

Bill of Materials

Parts# CC3200, TRF7970 TIDC- CC3200-NFC_Card Reader

QTY	Part Reference	Value	Mfr_Name	Mfr_Part_Number	Description
	2 C1 C4	10uF	Murata	GRM21BR61A106KE19L	CAP CER 10UF 10V 10% X5R 0805
	C2 C3 C7 C8 C9 C11 C14 C15				
	C17 C18 C19 C20 C21 C22 C28				
	C29 C30 C31 C35 C37 C39 C41				
2	26 C42 C44 C45 C46	0.1uF	Taiyo Yuden	LMK105BJ104KV-F	CAP CER 0.1UF 10V 10% X5R 0402
	1 C5	33000 pF	Samsung	CL05B333KO5NFNC	CAP 33000PF 16V CERAMIC X7R 0402
	1 C6	15pF	Murata Electronics North America	GRM1555C1H150JA01D	CAP CER 15PF 50V 5% NP0 0402
	2 C10 C12	27pF	Murata Electronics North America	GRM1555C1E270JA01D	CAP CER 27PF 25V 5% NP0 0402
	5 C13 C16 C27 C32 C43	10uF	Murata Electronics North America	GRM188R60J106ME47D	CAP CER 10UF 6.3V 20% X5R 0603
	2 C23 C24	100uF	TDK Corportation	C3216X5R0J107M160AB	CAP CER 100UF 6.3V 20% X5R 1206
	2 C25 C26	10pF	Murata Electronics North America	GRM1555C1H100FA01D	CAP CER 10PF 50V 1% NP0 0402
	3 C33 C38 C40	4.7uF	Samsung Electro-Mechanics America, Inc	CL05A475MQ5NRNC	CAP CER 4.7UF 6.3V 20% X5R 0402
	2 C34 C36	22uF	Taiyo Yuden	AMK107BBJ226MAHT	CAP CER 22UF 4V 20% X5R 0603
	2 C47 C48	6.2pF	Murata Electronics North America	GRM1555C1H6R2BA01D	CAP CER 6.2PF 50V NP0 0402
	1 C49	10pF	AVX Corporation	04025U100CAT2A	CAP CER 10PF 50V NP0 0402
	1 C50	1.0pF	Murata Electronics North America	GJM1555C1H1R0BB01D	CAP CER 1PF 50V NP0 0402
	2 D1 D6	LED	OSRAM Opto Semiconductors Inc	LY Q976-P1S2-36	LED CHIPLED 587NM YLW 0603 SMD
	2 D2 D5	LED	OSRAM Opto Semiconductors Inc	LG Q971-KN-1	LED CHIPLED 570NM GREEN 0603 SMD
	1 D3	CD0603-B00340	Bourns Inc	CD0603-B00340	DIODE SCHOTTKY 40V 0.03A 0603
	2 D4 D7	LED	OSRAM Opto Semiconductors Inc	LS Q976-NR-1	LED CHIPLED 633NM RED 0603 SMD
	1 E1	2.45GHz Ant	Taiyo Yuden	AH316M245001-T	ANT BLUETOOTH W-LAN ZIGBEE WIMAX
	1 FL1	2.4GHz Filter	TDK-Epcos	DEA202450BT-1294C1-H	FILTER BANDPASS 2.45GHZ WLAN SMD
	1 J1	CONN_MICRO_USB	FCI	10118194-0001LF	CONN USB MICRO B RECPT SMT R/A
	3 J14 J15 J16 J17	HEADER_2	TE Connectivity	5-146285-2	CONN HEADR BRKWAY .100 2POS STR
	1 J5	HEADER_5	Molex/GC/Waldom Inc.	22-28-4051	CONN HEADER VERT 5 POS .100 TIN
	4 J6 J7 J19 J20	HEADER_3	TE Connectivity	5-146282-3	CONN HDR BRKWAY .100 3POS VERT
	1 J18	CONN_U.FL	Emerson Network Power Connectivity Johnson	128-0711-201	CONN UMC RCPT STR 50 OHM SMD
	2 J22 J23	CONN_RCPT_10x2	Samtec	SSQ-110-03-G-D	CONN RCPT .100" 20POS DUAL GOLD
	1 J24	RF SWITCH	Murata	MM8030-2610RJ3	CONN SWG JACK STR 50 OHM SMD
	2 L1 L2	FB	Samsung	CIM10U800NC	FERRITE CHIP 80 OHM 600MA 0603 SMD
	1 L3	10uH	Taiyo Yuden	CB2518T100K	INDUCTOR POWER 10UH 1007
	2 L5 L7	2.2uH	Murata Electronics North America	LQM2HPN2R2MG0L	INDUCTOR 2.2UH 20% 1300MA 1008
	1 L6	1uH	Murata	LQM2HPN1R0MJ0L	INDUCTOR POWER 1.0UH 1007
	1 L9	3.6nH	Murata Electronics North America	LQP15MN3N6B02D	INDUCTOR 3.6NH 0.1NH 0402
	4 Q1 Q3 Q4 Q5	BSS138LT3G	On Semi	BSS138LT3G	MOSFET N-CH 50V 200MA SOT-23
	1 Q2	SI2323DS-T1-GE3	Vishay	SI2323DS-T1-GE3	MOSFET P-CH 20V 3.7A SOT23-3
	1 R1	100R	Panasonic - ECG	ERJ-2GEJ101X	RES 100 OHM 1/10W 5% 0402 SMD
	1 R2	0.1 R	Panasonic	ERJ-S6SFR10V	RES 0.1 OHM 1/4W 1% 0805 SMD
	6 R3 R4 R20 R125 R126 R127	270	Panasonic Electronic Components	ERJ-3GEYJ271V	RES 270 OHM 1/10W 5% 0603 SMD
	R5 R58 R59 R118 R120 R122	4001	V	D00400 ID 07400KI	DEC 400K OUM 4/40M 50K 0400 OMD
<u> </u>	R130 R131 R132 R286 R287	100k	Yageo	RC0402JR-07100KL	RES 100K OHM 1/16W 5% 0402 SMD
1	R6 R7 R11 R13 R14 R16 R22 R30 R33 R44 R45 R49 R50				
1 .	8 R117 R119 R121 R123 R128	10k	Vagos	RC0402JR-0710KL	RES 10K OHM 1/16W 5% 0402 SMD
<u> </u>	2 R8 R9	10k 28	Yageo Yageo	RC0402JR-0710KL RC0402FR-0728RL	RES 28.0 OHM 1/16W 1% 0402 SMD
-	1 R10	1.5k	Yageo	RC0402FR-071K5L	RES 1.50K OHM 1/16W 1% 0402 SMD
—	1 R12	2.2K	Panasonic	ERJ-2GEJ222X	RES 2.2K OHM 1/10W 5% 0402 SMD
L	11114	4.411	i anasonio	LINU-ZGLUZZZA	INLO 2.21 OF HAT 1/ TOWN 3/0 0402 ONID

QTY	Part Reference	Value	Mfr_Name	Mfr_Part_Number	Description
	R15 R19 R25 R26 R28 R29 R34				
	R35 R36 R40 R41 R46 R52 R53				
	R56	33	Yageo	RC0402FR-0733RL	RES 33.0 OHM 1/16W 1% 0402 SMD
		51K	Samsung	RC1005F513CS	RES 51K OHM 1/16W 1% 0402
1	R18	30.1K	Yageo	RC0402FR-0730K1L	RES 30.1K OHM 1/16W 1% 0402 SMD
1	R21	470	Yageo	RC0402FR-07470RL	RES 470 OHM 1/16W 1% 0402 SMD
	R23 R27 R32 R38 R39 R42 R43				
	R48 R51 R55 R60 R64 R65 R66				
	R67 R68 R69 R70 R72 R73 R75				
	R78 R80 R82 R84 R87 R89 R91				
	R93 R95 R96 R98 R99 R101				
	R102 R103 R104 R105 R106				
	R107 R108 R109 R111 R115				
45	R129	0 R	Panasonic Electronic Components	ERJ-2GE0R00X	RES 0.0 OHM 1/10W JUMP 0402 SMD
	R24 R31 R63 R71 R74 R76 R77				
	R83 R85 R92 R94 R97 R110				
14	R285	DNP	DNP	DNP	DO NOT MOUNT
1	R37	DNP	DNP	DNP	DO NOT MOUNT
2	R47 R54	3.3K	Panasonic - ECG	ERJ-2GEJ332X	RES 3.3K OHM 1/10W 5% 0402 SMD
1	R57	270	Yageo	RC0402FR-07270RL	RES 270 OHM 1/16W 1% 0402 SMD
1	R61	2.7k	Yageo	RC0402FR-072K7L	RES 2.70K OHM 1/16W 1% 0402 SMD
2	R116 R124	1k	Yageo	RC0402JR-071KL	RES 1.0K OHM 1/16W 5% 0402 SMD
3	SW1 SW2 SW3	SW TACT	Panasonic	EVQ-11A04M	SWITCH TACTILE SPST-NO 0.02A 15V
	TP1	TP_1206	TE Connectivity	1625854-4	1206 PROBE PAD
	U1	TPD2EUSB30	TI	TPD2EUSB30DRTR	IC ESD SOLUTION 2CH SOT3
		93LC46B-I/MS	Microchip	93LC46B-I/MS	IC SRL EE 1K 64X16 2.5V 8MSOP
1	U3	TPS79601	TEXAS INSTRUMENTS INC	TPS79601DCQR	IC,VREG,LDO,1.2V-5.5V,2.7V-5.5V,,6PIN,SOT-223
1	U5	FT2232D	FUTURE TECHNOLOGY DEVICES INTERNATIONAL LTD	FT2232D	IC, USB UART/FIFO, MPSSE, 12/48MHz, 48-PIN, LQFP
1	U6	TMP006	Texas Instruments	TMP006AIYZFR	IC SENSOR THERMOPILE 8DSBGA
1	U10	BMA222	Bosch	BMA222E	3-AXIS ACCELEROMETER DIGITAL SMD
	U11 U12	SN74LVC1T45D	TEXAS INSTRUMENTS INC	SN74LVC1T45DCKR	IC, BUS XCVR, 1-BIT, NON INVERTING, 3-STATE, 6-PIN, SOT-23
	U13	CC3200	Texas Instruments	CC3200R	ARM M4 MCU with 802.11bg WIFI
	U15	8M (1M x 8)	Winbond	W25Q80BLSNIG	IC FLASH 8MBIT 75MHZ 8SO
	U4 U9	SN74LVC125APWR	TEXAS INSTRUMENTS INC	SN74LVC125APWR	IC BUS BUFF TRI-ST QD 14TSSOP
	U7	SN74LVC126APWR	TEXAS INSTRUMENTS INC	SN74LVC126APWR	IC BUS BUFF TRI-ST QD 14TSSOP
	U8	TPS61097-33DBVR	TEXAS INSTRUMENTS INC	TPS61097-33DBVR	IC REG BST SYNC 3.3V .1A SOT23-5
1	Y1	CRYSTAL	Epson	CA-301 6.0000M-C:PBFREE	CRYSTAL 6MHZ 18PF THRU
	Y2	Crystal	Abracon Corporation	ABS07-32.768KHZ-T	CRYSTAL 32.768KHZ 12.5PF SMD
1	Y3	Crystal	Epson	Q24FA20H00396	CRYSTAL 40MHZ 8PF SMD
1		DLP-7970ABP RFID BoosterPack	TRF7970A NFC BoosterPack	DLP Design	DLP-7970ABP

IMPORTANT NOTICE FOR TI REFERENCE DESIGNS

Texas Instruments Incorporated ("TI") reference designs are solely intended to assist designers ("Buyers") who are developing systems that incorporate TI semiconductor products (also referred to herein as "components"). Buyer understands and agrees that Buyer remains responsible for using its independent analysis, evaluation and judgment in designing Buyer's systems and products.

TI reference designs have been created using standard laboratory conditions and engineering practices. TI has not conducted any testing other than that specifically described in the published documentation for a particular reference design. TI may make corrections, enhancements, improvements and other changes to its reference designs.

Buyers are authorized to use TI reference designs with the TI component(s) identified in each particular reference design and to modify the reference design in the development of their end products. HOWEVER, NO OTHER LICENSE, EXPRESS OR IMPLIED, BY ESTOPPEL OR OTHERWISE TO ANY OTHER TI INTELLECTUAL PROPERTY RIGHT, AND NO LICENSE TO ANY THIRD PARTY TECHNOLOGY OR INTELLECTUAL PROPERTY RIGHT, 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 components 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 such information 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 ARE PROVIDED "AS IS". TI MAKES NO WARRANTIES OR REPRESENTATIONS WITH REGARD TO THE REFERENCE DESIGNS OR USE OF THE REFERENCE DESIGNS, EXPRESS, IMPLIED OR STATUTORY, INCLUDING ACCURACY OR COMPLETENESS. TI DISCLAIMS ANY WARRANTY OF TITLE AND ANY IMPLIED WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, QUIET ENJOYMENT, QUIET POSSESSION, AND NON-INFRINGEMENT OF ANY THIRD PARTY INTELLECTUAL PROPERTY RIGHTS WITH REGARD TO TI REFERENCE DESIGNS OR USE THEREOF. TI SHALL NOT BE LIABLE FOR AND SHALL NOT DEFEND OR INDEMNIFY BUYERS AGAINST ANY THIRD PARTY INFRINGEMENT CLAIM THAT RELATES TO OR IS BASED ON A COMBINATION OF COMPONENTS PROVIDED IN A TI REFERENCE DESIGN. IN NO EVENT SHALL TI BE LIABLE FOR ANY ACTUAL, SPECIAL, INCIDENTAL, CONSEQUENTIAL OR INDIRECT DAMAGES, HOWEVER CAUSED, ON ANY THEORY OF LIABILITY AND WHETHER OR NOT TI HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES, ARISING IN ANY WAY OUT OF TI REFERENCE DESIGNS OR BUYER'S USE OF TI REFERENCE DESIGNS.

TI reserves the right to make corrections, enhancements, improvements and other changes to its semiconductor products and services per JESD46, latest issue, and to discontinue any product or service per JESD48, latest issue. Buyers should obtain the latest relevant information before placing orders and should verify that such information is current and complete. All semiconductor products are sold subject to TI's terms and conditions of sale supplied at the time of order acknowledgment.

TI warrants performance of its components to the specifications applicable at the time of sale, in accordance with the warranty in TI's terms and conditions of sale of semiconductor products. Testing and other quality control techniques for TI components are used to the extent TI deems necessary to support this warranty. Except where mandated by applicable law, testing of all parameters of each component is not necessarily performed.

TI assumes no liability for applications assistance or the design of Buyers' products. Buyers are responsible for their products and applications using TI components. To minimize the risks associated with Buyers' products and applications, Buyers should provide adequate design and operating safeguards.

Reproduction of significant portions of TI information in TI data books, data sheets or reference designs is permissible only if reproduction is without alteration and is accompanied by all associated warranties, conditions, limitations, and notices. TI is not responsible or liable for such altered documentation. Information of third parties may be subject to additional restrictions.

Buyer acknowledges and agrees that it is solely responsible for compliance with all legal, regulatory and safety-related requirements concerning its products, and any use of TI components in its applications, notwithstanding any applications-related information or support that may be provided by TI. Buyer represents and agrees that it has all the necessary expertise to create and implement safeguards that anticipate dangerous failures, monitor failures and their consequences, lessen the likelihood of dangerous failures and take appropriate remedial actions. Buyer will fully indemnify TI and its representatives against any damages arising out of the use of any TI components in Buyer's safety-critical applications.

In some cases, TI components may be promoted specifically to facilitate safety-related applications. With such components, TI's goal is to help enable customers to design and create their own end-product solutions that meet applicable functional safety standards and requirements. Nonetheless, such components are subject to these terms.

No TI components are authorized for use in FDA Class III (or similar life-critical medical equipment) unless authorized officers of the parties have executed an agreement specifically governing such use.

Only those TI components that TI has specifically designated as military grade or "enhanced plastic" are designed and intended for use in military/aerospace applications or environments. Buyer acknowledges and agrees that any military or aerospace use of TI components that have *not* been so designated is solely at Buyer's risk, and Buyer is solely responsible for compliance with all legal and regulatory requirements in connection with such use.

TI has specifically designated certain components as meeting ISO/TS16949 requirements, mainly for automotive use. In any case of use of non-designated products, TI will not be responsible for any failure to meet ISO/TS16949.