

Bill of Materials

TI DESIGNS

TIDEP0037

Part Number	Qty	Ref Des	*Description / Document Name
Chips	1	DSP1	TMX320C6678CYP for DSPM-8301
	1	U11	IC SN74LVC00APWR SMD TSSOP 14P
	3	U244,U245,U248	IC PCA9306DCUT I2C Vol. Trans SMD US8 8P
	1	U12	IC AT93C46DN-SH-T SMD SOIC 8P
	2	U19,U24	IC SN74AVC4T245PWR Bus Buffer SMD TSSOP 16P
	1	U1	IC ICS557GI-08LFT Rev.C PCIe Bridge SMD TSSOP16
	1	U26	IC AT25128B-SSHL-B EEPROM SMD SOIC 8P
	2	U10,U13	IC TXS0108EPWR Translator SMD TSSOP 20P
	1	PHY1	IC 88E1111-B2-BAB1C000 B2 SMD TFBGA 117P
	1	FPGA1	IC XC3S200AN-4FTG256C FPGA SMD FTBGA 256P
	1	U9	IC FT2232HL SMD LQFP 64P
	1	U27	IC TPS51200DRCT SMD SON 10P
	2	U30,U36	IC TPS54620RGY Step Down Converter SMD QFN 14P
	2	CLK2,CLK3	IC CDCE62005RGZT SMD VQFN 48P
	1	MMC1	IC MSP430F5435IPN SMD LQFP 80P
	1	U29	IC TPS54231D DC/DC CONVERTER SMD SOIC 8P
	1	U34	IC UCD7242RSJT SMD QFN 32P
	4	Q2,Q3,Q4,Q5	IC TPS73701DRBT SMD SON 8P
	1	U32	IC UCD9222RGZR SMD VQFN 48P
	1	U249	IC MAX3221ECPWR RS-232 DRIVER/RECE SMD TSSOP 16P
	2	U254,U259	IC TS3L301DGG SMD TSSOP 48P
	1	U255	IC SN74ALVC125PWR SMD TSSOP 14P
	1	NAND1	IC NAND512R3A2DZA6E SMD VFBGA 63P
	1	EEPROM1	IC M24M01-HRMN6TP I2C 1.8V EEPROM SMD SO8 8P ST
	4	U4,U5,U16,U17	IC K4B1G1646G-BCH9 DDR3 1333 SMD FBGA 96P
	1	Q13	IC MCP9700AT-E/LT SMD SC70 5P 2.25x1.35x1.0mm
	1	SPI1	IC N25Q128A11BSF40F FLASH SMD SO16 16P
	2	U251,U253	IC SN74LVC1G07DBVR BUFFER/DRIVER SMD SOT23 5P
	1	U257	IC SN74LVC2G125DCUR BUS BUFFER GATE SMD US 8P
	Connectors & Headers	3	RST_COLD1,RST_FULL1,RST_WARM1
1		SW9	DIP SW ESD102EZ SMD 2x2P 2.54mm
4		SW3,SW4,SW5,SW6	SW ESD104EZ SMD 2x4P 10.12x6.6x3.1mm
1		LAN1	PHONE JACK RJ45 17P 90D(F) DIP 101112FHBMMAM404ZA
1		DC_IN1	POWER JACK 3P 2.5mm 90D(M) DIP 2DC-0005B100
1		COM_SEL1	PIN HEADER 3x2P 2.54mm 180D(M) DIP 201-2*3GS
1		560V2_PWR1	PIN HEADER 4x2P 2.54mm 180D(M) DIP 201-2*4GS
1		TEST_PH1	FEMALE HEADER 2x40P 1.27mm 180D(F) SMD 22L8742
1		PMBUS1	PIN HEADER 5x1P 2.54mm 180D(M) DIP 21N12564
1		TAP_FPGA1	PIN HEADER 8x1P 2.54mm 180D DIP YP91-01104-08B1
2		COM_SEL1(1-3),COM_SEL1(2-4)	MINI JUMPER 2P 2.54mm 180D(F) DIP 1132-040-02
1		USB1	MINI USB 5P 180D(F) SMD UH51543-CS7-7F
1		EMU1	B/B Conn. 60P 1.27mm 180D(F) SMD SOLC-115-02-5
1		HYPERLINK1	Conn. 36P 90D(F) 76867-0011
1		COM1	Wafer 2.54mm 3P 180D(M) DIP W/LOCK 22-27-2031
1	SBW_MMC1	WAFER 4P 2.54mm 180D(M) DIP 2542A-WS-4	
1	FAN1	WAFER BOX 3P 2.0mm 180D(M) DIP 2001-WS-3	
Inductors	2	L3,L8	Choke 3.3uH 20% GA SMD PCMC063T-3R3MN
	2	L5,L6	Choke 0.47uH 20% 17.5A SMD PCMC063T-R47MN
	1	L2	Inductor 22uH 20% 2.8A SMD 2P IHLM2525CZER220M11
Filters	9	B25,B26,B33,B34,B35,B36,B158,B164,B165	Bead 120ohm 25% 2A SMD 0603 BLM18PG121SN1 WO/Pb
	21	B8,B9,B10,B11,B12,B13,B14,B15,B16,B17,B18,B19,B20,B21,B22,B27,B28,B29,B30,B31,B32	EMI Filter 0.7A SMD 3P NFM18CC222R1C3
	8	B1,B2,B3,B4,B5,B6,B7,B24	Bead 120ohm 25% 500mA SMD 0402 BLM15AG121SN1D
OSC & X'tal	2	Y3,Y5	X'TAL 25MHz 30ppm 20PF SMD 5x3.2mm 2P 7A25000012
	1	Y2	X'TAL 12MHz 30ppm 20PF SMD 5x3.2mm 2P 7A12000044
	1	Y1	X'TAL 32.768KHZ 20ppm 12.5pF SMD 4P MC-146(LF)
	1	Y7	OSC 48MHZ 50ppm 3.3V 15pF SMD 4P 7x5 7W48000032
	2	D4,D5	Polyswitch SMD 0603 PGB1010603
	1	D7	Schottky B340A 3A 40V SMD SMA

Diode & LEDs	1	D3	Schottky ASD500V 0805 0.1A 40V 500mW SMD 0805
	2	D9,D10	DIODE RB751V40 0.2A 40V SMD SOD-32
	1	D12	ZENER BZX84-C12 12V 350MW SMD SOT-23
	6	D2,FPGA_D1,FPGA_D2,FPGA_D3,FPGA_D4,SYSPG_D1	LED BLUE SMD 0603 19-215SUBC/S280/TR8
MOSFET	1	D1	LED Red SMD 0603 KPT-1608EC
	1	Q10	MOSFET P-CH AO3401 -4.2A -30V SMD SOT-23 3P
	2	Q1,Q11	MOSFET N-CH 2N7002 0.3A 60V SMD SOT-23 3P
Resistors	1	Q12	TRANS NPN MMBT3904LT1G 0.2A SMD SOT-23 3P
	2	R334,R374	CR 31.6K 1% 1/16W SMD 0402 RM04FTN3162
	2	R242,R332	CR 56.2K 1% 1/16W SMD 0402 RM04FTN5622
	3	R1,R2,R237	CR 33K 5% 1/16W SMD 0402 RM04JTN333
	5	R901,R902,R903,R908,R909	CR 4.75K 1% 1/16W SMD 0402 RM04FTN4751
	6	R125,R251,R373,R391,R392,R393	CR 4.99K 1% 1/16W SMD 0402 RM04FTN4991
	1	R241	CR 1.87k 1% 1/10W SMD 0603 0603WAF1871T5E
	1	R58	CR 45.3 1/16W 1% SMD 0402 RM04FTN45R3
	2	R936,R937	CR 10M 5% 1/4W SMD 1206 232271161106L
	1	R250	CR 10.2K 1% 1/10W SMD 0603 232270461023L
	91	R16,R21,R22,R23,R25,R75,R85,R103,R128,R129,R130,R131,R136,R138,R141,R173,R174,R176,R180,R181,R201,R209,R210,R213,R215,R223,R230,R238,R240,R245,R259,R262,R264,R265,R284,R296,R298,R299,R301,R304,R306,R308,R309,R312,R314,R320,R321,R322,R323,R324,R325,R326,R327,R331,R335,R336,R350,R366,R367,R375,R376,R404,R407,R408,R418,R419,R421,R422,R423,R433,R436,R438,R439,R440,R441,R442,R445,R446,R447,R448,R449,R451,R452,R454,R475,R486,R762,R764,R957,R964	CR 10K 1% 1/16W SMD 0402 RM04FTN1002
	3	R24,R39,R476	CR 33 1% 1/16W SMD 0402 RM04FTN33R0
	31	R8,R30,R35,R36,R68,R140,R211,R212,R214,R216,R228,R283,R285,R289,R297,R300,R302,R303,R305,R307,R310,R311,R313,R317,R318,R319,R402,R403,R416,R417,R658	CR 100 1% 1/16W SMD 0402 RM04FTN1000
	19	R77,R78,R79,R80,R81,R84,R99,R142,R143,R171,R172,R177,R217,R229,R231,R233,R263,R420,R923	CR 1K 1% 1/16W SMD 0402 RM04FTN1001
	6	R253,R254,R257,R316,R328,R339	CR 100K 1% 1/16W SMD 0402 RM04FTN1003
	1	R258	CR 1M 1% 1/10W SMD 0603 232270461005L
	1	R94	CR 12.1K 1% 1/10W SMD 0603 0603WAF1212T5E
	2	R425,R426	CR 150 1% 1/16W SMD 0402 RM04FTN1500
	1	R252	CR 1.5K 1% 1/10W SMD 0603 0603WAF1501T5E
	2	R244,R333	CR 1.69K 1% 1/10W SMD 0603 232270461692L
	6	R70,R71,R82,R83,R90,R175,R255,R256	CR 2K 1% 1/16W SMD 0402 RM04FTN2001
	1	R239	CR 22.6K 1% 1/10W SMD 0603 232270462263L
	5	R73,R76,R87,R132,R133	CR 240 1% 1/10W SMD 0603 RM06FTN2400
	2	R222,R385	CR 28K 1% 1/10W SMD 0603 232270462803L
	1	R227	CR 36.5K 1% 1/10W SMD 0603 WR06X3655FTL
	1	R225	CR 39.2K 1% 1/10W SMD 0603 2322 704 63923L
	28	R37,R38,R41,R42,R43,R44,R45,R46,R47,R48,R49,R50,R51,R52,R53,R54,R55,R56,R57,R59,R60,R61,R62,R63,R64,R65,R66,R86	CR 39.2 1% 1/16W SMD 0402 0402WGF392JTCE
	1	R40	CR 475 1% 1/16W SMD 0402 0402WGF4750T5E
	9	R26,R27,R28,R29,R31,R32,R33,R34,R67	CR 49.9 1% 1/16W SMD 0402 RM04FTN49R9
	2	R224,R386	CR 56.2K 1% 1/10W SMD 0603 232270465623L
	2	R261,R405	CR 750 1% 1/16W SMD 0402 RM04FTN7500
	1	R243	CR 9.09K 1% 1/10W SMD 0603 232270469092L
	40	R126,R127,R137,R144,R145,R146,R147,R148,R149,R150,R151,R153,R154,R155,R156,R159,R165,R167,R199,R221,R234,R430,R431,R474,R477,R478,R479,R480,R481,R482,R483,R484,R487,R773,R774,R775,R776,R777,R778,R779	CR 0 5% 1/16W SMD 0402 RM04JTN0
	60	R260,R266,R267,R268,R269,R270,R271,R272,R273,R274,R275,R276,R277,R278,R279,R280,R281,R282,R286,R287,R288,R291,R292,R293,R294,R295,R337,R338,R340,R341,R347,R363,R377,R378,R396,R397,R398,R399,R400,R401,R406,R411,R473,R485,R938,R939,R940,R941,R942,R943,R944,R945,R946,R947,R948,R949,R950,R951,R952,R953	CR 10 5% 1/16W SMD 0402 RM04JTN100
	2	R372,R444	CR 100 5% 1/16W SMD 0402 RM04JTN101
	1	R935	CR 1K 5% 1/16W SMD 0402 RM04JTN102
	5	R930,R931,R932,R933,R934	CR 100K 5% 1/16W SMD 0402 RM04JTN104
	1	R102	CR 2.2K 5% 1/16W SMD 0402 RM04JTN222
	26	R88,R89,R91,R92,R93,R100,R101,R105,R106,R119,R120,R122,R123,R124,R152,R236,R248,R249,R432,R456,R457,R965,R966,R967,R968,R969	CR 22 5% 1/16W SMD 0402 RM04JTN220
	9	R3,R4,R184,R191,R192,R205,R206,R207,R208	CR 330 5% 1/16W SMD 0402 RM04JTN331
	3	R13,R14,R15	CR 3.3K 5% 1/16W SMD 0402 0402WGF0332TCE
	4	R178,R202,R368,R369	CR 33 5% 1/16W SMD 0402 RM04JTN330

	84	R95,R96,R97,R98,R104,R107,R109,R110,R111,R112,R113,R114,R115,R116,R117,R118,R121,R134,R135,R162,R163,R166,R168,R169,R179,R183,R185,R186,R187,R188,R189,R190,R194,R195,R196,R200,R203,R204,R218,R290,R315,R329,R330,R348,R353,R370,R379,R380,R381,R382,R383,R384,R387,R388,R389,R390,R413,R414,R424,R443,R455,R458,R459,R460,R461,R462,R463,R464,R465,R466,R467,R468,R469,R470,R471,R472,R893,R895,R896,R897,R905,R955,R956,R958	CR 4.7K 5% 1/16W SMD 0402 RM04JTN472	
	1	R434	CR 1.2k 1% 1/16W SMD 0402 0402WGF1201TCE	
	4	R5,R10,R74,R139	CR 8.2K 5% 1/16W SMD 0402 0402WGF0822TCE	
Capacitors	13	C142,C145,C147,C150,C153,C179,C201,C226,C227,C295,C300,C325,C441	MLCC X5R 4.7uF 10% 6.3V SMD 0603 GRM188R60J475K	
	2	C549,C550	MLCC X7R 0.1uF 10% 50V SMD 0603 C1608X7R1H104KT	
	5	C56,C70,C87,C101,C112	MLCC X5R 22uF 20% 6.3V SMD 0805 C0805B226M007T	
	28	C1,C2,C3,C4,C6,C10,C12,C14,C15,C19,C20,C21,C22,C23,C25,C26,C27,C28,C29,C30,C31,C34,C36,C38,C40,C42,C44,C51,C52,C53,C54,C55,C59,C60,C65,C66,C67,C68,C69,C85,C86,C88,C89,C90,C100,C102,C103,C104,C105,C107,C108,C109,C110,C111,C113,C114,C116,C117,C118,C119,C120,C121,C122,C123,C124,C125,C127,C128,C129,C132,C133,C134,C135,C136,C137,C141,C144,C146,C149,C152,C154,C155,C156,C157,C159,C160,C161,C162,C163,C164,C165,C166,C167,C168,C169,C170,C171,C172,C173,C174,C175,C184,C185,C194,C197,C202,C205,C216,C217,C218,C219,C258,C259,C260,C261,C262,C263,C283,C284,C285,C286,C287,C291,C296,C301,C302,C303,C304,C305,C306,C307,C308,C309,C310,C311,C312,C313,C314,C315,C316,C317,C318,C319,C321,C323,C326,C327,C328,C329,C331,C335,C337,C338,C339,C340,C341,C342,C343,C344,C345,C346,C347,C349,C351,C353,C354,C355,C356,C357,C359,C363,C365,C367,C368,C369,C382,C383,C384,C386,C387,C388,C389,C390,C391,C393,C394,C400,C401,C406,C410,C411,C412,C413,C414,C415,C416,C417,C418,C419,C420,C425,C429,C431,C435,C436,C439,C440,C442,C445,C465,C468,C470,C472,C475,C476,C478,C482,C486,C490,C493,C494,C495,C496,C497,C498,C499,C500,C501,C502,C503,C504,C505,C506,C508,C510,C511,C512,C513,C515,C519,C520,C521,C523,C524,C528,C529,C530,C531,C532,C533,C534,C535,C536,C538,C542,C545,C546,C547,C548,C551,C554,C560,C561,C562,C563,C572,C573,C574,C575,C576,C577,C578,C579,C580,C581,C582,C583,C584,C585,C596,C597,C599	MLCC X7R 0.1uF 10% 16V SMD 0402 2238 787 15649	
	1	C552	MLCC 1uF 10% 25V SMD 0603 GRM188R61E105KA12D	
	18	C320,C322,C324,C330,C332,C333,C334,C336,C348,C350,C352,C358,C360,C361,C362,C364,C444,C522	MLCC X5R 1uF 10% 6.3V SMD 0402 C1005X5R0J105KT	
	2	C449,C450	MLCC X5R 22uF 20% 16V SMD 1206 KC30R1C226M-T	
	6	C456,C460,C469,C471,C473,C474	SC 330uF 20% 6.3V SMD 7.3x4.3x1.8mm 6TPE330MAP	
	61	C186,C187,C188,C189,C190,C191,C192,C193,C199,C204,C207,C208,C209,C210,C211,C212,C213,C214,C215,C228,C229,C230,C231,C232,C233,C234,C235,C236,C237,C238,C239,C240,C241,C242,C243,C244,C245,C246,C247,C267,C268,C269,C270,C271,C272,C273,C274,C275,C276,C289,C290,C293,C294,C298,C299,C446,C467,C477,C481,C485,C489	MLCC X7R 560pF 10% 50V SMD 0402 223858715619	
	4	C455,C457,C458,C459	SC 220uF 20% 4V SMD 3.5x2.8x1.9mm 4TPE220MAZB	
	7	C264,C265,C266,C453,C454,C461,C462	MLCC X5R 47uF 20% 6.3V 0805 CL21A476MQYNNNE	
	1	C7	MLCC X5R 0.47uF 10% 10V 0402 223824713658	
	26	C158,C177,C178,C385,C392,C395,C396,C397,C398,C399,C405,C407,C408,C409,C421,C507,C509,C514,C517,C527,C537,C558,C559,C570,C571,C601	MLCC X5R 10uF 20% 6.3V SMD 0603 C1608X5R0J106MT	
	14	C176,C200,C402,C404,C422,C430,C432,C539,C556,C557,C566,C567,C568,C569	MLCC X5R 100uF 20% 6.3V SMD 1206	
	2	C451,C452	MLCC X7R 0.22uF 10% 25V 0603 C0603X224K025T	
	7	C423,C466,C540,C541,C543,C544,C553	MLCC X5R 10uF 10% 16V SMD 0805 GRM21BR61C106K	
	74	C9,C11,C13,C16,C17,C18,C33,C35,C37,C39,C41,C43,C115,C126,C140,C143,C148,C151,C182,C183,C195,C198,C203,C206,C220,C221,C222,C223,C224,C225,C248,C249,C250,C251,C252,C253,C254,C255,C256,C257,C277,C278,C279,C280,C281,C282,C288,C292,C297,C403,C426,C428,C433,C438,C443,C447,C448,C479,C484,C488,C491,C564,C565,C586,C587,C588,C589,C590,C591,C592,C593,C594,C595,C602	MLCC X7R 0.01uF 10% 16V SMD 0402 2238 787 15636	
	1	C464	MLCC Y5V 4.7uF +80%-20% 16V SMD 1206	
	2	C5,C8	MLCC NPO 22pF 5% 50V SMD 0402 223886915229	
	2	C138,C139	MLCC NPO 27pF 5% 50V SMD 0402 223886915279	
	2	C130,C131	MLCC NPO 33pF 5% 50V SMD 0402 223886915339	
	1	C24	MLCCNPO 470pF 5% 50V SMD 0402 WO/Pb	
	1	C427	MLCC NPO 56pF 5% 50V SMD 0603 223886715569	
	10	C180,C181,C196,C371,C480,C483,C487,C492,C516,C518	MLCC X7R 1000pF 10% 50V SMD 0402 223858715623	
	1	C424	MLCC X7R 1200pF 10% 50V SMD 0603 2238 586 15624	
	2	C434,C437	MLCC X7R 8200pF 10% 50V SMD 0603 223858615635	
	1	C555	MLCC NPO 8.2pF 0.5pF 50V SMD 0603 223886715828	
	3	C463,C525,C526	MLCC X7R 1uF 10% 16V SMD 0805 C0805X105K016T	
	FAN	1	FAN2	FAN0.09 12V 7000PRM 35x35x10mm AFB03512HA
	POST&SCREW	4	POST1,POST2,POST3,POST4	POST F=M3*11L B=5 H=11 Cu
		2	POST5,POST6	Post F=M3x23L D=5 H=23 CU for DSPM-8301E
		2	SCREWS,SCREW6	F/S D=5.6 H=1.0 +M M3*4L ST/H Ni NK

	2	SCREW9,SCREW10	Screw F/S D=3.5 H=0.7 + T2x4L ST BLK None
	2	SCREW11,SCREW12	S/S D=5 H=1.3 + M3*15L ST Ni
	4	SCREW1,SCREW2,SCREW3,SCREW4	R/S D=5.5 H=2 + M3*5L ST Ni
HEATSINK	1	HEATSINK1	Heatsink O-TMX320TCI6608CYP S-16W 42x36x17-PP
19C2830101	1	PCB1	PCB DSPM-8301E AMC A102-1 L:12 C:B 1.6mm IT168G

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