

Bill of Materials

TI DESIGNS TIDA-00202
Interface to a HIPERFACE Position Encoder

Quantity	Designator	Description	Manufacturer	PartNumber	PackageReference	Fitted
1	PCB1	Printed Circuit Board	Any	TIDA-00202		Fitted
4	C1, C7, C8, C25	CAP, CERM, 0.1 µF, 50 V, +/- 10%, X7R, 0603	Würth Elektronik	885012206095	0603	Fitted
2	C2, C3	CAP, CERM, 10 µF, 50 V, +/- 10%, X5R, 1206_190	TDK	CGA5L3X5R1H106K160AB	1206_190	Fitted
2	C5, C24	CAP, CERM, 1 µF, 50 V, +/- 10%, X7R, 0805_140	Würth Elektronik	885012207103	0805_140	Fitted
1	C6	CAP, CERM, 0.01 µF, 50 V, +/- 10%, X7R, 0805	Würth Elektronik	885012207092	0805	Fitted
2	C9, C10	CAP, CERM, 2.2µF, 50V, +/-10%, X5R, 1206	MuRata	GRM31CR61H225KA88L	1206	Fitted
1	C11	CAP, CERM, 2200 pF, 16 V, +/- 10%, X7R, 0402	Würth Elektronik	885012205027	0402	Fitted
1	C12	CAP, CERM, 16 pF, 50 V, +/- 5%, C0G/NP0, 0402	MuRata	GRM1555C1H160JA01D	0402	Fitted
1	C13	CAP, CERM, 4700 pF, 16 V, +/- 10%, X7R, 0402	Würth Elektronik	885012205029	0402	Fitted
1	C14	CAP, CERM, 0.1 µF, 25 V, +/- 10%, X7R, 0603	Würth Elektronik	885012206071	0603	Fitted
1	C15	CAP, CERM, 10 µF, 25 V, +/- 10%, X7R, 1206	Würth Elektronik	885012208069	1206	Fitted
2	C16, C17	CAP, CERM, 10 µF, 25 V, +/- 10%, X5R, 0805	MuRata	GRM219R61E106KA12	0805	Fitted
1	C18	CAP, CERM, 680 pF, 25 V, +/- 10%, X7R, 0805	Würth Elektronik	885012207059	0805	Fitted
1	C20	CAP, CERM, 1 µF, 16 V, +/- 10%, X7R, 0603	Würth Elektronik	885012206052	0603	Fitted
2	C21, C22	CAP, CERM, 2.2 µF, 16 V, +/- 20%, X5R, 0603	Würth Elektronik	885012106018	0603	Fitted
1	C23	CAP, CERM, 0.01 µF, 16 V, +/- 10%, X7R, 0603	Würth Elektronik	885012206040	0603	Fitted
2	C26, C27	CAP, CERM, 4.7 µF, 25 V, +/- 10%, X7R, 0805_140	MuRata	GRM21BR71E475KA73L	0805_140	Fitted
7	C28, C32, C34, C35,	CAP, CERM, 0.1 µF, 16 V, +/- 10%, X7R, 0603	Würth Elektronik	885012206046	0603	Fitted
2	C29, C30	CAP, CERM, 330 pF, 50 V, +/- 5%, C0G/NP0, 0603	Würth Elektronik	885012006060	0603	Fitted
4	C31, C43, C44, C55	CAP, CERM, 120 pF, 50 V, +/- 5%, C0G/NP0, 0402	MuRata	GRM1555C1H121JA01D	0402	Fitted
6	C33, C39, C46, C51, C63, C75	CAP, CERM, 2200 pF, 50 V, +/- 5%, C0G/NP0, 0603	MuRata	GRM1885C1H222JA01D	0603	Fitted
4	C36, C42, C48, C54	CAP, CERM, 0.01 µF, 50 V, +/- 10%, C0G/NP0,	MuRata	GCM155R71H103KA55D	0402	Fitted
4	C37, C41, C49, C53	CAP, CERM, 47 pF, 50 V, +/- 5%, C0G/NP0, 0402	Würth Elektronik	885012005044	0402	Fitted
4	C38, C40, C50, C52	CAP, CERM, 100 pF, 50 V, +/- 5%, C0G/NP0, 0402	Würth Elektronik	885012005061	0402	Fitted
10	C56, C57, C61, C65, C67, C68, C70, C74, C78, C79	CAP, CERM, 220 pF, 50 V, +/- 5%, C0G/NP0, 0402	Würth Elektronik	885012005063	0402	Fitted
2	C59, C71	CAP, CERM, 0.1 µF, 16 V, +/- 10%, X7R, 0603	Würth Elektronik	885012206046	0603	Fitted
2	C60, C62	CAP, CERM, 10 µF, 16 V, +/- 10%, X7R, 0805_140	Samsung	CL21B106KOQNNNE	0805_140	Fitted
2	C64, C76	CAP, CERM, 1000 pF, 50 V, +/- 5%, C0G/NP0, 0402	MuRata	GRM1555C1H102JA01D	0402	Fitted
2	C66, C77	CAP, CERM, 0.1 µF, 16 V, +/- 10%, X7R, 0402	Würth Elektronik	885012205037	0402	Fitted
2	C72, C73	CAP, CERM, 10 µF, 10 V, +/- 10%, X7R, 0805	Würth Elektronik	885012207026	0805	Fitted
1	C80	CAP, CERM, 1000 pF, 2000 V, +/- 10%, X7R, 1812	AVX	1812GC102KA1	1812	Fitted
2	D1, D2	Diode, Schottky, 60V, 1A, SMA	ON Semiconductor	MBRA160T3G	SMA	Fitted
4	D3, D4, D5, D6	LED, Green, SMD	Würth Elektronik	150060GS75000	LED_0603	Fitted
10	D7, D8, D9, D10, D11,	Diode, Schottky, 40 V, 0.35 A, SOD-523	Diodes Inc.	ZHCS350TA	SOD-523	Fitted
4	H1, H2, H3, H4	Machine Screw, Round, #4-40 x 1/4, Nylon, Phillips panhead	B&F Fastener Supply	NY PMS 440 0025 PH	Screw	Fitted
4	H5, H6, H7, H8	Standoff, Hex, 0.5"L #4-40 Nylon	Keystone	1902C	Standoff	Fitted
1	J1	WR-DC DC Power Jack, R/A, TH	Würth Elektronik	694106301002	WR-DC DC Power Jack, R/A, TH	Fitted
1	J2	Header, 2.54 mm, 2x1, Gold, TH	Würth Elektronik	61300211121	Header, 2.54mm, 2x1, TH	Fitted
1	J3	Header, 100mil, 5x2, Tin, TH	Sullins Connector Solutions	PEC05DAAN	Header, 5x2, 100mil, Tin	Fitted
1	J4	Header, 100mil, 10x2, TH	Sullins Connector Solutions	PEC10DAAN	Header, 10x2, 2.54mm, TH	Fitted
1	J5	Header, 2.54mm, 3x2, Gold, TH	Würth Elektronik	61300621121	Header, 2.54mm, 3x2, TH	Fitted
1	J6	Receptacle, D-Sub, 9 Position, R/A, TH	Würth Elektronik	618009231121	Receptacle, D-Sub, 9	Fitted
1	J7	Header, 100mil, 8x1, TH	Mill-Max	800-10-008-10-001000	Header, 8x1, 100mil, TH	Fitted
1	L1	Inductor, Shielded, 6.8 µH, 0.88 A, 0.3682 ohm, SMD	Würth Elektronik	74438334068	SMD, 2-Leads, Body	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	L3	Inductor, Shielded Drum Core, Ferrite, 33 µH, 2.5 A,	Würth Elektronik	7447714330	10x5x10mm	Fitted
1	L4	Ferrite Bead, 60 ohm @ 100 MHz, 5.1 A, 1.6x0.8mm	Würth Elektronik	74279228600	1.6x0.8mm	Fitted
4	L5, L6, L7, L8	Inductor, Wirewound, Ferrite, 47 µH, 0.035 A, 2.5	Taiyo Yuden	LBMF1608T470K	0603	Fitted
3	R1, R26, R28	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, R21	RES, 8.66 k, 1%, 0.063 W, 0402	Vishay-Dale	CRCW04028K66FKED	0402	Fitted
1	R4	RES, 80.6 k, 1%, 0.063 W, 0402	Vishay-Dale	CRCW040280K6FKED	0402	Fitted
1	R5	RES, 46.4 k, 1%, 0.063 W, 0402	Vishay-Dale	CRCW040246K4FKED	0402	Fitted
1	R6	RES, 140 k, 1%, 0.063 W, 0402	Vishay-Dale	CRCW0402140KFKED	0402	Fitted
1	R7	RES, 237 k, 1%, 0.063 W, 0402	Vishay-Dale	CRCW0402237KFKED	0402	Fitted

Quantity	Designator	Description	Manufacturer	PartNumber	PackageReference	Fitted
2	R8, R52	RES, 10.0 k, 1%, 0.063 W, 0402	Vishay-Dale	CRCW040210K0FKED	0402	Fitted
2	R9, R19	RES, 0, 5%, 0.125 W, 0805	Vishay-Dale	CRCW08050000Z0EA	0805	Fitted
1	R11	RES, 105 k, 1%, 0.1 W, 0603	Vishay-Dale	CRCW0603105KFKEA	0603	Fitted
1	R13	RES, 3.0 k, 5%, 0.063 W, 0402	Vishay-Dale	CRCW04023K00JNED	0402	Fitted
1	R14	RES, 20.0 k, 1%, 0.1 W, 0603	Vishay-Dale	CRCW060320K0FKEA	0603	Fitted
1	R16	RES, 0, 5%, 0.063 W, 0402	Vishay-Dale	CRCW04020000Z0ED	0402	Fitted
1	R18	RES, 1.5 k, 5%, 0.063 W, 0402	Vishay-Dale	CRCW04021K50JNED	0402	Fitted
1	R20	RES, 806 k, 1%, 0.1 W, 0603	Vishay-Dale	CRCW0603806KFKEA	0603	Fitted
2	R22, R23	RES, 100 k, 1%, 0.1 W, 0603	Vishay-Dale	CRCW0603100KFKEA	0603	Fitted
6	R24, R31, R65, R76, R84, R95	RES, 1.00 k, 1%, 0.1 W, 0603	Vishay-Dale	CRCW06031K00FKEA	0603	Fitted
1	R25	RES, 22, 5%, 0.1 W, 0603	Vishay-Dale	CRCW060322R0JNEA	0603	Fitted
3	R27, R69, R89	RES, 130, 1%, 0.4 W, AEC-Q200 Grade 0, 0805	Rohm	ESR10EZPF1300	0805	Fitted
2	R29, R30	RES, 10 k, 5%, 0.1 W, 0603	Vishay-Dale	CRCW060310K0JNEA	0603	Fitted
4	R32, R40, R49, R58	RES, 20.0, 1%, 0.063 W, 0402	Vishay-Dale	CRCW040220R0FKED	0402	Fitted
1	R33	RES, 1.0, 5%, 0.063 W, 0402	Vishay-Dale	CRCW04021R00JNED	0402	Fitted
4	R34, R46, R51, R64	RES, 8.45 k, 0.1%, 0.063 W, 0402	Panasonic	ERA-2AEB8451X	0402	Fitted
8	R35, R39, R53, R57,	RES, 10.0, 1%, 0.063 W, 0402	Vishay-Dale	CRCW040210R0FKED	0402	Fitted
4	R36, R45, R54, R63	RES, 220, 5%, 0.063 W, 0402	Vishay-Dale	CRCW0402220R0JNED	0402	Fitted
4	R37, R43, R55, R61	RES, 332, 1%, 0.063 W, 0402	Vishay-Dale	CRCW0402332R0FKED	0402	Fitted
4	R38, R44, R56, R62	RES, 4.75 k, 0.1%, 0.063 W, 0402	Panasonic	ERA-2AEB4751X	0402	Fitted
2	R41, R59	RES, 26.7 k, 1%, 0.063 W, 0402	Vishay-Dale	CRCW040226K7FKED	0402	Fitted
2	R42, R60	RES, 549 k, 1%, 0.063 W, 0402	Vishay-Dale	CRCW0402549KFKEA	0402	Fitted
1	R47	RES, 1.6 k, 5%, 0.063 W, 0402	Vishay-Dale	CRCW04021K60JNED	0402	Fitted
1	R48	RES, 107, 1%, 0.063 W, 0402	Vishay-Dale	CRCW0402107R0FKED	0402	Fitted
1	R50	RES, 3.32 k, 1%, 0.063 W, 0402	Vishay-Dale	CRCW04023K32FKED	0402	Fitted
4	R66, R80, R83, R96	RES, 4.99 k, 0.1%, 0.063 W, 0402	Panasonic	ERA-2AEB4991X	0402	Fitted
4	R67, R73, R86, R92	RES, 0, 5%, 0.1 W, 0603	Vishay-Dale	CRCW06030000Z0EA	0603	Fitted
4	R68, R79, R85, R94	RES, 1.00 k, 0.1%, 0.063 W, 0402	Panasonic	ERA-2AEB102X	0402	Fitted
4	R71, R75, R81, R82	RES, 3.0, 5%, 0.063 W, 0402	Vishay-Dale	CRCW04023R00JNED	0402	Fitted
2	R72, R78	RES, 22, 5%, 0.063 W, 0402	Vishay-Dale	CRCW040222R0JNED	0402	Fitted
2	R74, R91	RES, 10, 5%, 0.063 W, 0402	Vishay-Dale	CRCW040210R0JNED	0402	Fitted
2	R87, R88	RES, 0.22, 1%, 0.1 W, 0603	Panasonic	ERJ-3RQFR22V	0603	Fitted
2	TP1, TP3	Test Point, Miniature, Black, TH	Keystone	5001	Black 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	TPS5401DGQR	DGQ0010D	Fitted
1	U2	4.5V to 18V Input, 500mA Synchronous Step Down	Texas Instruments	TPS560200DBVR	DBV0005A	Fitted
1	U4	Single Output High PSRR LDO, 200 mA, Fixed 3.3 V Output, 2.7 to 6.5 V Input, with Low IQ, 5-pin SOT (DDC), -40 to 85 degC, Green (RoHS & no Sb/Br)	Texas Instruments	TPS79933DDCR	DCC0005A	Fitted
1	U5	5V Micropower Low-Dropout Voltage Regulator, 8-	Texas Instruments	LP2954AIM	M08A	Fitted
1	U7	3.3V-Supply RS-485 with IEC ESD Protection, D0008A	Texas Instruments	SN65HVD72DR	D0008A	Fitted
3	U9, U10, U11	50 MHz, Low-Noise Single-Supply Rail-to-Rail	Texas Instruments	OPA2365AIDR	D0008A	Fitted
1	U12	40-ns, microPOWER, Push-Pull Output Comparators, D0008A	Texas Instruments	TLV3202AID	D0008A	Fitted
1	U13	Low Voltage Adjustable Precision Shunt Regulator,	Texas Instruments	TLV431IDBZR	DBZ0003A	Fitted
1	U15	Dual, High-Speed, 12-Bit, Simultaneous-Sampling, Analog-to-Digital Converter, PW0016A	Texas Instruments	ADS7254IPWR	PW0016A	Fitted
2	U16, U18	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	C19	CAP, CERM, 1 µF, 16 V, +/- 10%, X7R, 0603	Wurth Elektronik	885012206052	0603	Not Fitted
0	C47	CAP, CERM, 0.1 µF, 50 V, +/- 10%, X7R, 0603	Wurth Elektronik	885012206095	0603	Not Fitted
0	FID1, FID2, FID3	Fiducial mark. There is nothing to buy or mount.	N/A	N/A	Fiducial	Not Fitted
0	R10	RES, 0, 5%, 0.063 W, 0402	Vishay-Dale	CRCW04020000Z0ED	0402	Not Fitted
0	R12	RES, 845 k, 1%, 0.063 W, 0402	Vishay-Dale	CRCW0402845KFKEA	0402	Not Fitted
0	R15	RES, 160 k, 5%, 0.063 W, 0402	Vishay-Dale	CRCW0402160KJNED	0402	Not Fitted
0	R17	RES, 0, 5%, 0.125 W, 0805	Vishay-Dale	CRCW08050000Z0EA	0805	Not Fitted
0	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	TPS17101DCKR	DCK0005A	Not Fitted
0	U6, U8, U14, U17	ESD Protection Array for AC Signal Data Interface, 2	Texas Instruments	TPD2E007DCKR	DCK0003A	Not Fitted

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