The Kinetis KL3x family of MCUs based on the ARM® Cortex®-M0+ core combine ultra-low power performance with a rich suite of analog, communication, timing and control peripherals, including a low-power segment LCD controller with support for up to 376 segments.

**TARGET APPLICATIONS**
- Blood glucose meters
- Electronic scales
- Flow meters
- Smart meters
- Thermostats

Family members start from 32 KB of flash in a 48 QFN package, extending up to 256 KB in a 121 MBGA package. The KL3x MCU family is compatible with the ARM Cortex-M4-based Kinetis K30 MCU family, offering a migration path to higher performance and feature integration.

**FEATURES**

**Ultra-Low-Power**
- Next-generation 32-bit ARM Cortex-M0+ core. 2x more CoreMark®/mA than the closest 8/16-bit architecture. Single-cycle fast I/O access port facilitates bit banging and software protocol emulation, maintaining an 8-bit ‘look and feel’.
- Multiple, flexible low power modes including new compute mode that reduce dynamic power by placing peripherals in an asynchronous stop mode
- LPUART, SPI, I2C, FlexIO, ADC, DAC, LP timer and DMA support low power mode operation without waking up the core

**Memory**
- Up to 256 KB flash with 64 byte flash cache, up to 32 KB RAM
- 16 KB ROM with integrated bootloader
- Security circuitry to prevent unauthorized access to RAM and flash contents

**Performance**
- ARM Cortex-M0+ core, 48 MHz core frequency over full voltage and temperature range (–40°C +105°C)
- Bit manipulation engine for improved bit handling of peripheral modules
- Up to 4-channel DMA for peripheral and memory servicing with reduced CPU loading and faster system throughput

**Mixed Signal**
- Up to 16-bit ADC
- High-speed comparator with internal 6-bit DAC
- 12-bit DAC with DMA support
- 1.2 V high-accuracy internal voltage reference
KINETIS KL3x MCU FAMILY OPTIONS

<table>
<thead>
<tr>
<th>Sub-Family</th>
<th>Part Number</th>
<th>CPU (MHz)</th>
<th>Memory</th>
<th>Features</th>
<th>Memory Features</th>
<th>Development Hardware</th>
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<td>MKL33232xx00x4</td>
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* This package is included in a Package Your Way program for Kinetis MCUs. Please visit www.nxp/KPYW for more detail.