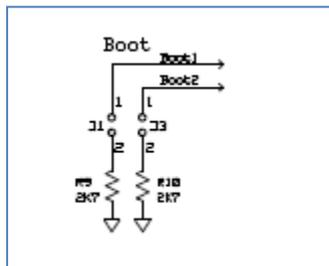


Lab15_1: Test program F28335 „Serial Boot Loader“.
Download binary image “test.bin” (binary counter code) via serial boot loader into RAM of DSP.

1. Boot – Mode Selection, Peripheral Explorer Board:

For a F28335ControlCard, close jumper “SCI-BOOT -84” (J3) at Peripheral Explorer Board. After a power on, the F28335 will execute the internal serial SCI-A boot code.



2. Use the converter – tool “hex2000.exe” to generate a binary image:

- In Windows-XP or Vista, open a command line window and enter the path to the location of your project – out file, e.g.:

```
cd c:\DSP2833x\solution\lab15\debug
```

The screenshot shows a Windows command prompt window titled "Administrator: Eingabeaufforderung". The window displays the following text:

```
Microsoft Windows [Version 6.0.6001]
Copyright (c) 2006 Microsoft Corporation. Alle Rechte vorbehalten.

C:\Users\bormann>CD c:\DSP2833x\solution\lab15\debug
c:\DSP2833x\solution\Lab15\Debug>_
```

- To start the hex2000 – tool, enter the following command in a single line (you might need to adjust the path to the location of this file on your installation):

```
C:\CCStudio_v3.3\C2000\cgtools\bin\hex2000 -b -boot -sci8
-e=codestart -o=test.bin Lab15.out
```

```

Administrator: Eingabeaufforderung
Microsoft Windows [Version 6.0.6001]
Copyright (c) 2006 Microsoft Corporation. Alle Rechte vorbehalten.

C:\Users\hormann>CD c:\DSP2833x\solution\lab15\debug

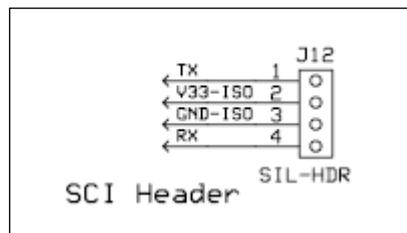
c:\DSP2833x\solution\Lab15\Debug>C:\CCStudio_v3.3\c2000\cgtools5.2.2\bin\hex2000
-b -boot -sci8 -e=codestart -o=test.bin Lab15.out
Translating to Binary format...
"Lab15.out" ==> codestart <BOOT LOAD>
"Lab15.out" ==> ramfuncs <BOOT LOAD>
"Lab15.out" ==> .text <BOOT LOAD>
"Lab15.out" ==> .cinit <BOOT LOAD>
"Lab15.out" ==> .econst <BOOT LOAD>

c:\DSP2833x\solution\Lab15\Debug>_

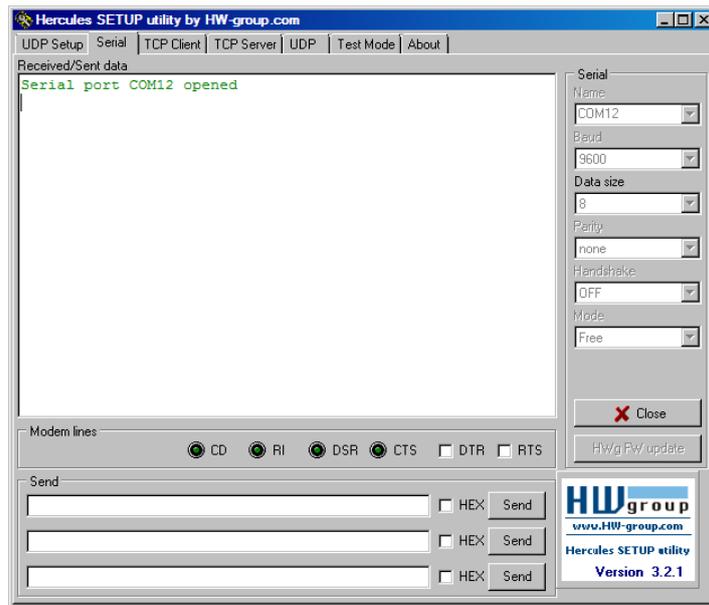
```

3. Use a serial terminal program to download image “test.bin”

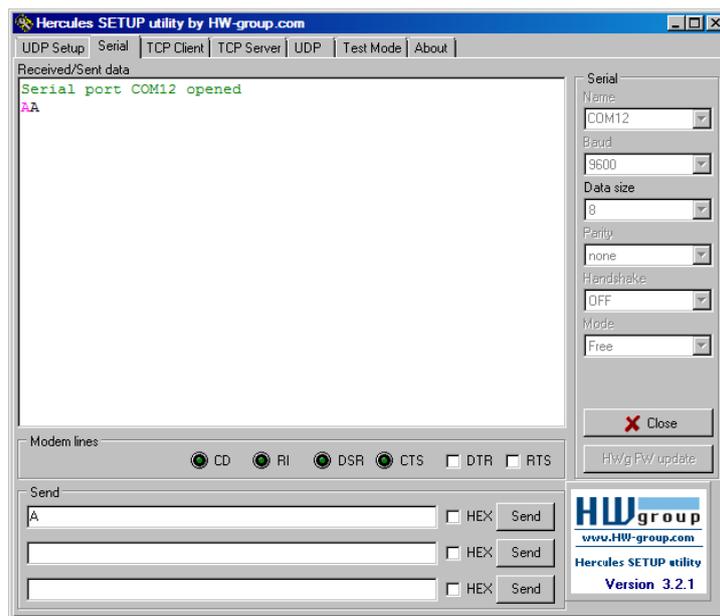
- Connect the Peripheral Explorer Board SCI-A (header J12) with a serial COM – channel of your PC. Plug in the serial cable provided to header J12 making sure the red wire aligns with the Rx pin on the peripheral explorer kit.



- Disconnect you Emulator, power OFF the Peripheral Explorer Board.
- After a few seconds, power ON the Peripheral Explorer Board again.
- use windows hyper-terminal or another freeware – tool, such as “Hercules” (www.HW-group.com) as counterpart.
- Set up the following data protocol:
 - 9600 bit/s
 - 8 data bits
 - no parity
 - 1 stop bit
 - no hardware handshake or protocol



- Send a single character 'A'
- wait for echo 'A' from F2833x (indicates a locked auto baud detection)



- send file "test.bin" as a text file. The F2833x will echo back all characters.
- At the end of the download, the F2833x will automatically enter the entry – point "codestart" and execute the code, which has just been downloaded.

