

NXP LPC54114 :: ARM Cortex M4

The [NXP LPC54114](#) are ARM Cortex-M4-based microcontrollers designed for embedded applications. It features a Cortex-M0+ coprocessor, up to 256 KB Flash and 192 KB SRAM, USB device support, audio interfaces (DMIC and I2S), multiple timers, watchdog, RTC, flexible serial interfaces (USART/SPI/I2C), a 12-bit high-speed ADC, and a temperature sensor.

The BSP development is made with a NXP LPCXpresso54114 development board. The BSP features a CMake build system, GCC toolchain supports and built based on our Hardware Abstraction Layer (HAL). It requires an application configuration file, which allows the user to specify the CPU clock frequency, enable or disable RTOS, and further define project-level I/O and settings.

The software is architected with long-term maintainability and adherence to high software quality standards as core design principles.

- ✓ Layered architecture with clear HAL abstraction
- ✓ Conforms to ISO C99 standard
- ✓ Supports both RTOS and bare-metal environments
- ✓ CMake build system for scalable integration
- ✓ Seamless integration with GCC toolchain
- ✓ Statically analyzed for MISRA, CERT, and CWE compliance

Features	Remarks
FPU support	Yes
Max. clock speed	150 MHz
Flash size	256 kB
SRAM	192 kB

Peripherals	Total Channels
ADC	12
GPIO	48
I2C	8
NVM	-
PWM	8
RTCC	1
SPI	8
Timer	5
UART	8

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BSP_LPC54114

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Passed

Last analysis: 12 seconds ago • 3.9k Lines of Code • C

A 0

Security

A 0

Reliability

A 0

Maintainability

A —

Hotspots Reviewed

0.0%

Coverage

0.0%

Duplications

Support Package:

LQFP64