

APPENDIX D

Parts List

To get started with the practical exercises in this book you will of course need an LPC1768 mbed. There is some flexibility in almost any other component or subsystem after that. The items listed below are the ones we used, sourced from the suppliers shown; in most cases it is easy to substitute other suppliers, and sometimes equivalent parts. As is the way with electronics, some of these parts are likely to become obsolete, and you may have to seek an alternative. Note that order codes and suppliers change very fast. Check that each code is correct for the part you wish to order, before placing the order. Also note that some codes quoted link to multiples of the component identified; for example, for resistors.

Table D.1: Components and devices used in the book—new parts introduced in each chapter.

Description	Supplier	Supplier Code
Chapter 2		
NXP mbed prototyping board LPC1768	www.rs-online.com	703-9238
Prototyping breadboard	www.rapidonline.com	34-0664 OR 34-0550
Jumper wire kit	www.rapidonline.com	34-0495 OR 34-0555
Chapter 3		
Mbed Application Board	www.rs-online.com	769-4182
LED, 5 V, red	www.rapidonline.com	56-1500
LED, 5 V, green	www.rapidonline.com	56-1505
Switch PCB mount SPDT	www.rapidonline.com	76-0200
Photointerrupter/Slotted Optoswitch	www.rapidonline.com	58-0944 OR 58-0303
Kingbright 7-segment display	www.rapidonline.com	57-0294
switching transistor, ZVN4206 OR	www.rapidonline.com	47-0162
BC107	www.rapidonline.com	81-0010
220 ohm resistor	www.rapidonline.com	62-3434
10k resistor	www.rapidonline.com	62-3474
Motor, 6 V, DC	www.rapidonline.com	37-0161
Battery box, 4xAA	www.rapidonline.com	18-2913 OR 18-2909
Diode, 1N4001	www.rapidonline.com	47-3420

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Table D.1: Components and devices used in the book—new parts introduced in each chapter.—cont’d

Description	Supplier	Supplier Code
Chapter 4		
Servo Hitec HS-422	www.active-robots.com	HS-422
Piezo transducer (“Buzzer”)	www.rapidonline.com	35-0200
Chapter 5		
10k linear potentiometer	www.rapidonline.com	65-0715
NORPS12 light dependent resistor	www.rapidonline.com	58-0132
10k resistor	www.rapidonline.com	62-3474
LM35 temp. sensor	www.rapidonline.com	82-0240
Chapter 6		
(No new items)		
Chapter 7		
(Two mbeds and two breadboards required for some builds)		
Triple axis accelerometer breakout, ADXL345	www.sparkfun.com	SEN-09836
4k7 resistor	www.rapidonline.com	62-3577
Pushbutton switch, red	www.rapidonline.com	78-0160
Pushbutton switch, blue	www.rapidonline.com	78-0170
Digital temperature sensor breakout, TMP102	www.sparkfun.com	SEN-11931
Ultrasonic range finder, SRF08	www.rapidonline.com	78-1086
Chapter 8		
PC1602 alphanumeric LCD display	www.rapidonline.com	57-0913
uLCD-144-G2 GFX color LCD module	www.sparkfun.com	LCD-11377
Chapter 9		
ICL7611 op amp	www.rapidonline.com	82-0782
Chapter 10		
Breakout board for MicroSD transflash	www.sparkfun.com	BOB-00544
Kingston MicroSD card (with standard SD adapter)	www.rapidonline.com	19-9230
Rapid USB Flash Drive	www.rapidonline.com	19-9982
Chapter 11		
RN-41 Bluetooth breakout module (2 off)	www.sparkfun.com	WRL-12579
XBee 2mW Module with PCB Antenna (Series ZB) (2 off)	www.coolcomponents.co.uk	1086

Table D.1: Components and devices used in the book—new parts introduced in each chapter.—cont’d

Description	Supplier	Supplier Code
XBee Explorer USB	www.coolcomponents.co.uk	1479
Breakout Board for XBee Module (2 off) with 2mm 10pin XBee Socket (4 off)	www.coolcomponents.co.uk	942
		938
Chapter 12		
Ethernet RJ45 8-pin connector	www.sparkfun.com	PRT-00643
Ethernet RJ45 breakout board	www.sparkfun.com	BOB-00716
Draytek Vigor 2820Vn Ethernet router	www.amazon.co.uk	V2820VN
Chapter 13		
KORG nanoKEY2 MIDI keyboard	www.gear4music.com	N/A
1.5k resistor	www.rapidonline.com	62-2106
47k resistor	www.rapidonline.com	62-2178
4.7 nF capacitor	www.rapidonline.com	08-0995
10 µF capacitor	www.rapidonline.com	11-0840
0.1 µF capacitor	www.rapidonline.com	08-1020
AudioCODEC for mbed	www.rs-online.com	754-1974
Chapter 14		
(No new items)		
Chapter 15		
EFM32 Zero Gecko Starter Kit	http://uk.farnell.com/	2409172
Chapter 16		
NXP Freedom K64F	www.nxp.com	FRDM-K64F
NXP Freedom KL25Z	www.nxp.com	FRDM-KL25Z