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[™] 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 I²C **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:

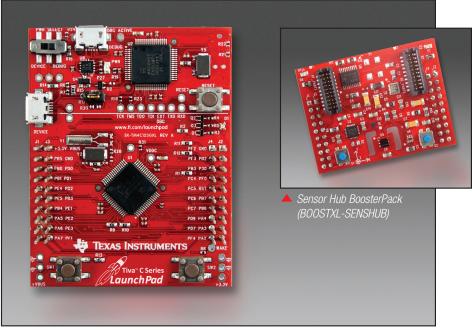
- Up to 40 PWM outputs, 2 QEIs
- Up to 24 timers
- 12-bit ADCs up to 1 MSPS
- Up to 20 serial ports-UART, I²C, SPI/SSI
- CAN A/B, USB 2.0 OTG/H/D

Applications

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

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 |
| LM4F120C4QR | TM4C1233D5PM | LM4F132C4QC | TM4C1237D5PZ | LM4F232H5BB | TM4C123GH6ZRB |
| LM4F120E5QR | TM4C1233E6PM | LM4F132E5QC | TM4C1237E6PZ | LM4F232H5QC | TM4C123GH6PZ |
| LM4F120H5QR | TM4C1233H6PM | LM4F132H5QC | TM4C1237H6PZ | LM4F232H5QD | TM4C123GH6PGE |
| LM4F121B2QR | TM4C1232C3PM | LM4F132H5QD | TM4C1237H6PGE | | |

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