

Spoločnosť NXP predstavila najmenší ARM procesor - LPC1102 zaberajúci iba niečo cez 2x2mm. LPC1102 je ARM Cortex-M0 procesor, pracujúci do 50MHz, poskytujúci 45 DMIPS výkon.

Obsahuje 32kB FLASH a 8 kB RAM pamäte, jeden RS-485/EIA-485 UART, SPI s SPP, 4 čítače/časovače 10-bitový AD prevodník a 11 I/O pinov.

Kremík je oblečený do 16 pinového WLCSP púzdra (ball-grid).

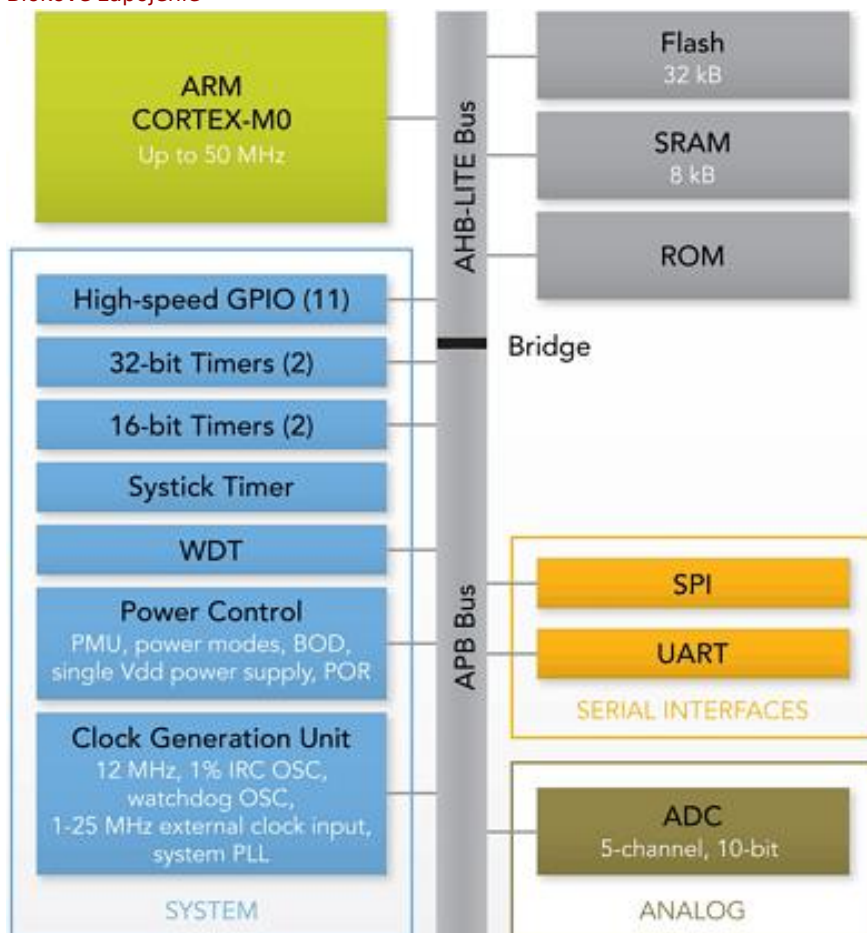


## Vlastnosti

- System
  - ARM Cortex-M0 processor, running at frequencies of up to 50 MHz.
  - ARM Cortex-M0 built-in Nested Vectored Interrupt Controller (NVIC).
  - Serial Wire Debug.
  - System tick timer.
- Memory
  - 32 kB on-chip flash programming memory.
  - 8 kB SRAM.
  - In-Application Programming (IAP) and In-System Programming (ISP) support via on-chip bootloader software.
- Digital peripherals
  - 11 General Purpose I/O (GPIO) pins with configurable pull-up/pull-down resistors.
  - GPIO pins can be used as edge and level sensitive interrupt sources.
  - Four general purpose counter/timers with a total of one capture input and nine match outputs.
  - Programmable WatchDog Timer (WDT).
- Analog peripherals
  - 10-bit ADC with input multiplexing among five pins.
- Serial interfaces
  - UART with fractional baud rate generation, internal FIFO, and RS-485 support.
  - One SPI controller with SSP features and with FIFO and multi-protocol capabilities
- Clock generation
  - 12 MHz internal RC oscillator trimmed to 1% accuracy that can optionally be used as a system clock.
  - Programmable watchdog oscillator with a frequency range of 7.8 kHz to 1.8 MHz.

- PLL allows CPU operation up to the maximum CPU rate without the need for a high-frequency crystal. May be run from an external clock or the internal RC oscillator.
- Clock output function with divider that can reflect the external clock, IRC clock, CPU clock, and the Watchdog clock.
- Power control
  - Integrated PMU (Power Management Unit) to minimize power consumption during Sleep and Deep-sleep modes.
  - Two reduced power modes: Sleep and Deep-sleep modes.
  - Processor wake-up from Deep-sleep mode via a dedicated start logic using up to six of the functional pins.
  - Power-On Reset (POR).
  - Brownout detect with four separate thresholds for interrupt and forced reset.
- Unique device serial number for identification.
- Single 3.3 V power supply (1.8 V to 3.6 V).
- Available as WLCSP16 package.

## Blokové zapojenie



## Odkazy

[LPC1102 Homepage](#)

[LPC1102 Datasheet](#)





Distribúcia

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