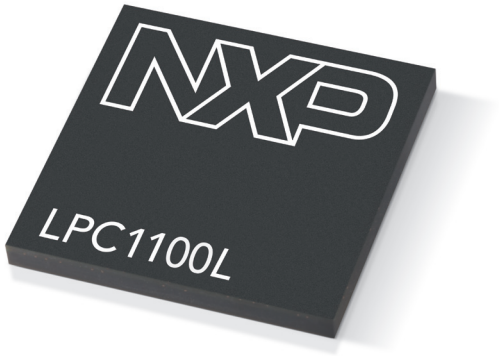


NXP 50-MHz, 32-bit Cortex-M0™ microcontrollers LPC1100L

Cortex-M0 MCUs with lowest active power and superior code density

Built around the new Cortex-M0 architecture, the smallest, lowest power, and most energy-efficient ARM core ever developed, these MCUs are ideally equipped for use in many traditional 8/16-bit applications.

Key features

- ARM Cortex-M0 processor
  - 50 MHz operation
  - Nested Vectored Interrupt Controller for fast deterministic interrupts
  - Wakeup Interrupt Controller allows automatic wake from a priority interrupt
  - Three reduced-power modes: Sleep, Deep-sleep, and Deep power-down
- Memories
  - Up to 32 KB Flash memory
  - Up to 8 KB SRAM
- Serial peripherals
  - UART with fractional baud rate generation, internal FIFO, and RS-485 support
  - Up to 2 SPI controllers with FIFO and multi-protocol capabilities
  - I^2C-bus interface supporting full I^2C-bus specification and Fast-mode Plus (Fm+) with a data rate of 1 Mbit/s, multiple address recognition, and monitor mode
- Analog peripheral
  - 10-bit analog-to-digital converter with eight channels and conversion rates up to 400 K samples per second
- Other:
  - Up to 42 general-purpose I/O (GPIO) pins with configurable pull-up/down resistors and a new, configurable open-drain operating mode
  - Four general-purpose counter/timers, with a total of four capture inputs and 13 match outputs
  - Programmable watchdog timer (WDT) with lock-out feature
  - System tick timer
  - Each peripheral has its own clock divider for power savings

Applications

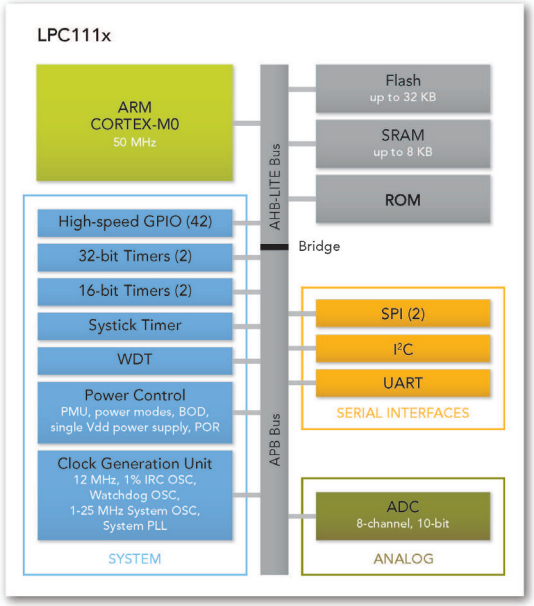
- White goods
- e-Metering
- Consumer peripherals
- Remote sensors
- 8/16-bit applications
- Industrial networking
- System supervisors

NXP's LPC1100L is the lowest-priced 32-bit MCU solution in the market. It offers greater value than existing 8/16-bit microcontroller by delivering unprecedented performance, simplicity, lowest active power, and dramatic reductions in code size for every application.

With over 45 DMIPS of performance compared to the sub-DMIP performance typical of 8-bit MCUs and the 3 to 5 DMIPS performance of 16-bit MCUs, the LPC1100L not only executes basic control tasks but sophisticated algorithms as well, making even the most complex tasks within reach. The LPC1100L delivers the industry's lowest 32-bit active power consumption at 130 µA/MHz and reduces deep-sleep current by a dramatic 60%. The series also features unique API-driven power profiles which provide users with ready-to-use power management templates.

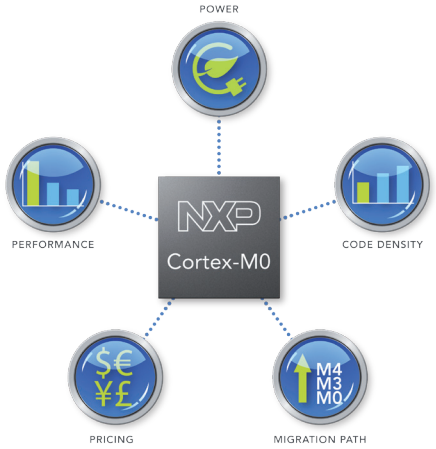
Challenging the belief that 8/16-bit microcontrollers use less code, industry-standard Coremark benchmarks show that the LPC1100L requires 40-50% less code for most common microcontroller tasks.

LPC1100L block diagram



Development tools

The LPC1100 family is supported by the LPCXpresso, an easy-to-use, comprehensive development tool platform for under US$30, as well as development tools from IAR, Keil, Hitex, Code Red, and many others. For the most current listing, please visit www.nxp.com/microcontrollers.



LPC111x ordering options

Type number	Flash	Total SRAM	UART RS-485	I²C / Fast+	SPI	ADC channels	Package
LPC1111							
LPC1111FHN33/1/x02	8 KB	2 KB	1	1	1	8	HVQFN33
LPC1111FHN33/2/x02	8 KB	4 KB	1	1	1	8	HVQFN33
LPC1112							
LPC1112FHN33/1/x02	16 KB	2 KB	1	1	1	8	HVQFN33
LPC1112FHN33/2/x02	16 KB	4 KB	1	1	1	8	HVQFN33
LPC1113							
LPC1113FHN33/2/x02	24 KB	4 KB	1	1	1	8	HVQFN33
LPC1113FHN33/3/x02	24 KB	8 KB	1	1	1	8	HVQFN33
LPC1113FBD48/3/x02	24 KB	8 KB	1	1	2	8	LQFP48
LPC1114							
LPC1114FHN33/2/x02	32 KB	4 KB	1	1	1	8	HVQFN33
LPC1114FHN33/3/x02	32 KB	8 KB	1	1	1	8	HVQFN33
LPC1114FBD48/3/x02	32 KB	8 KB	1	1	2	8	LQFP48
LPC1114FA44/3/x02	32 KB	8 KB	1	1	2	8	PLCC44

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