 and SW1-7 : These two switches set the winDSK8 kernel's baud rate as shown in the table below. Ensure that you set SW1-6 and SW1-7 to match the baud rate set in the winDSK8-based application you are using.

SW1-6	SW1-7	Baud rate
OFF	OFF	115200
ON	OFF	230400
OFF	ON	460800
ON	ON	921600

- Press the reset switch (S1) on the OMAP-L138 board. You should the user LEDs flash several times.
- The winDSK8 kernel is now installed and ready to use. You can use the winDSK8 ***Get Board Version*** button to verify that you have correctly installed the kernel.