

The ARM selection guide

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. We offer an easy migration path from 32-bit solutions.

LPC1000 family

The LPC1100 series, based on the ARM Cortex-M0, is the lowest-priced 32-bit MCU solution in the market. It delivers unprecedented performance, simplicity, low power, and dramatic reductions in code size for every application. Based on the ARM Cortex-M3 core operating at up to 150 MHz, the LPC1800 and LPC1700 series are low power 32-bit microcontrollers featuring a broad range of serial interfaces and are ideal for a broad range of applications, such as eMetering, Medical, POS, and Industrial networking. The LPC1300 series, also based on the Cortex-M3 core, are very low power and includes on-chip USB drivers incorporated in ROM to greatly simplify USB implementation.

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/SPI	I ² S	ADC channels/ resolution										
LPC1800 devices																							
LPC1857	1024	136	5	6	1	2	4	2	1	2	1	8 / 10 b (x2)	1	•	80	16-32	•	150	2.0 - 3.6V	F	LQFP208, TBGA256/180	Dual Bank Flash, LCD 1024Hx768V, HS USB, SPI Flash Interface, State Config. Timer	
LPC1853	512	136	5	6	1	2	4	2	1	2	1	8 / 10 b (x2)	1	•	80	16-32	•	150	2.0 - 3.6V	F	LQFP208, TBGA256/180	Dual Bank Flash, LCD 1024Hx768V, HS USB, SPI Flash Interface, State Config. Timer	
LPC1850		200	5	6	1	2	4	2	1	2	1	8 / 10 b (x2)	1	•	80	16-32	•	150	2.0 - 3.6V	F	LQFP208, TBGA256/180	Dual Bank Flash, LCD 1024Hx768V, HS USB, SPI Flash Interface, State Config. Timer	
LPC1837	1024	136	5	6	1	2	4	2	1	2	1	8 / 10 b (x2)	1	•	80	16-32	•	150	2.0 - 3.6V	F	LQFP208, TBGA256/180	Dual Bank Flash, Hi-Speed USB, SPI Flash Interface, State Config. Timer	
LPC1833	512	136	5	6	1	2	4	2	1	2	1	8 / 10 b (x2)	1	•	80	16-32	•	150	2.0 - 3.6V	F	LQFP208, TBGA256/180	Dual Bank Flash, Hi-Speed USB, SPI Flash Interface, State Config. Timer	
LPC1830		200	5	6	1	2	4	2	1	2	1	8 / 10 b (x2)	1	•	80	16-32	•	150	2.0 - 3.6V	F	LQFP208, TBGA256/180	Dual Bank Flash, Hi-Speed USB, SPI Flash Interface, State Config. Timer	
LPC1827	1024	136	5	6		1	4	2	1	2	1	4-6 / 10 b (x2)	1		up to 64	8	•	150	2.0 - 3.6V	F	LQFP144, TBGA100	Dual Bank Flash, Hi-Speed USB, SPI Flash Interface, State Config. Timer	
LPC1825	768	136	5	6		1	4	2	1	2	1	4-6 / 10 b (x2)	1		up to 64	8	•	150	2.0 - 3.6V	F	LQFP144, TBGA100	Dual Bank Flash, Hi-Speed USB, SPI Flash Interface, State Config. Timer	
LPC1823	512	104	5	6		1	4	2	1	2	1	4-6 / 10 b (x2)	1		up to 64	8	•	150	2.0 - 3.6V	F	LQFP144, TBGA100	Dual Bank Flash, Hi-Speed USB, SPI Flash Interface, State Config. Timer	
LPC1822	512	104	5	6		1	4	2	1	2	1	4-6 / 10 b (x2)	1		up to 64	8	•	150	2.0 - 3.6V	F	LQFP144, TBGA100	Hi-Speed USB, SPI Flash Interface, State Config. Timer	
LPC1820		200	5	6		1	4	2	1	2	1	4-6 / 10 b (x2)	1		up to 64	8	•	150	2.0 - 3.6V	F	LQFP144, TBGA100	Dual Bank Flash, Hi-Speed USB, SPI Flash Interface, State Config. Timer	
LPC1817	1024	136	5	6			4	2	1	2	1	4-6 / 10 b (x2)	1		up to 64	8	•	150	2.0 - 3.6V	F	LQFP144, TBGA100	Dual Bank Flash, SPI Flash Interface, State Config. Timer	
LPC1815	768	136	5	6			4	2	1	2	1	4-6 / 10 b (x2)	1		up to 64	8	•	150	2.0 - 3.6V	F	LQFP144, TBGA100	Dual Bank Flash, SPI Flash Interface, State Config. Timer	

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/SPI	I ² S	ADC channels/resolution										
LPC1813	512	104	5	6			4	2	1		2	1	4-6 /10 b (x2)	1		up to 64	8	•	150	2.0 - 3.6V	F	LQFP144, TBGA100	Dual Bank Flash, SPI Flash Interface, State Config. Timer
LPC1812	512	104	5	6			4	2	1		2	1	4-6 /10 b (x2)	1		up to 64	8	•	150	2.0 - 3.6V	F	LQFP144, TBGA100	SPI Flash Interface, State Config. Timer
LPC1810		136	5	6			4	2	1		2	1	4-6 /10 b (x2)	1		up to 64	8	•	150	2.0 - 3.6V	F	LQFP144, TBGA100	Dual Bank Flash, SPI Flash Interface, State Config. Timer
LPC1700 devices																							
LPC1769	512 KB	64 KB	6	6	1	1	4	3	2	1	2	1	8 /12 b	1		70		•	120	3.3 V	F	LQFP100	120 MHz, 512 KB Flash with Ethernet, USB, CAN.
LPC1768	512 KB	64 KB	6	6	1	1	4	3	2	1	2	1	8 /12 b	1		70		•	100	3.3 V	F	LQFP100, TFBGA100	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		70		•	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		70		•	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		70		•	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			70		•	100	3.3 V	F	LQFP100	128 K Flash / 32 K RAM version of LPC1766; USB Device only; no I2S, no DAC.
LPC1763	256 KB	64 KB	6	6			4	3		1	2	1	8 /12 b	1		70		•	100	3.3 V	F	LQFP100	256 KB Flash without Ethernet, USB or CAN.
LPC1759	512 KB	64 KB	6	6		1	4	2	2	1	2	1	6 /12 b	1		52		•	120	3.3 V	F	LQFP80	120 MHz, 512 KB Flash with USB and CAN, 80-pin package.
LPC1758	512 KB	64 KB	6	6	1	1	4	2	2	1	2	1	6 /12 b	1		52		•	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		52		•	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		52		•	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			52		•	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			52		•	100	3.3 V	F	LQFP80	32 K Flash / 8 K RAM version of LPC1752.
LPC1300 devices																							
LPC1343	32 K	8 K	5	11**		1	1	1			1		8/10 b			28 - 42		•	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	11**		1	1	1			1		8/10 b			28		•	72	3.3 V	F	HVQFN33	16 K Flash / 4 K RAM version of LPC1343
LPC1313	32 K	8 K	5	11**			1	1			1		8/10 b			28 - 42		•	72	3.3 V	F	LQFP48, HVQFN33	Low cost, low power Cortex-M3 device
LPC1311	8 K	2 K	5	11**			1	1			1		8/10 b			28		•	72	3.3 V	F	HVQFN33	8 K Flash / 2 K RAM version of LPC1313
LPC1100 devices																							
LPC1114	32 K	4-8 K	5	11**			1	1			1-2		8/10 b			28 - 42		•	50	3.3 V	F	HVQFN33, LQFP48	Low cost, low power Cortex-M0 device
LPC1113	24 K	4-8 K	5	11**			1	1			1-2		8/10 b			28 - 42		•	50	3.3 V	F	HVQFN33, LQFP48	24 K Flash version of LPC1114
LPC1112	16 K	2-4 K	5	11**			1	1			1		8/10 b			28		•	50	3.3 V	F	HVQFN33	16 K Flash version of LPC1114
LPC1111	8 K	2-4 K	5	11**			1	1			1		8/10 b			28		•	50	3.3 V	F	HVQFN33	8 K Flash version of LPC1114
LPC11C00 devices																							
LPC11C14	32 K	8 K	5	11**			1	1	1		2		8/10 b			42		•	50	3.3 V	F	LQFP48	32K Flash version of the LPC11C12
LPC11C12	16 K	8 K	5	11**			1	1	1		2		8/10 b			42		•	50	3.3 V	F	LQFP48	Cortex-M0 MCU with on-chip CAN drivers
CSP (Chip Scale Package)																							
LPC1102	32 K	8 K	5	9**			1	1	1		1		5/10 b			11		•	50	3.3 V	F	WLCSP16	2.17 x 2.32 x 0.6 mm miniature package size

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

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
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	
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	

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LPC2000 Family (continued)

Type	Memory			Timers		Serial interfaces							Analog		LGD 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											
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		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

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	SSP	I ² S	ADC (10-bit) No. of channels											
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.
LPC2926	256 KB	56 KB	16	7	24			1	4	2	2	2	3		24			104	•	•	125	1.8 V	3.3 V	F	LQFP144	LPC2927 with 256 KB Flash.
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

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	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	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	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	
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

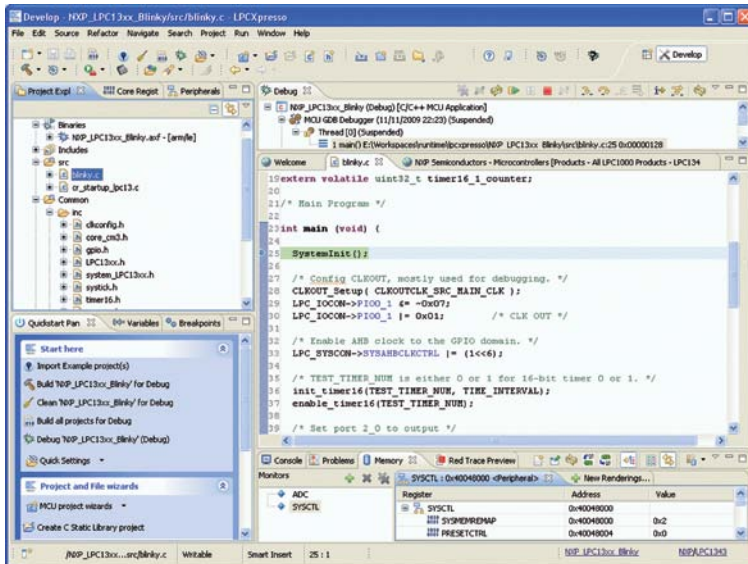
To save time-to-market for applications that use an LCD screen, these ARM922T-based microcontrollers are equipped with an LCD controller. Supported by a comprehensive set of software and hardware design tools, the LH7A series makes it easy to create everything from cost-conscious consumer systems to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



LPCXpresso:

LPCXpresso™ is a low-cost development platform available from NXP. It supports NXP's ARM-based LPC microcontrollers. The platform is comprised of a simplified Eclipse-based IDE and low-cost target boards which include an attached JTAG debugger. LPCXpresso is an end-to-end solution enabling embedded engineers to develop their applications from initial evaluation to final production.



LPCXpresso IDE:

LPCXpresso's IDE is a highly-integrated software development environment for NXP's LPC microcontrollers, which includes all the tools necessary to develop high-quality software solutions in a timely and cost effective manner. LPCXpresso is based on Eclipse with many LPC-specific enhancements. It also features the latest version of the industry standard GNU tool chain with optimized C libraries providing professional quality tools at low cost. The LPCXpresso IDE can build an executable of any size with full code optimization, and it supports a download limit of 128 KB after registration.

LPC-Link:

The JTAG/SWD debugger portion of an LPCXpresso board is called the LPC-Link™. The LPC-Link is equipped with a 10-pin JTAG header, and it seamlessly interfaces with a target via USB (the USB interface and other debug features are provided by NXP's ARM9 based LPC3154 MCU). Cutting the traces between the LPC-link and the target will make the LPC-Link a stand-alone JTAG debugger. This enables the LPCXpresso platform to be connected to an external target and used to develop for a wide variety of NXP's Cortex-M0, Cortex-M3, and ARM7/9 based applications.

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