

Bill of Materials

TI DESIGNS

TIDUC04 CapTivate™ E-Lock

Item	Qty	Reference	Value	Part Description	Manufacturer	PCB Footprint	Note
1	1	C1	0.1uF	CAP, 0.1uF, 10V, +/-10%, X5R, 0402	Capacitor	c/0603	
2	1	C2	4.7uF	CAP, 4.7 μF, 10 V, +/- 10%, X5R, 0603	Capacitor	C/0603	
3	1	C3	1uF	CAP, 1 μF, 10 V, +/- 10%, X5R, 0603	Capacitor	C/0603	
4	1	C4	1uF	CAP, 1000pF, 50V, +/-10%, X7R, 0402	Capacitor	C/0603	
5	2	C6, C7	22pF	CAP, 22 pF, 50 V, +/- 5%, C0G/NP0, 0402	Capacitor	C/0603	
6	1	C8	0.1uF	CAP, 0.1uF, 16V, [TempCo], xx%,	Capacitor	C/0603	
7	12	D1, D2, D3, D4, D5, D6, D7, D8, D9, D10, D11, D12		LED, 1206	LED	LED1206_Hole	LED
8	1	LS1	3V	Buzzer	Buzzer	Buzzer - P4D9	Buzzer
9	1	P1			DIP6	CN6P/2.5	SPW
10	1	P2	3V	Haptics Motor	Kaile	MOTO_MINI	Haptics
11	1	P3		Header, 8-Pin	XinHongNuo	Molex_52892-0895	Header 8
12	1	Q1		Trans, PChan FET -20V, 3.2A, Rds 0.070 Ohm	TR-NTR4101P	SOT23-3P	TR-NTR4101P
13	1	Q2		Transistor, NPN, xxV, xA, [PackageReference]	NPN	SOT23-3P	9013
14	12	R1, R2, R3, R4, R5, R6, R7, R8, R9, R10, R11, R12	330	Resistor	Resistor	0402	
15	1	R18	47K	Resistor	Resistor	0402	
16	2	R19	100K	Resistor	Resistor	R/0603	
17	2	R25	2.7K	Resistor	Resistor	R/0603	
18	1	R20	10	Resistor	Resistor	0402	
19	1	R21	180	Resistor	Resistor	0402	180
20	1	R22	10K	Resistor	Resistor	0402	10K
21	1	U1		MSP430 Captivate Microcontroller	MSP430FR2633IRHB	RHB0032E	MSP430FR2633IRHB
22	1	Y1		Crystal, 32.768kHz, 12.5pF, SMD	MS3V-T1R 32.768KHZ +/-20PPM 12.5PF	XTAL_MS3V-T1R	Crystal
23	3	C9,C10, C12	10uF	CAP,10uF, 16 V, +/- 10%, 0805	Capacitor	C0805	
25	1	C13	47uF	CAP,47uF, 16 V, +/- 10%, 0805	Capacitor	C0805	
26	1	C14	2.2uF	CAP, 2.2 μF, 10 V, +/- 10%, X5R, 0603	Capacitor	C0603	

Item	Qty	Reference	Value	Part Description	Manufacturer	PCB Footprint	Note
27	1	L1	4.7uH	Inductor, Wirewound, 4.7 μ H, 1.01 A, 0.1 ohm, SMD	inductor	3225	inductor
28	1	L2	6.8uH	Inductor, Wirewound, 6.8 μ H, 1.01 A, 0.1 ohm, SMD	inductor	3225	inductor
29	1	P4		Header, 8-Pin		2.54	Header 8
30	1	P5		Header, 8-Pin	Molex_52892-0895		Header 8
31	3	P6, P7, P8		Header, 2-Pin		2.54	Header 2
32	2	Q4, Q5		PNP transistor 9012	transistor	SOT23-3P	transistor
33	2	Q6, Q7		NPN transistor 9013	transistor	SOT23-3P	transistor
34	3	R26, R38, R31	0	Resistor	Resistor	R/0603	
36	2	R32, R33	0.15K	Resistor	Resistor	R/0603	
37	2	R34, R35	0.6K	Resistor 1%	Resistor	R/0603	
38	1	R36	38.3K	Resistor 1%	Resistor	R/0603	
39	1	R37	30K	Resistor	Resistor	R/0603	
40	1	U2		TI 'Buck Converter	TPS62745	DSS0012A	Buck Converter
41	1	U3		TI Boost Converter	TPS61020	DRC0010J	Boost Converter

IMPORTANT NOTICE FOR TI REFERENCE DESIGNS

Texas Instruments Incorporated ("TI") reference designs are solely intended to assist designers ("Designer(s)") who are developing systems that incorporate TI products. TI has not conducted any testing other than that specifically described in the published documentation for a particular reference design.

TI's provision of reference designs and any other technical, applications or design advice, quality characterization, reliability data or other information or services does not expand or otherwise alter TI's applicable published warranties or warranty disclaimers for TI products, and no additional obligations or liabilities arise from TI providing such reference designs or other items.

TI reserves the right to make corrections, enhancements, improvements and other changes to its reference designs and other items.

Designer understands and agrees that Designer remains responsible for using its independent analysis, evaluation and judgment in designing Designer's systems and products, and has full and exclusive responsibility to assure the safety of its products and compliance of its products (and of all TI products used in or for such Designer's products) with all applicable regulations, laws and other applicable requirements. Designer represents that, with respect to its applications, it has all the necessary expertise to create and implement safeguards that (1) anticipate dangerous consequences of failures, (2) monitor failures and their consequences, and (3) lessen the likelihood of failures that might cause harm and take appropriate actions. Designer agrees that prior to using or distributing any systems that include TI products, Designer will thoroughly test such systems and the functionality of such TI products as used in such systems. Designer may not use any TI products in life-critical medical equipment unless authorized officers of the parties have executed a special contract specifically governing such use. Life-critical medical equipment is medical equipment where failure of such equipment would cause serious bodily injury or death (e.g., life support, pacemakers, defibrillators, heart pumps, neurostimulators, and implantables). Such equipment includes, without limitation, all medical devices identified by the U.S. Food and Drug Administration as Class III devices and equivalent classifications outside the U.S.

Designers are authorized to use, copy and modify any individual TI reference design only in connection with the development of end products that include the TI product(s) identified in that reference design. HOWEVER, NO OTHER LICENSE, EXPRESS OR IMPLIED, BY ESTOPPEL OR OTHERWISE TO ANY OTHER TI INTELLECTUAL PROPERTY RIGHT, AND NO LICENSE TO ANY TECHNOLOGY OR INTELLECTUAL PROPERTY RIGHT OF TI OR ANY THIRD PARTY IS GRANTED HEREIN, including but not limited to any patent right, copyright, mask work right, or other intellectual property right relating to any combination, machine, or process in which TI products or services are used. Information published by TI regarding third-party products or services does not constitute a license to use such products or services, or a warranty or endorsement thereof. Use of the reference design or other items described above may require a license from a third party under the patents or other intellectual property of the third party, or a license from TI under the patents or other intellectual property of TI.

TI REFERENCE DESIGNS AND OTHER ITEMS DESCRIBED ABOVE ARE PROVIDED "AS IS" AND WITH ALL FAULTS. TI DISCLAIMS ALL OTHER WARRANTIES OR REPRESENTATIONS, EXPRESS OR IMPLIED, REGARDING THE REFERENCE DESIGNS OR USE OF THE REFERENCE DESIGNS, INCLUDING BUT NOT LIMITED TO ACCURACY OR COMPLETENESS, TITLE, ANY EPIDEMIC FAILURE WARRANTY AND ANY IMPLIED WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, AND NON-INFRINGEMENT OF ANY THIRD PARTY INTELLECTUAL PROPERTY RIGHTS.

TI SHALL NOT BE LIABLE FOR AND SHALL NOT DEFEND OR INDEMNIFY DESIGNERS AGAINST ANY CLAIM, INCLUDING BUT NOT LIMITED TO ANY INFRINGEMENT CLAIM THAT RELATES TO OR IS BASED ON ANY COMBINATION OF PRODUCTS AS DESCRIBED IN A TI REFERENCE DESIGN OR OTHERWISE. IN NO EVENT SHALL TI BE LIABLE FOR ANY ACTUAL, DIRECT, SPECIAL, COLLATERAL, INDIRECT, PUNITIVE, INCIDENTAL, CONSEQUENTIAL OR EXEMPLARY DAMAGES IN CONNECTION WITH OR ARISING OUT OF THE REFERENCE DESIGNS OR USE OF THE REFERENCE DESIGNS, AND REGARDLESS OF WHETHER TI HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES.

TI's standard terms of sale for semiconductor products (<http://www.ti.com/sc/docs/stdterms.htm>) apply to the sale of packaged integrated circuit products. Additional terms may apply to the use or sale of other types of TI products and services.

Designer will fully indemnify TI and its representatives against any damages, costs, losses, and/or liabilities arising out of Designer's non-compliance with the terms and provisions of this Notice.

Mailing Address: Texas Instruments, Post Office Box 655303, Dallas, Texas 75265
Copyright © 2016, Texas Instruments Incorporated