

LPC551x/S1x: Baseline Arm® Cortex®-M33-Based Microcontroller Family

LPC551X-S1X

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The LPC551x/S1x MCU family is part of the EdgeVerse[™] edge computing platform and 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 to accelerate time to market, while leveraging the cost-effective 40-nm NVM process technology.

The LPC551x/S1x is the baseline family within the LPC5500 MCU series inclusive of LPC5516x, LPC55S16x, LPC55S14x, LPC55S12x MCUs, providing new levels of cost and performance efficiency in addition to advanced security and system integration for industrial and general embedded markets.

Built with advanced security in mind, the LPC55S16 MCU is part of the Certified EdgeLock®; Assurance program and has been awarded Level 2 certifications by both the PSA Certified™ scheme co-developed by Arm and the GlobalPlatform Security Evaluation Standard for IoT Platforms (SESIP).

LPC551x/S1x MCU Block Diagram

Core Platform		Timers	
Arm® Cortex®-M33 Up to 150 MHz		5 x 32b Timers	SCTimer/PWM
FPU, SIMD Arm TrustZone®		Multi-Rate Timer	Windowed WDT
System Control		RTC	Micro Timer
$ \begin{array}{c} \textbf{Power Control} \\ \textbf{Single V}_{dd} \ \textbf{Power Supply, POR, BOD,} \\ \textbf{Reduced Power Modes - DC Converter} \end{array} $		Interfaces	
		8 x FlexComm Supports UART, SPI, I ² C, I ² S	
Clock Generation Unit OSCs, SystemPLL, USB PLL, Clock Out			
		HS LSPI	CAN-FD/CAN2.0
DMA0 Up to 22-ch.	DMA1 Up to 10-ch.	HS USB + PHY	FS USB + PHY
Memory		Security	
Flash Up to 256 KB		AES-256	SHA-2
RAM		SRAM PUF	PRINCE
Up to 96 KB		Secure Debug	RNG
ROM (128 KB) Boot code + USB driver		PFR	UID
Analog		Programmable Features	
ADC 16b 2MSPS ACMP Temp Sensor		Programmable Logic Unit 6 Input, 8 Output	
Optional			

View additional information for LPC551x/S1x: Baseline Arm® Cortex®-M33-Based Microcontroller Family.

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

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