

TivaTM C Series Launchpad Board & IO board User Manual

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- Tiva TM4C123GH6PMI microcontroller
- Uses a 16.0-MHz crystal and the internal PLL multiplies this clock to higher frequencies.
- Hibernation module is clocked from an external 32.768-KHz crystal.
- 3 LEDs(R,G,B) and 2 Switches for simple programs
- Motion control PWM
- On-board Integrated In-Circuit Debug Interface(ICDI).
- USB micro-A and micro-B connector for USB device, host, and on-the-go (OTG) connectivity
- Switch-selectable power sources:ICDI and USB device.
- All ports accessible

Tiva C Series TM4C123G Board Layout

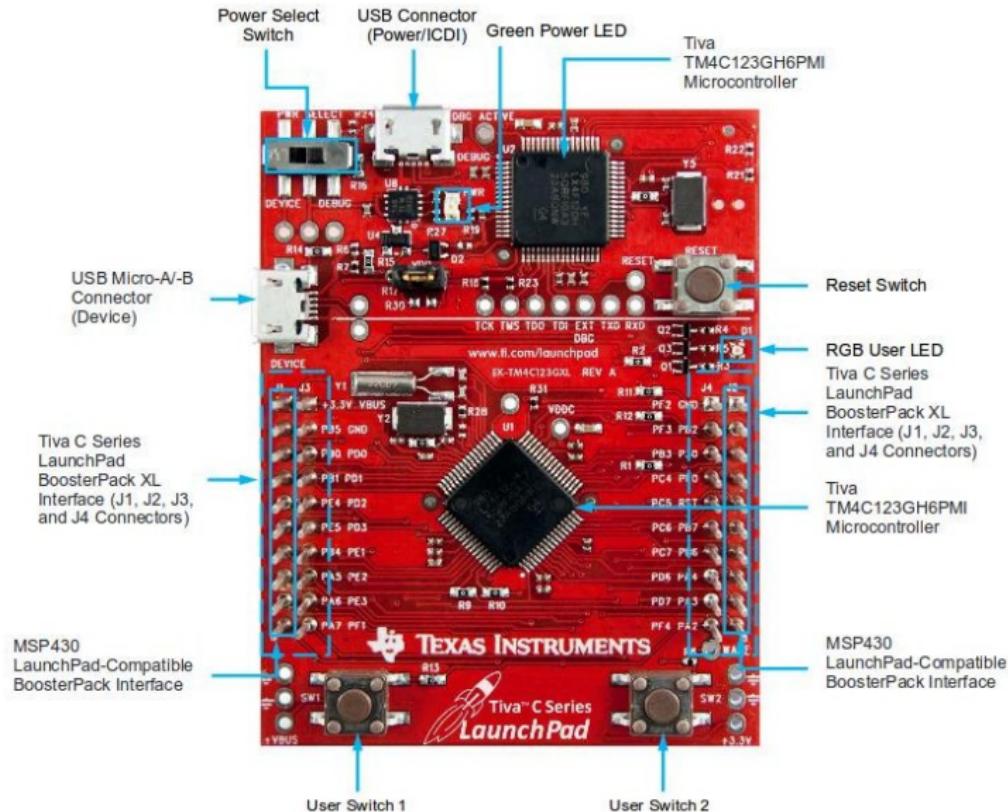


Figure : Tiva C Series TM4C123G LaunchPad Evaluation Board

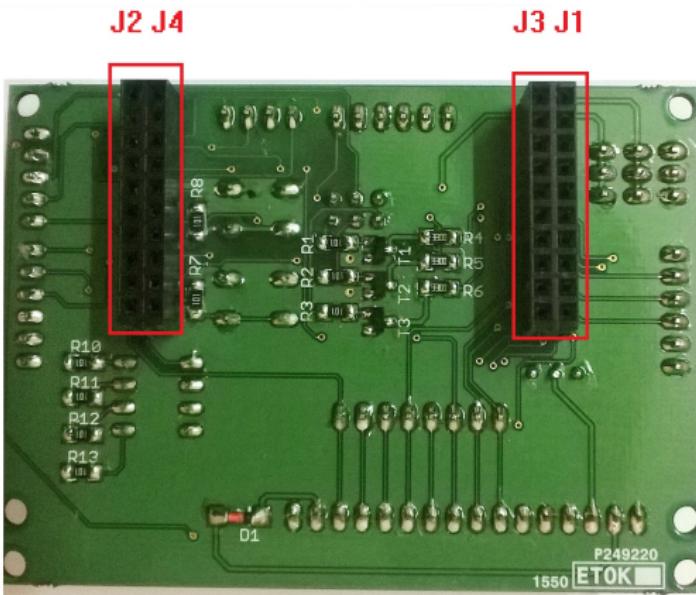
- Switch the POWER SELECT switch to the right for Debug mode.
- Connect the USB-A cable plug to an available port on the PC and the Micro-B plug to the Debug USB port on the board (Power/ICDI).
- Verify that the POWER LED D4 on the board is lit.
- 3 LEDs
 - RGB Red - PF1
 - RGB Blue - PF2
 - RGB Green - PF3
- 2 Push Button Switches
 - SW1 - PF4
 - SW2 - PF0

- The IO Board is used to organise the pins of the TM4C123G LaunchPad Evaluation Board.
- The Push button switches are in parallel with the board switches ie. PF0, PF4.
- The RGB LEDs are in parallel with the Board switches ie. PF1, PF2, PF3.
- Added 4 Switches for small programs ie, PA2, PA3, PA4, PA5.
- Added socket compatible for 16*2 LCD display.

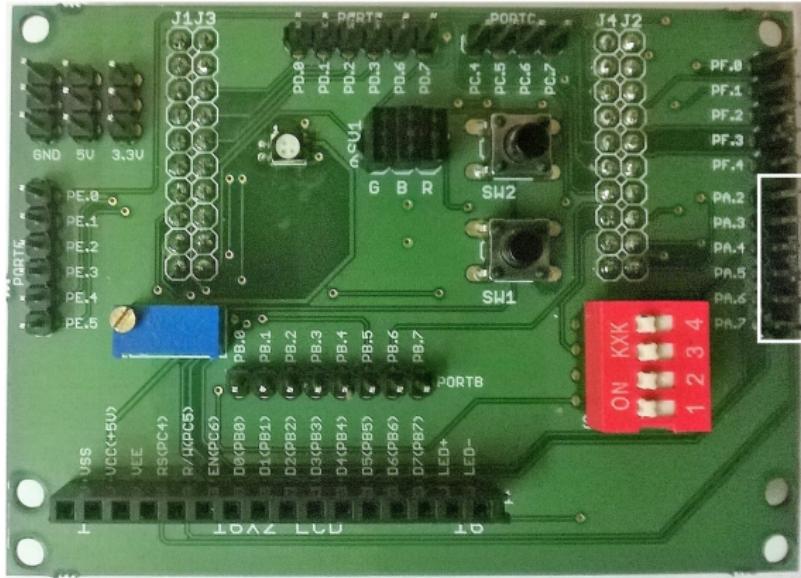
Note: The pins in microcontroller can be muxed for various purposes, but before using it as GPIO it has to be configured accordingly using Tivaware function(as mentioned in the [Peripheral Library](#)).

Connect IO Board to Tiva

Connect Tiva C Series LaunchPad BoosterPack XL Interface to the corresponding slots J1, J2, J3 and J4 in the IO Board.



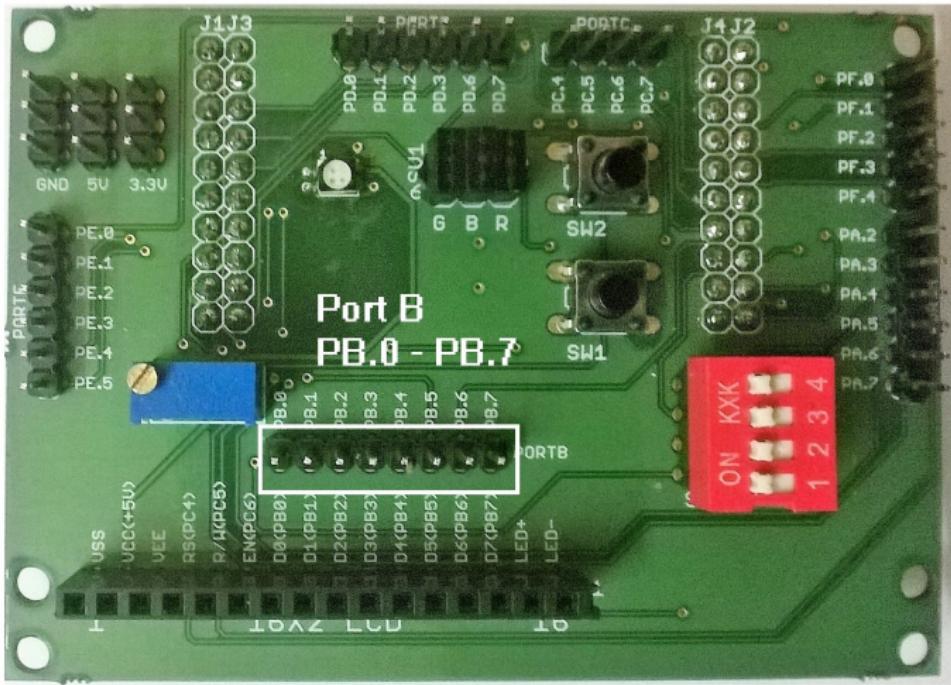
Board Layout: Ports: Port A



Port A

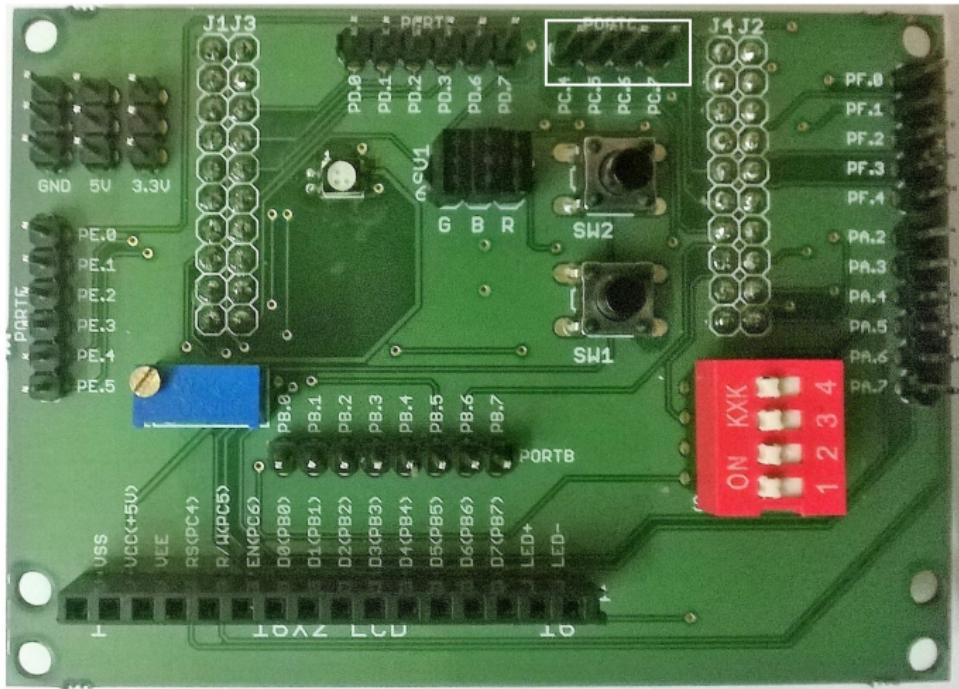
PA.2 - PA.7

Board Layout: Ports: Port B



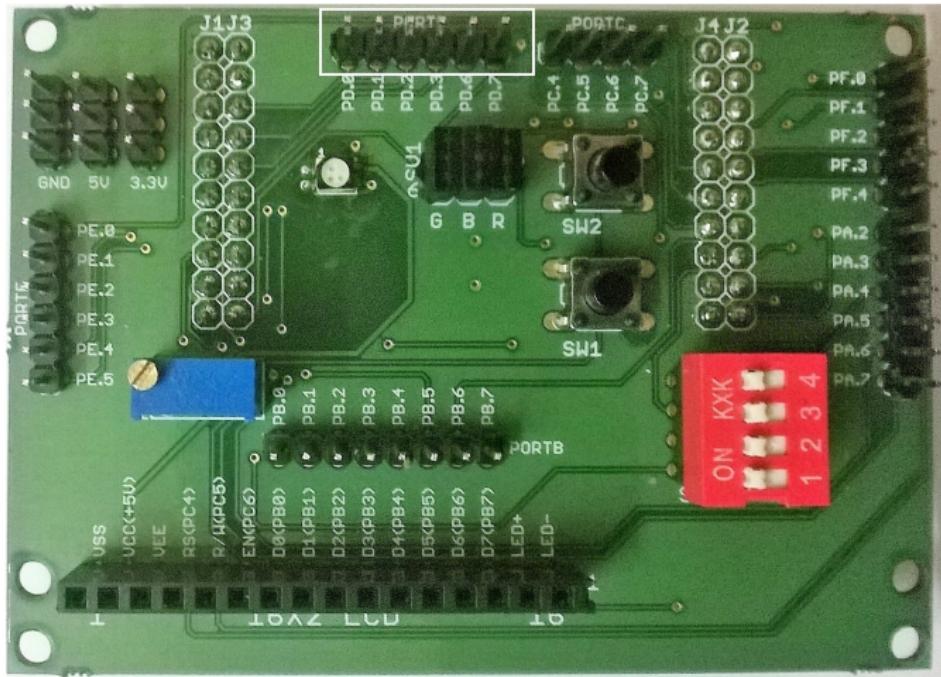
Board Layout: Ports: Port C

Port C PC.4 - PC.7



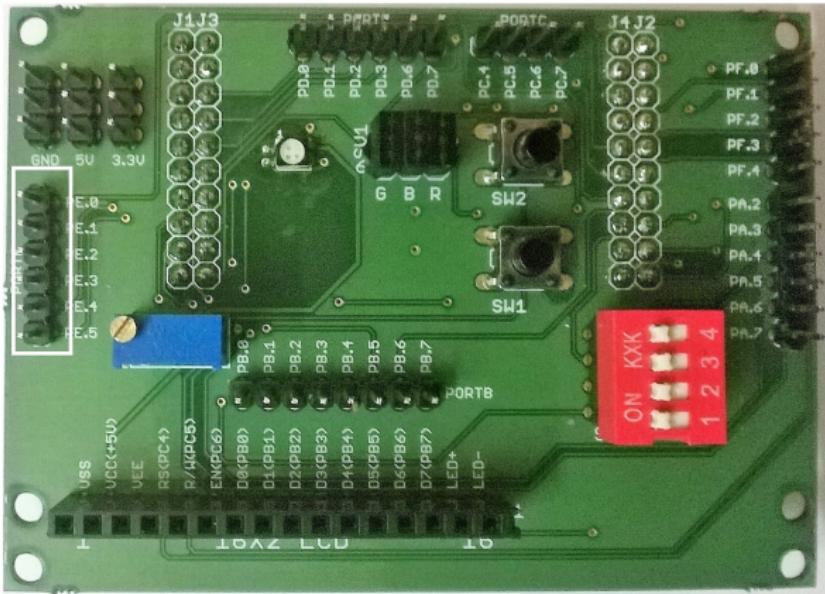
Board Layout: Ports: Port D

Port D PD.0 - PD.3, PD.6 - PD.7

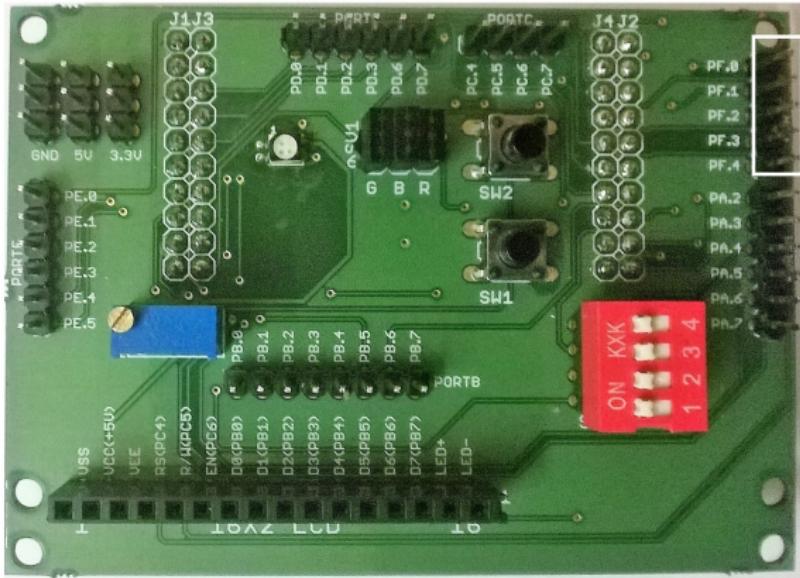


Board Layout: Ports: Port E

Port E
PE.0 - PE.5

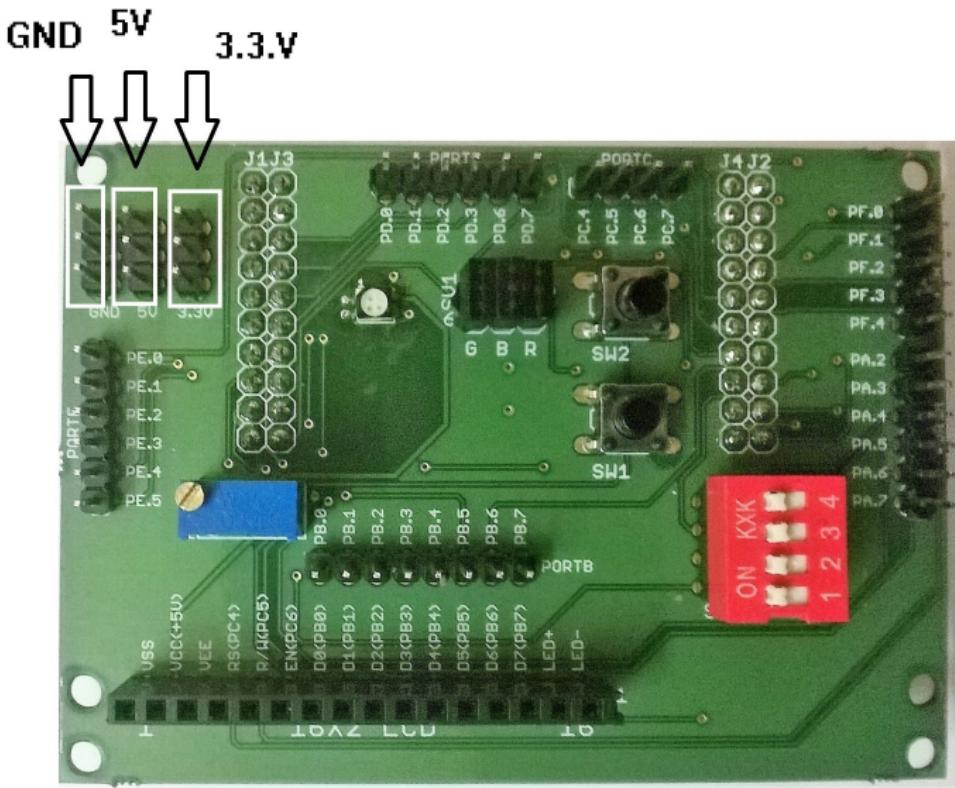


Board Layout: Ports: Port F



Port F
PF.0 - PF.4

Board Layout: Fixed Voltage Pins



Board Layout: Peripherals and Connectors

