Kinetis EA Series Family of Microcontrollers

ARM®-Based MCUs for Ultra-Reliable Applications

Features

- AEC-Q100 Grade1, Ta125 °C
- 12-bit ADC, PWM/Timers
- CAN and LIN Node
- Ultra-reliable MCU

Product One-Sheet

Get Sample **Data Sheet** **Tools**

Performance and Low Power – Up to 48 MHz ARM® Cortex®-M0+ core, single-cycle 32-bit x 32-bit multiplier, less than 2µA in stop mode

High Reliability – AEC-Q100 Grade 1, automotive quality, enhanced ESD/EMC performance up to 6 KV, 125 °C ambient temperature

Features Rich – CAN, LIN, SPI, I²C, analog comparators, multiple timers with PWM functionality

Enablement – Fast time to market with large choice of low-level drivers, reference designs, middleware libraries, and example code

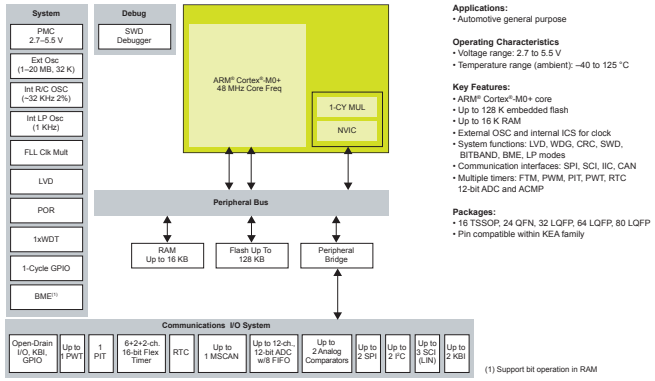
KEAZ128 Specifications

Flash	Up to 128 KB	Timer/PWM	Up to 8-ch., 16-bit
RAM	Up to 16 KB	Other Timer	RTC, PWT, 2 PIT
Core	M0+	Comparator	Two 6-bit DAC
Speed	48 MHz	CAN	1
Package	16 to 80 pins	SCI/SPI/I²C	Up to 3/2/2
Op Range	2.9 V–5.5 V	HMI	Up to 71 GPIO, 2 KBI, 1 IRQ
Temp	125 °C	Security	LVD, WDOG, CRC

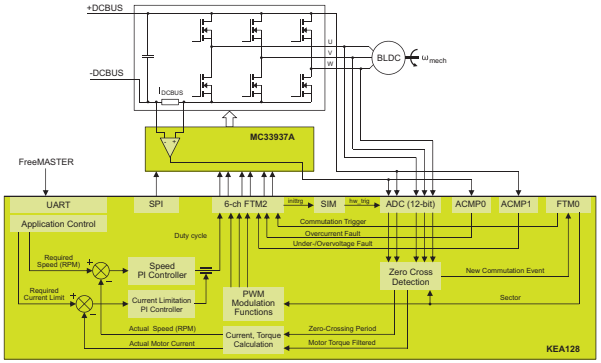
Orderable Samples

Part Number	Temp Range	Package
S9KEAZ128	-40 °C to 125 °C	64 and 80 LQFP
S9KEAZN64	-40 °C to 125 °C	32 and 64 LQFP
S9KEAZN8	-40 °C to 125 °C	16 TSSOP and 24 QFN

Kinetis EA Series MCUs Block Diagram



3 Phases Sensorless BLDC Motor Control



Energy Efficient Solutions by Freescale™

Product Longevity

Success Stories

- Electric motor control
- Air flow system
- Industrial HVAC
- Battery management system

Target Applications

- CAN and LIN nodes
- Peripheral Gateway
- Lighting control
- DC/BLDC motor
- Pump/fan controller
- Battery management
- Generic sensor node
- HVAC

Enablement Tools

- Evaluation boards:
  - TRK-KEA8, TRK-KE64, TRK-KEA128
- Reference designs:
  - KEA128BLDCRD – BLDC Motor Control
  - Lighting Control, CAN/LIN Gateway
- CodeWarrior, KDS, IAR Embedded Workbench®, KEIL®, Cosmic
- NVM, CAN and LIN drivers, LIN stack
- M0+ motor control libraries
- FreeMASTER and MCAT

www.nxp.com/KEA

CodeWarrior, the Energy Efficient Solutions logo and Kinetis are trademarks of Freescale Semiconductor, Inc., Reg. U.S. Pat. & Tm. Off. All other product or service names are the property of their respective owners. ARM, Cortex and Keil are registered trademarks of ARM Limited (or its subsidiaries) in the EU and/or elsewhere. All rights reserved. © 2015 Freescale Semiconductor, Inc.

Document Number: KINETISEAMCUFS REV 5