

# Bill of Materials



TI DESIGNS

TIPD173: 16-bit, 1MSPS, Single-Ended Data Acquisition (DAQ) Block for Multiplexed Application

Item	QTY	Value	Ref Des	Description	Manufacturer	Manufacturer Part Number	Supplier	Supplier Part Number
1	1		C5, R10, R23	Uninstalled				
2	1	1uF	C1	CAP, CERM, 10V, +/-10%, X7R, 0805	Kemet	C0805C105K8RACTU	Digi-Key	399-1172-1-ND
3	4	10uF	C3, C6, C16, C36	CAP, CERM, 10V, +/-10%, X7R, 0805	MuRata	GRM21BR71A106KE51L	Digi-Key	490-3905-1-ND
4	7	1uF	C4, C10, C11, C12, C13, C19, C20	CAP, CERM, 25V, +/-10%, X7R, 0603	MuRata	GRM188R71E105KA12D	Digi-Key	490-5307-1-ND
5	4	0.1uF	C7, C8, C14, C21	CAP, CERM, 16V, +/-5%, X7R, 0603	AVX	0603YC104JAT2A	Digi-Key	478-3726-1-ND
6	2	1000pF	C9, C37	CAP, CERM, 25V, +/-5%, C0G/NP0, 0603	MuRata	GRM1885C1E102JA01D-ND	Digi-Key	490-6373-1-ND
7	1	470pF	C24	CAP, CERM, 25V, +/-5%, C0G/NP0, 0603	Kemet	C0603C471J3GACAUTO	Digi-Key	399-6891-1-ND
8	1		J3	Connector, TH, SMA	Emerson Network Power	142-0701-201	Digi-Key	J500-ND
9	2		J1-T, J3-T	Header, 100mil, 10x2, SMD	Samtec, Inc.	TSM-110-01-T-DV-P	Digi-Key	TSM-110-01-T-DV-P-ND
10	2		J1-B, J3-B	Connector, Receptacle, 100mil, 10x2, Gold plated, SMT	Samtec, Inc.	SSW-110-22-F-D-VS-K-ND	Digi-Key	SAM8740-ND
11	1		J2-T	Header, 100mil, 5x2, SMD	Samtec, Inc.	TSM-105-01-T-DV-P	Digi-Key	TSM-105-01-T-DV-P-ND
12	1		J2-B	Connector, Header, 10-Pos (10x2), Receptacle, 100x100-mil Pits	Samtec, Inc.	SSW-105-22-F-D-VS-K-ND	Digi-Key	SAM8738-ND
13	2		JP1, JP2	Header, TH, 100mil, 1x3, Gold plated, 230 mil above insulatc	Sullins Connector Solutions	PBC03SAAN	Digi-Key	ST011E-03-ND
14	1		JP3	Header, 100mil, 2x1, Gold plated, T+	TE Connectivity	5-146261-1	Digi-Key	5-146261-1-ND
15	4	20kΩ	R1, R4, R5, R8	RES, 1%, 0.1W, 0603	Vishay-Dale	CRCW060320K0FKEA	Digi-Key	541-20.0KHCT-ND
16	2	0.22Ω	R2, R12	RES, 1%, 0.1W, 0603	Panasonic	ERJ-3RQFR22V	Digi-Key	P22AJCT-ND
17	4	0Ω	R3, R14, R25, R35	RES, 5%, 0.1W, 0603	Panasonic	ERJ-3GEY0R00V	Digi-Key	P0.0GCT-ND
18	1	100Ω	R6	RES, 1%, 0.1W, 0603	Yageo America	RC0603FR-07100RL	Digi-Key	311-100HRCT-ND
19	2	1kΩ	R7, R9	RES, 1%, 0.1W, 0603	Vishay Dale	CRCW06031K00FKEA	Digi-Key	541-1.00KHCT-ND
20	4	47Ω	R11, R17, R22, R26	RES, 1%, 0.1W, 0603	Yageo America	RC0603FR-0747RL	Digi-Key	311-47.0HRCT-ND
21	1	51Ω	R13	RES, 1%, 0.25W, 0805	Rohm Semiconductor	LTR10EZPF51R0	Digi-Key	RHM1217CT-ND
22	2	10Ω	R15, R16	RES, 1%, 0.1W, 0603	Yageo America	RC0603FR-0710RL	Digi-Key	311-10.0HRCT-ND
23	2	34Ω	R21, R27	RES, 1%, 0.1W, 0603	Panasonic	ERJ-3EKF34R0V	Digi-Key	P34.0HCT-ND
24	1		U1	IC, 16 Bit 1 MSPS, Serial Interface	TI	ADS8860IDGS		
25	1		U2	IC, Precision, 20MHz, 0.9pA Ib, RRIO, CMOS Operational Amplifie	TI	OPA320AIDBVT		
26	2		U3, U5	IC, 1.8V, 17µA, microPower, Precision, Zero Drift CMOS Op Amp	TI	OPA333AIDBVT		
27	1		U4	IC, Very Low-Power, High-Speed, R-R In/Output Op-Ampl	TI	THS4281DBVT		
28	1		U6	IC, Precision Voltage Reference, 5V	TI	REF5040IDGKT		
29	1		U7	IC, EEPROM 256kbit 400kHz	Microchip	24LC256-I/ST	Digi-Key	24LC256-I/ST-ND
Alternate Reference Circuit								
1	0	1 µF	C1	CAP, CERM, 1 µF, 10V, +/- 10%, X5R, 0603	MuRata	GRM185R81A105KE36D	Digi-Key	
2	0	47 µF	C2	CAP, CERM, 47 µF, 6.3 V, +/- 20%, X5R, 0603	MuRata	GRM188R60J476ME15D	Digi-Key	
3	0	10 µF	C3	CAP, CERM, 10 µF, 25 V, +/- 10%, X5R, 0805	MuRata	GRM21BR61E106KA73L	Digi-Key	
4	0	0.005 Ω	R1	RES, 0.005, 1%, 0.25 W, AEC-Q200 Grade, 0603	Panasonic	ERJ3LWFR005V	Digi-Key	
5	0	0.22 Ω	R2	RES, 0.22, 1%, 0.1 W, 0603	Panasonic	ERJ-3RQFR22V	Digi-Key	
6	0		U1B	High Precision Voltage Reference	Texas Instruments	REF6041IDGKR	Digi-Key	

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