

Bill of Materials

TI DESIGNS TIDA-00178

Interface to a Sin/Cos Encoder with Sitara AM437x

Quantity	Designator	Description	Manufacturer	PartNumber	PackageReference	Fitted
1	PCB1	Printed Circuit Board	Any	TIDA-00178		Fitted
3	C1, C7, C8	CAP, CERM, 0.1 µF, 50 V, +/- 10%, X7R, 0603	MuRata	GRM188R71H104KA93D	0603	Fitted
2	C2, C3	CAP, CERM, 10 µF, 50 V, +/- 10%, X5R, 1206_190	TDK	CGA5L3X5R1H106K160AB	1206_190	Fitted
1	C5	CAP, CERM, 1 µF, 50 V, +/- 10%, X7R, 0805	MuRata	GRM21BR71H105KA12L	0805	Fitted
1	C6	CAP, CERM, 0.01 µF, 50 V, +/- 10%, X7R, 0805	MuRata	GRM216R71H103KA01D	0805	Fitted
2	C9, C10	CAP, CERM, 2.2µF, 50V, +/-10%, X5R, 1206	MuRata	GRM31CR61H225KA88L	1206	Fitted
1	C12	CAP, CERM, 2200 pF, 16 V, +/- 10%, X5R, 0402	MuRata	GRM155R61C222KA01D	0402	Fitted
2	C13, C15	CAP, CERM, 16 pF, 50 V, +/- 5%, C0G/NP0, 0402	MuRata	GRM1555C1H160JA01D	0402	Fitted
1	C14	CAP, CERM, 4700 pF, 16 V, +/- 10%, X7R, 0402	MuRata	GRM155R71C472KA01D	0402	Fitted
3	C16, C18, C20	CAP, CERM, 10 µF, 16 V, +/- 10%, X5R, 0805	MuRata	GRM219R61C106KA73D	0805	Fitted
3	C17, C19, C21	CAP, CERM, 2.2 µF, 16 V, +/- 10%, X5R, 0603	MuRata	GRM188R61C225KE15D	0603	Fitted
1	C22	CAP, CERM, 0.01 µF, 16 V, +/- 10%, X7R, 0603	MuRata	GRM188R71C103KA01D	0603	Fitted
6	C23, C28, C32, C38, C50, C60	CAP, CERM, 0.1 µF, 16 V, +/- 10%, X7R, 0603	MuRata	GRM188R71C104KA01D	0603	Fitted
12	C24, C29, C33, C40, C25	CAP, CERM, 220 pF, 50 V, +/- 5%, C0G/NP0, 0402	MuRata	GRM1555C1H221JA01D	0402	Fitted
1	C25	CAP, CERM, 0.47 µF, 10 V, +/- 10%, X7R, 0603	Kemet	C0603C474K8RACTU	0603	Fitted
3	C26, C30, C34	CAP, CERM, 1 µF, 16 V, +/- 10%, X7R, 0603	MuRata	GRM188R71C105KA12D	0603	Fitted
3	C27, C31, C35	CAP, CERM, 10 pF, 50 V, +/- 5%, C0G/NP0, 0603	MuRata	GRM1885C1H100JA01D	0603	Fitted
3	C36, C48, C58	CAP, CERM, 0.01 µF, 16 V, +/- 10%, X7R, 0402	TDK	C1005X7R1C103K	0402	Fitted
5	C37, C47, C49, C57, C59	CAP, CERM, 22 pF, 50 V, +/- 1%, C0G/NP0, 0402	MuRata	GRM1555C1H220FA01D	0402	Fitted
2	C39, C41	CAP, CERM, 10 µF, 16 V, +/- 10%, X7R, 0805_140	Samsung	CL21B106K0QNNNE	0805_140	Fitted
3	C43, C53, C65	CAP, CERM, 3300 pF, 50 V, +/- 5%, C0G/NP0, 0603	MuRata	GRM1885C1H332JA01D	0603	Fitted
3	C44, C54, C66	CAP, CERM, 1000 pF, 50 V, +/- 5%, C0G/NP0, 0402	MuRata	GRM1555C1H102JA01D	0402	Fitted
3	C45, C56, C67	CAP, CERM, 0.1 µF, 16 V, +/- 10%, X7R, 0402	MuRata	GRM155R71C104KA88D	0402	Fitted
2	C62, C63	CAP, CERM, 10 µF, 10 V, +/- 10%, X7R, 0805_140	MuRata	GRM21BR71A106KE51K	0805_140	Fitted
2	D1, D2	Diode, Schottky, 60V, 1A, SMA	ON Semiconductor	MBRA160T3G	SMA	Fitted
2	D3, D4	LED, Green, SMD	OSRAM	LG L29K-G2J1-24-Z	1.7x0.65x0.8mm	Fitted
6	D5, D6, D7, D8, D9, D10	Diode, Switching, 75 V, 0.3 A, SOT-23	Diodes Inc.	BAV99-7-F	SOT-23	Fitted
3	FID4, FID5, FID6	Fiducial mark. There is nothing to buy or mount.	N/A	N/A	Fiducial	Fitted
2	H1, H2	Machine Screw, Round, #4-40 x 1/4, Nylon, Philips panhead	B&F Fastener Supply	NY PMS 440 0025 PH	Screw	Fitted
2	H3, H4	Standoff, Hex, 0.5"L #4-40 Nylon	Keystone	1902C	Standoff	Fitted
2	J1, J4	Terminal Block, 2-pole, 200mil, TH	On-Shore Technology	OSTTC022162	THD, 2-Leads, Body 10.16x7.6mm, Pitch 5.08mm	Fitted
2	J2, J8	Header, 100mil, 2x1, Tin, TH	Sullins Connector Solutions	PEC02SAAN	Header, 2 PIN, 100mil, Tin	Fitted
1	J3	Header, 100mil, 3x1, Tin, TH	Sullins Connector Solutions	PEC03SAAN	Header, 3 PIN, 100mil, Tin	Fitted
1	J5	D-Sub-15, 17Pos, TH	Harting	09 66 252 6610	D-Sub-15, 2rows, Female,	Fitted
1	J6	Header, 2mm, 30x2, Gold, TH	3M	151260-8422-RB	Header, 30x2, 2mm, TH	Fitted
1	J7	Header, 100mil, 3x2, Tin, TH	Sullins Connector Solutions	PEC03DAAN	3x2 Header	Fitted
1	J9	Header, 100mil, 10x1, TH	Mill-Max	800-10-010-10-001000	Header, 10x1, 100mil, TH	Fitted
1	L1	Inductor, Shielded Drum Core, Ferrite, 1 µH, 1.5 A,	Coilcraft	LPS3010-102MLB	LPS3010	Fitted
1	L2	Inductor, Shielded Drum Core, Ferrite, 100 µH, 0.9 A, 0.33 ohm, SMD	Würth Elektronik eiSos	744065101	WE-TPC-XLH2	Fitted
1	R1	RES, 10 ohm, 5%, 0.25W, 0603	Vishay-Dale	CRCW060310R0JNEAHP	0603	Fitted
1	R2	RES, 681 k, 1%, 0.063 W, 0402	Vishay-Dale	CRCW0402681KFKED	0402	Fitted
2	R3, R12	RES, 1.0 k, 5%, 0.063 W, 0402	Vishay-Dale	CRCW04021K00JNED	0402	Fitted
1	R5	RES, 63.4 k, 1%, 0.063 W, 0402	Vishay-Dale	CRCW040263K4FKED	0402	Fitted
1	R6	RES, 51 ohm, 5%, 0.1W, 0603	Vishay-Dale	CRCW060351R0JNEA	0603	Fitted
1	R7	RES, 46.4 k, 1%, 0.063 W, 0402	Vishay-Dale	CRCW040246K4FKED	0402	Fitted
1	R8	RES, 237 k, 1%, 0.063 W, 0402	Vishay-Dale	CRCW0402237KFKED	0402	Fitted
1	R9	RES, 64.9 k, 1%, 0.063 W, 0402	Vishay-Dale	CRCW040264K9FKED	0402	Fitted
1	R10	RES, 10.0 k, 1%, 0.063 W, 0402	Vishay-Dale	CRCW040210K0FKED	0402	Fitted
1	R11	RES, 340 k, 1%, 0.063 W, 0402	Vishay-Dale	CRCW0402340KFKED	0402	Fitted
1	R13	RES, 100 k, 5%, 0.063 W, 0402	Vishay-Dale	CRCW0402100KJNED	0402	Fitted
2	R14, R17	RES, 0, 5%, 0.063 W, 0402	Vishay-Dale	CRCW04020000Z0ED	0402	Fitted
1	R15	RES, 845 k, 1%, 0.063 W, 0402	Vishay-Dale	CRCW0402845KFKED	0402	Fitted
1	R16	RES, 160 k, 5%, 0.063 W, 0402	Vishay-Dale	CRCW0402160KJNED	0402	Fitted
6	R18, R24, R32, R48,	RES, 10, 5%, 0.063 W, 0402	Vishay-Dale	CRCW040210R0JNED	0402	Fitted
3	R19, R25, R34	RES, 825, 1%, 0.063 W, 0402	Vishay-Dale	CRCW0402825RFKED	0402	Fitted
2	R20, R26	RES, 20.0 k, 1%, 0.1 W, 0603	Yageo America	RC0603FR-0720KL	0603	Fitted

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15	R21, R27, R36, R41, R44, R47, R51, R57, R59, R60, R63, R69, R70, R72, R74	RES, 10.0, 1%, 0.063 W, 0402	Vishay-Dale	CRCW040210R0FKED	0402	Fitted
4	R22, R28, R35, R37	RES, 20.0 k, 1%, 0.063 W, 0402	Vishay-Dale	CRCW040220K0FKED	0402	Fitted
3	R23, R30, R38	RES, 576 k, 1%, 0.063 W, 0402	Vishay-Dale	CRCW0402576KFKED	0402	Fitted
3	R29, R31, R33	RES, 22, 5%, 0.1 W, 0603	Vishay-Dale	CRCW060322R0JNEA	0603	Fitted
6	R39, R52, R55, R64, R65, R76	RES, 4.99 k, 0.1%, 0.063 W, 0402	Panasonic	ERA-2AEB4991X	0402	Fitted
6	R40, R50, R56, R62	RES, 1.00 k, 0.1%, 0.063 W, 0402	Panasonic	ERA-2AEB102X	0402	Fitted
4	R42, R46, R53, R54	RES, 3.0, 5%, 0.063 W, 0402	Vishay-Dale	CRCW04023R00JNED	0402	Fitted
2	R43, R49	RES, 22, 5%, 0.063 W, 0402	Vishay-Dale	CRCW040222R0JNED	0402	Fitted
3	R45, R58, R71	RES, 120, 1%, 0.4 W, 0805	Rohm	ESR10EZPF1200	0805	Fitted
2	R66, R67	RES, 0.22, 1%, 0.1 W, 0603	Panasonic	ERJ-3RQFR22V	0603	Fitted
2	TP1, TP4	Test Point, Miniature, Black, TH	Keystone	5001	Black Miniature Testpoint	Fitted
2	TP2, TP3	Test Point, Miniature, Red, TH	Keystone	5000	Red Miniature Testpoint	Fitted
1	U1	Buck Step Down Regulator with 3.5 to 42 V Input and 0.8 to 39 V Output, -40 to 150 degC, 10-Pin MSOP-PowerPAD (DGQ), Green (RoHS & no Sb/Br)	Texas Instruments	TPS5401DGQ	DGQ0010D	Fitted
1	U2	Single Output High PSRR LDO, 200 mA, Adjustable	Texas Instruments	TPS79901DRVR	DRV0006A	Fitted
1	U3	Single Output LDO, 150 mA, Adjustable 0.9 to 6.2 V Output, 2.5 to 6.5 V Input, with High-Bandwidth PSRR, 5-pin SC70 (DCK), -40 to 125 degC, Green (RoHS & no Sb/Br)	Texas Instruments	TPS71701DCKR	DCK0005A	Fitted
1	U4	Single Output High PSRR LDO, 200 mA, Fixed 3.3 V	Texas Instruments	TPS79933DRVR	DRV0006A	Fitted
1	U5	40-ns, microPOWER, Push-Pull Output Comparators, D0008A	Texas Instruments	TLV3202AID	D0008A	Fitted
1	U6	2.5 V, 50 ppm / degC, 50 uA Series (Bandgap)	Texas Instruments	REF3025AIDBZT	DBZ0003A	Fitted
1	U7	Triple Schmitt-Trigger Buffer, DCT0008A	Texas Instruments	SN74LVC3G17DCTR	DCT0008A	Fitted
1	U8	40-ns, microPOWER, Push-Pull Output	Texas Instruments	TLV3201DBV	DBV0005A	Fitted
1	U9	Dual, High-Speed, 16-, 14-, and 12-Bit, Simultaneous-Sampling, Analog-to-Digital Converters, PW0016A	Texas Instruments	ADS8354IPWR	PW0016A	Fitted
3	U10, U11, U12	Ultra Low Power, Rail-to-Rail Output, Fully-	Texas Instruments	THS4531AIDGK	DGK0008A	Fitted
0	C4	CAP, CERM, 10 µF, 50 V, +/- 10%, X5R, 1206_190	TDK	CGA5L3X5R1H106K160AB	1206_190	Not Fitted
0	C11	CAP, CERM, 4.7 µF, 50 V, +/- 10%, X5R, 0805	TDK	C2012X5R1H475K125AB	0805	Not Fitted
0	C69	CAP, CERM, 22 pF, 50 V, +/- 1%, COG/NP0, 0402	MuRata	GRM1555C1H220FA01D	0402	Not Fitted
0	FID1, FID2, FID3	Fiducial mark. There is nothing to buy or mount.	N/A	N/A	Fiducial	Not Fitted
0	R4	RES, 10k ohm, 5%, 0.125W, 0805	Vishay-Dale	CRCW080510K0JNEA	0805	Not Fitted

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