Additional resources @
www.ti.com/dk-tm4c123g

Welcome to the Tiva DK-TM4C123G

TEXAS INSTRUMENTS

Tiva™ DK-TM4C123G
Getting Started Guide

TEXAS INSTRUMENTS

Welcome to the Tiva TM4C123G Development Kit. The DK-TM4C123G is a complete development platform that provides everything you need to develop applications for the Tiva C Series TM4C123x microcontrollers.

1. **Board Setup**
Install Power Select jumper J6 (top left corner) to the In-Circuit Debug Interface (ICDI) for debug power select mode. Connect the included USB cable from a Windows®-enabled PC to the ICDI Debug USB Port (top right corner) on the Tiva TM4C123G development kit. This USB port provides JTAG debug and Virtual COM Port connectivity via the ICDI.

Note: If the Found New Hardware dialog box appears on your PC, ignore it until it is time to install the drivers.

2. **Quickstart Application**
The DK-TM4C123G comes preprogrammed with the data logger quickstart application. This application demonstrates the 9-axis Digital Motion Sensor (Accelerometer, Gyroscope, Magnetometer), the internal and external temperature sensors, current measurement, and analog-to-digital converter (ADC) sampling.
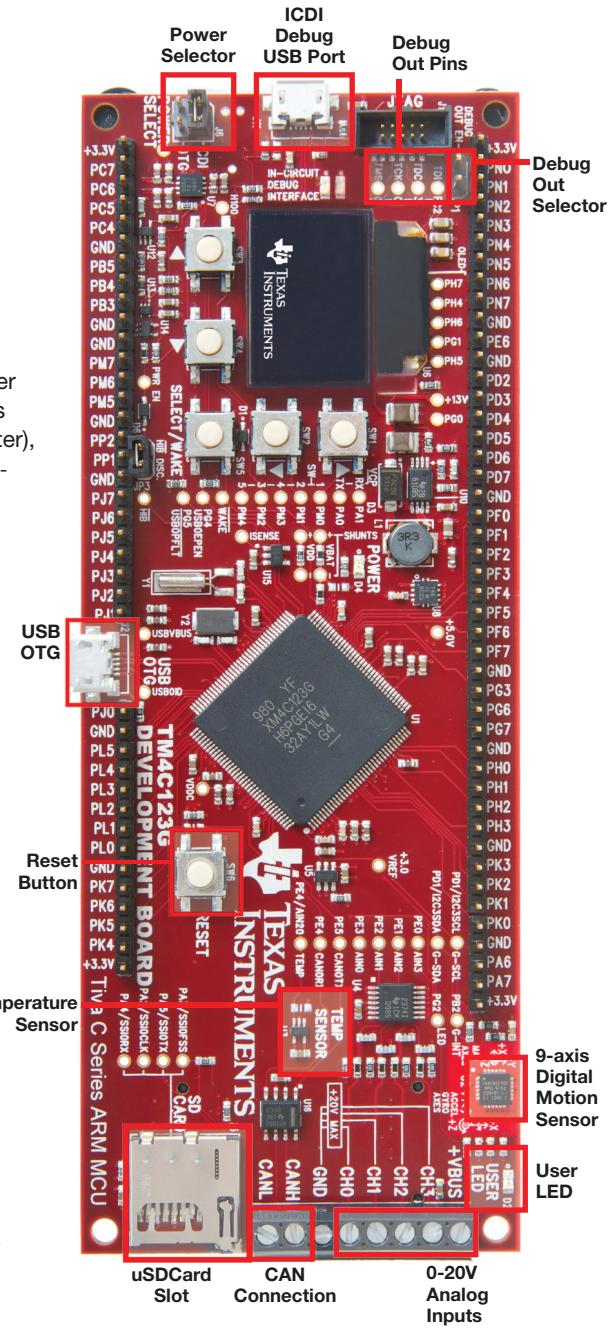
You can select which sources to display, how often to sample, and where to save the results by using the five push buttons around the graphic display. When you have made your selections under the CONFIG menu you may start the application by selecting START at the top level. In addition, you can view samples on your computer by setting STORAGE to HOST PC and using the Windows application logger.exe located in **C:/ti/TivaWare_C_Series-*/tools/bin**.

3. **Software, Drivers, and Documentation**
Insert the USB flash drive into your PC. Install the TivaWare™ software library from /Tivaware/SW-DK-TM4C123G*.exe. The drivers for the board are located in the /Drivers folder, these should be installed via the Found New Hardware wizard in Windows. Documentation can be found in the /Documentation folder. IDE tools and the LMFlash Programmer tool can befound in the /Tools directory. For additional assistance, or if you have any questions, please visit the Tiva C Series e2e™ forums at **http://e2e.ti.com**
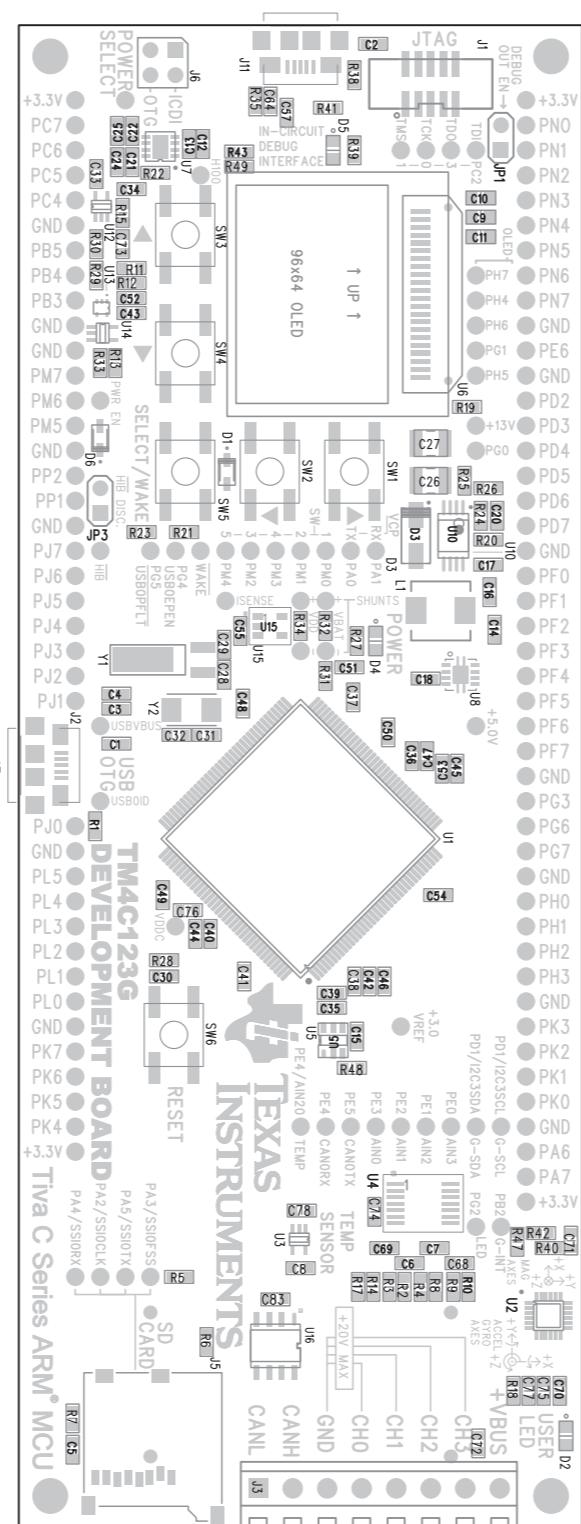
4. **Further Reading**
When you are ready, take a look at the other examples for the DK-TM4C123G installed as part of TivaWare to **C:/ti/TivaWare_C_Series-*/examples/boards/dk-tm4c123g/**. In addition, please review the Read Me First file (located on the USB flash drive) as well as the graphical pin configuration shown on the back of this page.

Power Selector
ICDI Debug USB Port
Debug Out Pins
Debug Out Selector
USB OTG
Reset Button
Temperature Sensor
9-axis Digital Motion Sensor
User LED
uSDCard Slot
CAN Connection
0-20V Analog Inputs

SPMU358

Tiva DK-TM4C123G Pin Configurations

Left side

Functions							PIN NUMBER	PIN NAME
								+3.3V
USB0PFLT			U3Tx	WT1CCP1	C0		33	PC7
USB0EPEN		PhB1	U3Rx	WT1CCP0	C0+		34	PC6
M0PWM7	U1CTS	U1Tx	PhA1	U4Tx	WT0CCP1	C1+	35	PC5
M0PWM6	U1RTS	U1Rx	IDX1	U4Rx	WT0CCP0	C1	36	PC4
								GND
CAN0Tx	M0PWM3	AIN11	T1CCP1	SSI2Fss			135	PB5
CAN0Rx	M0PWM2	AIN10	T1CCP0	SSI2Clk			136	PB4
			T3CCP1	I2C0SDA			100	PB3
								GND
								GND
			WT0CCP1	M0PWM5			82	PM7
			WT0CCP0	M0PWM4			83	PM6
							84	PM5
								GND
			T5CCP0	M0PWM2			11	PP2
		AIN22	T4CCP1	M0PWM1			132	PP1
								GND
							130	PJ7
							129	PJ6
	C2	T3CCP1	U6Tx				128	PJ5
	C2+	T3CCP0	U6Rx				127	PJ4
		T2CCP1	U5Tx				123	PJ3
	IDX0	T2CCP1	U5Rx				122	PJ2
		T1CCP1	U4Tx				121	PJ1
								USB OTG
			T1CCP0	U4Rx			120	PJ0
								GND
			T2CCP1	WT2CCP1			103	PL5
			T2CCP0	WT2CCP0			104	PL4
			T1CCP1	WT1CCP1			105	PL3
			T1CCP0	WT1CCP0			106	PL2
			T0CCP1	WT0CCP1			107	PL1
			T0CCP0	WT0CCP0			108	PL0
								GND
								PK7
			WT1CCP1	M0FAULT3			109	PK6
	C2o	WT1CCP0	M0FAULT2				110	PK5
	C1o	U7Tx	M0FAULT1				111	PK4
RTCCLK	C0o	U7Rx	M0FAULT0				112	+3.3V

Right side

PIN NAME	PIN NUMBER	Functions								
+3.3V										
PN0	81	CAN0Rx								
PN1	80	CAN0Tx								
PN2	20	WT2CCP0	M0PWM6							
PN3	119	WT2CCP1	M0PWM7							
PN4	71	WT3CCP0	M1PWM4							
PN5	70	WT3CCP1	M1PWM5							
PN6	69	WT4CCP0	M1PWM6							
PN7	68	WT4CCP1	M1PWM7							
GND										
PE6	133	CAN1Rx	AIN21							
GND										
PD2	3	WT3CCP0	AIN13	USB0EPEN	SSI3Rx	SSI1Rx	M0FAULT0			
PD3	4	WT3CCP1	AIN12	USB0PFLT	SSI3Tx	SSI1Tx	IDX0			
PD4	141	WT4CCP0	AIN7	U6Rx						
PD5	142	WT4CCP1	AIN6	U6Tx						
PD6	143	WT5CCP0	AIN5	U2Rx	M0FAULT0	PhA0				
PD7	144	WT5CCP1	AIN4	U2Tx	M0FAULT1	PhB0	NMI			
GND										
PF0	62	T0CCP0	TRD2	U1RTS	SSI1Rx	M1PWM4	PhA0	C0o	CAN0Rx	NMI
PF1	63	T0CCP1	TRD1	U1CTS	SSI1Tx	M1PWM5	PhB0	C1o		
PF2	64	T1CCP0	TRD0	U1DCD	SSI1Clk	M0FAULT0	M1PWM6	C2o		
PF3	65	T1CCP1	TRDCLK	U1DSR	SSI1Fss	M0PWM7	M0FAULT1	CAN0Tx		
PF4	61	T2CCP0	TRD3	U1DTR	M0FAULT2	M1FAULT0	IDX0	USB0EPEN		
PF5	60	T2CCP1	USB0PFLT	M0FAULT3						
PF6	59	T3CCP0	I2C2SCL							
PF7	58	T3CCP1	I2C2SDA	M1FAULT0						
GND										
PG3	52	T5CCP1	I2C4SDA	M0FAULT2	M1PWM1	PhA1				
PG6	48	WT1CCP0	I2C5SCL	M0PWM6						
PG7	47	WT1CCP1	I2C5SDA	M0PWM7	IDX1					
PH0	32	WT2CCP0	SSI3Clk	M0PWM0	M0FAULT0					
PH1	31	WT2CCP1	SSI3Fss	M0PWM1	IDX0	M0FAULT1				
PH2	28	WT5CCP0	SSI3Rx	M0PWM2	M0FAULT2					
PH3	27	WT5CCP1	SSI3Tx	M0PWM3	M0FAULT3					
GND										
PK3	19	AIN19	SSI3Tx	M1FAULT3						
PK2	18	AIN18	SSI3Rx	M1FAULT2						
PK1	17	AIN17	SSI3Fss	M1FAULT1						
PK0	16	AIN16	SSI3Clk	M1FAULT0						
GND										
PA6	45	I2C1SCL	M1PWM2							
PA7	46	I2C1SDA	M1PWM3							
+3.3V										

LEGEND

UART	ADC
PWM	Power
I2C	Hibernate
SSI	General-Purpose Timers
CAN	Analog Comparator
QEI	Core
USB	System Control & Clocks

TM4C123G DEVELOPMENT BOARD

Tiva C Series ARM® MCU

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