

The choice for embedded technologies

Our microcontroller offering combines the highest performance in Flash with the lowest power consumption in the smallest packages. A comprehensive portfolio of industry-leading performers includes the latest 32-bit LPC3000, LPC2000, LPC1000, LH7A, LH7, and 8-bit LPC900, LPC700 and 80C51 families. We offer an easy migration path from 8-bit to 32-bit solutions.

LPC3000 family

The 32-bit LPC3000 family is based on the ARM926EJ core and is the only ARM9 microcontroller that provides a vector floating-point co-processor and integrated USB On-The-Go, as well as the ability to operate in ultra-low-power mode down to 0.9 V. With speeds of up to 266 MHz, the NXP LPC3000 family supports Linux and WinCE and is ideal for a wide range of applications in consumer, medical, industrial, automotive and networking.

Type	Memory				Timers		Serial interfaces							Analog	LCD Controller/ Interface	SD/MMC	I/O pins	External bus interface	PLL	Max. freq. (MHz)	CPU voltage	I/O voltage	Temp. range options	Package	Comments / special features
	FLASH	RAM	Instruction cache	Data cache	No. of timers*	PWM channels	Ethernet	USB	UART	I ² C	SPI	SSP	I ² S	ADC (10-bit) No. of chan- nels											
LPC3250		256 KB	32 KB	32 KB	8	11	1	1	7	2	2	2	2	3	•	•	87	•	•	266/ 208	1.35/ 1.2 V	1.8/ 2.8/ 3.0 V	F	LFBGA296	VFP unit, NAND Flash, SRAM/SDRAM/DDR, USB 2.0 FS OTG/Host/Device, 24-bit Color LCD controller and Touch Screen controller, Keypad interface and 0.9 V low power mode
LPC3240		256 KB	32 KB	32 KB	8	11	1	1	7	2	2	2	2	3		•	87	•	•	266/ 208	1.35/ 1.2 V	1.8/ 2.8/ 3.0 V	F	LFBGA296	VFP unit, NAND Flash, SRAM/SDRAM/DDR, USB 2.0 FS OTG/Host/Device, Keypad interface and 0.9 V low power mode
LPC3230		256 KB	32 KB	32 KB	8	11		1	7	2	2	2	2	3	•	•	87	•	•	266/ 208	1.35/ 1.2 V	1.8/ 2.8/ 3.0 V	F	LFBGA296	VFP unit, NAND Flash, SRAM/SDRAM/DDR, USB 2.0 FS OTG/Host/Device, 24-bit Color LCD controller and Touch Screen controller, Keypad interface and 0.9 V low power mode
LPC3220		128 KB	32 KB	32 KB	8	11		1	7	2	2	2	2	3		•	87	•	•	266/ 208	1.35/ 1.2 V	1.8/ 2.8/ 3.0 V	F	LFBGA296	VFP unit, NAND Flash, SRAM/SDRAM/DDR, USB 2.0 FS OTG/Host/Device, Keypad interface and 0.9 V low power mode
LPC3154		192 KB	16 KB	16 KB	4	1		1	1	1	1		1	3	•	•	157	•	•	180	1.2 V	1.8/ 2.8/ 3.3 V	F	TFBGA208	LPC3152 with a Decryption Engine & Secure Boot
LPC3152		192 KB	16 KB	16 KB	4	1		1	1	1	1		1	3	•	•	157	•	•	180	1.2 V	1.8/ 2.8/ 3.3 V	F	TFBGA208	Stereo CODEC w/ Class AB Headphone Amplifier, Power Supply Unit, Battery Charger, Unique ID, OTP, HS USB 2.0 OTG with on-chip PHY, NAND Flash Controller, MMC/SDHC/SDIO/CE-ATA, 6800/8080/Serial LCD Interface
LPC3143		192 KB	16 KB	16 KB	4	1		1	1	2	1		2	4	•	•	97	•	•	270	1.2 V	1.8/ 2.8/ 3.3 V	F	TFBGA180	LPC3141 with a Decryption Engine & Secure Boot
LPC3141		192 KB	16 KB	16 KB	4	1		1	1	2	1		2	4	•	•	97	•	•	270	1.2 V	1.8/ 2.8/ 3.3 V	F	TFBGA180	HS USB 2.0 OTG with on-chip PHY, NAND Flash Controller, MMC/SDHC/SDIO/CE-ATA, 6800/8080 LCD Interface, Random Number Generator, Unique ID, OTP

LPC3000 family (continued)

Type	Memory				Timers		Serial interfaces							Analog		LCD Controller/ Interface	SD/MMC	I/O pins	External bus interface	PLL	Max. freq. (MHz)	CPU voltage	I/O voltage	Temp. range options	Package	Comments / special features
	FLASH	RAM	Instruction cache	Data cache	No. of timers*	PWM channels	Ethernet	USB	UART	I ² C	SPI	SSP	I ² S	ADC (10-bit) No. of chan- nels												
LPC3131		192 KB	16 KB	16 KB	4	1		1	1	2	1		2	4	•	•	97	•	•	180	1.2 V	1.8/ 2.8/ 3.3 V	F	TFBGA180	LPC3130 with 192 KB SRAM	
LPC3130		96 KB	16 KB	16 KB	4	1		1	1	2	1		2	4	•	•	97	•	•	180	1.2 V	1.8/ 2.8/ 3.3 V	F	TFBGA180	HS USB 2.0 OTG with on-chip PHY, NAND Flash Controller with 8-bit ECC, MMC/SDHC/SDIO/CE-ATA, 6800/8080/Serial LCD Interface, Random Number Generator	
LPC3180/01		64 KB	32 KB	32 KB	4	2		1	7	2	2			3			55	•	•	208	1.2 V	1.8/ 2.8/ 3.0 V	F	LFBGA320	VFP unit, NAND Flash, SDRAM/DDR, USB 2.0 FS OTG/Host/Device	

LH7A family

To save time-to-market for applications that use an LCD screen, these ARM922T-based microcontrollers are equipped with an LCD controller. Supported by a comprehensive set of software and hardware design tools, the LH7A series makes it easy to create everything from cost-conscious consumer systems to advanced systems with media-rich environments.

Type	Memory				Timers		Serial interfaces					Analog		LCD Controller	SD/MMC	I/O pins	External bus interface	PLL	Max. freq. (MHz)	CPU voltage	I/O voltage	Temp. range options	Package	Comments / special features
	FLASH	RAM	Instruction cache	Data cache	No. of timers	PWM channels	USB	UART	I ² C	SPI	ADC (10-bit) No. of channels													
LH7A404		80 KB Frame Buffer	8 KB	8 KB	5	2	1	3		1	10	•	•	64	•	•	266		1.8 V	3.3 V	F	LFBGA324	Integrated LCD controller. IrDA touchscreen interface. Touchscreen controller. MMU. USB 2.0 Full Speed Host/Device. 32-bit external data bus. CompactFlash. SDRAM controller. DMA controller. PCMCIA, BMI, PS/2, MMC/SD.	
LH7A400		80 KB Frame Buffer	8 KB	8 KB	5		1	3		1		•	•	60	•	•	245		1.8 V	3.3 V	F	BGA256 LFBGA256	Integrated LCD controller. IrDA. MMU. USB 2.0 Full Speed device. 32-bit external data bus. CompactFlash. SDRAM controller. MMC, PCMCIA, BMI.	

LPC1000 family

Based on the ARM Cortex-M3 core operating at up to 100 MHz, these low power 32-bit microcontrollers feature a broad range of serial interfaces including Ethernet, USB Host/OTG/Device, and CAN, as well as a broad range of analog peripherals. The controllers are ideal for a broad range of applications, such as eMetering, Medical, POS, and Industrial networking.

Type	Memory		Timers		Serial interfaces							Analog		SD/MMC	I/O pins	External bus interface	PLL	Max. freq. (MHz)	CPU voltage	I/O voltage	Temp. range options	Package	Comments / special features
	FLASH	RAM	No. of timers*	PWM channels	Ethernet	USB	UART	I ² C	CAN	SPI	SSP	I ² S	ADC channels/ resolution										
LPC1700 devices																							
LPC1768	512 KB	64 KB	6	6	1	1	4	3	2	1	2	1	8/12 b	1		•	100	3.3 V	F	LQFP100	Cortex-M3 (Rev 2) version of LPC2368; adds NVIC, MPU, Motor Control PWM, QEI.		
LPC1767	512 KB	64 KB	6	6	1		4	3		1	2	1	8/12 b	1		•	100	3.3 V	F	LQFP100	512 K Flash with Ethernet		
LPC1766	256 KB	64 KB	6	6	1	1	4	3	2	1	2	1	8/12 b	1		•	100	3.3 V	F	LQFP100	256 K Flash version of LPC1768.		
LPC1765	256 KB	64 KB	6	6		1	4	3	2	1	2	1	8/12 b	1		•	100	3.3 V	F	LQFP100	Same as LPC1766, but no Ethernet.		
LPC1764	128 KB	32 KB	6	6	1	1	4	3	2	1	2		8/12 b			•	100	3.3 V	F	LQFP100	128 K Flash / 32 K RAM version of LPC1766; USB Device only; no I2S, no DAC.		
LPC1758	512 KB	64 KB	6	6	1	1	4	2	2	1	2	1	6/12 b	1		•	100	3.3 V	F	LQFP80	80-pin version of LPC1768 with 6-channels ADC in LQFP80.		
LPC1756	256 KB	32 KB	6	6		1	4	2	2	1	2	1	6/12 b	1		•	100	3.3 V	F	LQFP80	256 K Flash / 32 K RAM version of LPC1758; no Ethernet.		
LPC1754	128 KB	32 KB	6	6		1	4	2	1	1	2		6/12 b	1		•	100	3.3 V	F	LQFP80	128 K Flash version of LPC1756; 1 CAN only, no I2S.		
LPC1752	64 KB	16 KB	6	6		1	4	2	1	1	2		6/12 b			•	100	3.3 V	F	LQFP80	64 K Flash / 16 K RAM version of LPC1754; USB Device only, no DAC.		
LPC1751	32 KB	8 KB	6	6		1	4	2	1	1	2		6/12 b			•	100	3.3 V	F	LQFP80	32 K Flash / 8 K RAM version of LPC1752.		

LPC1000 Family (continued)

Type	Memory		Timers		Serial interfaces							Analog		SD/MMC	I/O pins	External bus interface	PLL	Max. freq. (MHz)	CPU voltage	I/O voltage	Temp. range options	Package	Comments / special features
	FLASH	RAM	No. of timers*	PWM channels	Ethernet	USB	UART	I ² C	CAN	SPI	SSP	I ² S	ADC channels/ resolution										
LPC1300 devices																							
LPC1343	32 K	8 K	5	13**		1	1	1			1		8/10 b		40	•	72	3.3 V		F	LQFP48 , HVQFN33	Low cost, low power Cortex-M3 device with full-speed USB device interface and pre-loaded USB drivers	
LPC1342	16 K	4 K	5	13**		1	1	1			1		8/10 b		40	•	72	3.3 V		F	HVQFN33	16 K Flash / 4 K RAM version of LPC1343	
LPC1313	32 K	8 K	5	13**				1	1				8/10 b		42	•	72	3.3 V		F	LQFP48 , HVQFN33	Low cost, low power Cortex-M3 device	
LPC1311	8 K	2 K	5	13**				1	1				8/10 b		42	•	72	3.3 V		F	HVQFN33	8 K Flash / 2 K RAM version of LPC1313	

* Includes Watchdog timer and real-time clock. ** Using timers 0-3.

LPC2000 and LH7 families

Based on an ARM7TDMI-S core operating at up to 84 MHz, these 32-bit microcontrollers deliver high performance and low power consumption in a cost-effective package. In addition to offering integrated LCD support, they offer a wide range of peripherals, including multiple serial interfaces, Ethernet, USB Host/OTG, CAN, and external bus options and are designed for use in general-purpose and specialty embedded applications such as industrial control, automotive, medical, and connectivity.

Type	Memory		Timers		Serial interfaces							Analog		LCD Controller	SD/MMC	I/O pins	External bus interface	PLL	Max. freq. (MHz)	CPU voltage	I/O voltage	Temp. range options	Package	Comments / special features		
	FLASH	RAM	EEPROM (KB)	No. of timers*	PWM channels	Ethernet	USB	UART	I ² C	CAN	SPI	SSP	I ² S												ADC (10-bit) No. of channels	DAC (10-bit) No. of channels
LH7 devices																										
LH79525		16 KB + 8 KB cache		5	3	1	1	3	1		1	1	1	10		•	86	•	•	76	1.8 V	3.3 V	F	LQFP176	ARM720T MCU with color LCD controller. Touchscreen interface. USB 2.0 device. IrDA. SDRAM controller. MMU. DMA. NAND Flash boot. 16-bit external data bus.	
LH79524		16 KB + 8 KB cache		5	3	1	1	3	1		1	1	1	10		•	104	•	•	76	1.8 V	3.3 V	F	LFBGA208	ARM720T MCU with color LCD controller. Touchscreen interface. USB 2.0 device. IrDA. SDRAM controller. MMU. DMA. NAND Flash boot. 32-bit external data bus.	
LH79520		32 KB + 8 KB cache		6	2			3			1	1				•	64	•	•	77	1.8 V	3.3 V	F	LQFP176	ARM720T MCU with color LCD controller. IrDA. SDRAM controller. MMU. 32-bit external data bus.	
LH75411		32 KB		5	3			3			1	1		8		•	76	•	•	84	1.8 V	3.3 V	F	LQFP144	Color LCD controller. Touchscreen interface. DMA controller. 5-V-tolerant I/O. 16-bit external data bus.	
LH75401		32 KB		5	3			3		1	1	1		8		•	76	•	•	84	1.8 V	3.3 V	F	LQFP144	Color LCD controller. Touchscreen interface. DMA controller. 5-V-tolerant I/O. 16-bit external data bus.	
LPC2400 devices																										
LPC2478	512 KB	98 KB		6	12	1	2	4	3	2	1	2	1	8	1	•	•	160	•	•	72	3.3 V		F	LQFP208 TFBGA208	LPC2468 with XGA LCD controller
LPC2470		98 KB		6	12	1	2	4	3	2	1	2	1	8	1	•	•	160	•	•	72	3.3 V		F	LQFP208 TFBGA208	LPC2460 with XGA LCD controller
LPC2468	512 KB	98 KB		6	12	1	2	4	3	2	1	2	1	8	1	•	•	160	•	•	72	3.3 V		F	LQFP208 TFBGA208	On-chip 4-MHz RC-Osc, GP DMA, RTC w/ 2 K batt. RAM 2 PWM blocks; USB 2.0 FS Host/OTG/device, DMA and 4 K RAM; UART 3 w/ IrDA; 32-bit ext. bus
LPC2460		98 KB		6	12	1	2	4	3	2	1	2	1	8	1	•	•	160	•	•	72	3.3 V		F	LQFP208, TFBGA208	Flashless LPC2468
LPC2458	512 KB	98 KB		6	12	1	2	4	3	2	1	2	1	8	1	•	•	136	•	•	72	3.3 V		F	TFBGA180	LPC2468 with 16-bit External Memory Interface
LPC2420		82 KB		6	12		2	4	3		1	2	1	8	1	•	•	160	•	•	72	3.3 V		F	LQFP208 TFBGA208	Flashless USB Host/OTG/Device controller
LPC2300 devices																										
LPC2388	512 KB	98 KB		6	6	1	1	4	3	2	1	2	1	8	1	•	•	104	•	•	72	3.3 V		F	LQFP144	LPC2378 with 98 K SRAM and USB Host/OTG
LPC2387	512 KB	98 KB		6	6	1	1	4	3	2	1	2	1	6	1	•	•	70	•	•	72	3.3 V		F	LQFP100	LPC2368 with 98 K SRAM and USB Host/OTG
LPC2378	512 KB	58 KB		6	6	1	1	4	3	2	1	2	1	8	1	•	•	104	•	•	72	3.3 V		F	LQFP144	On-chip 4MHz RC-Osc, GP DMA, RTC w/ 2 K batt. RAM USB 2.0 FS device w/ PHY, DMA and 4 K RAM; UART 3 w/ IrDA; MiniBus (8-bit)
LPC2377	512 KB	58 KB		6	6	1		4	3		1	2	1	8	1	•	•	104	•	•	72	3.3 V		F	LQFP144	LPC2378 without USB or CAN

Continued next page

LPC2000 Family (continued)

Type	Memory			Timers		Serial interfaces						Analog			LCD Controller	SD/MMC	I/O pins	External bus interface	PLL	Max. freq. (MHz)	CPU voltage	I/O voltage	Temp. range options	Package	Comments / special features	
	FLASH	RAM	EEPROM (KB)	No. of timers*	PWM channels	Ethernet	USB	UART	I ² C	CAN	SPI	SPI	I ² S	ADC (10-bit) No. of channels												DAC (10-bit) No. of channels
LPC2368	512 KB	58 KB		6	6	1	1	4	3	2	1	2	1	6	1		•	70		•	72	3.3 V	F	LQFP100, TFBGA100	100-pin version of LPC2378, no external bus	
LPC2367	512 KB	58 KB		6	6	1		4	3		1	2	1	6	1		•	70		•	72	3.3 V	F	LQFP100	LPC2368 without USB or CAN	
LPC2366	256 KB	58 KB		6	6	1	1	4	3	2	1	2	1	6	1			70		•	72	3.3 V	F	LQFP100	256 K Flash version of LPC2368, no SD/MMC	
LPC2365	256 KB	58 KB		6	6	1		4	3		1	2	1	6	1			70		•	72	3.3 V	F	LQFP100	LPC2366 without USB or CAN	
LPC2364	128 KB	34 KB		6	6	1	1	4	3	2	1	2	1	6	1			70		•	72	3.3 V	F, H	LQFP100, TFBGA100	128 K Flash / 34 K RAM version of LPC2368, no SD/MMC	
LPC2362	128 KB	58 KB		6	6	1	1	4	3	2	1	2	1	6	1			70		•	72	3.3 V	F	LQFP100	LPC2364 with USB Host/OTG/Device and more RAM	
LPC2361	64 KB	34 KB		6	6		1	4	3	2	1	2	1	6	1			70		•	72	3.3 V	F	LQFP100	64 KB Flash, USB Host/OTG/Device and CAN controller	
LPC2200 devices																										
LPC2294/01	256 KB	16 KB		5	6			2	1	4	2			8				112	•	•	60	1.8 V	3.3 V	H	LQFP144	LPC2214/01 upgrade with 4x CAN
LPC2292/01	256 KB	16 KB		5	6			2	1	2	2			8				112	•	•	60	1.8 V	3.3 V	F	LQFP144, TFBGA144	LPC2214/01 upgrade with 2x CAN
LPC2290/01		64 KB		5	6			2	1	2	2			8				76	•	•	60	1.8 V	3.3 V	F	LQFP144	ROMless version of LPC2292/01 with 64 KB RAM
LPC2220		64 KB		5	6			2	1		2			8				76	•	•	75	1.8 V	3.3 V	F	LQFP144, TFBGA144	64 K RAM version of LPC2210/01
LPC2214/01	256 KB	16 KB		5	6			2	1		2			8				112	•	•	60	1.8 V	3.3 V	F	LQFP144	External Bus, 4 Chip Selects, 10-bit SA ADC, 256 K Flash
LPC2212/01	128 KB	16 KB		5	6			2	1		2			8				112	•	•	60	1.8 V	3.3 V	F	LQFP144	128 K Flash version of LPC2214/01
LPC2210/01	16 KB	16 KB		5	6			2	1		2			8				76	•	•	60	1.8 V	3.3 V	F	LQFP144	ROMless version of LPC2214/01
LPC2100 devices																										
LPC2194/01	256 KB	16 KB		5	6			2	1	4	2			4				46		•	60	1.8 V	3.3 V	H	LQFP64	LPC2124/01 upgrade with 4x CAN
LPC2158	512 KB	40 KB		5	6		1	2	2		1	1		8+6	1	•		38		•	60	3.3 V	F	LQFP100	LPC2148 with 32 x 4 LCD driver	
LPC2157	512 KB	32 KB		5	6			2	2		1	1		2x8	1	•		38		•	60	3.3 V	F	LQFP100	LPC2138/01 with 32 x 4 LCD driver	
LPC2148	512 KB	40 KB		5	6		1	2	2		1	1		8+6	1			45		•	60	3.3 V	F	LQFP64	LPC2138 plus USB 2.0 full speed	
LPC2146	256 KB	40 KB		5	6		1	2	2		1	1		8+6	1			45		•	60	3.3 V	F	LQFP64	LPC2136 plus USB 2.0 full speed	
LPC2144	128 KB	16 KB		5	6		1	2	2		1	1		8+6	1			45		•	60	3.3 V	F	LQFP64	LPC2134 plus USB 2.0 full speed	
LPC2142	64 KB	16 KB		5	6		1	2	2		1	1		6	1			45		•	60	3.3 V	F	LQFP64	LPC2132 plus USB 2.0 full speed	
LPC2141	32 KB	8 KB		5	6		1	2	2		1	1		6				45		•	60	3.3 V	F	LQFP64	LPC2131 plus USB 2.0 full speed	
LPC2138/01	512 KB	32 KB		5	6			2	2		1	1		2x8	1			47		•	60	3.3 V	F	LQFP64, HVQFN64	Dual 8-ch. 10-bit ADC, BOD, POR, 32-kHz XTAL input, VBAT, Fast I/O	
LPC2136/01	256 KB	32 KB		5	6			2	2		1	1		2x8	1			47		•	60	3.3 V	F	LQFP64	256 K Flash version of LPC2138/01	
LPC2134/01	128 KB	16 KB		5	6			2	2		1	1		2x8	1			47		•	60	3.3 V	F	LQFP64	128 K Flash, 16 K RAM version of LPC2138/01	
LPC2132/01	64 KB	16 KB		5	6			2	2		1	1		8	1			47		•	60	3.3 V	F	LQFP64, HVQFN64	64 K Flash, 16 K RAM version of LPC2138/01; single ADC	
LPC2131/01	32 KB	8 KB		5	6			2	2		1	1		8				47		•	60	3.3 V	F	LQFP64	32 K Flash, 8 K RAM version of LPC2138/01; single ADC, no DAC	
LPC2129/01	256 KB	16 KB		5	6			2	1	2	2			4				46		•	60	1.8 V	3.3 V	F	LQFP64	LPC2124/01 upgrade with 2x CAN
LPC2119/01	128 KB	16 KB		5	6			2	1	2	2			4				46		•	60	1.8 V	3.3 V	F	LQFP64	LPC2114/01 upgrade with 2x CAN
LPC2109/01	64 KB	8 KB		5	6			2	1	1	2			4				46		•	60	1.8 V	3.3 V	F	LQFP64	LPC2119/01 with 64 KB Flash, 8 KB RAM, and 1x CAN
LPC2124/01	256 KB	16 KB		5	6			2	1		2			4				46		•	60	1.8 V	3.3 V	F	LQFP64	10-bit SA ADC, 2x SPI and 256 K Flash
LPC2114/01	128 KB	16 KB		5	6			2	1		2			4				46		•	60	1.8 V	3.3 V	F	LQFP64	128 K Flash version of the LPC2124/01
LPC2106/01	128 KB	64 KB		5	6			2	1		1							32		•	60	1.8 V	3.3 V	B, F	LQFP48	64 K RAM, 128 K Flash
LPC2105/01	128 KB	32 KB		5	6			2	1		1							32		•	60	1.8 V	3.3 V	B	LQFP48	32 K RAM version of LPC2106/01
LPC2104/01	128 KB	16 KB		5	6			2	1		1							32		•	60	1.8 V	3.3 V	B	LQFP48	16 K RAM version of LPC2106/01
LPC2103	32 KB	8 KB		6	14**			2	2		1	1		8				32		•	70	1.8 V	3.3 V	F	LQFP48, HVQFN48	Lowest cost, lowest power, ADC
LPC2102	16 KB	4 KB		6	14**			2	2		1	1		8				32		•	70	1.8 V	3.3 V	F	LQFP48, HVQFN48	16 K Flash, 4 K RAM version of LPC2103
LPC2101	8 KB	2 KB		6	14**			2	2		1	1		8				32		•	70	1.8 V	3.3 V	F	LQFP48	8 K Flash, 2 K RAM version of LPC2103

* Includes Watchdog timer and real-time clock. ** Using timers 0-3.

LPC2900 series

Based on the ARM968E-S core operating at up to 125 MHz, these 32-bit microcontrollers deliver the highest Flash performance on any available ARM MCU. The on-chip peripherals include USB Host/Device/OTG, Motor Control PWM/QEI, 2 x 3 V and 1 x 5 V ADC, EEPROM, I²C, Q-SPI and external memory interfaces. The MCUs are designed for use in general-purpose and specialty embedded applications such as high speed document printers/scanners, industrial control and motor control.

Type	Memory			Timers			Serial interfaces						Analog			LCD Controller	SD/MMC	I/O pins	External bus interface	PLL	Max. freq. (MHz)	CPU voltage	I/O voltage	Temp. range options	Package	Comments / special features
	FLASH	RAM	EEPROM (KB)	No. of timers*	PWM channels	Ethernet	USB	UART	I ² C	CAN	LIN	SPI	SSP	I ² S	ADC (10-bit) No. of channels											
LPC2939	768 KB	56 KB	16	7	24		2	4	2	2	2	3		24			152	•	•	125	1.8 V	3.3 V	F	LQFP208	ARM968E-S MCU with USB Host/OTG/Device, 32 KB I- & D- TCM, Motor Control, GP DMA, 16 KB EEPROM.	
LPC2930		56 KB	16	7	24		2	4	2	2	2	3		24			152	•	•	125	1.8 V	3.3 V	F	LQFP208	Flashless version of LPC2939.	
LPC2929	768 KB	56 KB	16	7	24		1	4	2	2	2	3		24			104	•	•	125	1.8 V	3.3 V	F	LQFP144	LPC2939 with 144 pins without USB Host.	
LPC2927	512 KB	56 KB	16	7	24		1	4	2	2	2	3		24			104	•	•	125	1.8 V	3.3 V	F	LQFP144	LPC2929 with 512 KB Flash.	
LPC2925	512 KB	40 KB	16	7	24		1	4	2	2	2	3		16			60		•	125	1.8 V	3.3 V	F	LQFP100	LPC2927 with 100 pins, with 32 KB SRAM, 16 KB I- & D- TCM and 16 channels of ADC. No External Memory Interface, no USB OTG.	
LPC2923	256 KB	24 KB	16	7	24		1	4	2	2	2	3		16			60		•	125	1.8 V	3.3 V	F	LQFP100	LPC2925 with 256 KB Flash, 16 KB SRAM.	
LPC2921	128 KB	24 KB	16	7	24		1	4	2	2	2	3		16			60		•	125	1.8 V	3.3 V	F	LQFP100	LPC2923 with 128 KB Flash.	
LPC2919/01	768 KB	56 KB	16	7	24			4	2	2	2	3		16			108	•	•	125	1.8 V	3.3 V	F	LQFP144	ARM968E-S MCU with 2 LIN Master Controllers, 16 KB I-TCM, 16 KB D-TCM	
LPC2917/01	512 KB	56 KB	16	7	24			4	2	2	2	3		16			108	•	•	125	1.8 V	3.3 V	F	LQFP144	LPC2919/01 with 512 KB Flash	

LPC900 family

Designed for applications that demand high integration and low cost over a wide range of performance requirements, these single-chip microcontrollers integrate a number of system-level functions.

Type	Memory			Timers			Serial interfaces			Analog				I/O pins	Frequency range (MHz) at 3 V	Temp. range options	Package	Comments / special features
	FLASH / EEPROM (program / data)	EEPROM (data)	RAM	No. of timers	PWM	RTC / system timer / WD	UART	I ² C	SPI	ADC channels resolution	DAC channels resolution	Temp Sensor	Comparators					
LPC98x devices																		
P89LPC985	8 KB		512 B	7	5	1	1	1	1	8/10b			2	26	0-18	F	TSSOP28,PLCC28	2.4-5.5v power supply (available Q4 '09)
P89LPC983	4 KB		256 B	7	5	1	1	1	1	4/10b			2	26	0-18	F	TSSOP28	PC980 with 4-ch 10-bit ADC (available Q4 '09)
P89LPC982	8 KB		512 B	7	5	1	1	1	1				2	26	0-18	F	TSSOP28,PLCC28	LPC985 without ADC (available Q4 '09)
P89LPC980	4 KB		256 B	7	5	1	1	1	1				2	26	0-18	F	TSSOP28	4K flash version of LPC982 (available Q4 '09)
LPC97x devices																		
P89LPC972	8 KB		256 B	7	5	1	1	1	1*				2	18	0-18	F	TSSOP20, DIP20	20pin version of LPC982 (available Q4 '09)
P89LPC971	4 KB		256 B	7	5	1	1	1	1*				2	18	0-18	F	TSSOP20	4K flash version of LPC972 (available Q4 '09)
P89LPC970	2 KB		256 B	7	5	1	1	1	1*				2	18	0-18	F	TSSOP20	2K flash version of LPC972 (available Q4 '09)
LPC95x devices																		
P89LPC954	16 KB		512 B	4	2 ch.	1	2	1	1	8/10b			2	40	0-18	F	PLCC44, LQFP44, LQFP48	LPC952 with 16 KB Flash
P89LPC952	8 KB		512 B	4	2 ch.	1	2	1	1	8/10b			2	40	0-18	F	PLCC44, LQFP44	LPC900 in 44/48-pin package; 2 UARTs; 2-wire debug interface

* SPI available for pin remap

LPC900 family (continued)

Type	Memory			Timers			Serial interfaces			Analog					I/O pins	Frequency range (MHz) at 3 V	Temp. range options	Package	Comments / special features
	FLASH / EEPROM (program / data)	EEPROM (data)	RAM	No. of timers	PWM	RTC / system timer / WD	UART	I ² C	SPI	ADC channels resolution	DAC channels resolution	Temp. Sensor	Comparators	Programmable Gain Amplifier					
LPC940x devices																			
P89LPC9408	8 KB	512 B	768 B	5	CCU	1	1	1	1	8/10b			2		23	0-18	F	LQFP64	LPC938 with integrated PCF8576D universal LCD driver
P89LPC9402	8 KB		256 B	4	2 ch.	1	1	1	1				2		23	0-18	F	LQFP64	LPC931A1 with integrated PCF8576D universal LCD driver
P89LPC9401	8 KB		256 B	4	2 ch.	1	1	1	1				2		23	0-18	F	LQFP64	LPC931 with integrated PCF8576D universal LCD driver
LPC93x devices																			
P89LPC9381	4 KB		256 B	4		1	1	1	1	8/10b			2		26	0-18	F	TSSOP28	4 K flash version of LPC938
P89LPC938	8 KB	512 B	768 B	5	CCU	1	1	1	1	8/10b			2		26	0-18	F	TSSOP28, HVQFN28, PLCC28	LPC935 with 10-bit ADC
P89LPC9361	16 KB	512 B	768 B	5	CCU	1	1	1	1	2x4/8b	2x8b	1	2	2	26	0-18	F	TSSOP28	LPC9351 with 16 K Flash
P89LPC936	16 KB	512 B	768 B	5	CCU	1	1	1	1	2x4/8b	2x8b		2		26	0-18	F	TSSOP28	LPC935 with 16 K Flash
P89LPC9351	8 KB	512 B	768 B	5	CCU	1	1	1	1	2x4/8b	2x8b	1	2	2	26	0-18	F	TSSOP28, PLCC28	LPC935 with 2 x PGAs, Temp Sensor and other enhanced features
P89LPC935	8 KB	512 B	768 B	5	CCU	1	1	1	1	2x4/8b	2x8b		2		26	0-18	F	TSSOP28, PLCC28, HVQFN28	LPC932A1 + two 4-ch 8-bit ADCs / two 8-bit DACs
P89LPC9341	8 KB		256 B	4	2 ch.	1	1	1	1	2x4/8b	2x8b	1	2		26	0-18	F	TSSOP28	LPC934 with two 4-ch 8-bit ADCs/ two 8-bit DACs, Temp Sensor and other enhanced features
P89LPC934	8 KB		256 B	4	2 ch.	1	1	1	1	4/8b	2x8b		2		26	0-18	F	TSSOP28	LPC931 + 4-ch 8-bit ADC/ 2x 1-ch 8-bit DAC
P89LPC9331	4 KB		256 B	4	2 ch.	1	1	1	1	2x4/8b	2x8b	1	2		26	0-18	F, H	TSSOP28	LPC933 with two 4-ch 8-bit ADCs/ two 8-bit DACs, Temp Sensor and other enhanced features
P89LPC933	4 KB		256 B	4	2 ch.	1	1	1	1	4/8b	2x8b		2		26	0-18	F, H	TSSOP28	LPC930 + 4-ch 8-bit ADC/ 2x 1-ch 8-bit DAC
P89LPC9321	8 KB	512 B	768 B	5	CCU	1	1	1	1				2	1	26	0-18	F	TSSOP28, PLCC28, PDIP28	LPC932 with PGA and other enhanced features
P89LPC932A1	8 KB	512 B	768 B	5	CCU	1	1	1	1				2		26	0-18	F	TSSOP28, PLCC28, HVQFN28, DIP28	LPC935 without ADC and DAC
P89LPC931A1	8 KB		256 B	4	2 ch.	1	1	1	1				2		26	0-18	F	TSSOP28	LPC931 with enhanced BOD, clock doubler and other features
P89LPC931	8 KB		256 B	4	2 ch.	1	1	1	1				2		26	0-18	F	TSSOP28	4 K / 8 K Flash versions of LPC932A1 w/o EEPROM, w/o CCU, w/o XRAM
P89LPC9301	4 KB		256 B	4	2 ch.	1	1	1	1				2		26	0-18	F	TSSOP28	LPC930 with enhanced BOD, clock doubler and other features
P89LPC930	4 KB		256 B	4	2 ch.	1	1	1	1				2		26	0-18	F	TSSOP28	4 K / 8 K Flash versions of LPC932A1 w/o EEPROM, w/o CCU, w/o XRAM
LPC92x devices																			
P89LPC9251	8 KB		256 B	4	2 ch.	1	1	1		4/8b	1/8b	1	2		18	0-18	F	TSSOP20	LPC925 with Temp Sensor and other enhanced features
P89LPC925	8 KB		256 B	4	2 ch.	1	1	1		4/8b	1/8b		2		18	0-18	F	TSSOP20	LPC921/922 + 4-ch 8-bit ADC / 8-bit DAC; runs up to 18 MHz
P89LPC9241	4 KB		256 B	4	2 ch.	1	1	1		4/8b	1/8b	1	2		18	0-18	F	TSSOP20	4 K flash version of LPC9251
P89LPC924	4 KB		256 B	4	2 ch.	1	1	1		4/8b	1/8b		2		18	0-18	F	TSSOP20	LPC921/922 + 4-ch 8-bit ADC / 8-bit DAC; runs up to 18 MHz
P89LPC922A1	8 KB		256 B	4	2 ch.	1	1	1					2		18	0-18	F	TSSOP20, DIP20	LPC9221 with enhanced BOD, clock doubler and other features
P89LPC9221	8 KB		256 B	4	2 ch.	1	1	1					2		18	0-18	F	TSSOP20	LPC922 with 8 high-drive pins (20 mA)
P89LPC922	8 KB		256 B	4	2 ch.	1	1	1					2		18	0-18	F	TSSOP20, DIP20	20-pin versions of LPC930/931 w/o SPI; LPC76x pin-comp. upgrade
P89LPC9211	4 KB		256 B	4	2 ch.	1	1	1					2		18	0-18	F	TSSOP20	4 K flash version of LPC922A1
P89LPC921	4 KB		256 B	4	2 ch.	1	1	1					2		18	0-18	F	TSSOP20, DIP20	20-pin versions of LPC930/931 w/o SPI; LPC76x pin-comp. upgrade
P89LPC9201	2 KB		256 B	4	2 ch.	1	1	1					2		18	0-18	F	TSSOP20	2 K flash version of LPC922A1
P89LPC920	2 KB		256 B	4	2 ch.	1	1	1					2		18	0-18	F	TSSOP20	2 K Flash version of 921/922

Notes: (1) LPC900 FLASH EEPROM features: Program and data (byte) storage, block-/sector-/page-/byte-erasable, 2-ms erase, data read via MOVX instruction.
(2) Auxiliary EEPROM features: Data (byte) storage, page-/byte-erasable, 2-ms erase. (3) Reset active low.

Continued next page

LPC900 family (continued)

Type	Memory			Timers			Serial interfaces			Analog					I/O pins	Frequency range (MHz) at 3 V	Temp. range options	Package	Comments / special features
	FLASH / EEPROM (program / data)	EEPROM (data)	RAM	No. of timers	PWM	RTC / system timer / WD	UART	I ² C	SPI	ADC channels resolution	DAC channels resolution	Temp. Sensor	Comparators	Programmable Gain Amplifier					
LPC91x devices																			
P89LPC9171	2 KB		256 B	4	2 ch.	1	1	1		4/8b	1/8b		2		14	0-IRC	F	TSSOP16	LPC917 with enhanced BOD, clock doubler and other features
P89LPC917	2 KB		256 B	4	2 ch.	1	1	1		4/8b	1/8b		2		14	0-IRC	F	TSSOP16	4-ch 8-bit ADC / 8-bit DAC; 2 serial channels; 2-ch 8-bit PWM
P89LPC9161	2 KB		256 B	4	1 ch.	1	1	1	1	4/8b	1/8b		2		14	0-IRC	F	TSSOP16	LPC916 with enhanced BOD, clock doubler and other features
P89LPC916	2 KB		256 B	4	1 ch.	1	1	1	1	4/8b	1/8b		2		14	0-IRC	F	TSSOP16	4-ch 8-bit ADC / 8-bit DAC; 3 serial channels; 1-ch 8-bit PWM
P89LPC9151	2 KB		256 B	4	1 ch.	1	1	1		4/8b	1/8b		2		12	0-IRC	F	TSSOP14	LPC915 with enhanced BOD, clock doubler and other features
P89LPC915	2 KB		256 B	4	1 ch.	1	1	1		4/8b	1/8b		2		12	0-IRC	F, H	TSSOP14, DIP14	4-ch 8-bit ADC / 8-bit DAC; 2 serial channels; 1-ch 8-bit PWM
P89LPC913	1 KB		128 B	4		1	1		1				2		12	0-18	F	TSSOP14	UART; SPI; 12 I/O pins; external crystal pins
P89LPC912	1 KB		128 B	4	1 ch.	1			1				2		12	0-18	F, H	TSSOP14	1-ch 8-bit PWM; SPI; 12 I/O pins; external crystal pins
LPC910x devices																			
P89LPC9107	1 KB		128 B	4	2 ch.	1	1			4/8b	1/8b		1		10	0-18	F	TSSOP14, DIP14	Clock doubler for internal RC OSC
P89LPC9103	1 KB		128 B	4		1	1			4/8b	1/8b		1		8	0-18	F	HVSON10	Smallest available package 3 x 3 mm ²
LPC90x devices																			
P89LPC903	1 KB		128 B	4		1	1						2		6	0-IRC	F	SO8	Industry-standard pinout; 6 I/O pins; 2 analog comparators; UART
P89LPC902	1 KB		128 B	4		1							2		6	0-IRC	F	SO8, DIP8	Industry-standard pinout; 6 I/O pins; 2 analog comp. 5 ext. interrupt inputs
P89LPC901	1 KB		128 B	4	1 ch.	1							1		6	0-18	F	SO8, DIP8	Industry-standard pinout; 6 I/O pins; 1-ch 8-bit PWM; external crystal pins

LPC700 family

Designed for applications that demand low voltage, high integration, and low cost, the LPC700 series uses a high-performance 6-clock 80C51 that executes instructions at twice the rate of the standard 80C51. To reduce component count, board space, and system cost, the devices combine a number of system supervisory functions, serial interfaces, and analog options in low-profile SO and TSSOP packages.

Type	Memory			Timers			Serial interfaces		Analog		I/O pins	Max. frequency (MHz)	Temp. range options	Package	Comments / special features
	OTP / ROM	RAM	ICP / PP	No. of timers	PWM	WD	UART	I ² C	ADC ch. / bits	Comparators					
LPC76x / LPC77x devices															
P87LPC779	8 KB	128 B	ICP	2		•	1	1 (bit)	4/8	2	18	20	F	TSSOP20	LPC769 upgrade with 8 K OTP; addtl 128 B of RAM not supported by emulators
P87LPC778	8 KB	128 B	ICP	2	•	•	1	1 (bit)	4/8	2	18	20	F	TSSOP20	LPC768 upgrade with 8 K OTP; addtl 128 B of RAM not supported by emulators
P87LPC769	4 KB	128 B	ICP	2		•	1	1 (bit)	4/8	2	18	20	H	SO20	2 AC, BOD, POR, 8 KBIs, IRC (6 MHz ± 25%), 4ch 8-bit ADC, 2ch 8-bit DAC
P87LPC768	4 KB	128 B	ICP	2	•	•	1	1 (bit)	4/8	2	18	20	B, F	DIP20, SO20	2 AC, BOD, POR, 8 KBIs, IRC (6 MHz ± 25%), 4ch 8-bit ADC, PWM
P87LPC767	4 KB	128 B	ICP	2		•	1	1 (bit)	4/8	2	18	20	B, F	DIP20, SO20	2 AC, BOD, POR, 8 KBIs, IRC (6 MHz ± 25%), 4ch 8-bit ADC
P87LPC764	4 KB	128 B	ICP	2		•	1	1 (bit)		2	18	20	B, F, H	TSSOP20, DIP20, SO20	2 AC, BOD, POR, 8 KBIs, IRC (6 MHz ± 10% / ± 25%)
P87LPC762	2 KB	128 B	ICP	2		•	1	1 (bit)		2	18	20	B, F	TSSOP20, DIP20, SO20	2 AC, BOD, POR, 8 KBIs, IRC (6 MHz ± 10% / ± 25%)
P87LPC761	2 KB	128 B	ICP	2		•	1	1 (bit)		2	14	20	B	TSSOP16, DIP16	16-pin LPC derivative; ± 2.5% internal RC Oscillator (0-50 °C)
P87LPC760	1 KB	128 B	ICP	2		•	1	1 (bit)		2	12	20	B	TSSOP14, DIP14	14-pin LPC derivative; ± 2.5% internal RC Oscillator (0-50 °C)

80C51 family

Type	Memory			Timers			Serial interfaces			I/O Pins	Max. freq. (MHz)	Temp. range options	Package	Comments / special features
	FLASH	OTP / ROM	RAM	No. of timers	PWM	WD	UART	I ² C	SPI					
66x devices														
P89V664	64 KB		2 KB	4	•	•	1	2	1	36	40	F	PLCC44, LQFP44	Fast erase times and more I/O
P89V662	32 KB		1 KB	4	•	•	1	2	1	36	40	F	PLCC44, LQFP44	Fast erase times and more I/O
P89V660	16 KB		512 B	4	•	•	1	2	1	36	40	F	PLCC44, LQFP44	Fast erase times and more I/O
66xX2 devices														
P87C660X2		16 KB	512 B	4	•	•	1	1		32	33	B, F	PLCC44, LQFP44	OTP version of 89C660; 12-clk default, 6-clk option
Mx2 devices														
P87C51MC2/02		96 KB	3 KB	4	•	•	2		1	34	24	B	PLCC44	16 MB data/code addr. range; 2 UARTs, SPI, P4 I/O
P87C51MB2/02		64 KB	2 KB	4	•	•	2		1	34	24	B	PLCC44	16 MB data/code addr. range; 2 UARTs, SPI, P4 I/O
Rx2 devices														
P89CV51RD2	64 KB		1 KB	4	•	•	1		1	32	33	B, F	PLCC44, TQFP44	Drop-in replacement device for P89C51RD2.
P89CV51RB2	32 KB		1 KB	4	•	•	1		1	32	33	B, F	PLCC44, TQFP44	Drop-in replacement device for P89C51RB2.
P89CV51RB2	16 KB		1 KB	4	•	•	1		1	32	33	B, F	PLCC44, TQFP44	3 V version of P89V51RD2
P89LV51RD2	64 KB		1 KB	4	•	•	1		1	32	33	B, F	DIP40, PLCC44, TQFP44	3 V version of P89V51RC2
P89LV51RC2	32 KB		1 KB	4	•	•	1		1	32	33	F	PLCC44, TQFP44	3 V version of P89V51RC2
P89LV51RB2	16 KB		1 KB	4	•	•	1		1	32	33	B	PLCC44	3 V version of P89V51RB2
P89V51RD2	64 KB		1 KB	4	•	•	1		1	32	40	B, F	DIP40, PLCC44, TQFP44	
P89V51RC2	32 KB		1 KB	4	•	•	1		1	32	40	F	DIP40, PLCC44, TQFP44	
P89V51RB2	16 KB		1 KB	4	•	•	1		1	32	40	B, F	DIP40, PLCC44, TQFP44	
P89V52X2	8 KB		256 B	4	•		1			32	33	F	DIP40, PLCC44, LQFP44	Drop-in replacement device for P89C52/ P87C52; adds 192 B EEPROM

Temperature Legend:

B 0 to +70 °C
 F -40 to +85 °C
 H -40 to +125 °C
 J -40 to +105 °C

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