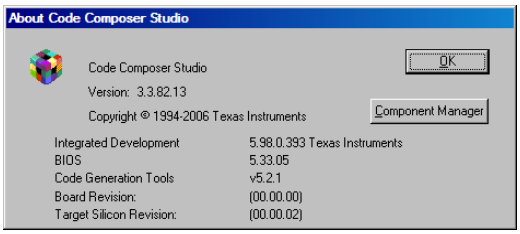
Lab9_1 - Documentation

How to setup a Hardware Breakpoint to watch for Data Memory Writes; Code Composer Studio, Version:



Target:

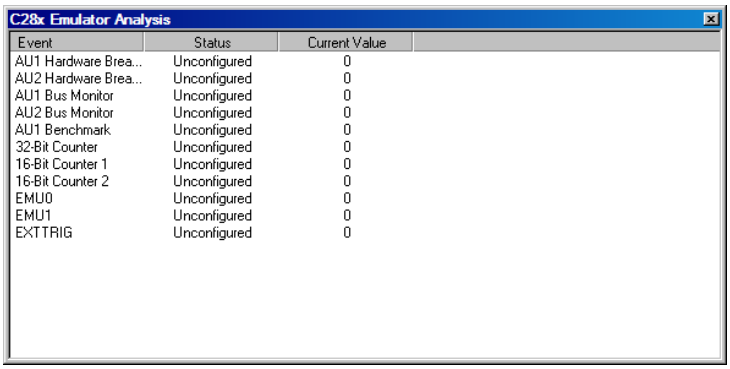
The exercise is applicable to all C2000 devices. Laboratory is based on F28027ControlCard or F28027USB-Stick

Objective:

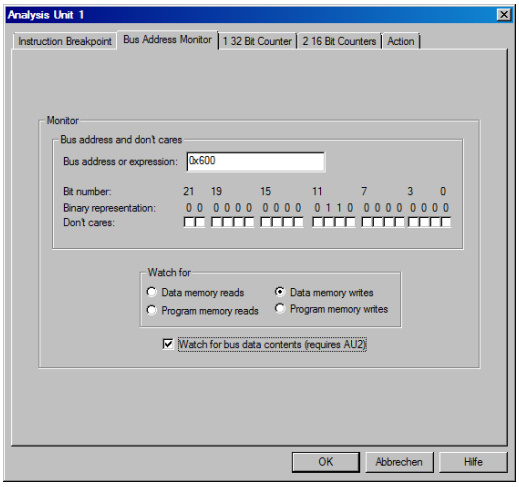
Set a hardware breakpoint to watch for data write access to memory location 0x600. Trigger the breakpoint, when data pattern 0x0025 is written into address 0x600. Halt the code execution on such an event.

Procedure:

1. Tools ➔ C28x Emulator Analysis Unit

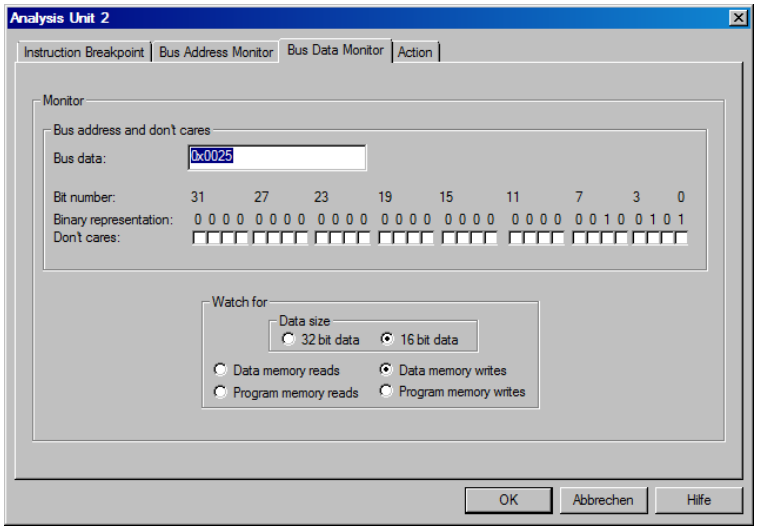


2. Right mouse click into this window ➔ AU1 setup
   - Bus Address Monitor,
   - Enter Bus Address or Expression: 0x600
   - Data Memory Writes
   - Enable “Watch for bus data contents”

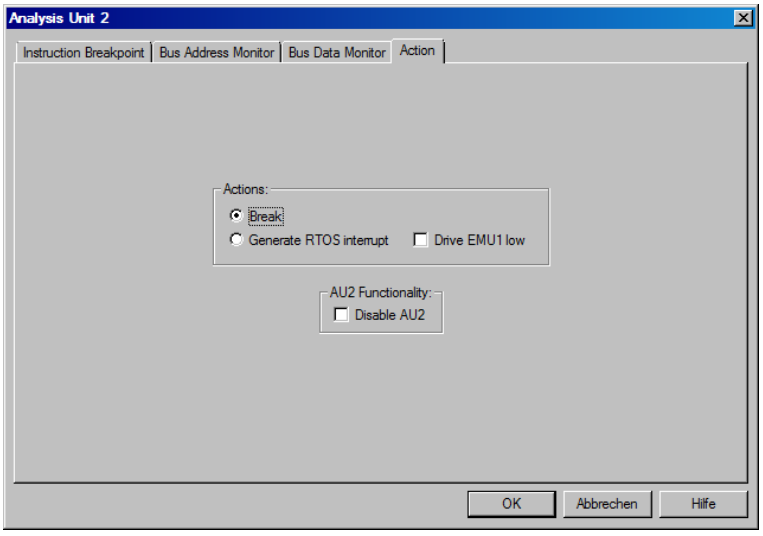


   - Close Window AU1 (OK).

3. Right mouse click into window “C28x Emulator Analysis Unit” ➔ AU2 setup
    - Category: Bus Data Monitor
    - Bus Data: 0x0025
    - 16 Bit Data
    - Data Memory Writes

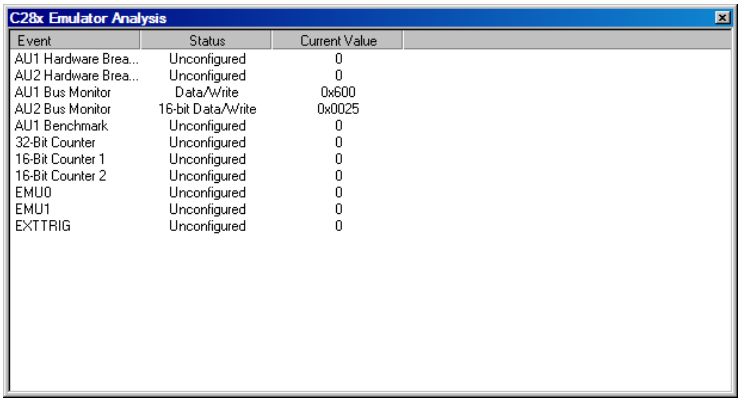


- Category: Action
    - Break



- Close Window AU2 (OK).

4. Final Setup of Emulator Analysis Unit should look like:



5. Test the setup:

```
void main(void)
{
      int * ptr = (int *)0x600;
      int i;
      for(i=0;i<100;i++)
            *ptr = i;
      while(1);       // endless loop
}
```

6. Result:
   - Build and run the code.
   - The execution should stop, when value 0x0025 was written into address 0x600. For verification open a watch window and enter (int *)0x600: