

# **NXP unveils versatile microcontroller family to drive a smarter user experience in next-generation embedded designs**

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NXP Semiconductors today announced the release of the LPC82x family of microcontrollers, dramatically extending the versatility of the ARM Cortex-M0+-based LPC800 Series for use in today's highly connected, sensor-dense and IoT designs. With double the memory (over the LPC81x family), a new 1.2 Msps ADC, DMA, and triple the serial connectivity, the LPC82x family makes it easy for embedded developers to meet the growing requirements for a better, smarter user experience in their next-generation product designs—from connected thermostats, environment monitoring devices, home and building automation products, and lighting controls, to server and rack monitors, wearable health/fitness devices, toys, models, and more.

Versatile connectivity equips the LPC82x family to handle a wide range of microcontroller functions with exceptional power efficiency. As a sensor gateway, it efficiently connects to and concentrates data from multiple analog and/or digital sensors. For IoT connectivity, the LPC82x family is a space and power-efficient solution for local area or cloud connectivity via myriad wireless protocols such as NFC, Bluetooth Smart (BTLE), ZigBee or WiFi. For human machine interface (HMI) applications, the LPC82x family offers efficient sensor interface and data aggregation for capacitive or mechanical touch, swipe, and gesture front ends. It is also a space efficient solution for motor control applications such as fan control.

"Combining sensor-derived features such as location, environment or user condition, with smart connectivity – whether local or cloud – unleashes designers to reimagine how users interact with their products," said Ross Bannatyne, general manager, mass market microcontroller product line, NXP Semiconductors. "The new LPC82x microcontroller family gives embedded developers an incredibly power and space [efficient solution](#) for innovating new generations of smarter, connected products in an unlimited range of applications and industries."

## Key LPC82x Features

- Low-power (90  $\mu$ A/MHz), 30 MHz ARM Cortex-M0+ core with advanced power optimization
- Memories: 32 kB Flash, 8 kB RAM
- Embedded ROM drivers
- 18-ch DMA to offload core for better throughput and power efficiency
- Serial I/O: Up to 4 I2C, 2 SPI, 3 UARTs, and 29 GPIO pins
- 1.2 Msps, 12 ch, 12-bit ADC
- Full range of timing features including SCTimer/PWM
- Switch matrix for flexible I/O pin configuration
- 105  $^{\circ}$ C temp rating
- Small footprint in popular TSSOP20, HVQFN33 packages

## Developer Ecosystem

LPC82x is fully supported by the LPC developers' ecosystem which provides an extensive collection of tools, drivers and middleware, as well as popular forums and blogs in constant use by a highly engaged and collaborative community of embedded developers. The NXP LPCXpresso development platform includes a full featured C/C++ IDE that is free to LPC82x developers, low-cost target boards with on-board

debug probes and access to LPCOpen for firmware, drivers and middleware. LPCOpen incorporates device drivers, stacks, and graphics libraries that enable rapid code development and can be used with a wide range of third-party RTOSs, middleware solutions, and popular third-party ARM development tools including Keil and IAR. LPC82x is software- and tool-compatible with existing LPC81x parts.

Provided by NXP

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