

1



2

Core
Internal pull down 50K ohm

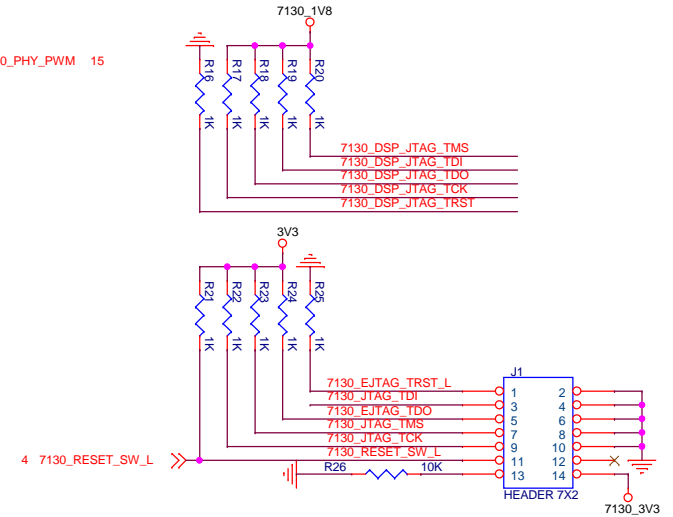
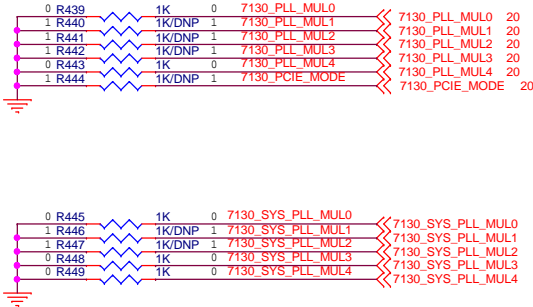
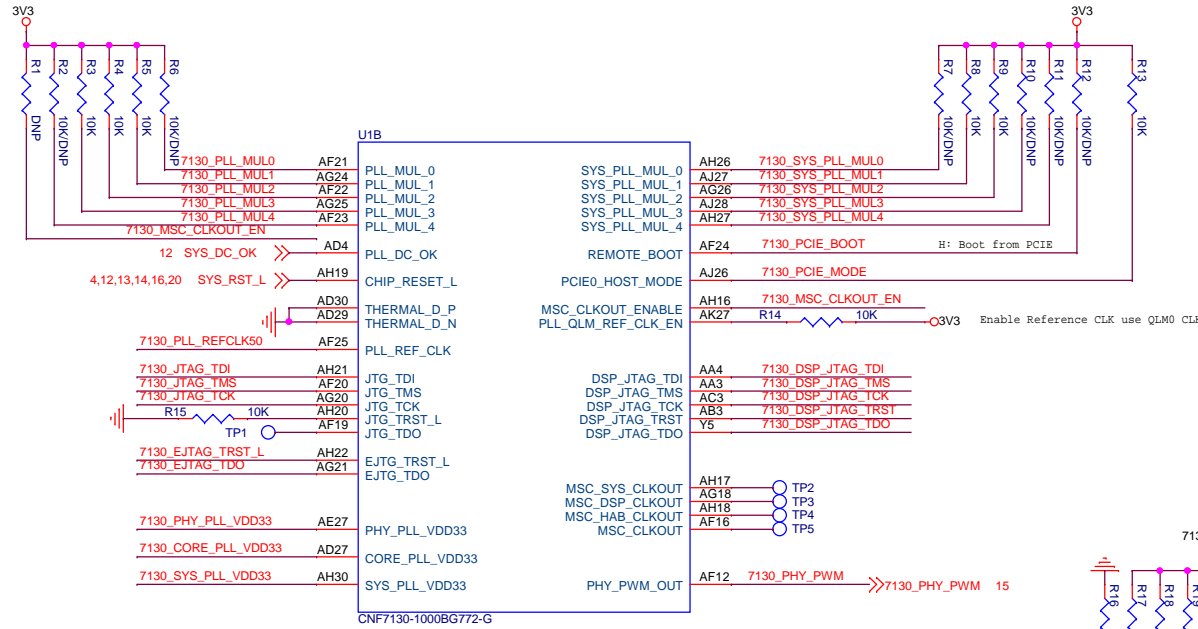
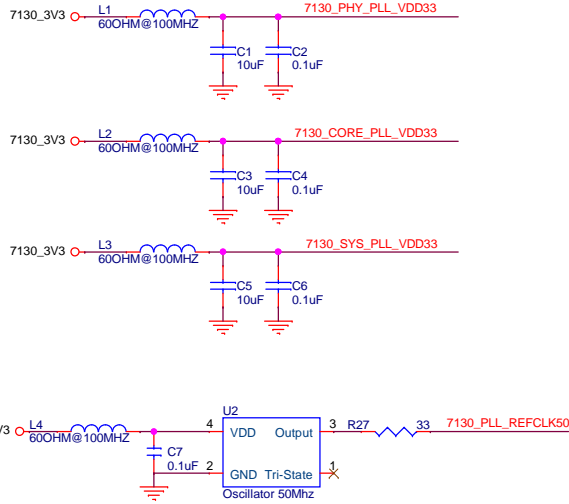
CORE

PLL_MU[4:0]	Clock
0x02	400MHz
0x06	600MHz
0x0A	800MHz
0x0E	1.0GHz
All other options are reserved	

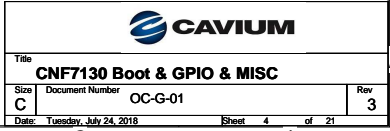
Coprocessor
Internal pull down 50K ohm

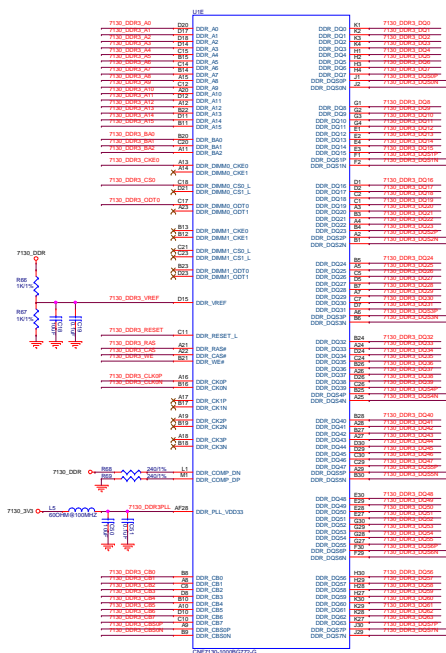
COPROCESSOR

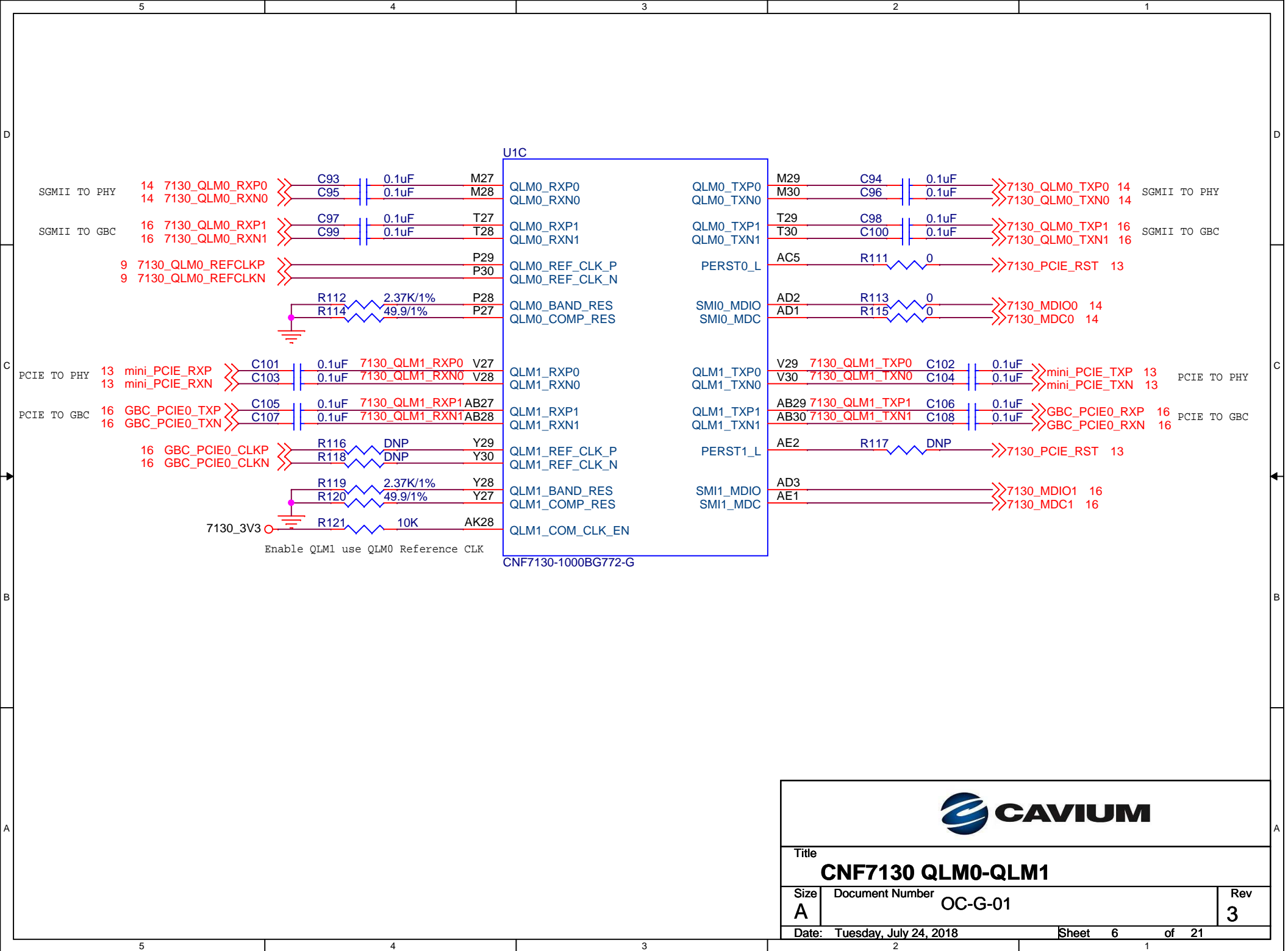
SYS_PLL_MU[4:0]	Clock
0x02	400MHz
0x06	600MHz
0x0A	800MHz
All other options are reserved	



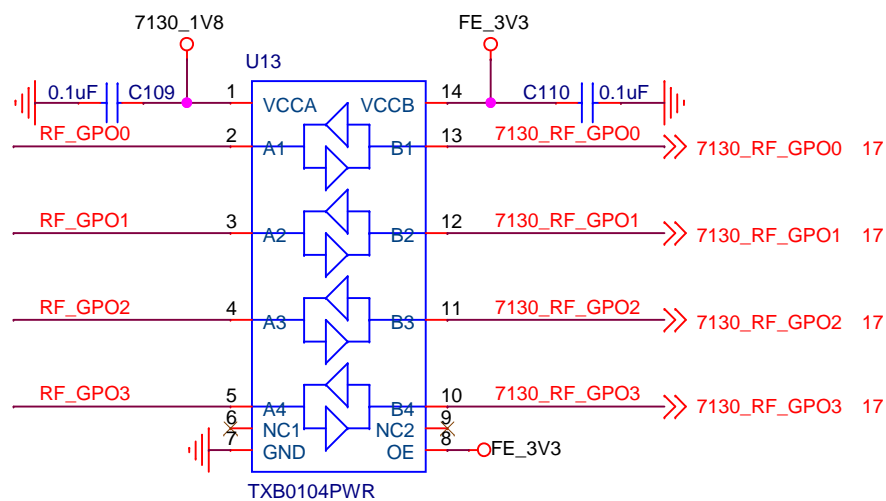
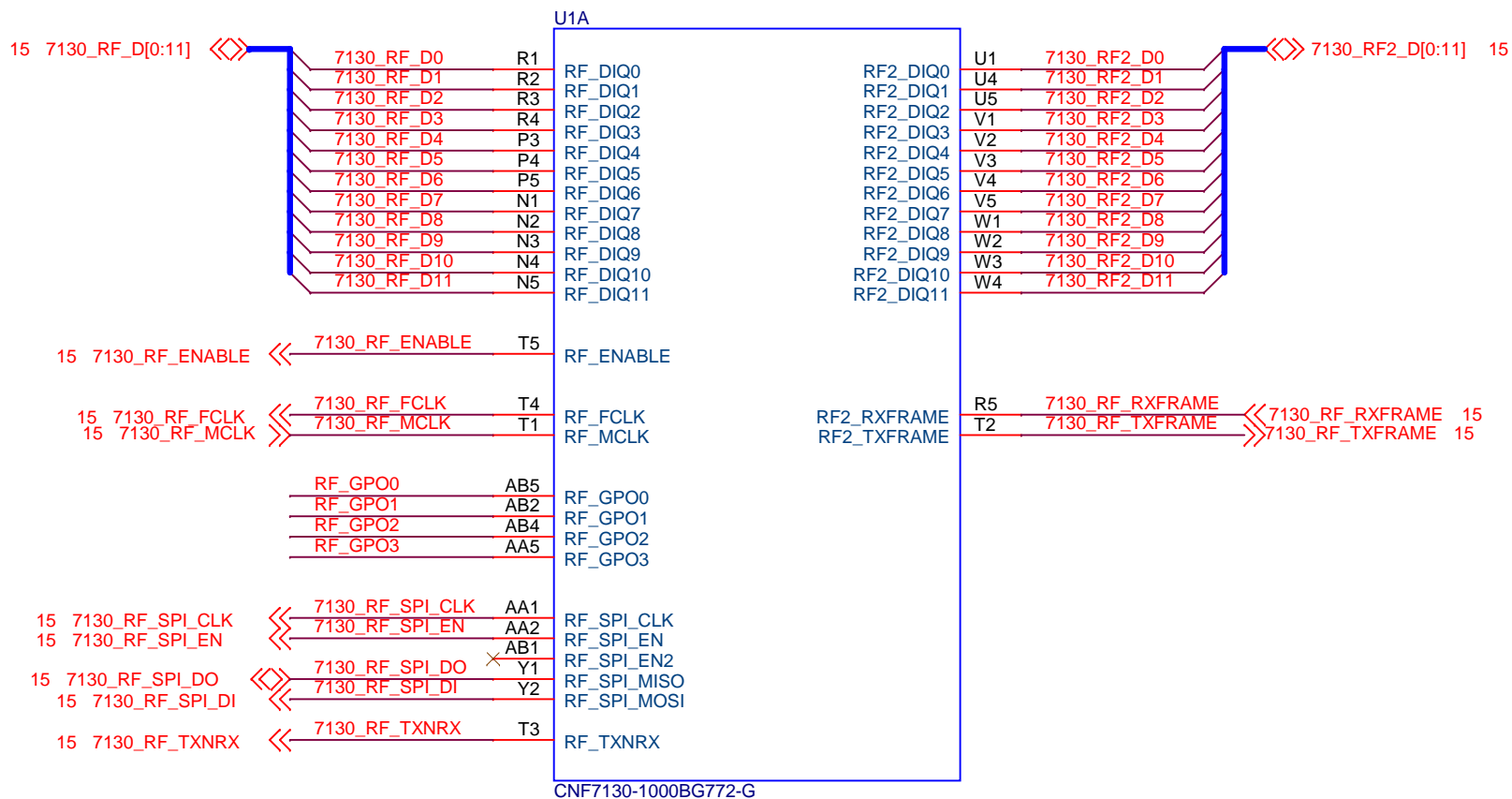
Title CNF7130 Config & JTAG		
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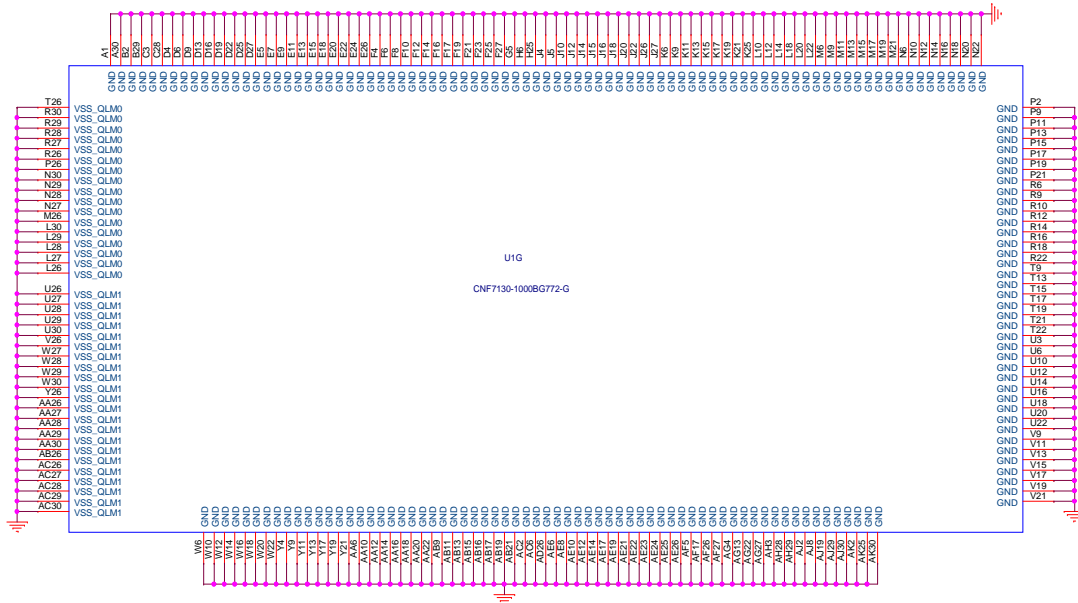
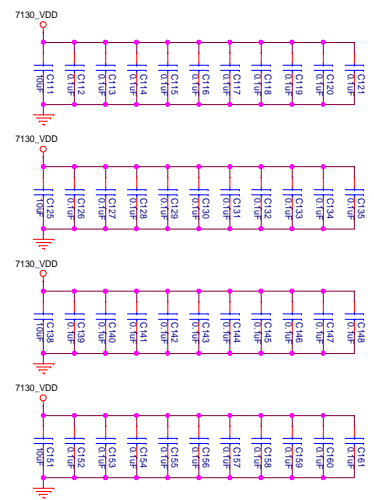


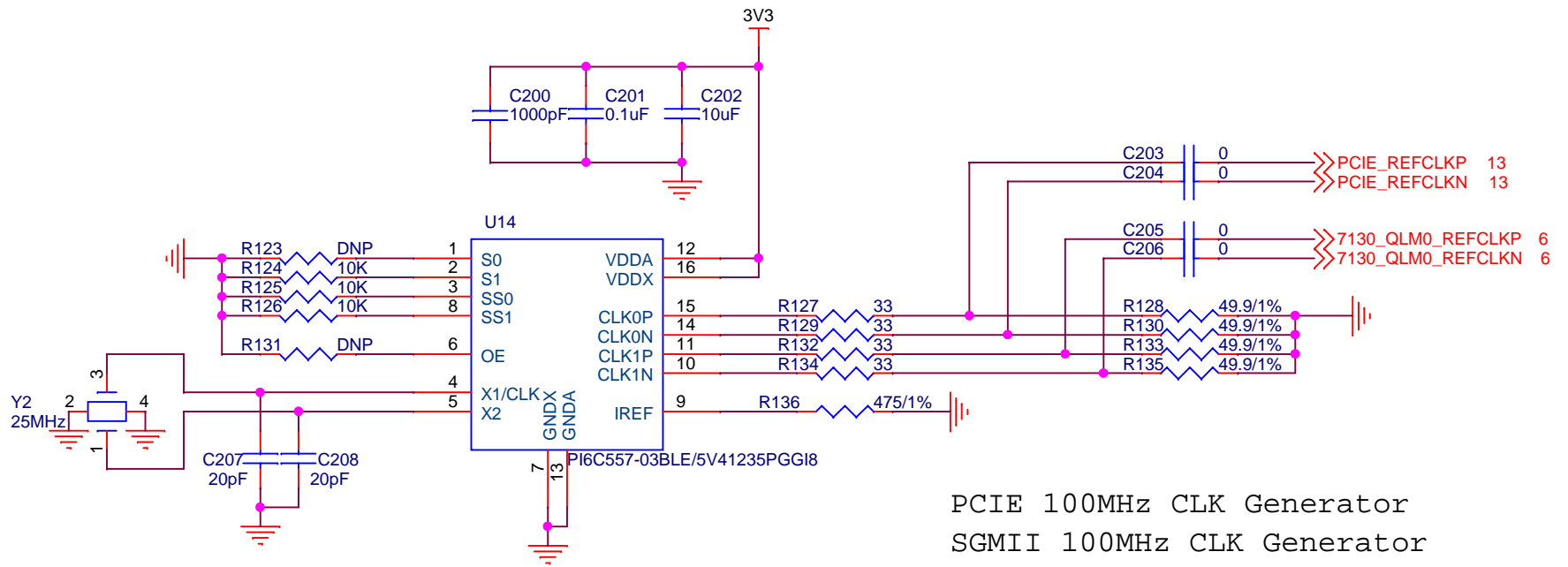


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CNF7130 QLM0-QLM1		
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CNF7130 RF Interface		
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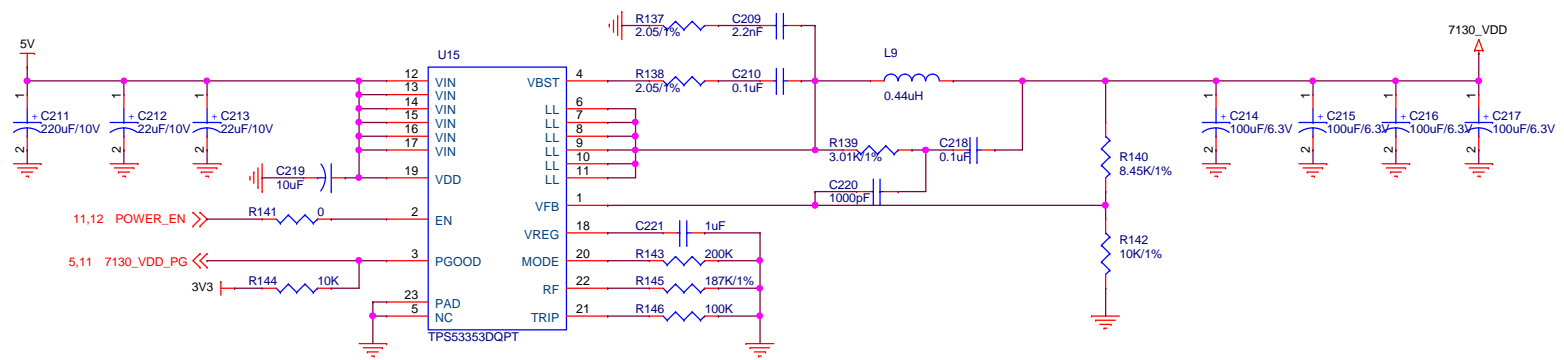
S1	S0	CLK
0	0	25
0	1	100
1	0	125
1	1	200

SS1	SS0	Spread
0	0	No Spread
0	1	Down-0.5
1	0	Down-0.75
1	1	No Spread

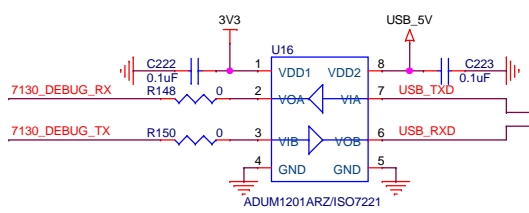
Internal Pull-up resistor



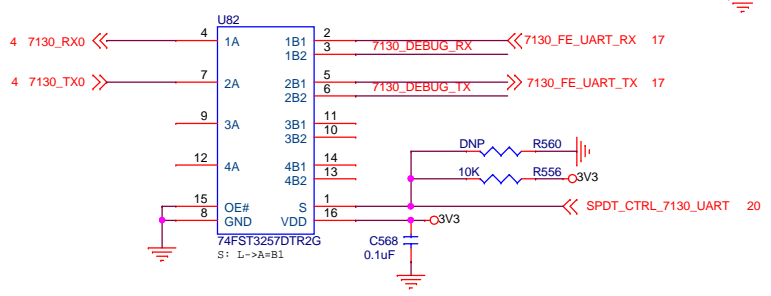
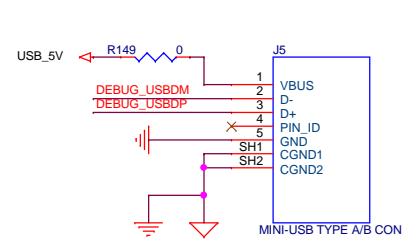
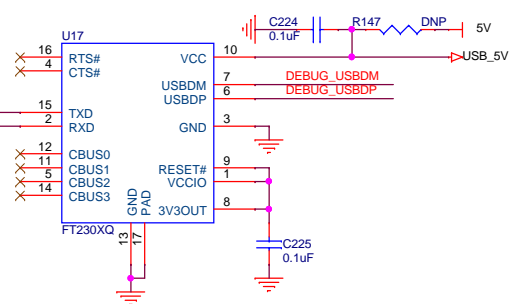
Title		
CNF7130 Clock Generator		
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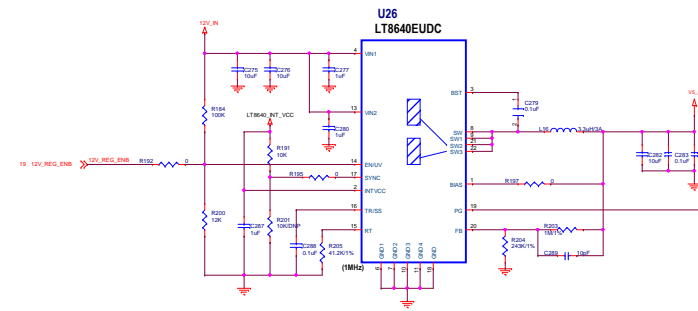
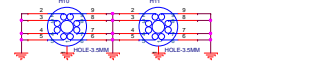
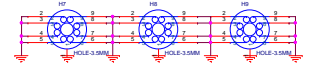
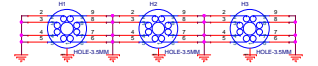
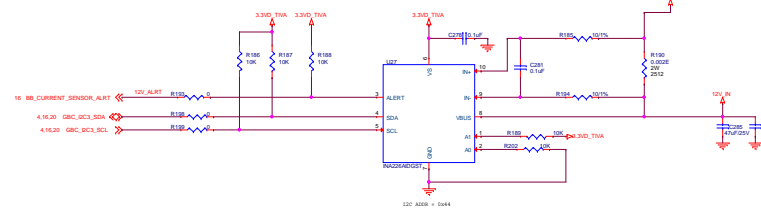
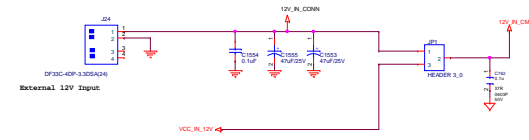
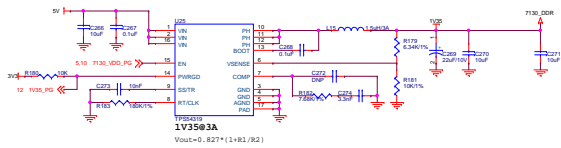
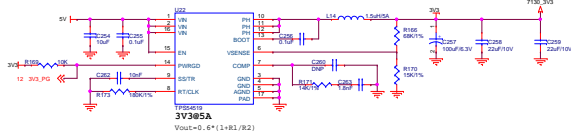
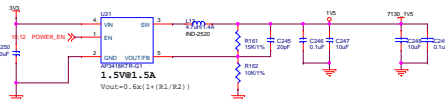
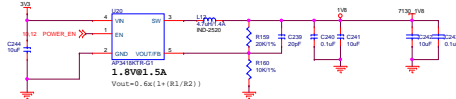
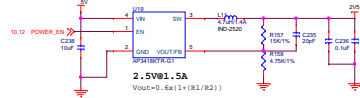
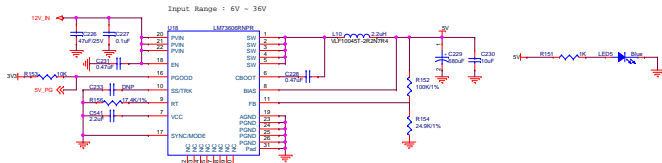
1.1V @20A
 $V_{out} = 0.6 * (1 + R1/R2)$

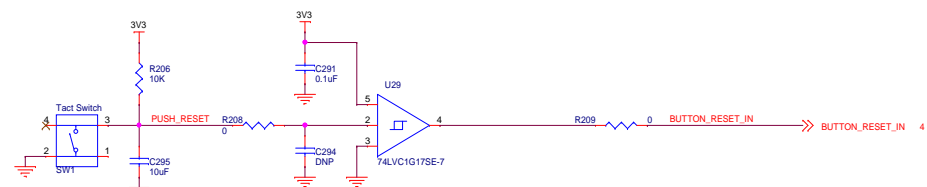


Isolator



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CNF7130 Core Power & Debug		
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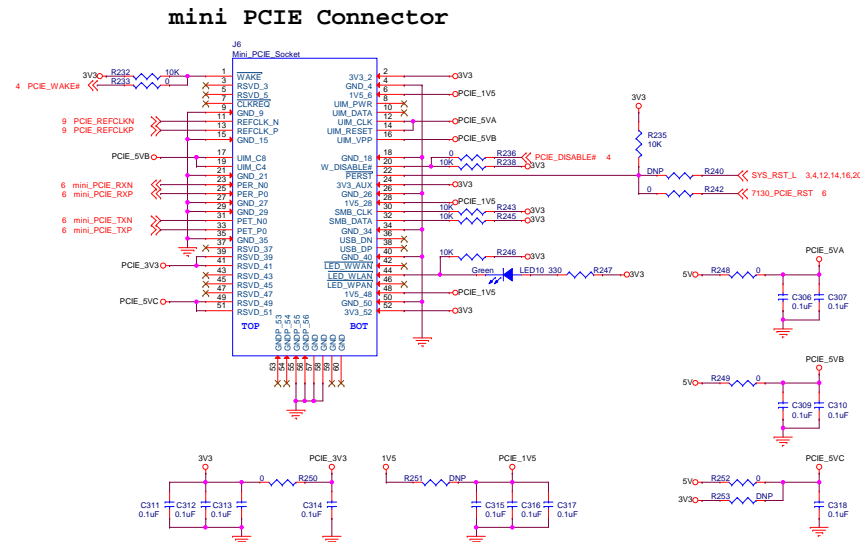
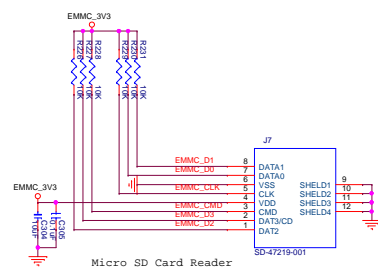


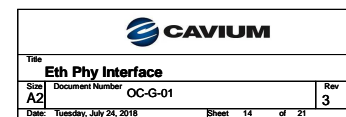
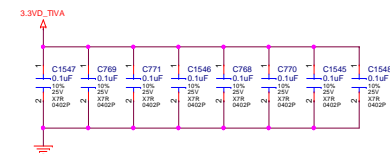
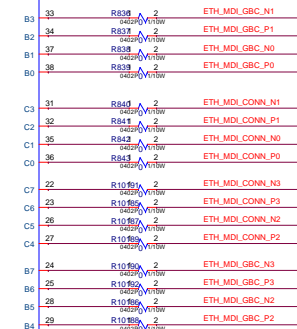
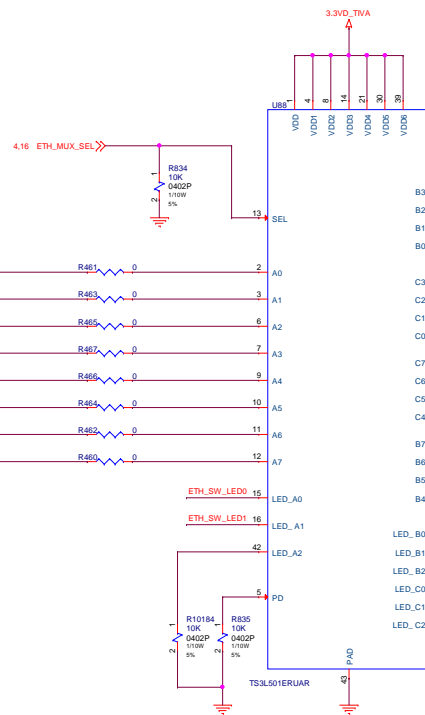
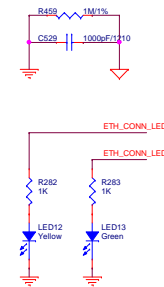
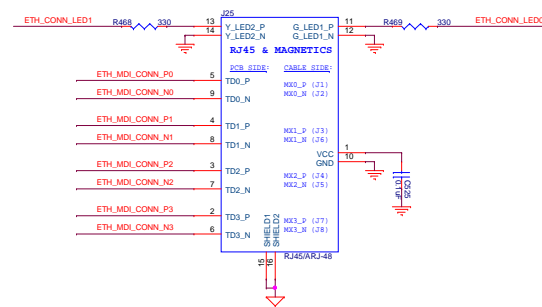


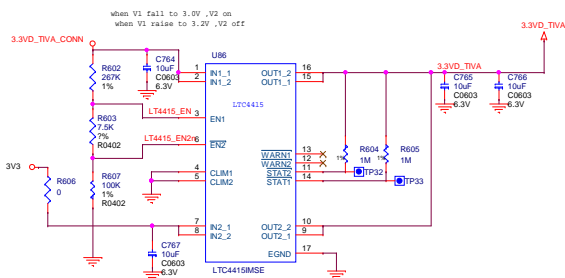
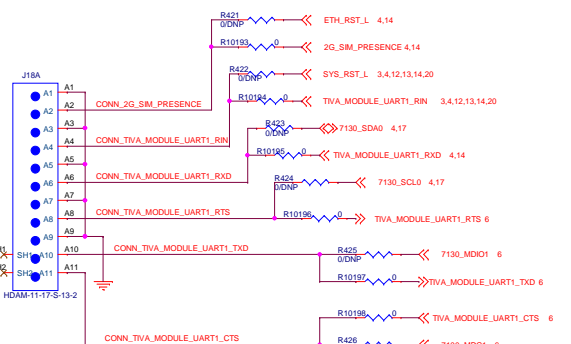
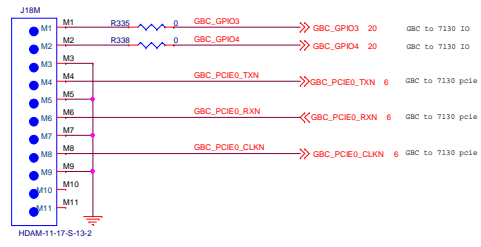
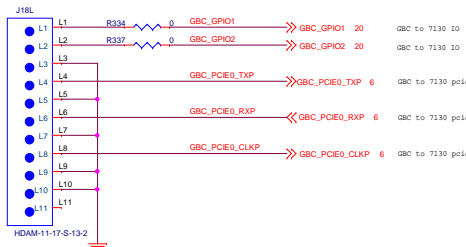
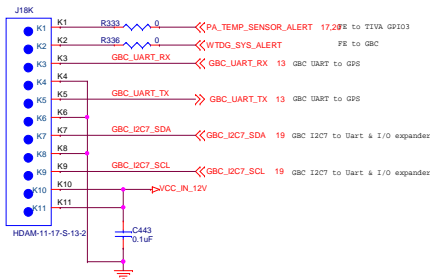
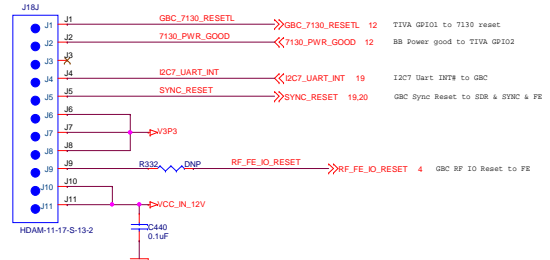
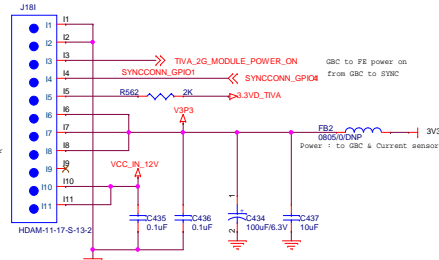
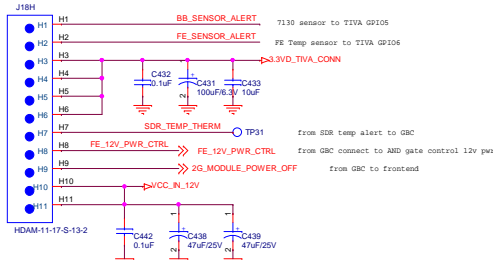
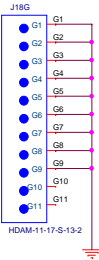
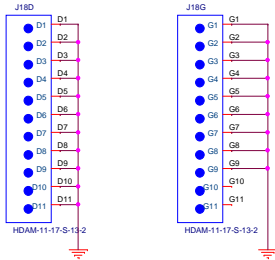
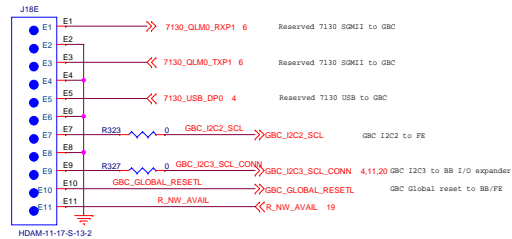
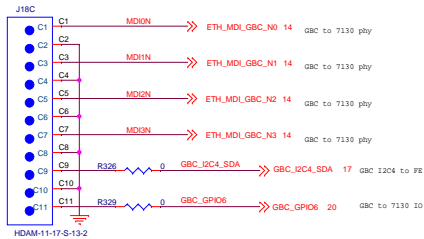
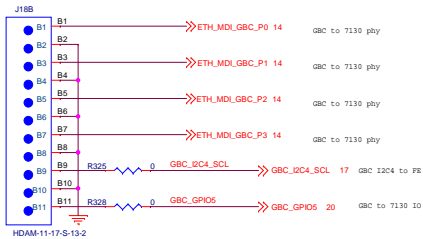
The schematic diagram illustrates the power and reset circuitry for the STM8 microcontroller. Key components include:

- Power Regulation:** A 3V3 regulator (U31) and a 5V regulator (U35) are used to provide stable power to the system. The 3V3 regulator is connected to the 3V3 pin of the microcontroller (U37).
- Reset Circuit:** A push-button (SW2) is connected to the reset line (U36) through a 140ms delay (U36). The reset line is connected to the MR# pin of the microcontroller (U37).
- Microcontroller (U37):** The STM8 microcontroller is shown with its pins connected to the power and reset lines. The VCC pin is connected to the 3V3 regulator, and the MR# pin is connected to the reset line.
- LEDs:** Two LEDs are shown: LED7 (Blue) and LED8 (Red). LED7 is connected to the 3V3 pin, and LED8 is connected to the reset line through a 1K resistor (R217).
- Resistors and Capacitors:** Various resistors (R213, R216, R218, R219, R220, R221, R222, R223, R224, R212, R214, R215) and capacitors (C296, C298, C299, C300, C301, C303) are used for timing, filtering, and signal conditioning.

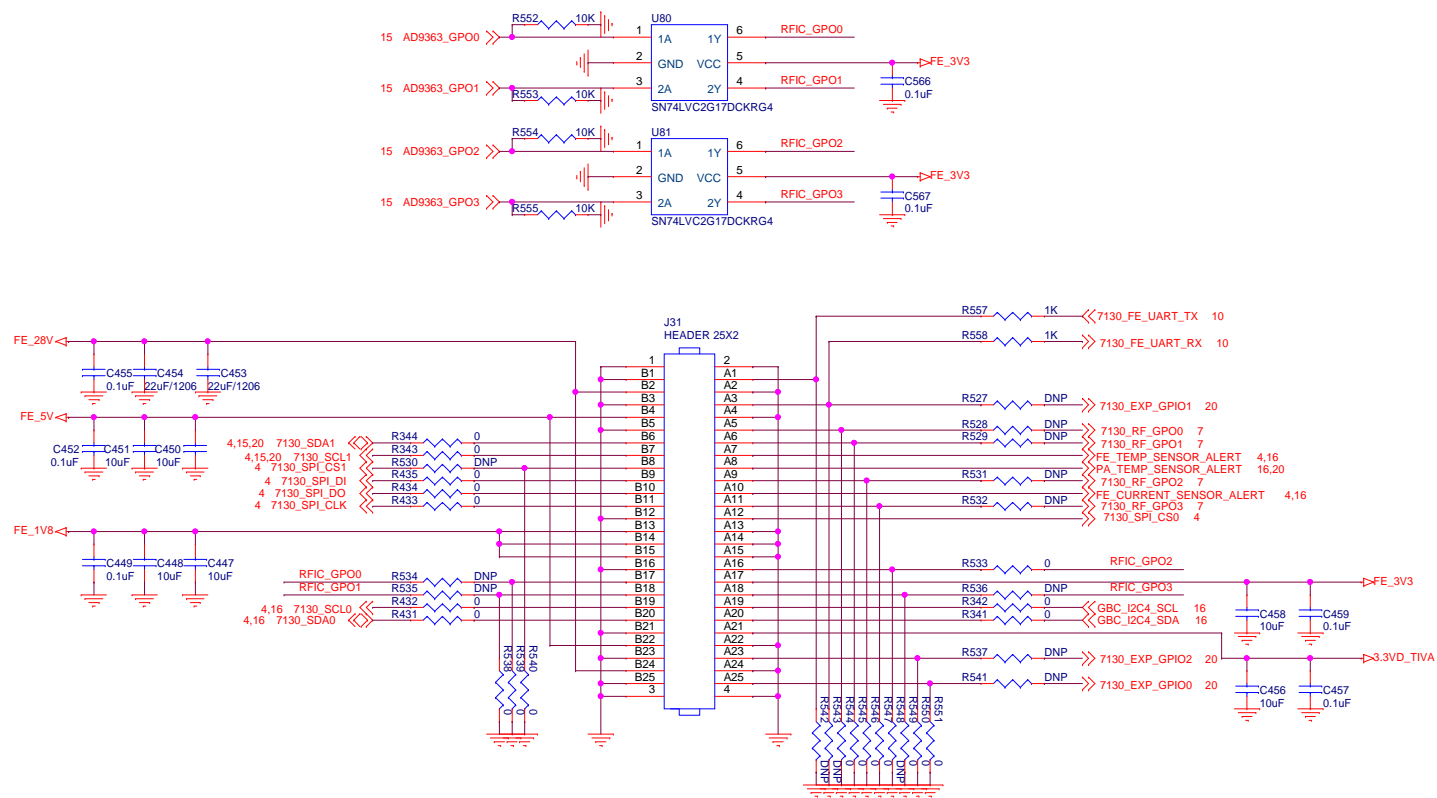
Debug Reset Push Button



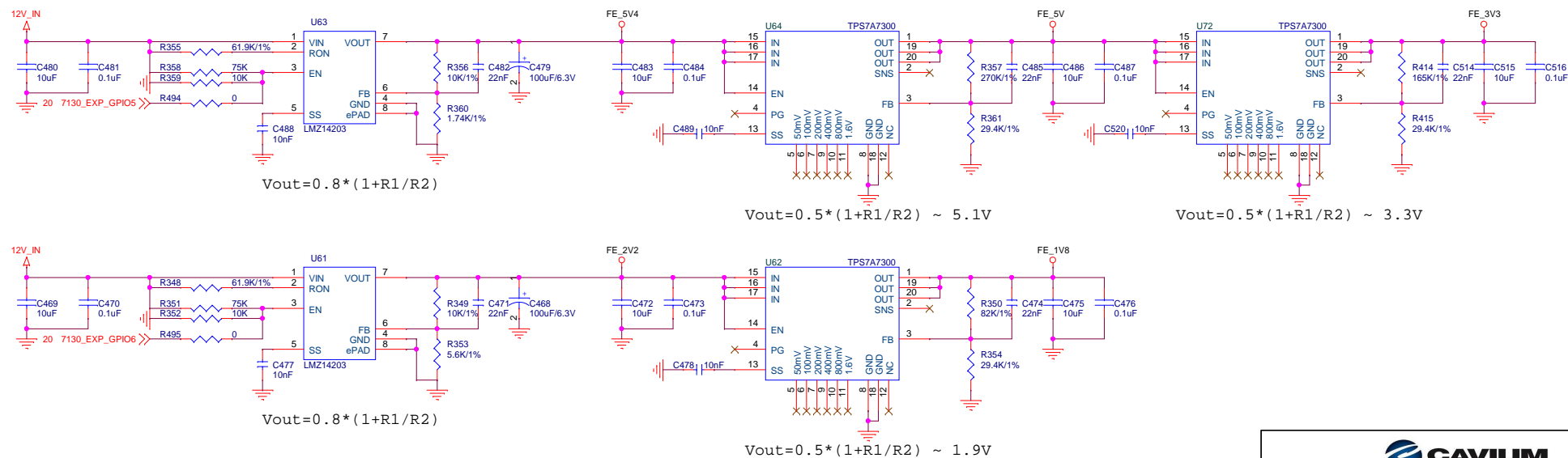
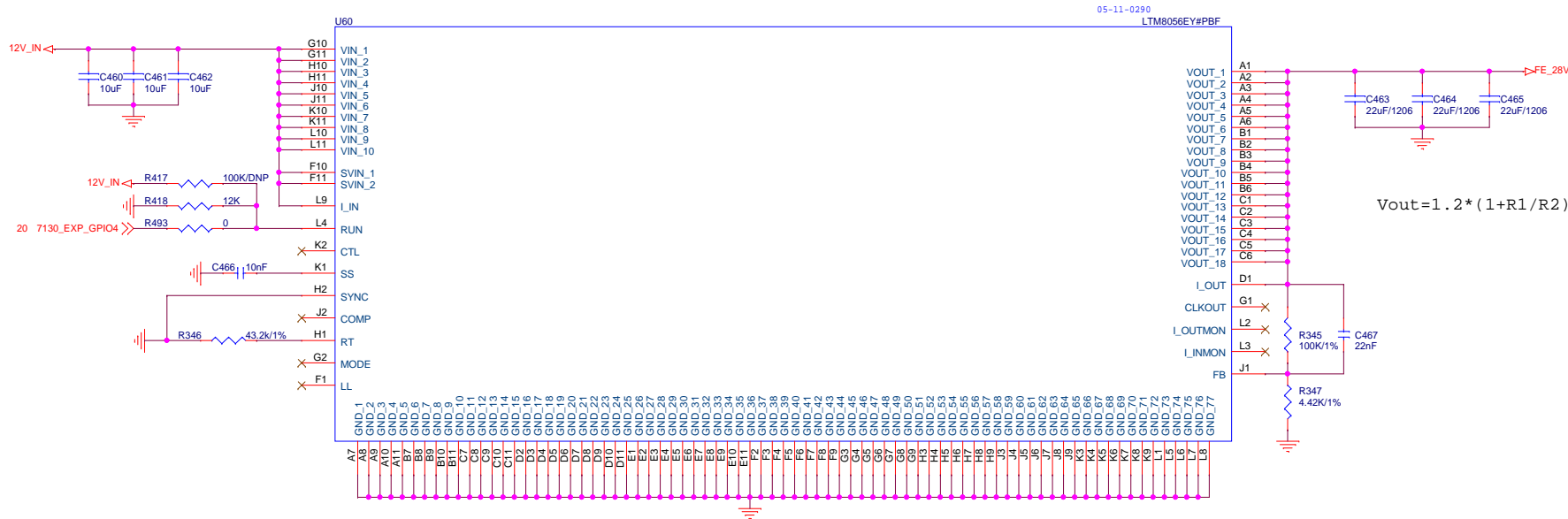




Front End Board Connector



Title			
Front End Board Connector			
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Front End Board Power

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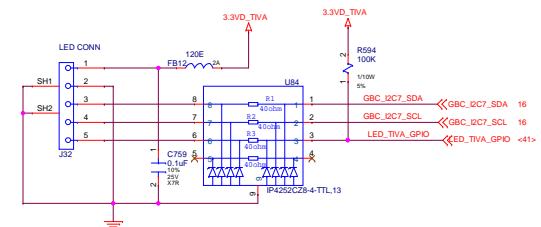
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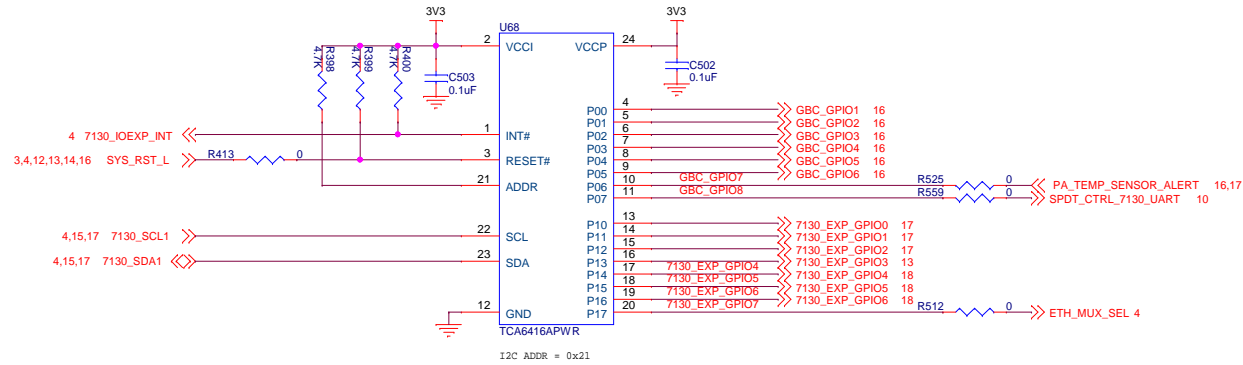
[illegible][illegible]

The schematic diagram illustrates the U67 (SX15096) chip and its connections. The chip is a 16-bit parallel-to-serial converter with a 3.3V VDDA supply and a 3.3V VDDI supply. It features a 16-bit data bus (IO[0] to IO[15]) and a 16-bit address bus (ADDR[0] to ADDR[3]). The chip is connected to various components and signals, including:

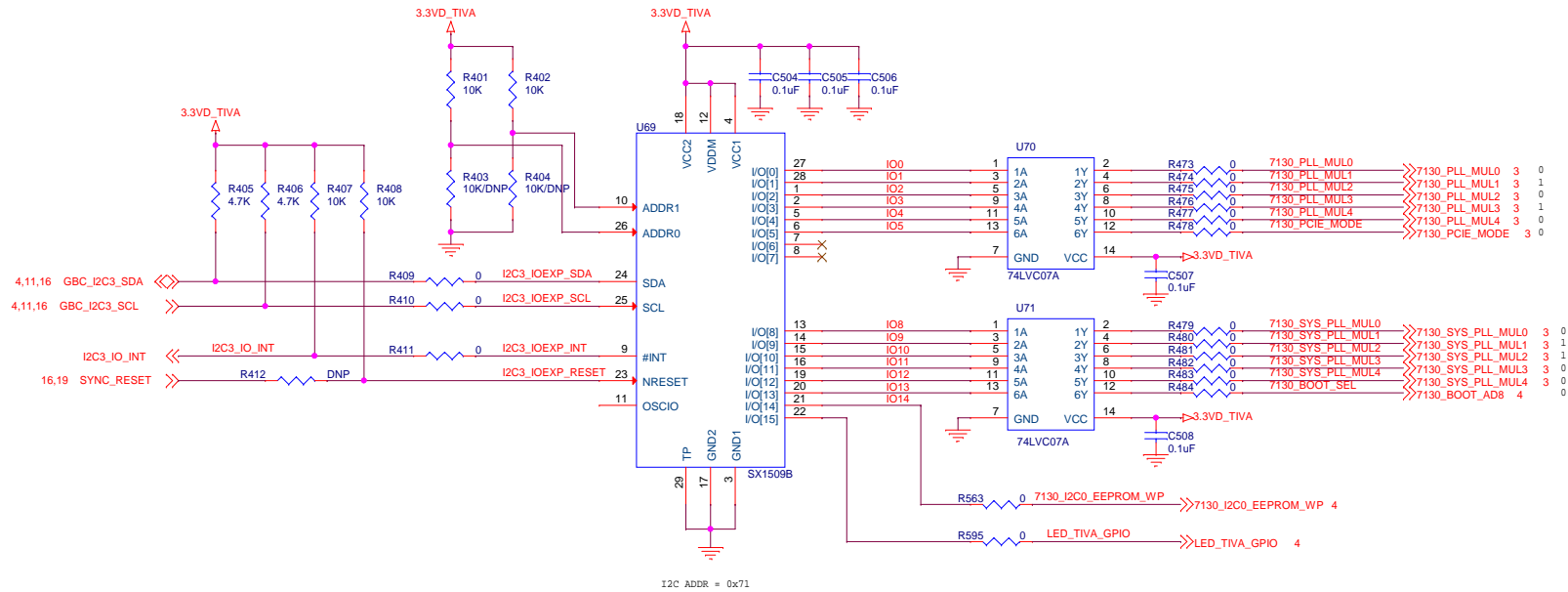
- Power and Ground:** 3.3V VDDA and 3.3V VDDI supplies, and GND connections.
- Resistors:** R385, R386, R388, R389, R390, R391, R392, R393, R394, R395, R396, R397, R398, R399, R400, R401, R402, R403, R404, R405, R406, R407, R408, R409, R410, R411, R412, R413, R414, R415, R416, R417, R418, R419, R420, R421, R422, R423, R424, R425, R426, R427, R428, R429, R430, R431, R432, R433, R434, R435, R436, R437, R438, R439, R440, R441, R442, R443, R444, R445, R446, R447, R448, R449, R450, R451, R452, R453, R454, R455, R456, R457, R458, R459, R460, R461, R462, R463, R464, R465, R466, R467, R468, R469, R470, R471, R472, R473, R474, R475, R476, R477, R478, R479, R480, R481, R482, R483, R484, R485, R486, R487, R488, R489, R490, R491, R492, R493, R494, R495, R496, R497, R498, R499, R500, R501, R502, R503, R504, R505, R506, R507, R508, R509, R510, R511, R512, R513, R514, R515, R516, R517, R518, R519, R520, R521, R522, R523, R524, R525, R526, R527, R528, R529, R530, R531, R532, R533, R534, R535, R536, R537, R538, R539, R540, R541, R542, R543, R544, R545, R546, R547, R548, R549, R550, R551, R552, R553, R554, R555, R556, R557, R558, R559, R560, R561, R562, R563, R564, R565, R566, R567, R568, R569, R570, R571, R572, R573, R574, R575, R576, R577, R578, R579, R580, R581, R582, R583, R584, R585, R586, R587, R588, R589, R590, R591, R592, R593, R594, R595, R596, R597, R598, R599, R600, R601, R602, R603, R604, R605, R606, R607, R608, R609, R610, R611, R612, R613, R614, R615, R616, R617, R618, R619, R620, R621, R622, R623, R624, R625, R626, R627, R628, R629, R630, R631, R632, R633, R634, R635, R636, R637, R638, R639, R640, R641, R642, R643, R644, R645, R646, R647, R648, R649, R650, R651, R652, R653, R654, R655, R656, R657, R658, R659, R660, R661, R662, R663, R664, R665, R666, R667, R668, R669, R670, R671, R672, R673, R674, R675, R676, R677, R678, R679, R680, R681, R682, R683, R684, R685, R686, R687, R688, R689, R690, R691, R692, R693, R694, R695, R696, R697, R698, R699, R700, R701, R702, R703, R704, R705, R706, R707, R708, R709, R710, R711, R712, R713, R714, R715, R716, R717, R718, R719, R720, R721, R722, R723, R724, R725, R726, R727, R728, R729, R730, R731, R732, R733, R734, R735, R736, R737, R738, R739, R740, R741, R742, R743, R744, R745, R746, R747, R748, R749, R750, R751, R752, R753, R754, R755, R756, R757, R758, R759, R760, R761, R762, R763, R764, R765, R766, R767, R768, R769, R770, R771, R772, R773, R774, R775, R776, R777, R778, R779, R780, R781, R782, R783, R784, R785, R786, R787, R788, R789, R790, R791, R792, R793, R794, R795, R796, R797, R798, R799, R800, R801, R802, R803, R804, R805, R806, R807, R808, R809, R810, R811, R812, R813, R814, R815, R816, R817, R818, R819, R820, R821, R822, R823, R824, R825, R826, R827, R828, R829, R830, R831, R832, R833, R834, R835, R836, R837, R838, R839, R840, R841, R842, R843, R844, R845, R846, R847, R848, R849, R850, R851, R852, R853, R854, R855, R856, R857, R858, R859, R860, R861, R862, R863, R864, R865, R866, R867, R868, R869, R870, R871, R872, R873, R874, R875, R876, R877, R878, R879, R880, R881, R882, R883, R884, R885, R886, R887, R888, R889, R890, R891, R892, R893, R894, R895, R896, R897, R898, R899, R900, R901, R902, R903, R904, R905, R906, R907, R908, R909, R910, R911, R912, R913, R914, R915, R916, R917, R918, R919, R920, R921, R922, R923, R924, R925, R926, R927, R928, R929, R930, R931, R932, R933, R934, R935, R936, R937, R938, R939, R940, R941, R942, R943, R944, R945, R946, R947, R948, R949, R950, R951, R952, R953, R954, R955, R956, R957, R958, R959, R960, R961, R962, R963, R964, R965, R966, R967, R968, R969, R970, R971, R972, R973, R974, R975, R976, R977, R978, R979, R980, R981, R982, R983, R984, R985, R986, R987, R988, R989, R990, R991, R992, R993, R994, R995, R996, R997, R998, R999, R1000, R1001, R1002, R1003, R1004, R1005, R1006, R1007, R1008, R1009, R1010, R1011, R1012, R1013, R1014, R1015, R1016, R1017, R1018, R1019, R1020, R1021, R1022, R1023, R1024, R1025, R1026, R1027, R1028, R1029, R1030, R1031, R1032, R1033, R1034, R1035, R1036, R1037, R1038, R1039, R1040, R1041, R1042, R1043, R1044, R1045, R1046, R1047, R1048, R1049, R1050, R1051, R1052, R1053, R1054, R1055, R1056, R1057, R1058, R1059, R1060, R1061, R1062, R1063, R1064, R1065, R1066, R1067, R1068, R1069, R1070, R1071, R1072, R1073, R1074, R1075, R1076, R1077, R1078, R1079, R1080, R1081, R1082, R1083, R1084, R1085, R1086, R1087, R1088, R1089, R1090, R1091, R1092, R1093, R1094, R1095, R1096, R1097, R1098, R1099, R1100, R1101, R1102, R1103, R1104, R1105, R1106, R1107, R1108, R1109, R1110, R1111, R1112, R1113, R1114, R1115, R1116, R1117, R1118, R1119, R1120, R1121, R1122, R1123, R1124, R1125, R1126, R1127, R1128, R1129, R1130, R1131, R1132, R1133, R1134, R1135, R1136, R11



7130 IO EXPANDER



I2C3 IO EXPANDER



Title		
GBC I2C3 & 7130 I/O Expander		
Size	Document Number	Rev
A3	OC-G-01	3
Date:	Sheet	of
Tuesday, July 24, 2018	20	21

T.B.D

Layout Notes:

1. Discrete (especially resistors) should be placed close to Large components which are on the same schematic page

NOTES, UNLESS OTHERWISE SPECIFIED:

1. RESISTANCE VALUES IN OHMS.
2. CAPACITANCE VALUES IN MICROFARADS.
3. REFERENCE DESIGNATORS USED.
4. ALL 0.1 uF CAPACITORS ARE DECOUPLING CAPS UNLESS OTHERWISE NOTED. THEY ARE SHOWN ON THE PAGE WITH THE INTEGRATED CIRCUITS THEY SHOULD BE PLACED NEAR.

5. BOARD PROPERTIES:

- A. FR-4 RoHS COMPLIANT MATERIAL PER IPC-4101/129 OR BETTER
- B. ALL SIGNAL LAYERS - 0.5 OZ CU
- C. PLANE LAYERS - 0.5 OZ CU
- D. IMPEDENCE CONTROL:
50 OHMS +/- 10% SINGLE ENDED TRACES
60 OHMS +/- 10% SINGLE ENDED TRACES
90 OHMS +/- 10% SINGLE ENDED TRACES
100 OHMS +/- 10% DIFFERENTIAL TRACES

E. LAYER STACKUP:



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HF Return Path Capacitor			
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