

# TM4C123 by Keil-uVision

## Debugging

E:\Diploma\ux\Lab\_3\Keil\_uvision\_unit3\_lab4\_project\Keil\_uvision\_unit3\_lab4\_project.uvprojx - µVision [Non-Commercial Use License]

File Edit View Project Flash Debug Peripherals Tools SVCS Window Help

Registers

Register	Value
R0	0x00000000
R1	0x00000000
R2	0x00000020
R3	0x00000000
R4	0x00000000
R5	0x00000000
R6	0x00000000
R7	0x00000000
R8	0x00000000
R9	0x00000000
R10	0x00000000
R11	0x00000000
R12	0x200003D0
R13	0x00000000
R14	0x00000000
R15	0x00000000
R16	0x00000000
R17	0x00000000
R18	0x00000000
R19	0x00000000
R20	0x00000000
R21	0x00000000
R22	0x00000000
R23	0x00000000
R24	0x00000000
R25	0x00000000
R26	0x00000000
R27	0x00000000
R28	0x00000000
R29	0x00000000
R30	0x00000000
R31	0x00000000

Core

start.c main.c

```
40 extern uint32_t E_TEXT ;
41 extern uint32_t S_DATA ;
42 extern uint32_t E_DATA ;
43 extern uint32_t S_BSS ;
44 extern uint32_t E_BSS ;
45
46 /*****
47
48 void Reset_Handler (void)
49 {
50     /* copy data from ROM to RAM */
51     uint32_t DATA_Size = (uint8_t*)&E_DATA - (uint8_t*)&S_DATA;
52     uint8_t* P_src = (uint8_t*)&E_TEXT ;
53     uint8_t* P_dst = (uint8_t*)&S_DATA ;
54
55     for (int i = 0; i < DATA_Size; ++i)
56     {
57         *((uint8_t*)P_dst++) = *((uint8_t*)P_src++);
58     }
59
60     /* init the .bss with zero */
61     uint32_t BSS_Size = (uint8_t*)&E_BSS - (uint8_t*)&S_BSS ;
62     P_dst = (uint8_t*)&S_BSS ;
63
64     for (int i = 0; i < BSS_Size; ++i)
65     {
66         *((uint8_t*)P_dst++) = (uint8_t)0 ;
67     }
68 }
```

Command

Access to Port F without a clock.  
You must turn on bit 5 in RCGC2

Call Stack + Locals

Name	Location/Value	Type
main	0x00000010	int f()
i	<not in scope>	auto - uint

ASSIGN BreakDisable BreakEnable BreakKill BreakList BreakSet BreakAccess COVERAGE

Simulation

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Simulation

f1: 14.84550000 c/s 1:49 C:1 CAP NUM SCRI OVR RAW

# #Logic Analyzer to display the wave form

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Registers

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R 0x00000000	
R 0x00000020	
R 0x00000000	
R 0x00000000	
R 0x00000000	
R 0x00000000	
R 0x200003D0	
R 0x00000000	
R 0x00000000	
R 0x00000000	
R 0x00000000	
R 0x200003D0	
R 0x00000101	
R 0x00000020	
x 0x01000000	

Logic Analyzer

Setup... Load... Save... Min Time 0s Max Time 46.5075s Grid 0.5s Zoom In Out All Auto Min/Max Update Screen Stop Clear Transition Prev Next Jump to Code Trace Signal Info Amplitude Timestamps Enable Show Cycles Cursor

PORTF

36.0565 s 41.0565 s 46.5565 s

55 for (int i = 0;  
56 {  
57 \*(uint8\_t\*)  
58 }  
59  
60 /\* init the .b  
61 uint32\_t BSS\_Si  
62 P\_dst = (uint8\_t\*)  
63  
64 for (int i = 0;  
65 {  
66 \*(uint8\_t\*)

Port F Hardware

TM4C123

SW1 SW2

PF4 PF0

PF3 PF2 PF1

16 MHz

LED LED

Port F Registers

DATA: 0x11 PUR: 0x00 LOCK: 0x01

DIR: 0x08 PDR: 0x00 CR: 0x1E

DEN: 0x08 RCGC2: 0x00000020 Clock enabled

Grading Controls

Number from edX Grade Score: 0

Copy this to edX

Location/Value Type

0x00000010	int f()
<not in scope>	auto - uint

Command

Access to Port F without a clock.  
You must turn on bit 5 in RCGC2

ASSIGN BreakDisable BreakEnable BreakKill BreakL