



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

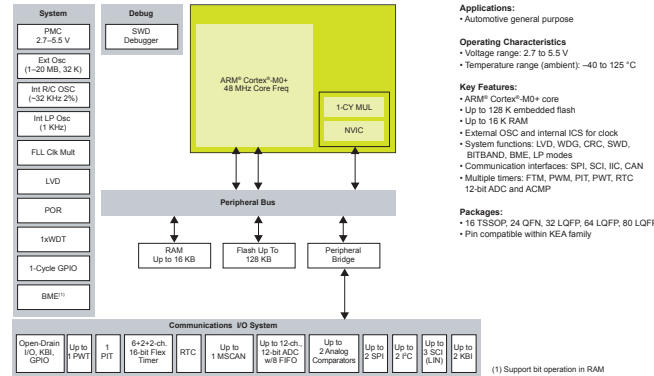
KEAZ128 Specifications

| | | | |
|----------|---------------|-------------|-----------------------------|
| 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 |

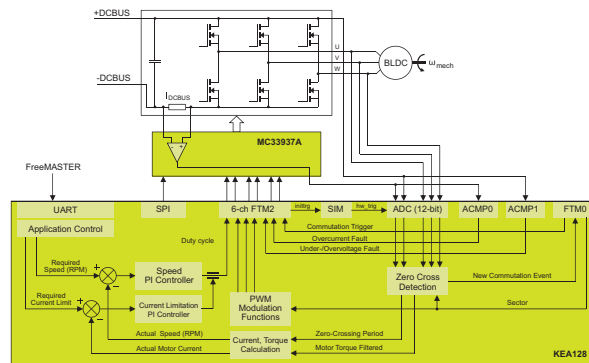
Orderable Samples

| 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



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

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Document Number: KINETISEAMCDFS REV 5

