# Tiva™ C Series ARM® Cortex™-M Microcontrollers



# **Product Bulletin**

#### Overview

The Tiva C Series microcontrollers provide a broad portfolio of floating-point enabled ARM Cortex-M4F MCUs. Designers who migrate to the Tiva C Series MCUs benefit from a balance between the performance needed to create highly responsive mixed-signal applications and the low power architecture required to

address increasingly aggressive power budgets. Tiva C Series MCUs are supported by TivaWare™ for C Series, designed specifically for those customers who want to get started easily, write production-ready code quickly, and minimize their overall cost of software ownership.

#### TM4C123x series MCUs Analog 256 KB Flash **ARM®** Cortex<sup>™</sup> M4F 80 MHz LDO Voltage Regulator 32 KB SRAM 3 Analog **JTAG** MPU Comparators ROM 2x12-bit ADC Up to 24 Channel 1MSPS **NVIC ETM** 2KB EEPROM **FPU** SWD/T **Temp Sensor System** Serial Interfaces **Motion Control** Clocks, Reset 2 Quadrature 4SSI/SPI System Control **Encoder Inputs** 8 UARTs **Systick Timer** 16 PWM Outputs USB Full Speed Host/Device/OTG **Timer** 12 Timer/PWM/CCP 6 each 32-bit or 2x16-bit 6 each 64-bit or 2x32-bit Comparators 2 CAN 2 Watchdog Timers **PWM PWM** 6 I<sup>2</sup>C **GPIOs** Generator Generator 32ch DMA Dead-Band Generator Precision Oscillator **Battery-Backed Hibemate**

## **Key Features**

## Performance:

 ARM Cortex-M4F core up to 80 MHz

#### Power:

- Active power as low as 375 µA/MHz
- Low-power modes down to 1.6 μA

# Integration:

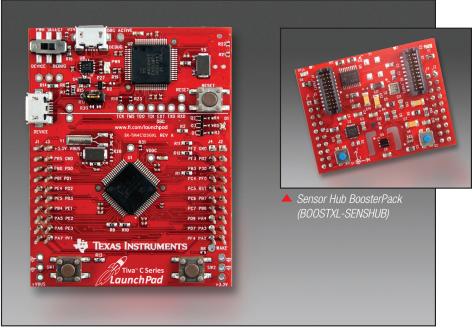
- Up to 40 PWM outputs, 2 QEIs
- Up to 24 timers
- 12-bit ADCs up to 1 MSPS
- Up to 20 serial ports-UART, I<sup>2</sup>C, SPI/SSI
- CAN A/B, USB 2.0 OTG/H/D

# **Applications**

- Security and access control
- Home and building automation
- Industrial automation
- Human machine interface
- Lighting control
- System management

# Tiva EK-TM4C123GXL LaunchPad Evaluation Kit

The Tiva EK-TM4C123GXL LaunchPad provides everything a customer needs to get started evaluating a Tiva C Series microcontroller in just 10 minutes or less. With an affordable price point, visit www.ti.com/launchpad and purchase this speedy and highly-integrated microcontroller evaluation tool. Don't forget to tell your friends!



▲ Tiva C Series TM4C123G LaunchPad Evaluation Kit

# **Part Number Reference**

Old Part Number	New Part Number	Old Part Number	New Part Number	Old Part Number	New Part Number
LM4F110B2QR	TM4C1231C3PM	LM4F121C4QR	TM4C1232D5PM	LM4F210E5QR	TM4C123BE6PM
LM4F110C4QR	TM4C1231D5PM	LM4F121E5QR	TM4C1232E6PM	LM4F210H5QR	TM4C123BH6PM
LM4F110E5QR	TM4C1231E6PM	LM4F121H5QR	TM4C1232H6PM	LM4F211E5QR	TM4C123AE6PM
LM4F110H5QR	TM4C1231H6PM	LM4F122C4QC	TM4C1233D5PZ	LM4F211H5QR	TM4C123AH6PM
LM4F111B2QR	TM4C1230C3PM	LM4F122E5QC	TM4C1233E6PZ	LM4F212E5QC	TM4C123BE6PZ
LM4F111C4QR	TM4C1230D5PM	LM4F122H5QC	TM4C1233H6PZ	LM4F212H5BB	TM4C123BH6ZRB
LM4F111E5QR	TM4C1230E6PM	LM4F122H5QD	TM4C1233H6PGE	LM4F212H5QC	TM4C123BH6PZ
LM4F111H5QR	TM4C1230H6PM	LM4F130C4QR	TM4C1237D5PM	LM4F212H5QD	TM4C123BH6PGE
LM4F112C4QC	TM4C1231D5PZ	LM4F130E5QR	TM4C1237E6PM	LM4F230E5QR	TM4C123GE6PM
LM4F112E5QC	TM4C1231E6PZ	LM4F130H5QR	TM4C1237H6PM	LM4F230H5QR	TM4C123GH6PM
LM4F112H5QC	TM4C1231H6PZ	LM4F131C4QR	TM4C1236D5PM	LM4F231E5QR	TM4C123FE6PM
LM4F112H5QD	TM4C1231H6PGE	LM4F131E5QR	TM4C1236E6PM	LM4F231H5QR	TM4C123FH6PM
LM4F120B2QR	TM4C1233C3PM	LM4F131H5QR	TM4C1236H6PM	LM4F232E5QC	TM4C123GE6PZ
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LM4F120H5QR	TM4C1233H6PM	LM4F132H5QC	TM4C1237H6PZ	LM4F232H5QD	TM4C123GH6PGE
LM4F121B2QR	TM4C1232C3PM	LM4F132H5QD	TM4C1237H6PGE		

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