LPC552x/S2x: Mainstream Arm® Cortex®-M33-based Microcontroller Family
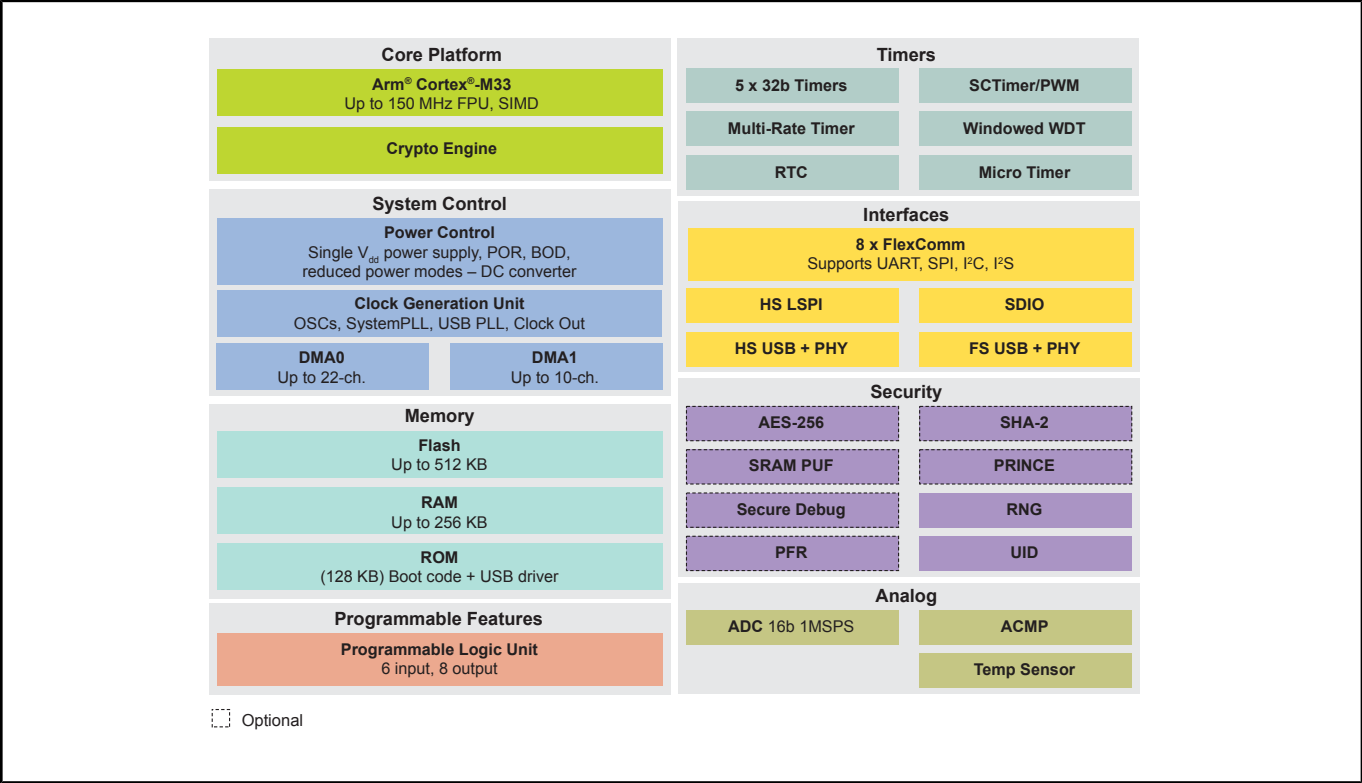
LPC552x-S2x

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The LPC552x/S2x MCU family is part of the EdgeVerse™ edge computing platform and further expands the world's first general purpose Cortex-M33-based MCU series, offering significant advantages for developers, including pin-, software- and peripheral-compatibility for ease of use and accelerating time to market, while leveraging the cost-effective 40-nm NVM process technology.

The LPC552x/S2x is a mainstream family within the LPC5500 MCU series inclusive of LPC55S28, LPC55S26, LPC5528, LPC5526 MCUs, providing a perfect balance between security, performance efficiency and system integration for general embedded and industrial IoT markets. The LPC552x/S2x MCU family combines the high-performance efficiency of the Cortex-M33 core with multiple high-speed interfaces, an integrated power management IC, and rich analog integration.

LPC552x/S2x MCU Block Diagram

Core Platform

Arm® Cortex®-M33
Up to 150 MHz FPU, SIMD

Crypto Engine

System Control

Power Control
Single V_{dd} power supply, POR, BOD,
reduced power modes – DC converter

Clock Generation Unit
OSCs, SystemPLL, USB PLL, Clock Out

DMA0
Up to 22-ch.

DMA1
Up to 10-ch.

Memory

Flash
Up to 512 KB

RAM
Up to 256 KB

ROM
(128 KB) Boot code + USB driver

Programmable Features

Programmable Logic Unit
6 input, 8 output

Timers

5 x 32b Timers

SCTimer/PWM

Multi-Rate Timer

Windowed WDT

RTC

Micro Timer

Interfaces

8 x FlexComm
Supports UART, SPI, I²C, I²S

HS LSPI

SDIO

HS USB + PHY

FS USB + PHY

Security

AES-256

SHA-2

SRAM PUF

PRINCE

Secure Debug

RNG

PFR

UID

Analog

ADC 16b 1MSPS

ACMP

Temp Sensor

⬚ Optional

View additional information for LPC552x/S2x: Mainstream Arm® Cortex®-M33-based Microcontroller Family.

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