Kinetis E Series MCUs Built on the ARM Cortex-M0+ Core

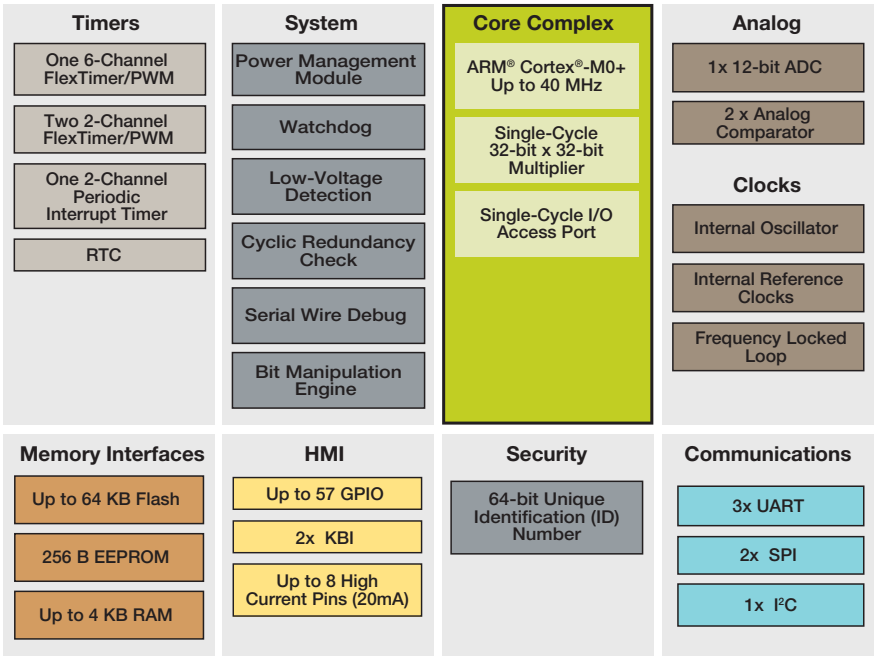
High voltage and robust

The Kinetis E series is the most scalable portfolio of ARM® Cortex®-M0+ MCUs in the industry. Designed to maintain high robustness for complex electrical noise environments and high-reliability applications, the Kinetis E series families offer a broad range of memory, peripheral and package options. They share common peripherals and pin counts, allowing developers to migrate easily within an MCU family or between MCU families to take advantage of more memory or feature integration. This scalability allows developers to standardize on the Kinetis E series for their end-product platforms, maximizing hardware and software reuse and reducing time to market.

Features

- 32-bit ARM Cortex-M0+ core
- Scalable memory footprints from 8 KB flash/1 KB SRAM to 128 KB flash/16 KB SRAM
- Precision mixed-signal capability with on-chip analog comparator and 12-bit ADC
- Powerful timers for a broad range of applications, including motor control
- Serial communication interfaces such as UART, SPI, I²C, etc.
- High security and safety with internal watchdog and programmable CRC module
- Single power supply (2.7–5.5 V) with full functional flash program/erase/read operations
- Ambient operation temperature range: –40 °C to +105 °C
- Robust 5 V MCU with 8-bit S08 compatibility

Kinetis KE02 Family Block Diagram



Freescale Development Tools for the Kinetis E Series

Development Tool Part Number	Kinetis Family Support	MSRP	Extended Hardware Support Options
FRDM-KE02Z	20 MHz KE02Z		Arduino™ footprint-compatible with support for a rich set of third-party expansion boards (“shields”)
FRDM-KE02Z40M	40 MHz KE02Z		

For more information, visit **freescale.com/Freedom**.

Overview

The Kinetis KE02 sub-family is the entry-point into the Kinetis E series and is pin compatible across the E series and with the 8-bit S08P family. This sub-family includes a powerful array of analog, communication, timing and control peripherals with varying flash memory size and pin count and offers a series of highly robust, cost-effective and energy-efficient MCUs that provide the appropriate entry-level solution. It is the next-generation MCU solution, offering enhanced ESD/EMC performance for cost-sensitive, high-reliability device applications used in high electrical noise environments.

To learn more, visit **freescale.com/Kinetis/Eseries**.