High-Performance, Power-Efficient and Cost Sensitive Arm® Cortex®-M0+ MCUs
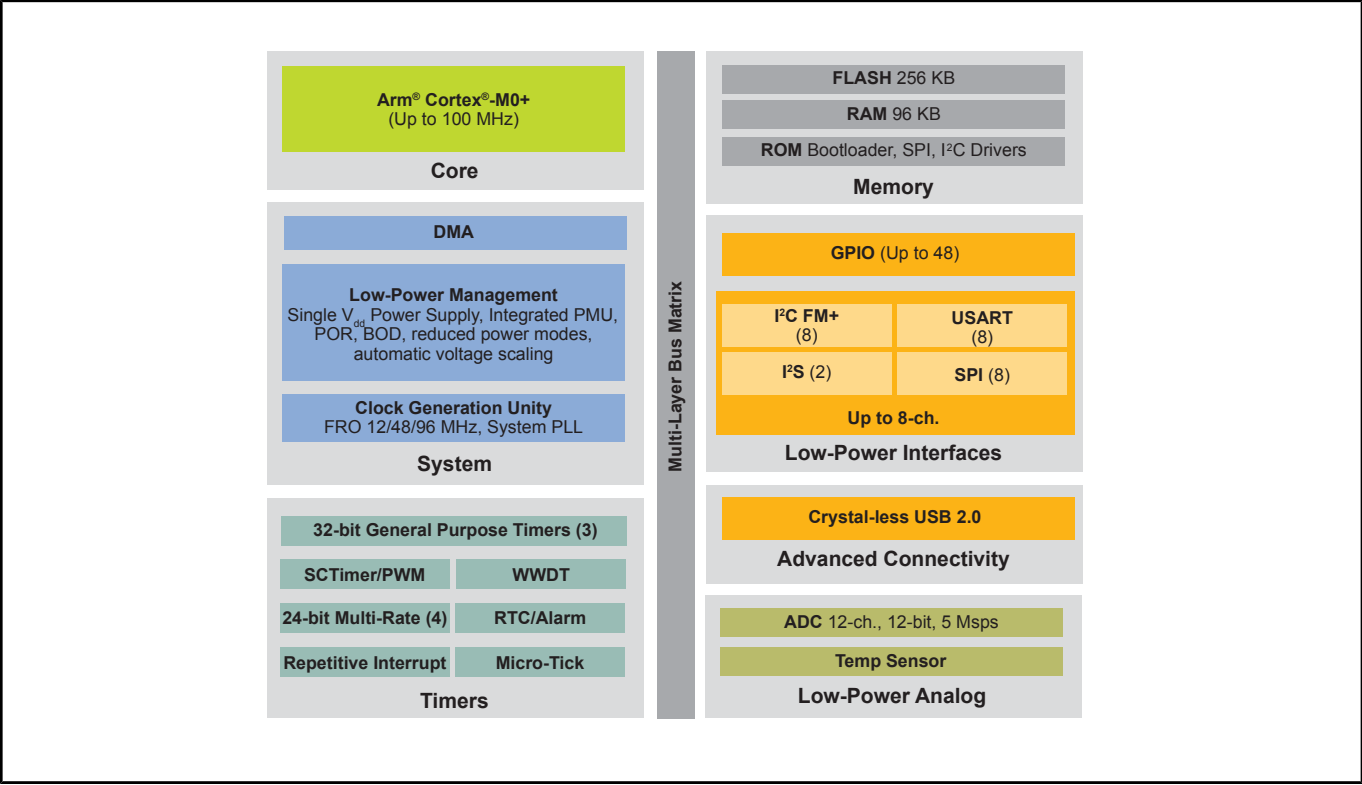
LPC51U68

Last Updated: Nov 21, 2023

Based on the highly energy-efficient Arm® Cortex®-M0+ core and operating at CPU frequencies of up to 150 MHz, NXP's 32-bit LPC51U68 microcontrollers for embedded applications feature larger memory resources including 96 KB of on-chip SRAM and 256 KB of on-chip flash programming memory with flash accelerator.

NXP's LPC51U68 MCU features added performance, expanded memory resources and flexible serial port configuration, including USB connectivity, bringing design flexibility, computing performance and integration into today's demanding IoT and industrial applications. In addition, this MCU is pin compatible with the LPC5411x and LPC5410x MCU families providing scalability options to Arm Cortex-M4 cores.

LPC51U68 MCU Block Diagram

Arm® Cortex®-M0+ (Up to 100 MHz) **Core**		**FLASH** 256 KB **RAM** 96 KB **ROM** Bootloader, SPI, I²C Drivers **Memory**
DMA **Low-Power Management** Single V$_{dd}$ Power Supply, Integrated PMU, POR, BOD, reduced power modes, automatic voltage scaling **Clock Generation Unity** FRO 12/48/96 MHz, System PLL **System**	**Multi-Layer Bus Matrix**	**GPIO** (Up to 48) **I²C FM+** (8) / **USART** (8) **I²S** (2) / **SPI** (8) **Up to 8-ch.** **Low-Power Interfaces**
32-bit General Purpose Timers (3) **SCTimer/PWM** / **WWDT** **24-bit Multi-Rate (4)** / **RTC/Alarm** **Repetitive Interrupt** / **Micro-Tick** **Timers**		**Crystal-less USB 2.0** **Advanced Connectivity** **ADC** 12-ch., 12-bit, 5 Msps **Temp Sensor** **Low-Power Analog**

View additional information for High-Performance, Power-Efficient and Cost Sensitive Arm® Cortex®-M0+ MCUs.

Note: The information on this document is subject to change without notice.