

Arduino Rev. 3

PCB layout showing components and connections for the Arduino Rev. 3 board. The layout includes various components such as Fm1, Fm2, Fm3, Fm4, Fm5, Fm6, Jp1, Jp2, P101, P102, P103, P104, P105, P106, P107, P108, P109, P110, P111, P112, P113, P114, P115, P116, P117, P118, P119, P120, P121, P122, P123, P124, P125, P126, P127, P128, P129, P130, P131, P132, P133, P134, P135, P136, P137, P138, P139, P140, P141, P142, P143, P144, P145, P146, P147, P148, P149, P150, P151, P152, P153, P154, P155, P156, P157, P158, P159, P160, P161, P162, P163, P164, P165, P166, P167, P168, P169, P170, P171, P172, P173, P174, P175, P176, P177, P178, P179, P180, P181, P182, P183, P184, P185, P186, P187, P188, P189, P190, P191, P192, P193, P194, P195, P196, P197, P198, P199, P200, P201, P202, P203, P204, P205, P206, P207, P208, P209, P210, P211, P212, P213, P214, P215, P216, P217, P218, P219, P220, P221, P222, P223, P224, P225, P226, P227, P228, P229, P230, P231, P232, P233, P234, P235, P236, P237, P238, P239, P240, P241, P242, P243, P244, P245, P246, P247, P248, P249, P250, P251, P252, P253, P254, P255, P256, P257, P258, P259, P260, P261, P262, P263, P264, P265, P266, P267, P268, P269, P270, P271, P272, P273, P274, P275, P276, P277, P278, P279, P280, P281, P282, P283, P284, P285, P286, P287, P288, P289, P290, P291, P292, P293, P294, P295, P296, P297, P298, P299, P300, P301, P302, P303, P304, P305, P306, P307, P308, P309, P310, P311, P312, P313, P314, P315, P316, P317, P318, P319, P320, P321, P322, P323, P324, P325, P326, P327, P328, P329, P330, P331, P332, P333, P334, P335, P336, P337, P338, P339, P340, P341, P342, P343, P344, P345, P346, P347, P348, P349, P350, P351, P352, P353, P354, P355, P356, P357, P358, P359, P360, P361, P362, P363, P364, P365, P366, P367, P368, P369, P370, P371, P372, P373, P374, P375, P376, P377, P378, P379, P380, P381, P382, P383, P384, P385, P386, P387, P388, P389, P390, P391, P392, P393, P394, P395, P396, P397, P398, P399, P400, P401, P402, P403, P404, P405, P406, P407, P408, P409, P410, P411, P412, P413, P414, P415, P416, P417, P418, P419, P420, P421, P422, P423, P424, P425, P426, P427, P428, P429, P430, P431, P432, P433, P434, P435, P436, P437, P438, P439, P440, P441, P442, P443, P444, P445, P446, P447, P448, P449, P450, P451, P452, P453, P454, P455, P456, P457, P458, P459, P460, P461, P462, P463, P464, P465, P466, P467, P468, P469, P470, P471, P472, P473, P474, P475, P476, P477, P478, P479, P480, P481, P482, P483, P484, P485, P486, P487, P488, P489, P490, P491, P492, P493, P494, P495, P496, P497, P498, P499, P500, P501, P502, P503, P504, P505, P506, P507, P508, P509, P510, P511, P512, P513, P514, P515, P516, P517, P518, P519, P520, P521, P522, P523, P524, P525, P526, P527, P528, P529, P530, P531, P532, P533, P534, P535, P536, P537, P538, P539, P540, P541, P542, P543, P544, P545, P546, P547, P548, P549, P550, P551, P552, P553, P554, P555, P556, P557, P558, P559, P560, P561, P562, P563, P564, P565, P566, P567, P568, P569, P570, P571, P572, P573, P574, P575, P576, P577, P578, P579, P580, P581, P582, P583, P584, P585, P586, P587, P588, P589, P590, P591, P592, P593, P594, P595, P596, P597, P598, P599, P600, P601, P602, P603, P604, P605, P606, P607, P608, P609, P610, P611, P612, P613, P614, P615, P616, P617, P618, P619, P620, P621, P622, P623, P624, P625, P626, P627, P628, P629, P630, P631, P632, P633, P634, P635, P636, P637, P638, P639, P640, P641, P642, P643, P644, P645, P646, P647, P648, P649, P650, P651, P652, P653, P654, P655, P656, P657, P658, P659, P660, P661, P662, P663, P664, P665, P666, P667, P668, P669, P670, P671, P672, P673, P674, P675, P676, P677, P678, P679, P680, P681, P682, P683, P684, P685, P686, P687, P688, P689, P690, P691, P692, P693, P694, P695, P696, P697, P698, P699, P700, P701, P702, P703, P704, P705, P706, P707, P708, P709, P710, P711, P712, P713, P714, P715, P716, P717, P718, P719, P720, P721, P722, P723, P724, P725, P726, P727, P728, P729, P730, P731, P732, P733, P734, P735, P736, P737, P738, P739, P740, P741, P742, P743, P744, P745, P746, P747, P748, P749, P750, P751, P752, P753, P754, P755, P756, P757, P758, P759, P760, P761, P762, P763, P764, P765, P766, P767, P768, P769, P770, P771, P772, P773, P774, P775, P776, P777, P778, P779, P780, P781, P782, P783, P784, P785, P786, P787, P788, P789, P790, P791, P792, P793, P794, P795, P796, P797, P798, P799, P800, P801, P802, P803, P804, P805, P806, P807, P808, P809, P810, P811, P812, P813, P814, P815, P816, P817, P818, P819, P820, P821, P822, P823, P824, P825, P826, P827, P828, P829, P830, P831, P832, P833, P834, P835, P836, P837, P838, P839, P840, P841, P842, P843, P844, P845, P846, P847, P848, P849, P850, P851, P852, P853, P854, P855, P856, P857, P858, P859, P860, P861, P862, P863, P864, P865, P866, P867, P868, P869, P870, P871, P872, P873, P874, P875, P876, P877, P878, P879, P880, P881

Main Board

A4	-	Revision: 2.1
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A

B

C

D

A

B

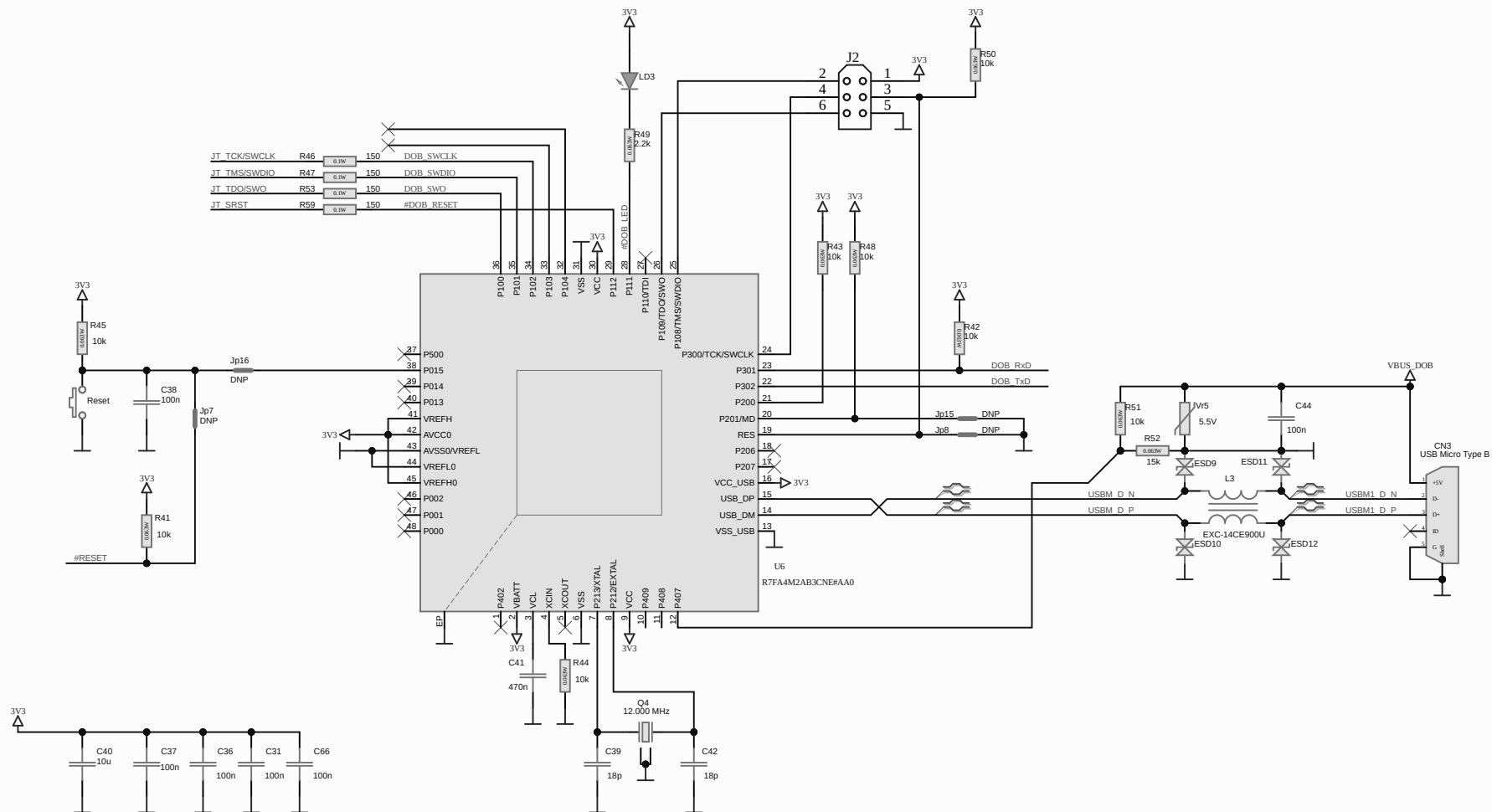
C

D

U1A					
A0	169	P000 / IRQ6_DS / AN000/AN000	P500 / CACREF / AN118 / GTU1 / AGTOA0 / CTSS1 / USB_VBUSEN / QSPCLK	140	P500
A1	168	P001 / IRQ7_DS / AN001/AN001	P501 / IRQ11 / AN117 / GTV1 / AGTOB0 / TXD5 / USB_OVRCLRA / QSSL	141	P501
A2	167	P002 / IRQ8_DS / AN002/AN002	P502 / IRQ12 / AN118 / GTW1 / AGTOA2 / CTSS6 / RXD5 / USB_OVRCLRB / QIO0	142	P502
A3	166	P003 / AN003	P503 / AN119 / GTETRG0 / AGTOB2 / CTSS6 / SCK5 / USB_EXICEN / QIO1	143	P503
P004	165	P004 / IRQ9_DS / AN004	P504 / AN120 / ALE / GTETRG0 / AGTOA3 / SCK6 / CTSS5 / USB_ID / QIO2	144	P504
P005	164	P005 / IRQ10_DS / AN005	P505 / IRQ14 / AN121 / AGTOB3 / RXD6 / QIO3	145	ModBus_Rx0
LED_B	163	P006 / IRQ11_DS / AN006	P506 / IRQ15 / AN122 / TXD6	146	ModBus_Tx0
LED_G	162	P007 / AN007	P507 / IRQ15 / CTSS6 / SCK5	147	ModBus_CS
LED_R	161	P008 / IRQ12_DS / AN008	P508 / AN124 / CTSS5 / RTS5_B	148	P508
SB2	160	P009 / IRQ13_DS / AN009	P511 / IRQ15 / GTIOC0B / RXD4 / SDA1_A / CRX1	176	CAN_RX
SB1	159	P010 / IRQ14 / AN010	P512 / IRQ14 / GTIOC0A / TXD4 / SCL1_A / CTX3	175	CAN_TX
A4	152	P014 / AN012/DA0	P513 / RXD5_B	174	CAN_STBY
A5	151	P015 / IRQ13 / AN013/DA1			
OM_SCLK_BSS	132	P100 / IRQ2 / D0 / GTETRG4 / GTIOC5B / AGTIO0 / RXD0 / SCK1 / MISOB_A / QSPCLK / OM_SCLK			
OM_SIO7	131	P101 / IRQ1 / D1 / GTETRG8 / GTIOC5A / AGTEE0 / TXD0 / CTSS1 / RTS1 / MOSIB_A / QIO1 / OM_SIO7			
OM_SIO4	130	P102 / ADTRG0 / D2 / GTOWLO / GTIOC2B / AGTO0 / SCK0 / RSPCKB_A / CRX0 / QIO0 / OM_SIO1			
OM_SIO6	129	P103 / D3 / GTOWUP / GTIOC3A / AGTIO2 / CTSS0 / RTS0 / SSBIB_A / CTSS6 / QIO3 / OM_SIO6	P600 / CACREF/CLKOUT / RD / GTIOC0B / AGTIO3 / SCK0 / OM_SIO4	122	OM_SIO4
OM_ECS	128	P104 / IRQ1 / D4 / GTETRG8 / GTIOC3B / AGTEE2 / RXD8 / SSBIB_A / QIO2 / OM_DQS	P601 / WRWR0 / GTIOC0A / AGTEE3 / RXD9 / OM_SIO2	121	OM_SIO2
OM_SIO5	127	P105 / IRQ6 / D5 / GTETRG4 / GTIOC1A / AGTO2 / TXD8 / SSBIB_A / OM_SIO5	P602 / BCLK / GTIOC7B / AGTIO3 / TXD9 / OM_CS1	120	OM_CS1
OM_SIO0	126	P106 / D6 / GTIOC0B / AGTOB0 / SCK8 / SSBIB_A / OM_SIO0	P603 / D13 / GTIOC7A / AGTIO4 / CTSS9 / RTS9	119	OM_RESET
OM_SIO3	125	P107 / D7 / GTIOC0A / AGTOA0 / CTSS5 / RTS8 / OM_SIO3	P604 / D12 / GTIOC0B / AGTEE4 / CTSS9	118	P604
JT_TMS/SWDIO	89	P108 / TMS/SWDIO / GTOWLO / GTIOC0B / AGTOA3 / CTSS9 / RTS8 / SSBIB_A	P605 / D11 / GTIOC0A / AGTIO4 / CTSS8	117	P605
DC0B_Rx0	90	P109 / TDO/SWIOCLKOUT / GTOWUP / GTIOC1A / AGTOB3 / TXD9 / MOSIA_B / CTX1	P606 / RTICOUT_B / CTSS5 / RTS8_C	116	P606
DC0B_Tx0	91	P110 / TX1 / IRQ3 / GTOWLO / GTIOC1B / AGTEE3 / CTSS2 / RTS2 / RXD9 / MISOA_B / CRX1	P607 / RXD8_C	115	P607
D1	92	P111 / IRQ4 / A5 / GTIOC3A / AGTIO4 / SCK2 / SCK9 / RSPCKA_B	P608 / ADIRC0 / GTIOC0A	99	DT
D4	93	P112 / A4 / GTIOC0B / AGTOB5 / TXD2 / SCK1 / SSBIB_A / OM_CS1 / SSBIBCK0_B	P609 / CS1 / GTIOC5A / AGTIO5 / CTX1 / OM_ECS	100	OM_ECS
D5	94	P113 / A3 / GTIOC3A / AGTEE5 / RXD2 / SSBIBCK0_B	P610 / CS0 / GTIOC5B / AGTIO4 / CTSS7 / CRX1 / OM_CS0	101	OM_CS0
D6	95	P114 / A2 / GTIOC2B / AGTIO5 / CTSS9 / SSBIBCK0_B	P611 / CACREF/CLKOUT / AGTIO3 / CTSS7 / RTS7	102	P611
D9	96	P115 / A1 / GTIOC0A / SSBIBCK0_B	P612 / D8 / AGTIO2 / SCK7	103	P612
			P613 / D9 / AGTIO1 / TXD7	104	D1
			P614 / D10 / AGTIO0 / RXD7	105	D0
			P615 / IRQ7 / USB_VBUSEN_D	106	P615
D12	54	P202 / IRQ3_DS / WR18C1 / GTIOC5B / AGTOB3 / SCK2 / RXD9 / MISOA_A / CRX0 / SDO0AT6_A / ET0_ERXD2 / TS19			
D11	53	P203 / IRQ2_DS / A19 / GTIOC5A / AGTOA3 / CTSS2 / RTS2 / TXD9 / MOSIA_A / CTX0 / SDO0AT5_A / ET0_COL / TS18			
D13	52	P204 / CACREF / A18 / GTW1 / GTIOC4B / AGTIO1 / SCK4 / SCK9 / RSPCKA_A / USB_OVRCLRB_DS / SSBIBCK0_C / SDO0AT4_A / ET0_RX_DV / TS00			
SD_D2	51	P205 / CLKOUT / IRQ2_DS / A18 / GTW1 / GTIOC4A / AGTIO1 / TXD4 / CTSS9 / RTS9 / SCL1_B / SSBIB_A / USB_OVRCLRA_DS / SSBIBCK0_C / SDO0AT3_A / ET0_WOL / ET0_WOL / TS01			
SD_D2	50	P206 / IRQ0_DS / WAIT / GTU1 / RD4 / CTSS9 / SDA1_B / SSBIB_A / USB_VBUSEN / SDO0AT2_A / ET0_LINKSTA / ET0_LINKSTA / CECIO / SDO0AT2_C / TS02			
D8	49	P207 / A17 / TXD4 / SSBIB_A / QSSL / TS04P			
P208	66	P208 / TDATA2 / CS4 / GTOWLO / QIO3 / SDO0AT0_B / ET0_LINKSTA / ET0_LINKSTA	P700 / GTIOC5A / AGTIO4 / MISOA_C / ET0_ETXD1 / RMIO_TXD0_B	8	RAMA
SD_VIP	65	P209 / TDATA2 / CS5 / GTOWUP / AGTEE5 / QIO2 / SDO0P / ET0_EXOUT / ET0_EXOUT	P701 / GTIOC5B / AGTIO3 / MOSIA_C / ET0_ETXD0 / REF50CK0_C	9	REF50CK0
SD_CD	64	P210 / TDATA1 / CS6 / GTW1 / AGTOB5 / QIO1 / SDO0C / ET0_WOL / ET0_WOL	P702 / GTIOC0A / AGTIO2 / RSPCKA_C / ET0_ERXD1 / RMIO_RXD0_B	10	RMIO_RXD0
P211	63	P211 / TDATA0 / CS7 / GTV1 / AGTOA5 / QIO0 / SDO0C0_B / ET0_MDIO / ET0_MDIO	P703 / GTIOC0B / AGTIO1 / SSBIB_A / ET0_ERXD0 / RMIO_RXD1_B	11	RMIO_RXD1
P214	62	P214 / TCLK / GTU1 / AGTOS / QSPCLK / SDO0CK0_B / ET0_MDIO / ET0_MDIO	P704 / AGTIO0 / SSBIB_A / CTX0 / ET0_RX_CLK / RMIO_RX_ER_B	12	RMIO_RX_ER
JT_TCK/SWCLK	88	P900 / TCK/SWCLK / GTOWUP / GTIOC0A / SSBIB_B	P705 / AGTIO0 / CTSS3 / SSBIB_A / CTX0 / ET0_RX_CLK / RMIO_RX_ER_B	13	RMIO_RX_ER
D10	87	P901 / IRQ6 / A6 / GTOWLO / GTIOC0B / AGTIO0 / RXD2 / CTSS9 / RTS9 / SSBIB_B	P706 / IRQ7 / USBHS_OVRCLRB / RXD3_B	14	ET_IRQ
P902	86	P902 / IRQ5 / A3 / GTOWUP / GTIOC0A / TXD2 / SSBIB_B	P707 / IRQ8 / USBHS_OVRCLRA / TXD3_B	15	USBHS_OC
P903	85	P903 / A8 / GTIOC7B / CTSS9	P708 / CACREF / IRQ11 / RXD1 / SSBIB_B / AUDIO_CLK / ET0_ETXD3 / CECIO / TS12	36	P708
P904	82	P904 / IRQ8 / A8 / GTOWLO / GTIOC7A / AGTEE2 / RXD6			
QSPCLK	81	P905 / IRQ8 / A10 / GTOWUP / AGTOB2 / TXD6 / QSPCLK			
QSSL	80	P906 / A11 / GTOWLO_D / AGTOA2 / SCK6 / QSSL			
QIO4	79	P907 / A12 / GTOWUP_D / AGTEE4 / CTSS6 / RTS6 / QIO0	P800 / AN125 / D14 / AGTOA4 / CTSS0	133	P800
QIO1	78	P908 / A13 / AGTOB4 / CTSS6 / CTSS3 / QIO1	P801 / AN126 / D15 / AGTOB4 / CTSS8	134	P801
QIO2	77	P909 / A14 / AGTOB4 / RXD3 / QIO2	P802 / IRQ3 / AN127	135	P802
QIO3	76	P910 / A15 / AGTEE1 / TXD3 / QIO3	P803 / IRQ2 / AN128	136	P803
P911	75	P911 / CS2 / AGTOB1 / SCK3	P804 / IRQ1	137	P804
P912	74	P912 / CS1 / AGTOA1 / CTSS3 / RTS3	P805 / TXD5_B	173	P805
P913	55	P913 / A20 / SDO0AT7_A / ET0_ERXD3	P806 / IRQ0	172	P806
P914	56	P914 / ADTRG0 / A21			
P915	57	P915 / A22 / RXD4_C			
ET_HRST	1	P400 / IRQ0 / ADTRG1 / GTIOC0A / AGTIO1 / SCK4 / SCK7 / SCL0_A / AUDIO_CLK / ET0_WOL / ET0_WOL	P900 / A23 / TXD4_C	58	P900
ET_MDIO_RTS	2	P401 / IRQ5_DS / GTETRG4 / GTIOC0B / CTSS1 / RTS1 / TXD1 / SDA0_A / CTX0 / ET0_MDIO / ET0_MDIO	P901 / AGTIO1_E / SCK4_C	59	P901
ET_MDIO_RASD	3	P402 / CACREF / IRQ4_DS / AGTIO0 / AGTIO1 / AGTIO2 / AGTIO3 / RTIOC1 / CTSS4 / RXD0 / AUDIO_CLK / ET0_MDIO / ET0_MDIO	P902 / IRQ8 / USB_ID_C	72	P902
P403	4	P403 / IRQ14_DS / GTIOC3A / AGTIO1 / AGTIO1 / AGTIO3 / RTIOC1 / CTSS7 / SSBIBCK0_A / ET0_LINKSTA / ET0_LINKSTA	P906 / IRQ9 / USB_EXICEN_C	71	P906
P404	5	P404 / IRQ15_DS / GTIOC3B / AGTIO1_G / AGTIO1 / AGTIO2 / AGTIO3 / RTIOC1 / CTSS7 / SSBIBCK0_A / ET0_EXOUT / ET0_EXOUT	P907 / IRQ10 / USBHS_ID	70	P907
RMIO_TXD0_EN	6	P405 / GTIOC1A / SSBIBCK0_A / ET0_TX_EN / RMIO_TXD_EN_B	P908 / IRQ11 / USBHS_EXICEN	70	P908
RMIO_TXD1_RAMA	7	P406 / GTIOC1B / AGTIO5 / SSBIB_A / CTSS9 / SSBIBCK0_A / ET0_RX_ER / RMIO_TXD1_B			
USBHS_VBUS	44	P407 / ADTRG0 / GTIOC0A / AGTIO0 / RTICOUT / CTSS4 / RTS4 / SDA0_B / SSBIB_A / USB_VBUS / ET0_EXOUT / ET0_EXOUT / TS03	PAD0 / TXD8_C	114	PAD0
P408	43	P408 / IRQ7 / GTOWLO / GTIOC0B / AGTOB2 / CTSS4 / RXD3 / SCL0_B / USB_ID / USBHS_ID / ET0_CHS / RMIO_CHS_DV_A / TS04	PAD1 / SCK8_C	115	PAD1
SD	42	P409 / IRQ6 / GTOWUP / AGTOA2 / TXD3 / SDA2 / USB_EXICEN / USBHS_EXICEN / ET0_RX_CLK / RMIO_RX_ER_A / TS05	PAD8 / IRQ6 / USB_OVRCLRA_C	107	PAD8
SD_D1	41	P410 / IRQ5 / GTOWLO / GTIOC0B / AGTIO1 / RXD0 / SCL0 / SCK3 / MISOB_B / SDO0AT1_A / ET0_ERXD0 / RMIO_RXD0_A / TS06	PAD9 / IRQ5 / USB_OVRCLRB_C	106	PAD9
SD_D0	40	P411 / IRQ4 / GTOWUP / GTIOC0A / AGTOA1 / TXD0 / CTSS2 / RTS2 / MOSIB_B / SDO0AT0_A / ET0_ERXD0 / RMIO_RXD0_A / TS07	P410 / IRQ4	105	P410
SD_CMD	39	P412 / GTOWLO / AGTEE3 / SCK0 / CTSS3 / RSPCKB_B / SDO0C0_A / ET0_ETXD0 / REF50CK0_A / TS08			
SD_CLK	38	P413 / GTOWUP / AGTEE3 / CTSS9 / RTS9 / SSBIB_A / ET0_ETXD1 / RMIO_TXD0_A / TS09			
SDA	37	P414 / IRQ9 / GTIOC0B / AGTIO5 / SDA2 / CTSS0 / SSBIB_B / SDO0P / ET0_RX_ER / RMIO_TXD1_A / TS10	P800 / USBHS_VBUSEN / SCK3_B	16	USBHS_EN
SCL	36	P415 / IRQ8 / GTIOC0A / AGTIO4 / SCL2 / SSBIB_B / USB_VBUSEN / SDO0C / ET0_TX_EN / RMIO_TXD_EN_A / TS11	P801 / USBHS_VBUS / CTSS5 / RTS5_B	17	USBHS_VBUS

RF7A6M5BH3CFC

VK-RA6M5			
MCU I/O			
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VK-RA6M5

On Board Debug

A4

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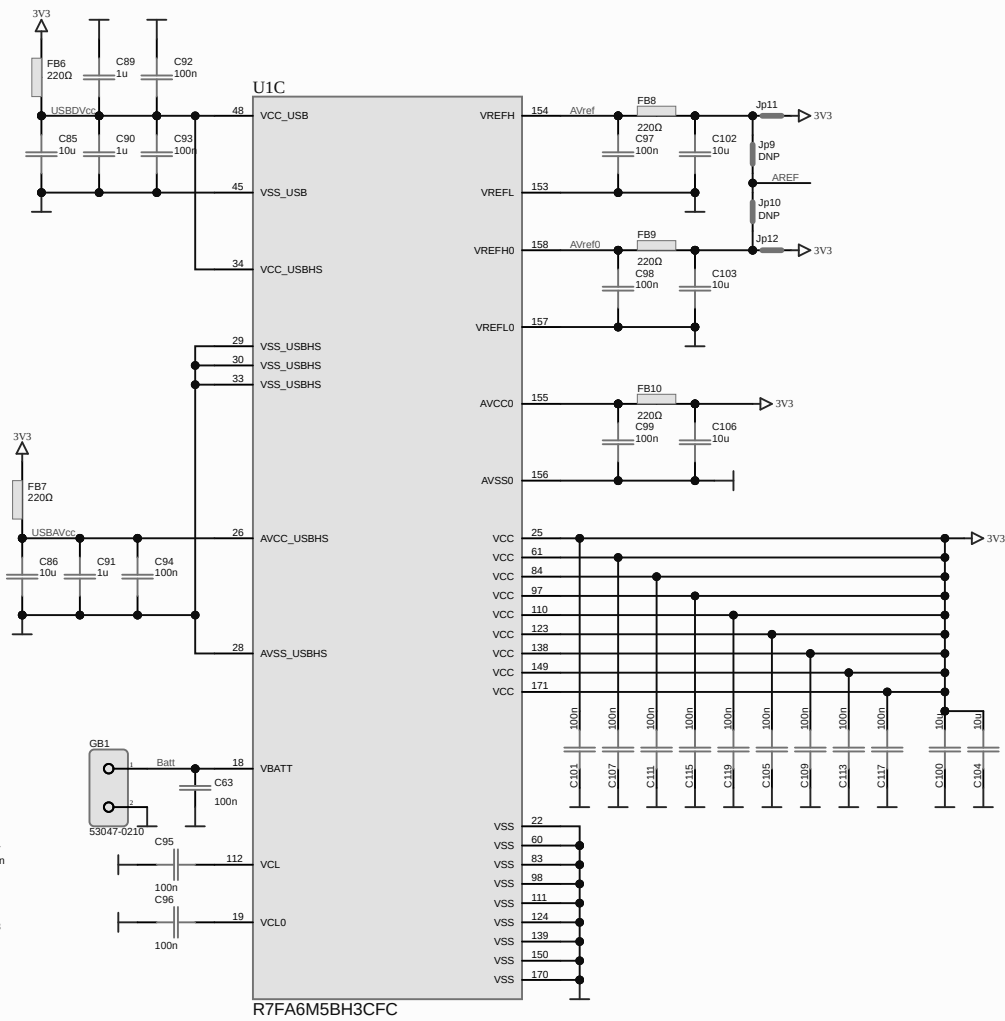
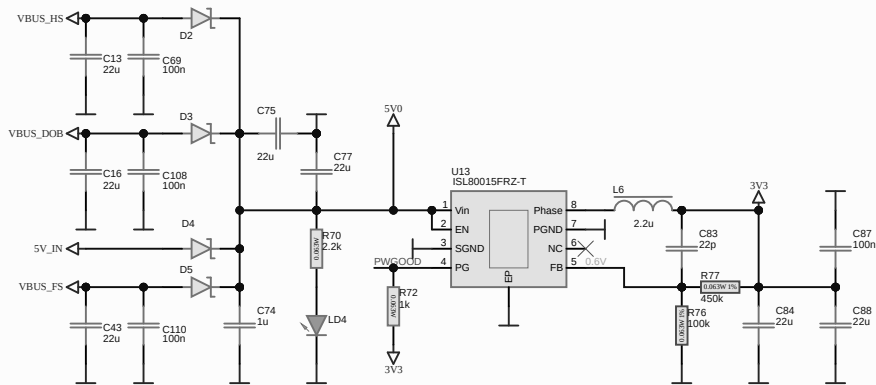
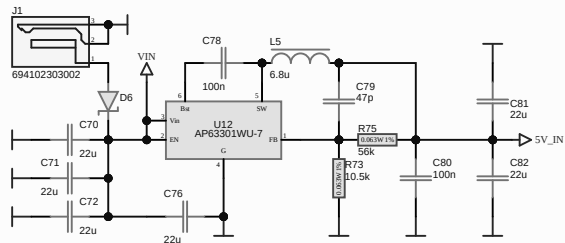
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R7FA6M5BH3CFC

VK-RA6M5

Power Supply

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Designator	Description	Comment	Quantity	Part Number	Manufacturer	Placement
C1, C2, C5, C7, C14, C15, C18, C19, C21, C22, C29, C31, C36, C37, C38, C44, C48, C51, C55, C57, C62, C63, C64, C65, C66, C69, C73, C78, C80, C87, C92, C93, C94, C95, C96, C97, C98, C99, C101, C105, C107, C108, C109, C110, C111, C113, C115, C117, C119	SMD 0402 50V X7R 10%	100n	49	885012205086	Würth Elektronik	
C3	SMD 0402 16V X7R 10%	220n	1	1C105B224K05NNNC	Samsung	
C4, C6	SMD 0402 50V 0G5 5%	15p	2		Samsung	
C8, C11	SMD 0402 50V 0G5 5%	100p	2		Samsung	
C9, C10	SMD 0402 50V 0G5 5%	12p	2	2C105C120B5NNNC	Samsung	
C12, C13, C16, C43, C81, C82	SMD 0603 10V X5R 10%	22u	6	1C110A228MP5NNNC	Samsung	
C17	SMD 0603 25V X5R 10%	10u	1	1C110A106MA5NNNC	Samsung	
C20, C35, C45, C46, C47, C60, C61, C85, C86, C100, C102, C103, C104, C106	SMD 0402 6.3V X5R 20%	10u	14	885012105020	Würth Elektronik	
C23, C25	SMD 0402 50V 0G5 5%	100n	2	2GCM1555C1H100A14D	Murata Electronics	
C24, C28	SMD 0402 50V 0G5 5%	10n	2	2GCM1555C1H100A14D	Murata Electronics	
C26, C27, C89, C90, C91	SMD 0402 16V X5R 10%	1u	5	1C105A105V05NNNC	Samsung	
C30	SMD 0402 50V X7R 10%	1u	1	885012205086	Würth Elektronik	
C32	SMD 0402 16V X7R 10%	100n	1	1C105B224K05NNNC	Samsung	
C33, C34	SMD 0402 50V X7R 10%	10n	2	885012205086	Würth Elektronik	
C39, C42	SMD 0402 50V 0G5 5%	18p	2	2C105C180B5NNNC	Samsung	
C40	SMD 0402 16V X5R 10%	10u	1	1C105A105V05NNNC	Samsung	
C41	SMD 0402 50V X7R 10%	470n	1	885012205086	Würth Elektronik	
C48, C50, C52, C53, C54, C56	SMD 0402 50V X7R 10%	100n	1	1C105B224K05NNNC	Samsung	
C58, C59	SMD 0402 16V X5R 10%	4.7u	2	1C105A105V05NNNC	Samsung	
C68	SMD Case C 10V 1.2u	100u	1	1TAJC107V010RNU	AVX	
C70, C71, C72, C76	SMD 0805 25V X5R 10%	22u	4	4GRM218R61E228ME4L	Samsung	
C74	SMD 0603 25V X5R 10%	1u	1	1C110A105VABNNNC	Samsung	
C75, C77, C84, C88	SMD 0603 6.3V X5R 10%	22u	2	1C110A228MP5NNNC	Samsung	
C79	SMD 0402 50V 0G5 5%	47p	1	2C105C470B5NNNC	Samsung	
C83	SMD 0402 50V 0G5 5%	22p	1	1C105C470B5NNNC	Samsung	
CN1, CN3	USB Connector WR-COM Type B SMT 5Pin Horizl FmlMicro	USB Micro Type B	2	2629105136821	Würth Elektronik	
CN2	USB Connector WR-COM USB Micro SMT Type AB Horizl	USB Micro Type AB	1	16291051525021	Würth Elektronik	
CN5	Memory Card Connector WR-CSD 10 Micro Card 8Pin Push & Push	169371010811	1	169371010811	Würth Elektronik	
CN8	Ethernet Connector 1X1 TAB DOWN WILEDS	7499010211A	1	7499010211A	Würth Elektronik	
CN9	Fixed Terminal Block WR-TBL Terminal block - Screwless Push IN - TH	6914029100058	1	6914029100058	Würth Elektronik	
D2, D3, D4, D5, D6	SMD S00128 5A 30V Schottky	PMEG3050EP	9	PMEG3050EP 115	Nexperia	
ESD13, ESD14	WE-TVS TVS Diode - Standard Series	ES4098024	1	ES4098024	Würth Elektronik	
ESD1, ESD2, ESD3, ESD4, ESD5, ESD6, ESD7, ESD8, ESD9, ESD10, ESD11, ESD12	ESD Suppressors / TVS Diodes WE-ESD 0402 12Vdc 5pF	82357120050	12	82357120050	Würth Elektronik	
FB1, FB2	SMD 1806 3.5A 750/15mΩ	120n	2	2BLM413PG005N1L	Murata	
FB4, FB5, FB6, FB7, FB8, FB9, FB10	Ferrite Bead WE-CBH HF 0603 SMD 100MHz 220Ohm 600mA	220u	7	742863127	Würth Elektronik	
G81	Header & Wire Housing VERTICAL HDR 2P	53947-0210	1	53947-0210	Molex	
H1	Pin Header, Board-to-Board, 1.27mm, 2 Rows, 10 Contacts, Surface Mount, WR-PHD Series	HN2x5	1	142101021021	Würth Elektronik	
H2	WR-PHD Pin Header, THT, pitch 2mm, Single Row, Vertical, 2p	62000211121	1	62000211121	Würth Elektronik	
H5	WR-PHD Pin Header, THT, pitch 1.27mm, Dual Row, Vertical, 8p	62200821121	1	62200821121	Würth Elektronik	
H6, PN1, PN4, PN6	HN.6	PN1x6	1	161300611821	Würth Elektronik	
H7	WR-PHD Pin Header, THT, pitch 1.27mm, Dual Row, Vertical, 20p	62200202121	1	62200202121	Würth Elektronik	
J1	DC Power Connectors WR-DC Pwr.Kit CtrPinTHT Right Angled	694102303002	1	694102303002	Würth Elektronik	
Jp1, Jp11, Jp12, Jp13	SMD 0402 0 Ω	0.05	6	0603SA1000J150	UniChm	
Jp9, Jp10	SMD 0402 0 Ω	0.05	2	0603SA1000J150	UniChm	
L1, L2, L3	Common mode Noise Filters 90Ω	EXC-14CE900U	3	EXC-14CE900U	Panasonic	DNP
L5	1.34A 120mΩ 4x4x1.65mm	6.8u	1	1LQH48PN6R8MPOL	Murata	
L6	Fixed Inductor 2.2uH 2.2A 130mOhms 1MHz Tol=20%	2.2u	1	1TFM201610ALMA2R2MTAA	TDK	
LD1	Standard LED - SMD WL-SMCO SMD MonoChip 0603 Red 620nm	150060R555040	1	150060R555040	Würth Elektronik	
LD2, LD3, LD4	Standard LED - SMD WL-SMCO SMD Mono SMD 0603 Green 520nm	150060R555040	1	150060R555040	Würth Elektronik	
LD5	Standard LED - SMD WL-SMCO SMD Mono SMD 0603 Blue 465nm	150060R555040	1	150060R555040	Würth Elektronik	
PN2	HN.6	PN1x6	1	161300611821	Würth Elektronik	
PN3, PN5	HN.6	PN1x10	2	261301011821	Würth Elektronik	
Q1	Crystal WE-XTAL 24.0MHz 30ppm 3.2 x 2.5mm	24MHz	1	8340984124	Würth Elektronik	
Q2	Crystal WE-XTAL 32.768kHz 2.0ppm 2.0 x 1.2mm	32kHz	1	1610507089	Würth Elektronik	
Q3	SMD CMOS Oscillator 50MHz	2520MVL	1	1ECS-2520MVL-500-BN-TR	ECS	
Q4	Crystal WE-XTAL 12.0MHz 30ppm 3.2 x 2.5mm	12,000 MHz	1	183010638809	Würth Elektronik	
R1, R4, R5, R16, R19, R20, R37, R38, R41, R42, R43, R44, R45, R46, R50, R51, R58, R61, R62, R64, R65, R66, R71, R74, R84	SMD 0402 0.063W 5% 50V	10k	25		YAGEO	
R2, R3, R21, R22, R49, R70	SMD 0402 0.063W 5% 50V	2.2k	6		YAGEO	
R6, R10, R54, R57, R60, R79, R81, R82, R83	SMD 0402 0.063W 5% 50V	22k	9		YAGEO	
R7, R8, R11, R23, R31, R39, R72	SMD 0402 0.063W 5% 50V	1k	7		YAGEO	
R9	SMD 0402 0.063W 5% 50V	6	1		YAGEO	
R12	SMD 0402 0.063W 5% 50V	1M	1		YAGEO	DNP
R13, R25, R28, R29, R55, R63, R67, R78, R80	SMD 0402 0.063W 5% 50V	22	9		YAGEO	
R14	SMD 0402 0.063W 1% 50V	2.2k	1		YAGEO	
R15	SMD 0402 0.063W 5% 50V	220	1		YAGEO	
R17, R18, R52	SMD 0402 0.063W 5% 50V	15k	1		YAGEO	
R24	SMD 0402 0.063W 1% 50V	18.7k	1		YAGEO	
R26, R27	SMD 0402 0.063W 5% 50V	1.5k	2		YAGEO	
R30, R33, R34, R35	SMD 0402 0.063W 1% 50V	49.9	4		YAGEO	
R32	SMD 0402 0.063W 1% 50V	1.91k	1		YAGEO	
R36, R56	SMD 0603 0.1W 5% 75V	1.89k-33F	1		YAGEO	
R40	SMD 0402 0.063W 5% 50V	0/1A	1		YAGEO	
R46, R47, R53, R59	SMD 0603 0.1W 5% 75V	150	4		YAGEO	
R68, R69	SMD 1206 0.25W 5% 200V	120	2	2RC1206R-07120RL (NoValue)	YAGEO	
R73	SMD 0402 0.063W 1% 50V	10.5k	1		YAGEO	
R75	SMD 0402 0.063W 1% 50V	5k	1		YAGEO	
R76	SMD 0402 0.063W 1% 50V	100k	1		YAGEO	
R77	SMD 0402 0.063W 1% 50V	450k	1		YAGEO	
RA1, RA3, RA4, RA11	SMD 0805 (4RM-0402) 0.0625W 5%	22k	4	4YC124-JR-074K7L	YAGEO	
RA2	SMD 0805 (4RM-0402) 0.0625W 5%	10k	1	4YC124-JR-074K7L	YAGEO	
RA5, RA6, RA7, RA13	SMD 0805 (4RM-0402) 0.0625W 5%	22	4	4YC124-JR-074K7L	YAGEO	
Reset, SB1, SB2	Tactile Switch WS-TASV SMT 2.5mm 180p 50mA 16V Black	434133025816	3	434133025816	Würth Elektronik	
T2	45V 0.1A 100MHz 4 SpF	BC847CW	1	1BC847CWT1G	ON Semiconductor	
U1	ARM Microcontrollers - MCU MCU R46 ARM CM33 200MHz 2M/512K QFP176	R7FA6M58H3CFC	1	1R7FA6M58H3CFC	Renesas Electronics	
U2	Supervisory Circuits Low Voltage Detector w/SENSE pin	R3118N271A	1	1R3118N271A-TR-FE	Ricoh Electronics	
U3	3 Input Pos AND Gate	LVCI1G11	1	1SN74VC1G11DEVR	Texas Instruments	
U4	OctaFlashTM Memory, NOR Flash Serial-SPI 3V/3.3V 512M-bit 512M/64M x 1/8-bit 8ns 24-Pin CSP	MX25UM1245GX000	1	1MX25UM1245GX000	Macronix	
U5	Ethernet G3 3.3V 10/100 Pin RJ45	1894K-33F	1	1894K-33F	Renesas Electronics	
U6	ARM Microcontrollers - MCU MCU R44 ARM CM33 100MHz 256K/128K QFN48	R7FA4M2AB3CNE#AA0	1	1R7FA4M2AB3CNE#AA0	Renesas Electronics	
U7	NOR Flash 128 Mbit, 3.0V (2.7V to 3.6V), -40C to 85C, SOIC-W 208mil (Tape & Reel), Single, Dual, Quad SPI NOR flash	AT25SF128A-SHB-T	1	1AT25SF128A-SHB-T	Dialog Semiconductor	
U8	Octal Double-Data-Rate PSRAM	AP512808L-30BM-BA	1	1AP512808L-30BM-BA	APMEMORY	
U9	RS-422/RS-485 Interface IC BLD IE8100-ESD 3V RS-485 1/2 DUPLX 500 kb/s	ISL3175E82-T	1	1ISL3175E82-T	Renesas Electronics	
U10	CAN Interface IC 3.3V CAN Transceivers with CAN FD (Flexible Data Rate) S-DOT 29...40 to 125	MCP2542FD-H/SN	1	1MCP2542FD-H/SN	Microchip	
U11	Current Limited, Power-Distribution Switch USB, 2A, 60 mOhms	AP22802	1	1AP22802AW5-7	Diodes Incorporated	
U12	Vin 3.8-32V 500kHz Ro=0.8V Iout=3A	AP63301WU-7	1	1AP63301WU-7	Diodes Incorporated	
U13	Switching Voltage Regulators 1.5A Low Iq High Efficiency Synch Buck Reg. TDRN 2mm x 2mm	ISL80015FR2-T	1	1ISL80015FR2-T	Renesas Electronics	
V1, V12, V15	Varistor WE-VS SMD 0402 220pF 20k 5.5VDC	82537040	3	82537040	Würth Elektronik	