Programming the Internal Flash. Exercise MEM_1

Exercise MEM_1
Program the Internal Flash

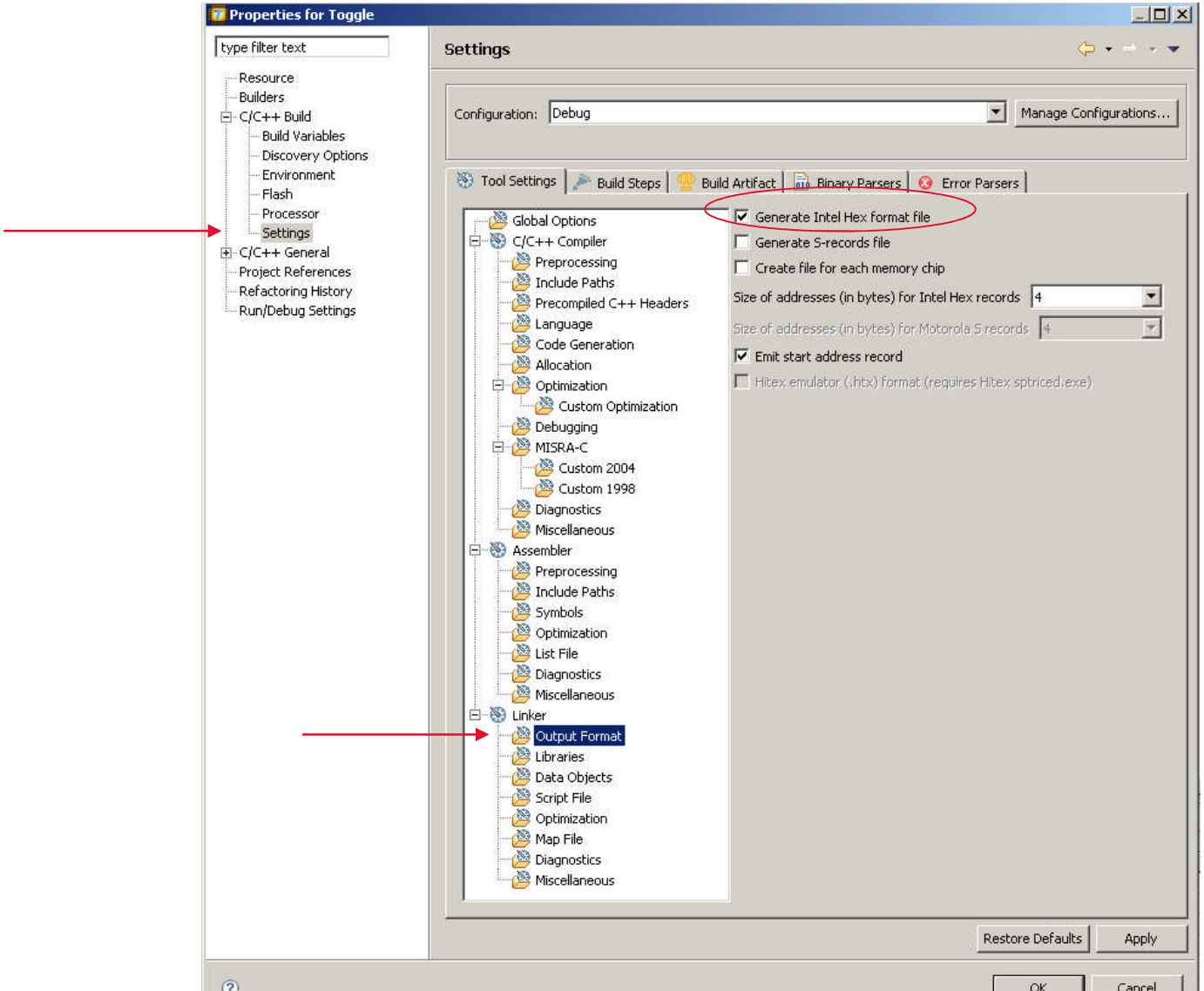
Objective:

- Save code in the Internal Flash Memory.
- Run the code from here: the on board LED will blink.

Exercise MEM_1 - EDE Configurations (cont.)Project Options

Project Options (cont.)

- **Linker / Output Format**
  - Select: Generate Intel HEX format file (.hex)



Exercise MEM_1 - EDE Configurations (cont.)Project Options

Project Options (cont.)

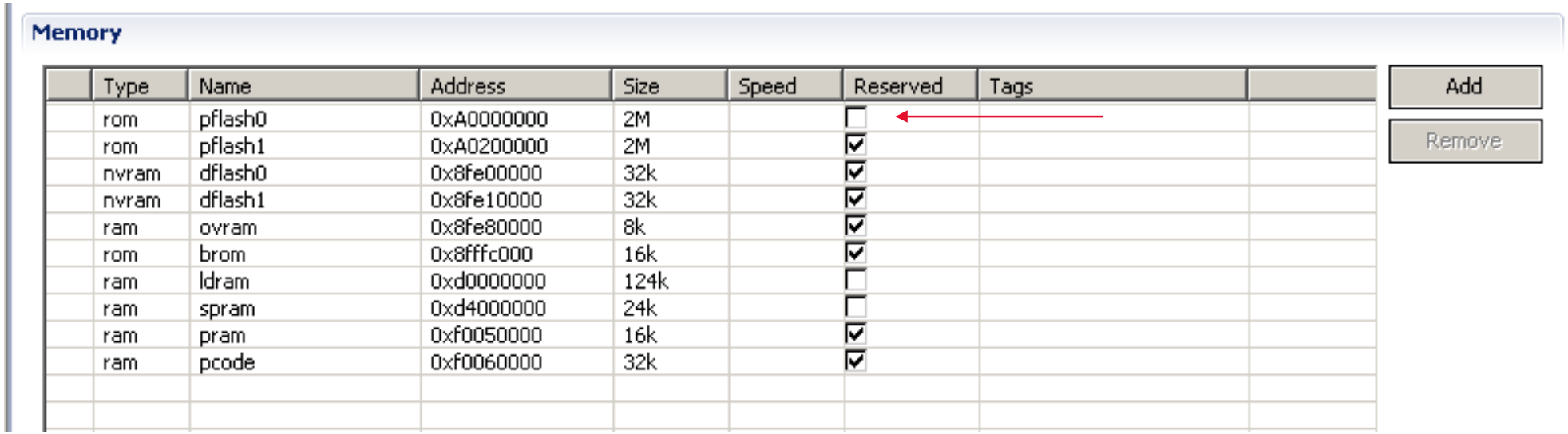
- **Linker / Special Areas**
  - **Special areas:**
    - **Reset start address**: 0xA000 0000.
    - **Interrupt table start address**: 0xA00F 0000.
    - **Trap table start address**: 0xA00F 2000.

Name	Address value
Reset start address	0xa0000000
Libraries start address	[0x00000000+16k .. 0x00000000+2M] | [0x10000000+16k .. 0x10000000+2M] | [0x20000000+16k .. 0x20000000+2M] | [0x3000
Interrupt table start address	0xa00f0000
Trap table start address	0xa00f2000
CSA start address	0xd0000000
Number of context blocks	64
A0 area start address	
A1 area start address	
A8 area start address	
A9 area start address	

Exercise MEM_1 - EDE Configurations (cont.)Project Options

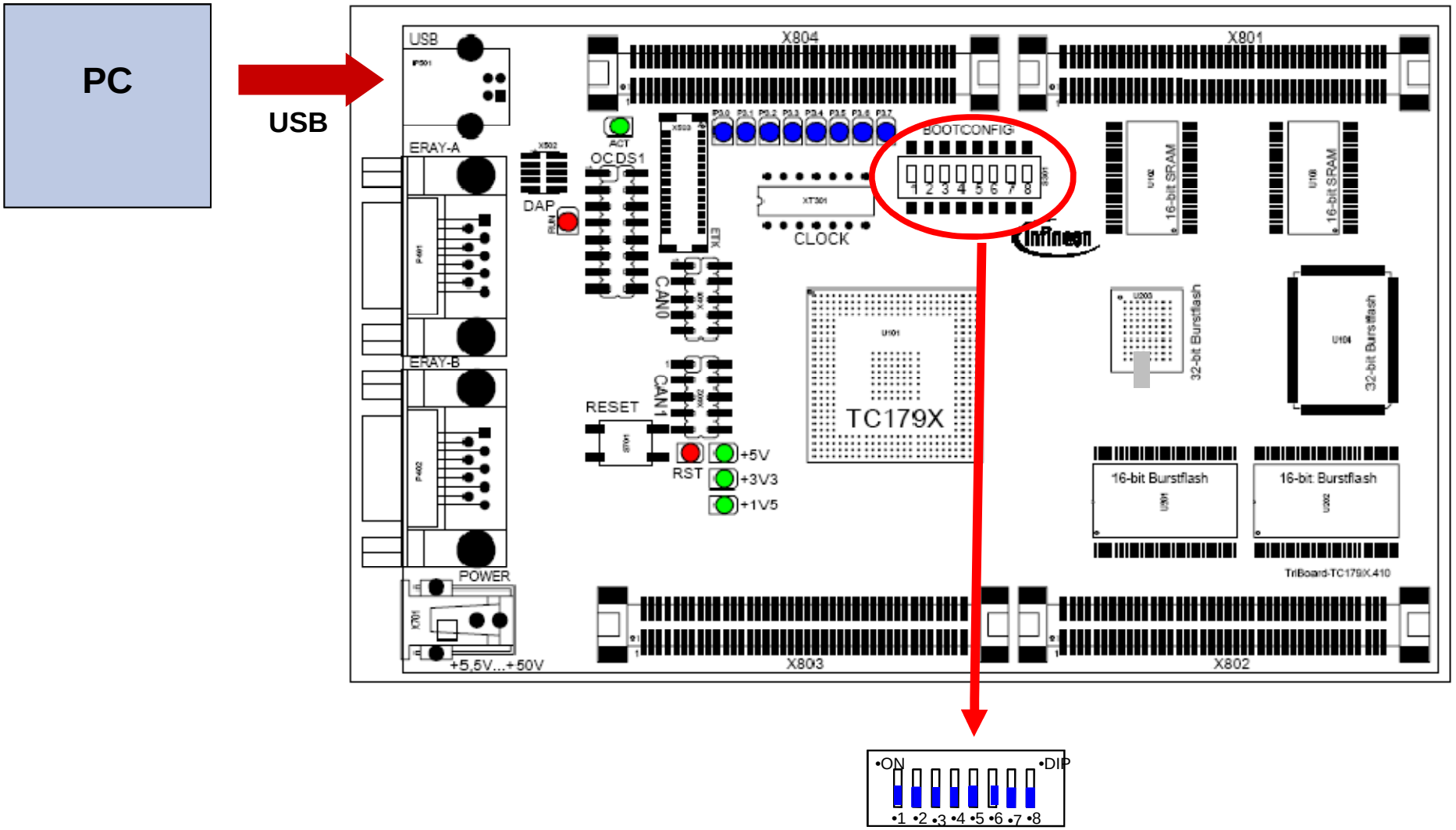
Project Options (cont.)

- **Linker / Memory**
  - Add a new section:
    - **Name** : pflash0
    - **Type** : ROM
    - **Size**: 2M
    - **Address** : 0xA0000000



Exercise MEM_1
Connect TriBoard

Connect TriBoard to PC:



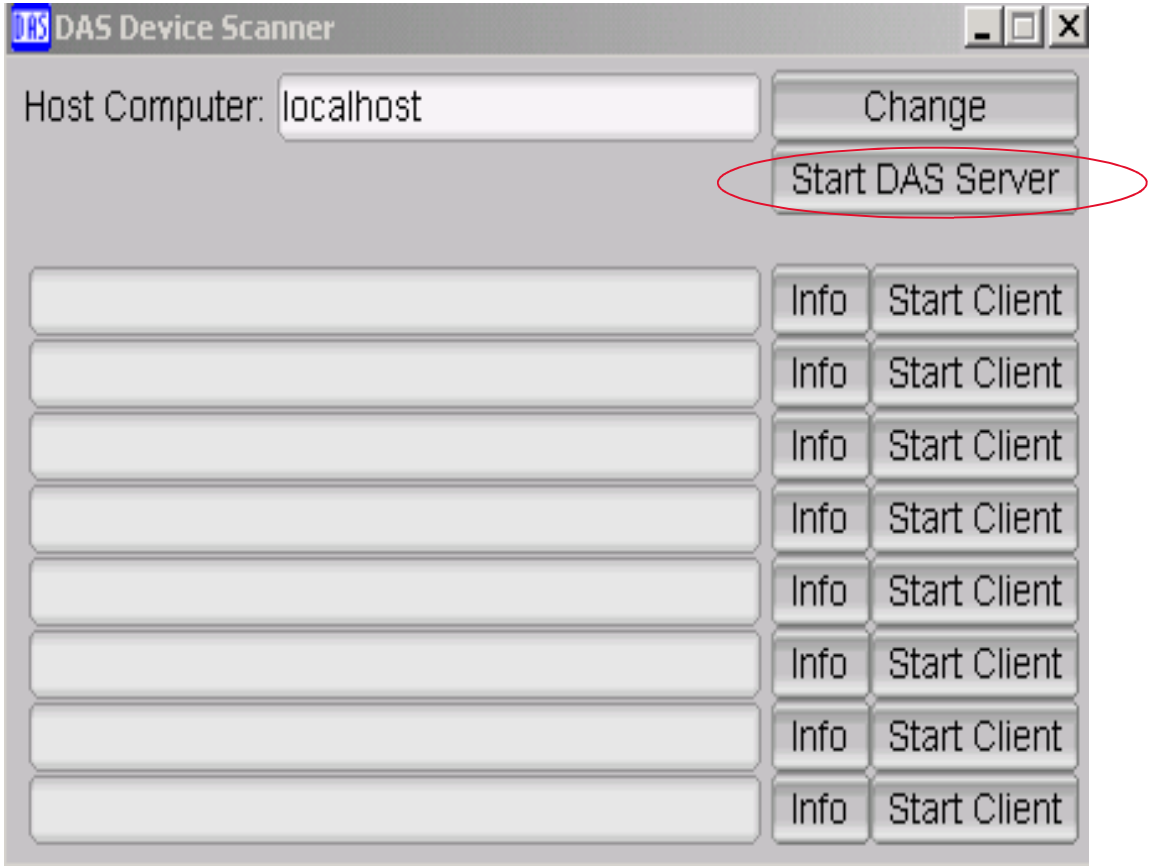
[Configuration for using MemTool via DAS]

Exercise MEM_1
Activating the DAS server

Open a DAS session by

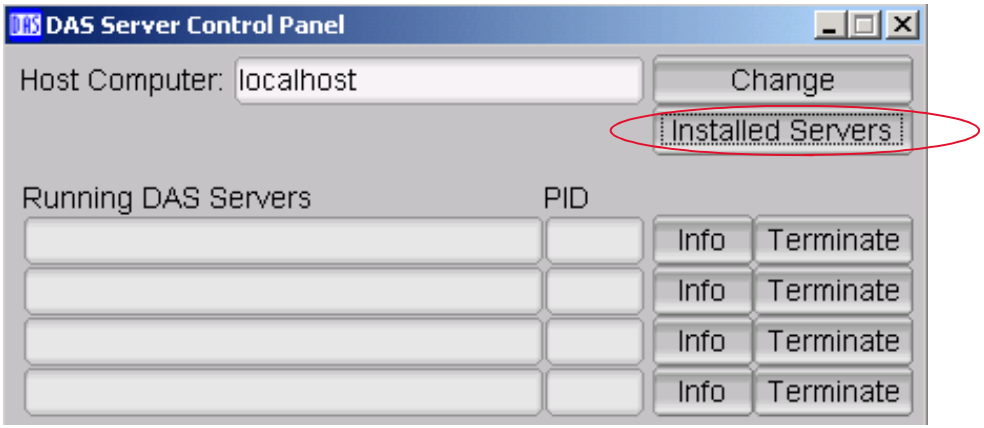
START->Program Files->DAS->DAS Device Scanner

A new window pops-up.



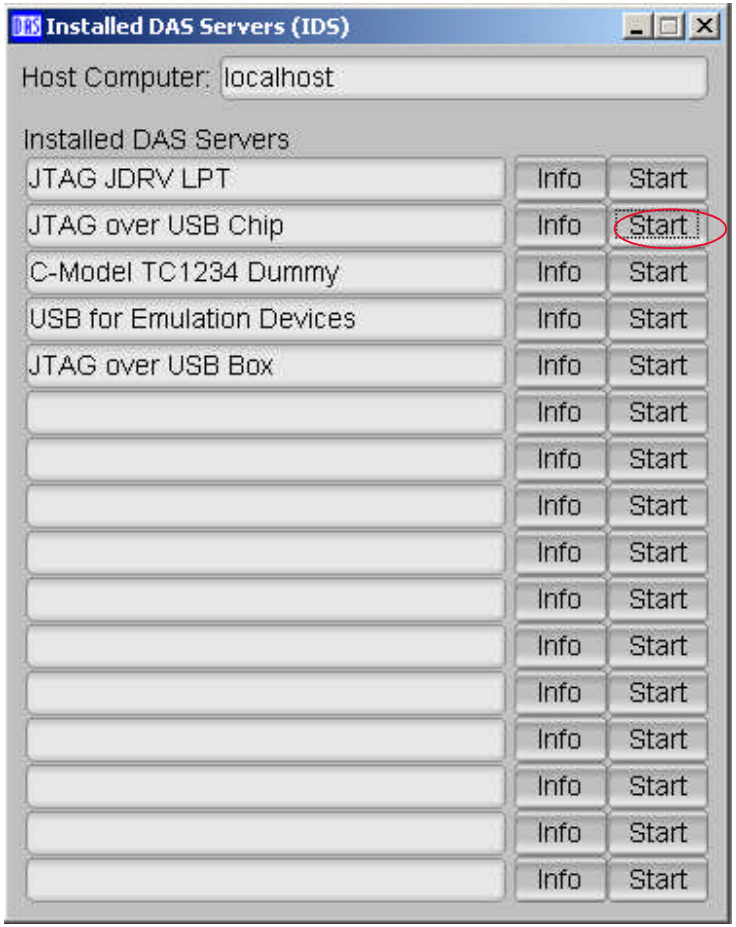
Exercise MEM_1
Activating the DAS server (cont.)

In the control panel window, click on '**Installed DAS Server**'. A new window pops-up.



Exercise MEM_1
Activating the DAS server (cont.)

In the IDS window, start the JTAG over USB chip server.

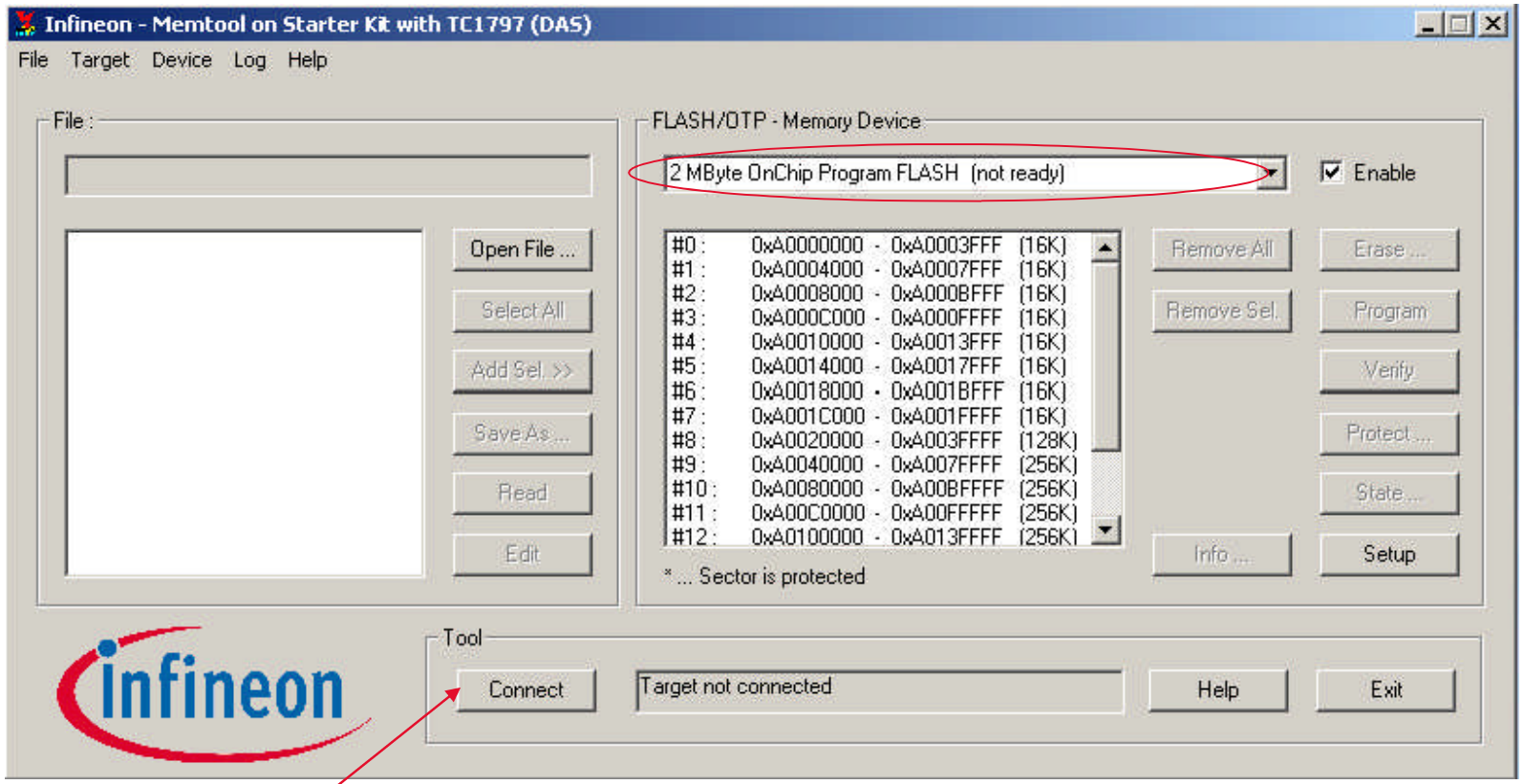


In the device scanner window, the TriCore-Family shall now be detected.
In the control panel window, the JTAG over USB chip server shall now be running.

Exercise MEM_1 - Programming the Flash

Programming the Flash.

- Start MemTool (select Target : TC1797).
- Select '2Mbyte OnChip Pflash'
- Press '**Connect**'

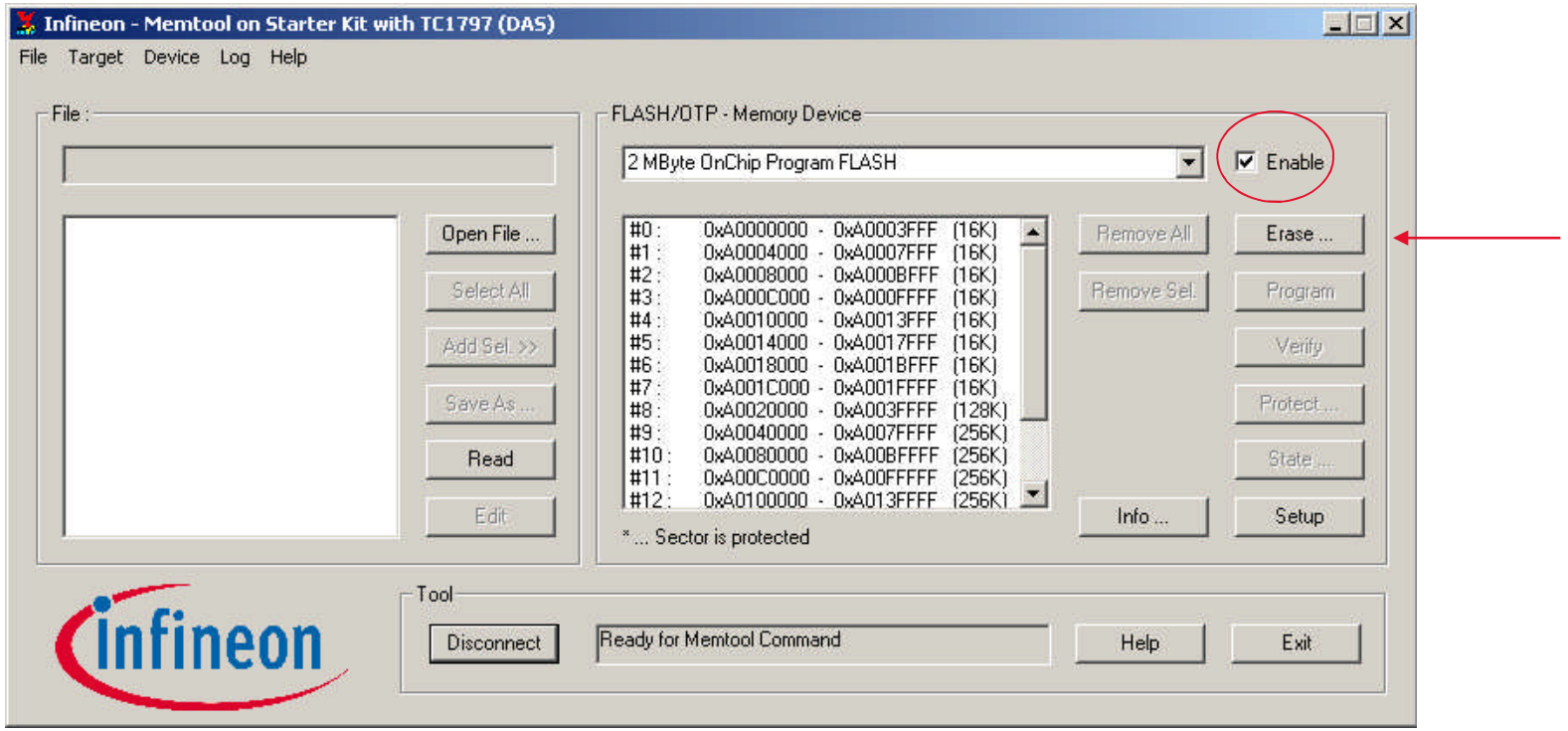


The sector definitions pop up automatically.

Exercise MEM_1 - Programming the Flash

Programming the Flash (cont.)

- Enable the On-Chip Flash.
- Press '**Erase**'
- A new Window pops up: choose '**Select All**' and then '**Start**'



- After a few seconds, the operation should be finished with success. Exit the pop up window.

Exercise MEM_1 - Programming the Flash

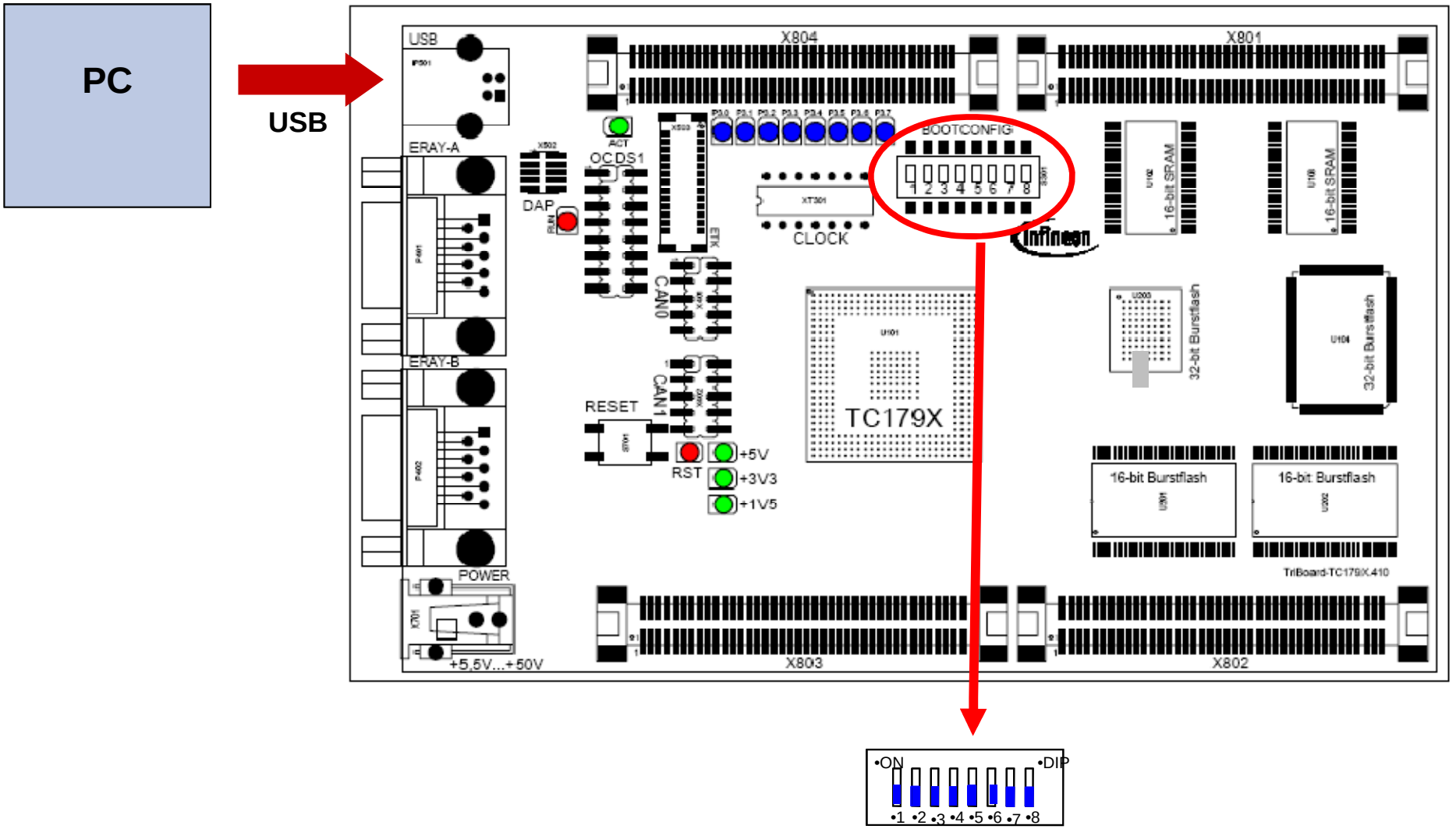
Programming the Flash (cont.)

- In the main window: '**Open File**' and browse for
  c:\hot\tc1797\quickstart\quickstart.hex
- Click: '**Select All**'
- Click: '**Add Sel.>>**'
- Click : '**Program**'. A new window pops up. After a few seconds, the operation should be finished successfully. Exit the pop-up window.
- Click : '**Verify**'. A new window pops up. After a few seconds, the operation should be finished successfully. Exit the pop-up window.

The On Chip Flash is now programmed!

Exercise MEM_1
Connect TriBoard

Connect TriBoard to PC:



Configuration for [Internal Start from Flash] Boot mode

Exercise MEM_1 - Running the Program

Now, the LED on the TriBoard blinks (fast)!

The TC1797 runs the program from its internal Flash. You can disconnect the power cable on the TriBoard and reconnect it: The program from the Flash will be automatically loaded and started!