Tiva™ C Series ARM® Cortex™-M Microcontrollers

TEXAS INSTRUMENTS

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.

Key Features

Performance:
- ARM Cortex-M4F core up to 80 MHz

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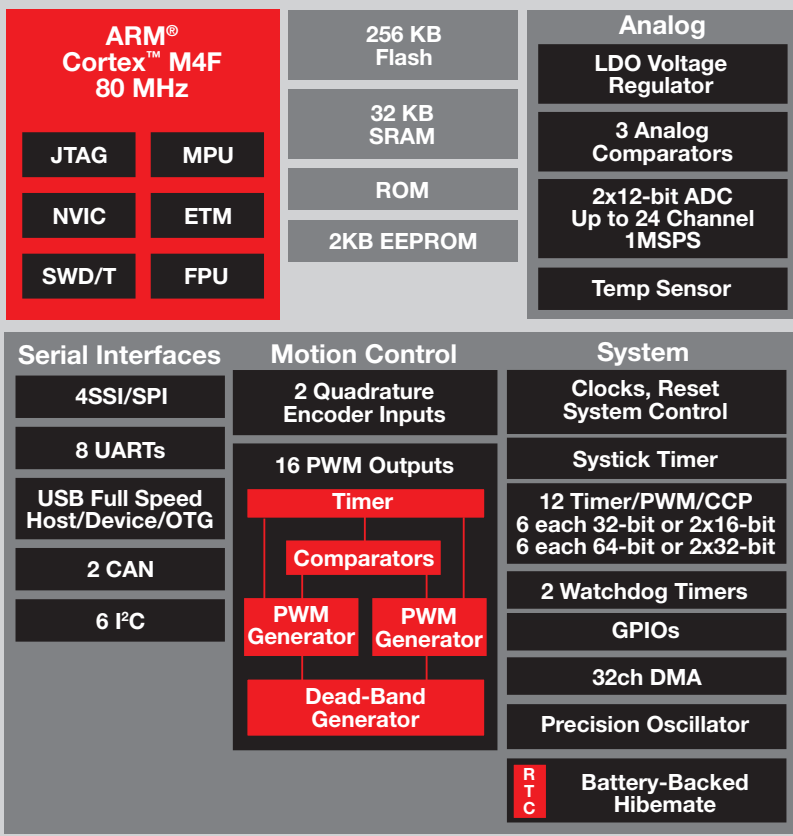- Active power as low as 375 µA/MHz
- Low-power modes down to 1.6 µA

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, I²C, 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

TM4C123x series MCUs

ARM® Cortex™ M4F 80 MHz		
JTAG	MPU	
NVIC	ETM	
SWD/T	FPU	

		Analog
256 KB Flash		LDO Voltage Regulator
32 KB SRAM		3 Analog Comparators
ROM		2x12-bit ADC Up to 24 Channel 1MSPS
2KB EEPROM		Temp Sensor

Serial Interfaces
- 4SSI/SPI
- 8 UARTs
- USB Full Speed Host/Device/OTG
- 2 CAN
- 6 I²C

Motion Control
- 2 Quadrature Encoder Inputs
- 16 PWM Outputs
  - Timer
  - Comparators
  - PWM Generator
  - PWM Generator
  - Dead-Band Generator

System
- Clocks, Reset System Control
- Systick Timer
- 12 Timer/PWM/CCP 6 each 32-bit or 2x16-bit 6 each 64-bit or 2x32-bit
- 2 Watchdog Timers
- GPIOs
- 32ch DMA
- Precision Oscillator
- RTC Battery-Backed Hibemate

www.ti.com/tiva

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!
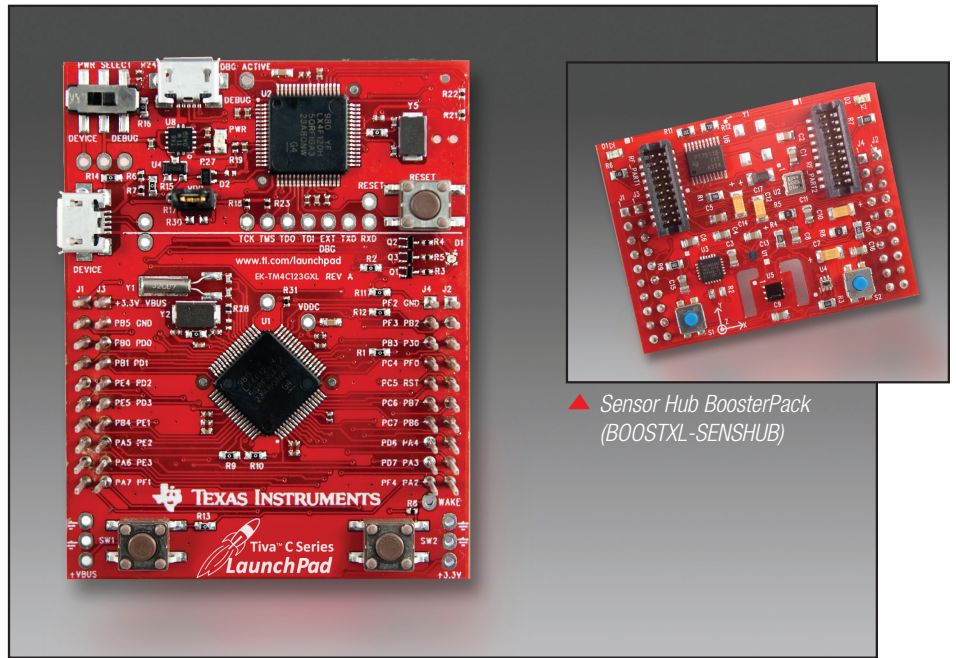
▲ Tiva C Series TM4C123G LaunchPad Evaluation Kit

▲ Sensor Hub BoosterPack (BOOSTXL-SENSHUB)

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
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LM4F120H5QR	TM4C1233H6PM	LM4F132H5QC	TM4C1237H6PZ	LM4F232H5QD	TM4C123GH6PGE
LM4F121B2QR	TM4C1232C3PM	LM4F132H5QD	TM4C1237H6PGE		

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