Optohybrid OHv3 Board BOM

**29 May 2020**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Part Numbers | Part | Package | Number per board | Comments |
| U1 | Xilinx XC7A200T-2FBG484C | BGA484 | **1** |  |
| U2, U3 | GBTx ASIC | BGA400 | **2** |  |
| U4 | SCA ASIC | LFBGA196 | **1** |  |
| U9, U11, U23, U24, U28, U29, U36 | SN74AVC2T45DCTR | SM8 | **7** |  |
| U6, U7, U8 | Micrel MIC69502WR | 7-pin S-PAK | **3** |  |
| U10, U22, U26, U27 | Tyco 1888247-1 | SM connector | **4** |  |
| U12, U13, U14, U16, U17, U18, U19, U20, U21 | SN65LVDT2DBV | 5-pin SOT-23 | **9** |  |
| U15 | SN74CBTLV3861PWR | TSSOP24 | **1** |  |
| U32, U34 | SN74AUP1G04DBVR | 5-pin SOT-23 | **2** |  |
| U31 | SN74AUP1G08DBVR | 5-pin SOT-23 | **1** |  |
| U30 | TI TXB0104DR | SOIC14 | **1** |  |
| U25 | Xilinx XCF32PFSG48C | FSG48 BGA | **1** |  |
| U35 | SN74LVC1G07DBVR | 5-pin SOT-23 | **1** |  |
| U38 | MAX6709OUB | 10-pin uMAX | **1** |  |
|  |  |  |  |  |
| P1 | FCI71922-126LF | 26-pin connector | **1** |  |
| P2, P3 | FCI75867-132LF | 8-pin connector | **2** |  |
| P4 | Molex 87833-1420 | 14-pin connector | **1** |  |
| P5, P6 | Samtec QSE-080-01-F-D-A | 160-pin connector | **2** |  |
| P7 | Samtec HLE-108-02-F-DV-A | 8-pin connector | **1** |  |
|  |  |  |  |  |
|  |  |  |  |  |
| SW1, SW3 | C&K TDA04H0SB1 | SM DIP switch | **2** |  |
| SW2 | Omron B3U-1000P | SM push button | **1** |  |
|  |  |  |  |  |
| D1..D11 | Lumex SML-LX1206GC-TR | SM LED | **11** |  |
|  |  |  |  |  |
| L1..L10 | Coilcraft 2929SQ-501JEB | SM inductor | **10** |  |
|  |  |  |  |  |
| R3,R7, R10 | Resistor 100 kOhm | SM0603 | **3** |  |
| R4,R5,R9,R11,R12,R38,R39, R65,R66, R67,R69,R95,R97, R100,R102,R105,R108,R111, R114,R119,R121,R123,R125, R127,R128, R129,R130,R136, R137, R138,R139,R144, R145,R146,R147 | Resistor 1 kOhm | SM0603 | **35** |  |
| R6,R13,R68,R70 | Resistor 100 Ohm | SM0603 | **4** |  |
| R8 | Resistor 1.40 kOhm | SM0603 | **1** |  |
| R15 | Resistor 180 Ohm | SM0603 | **1** |  |
| R14 | Resistor 150 Ohm | SM0603 | **1** |  |
| R16,R17,R18,R19, R21,R22,R23,R24,R25,R26,R27,R28,R29,R30,R31,R32,R33,R34,R35,R36,R41,R42,R43,R44, R46,R47,R48,R49,R50,R51,R52,R53,R54,R55,R56,R57,R58,R61,R62,R63,R71,R72,R73,R74,R77,R80,R81,R82,R83,R84,R85,R86,R87,R88,R89,R90,R91,R92, R115,R116,R148, R149, R150, R160 | Resistor 4.7 kOhm | SM0603 | **64** |  |
| R20, R45 | Resistor 20 kOhm | SM0603 | **2** |  |
| R103,R75,R76,R78,R106,R109, R112, R117 | Resistor 330 Ohm | SM0603 | **8** |  |
| R140 | Resistor 2.4 kOhm | SM0603 | **1** |  |
| R134, R135 | Resistor 2 kOhm | SM0603 | **2** |  |
| R141 | Resistor 1.6 kOhm | SM0603 | **1** |  |
| R142 | Resistor 1 kOhm | SM0603 | **1** |  |
| R143 | Resistor 510 Ohm | SM0603 | **1** |  |
| R94,R96,R99,R101,R104,R113, R118,R120, R122,R124,R126 | Resistor 3 kOhm | SM0603 | **11** |  |
|  |  |  |  |  |
| R151, R152, R153, R154 | Temperature sensor Heraeus Nexensos 32207638 | SM0603 | **4** |  |
| R155 | Resistor 1 kOhm, TT Electronics 66-WIN-T0603LF111001A | SM0603 | **1** |  |
| R156 | Resistor 0 Ohm | SM0603 | **1** |  |
| R157, R158 | Resistor 10 kOhm | SM0603 | **2** |  |
|  |  |  |  |  |
| C4, C7, C8, C10, C58, C73, C74, C75, C90, C91, C100, C108, C179, C190, C165, C197,C198,C210,C226, C229, C246, C247, C147, C148, C156 | Capacitor 47uF Kemet T520B476M006ATE025 | SM3528 | **25** |  |
| C11,C12,C35,C36,C37,C59,C60 | Capacitor 100 uF T520B107M006ATE025 | SM3528 | **7** |  |
| C230 | Capacitor 680 uF AVX TAJE687K006RNJ | SM7343 | **1** |  |
| C9 | Capacitor 330 uF Kemet T491D337M006AT | SM7343 | **1** |  |
| C2, C5, C19, C20, C21, C22, C27, C28, C33, C34, C43, C44, C45, C50, C51, C56, C57, C65, C66, C71, C72, C186, C188, C219, C231,C232,C233,C234,C235, C236,C237,C238 | Capacitor 4.7uF Samsung CLB475KQ8NQNC | SM0603 | **32** |  |
| C87,C88,C89,C92,C101,C102, C103,C149,C150,C151,C157, C159,C160,C199,C200,C201, C202,C211,C212 | Capacitor 0.1uF  Taiyo Yuden EMK105B7104KV-F | SM0402 | **19** |  |
| C76,C77,C78,C79,C80,C81,C82,C83,C84,C85,C86,C93,C94,C95,C96,C97,C98,C104,C106,C107, C109,C112,C113,C114,C115, C120,C121,C122,C123,C128, C129,C133,C134,C135,C136, C137,C138,C139,C140,C141, C142,C143,C144,C145,C146, C152,C153,C154,C155,C161, C162,C163,C166,C169,C170, C171,C172,C173,C174,C175, C176,C177,C178,C203,C204, C205,C206,C207,C208,C209, C213,C215,C217,C218, | Capacitor 0.01uF  Kemet C0402C103K5RECAUTO | SM0402 | **74** |  |
| C3,C6,C13,C14,C15,C16,C17, C23,C24,C25,C29,C30,C31,C38,C39,C40,C41,C46,C47,C48,C52,C53,C54,C61,C62,C63,C67,C68,C69, C239,C240,C241,C242,C243, C244,C245 | Capacitor 0.47uF  Murata GRT155R6YA474KE01D | SM0402 | **36** |  |
| C99,C105,C110,C111,C116, C117,C118,C124,C125,C126, C127,C130,C131,C132,C158, C164,C167,C168,C180,C181, C182,C183,C184,C185,C187, C189,C191,C192,C193,C194, C195,C196,C220,C221,C224, C225,C227,C228 | Capacitor 0.1uF  Kemet  C0603C104K4RAC7867 | SM0603 | **38** |  |
| C18,C26,C32,C42,C49,C55,C64,C70 | Capacitor 0.47uF  Samsung  CL10B474KQ8NNNC | SM0603 | **8** |  |
|  |  |  |  |  |
|  |  |  |  |  |

Comments and special instructions

1. Don’t assemble U25
2. Don’t assemble R67, R89, R50
3. R151-R154 are temperature sensors, face up mounting, see

<https://www.heraeus.com/media/media/hne/datasheets/smd/en_12/smd_0603_v_e.pdf>