

# 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, LH7A40x, LH7xxxx, and 8-bit LPC900 families. We offer an easy migration path from 8-bit to 32-bit solutions.

## LPC3000 series

The 32-bit LPC3000 series 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 0.9V. With speeds of up to 208 MHz, the NXP LPC3180 series supports Linux and WinCE and is ideal for a wide range of high-precision applications such as point-of-sale (POS) equipment, medical devices, and global positioning systems (GPS).

Type	Memory				Timers		Serial interfaces				ADC (10-bit) No. of channels	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 <sup>2</sup> C	SPI										
LPC3180		64K	32K	32K	4	2	1	7	2	2	3	55	•	•	208	1.2V	3/1.8V	F	LFBGA320	90nm process, NAND Flash, SDRAM/DDR (1.8V), (1) USB 2.0 FS OTG, VFP unit, and SD card

## LH7A40x series

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 LH7A40x series makes it easy to create everything from cost-conscious consumer systems to advanced systems with media-rich environments.

Type	Memory				Timers		Serial interfaces				ADC (10-bit) No. of channels	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 <sup>2</sup> C	SPI										
LH7A400		80K Frame Buffer	8K	8K	5	0	1	3	0	1		60	•	•	245	1.8V	3.3V	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.
LH7A404		80K Frame Buffer	8K	8K	5	2	1	3	0	1	10	64	•	•	266	1.8V	3.3V	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/SDIO.

## LPC2000 and LH7xxxx series

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		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 <sup>2</sup> C	CAN	SPI	SSP	I <sup>2</sup> S	ADC (10-bit) No. of channels	DAC (10-bit) No. of channels										
LPC2800 devices																								
LPC2888	1M	64K	4			1 <sup>(1)</sup>	1 <sup>(2)</sup>	1				1	5		•	85	•	•	60	1.8V	3.3V	F	TBGA180	<sup>(1)</sup> USB V2.0 high speed; <sup>(2)</sup> IrDA configurable; LCD interface logic
LPC2880		64K	4			1 <sup>(1)</sup>	1 <sup>(2)</sup>	1				1	5		•	85	•	•	60	1.8V	3.3V	F	TBGA180	LPC2880 is the ROMless version of the LPC2888
LPC2400 devices																								
LPC2478	512K	98K	6	12 <sup>(1)</sup>	1	1 <sup>(2)</sup>	4 <sup>(3)</sup>	3	2	1	2	1	8	1	•	160	• <sup>(4)</sup>	•	72	3.3V		F	LQFP208 TFBGA208	LPC2468 with QVGA LCD controller
LPC2470		98K	6	12 <sup>(1)</sup>	1	1 <sup>(2)</sup>	4 <sup>(3)</sup>	3	2	1	2	1	8	1	•	160	• <sup>(4)</sup>	•	72	3.3V		F	LQFP208 TFBGA208	LPC2468 with QVGA LCD controller
LPC2468	512K	98K	6	12 <sup>(1)</sup>	1	1 <sup>(2)</sup>	4 <sup>(3)</sup>	3	2	1	2	1	8	1	•	160	• <sup>(4)</sup>	•	72	3.3V		F	LQFP208 TFBGA208	On-chip 4MHz RC-Osc, GP DMA, RTC w/ 2K batt. RAM <sup>(1)</sup> 2 PWM blocks; <sup>(2)</sup> USB 2.0 FS Host/OTG/device, DMA and 4K RAM; <sup>(3)</sup> UART 3 w/ IrDA; <sup>(4)</sup> 32-bit ext. bus
LH7xxxx devices																								
LH75400		32K	5	3			3		1	1	1		8			76	•	•	84	1.8V	3.3V	F	LQFP144	Greyscale LCD controller. Touchscreen interface. DMA controller. 5-V-tolerant I/O. 16-bit external data bus.
LH75401		32K	5	3			3		1	1	1		8			76	•	•	84	1.8V	3.3V	F	LQFP144	Color LCD controller. Touchscreen interface. DMA controller. 5-V-tolerant I/O. 16-bit external data bus.
LH75410		32K	5	3			3			1	1		8			76	•	•	84	1.8V	3.3V	F	LQFP144	Color LCD controller. Touchscreen interface. DMA controller. 5-V-tolerant I/O. 16-bit external data bus.
LH75411		32K	5	3			3			1	1		8			76	•	•	84	1.8V	3.3V	F	LQFP144	Color LCD controller. Touchscreen interface. DMA controller. 5-V-tolerant I/O. 16-bit external data bus.
LH79520		32K + 8K cache	6	2			3			1	1					64	•	•	77	1.8V	3.3V	F	LQFP176	Color LCD controller. IrDA. SDRAM controller. MMU. 32-bit external data bus.
LH79524		16K + 8K cache	5	3	1	1	3	1		1	1	1	10			104	•	•	76	1.8V	3.3V	F	LFBGA208	Color LCD controller. Touchscreen interface. USB 2.0 device. IrDA. SDRAM controller. MMU. DMA. NAND Flash boot. 32-bit external data bus.
LH79525		16K + 8K cache	5	3	1	1	3	1		1	1	1	10			86	•	•	76	1.8V	3.3V	F	LQFP176	Color LCD controller. Touchscreen interface. USB 2.0 device. IrDA. SDRAM controller. MMU. DMA. NAND Flash boot. 16-bit external data bus.
LPC2300 devices																								
LPC2378	512K	58K	6	6	1	1 <sup>(1)</sup>	4 <sup>(2)</sup>	3	2	1	2	1	8	1	•	104	• <sup>(3)</sup>	•	72	3.3V		F	LQFP144	On-chip 4MHz RC-Osc, GP DMA, RTC w/ 2K batt. RAM <sup>(1)</sup> USB 2.0 FS device w/ PHY, DMA and 4K RAM; <sup>(2)</sup> UART 3 w/ IrDA; <sup>(3)</sup> MiniBus (8-bit)
LPC2368	512K	58K	6	6	1	1 <sup>(1)</sup>	4 <sup>(2)</sup>	3	2	1	2	1	6	1	•	70		•	72	3.3V		F	LQFP100	100-pin version of LPC2378, no external bus
LPC2366	256K	58K	6	6	1	1 <sup>(1)</sup>	4 <sup>(2)</sup>	3	2	1	2	1	6	1		70		•	72	3.3V		F	LQFP100	256K Flash version of LPC2368, no SD/MMC
LPC2364	128K	34K	6	6	1	1 <sup>(1)</sup>	4 <sup>(2)</sup>	3	2	1	2	1	6	1		70		•	72	3.3V		F	LQFP100	128K Flash / 34K RAM version of LPC2368, no SD/MMC
LPC2200 devices																								
LPC2294	256K	16K	5	6			2	1	4	2			8			112	•	•	60	1.8 V	3.3 V	H	LQFP144	LPC2214 upgrade with 4x CAN
LPC2292	256K	16K	5	6			2	1	2	2			8			112	•	•	60	1.8 V	3.3 V	F	LQFP144, TFBGA144	LPC2214 upgrade with 2x CAN
LPC2290/01		16K	5	6			2	1	2	2			8			76	•	•	60	1.8 V	3.3 V	F	LQFP144	ROMless version of LPC2292
LPC2220		64K	5	6			2	1		2			8			76	•	•	75	1.8 V	3.3 V	F	LQFP144, TFBGA144	64K RAM version of LPC2210
LPC2214	256K	16K	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, 256K Flash
LPC2212	128K	16K	5	6			2	1		2			8			112	•	•	60	1.8 V	3.3 V	F	LQFP144	128K Flash version of LPC2214

Note: Reset active low. \* Includes WatchDog timer and Real-time Clock. \*\* Using timers 0-3.

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## LPC2000 and LH7xxxx series (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 <sup>2</sup> C	CAN	SPI	SSP	I <sup>2</sup> S	ADC (10-bit) No. of channels										
LPC2210/01		16K	5	6			2	1	4	2			8				60	1.8 V	3.3 V	F	LQFP144	ROMless version of LPC2214	
LPC2100 devices																							
LPC2194	256K	16K	5	6			2	1	4	2			4				60	1.8 V	3.3 V	H	LQFP64	LPC2124 upgrade with 4x CAN	
LPC2148	512K	40K	5	6		1	2	2		1	1		8+6	1			60	3.3 V		F	LQFP64	LPC2138 plus USB 2.0 full speed	
LPC2146	256K	40K	5	6		1	2	2		1	1		8+6	1			60	3.3 V		F	LQFP64	LPC2136 plus USB 2.0 full speed	
LPC2144	128K	16K	5	6		1	2	2		1	1		8+6	1			60	3.3 V		F	LQFP64	LPC2134 plus USB 2.0 full speed	
LPC2142	64K	16K	5	6		1	2	2		1	1		6	1			60	3.3 V		F	LQFP64	LPC2132 plus USB 2.0 full speed	
LPC2141	32K	8K	5	6		1	2	2		1	1		6				60	3.3 V		F	LQFP64	LPC2131 plus USB 2.0 full speed	
LPC2138/01	512K	32K	5	6			2	2		1	1		2x8	1			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	256K	32K	5	6			2	2		1	1		2x8	1			60	3.3 V		F	LQFP64	256K Flash version of LPC2138	
LPC2134/01	128K	16K	5	6			2	2		1	1		2x8	1			60	3.3 V		F	LQFP64	128K Flash, 16K RAM version of LPC2138	
LPC2132/01	64K	16K	5	6			2	2		1	1		8	1			60	3.3 V		F	LQFP64, HVQFN64	64K Flash, 16K RAM version of LPC2138	
LPC2131/01	32K	8K	5	6			2	2		1	1		8				60	3.3 V		F	LQFP64	32K Flash, 8K RAM version of LPC2138	
LPC2129	256K	16K	5	6			2	1	2	2			4				60	1.8 V	3.3 V	F	LQFP64	LPC2124 upgrade with 2x CAN	
LPC2119	128K	16K	5	6			2	1	2	2			4				60	1.8 V	3.3 V	F	LQFP64	LPC2114 upgrade with 2x CAN	
LPC2109	64K	8K	5	6			2	1	1	2			4				60	1.8 V	3.3 V	F	LQFP64	LPC2119 with 64 KB Flash, 8 KB RAM, and 1x CAN	
LPC2124	256K	16K	5	6			2	1		2			4				60	1.8 V	3.3 V	F	LQFP64	10-bit SA ADC, 2x SPI and 256K Flash	
LPC2114	128K	16K	5	6			2	1		2			4				60	1.8 V	3.3 V	F	LQFP64	128K Flash version of the LPC2124	
LPC2106	128K	64K	5	6			2	1		1							60	1.8 V	3.3 V	B, F	LQFP48	64K RAM, 128K Flash	
LPC2105	128K	32K	5	6			2	1		1							60	1.8 V	3.3 V	B	LQFP48	32K RAM version of LPC2106	
LPC2104	128K	16K	5	6			2	1		1							60	1.8 V	3.3 V	B	LQFP48	16K RAM version of LPC2106	
LPC2103	32K	8K	6	14**			2	2		1	1		8				70	1.8 V	3.3 V	F	LQFP48	Lowest cost, lowest power, ADC	
LPC2102	16K	4K	6	14**			2	2		1	1		8				70	1.8 V	3.3 V	F	LQFP48	16K Flash, 4K RAM version of LPC2103	
LPC2101	8K	2K	6	14**			2	2		1	1		8				70	1.8 V	3.3 V	F	LQFP48	8K Flash, 2K RAM version of LPC2103	

## LPC900 series

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	Total no. of timers	PWM	RTC / system timer / WD	UART	I <sup>2</sup> C	SPI	ADC channels resolution	DAC channels resolution	Comparators					
LPC95x devices																	
P89LPC954	16K		512 B	4	2 ch.	1	2	1	1	8/10b		2	40	0-18	F	PLCC44, LQFP44	LPC952 with 16 KB Flash
P89LPC952	8K		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

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LPC900 series (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	Total no. of timers	PWM	RTC / system timer / WD	UART	I <sup>2</sup> C	SPI	ADC channels resolution	DAC channels resolution	Comparators					
<b>LPC940x devices</b>																	
P89LPC9408	8K	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
P89LPC9401	8K		256 B	4	2 ch.	1	1	1	1			2	23	0-18	F	LQFP64	LPC931 with integrated PCF8576D universal LCD driver
<b>LPC93x devices</b>																	
P89LPC938	8K	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
P89LPC936	16K	512 B	768 B	5	CCU	1	1	1	1	2x4/8b	2x8b	2	26	0-18	F	TSSOP28	LPC935 with 16K Flash
P89LPC935	8K	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
P89LPC934	8K		256 B	4	2 ch.	1	1	1	1	4/8b	2x8b	2	26	0-18	F	TSSOP28	LPC930/931 + 4-ch 8-bit ADC / two 8-bit DACs
P89LPC933	4K		256 B	4	2 ch.	1	1	1	1	4/8b	2x8b	2	26	0-18	F	TSSOP28	LPC930/931 + 4-ch 8-bit ADC / two 8-bit DACs
P89LPC932A1	8K	512 B	768 B	5	CCU	1	1	1	1			2	26	0-18	F	TSSOP28, PLCC28, HVQFN28	LPC935 with ADCs and DACs
P89LPC9311	8K		256 B	4	2 ch.	1	1	1	1			2	26	0-18	F	TSSOP28	LPC931 with 8 high-drive pins (20 mA)
P89LPC931	8K		256 B	4	2 ch.	1	1	1	1			2	26	0-18	F	TSSOP28	4K / 8K Flash versions of LPC932A1 w/o EEPROM, w/o CCU, w/o XRAM
P89LPC930	4K		256 B	4	2 ch.	1	1	1	1			2	26	0-18	F	TSSOP28	4K / 8K Flash versions of LPC932A1 w/o EEPROM, w/o CCU, w/o XRAM
<b>LPC92x devices</b>																	
P89LPC925	8K		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
P89LPC924	4K		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
P89LPC9221	8K		256 B	4	2 ch.	1	1	1				2	18	0-18	F	TSSOP20, DIP20	LPC922 with 8 high-drive pins (20 mA)
P89LPC922	8K		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
P89LPC921	4K		256 B	4	2 ch.	1	1	1				2	18	0-18	F	TSSOP20	20-pin versions of LPC930/931 w/o SPI; LPC76x pin-comp. upgrade
P89LPC920	2K		256 B	4	2 ch.	1	1	1				2	18	0-18	F	TSSOP20	2K Flash version of 921/922
<b>LPC91x devices</b>																	
P89LPC917	2K		256 B	4	2 ch.	1	1	1		4/8b	1/8b	2	14	0-18	F	TSSOP16	4-ch 8-bit ADC / 8-bit DAC; 2 serial channels; 2-ch 8-bit PWM
P89LPC916	2K		256 B	4	1 ch.	1	1	1	1	4/8b	1/8b	2	14	0-18	F	TSSOP16	4-ch 8-bit ADC / 8-bit DAC; 3 serial channels; 1-ch 8-bit PWM
P89LPC915	2K		256 B	4	1 ch.	1	1	1		4/8b	1/8b	2	12	0-18	F, H	TSSOP14, DIP14	4-ch 8-bit ADC / 8-bit DAC; 2 serial channels; 1-ch 8-bit PWM
P89LPC914	1K		128 B	4	1 ch.	1	1		1			2	12	0-18C	F	TSSOP14	1-ch 8-bit PWM; UART; SPI; 12 I/O pins
P89LPC913	1K		128 B	4		1	1		1			2	12	0-18	F	TSSOP14	UART; SPI; 12 I/O pins; external crystal pins
P89LPC912	1K		128 B	4	1 ch.	1			1			2	12	0-18	F	TSSOP14	1-ch 8-bit PWM; SPI; 12 I/O pins; external crystal pins
<b>LPC910x devices</b>																	
P89LPC9107	1K		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	1K		128 B	4		1	1			4/8b	1/8b	1	8	0-18	F	HVSON10	Smallest available package 3 x 3 mm <sup>2</sup>
P89LPC9102	1K		128 B	4	2 ch.	1				4/8b	1/8b	1	8	0-18	F	HVSON10	Smallest available package 3 x 3 mm <sup>2</sup>
<b>LPC90x devices</b>																	
P89LPC908	1K		128 B	4		1	1					1	6	0-IRC	F	SO8	UART; 6 I/O pins
P89LPC907	1K		128 B	4		1	1*					1	6	0-IRC	F	SO8	UART (*Transmit function only); 6 I/O pins
P89LPC906	1K		128 B	4	1 ch.	1						1	6	0-18	F	SO8	1-ch 8-bit PWM; 6 I/O pins; external crystal pins
P89LPC903	1K		128 B	4		1	1					2	6	0-IRC	F	SO8	Industry-standard pinout; 6 I/O pins; 2 analog comparators; UART
P89LPC902	1K		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	1K		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

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.

## LPC700 series

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 <sup>2</sup> C	ADC ch. / bits	Comparators					
<b>LPC76x / LPC77x devices</b>															
P87LPC779	8K	128 B	ICP	2		•	1	1 (bit)	4/8	2	18	20	F	TSSOP20	LPC769 upgrade with 8K OTP; addtl 128 B of RAM not supported by emulators
P87LPC778	8K	128 B	ICP	2	•	•	1	1 (bit)	4/8	2	18	20	F	TSSOP20	LPC768 upgrade with 8K OTP; addtl 128 B of RAM not supported by emulators
P87LPC769	4K	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	4K	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	4K	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	4K	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	2K	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	2K	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	1K	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

Designed for real-time applications, these 8-bit microcontrollers are used in a wide variety of applications, from consumer products and computer peripherals to automotive systems. The NXP portfolio includes Flash, OTP (one-time programmable), ROM, and ROMless devices.

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 <sup>2</sup> C	SPI					
<b>66x devices</b>														
P89V664	64K		2K	4	•	•	1	2	1	36	40	F	PLCC44, LQFP44	Fast erase times and more I/O
P89V662	32K		1K	4	•	•	1	2	1	36	40	F	PLCC44, LQFP44	Fast erase times and more I/O
P89V660	16K		512 B	4	•	•	1	2	1	36	40	F	PLCC44, LQFP44	Fast erase times and more I/O
<b>66xX2 devices</b>														
P87C661X2		16K	512 B	4	•	•	1	2		32	33	B	PLCC44, LQFP44	87C660X2 with two I <sup>2</sup> C interfaces
P87C660X2		16K	512 B	4	•	•	1	1		32	33	B, F	PLCC44, LQFP44	OTP version of 89C660; 12-clk default, 6-clk option
<b>Mx2 devices</b>														
P87C51MC2/02		96K	3K	4	•	•	2		1	34	24	B	PLCC44	16 MB data/code addr. range; 2 UARTs, SPI, P4 I/O
P87C51MB2/02		64K	2K	4	•	•	2		1	34	24	B	PLCC44	16 MB data/code addr. range; 2 UARTs, SPI, P4 I/O

Continued next page

## 80C51 family (continued)

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 <sup>2</sup> C	SPI					
<b>Rx2 devices</b>														
P89CV51Rx2	64K		1K	4	•	•	1		1	32	33	B, F	PLCC44, TQFP44	
P89LV51RD2	64K		1K	4	•	•	1		1	32	33	B, F	DIP40, PLCC44, LQFP44	
P89LV51RC2	32K		1K	4	•	•	1		1	32	33	B, F	DIP40, PLCC44, LQFP44	
P89LV51RB2	16K		1K	4	•	•	1		1	32	33	B, F	DIP40, PLCC44, LQFP44	
P89V51RD2	64K		1K	4	•	•	1		1	32	40	B, F	DIP40, PLCC44, LQFP44	
P89V51RC2	32K		1K	4	•	•	1		1	32	40	B, F	DIP40, PLCC44, LQFP44	
P89V51RB2	16K		1K	4	•	•	1		1	32	40	B, F	DIP40, PLCC44, LQFP44	
P89V52X2	8K		256 B	4	•		1			32	33	B, F	DIP40, PLCC44, TQFP44	192B EEPROM

### Temperature Legend:

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

### Need devices, support, and development tools?

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