

NXP Microcontrollers Selection Guide

NXP LPC family of microcontrollers is changing the landscape for embedded applications. Featuring award-winning innovations in connectivity, flexibility, level of Integration, packaging, performance, power consumption, security, ease-of-use, and more, NXP's LPC family provides developers a scalable continuum of 32-bit ARM based microcontrollers with both software and hardware reusability and portability. NXP's microcontrollers include the latest 32-bit Cortex-M0+, Cortex-M0, Cortex-M3, and Cortex-M4 based product cores and deliver high performance, low power consumption, and many peripheral options. Surrounded by a rapidly growing eco-system of tools, community and support, LPC product are designed to help you easily transition from concept to production.

LPC Go

NXP's LPC Go microcontrollers feature unprecedented performance, simplicity, and low-power. These products, based on 32-bit ARM cores, are the most cost effective series compared to 8/16-bit solutions and provide a dramatic reduction in code size for every application. LPC Go products can reduce your system cost and power consumption and are easy to use providing faster time-to-market. This category includes Cortex-M0+, Cortex-M0, Cortex-M3 and ARM7 based microcontrollers.

Type	Memory			Timers			Serial Interfaces							Analog		Comparator	LCD controller	SD/MMC	I/O pins	External bus interface	RTC	Max freq. (MHz)	CPU Voltage (V)	I/O voltage (V)	Temp. range options	Package	Comment/Special features
	Flash (KB)	RAM (KB)	EEPROM (KB)	Standard Timers†	State config	PWM channels‡	Ethernet	USB	UART	I²C	CAN	SPI/FI	SSP/SPI	I²S	ADC channels/ resolution												
LPC800 devices																											
LPC810	4	1		4**	1	4*			2	1			1			1			6			30	1.8 - 3.6	F	DIP8	On-chip APIs (USART, I2C, power profile), 1k Byte Flash sector, 64 page erase/program, Switch Matrix, GPIO-Single cycle I/O access, pattern matching engine , I/O 5V tolerant	
LPC811	8	2		4**	1	4*			2	1			1			1			14			30	1.8 - 3.6	F	TSSOP16	On-chip APIs (USART, I2C, power profile), 1k Byte Flash sector, 64 page erase/program, Switch Matrix, GPIO-Single cycle I/O access, pattern matching engine , I/O 5V tolerant	
LPC812	16	4		4**	1	4*			3	1			2			1			14			30	1.8 - 3.6	F	TSSOP16	On-chip APIs (USART, I2C, power profile), 1k Byte Flash sector, 64 page erase/program, Switch Matrix, GPIO-Single cycle I/O access, pattern matching engine , I/O 5V tolerant	
LPC812	16	4		4**	1	4*			2	1			1			1			18			30	1.8 - 3.6	F	SO20	On-chip APIs (USART, I2C, power profile), 1k Byte Flash sector, 64 page erase/program, Switch Matrix, GPIO-Single cycle I/O access, pattern matching engine , I/O 5V tolerant	
LPC812	16	4		4**	1	4*			3	1			2			1			18			30	1.8 - 3.6	F	TSSOP20	On-chip APIs (USART, I2C, power profile), 1k Byte Flash sector, 64 page erase/program, Switch Matrix, GPIO-Single cycle I/O access, pattern matching engine , I/O 5V tolerant	
LPC1100(X)L devices																											
LPC1102	32	8		5		9			1				1		5/10 b				11			50	3.3	F	WLCSP16	2.17 x 2.32 x 0.6 mm miniture package size	
LPC1104	32	8		5		9			1				1		5/10 b				13			50	3.3	F	WLCSP16	2.17 x 2.32 x 0.6 mm miniature package size	
LPC1115	64	8		5		11			1	1			2		8/10 b				42			50	3.3	F	LQFP48	64K Flash version of the LPC1114	
LPC1114	32	4-8		5		11			1	1			1-2		8/10 b				28/42			50	3.3	F	TSSOP28, DIP28, HVQFN33, LQFP48	On-chip power profile, I/O 5V tolerant; Both 7 mm x 7 mm and 5 mm x 5 mm HVQFN33 available	
LPC1113	24	4-8		5		11			1	1			1-2		8/10 b				28/42			50	3.3	F	HVQFN33, LQFP48	On-chip power profile, I/O 5V tolerant	
LPC1112	16	2-4		5		11			1	1			1		8/10 b				28			50	3.3	F	TSSOP20, TSSOP28, HVQFN24/33	On-chip power profile, I/O 5V tolerant; Both 7 mm x 7 mm and 5 mm x 5 mm HVQFN33 available	
LPC1111	8	2-4		5		11			1	1			1		8/10 b				28			50	3.3	F	TSSOP20, HVQFN33	On-chip power profile, I/O 5V tolerant	
LPC1110	4	1		5		11			1	1			1		5/10 b				16			50	3.3	F	SO20	On-chip power profile, I/O 5V tolerant	

*SCT peripheral can be configured as additional timers and/or PWM channels **MRT (Multi rate timer), Self wake-up timer, SCT can be configured as additional timer

+ Includes Watchdog timer. ** Using timers.

Temp. range options

F= -40 to +85 C J= -40 to +105 C



LPC Go Cont'd

Type	Memory			Timers			Serial interfaces							Analog		Comparator	LCD controller	SD/MMC	I/O pins	External bus interface	RTC	Max freq. (MHz)	CPU Voltage (V)	I/O voltage (V)	Temp. range options	Package	Comment/Special features
	Flash (KB)	RAM (KB)	EEPROM (KB)	Standard Timers*	State config timer	PWM channels**	Ethernet	USB	UART	I ² C	CAN	SPI/FI	SSP/SPI	I ² S	ADC channels/ resolution												
LPC1100LV devices																											
LPC1112LV	16	2/4		5		11			1	1			1		6/8 b			20/27			50	1.95	F	HVQFN24/33	Available dual 1.8V and 3.3V VDD for HVQFN33 package		
LPC1114LV	32	4/8		5		11			1	1			1		6/8 b			20/27			50	1.95	F	HVQFN24/33	Available dual 1.8V and 3.3V VDD for HVQFN33 package		
LPC11E00 devices																											
LPC11E14	32	10	4	5		11**			1	1			2		8/10 b			28/40/54			50	3.3	F	LQFP64, LQFP48, HVQFN33	ROM Drivers- Power Profiles, 32-b Divide Libraries, EEPROM		
LPC11E13	24	8	2	5		11**			1	1			2		8/10 b			40			50	3.3	F	LQFP48	ROM Drivers- Power Profiles, 32-b Divide Libraries, EEPROM		
LPC11E12	16	6	1	5		11**			1	1			2		8/10 b			40			50	3.3	F	LQFP48	ROM Drivers- Power Profiles, 32-b Divide Libraries, EEPROM		
LPC11E11	8	4	512b	5		11**			1	1			2		8/10 b			28			50	3.3	F	HVQFN33	ROM Drivers- Power Profiles, 32-b Divide Libraries, EEPROM		
LPC11E36	96	12	4	4		11**			1	1			2		8/10 b			28/54			50	3.3	F	LQFP64, HVQFN33	ROM Drivers- Power Profiles, 32-b Divide Libraries, EEPROM		
LPC11E37	128	12	4	4		11**			1	1			2		8/10 b			40/54			50	3.3	F	LQFP48, LQFP64	ROM Drivers- Power Profiles, 32-b Divide Libraries, EEPROM		
LPC1200 devices																											
LPC1227	128	8		6		13**			2	1			1		8/10 b			39/55		1	30	3.3	F	LQFP48, LQFP64	Additional DMA, CRC, 2x comparators, RS-48S		
LPC1226	96	8		6		13**			2	1			1		8/10 b			39/55		1	30	3.3	F	LQFP48, LQFP64	Additional DMA, CRC, 2x comparators, RS-48S		
LPC1225	64/80	8		6		13**			2	1			1		8/10 b			39/55		1	30	3.3	F	LQFP48, LQFP64	Additional DMA, CRC, 2x comparators, RS-48S		
LPC1224	32/48	4		6		13**			2	1			1		8/10 b			39/55		1	30	3.3	F	LQFP48, LQFP64	Additional DMA, CRC, 2x comparators, RS-48S		
LPC1300 devices																											
LPC1317	64	10	4	5		11**			1	1			2		8/12 b			28-51			72	3.3	F	LQFP64, LQFP48, HVQFN33	USART, Smart Card Interface, EEPROM Drivers and Power Profiles in ROM		
LPC1316	48	8	4	5		11**			1	1			2		8/12 b			28-51			72	3.3	F	LQFP64, LQFP48, HVQFN33	USART, Smart Card Interface, EEPROM Drivers and Power Profiles in ROM		
LPC1315	32	8	2	5		11**			1	1			2		8/12 b			28-51			72	3.3	F	LQFP64, LQFP48, HVQFN33	USART, Smart Card Interface, EEPROM Drivers and Power Profiles in ROM		
LPC1313	32	8		5		11**			1	1			1		8/10 b			28-42			72	3.3	F	LQFP48, HVQFN33	Low-cost, low-power Cortex-M3 device		
LPC1311	8	4		5		11**			1	1			1		8/10 b			28			72	3.3	F	HVQFN33	8K Flash / 2K RAM version of LPC1313		
LPC2100 devices																											
LPC2106/01	128	64		5		6			2	1			1					32			60	1.8	3.3	F	LQFP48	64K RAM, 128K Flash	
LPC2105/01	128	32		5		6			2	1			1					32			60	1.8	3.3	F	LQFP48	32K RAM version of LPC2106/01	
LPC2104/01	128	16		5		6			2	1			1					32			60	1.8	3.3	F	LQFP48	16K RAM version of LPC2106/01	
LPC2103	32	8		6		14**			2	2			2		8/10 b			32			70	1.8	3.3	F	LQFP48, HVQFN48	Lowest cost, lowest power, ADC	
LPC2102	16	4		6		14**			2	2			2		8/10 b			32			70	1.8	3.3	F	LQFP48, HVQFN48	16K Flash, 4K RAM version of LPC2103	
LPC2101	8	2		6		14**			2	2			2		8/10 b			32			70	1.8	3.3	F	LQFP48	8K Flash, 2K RAM version of LPC2103	

* Includes Watchdog timer. ** Using timers.

Temp. range options

F= -40 to +85 C J= -40 to +105 C

LPC Connect

NXP's LPC Connect microcontrollers add point-to-point connectivity to LPC Go products. Adding a USB or CAN interface to your system has never been easier. LPC Connect products combine these plug-and-play interfaces with software integrated drivers in on-chip ROM. Get to market faster with these easy-to-use connected microcontrollers. This category includes Cortex-M0, Cortex-M3 and ARM7 based microcontrollers.

Type	Memory			Timers		Serial Interfaces							Analog		LCD controller	SD/MMC	I/O pins	External bus interface	RTC	Max freq. (MHz)	CPU Voltage (V)	I/O voltage (V)	Temp. range options	Package	Comment/Special features
	Flash (KB)	RAM (KB)	EEPROM (KB)	Standard Timers*	PWM channels*	Ethernet	USB	UART	I ² C	CAN	SPI/FI	SSP/SPI	I ² S	ADC channels/ resolution											
LPC11D00 devices																									
LPC11D14	32	8		5	11**			1	1			2		8/10 b			42		50	3.3	F	LQFP100	LPC1114 with integrated 40x 4 segment LCD driver		
LPC12D00 devices																									
LPC12D27	128	8		4	13**			2	1			2		8/10 b			39	1	50	3.3	F	LQFP100	LPC1227 with integrated 40 x 4 segment LCD driver		
LPC11U10 devices																									
LPC11U14	32	6		5	11**		1	1	1			2		8/10 b			26/40		50	3.3	F	HVQFN33, LQFP48, TFBGA48	32K Flash version of LPC11U12		
LPC11U13	24	6		5	11**		1	1	1			2		8/10 b			40		50	3.3	F	LQFP48	24K Flash version of LPC11U12		
LPC11U12	16	6		5	11**		1	1	1			2		8/10 b			26/40		50	3.3	F	LQFP48, HVQFN33	Low cost, low-power Cortex-M0 device with USB, on-chip power profiles		
LPC11U20 devices																									
LPC11U24	32	10	4	5	11**		1	1	1			2		8/10 b			26/40/54		50	3.3	F	LQFP64, LQFP48, HVQFN33	ROM Drivers- USB drivers (HID, MSC, CDC), Power Profiles, 32-bit Divide Libraries		
LPC11U24	32	8	2	5	11**		1	1	1			2		8/10 b			26/40		50	3.3	F	HVQFN33 (5x5), TFBGA48, LQFP48	ROM Drivers- USB drivers (HID, MSC, CDC), Power Profiles, 32-bit Divide Libraries		
LPC11U23	24	8	1	5	11**		1	1	1			2		8/10 b			40		50	3.3	F	LQFP48	ROM Drivers- USB drivers (HID, MSC, CDC), Power Profiles, 32-bit Divide Libraries		
LPC11U30 devices																									
LPC11U37	128	10/12	4	5	11**		1	1	1			2		8/10 b			40/54		50	3.3	F	LQFP48/64	On-chip power profile, I/O 5V tolerant, 256 Byte Flash sector		
LPC11U36	96	10/12	4	5	11**		1	1	1			2		8/10 b			40/54		50	3.3	F	LQFP48/64	On-chip power profile, I/O 5V tolerant, 256 Byte Flash sector		
LPC11U35	64	10/12	4	5	11**		1	1	1			2		8/10 b			40/54		50	3.3	F	HVQFN33, LQFP48/64, TFBGA48	On-chip power profile, I/O 5V tolerant, 256 Byte Flash sector, both 7mm x 7mm and 5mm x 5mm HVQFN33 available		
LPC11U34	40/48	8/10	4	5	11**		1	1	1			2		8/10 b			26/40		50	3.3	F	HVQFN33, LQFP48	On-chip power profile, I/O 5V tolerant, 256 Byte Flash sector		
LPC11C00 devices																									
LPC11C24	32	8		5	11**			1	1	1		2		8/10 b			36		50	3.3	F	LQFP48	32K Flash version of LPC11C22		
LPC11C22	16	8		5	11**			1	1	1		2		8/10 b			36		50	3.3	F	LQFP48	Cortex-M0 MCU with on-chip CAN drivers and integrated CAN transceiver		
LPC11C14	32	8		5	11**			1	1	1		2		8/10 b			42		50	3.3	F	LQFP48	32K Flash version of LPC11C12		
LPC11C12	16	8		5	11**			1	1	1		2		8/10 b			42		50	3.3	F	LQFP48	Cortex-M0 MCU with on-chip CAN drivers		
LPC11A00 devices																									
LPC11A14	32	8	4	5	11**			1	1			2		8/10 b	1		28/42		50	3.3	F	HVQFN33, LQFP48	Comparator, VREF, UVLO protection		
LPC11A13	24	6	2	5	11**			1	1			2		8/10 b	1		28		50	3.3	F	HVQFN33	Comparator, VREF, UVLO protection		
LPC11A12	16	4	1	5	11**			1	1			2		8/10 b	1		28/42		50	3.3	F	HVQFN33, LQFP48	Comparator, VREF, UVLO protection		
LPC11A11	8	2	512b	5	11**			1	1			2		8/10 b	1		28		50	3.3	F	HVQFN33	Comparator, VREF, UVLO protection		
LPC11A04	32	8	4	5	11**			1	1			1		8/10 b	1		18		50	3.3	F	WLCSP20	Miniature package size, Comparator, VREF, UVLO protection		
LPC11A02	16	4	2	5	11**			1	1			1		8/10 b	1		18		50	3.3	F	WLCSP20	Comparator, VREF, UVLO protection		
LPC1340 devices																									
LPC1347	64	12	4	5	11**		1	1	1			2		8/12 b			28-51		72	3.3	F	LQFP64, LQFP48, HVQFN33	FS USB Device, USB & EEPROM drivers and Power Profiles in ROM, USART, Smart Card Interface		
LPC1346	48	10	4	5	11**		1	1	1			2		8/12 b			28-51		72	3.3	F	LQFP64, LQFP48, HVQFN33	FS USB Device, USB & EEPROM drivers and Power Profiles in ROM, USART, Smart Card Interface		
LPC1345	32	10	2	5	11**		1	1	1			2		8/12 b			28-51		72	3.3	F	LQFP64, LQFP48, HVQFN33	FS USB Device, USB & EEPROM drivers and Power Profiles in ROM, USART, Smart Card Interface		
LPC1343	32	8		5	11**		1	1	1			1		8/10 b			28-42		72	3.3	F	LQFP48, HVQFN33	Low-cost, low-power Cortex-M3 device with FS USB device interface and pre-loaded USB drivers		
LPC1342	16	4		5	11**		1	1	1			1		8/10 b			28		72	3.3	F	HVQFN33, LQFP48	16K Flash / 4K RAM version of LPC1343		

** Using timers.

Temp. range options

F= -40 to +85 C J= -40 to +105 C

LPC Connect Cont'd

Type	Memory			Timers		Serial Interfaces							Analog		LCD controller	SD/MMC	I/O pins	External bus interface	RTC	Max freq. (MHz)	CPU Voltage (V)	I/O voltage (V)	Temp. range options	Package	Comment/Special features
	Flash (KB)	RAM (KB)	EEPROM (KB)	Standard Timers*	PWM channels*	Ethernet	USB	UART	I ² C	CAN	SPI/I	SSP/SPI	I ² S	ADC channels/ resolution											
LPC2130 devices																									
LPC2138/01	512	32		5	6		2	2			2		2x8	1		47		•	60	3.3	F	LQFP64, HVQFN64	Dual 8-ch. 10-bit ADC, BOD, POR, 32-kHz XTAL input, VBAT, fast I/O		
LPC2136/01	256	32		5	6		2	2			2		2x8	1		47		•	60	3.3	F	LQFP64	256K Flash version of LPC2138/01		
LPC2134/01	128	16		5	6		2	2			2		2x8	1		47		•	60	3.3	F	LQFP64	128K Flash, 16K RAM version of LPC2138/01		
LPC2132/01	64	16		5	6		2	2			2		8	1		47		•	60	3.3	F	LQFP64, HVQFN64	64K Flash, 16K RAM version of LPC2138/01, single ADC		
LPC2131/01	32	8		5	6		2	2			2		8			47		•	60	3.3	F	LQFP64	32K Flash, 8K RAM version of LPC2138/01, single ADC, no DAC		
LPC2140 devices																									
LPC2148	512	40		5	6		1	2	2			2	8+6/10 b	1		45		•	60	3.3	F	LQFP64	LPC2138 plus USB 2.0 FS device		
LPC2146	256	40		5	6		1	2	2			2	8+6/10 b	1		45		•	60	3.3	F	LQFP64	LPC2136 plus USB 2.0 FS device		
LPC2144	128	16		5	6		1	2	2			2	8+6/10 b	1		45		•	60	3.3	F	LQFP64	LPC2134 plus USB 2.0 FS device		
LPC2142	64	16		5	6		1	2	2			2	6/10 b	1		45		•	60	3.3	F	LQFP64	LPC2132 plus USB 2.0 FS device		
LPC2141	32	8		5	6		1	2	2			2	6/10 b			45		•	60	3.3	F	LQFP64	LPC2131 plus USB 2.0 FS device		

* SCT peripheral can be configured as additional timers and/or PWM channels.

** Using timers.

LPC ConnectPlus

NXP's LPC ConnectPlus microcontrollers offer a broad range of interfaces and the bandwidth for running these multiple communication protocols simultaneously. Connect to USB plus CAN plus Ethernet plus LCD and more. LPC ConnectPlus products are offered in a wide range of packages, memories and peripherals and feature pin-compatibility between cores. This category includes Cortex-M3, Cortex-M4 and ARM7 based microcontrollers.

Type	Memory			Timers			Serial Interfaces							Analog		LCD controller	SD/MMC	I/O pins	External bus interface	RTC	Max freq. (MHz)	CPU Voltage (V)	I/O voltage (V)	Temp. range options	Package	Comment/Special features
	Flash (KB)	RAM (KB)	EEPROM (KB)	Standard Timers*	PWM channels*	State Config. Timer	Ethernet	USB	UART	I ² C	CAN	SPIFI	SSSP/SPI	I ² S	ADC channels/ resolution											
LPC1700 devices																										
LPC1788	512	96	4	5	6		1	1	5	3	2		3	1	8/12 b	1	1	1	109-165	8-32	1	120	3.3	F	LQFP208, TFBGA208, TFBGA180, LQFP144	USB host/OTG/device, QEI, 8/16/32-bit External Memory Controller (depends on package)
LPC1787	512	96	4	5	6			1	5	3	2		3	1	8/12 b	1	1	1	165	32	1	120	3.3	F	LQFP208	USB host/OTG/device, QEI
LPC1786	256	80	4	5	6		1	1	5	3	2		3	1	8/12 b	1	1	1	165	32	1	120	3.3	F	LQFP208	USB host/OTG/device, QEI
LPC1785	256	80	4	5	6			1	5	3	2		3	1	8/12 b	1	1	1	165	32	1	120	3.3	F	LQFP208	USB Host/OTG/device
LPC1778	512	96	4	5	6		1	1	5	3	2		3	1	8/12 b	1		1	109-165	8-32	1	120	3.3	F	LQFP208, TFBGA208, TFBGA180, LQFP144	USB host/OTG/device, QEI, 8/16/32-bit External Memory Controller (depends on package)
LPC1777	512	96	4	5	6			1	5	3	2		3	1	8/12 b	1		1	165	32	1	120	3.3	F	LQFP208	USB host/OTG/device, QEI
LPC1776	256	80	4	5	6		1	1	5	3	2		3	1	8/12 b	1		1	141-165	16-32	1	120	3.3	F	LQFP208, TFBGA180	USB host/OTG/device, QEI
LPC1774	128	40	2	5	6			1	4	3	2		3	1	8/12 b	1			109-165	8-32	1	120	3.3	F	LQFP208, LQFP144	USB Device Only, 8/32-bit External Memory Controler (depends on package)
LPC1773	128	40	2	5	6			1	4	3	2	1	3	1	8/12 b	1			109-165		1	120	3.3	F	LQFP144	USB Device Only
LPC1769	512	64		6	6		1	1	4	3	2		2	1	8/12 b	1			70		1	120	3.3	F	LQFP100	FS USB Host/OTG/Device, QEI, Motor Control PWM
LPC1768	512	64		6	6		1	1	4	3	2		2	1	8/12 b	1			70		1	100	3.3	F	LQFP100, TFBGA100	FS USB Host/OTG/Device, QEI, Motor Control PWM
LPC1767	512	64		6	6		1		4	3			2	1	8/12 b	1			70		1	100	3.3	F	LQFP100	QEI, Motor Control PWM
LPC1766	256	64		6	6		1	1	4	3	2		2	1	8/12 b	1			70		1	100	3.3	F	LQFP100	FS USB Host/OTG/Device, QEI, Motor Control PWM
LPC1765	256	64		6	6			1	4	3	2		2	1	8/12 b	1			70		1	100	3.3	F	LQFP100, TFBGA100	FS USB Host/OTG/Device, QEI, Motor Control PWM
LPC1764	128	32		6	6		1	1	4	3	2		2		8/12 b				70		1	100	3.3	F	LQFP100	FS USB Host/OTG/Device, QEI, Motor Control PWM
LPC1763	256	64		6	6				4	3			2	1	8/12 b	1			70		1	100	3.3	F	LQFP100	QEI, Motor Control PWM
LPC1759	512	64		6	6			1	4	3	2		2	1	6/12 b	1			52		1	120	3.3	F	LQFP80	FS USB Host/OTG/Device, QEI, Motor Control PWM
LPC1758	512	64		6	6		1	1	4	3	2		2	1	6/12 b	1			52		1	100	3.3	F	LQFP80	FS USB Host/OTG/Device, QEI, Motor Control PWM
LPC1756	256	32		6	6			1	4	3	2		2	1	6/12 b	1			52		1	100	3.3	F	LQFP80	FS USB Host/OTG/Device, QEI, Motor Control PWM
LPC1754	128	32		6	6			1	4	3	1		2		6/12 b	1			52		1	100	3.3	F	LQFP80	FS USB Host/OTG/Device, QEI, Motor Control PWM
LPC1752	64	16		6	6			1	4	3	1		2		6/12 b				52		1	100	3.3	F	LQFP80	FS USB Host/OTG/Device, QEI, Motor Control PWM
LPC1751	32	8		6	6			1	4	3	1		2		6/12 b				52		1	100	3.3	F	LQFP80	FS USB Host/OTG/Device, QEI, Motor Control PWM

* SCT peripheral can be configured as additional timers and/or PWM channels. ** SGPIO peripheral can be configured as additional I²S, I²C, UART and/or SSP channels.

Temp. range options

F= -40 to +85 C J= -40 to +105 C

LPC ConnectPlus Cont’d

Type	M0 Coprocessor	Floating Pt Unit	Memory			Timers		Serial Interfaces							Analog		LCD controller	SD/MMC	I/O pins	External bus interface	RTC	Max freq. (MHz)	CPU Voltage (V)	I/O voltage (V)	Temp. range options	Package	Comment/Special features	
			Flash (KB)	RAM (KB)	EEPROM (KB)	Standard Timers*	PWM channels*	State Config. Timer	Ethernet	USB	UART	I ² C	CAN	SPI/I	SSP/SPI	I ² S												ADC channels/ resolution
LPC2300 devices																												
LPC2388			512	98		6	6		1	1	4	3	2		3	1	8/10 b	1		•	104	8	•	72	3.3	F	LQFP144	LPC2378 with 98K SRAM and USB host/OTG/device
LPC2387			512	98		6	6		1	1	4	3	2		3	1	6/10 b	1		•	70		•	72	3.3	F	LQFP100	LPC2368 with 98K SRAM and USB host/OTG/device
LPC2378			512	58		6	6		1	1	4	3	2		3	1	8/10 b	1		•	104	8	•	72	3.3	F	LQFP144	On-chip 4 MHz RC-Osc, GP DMA, RTC w/ 2K batt. RAM USB 2.0 FS device w/ PHY, DMA and 4K RAM; UART 3 w/ IrDA; MiniBus (8-bit)
LPC2377			512	58		6	6		1		4	3			3	1	8/10 b	1		•	104	8	•	72	3.3	F	LQFP144	LPC2378 without USB or CAN
LPC2368			512	58		6	6		1	1	4	3	2		3	1	6/10 b	1		•	70		•	72	3.3	F	LQFP100, TFBGA100	100-pin version of LPC2378 with USB device, no external bus
LPC2367			512	58		6	6		1		4	3			3	1	6/10 b	1		•	70		•	72	3.3	F	LQFP100	LPC2368 without USB or CAN
LPC2366			256	58		6	6		1	1	4	3	2		3	1	6/10 b	1			70		•	72	3.3	F	LQFP100	256K Flash version of LPC2368 with USB device, no SD/MMC
LPC2365			256	58		6	6		1		4	3			3	1	6/10 b	1			70		•	72	3.3	F	LQFP100	LPC2366 without USB or CAN
LPC2364			128	34		6	6		1	1	4	3	2		3	1	6/10 b	1			70		•	72	3.3	F,H	LQFP100 TFBGA100	128K Flash / 34K RAM version of LPC2368 with USB device, no SD/MMC
LPC2362			128	58		6	6		1	1	4	3	2		3	1	6/10 b	1			70		•	72	3.3	F	LQFP100	LPC2364 with USB host/OTG/device and more RAM
LPC2361			64	34		6	6			1	4	3	2		3	1	6/10 b	1			70		•	72	3.3	F	LQFP100	64K Flash, USB host/OTG/device and CAN controller

Temp. range options
F= -40 to +85 C J= -40 to +105 C

LPC ConnectPlus cont'd

Type	M0 Coprocessor	Floating Pt Unit	Memory			Timers		Serial Interfaces							Analog		LCD controller	SD/MMC	I/O pins	External bus interface	RTC	Max freq. (MHz)	CPU Voltage (V)	I/O voltage (V)	Temp. range options	Package	Comment/Special features	
			Flash (KB)	RAM (KB)	EEPROM (KB)	Standard Timers	PWM channels	State Config. Timer	Ethernet	USB	UART	I ² C	CAN	SPI/I	SSP/SPI	I ² S												ADC channels/ resolution
LPC2400 devices																												
LPC2478			512	98		6	12		1	2	4	3	2		2	1	8/10 b	1	•	•	160	32	•	72	3.3	F	LPFP208, TFBGA208	LPC2468 with XGA LCD controller, USB device/host/OTG
LPC2470				98		6	12		1	2	4	3	2		2	1	8/10 b	1	•	•	160	32	•	72	3.3	F	LPFP208, TFBGA208	LPC2468 with XGA LCD controller, USB device/host/OTG
LPC2468			512	98		6	12		1	2	4	3	2		2	1	8/10 b	1		•	160	32	•	72	3.3	F	LPFP208, TFBGA208	On-chip 4-MHz RC-Osc., GP DMA, RTC w/ 2K batt. RAM 2 PWM blocks; USB 2.0 FS host/OTG/device, DMA and 4K RAM; UART 3 w/ IrDA; 32-bit ext. bus
LPC2460				98		6	12		1	2	4	3	2		2	1	8/10 b	1		•	160	32	•	72	3.3	F	LPFP208, TFBGA208	Flashless LPC2468
LPC2458			512	98		6	12		1	2	4	3	2		2	1	8/10 b	1		•	136	16	•	72	3.3	F	TFBGA180	LPC2468 with 16-bit external memory interface, USB device/host/OTG
LPC2420				82		6	12			2	4	3			2	1	8/10 b	1		•	160	32	•	72	3.3	F	LPFP208, TFBGA208	Flashless USB device/host/OTG controller, USB device/host/OTG
LPC4000 devices																												
LPC4088		1	512	96	4	5	6		1	1	5	3	2	1	3	1	8/12 b	1	1	1	109-165	8-32	1	120	3.3	F	LQFP208, TFBGA208, TFBGA180, LQFP144	USB host/OTG/device, QEI, 8/16/32-bit External Memory Controller (depends on package), 2 analog comparators
LPC4078		1	512	96	4	5	6		1	1	5	3	2	1	3	1	8/12 b	1		1	53-165	8-32	1	120	3.3	F	LQFP208, TFBGA208, TF-BGA180, LQFP144 , LQFP80	USB host/OTG/device, QEI, 8/16/32-bit External Memory Controller (depends on package), 2 analog comparators
LPC4076		1	256	80	4	5	6		1	1	5	3	2	1	3	1	8/12 b	1		1	109-140	8-16	1	120	3.3	F	TFBGA180, LQFP144	USB host/OTG/device, QEI, 8/16-bit External Memory Controller (depends on package) , 2 analog comparators
LPC4074			128	40	2	5	6			1	4	3	2	1	3	1	8/12 b	1			53-109		1	120	3.3	F	LQFP144, TFBGA80	USB device, 8-bit External Memory Controller
LPC4072			64	32	2	5	6			1	4	3	2	1	3	1	8/12 b	1			53		1	120	3.3	F	TFBGA80, LQFP80	USB device, 8-bit External Memory Controller

Temp. range options
F= -40 to +85 C J= -40 to +105 C

LPC ConnectTurbo

NXP’s LPC ConnectTurbo microcontrollers include the Industry’s fastest Cortex-M Microcontrollers. This turbo performance is combined with advanced peripherals for solving complex design challenges. LPC ConnectTurbo innovations include Hi-speed USB with integrated Hi-speed PHY, NXP’s unique SPI Flash Interface (SPIFI), State Configurable Timer (SCT), Serial GPIO and an industry first dual-core Cortex-M4/M0. All this integration reduces system cost and enables unprecedented embedded performance. This category includes Cortex-M3, Cortex-M4 and ARM9 based microcontrollers.

Type	M0 Coprocessor	Floating Pt Unit	Memory			Timers			Serial Interfaces							Analog		LCD controller	SD/MMC	I/O pins	External bus interface	RTC	Max freq. (MHz)	CPU Voltage (V)	I/O voltage (V)	Temp. range options	Package	Comment/Special features	
			Flash (KB)	RAM (KB)	EEPROM (KB)	Standard Timers*	PWM channels*	State Config. Timer	Ethernet	USB	UART**	I2C**	CAN	SPI/I	SSP/SPI**	I2S**	SGPIO												ADC channels/ resolution
LPC1800 devices																													
LPC1857			1024	136	16	5	6	1	1	2	4	2	2	1	3	2		8/10 b (x2)	1	1	1	146	16-32	1	180	3.3	F and J	LQFP208, LBGA256	Dual-bank Flash, 1024x768 Color LCD Controller, HS USB PHY, SPIFI, SCT, RTC, QEI.
LPC1853			512	136	16	5	6	1	1	2	4	2	2	1	3	2		8/10 b (x2)	1	1	1	146	16-32	1	180	3.3	F and J	LQFP208, LBGA256	Dual-bank Flash, 1024x768 Color LCD Controller, HS USB PHY, SPIFI, SCT, RTC, QEI.
LPC1850				200		5	6	1	1	2	4	2	2	1	3	2		8/10 b (x2)	1	1	1	146	16-32	1	180	3.3	F	LQFP208, LBGA256/ TFBGA180	1024x768 Color LCD Controller, HS USB PHY, SPIFI, SCT, RTC, QEI.
LPC1837			1024	136	16	5	6	1	1	2	4	2	2	1	3	2		8/10 b (x2)	1		1	146	16-32	1	180	3.3	F and J	LQFP144, LBGA256/ 100LQFP	Dual-bank Flash, HS USB PHY, SPIFI, SCT, RTC, QEI.
LPC1833			512	136	16	5	6	1	1	2	4	2	2	1	3	2		8/10 b (x2)	1		1	146	16-32	1	180	3.3	F and J	LQFP144, LBGA256/ 100LQFP	Dual-bank Flash, HS USB PHY, SPIFI, SCT, RTC, QEI.
LPC1830				200		5	6	1	1	2	4	2	2	1	3	2		8/10 b (x2)	1		1	146	16-32	1	180	3.3	F	LQFP144, LBGA256/ TFBGA180/100	HS USB PHY, SPIFI, SCT, RTC, QEI.
LPC1827			1024	136	16	5	6	1		1	4	2	2	1	3	2		8/10 b (x2)	1		1	up to 64	8-16	1	180	3.3	J	LQFP144, TFBGA100	Dual-bank Flash, HS USB PHY, SPIFI, SCT, RTC, QEI.
LPC1825			768	136	16	5	6	1		1	4	2	2	1	3	2		8/10 b (x2)	1		1	up to 64	8-16	1	180	3.3	J	LQFP144, TFBGA100	Dual-bank Flash, HS USB PHY, SPIFI, SCT, RTC, QEI.
LPC1823			512	104	16	5	6	1		1	4	2	2	1	3	2		8/10 b (x2)	1		1	up to 64	8-16	1	180	3.3	J	LQFP144, TFBGA100	Dual-bank Flash,HS USB PHY, SPIFI, SCT, RTC, QEI.
LPC1822			512	104	16	5	6	1		1	4	2	2	1	3	2		8/10 b (x2)	1		1	up to 64	8-16	1	180	3.3	J	LQFP144, TFBGA100	HS USB PHY, SPIFI, SCT, RTC, QEI.
LPC1820				168		5	6	1		1	4	2	2	1	3	2		8/10 b (x2)	1		1	up to 64	8-16	1	180	3.3	F	LQFP144, TFBGA100	HS USB PHY, SPIFI, SCT, RTC, QEI.
LPC1817			1024	136	16	5	6	1			4	2	2	1	3	2		8/10 b (x2)	1		1	up to 64	8-16	1	180	3.3	J	LQFP144, TFBGA100	Dual-bank Flash, SPIFI, SCT, RTC, QEI.
LPC1815			768	136	16	5	6	1			4	2	2	1	3	2		8/10 b (x2)	1		1	up to 64	8-16	1	180	3.3	J	LQFP144, TFBGA100	Dual-bank Flash, SPIFI, SCT, RTC, QEI.
LPC1813			512	104	16	5	6	1			4	2	2	1	3	2		8/10 b (x2)	1		1	up to 64	8-16	1	180	3.3	J	LQFP144, TFBGA100	Dual-bank Flash, SPIFI, SCT, RTC, QEI.
LPC1812			512	104	16	5	6	1			4	2	2	1	3	2		8/10 b (x2)	1		1	up to 64	8-16	1	180	3.3	J	LQFP144, TFBGA100	SPIFI, SCT, RTC, QEI.
LPC1810				136		5	6	1			4	2	2	1	3	2		8/10 b (x2)	1		1	up to 64	8-16	1	180	3.3	F	LQFP144, TFBGA100	SPIFI, SCT, RTC, QEI.
LPC4300 devices																													
LPC4357	1	1	1024	136	16	5	6	1	1	2	4	2	2	1	3	2	1	8/10 b (x2)	1	1	1	146	16-32	1	204	3.3	F and J	LQFP208, LBGA256	Cortex-M4/M0, FPU, Dual-bank Flash, 1024x768 Color LCD Controller, HS USB PHY, SPIFI, SCT, SGPIO, RTC, QEI.
LPC4353	1	1	512	136	16	5	6	1	1	2	4	2	2	1	3	2	1	8/10 b (x2)	1	1	1	146	16-32	1	204	3.3	F and J	LQFP208, LBGA256	Cortex-M4/M0, FPU, Dual-bank Flash, 1024x768 Color LCD Controller, HS USB PHY, SPIFI, SCT, SGPIO, RTC, QEI.
LPC4350	1	1		264		5	6	1	1	2	4	2	2	1	3	2	1	8/10 b (x2)	1	1	1	146	16-32	1	204	3.3	F	LQFP208, LBGA256/ TFBGA180	Cortex-M4/M0, FPU, 1024x768 Color LCD Controller, HS USB PHY, SPIFI, SCT, SGPIO, RTC, QEI.
LPC4337	1	1	1024	136	16	5	6	1	1	2	4	2	2	1	3	2	1	8/10 b (x2)	1		1	146	16-32	1	204	3.3	F and J	LQFP144/208 LBGA256/ TFBGA100	Cortex-M4/M0, FPU, Dual-bank Flash, HS USB PHY, SPIFI, SCT, SGPIO, RTC, QEI.
LPC4333	1	1	512	136	16	5	6	1	1	2	4	2	2	1	3	2	1	8/10 b (x2)	1		1	146	16-32	1	204	3.3	F and J	LQFP144, LBGA256/ TFBGA100	Cortex-M4/M0, FPU, Dual-bank Flash, HS USB PHY, SPIFI, SCT, SGPIO, RTC, QEI.
LPC4330	1	1		264		5	6	1	1	2	4	2	2	1	3	2	1	8/10 b (x2)	1		1	146	16-32	1	204	3.3	F	LQFP144, LBGA256/ TFBGA180/100	Cortex-M4/M0, FPU, HS USB PHY, SPIFI, SCT, SGPIO, RTC, QEI.
LPC4327	1	1	1024	136	16	5	6	1		1	4	2	2	1	3	2	1	4-6/10 b (x2)	1		1	up to 64	8-16	1	204	3.3	J	LQFP144, TFBGA100	Cortex-M4/M0, FPU, Dual-bank Flash, HS USB PHY, SPIFI, SCT, SGPIO, RTC, QEI.
LPC4325	1	1	768	136	16	5	6	1		1	4	2	2	1	3	2	1	4-6/10 b (x2)	1		1	up to 64	8-16	1	204	3.3	J	LQFP144, TFBGA100	Cortex-M4/M0, FPU, Dual-bank Flash, HS USB PHY, SPIFI, SCT, SGPIO, RTC, QEI.
LPC4323	1	1	512	104	16	5	6	1		1	4	2	2	1	3	2	1	4-6/10 b (x2)	1		1	up to 64	8-16	1	204	3.3	J	LQFP144, TFBGA100	Cortex-M4/M0, FPU, Dual-bank Flash, HS USB PHY, SPIFI, SCT, SGPIO, RTC, QEI.

* SCT peripheral can be configured as additional timers and/or PWM channels. ** SGPIO peripheral can be configured as additional I2S, I2C, UART and/or SSP channels.

Temp. range options

F= -40 to +85 C J= -40 to +105 C

LPC ConnectTurbo Cont'd

Type		M0 Coprocessor	Floating Pt Unit	Memory		Timers		Serial Interfaces								Analog		LCD controller	SD/MMC	I/O pins	External bus interface	RTC	PLL	Max freq. (MHz)	CPU Voltage (V)	I/O voltage (V)	Temp. range options	Package	Comment/Special features		
				Flash (KB)	RAM (KB)	EEPROM (KB)	Standard Timers*	PWM channels*	State Config. Timer	Ethernet	USB	UART**	I ² C**	CAN	SPIFI	SSP/SPI**	I ² S**													SGPIO	ADC channels/ resolution
LPC4300 devices																															
LPC4322	1	1	512	104	16	5	6	1		1	4	2	2	1	3	2	1	4-6/10 b (x2)	1		1	up to 64	8-16	1		204	3.3	J	LQFP144, TFBGA100	Cortex-M4/M0, FPU, HS USB PHY, SPIFI, SCT, SGPIO, RTC, QEI.	
LPC4320	1	1		200		5	6	1		1	4	2	2	1	3	2	1	4-6/10 b (x2)	1		1	up to 64	8-16	1		204	3.3	F	LQFP144, TFBGA100	Cortex-M4/M0, FPU, HS USB PHY, SPIFI, SCT, SGPIO, RTC, QEI.	
LPC4317	1	1	1024	136	16	5	6	1			4	2	2	1	3	2	1	4-6/10 b (x2)	1		1	up to 64	8-16	1		204	3.3	J	LQFP144, TFBGA100	Cortex-M4/M0, FPU, Dual-bank Flash, SPIFI, SCT, SGPIO, RTC, QEI.	
LPC4315	1	1	768	136	16	5	6	1			4	2	2	1	3	2	1	4-6/10 b (x2)	1		1	up to 64	8-16	1		204	3.3	J	LQFP144, TFBGA100	Cortex-M4/M0, FPU, Dual-bank Flash, SPIFI, SCT, SGPIO, RTC, QEI.	
LPC4313	1	1	512	104	16	5	6	1			4	2	2	1	3	2	1	4-6/10 b (x2)	1		1	up to 64	8-16	1		204	3.3	J	LQFP144, TFBGA100	Cortex-M4/M0, FPU, Dual-bank Flash, SPIFI, SCT, SGPIO, RTC, QEI.	
LPC4312	1	1	512	104	16	5	6	1			4	2	2	1	3	2	1	4-6/10 b (x2)	1		1	up to 64	8-16	1		204	3.3	J	LQFP144, TFBGA100	Cortex-M4/M0, FPU, SPIFI, SCT, SGPIO, RTC, QEI.	
LPC4310	1	1		168		5	6	1			4	2	2	1	3	2	1	4-6/10 b (x2)	1		1	up to 64	8-16	1		204	3.3	F	LQFP144, TFBGA100	Cortex-M4/M0, FPU, SPIFI, SCT, SGPIO, RTC, QEI.	
LPC 2900 devices																															
LPC2939			768	56	16	7	24			2	4	2	2		3			24/10 b				152	32		•	125	1.8	3.3	F	LQFP208	ARM968E-S MCU with USB host/OTG/device, 32K I- & D- TCM, motor control, GP DMA, 16 KB EEPROM
LPC2930				56	16	7	24			2	4	2	2		3			24/10 b				152	32		•	125	1.8	3.3	F	LQFP208	Flashless version of LPC2939
LPC2929			768	56	16	7	24			1	4	2	2		3			24/10 b				104	8		•	125	1.8	3.3	F	LQFP144	LPC2939 with 144 pins and without USB host
LPC2927			512	56	16	7	24			1	4	2	2		3			24/10 b				104	8		•	125	1.8	3.3	F	LQFP144	LPC2929 with 512K Flash, USB device/OTG
LPC2926			256	56	16	7	24			1	4	2	2		3			24/10 b				104			•	125	1.8	3.3	F	LQFP144	LPC2927 with 256K Flash
LPC2925			512	40	16	7	24			1	4	2	2		3			16/10 b				60			•	125	1.8	3.3	F	LQFP100	
LPC2923			256	24	16	7	24			1	4	2	2		3			16/10 b				60			•	125	1.8	3.3	F	LQFP100	LPC2925 with 256K Flash
LPC2921			128	24	16	7	24			1	4	2	2		3			16/10 b				60			•	125	1.8	3.3	F	LQFP100	LPC2923 with 128K Flash, USB device
LPC2919/01			768	56	16	7	24				4	2	2		3			16/10 b				108	8		•	125	1.8	3.3	F	LQFP144	ARM968E-S MCU with 2 LIN master controllers, 16K I-TCM, 16K D-TCM
LPC2917/01			521	56	16	7	24				4	2	2		3			16/10 b				108	8		•	125	1.8	3.3	F	LQFP144	LPC2919/01 with 512K Flash

* Includes Watchdog timer and real-time clock. ** Using timers 0-3.
Temp. range options
F= -40 to +85 C J= -40 to +105 C

LPC Command

NXP’s LPC Command application processors provide an ideal low-cost platform for running the Linux operating system. Based on the ARM9 core, LPC Command products provide an extensive set of peripherals and are designed for general purpose and specialty embedded applications such as high-speed document printers/scanners, industrial control, and motor control. This category includes ARM9 based microcontrollers.

Type	Memory			Timers		Serial interfaces							Analog		LCD controller	SD/MMC	I/O pins	External bus interface	PLL	Max freq. (MHz)	CPU Voltage (V)	I/O voltage (V)	Temp. range options	Package	Comment/Special features	
	Flash (KB)	RAM (KB)	EEPROM (KB)	Standard	PWM channels	Ethernet	USB	UART	I2C	CAN	SPI	SSP/SPI	I2S	ADC channels/ resolution												DAC (10-bit) channels
LPC3100 devices																										
LPC3154		192		4	1		1	1	1			3	2	3/10 b		•	•	157	32	•	180	1.2	1.8/2.8/3.3	F	TFBGA208	LPC3152 with a Decryption Engine & Secure Boot
LPC3152		192		4	1		1	1	1			3	2	3/10 b		•	•	157	32	•	180	1.2	1.8/2.8/3.3	F	TFBGA208	Stereo CODEC with 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		4	1		1	1	2			4	2	4/10 b		•	•	97	16	•	270	1.2	1.8/2.8/3.3	F	TFBGA180	LPC3141 with a Decryption Engine & Secure Boot
LPC3141		192		4	1		1	1	2			4	2	4/10 b		•	•	97	16	•	270	1.2	1.8/2.8/3.3	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		4	1		1	1	2			4	2	4/10 b		•	•	97	16	•	180	1.2	1.8/2.8/3.3	F	TFBGA180	LPC3130 with 192K SRAM, HS USB host/OTG/device
LPC3130		96		4	1		1	1	2			4	2	4/10 b		•	•	97	16	•	180	1.2	1.8/2.8/3.3	F	TFBGA180	HS USB 2.0 host/OTG/device 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		4	1		1	7	2			3		3/10 b			•	55	32	•	208	1.2	1.8/2.8/3.0	F	LFBGA320	VFP unit, NAND Flash, SDRAM/DDR, USB 2.0 FS host/OTG device
LPC3200 devices																										
LPC3250		256		8	11	1	1	7	2	2		2	2	3/10 b		•	•	87	32	•	266/208	1.35/1.2	1.8/2.8/3.0	F	LFBGA296	VFP unit, NAND Flash, SRAM/SDRAM/DDR, USB 2.0 FS host/OTG/device, 24-bit color LCD controler and touchscreen controller, keypad interface, and 0.9 V low-power mode
LPC3240		256		8	11	1	1	7	2	2		2	2	3/10 b			•	87	32	•	266/208	1.35/1.2	1.8/2.8/3.0	F	LFBGA296	VFP unit, NAND Flash, SRAM/SDRAM/DDR, USB 2.0 FS host/OTG/device, keypad interface, and 0.9 V low-power mode
LPC3230		256		8	11		1	7	2	2		2	2	3/10 b		•	•	87	32	•	266/208	1.35/1.2	1.8/2.8/3.0	F	LFBGA296	VFP unit, NAND Flash, SRAM/SDRAM/DDR, USB 2.0 FS host/OTG/device, 24-bit color LCD controler and touchscreen controller, keypad interface, and 0.9 V low-power mode
LPC3220		128		8	11		1	7	2	2		2	2	3/10 b			•	87	32	•	266/208	1.35/1.2	1.8/2.8/3.0	F	LFBGA296	VFP unit, NAND Flash, SRAM/SDRAM/DDR, USB 2.0 FS host/OTG/device, keypad interface, and 0.9 V low-power mode

Temp. range options
F= -40 to +85 C J= -40 to +105 C



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