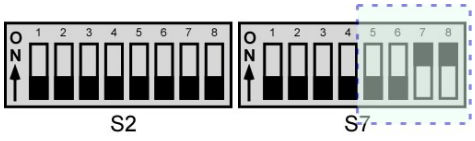
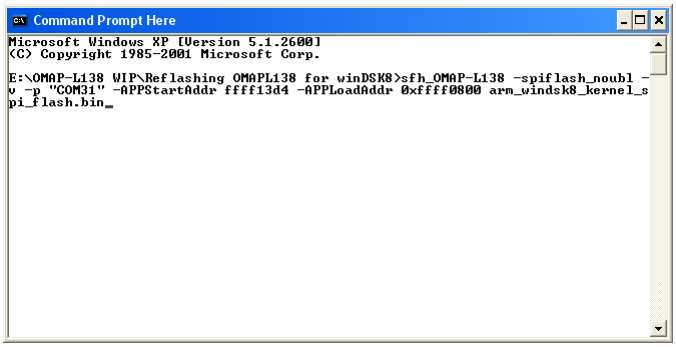
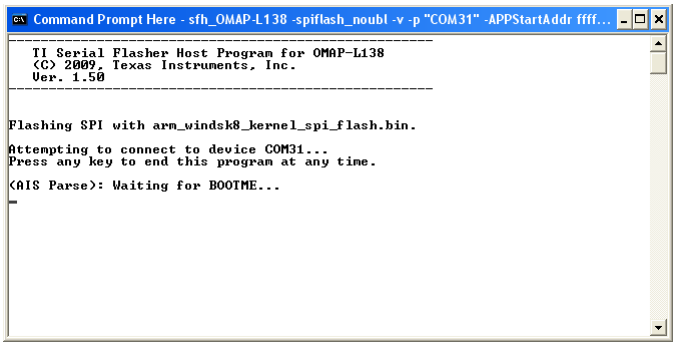
Reflashing the OMAPL138 for winDSK8

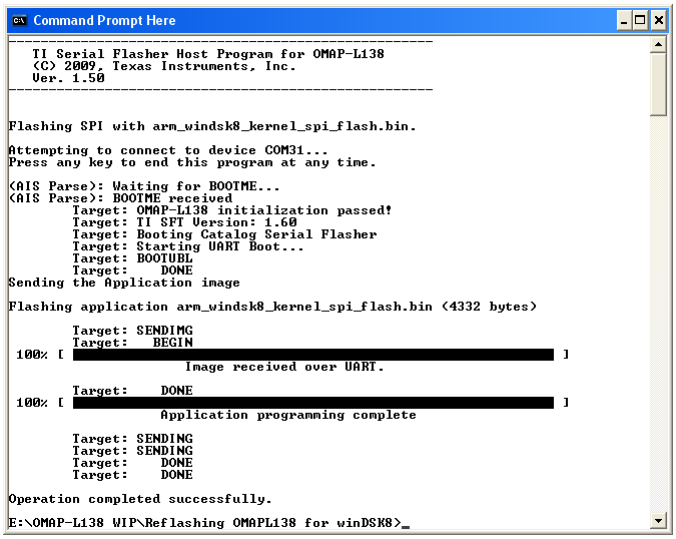
The instructions below detail how to program the winDSK8 kernel into the flash memory on the OMAP-L138 board. The winDSK8 kernel code is run by the ARM9 processor and supports the winDSK8 application itself as well as the applications based on the winDSK8 communications (i.e. OMAPL138_CONTROL, etc.). This process will overwrite the UBL bootloader installed on the board at the factory. The UBL bootloader can be reinstalled later if desired.

- Connect the OMAP-L138 board serial debug connector (P1) to the computer's serial port or USB-to-serial converter.
- Set the OMAP-L138 board for a UART2 boot (S7-5 OFF, S7-6 OFF, S7-7 ON, S7-8 ON).
  - 

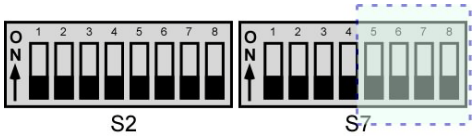
- Connect the power supply to the OMAP-L138 board and turn board power on.
- On the computer, open a command window in the directory containing ***sfh_OMAP-L138.exe*** and ***arm_windsk6_kernel_spi_flash.bin***. A "Command Prompt Here" shortcut is provided in the directory to simplify this process.
- Copy and paste the below command into the command window after editing "COMxx" to match the computer port number you connected the OMAP-L138 board to. The command can be found in the text file ***command.txt***.
  - sfh_OMAP-L138 -spiflash_noubl -v -p "COMxx" -APPStartAddr ffff13d4 -APPLoadAddr 0xffff0800 arm_windsk8_kernel_spi_flash.bin
  - 

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

- Press the reset switch (S5) on the OMAP-L138 board. You should immediately see the “BOOTME received” message. Then there will be a short delay, then the OMAP-L138 board will be programmed and the application will terminate.



- Set the OMAP-L138 board for a SPI1 flash boot (S7-5 OFF, S7-6 OFF, S7-7 OFF, S7-8 OFF).



- Three switches on S2 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.
    - S2-1 : Turn ON to enable the winDSK8 kernel. If S2-1 is OFF, the winDSK8 kernel will remain idle, allowing the DSP program to use UART2, the user LEDs, and the user switches (S2).
    - S2-2 and S2-3 : These two switches control the winDSK8 kernel baud rate as shown in the table below. Ensure that you set S2-2 and S2-3 to match baud rate set in the winDSK8-based application you are using.

S2-2	S2-3	Baud rate
OFF	OFF	115200
ON	OFF	230400
OFF	ON	460800
ON	ON	921600

- Press the reset switch (S5) on the OMAP-L138 board. You should the user LEDs (LED1 and LED2) flash several times.
- The winDSK8 kernel is installed and ready to use.