

fpga\_ddr



File: fpga\_ddr.kicad\_sch

fpga\_adc



File: fpga\_adc.kicad\_sch

fpga\_power



File: fpga\_power.kicad\_sch

fpga\_ft601



File: fpga\_ft601.kicad\_sch

fpga\_misc



File: fpga\_misc.kicad\_sch

fpga\_config



File: fpga\_config.kicad\_sch

IC1F  
ADC12DL500ACF\_Aligned

Power		
VA11_1	AGND_1	
VA11_2	AGND_2	
VA11_3	AGND_3	
VA11_4	AGND_4	
VA11_5	AGND_5	
VA11_6	AGND_6	
VA11_7	AGND_7	
VA11_8	AGND_8	
VA11_9	AGND_9	
VA11_10	AGND_10	
VA11_11	AGND_11	
VA11_12	AGND_12	
VA11_13	AGND_13	
VA11_14	AGND_14	
VA19_1	AGND_15	
VA19_2	AGND_16	
VA19_3	AGND_17	
VA19_4	AGND_18	
VA19_5	AGND_19	
VA19_6	AGND_20	
VA19_7	AGND_21	
VA19_8	AGND_22	
VA19_9	AGND_23	
VA19_10	AGND_24	
VA19_11	AGND_25	
VA19_12	AGND_26	
VA19_13	AGND_27	
VA19_14	AGND_28	
VA19_15	AGND_29	
VA19_16	AGND_30	
VD11_1	AGND_31	
VD11_2	AGND_32	
VD11_3	AGND_33	
VD11_4	AGND_34	
VD11_5	AGND_35	
VD11_6	AGND_36	
VLVD5_1	AGND_37	
VLVD5_2	AGND_38	
VLVD5_3	AGND_39	
VLVD5_4	AGND_40	
VLVD5_5	AGND_41	
VLVD5_6	AGND_42	
VLVD5_7	AGND_43	
VLVD5_8	AGND_44	
VLVD5_9	AGND_45	
VLVD5_10	AGND_46	
DGND_1	AGND_47	
DGND_2	AGND_48	
DGND_3	AGND_49	
DGND_4	AGND_50	
DGND_5	AGND_51	
DGND_6	AGND_52	
DGND_7	AGND_53	
DGND_8	AGND_54	
DGND_9	AGND_55	
DGND_10		
DGND_11		
DGND_12		
DGND_13		
DGND_14		
DGND_15		
DGND_16		
DGND_17		
DGND_18		

IC1D  
ADC12DL500ACF\_Aligned

Analog	
INA+	
INA-	
INB+	
INB-	
CLK+	
CLK-	

U3B  
Ti90G529\_Functions

ADC 1/2 LVDS Data	
lvds_rx1_1	
lvds_rx1_1_N	
lvds_rx1_2	
lvds_rx1_2_N	
lvds_rx1_3	
lvds_rx1_3_N	
lvds_rx1_4	
lvds_rx1_4_N	
lvds_rx1_5	
lvds_rx1_5_N	
lvds_rx1_6	
lvds_rx1_6_N	
lvds_rx1_7	
lvds_rx1_7_N	
lvds_rx1_8	
lvds_rx1_8_N	
lvds_rx1_9	
lvds_rx1_9_N	
lvds_rx1_10	
lvds_rx1_10_N	
lvds_rx1_11	
lvds_rx1_11_N	
lvds_rx1_12	
lvds_rx1_12_N	
lvds_rx1_13	
lvds_rx1_13_N	
lvds_rx2_1	
lvds_rx2_1_N	
lvds_rx2_2	
lvds_rx2_2_N	
lvds_rx2_3	
lvds_rx2_3_N	
lvds_rx2_4	
lvds_rx2_4_N	
lvds_rx2_5	
lvds_rx2_5_N	
lvds_rx2_6	
lvds_rx2_6_N	
lvds_rx2_7	
lvds_rx2_7_N	
lvds_rx2_8	
lvds_rx2_8_N	
lvds_rx2_9	
lvds_rx2_9_N	
lvds_rx2_10	
lvds_rx2_10_N	
lvds_rx2_11	
lvds_rx2_11_N	
lvds_rx2_12	
lvds_rx2_12_N	
lvds_rx2_13	
lvds_rx2_13_N	

IC1B  
ADC12DL500ACF\_Aligned

Ch B/D LVDS Out	
DB0+	
DB0-	
DB1+	
DB1-	
DB2+	
DB2-	
DB3+	
DB3-	
DB4+	
DB4-	
DB5+	
DB5-	
DB6+	
DB6-	
DB7+	
DB7-	
DB8+	
DB8-	
DB9+	
DB9-	
DB10+	
DB10-	
DB11+	
DB11-	
DBSTR+	
DBSTR-	
DD0+	
DD0-	
DD1+	
DD1-	
DD2+	
DD2-	
DD3+	
DD3-	
DD4+	
DD4-	
DD5+	
DD5-	
DD6+	
DD6-	
DD7+	
DD7-	
DD8+	
DD8-	
DD9+	
DD9-	
DD10+	
DD10-	
DD11+	
DD11-	
DDSTR+	
DDSTR-	

U3C  
Ti90G529\_Functions

ADC 3/4 LVDS Data	
lvds_rx3_1	
lvds_rx3_1_N	
lvds_rx3_2	
lvds_rx3_2_N	
lvds_rx3_3	
lvds_rx3_3_N	
lvds_rx3_4	
lvds_rx3_4_N	
lvds_rx3_5	
lvds_rx3_5_N	
lvds_rx3_6	
lvds_rx3_6_N	
lvds_rx3_7	
lvds_rx3_7_N	
lvds_rx3_8	
lvds_rx3_8_N	
lvds_rx3_9	
lvds_rx3_9_N	
lvds_rx3_10	
lvds_rx3_10_N	
lvds_rx3_11	
lvds_rx3_11_N	
lvds_rx3_12	
lvds_rx3_12_N	
lvds_rx3_13	
lvds_rx3_13_N	
lvds_rx4_1	
lvds_rx4_1_N	
lvds_rx4_2	
lvds_rx4_2_N	
lvds_rx4_3	
lvds_rx4_3_N	
lvds_rx4_4	
lvds_rx4_4_N	
lvds_rx4_5	
lvds_rx4_5_N	
lvds_rx4_6	
lvds_rx4_6_N	
lvds_rx4_7	
lvds_rx4_7_N	
lvds_rx4_8	
lvds_rx4_8_N	
lvds_rx4_9	
lvds_rx4_9_N	
lvds_rx4_10	
lvds_rx4_10_N	
lvds_rx4_11	
lvds_rx4_11_N	
lvds_rx4_12	
lvds_rx4_12_N	
lvds_rx4_13	
lvds_rx4_13_N	

IC1A  
ADC12DL500ACF\_Aligned

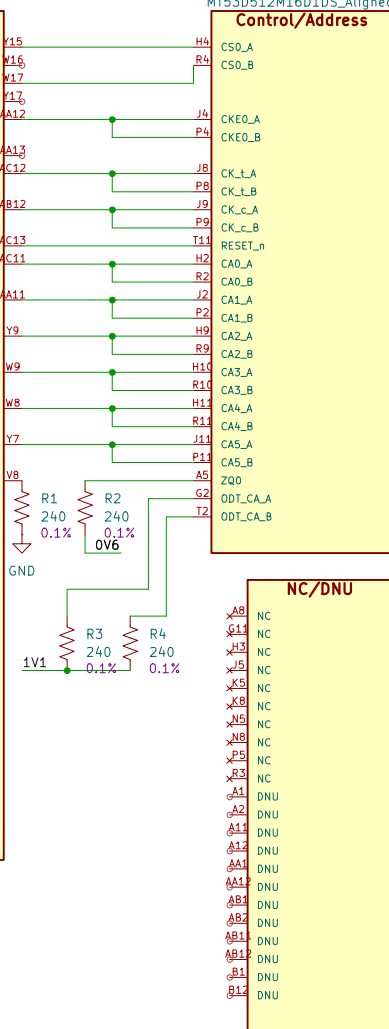
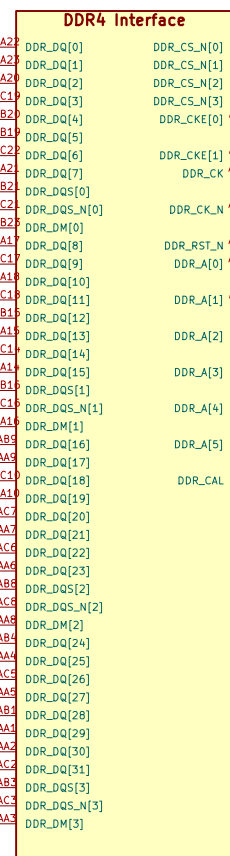
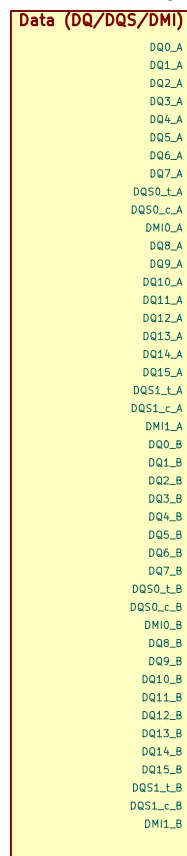
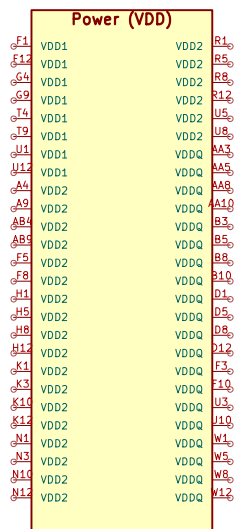
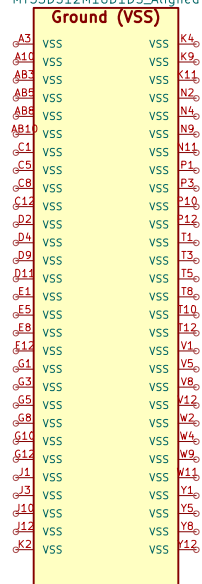
Ch A/C LVDS Out	
DA0+	
DA0-	
DA1+	
DA1-	
DA2+	
DA2-	
DA3+	
DA3-	
DA4+	
DA4-	
DA5+	
DA5-	
DA6+	
DA6-	
DA7+	
DA7-	
DA8+	
DA8-	
DA9+	
DA9-	
DA10+	
DA10-	
DA11+	
DA11-	
DASTR+	
DASTR-	
DC0+	
DC0-	
DC1+	
DC1-	
DC2+	
DC2-	
DC3+	
DC3-	
DC4+	
DC4-	
DC5+	
DC5-	
DC6+	
DC6-	
DC7+	
DC7-	
DC8+	
DC8-	
DC9+	
DC9-	
DC10+	
DC10-	
DC11+	
DC11-	
DCSTR+	
DCSTR-	

ADC LVDS Clocks

lvds_rx_top_clk1n1	
lvds_rx_top_clk1n1_N	
lvds_rx_top_clk1n2	
lvds_rx_top_clk1n2_N	
lvds_rx_bottom_clk1n3	
lvds_rx_bottom_clk1n3_N	
lvds_rx_bottom_clk1n4	
lvds_rx_bottom_clk1n4_N	

LVDS Clock Out

DBCLK+	
DBCLK-	
DDCLK+	
DDCLK-	
DACLK+	
DACLK-	
DCCLK+	
DCCLK-	














































































U1E  
MT53D512M16D1DS\_Aligned

U3H  
Ti90G529\_Functions

VCC Power		
J11	VCC	VCCI03C D7 <sub>o</sub>
J13	VCC	VCCI04A D4 <sub>o</sub>
J15	VCC	VCCI04A F6 <sub>o</sub>
J9	VCC	VCCI04A E4 <sub>o</sub>
K10	VCC	VCCI04B K7 <sub>o</sub>
K12	VCC	VCCI04B M5 <sub>o</sub>
K14	VCC	VCCI04B M8 <sub>o</sub>
J11	VCC	VCCI04C N7 <sub>o</sub>
J13	VCC	VCCI04C P2 <sub>o</sub>
J15	VCC	VCCI04C P4 <sub>o</sub>
J9	VCC	VDDPLL_MCB_TOP_PHY J12 <sub>o</sub>
M10	VCC	VDDQX_PHY J10 <sub>o</sub>
M12	VCC	VDDQX_PHY J13 <sub>o</sub>
M14	VCC	VDDQX_PHY J15 <sub>o</sub>
N11	VCC	VDDQX_PHY U9 <sub>o</sub>
N13	VCC	VDDQX_PHY J11 <sub>o</sub>
N15	VCC	VDDQX_PHY J12 <sub>o</sub>
N9	VCC	VDDQX_PHY J14 <sub>o</sub>
J16	VCC	VDDQX_PHY V9 <sub>o</sub>
J8	VCC	VDDQX_PHY V7 <sub>o</sub>
J10	VCC	VDDQX_PHY V10 <sub>o</sub>
J12	VCC	VDDQX_PHY V13 <sub>o</sub>
J14	VCC	VDDQX_PHY V15 <sub>o</sub>
J16	VCC	VDDQX_PHY V18 <sub>o</sub>
J18	VCC	VDDQX_PHY V19 <sub>o</sub>
J20	VCC	VDDQX_PHY V23 <sub>o</sub>
J22	VCC	VDDQX_PHY V24 <sub>o</sub>
J24	VCC	VDDQX_PHY V25 <sub>o</sub>
J26	VCC	VDDQX_PHY V26 <sub>o</sub>
J28	VCC	VDDQX_PHY V27 <sub>o</sub>
J30	VCC	VDDQX_PHY V28 <sub>o</sub>
J32	VCC	VDDQX_PHY V29 <sub>o</sub>
J34	VCC	VDDQX_PHY V30 <sub>o</sub>
J36	VCC	VDDQX_PHY V31 <sub>o</sub>
J38	VCC	VDDQX_PHY V32 <sub>o</sub>
J40	VCC	VDDQX_PHY V33 <sub>o</sub>
J42	VCC	VDDQX_PHY V34 <sub>o</sub>
J44	VCC	VDDQX_PHY V35 <sub>o</sub>
J46	VCC	VDDQX_PHY V36 <sub>o</sub>
J48	VCC	VDDQX_PHY V37 <sub>o</sub>
J50	VCC	VDDQX_PHY V38 <sub>o</sub>
J52	VCC	VDDQX_PHY V39 <sub>o</sub>
J54	VCC	VDDQX_PHY V40 <sub>o</sub>
J56	VCC	VDDQX_PHY V41 <sub>o</sub>
J58	VCC	VDDQX_PHY V42 <sub>o</sub>
J60	VCC	VDDQX_PHY V43 <sub>o</sub>
J62	VCC	VDDQX_PHY V44 <sub>o</sub>
J64	VCC	VDDQX_PHY V45 <sub>o</sub>
J66	VCC	VDDQX_PHY V46 <sub>o</sub>
J68	VCC	VDDQX_PHY V47 <sub>o</sub>
J70	VCC	VDDQX_PHY V48 <sub>o</sub>
J72	VCC	VDDQX_PHY V49 <sub>o</sub>
J74	VCC	VDDQX_PHY V50 <sub>o</sub>
J76	VCC	VDDQX_PHY V51 <sub>o</sub>
J78	VCC	VDDQX_PHY V52 <sub>o</sub>
J80	VCC	VDDQX_PHY V53 <sub>o</sub>
J82	VCC	VDDQX_PHY V54 <sub>o</sub>
J84	VCC	VDDQX_PHY V55 <sub>o</sub>
J86	VCC	VDDQX_PHY V56 <sub>o</sub>
J88	VCC	VDDQX_PHY V57 <sub>o</sub>
J90	VCC	VDDQX_PHY V58 <sub>o</sub>
J92	VCC	VDDQX_PHY V59 <sub>o</sub>
J94	VCC	VDDQX_PHY V60 <sub>o</sub>
J96	VCC	VDDQX_PHY V61 <sub>o</sub>
J98	VCC	VDDQX_PHY V62 <sub>o</sub>
J100	VCC	VDDQX_PHY V63 <sub>o</sub>
J102	VCC	VDDQX_PHY V64 <sub>o</sub>
J104	VCC	VDDQX_PHY V65 <sub>o</sub>
J106	VCC	VDDQX_PHY V66 <sub>o</sub>
J108	VCC	VDDQX_PHY V67 <sub>o</sub>
J110	VCC	VDDQX_PHY V68 <sub>o</sub>
J112	VCC	VDDQX_PHY V69 <sub>o</sub>
J114	VCC	VDDQX_PHY V70 <sub>o</sub>
J116	VCC	VDDQX_PHY V71 <sub>o</sub>
J118	VCC	VDDQX_PHY V72 <sub>o</sub>
J120	VCC	VDDQX_PHY V73 <sub>o</sub>
J122	VCC	VDDQX_PHY V74 <sub>o</sub>
J124	VCC	VDDQX_PHY V75 <sub>o</sub>
J126	VCC	VDDQX_PHY V76 <sub>o</sub>
J128	VCC	VDDQX_PHY V77 <sub>o</sub>
J130	VCC	VDDQX_PHY V78 <sub>o</sub>
J132	VCC	VDDQX_PHY V79 <sub>o</sub>
J134	VCC	VDDQX_PHY V80 <sub>o</sub>
J136	VCC	VDDQX_PHY V81 <sub>o</sub>
J138	VCC	VDDQX_PHY V82 <sub>o</sub>
J140	VCC	VDDQX_PHY V83 <sub>o</sub>
J142	VCC	VDDQX_PHY V84 <sub>o</sub>
J144	VCC	VDDQX_PHY V85 <sub>o</sub>
J146	VCC	VDDQX_PHY V86 <sub>o</sub>
J148	VCC	VDDQX_PHY V87 <sub>o</sub>
J150	VCC	VDDQX_PHY V88 <sub>o</sub>
J152	VCC	VDDQX_PHY V89 <sub>o</sub>
J154	VCC	VDDQX_PHY V90 <sub>o</sub>
J156	VCC	VDDQX_PHY V91 <sub>o</sub>
J158	VCC	VDDQX_PHY V92 <sub>o</sub>
J160	VCC	VDDQX_PHY V93 <sub>o</sub>
J162	VCC	VDDQX_PHY V94 <sub>o</sub>
J164	VCC	VDDQX_PHY V95 <sub>o</sub>
J166	VCC	VDDQX_PHY V96 <sub>o</sub>
J168	VCC	VDDQX_PHY V97 <sub>o</sub>
J170	VCC	VDDQX_PHY V98 <sub>o</sub>
J172	VCC	VDDQX_PHY V99 <sub>o</sub>
J174	VCC	VDDQX_PHY V100 <sub>o</sub>
J176	VCC	VDDQX_PHY V101 <sub>o</sub>
J178	VCC	VDDQX_PHY V102 <sub>o</sub>
J180	VCC	VDDQX_PHY V103 <sub>o</sub>
J182	VCC	VDDQX_PHY V104 <sub>o</sub>
J184	VCC	VDDQX_PHY V105 <sub>o</sub>
J186	VCC	VDDQX_PHY V106 <sub>o</sub>
J188	VCC	VDDQX_PHY V107 <sub>o</sub>
J190	VCC	VDDQX_PHY V108 <sub>o</sub>
J192	VCC	VDDQX_PHY V109 <sub>o</sub>
J194	VCC	VDDQX_PHY V110 <sub>o</sub>
J196	VCC	VDDQX_PHY V111 <sub>o</sub>
J198	VCC	VDDQX_PHY V112 <sub>o</sub>
J200	VCC	VDDQX_PHY V113 <sub>o</sub>
J202	VCC	VDDQX_PHY V114 <sub>o</sub>
J204	VCC	VDDQX_PHY V115 <sub>o</sub>
J206	VCC	VDDQX_PHY V116 <sub>o</sub>
J208	VCC	VDDQX_PHY V117 <sub>o</sub>
J210	VCC	VDDQX_PHY V118 <sub>o</sub>
J212	VCC	VDDQX_PHY V119 <sub>o</sub>
J214	VCC	VDDQX_PHY V120 <sub>o</sub>
J216	VCC	VDDQX_PHY V121 <sub>o</sub>
J218	VCC	VDDQX_PHY V122 <sub>o</sub>
J220	VCC	VDDQX_PHY V123 <sub>o</sub>
J222	VCC	VDDQX_PHY V124 <sub>o</sub>
J224	VCC	VDDQX_PHY V125 <sub>o</sub>
J226	VCC	VDDQX_PHY V126 <sub>o</sub>
J228	VCC	VDDQX_PHY V127 <sub>o</sub>
J230	VCC	VDDQX_PHY V128 <sub>o</sub>
J232	VCC	VDDQX_PHY V129 <sub>o</sub>
J234	VCC	VDDQX_PHY V130 <sub>o</sub>
J236	VCC	VDDQX_PHY V131 <sub>o</sub>
J238	VCC	VDDQX_PHY V132 <sub>o</sub>
J240	VCC	VDDQX_PHY V133 <sub>o</sub>
J242	VCC	VDDQX_PHY V134 <sub>o</sub>
J244	VCC	VDDQX_PHY V135 <sub>o</sub>
J246	VCC	VDDQX_PHY V136 <sub>o</sub>
J248	VCC	VDDQX_PHY V137 <sub>o</sub>
J250	VCC	VDDQX_PHY V138 <sub>o</sub>
J252	VCC	VDDQX_PHY V139 <sub>o</sub>
J254	VCC	VDDQX_PHY V140 <sub>o</sub>
J256	VCC	VDDQX_PHY V141 <sub>o</sub>
J258	VCC	VDDQX_PHY V142 <sub>o</sub>
J260	VCC	VDDQX_PHY V143 <sub>o</sub>
J262	VCC	VDDQX_PHY V144 <sub>o</sub>
J264	VCC	VDDQX_PHY V145 <sub>o</sub>
J266	VCC	VDDQX_PHY V146 <sub>o</sub>
J268	VCC	VDDQX_PHY V147 <sub>o</sub>
J270	VCC	VDDQX_PHY V148 <sub>o</sub>
J272	VCC	VDDQX_PHY V149 <sub>o</sub>
J274	VCC	VDDQX_PHY V150 <sub>o</sub>
J276	VCC	VDDQX_PHY V151 <sub>o</sub>
J278	VCC	VDDQX_PHY V152 <sub>o</sub>
J280	VCC	VDDQX_PHY V153 <sub>o</sub>
J282	VCC	VDDQX_PHY V154 <sub>o</sub>
J284	VCC	VDDQX_PHY V155 <sub>o</sub>
J286	VCC	VDDQX_PHY V156 <sub>o</sub>
J288	VCC	VDDQX_PHY V157 <sub>o</sub>
J290	VCC	VDDQX_PHY V158 <sub>o</sub>
J292	VCC	VDDQX_PHY V159 <sub>o</sub>
J294	VCC	VDDQX_PHY V160 <sub>o</sub>
J296	VCC	VDDQX_PHY V161 <sub>o</sub>
J298	VCC	VDDQX_PHY V162 <sub>o</sub>
J300	VCC	VDDQX_PHY V163 <sub>o</sub>
J302	VCC	VDDQX_PHY V164 <sub>o</sub>
J304	VCC	VDDQX_PHY V165 <sub>o</sub>
J306	VCC	VDDQX_PHY V166 <sub>o</sub>
J308	VCC	VDDQX_PHY V167 <sub>o</sub>
J310	VCC	VDDQX_PHY V168 <sub>o</sub>
J312	VCC	VDDQX_PHY V169 <sub>o</sub>
J314	VCC	VDDQX_PHY V170 <sub>o</sub>
J316	VCC	VDDQX_PHY V171 <sub>o</sub>
J318	VCC	VDDQX_PHY V172 <sub>o</sub>
J320	VCC	VDDQX_PHY V173 <sub>o</sub>
J322	VCC	VDDQX_PHY V174 <sub>o</sub>
J324	VCC	VDDQX_PHY V175 <sub>o</sub>
J326	VCC	VDDQX_PHY V176 <sub>o</sub>
J328	VCC	VDDQX_PHY V177 <sub>o</sub>
J330	VCC	VDDQX_PHY V178 <sub>o</sub>
J332	VCC	VDDQX_PHY V179 <sub>o</sub>
J334	VCC	VDDQX_PHY V180 <sub>o</sub>
J336	VCC	VDDQX_PHY V181 <sub>o</sub>
J338	VCC	VDDQX_PHY V182 <sub>o</sub>
J340	VCC	VDDQX_PHY V183 <sub>o</sub>
J342	VCC	VDDQX_PHY V184 <sub>o</sub>
J344	VCC	VDDQX_PHY V185 <sub>o</sub>
J346	VCC	VDDQX_PHY V186 <sub>o</sub>
J348	VCC	VDDQX_PHY V187 <sub>o</sub>
J350	VCC	VDDQX_PHY V188 <sub>o</sub>
J352	VCC	VDDQX_PHY V189 <sub>o</sub>
J354	VCC	VDDQX_PHY V190 <sub>o</sub>
J356	VCC	VDDQX_PHY V191 <sub>o</sub>
J358	VCC	VDDQX_PHY V192 <sub>o</sub>
J360	VCC	VDDQX_PHY V193 <sub>o</sub>
J362	VCC	VDDQX_PHY V194 <sub>o</sub>
J364	VCC	VDDQX_PHY V195 <sub>o</sub>
J366	VCC	VDDQX_PHY V196 <sub>o</sub>
J368	VCC	VDDQX_PHY V197 <sub>o</sub>
J370	VCC	VDDQX_PHY V198 <sub>o</sub>
J372	VCC	VDDQX_PHY V199 <sub>o</sub>
J374	VCC	VDDQX_PHY V200 <sub>o</sub>
J376	VCC	VDDQX_PHY V201 <sub>o</sub>
J378	VCC	VDDQX_PHY V202 <sub>o</sub>
J380	VCC	VDDQX_PHY V203 <sub>o</sub>
J382	VCC	VDDQX_PHY V204 <sub>o</sub>
J384	VCC	VDDQX_PHY V205 <sub>o</sub>
J386	VCC	VDDQX_PHY V206 <sub>o</sub>
J388	VCC	VDDQX_PHY V207 <sub>o</sub>
J390	VCC	VDDQX_PHY V208 <sub>o</sub>
J392	VCC	VDDQX_PHY V209 <sub>o</sub>
J394	VCC	VDDQX_PHY V210 <sub>o</sub>
J396	VCC	VDDQX_PHY V211 <sub>o</sub>
J398	VCC	VDDQX_PHY V212 <sub>o</sub>
J400	VCC	VDDQX_PHY V213 <sub>o</sub>
J402	VCC	VDDQX_PHY V214 <sub>o</sub>
J404	VCC	VDDQX_PHY V215 <sub>o</sub>
J406	VCC	VDDQX_PHY V216 <sub>o</sub>
J408	VCC	VDDQX_PHY V217 <sub>o</sub>
J410	VCC	VDDQX_PHY V218 <sub>o</sub>
J412	VCC	VDDQX_PHY V219 <sub>o</sub>
J414	VCC	VDDQX_PHY V220 <sub>o</sub>
J416	VCC	VDDQX_PHY V221 <sub>o</sub>
J418	VCC	VDDQX_PHY V222 <sub>o</sub>
J420	VCC	VDDQX_PHY V223 <sub>o</sub>
J422	VCC	VDDQX_PHY V224 <sub>o</sub>
J424	VCC	VDDQX_PHY V225 <sub>o</sub>
J426	VCC	VDDQX_PHY V226 <sub>o</sub>
J428	VCC	VDDQX_PHY V227 <sub>o</sub>
J430	VCC	VDDQX_PHY V228 <sub>o</sub>
J432	VCC	VDDQX_PHY V229 <sub>o</sub>
J434	VCC	VDDQX_PHY V230 <sub>o</sub>
J436	VCC	VDDQX_PHY V231 <sub>o</sub>
J438	VCC	VDDQX_PHY V232 <sub>o</sub>
J440	VCC	VDDQX_PHY V233 <sub>o</sub>
J442	VCC	VDDQX_PHY V234 <sub>o</sub>
J444	VCC	VDDQX_PHY V235 <sub>o</sub>
J446	VCC	VDDQX_PHY V236 <sub>o</sub>
J448	VCC	VDDQX_PHY V237 <sub>o</sub>
J450	VCC	VDDQX_PHY V238 <sub>o</sub>
J452	VCC	VDDQX_PHY V239 <sub>o</sub>
J454	VCC	VDDQX_PHY V240 <sub>o</sub>
J456	VCC	VDDQX_PHY V241 <sub>o</sub>
J458	VCC	VDDQX_PHY V242 <sub>o</sub>
J460	VCC	VDDQX_PHY V243 <sub>o</sub>
J462	VCC	VDDQX_PHY V244 <sub>o</sub>
J464	VCC	VDDQX_PHY V245 <sub>o</sub>
J466	VCC	VDDQX_PHY V246 <sub>o</sub>
J468	VCC	VDDQX_PHY V247 <sub>o</sub>
J470	VCC	VDDQX_PHY V248 <sub>o</sub>
J472	VCC	VDDQX_PHY V249 <sub>o</sub>
J474	VCC	VDDQX_PHY V250 <sub>o</sub>
J476	VCC	VDDQX_PHY V251 <sub>o</sub>
J478	VCC	VDDQX_PHY V252 <sub>o</sub>
J480	VCC	VDDQX_PHY V253 <sub>o</sub>
J482	VCC	VDDQX_PHY V254 <sub>o</sub>
J484	VCC	VDDQX_PHY V255 <sub>o</sub>
J486	VCC	VDDQX_PHY V256 <sub>o</sub>
J488	VCC	VDDQX_PHY V257 <sub>o</sub>
J490	VCC	VDDQX_PHY V258 <sub>o</sub>
J492	VCC	VDDQX_PHY V259 <sub>o</sub>
J494	VCC	VDDQX_PHY V260 <sub>o</sub>
J496	VCC	VDDQX_PHY V261 <sub>o</sub>
J498	VCC	VDDQX_PHY V262 <sub>o</sub>
J500	VCC	VDDQX_PHY V263 <sub>o</sub>
J502	VCC	VDDQX_PHY V264 <sub>o</sub>
J504	VCC	VDDQX_PHY V265 <sub>o</sub>
J506	VCC	VDDQX_PHY V266 <sub>o</sub>
J508	VCC	VDDQX_PHY V267 <sub>o</sub>
J510	VCC	VDDQX_PHY V268 <sub>o</sub>
J512	VCC	VDDQX_PHY V269 <sub>o</sub>
J514	VCC	VDDQX_PHY V270 <sub>o</sub>
J516	VCC	VDDQX_PHY V271 <sub>o</sub>
J518	VCC	VDDQX_PHY V272 <sub>o</sub>
J520	VCC	VDDQX_PHY V273 <sub>o</sub>
J522	VCC	VDDQX_PHY V274 <sub>o</sub>
J524	VCC	VDDQX_PHY V275 <sub>o</sub>
J526	VCC	VDDQX_PHY V276 <sub>o</sub>
J528	VCC	VDDQX_PHY V277 <sub>o</sub>
J530	VCC	VDDQX_PHY V278 <sub>o</sub>
J532	VCC	VDDQX_PHY V279 <sub>o</sub>
J534	VCC	VDDQX_PHY V280 <sub>o</sub>
J536	VCC	VDDQX_PHY V281 <sub>o</sub>
J538	VCC	VDDQX_PHY V282 <sub>o</sub>
J540	VCC	VDDQX_PHY V283 <sub>o</sub>
J542	VCC	VDDQX_PHY V284 <sub>o</sub>
J544	VCC	VDDQX_PHY V285 <sub>o</sub>
J546	VCC	VDDQX_PHY V286 <sub>o</sub>
J548	VCC	VDDQX_PHY V287 <sub>o</sub>
J550	VCC	VDDQX_PHY V288 <sub>o</sub>
J552	VCC	VDDQX_PHY V289 <sub>o</sub>
J554	VCC	VDDQX_PHY V290 <sub>o</sub>
J556	VCC	VDDQX_PHY V291 <sub>o</sub>
J558	VCC	VDDQX_PHY V292 <sub>o</sub>
J560	VCC	VDDQX_PHY V293 <sub>o</sub>
J562	VCC	VDDQX_PHY V294 <sub>o</sub>
J564	VCC	VDDQX_PHY V295 <sub>o</sub>
J566	VCC	VDDQX_PHY V296 <sub>o</sub>
J568	VCC	VDDQX_PHY V297 <sub>o</sub>
J570	VCC	VDDQX_PHY V298 <sub>o</sub>
J572	VCC	VDDQX_PHY V299 <sub>o</sub>
J574	VCC	VDDQX_PHY V300 <sub>o</sub>
J576	VCC	VDDQX_PHY V301 <sub>o</sub>
J578	VCC	VDDQX_PHY V302 <sub>o</sub>
J580	VCC	VDDQX_PHY V303 <sub>o</sub>
J582	VCC	VDDQX_PHY V304 <sub>o</sub>
J584	VCC	VDDQX_PHY V305 <sub>o</sub>
J586	VCC	VDDQX_PHY V306 <sub>o</sub>
J588	VCC	VDDQX_PHY V307 <sub>o</sub>
J590	VCC	VDDQX_PHY V308 <sub>o</sub>
J592	VCC	VDDQX_PHY V309 <sub>o</sub>
J594	VCC	VDDQX_PHY V310 <sub>o</sub>
J596	VCC	VDDQX_PHY V311 <sub>o</sub>
J598	VCC	VDDQX_PHY V312 <sub>o</sub>
J600	VCC	VDDQX_PHY V313 <sub>o</sub>
J602	VCC	VDDQX_PHY V314 <sub>o</sub>
J604	VCC	VDDQX_PHY V315 <sub>o</sub>
J606	VCC	VDDQX_PHY V316 <sub>o</sub>




















U3F  
Ti90G529\_Functions

Misc I/O

 C13	boardin[0]	LED[0]	 U40
 F13	boardin[1]	LED[1]	 W40
 H14	boardin[2]	LED[2]	 V30
 D14	boardin[3]	LED[3]	 W30
 A7	boardin[4]	adc_clkout	 U17
 B19	boardin[5]	auxout	 C19
 B20	boardin[6]	boardout[0]	 D11
 H9	boardin[7]	boardout[1]	 F11
 U18	ddr_pll_in	boardout[2]	 A12
 C9	ext_clk_in	boardout[3]	 E12
 F9	exttrig_in	boardout[4]	 U12
 C17	lockinfo[0]	boardout[5]	 C12
 C18	lockinfo[1]	boardout[6]	 A14
 A20	lockinfo[2]	boardout[7]	 E13
 D18	lockinfo[3]	debugout[0]	 C80
 E2	lvdsin_clk	debugout[10]	 H10
 E3	lvdsin_clk_N	debugout[11]	 A10
 C6	lvdsin_spare	debugout[1]	 D80
 H6	lvdsin_spare_N	debugout[2]	 A90
 B2	lvdsin_trig	debugout[3]	 B90
 A2	lvdsin_trig_N	debugout[4]	 D90
 D5	lvdsin_trig_b	debugout[5]	 C60
 E9	lvdsin_trig_b_N	debugout[6]	 A60
 W4	main_pll_in	debugout[7]	 E70
 A15	overrange[0]	debugout[8]	 F10
 D15	overrange[1]	debugout[9]	 B10
 B16	overrange[2]	fan_out	 W20
 A16	overrange[3]	lvdsout_clk	 F19
		lvdsout_clk_N	 C19
		lvdsout_spare	 H19
		lvdsout_spare_N	 A18
		lvdsout_trig	 C20
		lvdsout_trig_N	 E20
		lvdsout_trig_b	 D20
		lvdsout_trig_b_N	 D20
		neo_led	 V40
		spi_clk	 V18
		spi_miso	 T20
		spi_mosi	 T19
		spics[0]	 V18
		spics[1]	 U18
		spics[2]	 U20
		spics[3]	 V23
		spics[4]	 V24
		spics[5]	 V22
		spics[6]	 U21
		spics[7]	 V20

IC1E  
ADC12DL500ACF\_Aligned

Control/SPI

 B1	CALSTAT
 B2	CALTRIG
 E2	SYNCSE
 D1	TMSTP+
 E1	TMSTP-
 H1	SYSREF+
 N1	SYSREF-
 B1	PD
 P8	SDI
 N8	SDO
 T8	SCLK
 B8	SCS
 D2	BG
 H2	TDIODE+
 N2	TDIODE-
 B8	ORAO
 A8	ORA1
 D8	ORB0
 C8	ORB1

U2A  
FT601Q\_Aligned

U3A  
Ti90G529\_Functions

**FT601Q FIFO Interface**

DATA_0	40	F9
DATA_1	41	A5
DATA_2	42	E6
DATA_3	43	B7
DATA_4	44	C7
DATA_5	45	E8
DATA_6	46	A8
DATA_7	47	C9
DATA_8	50	F9
DATA_9	51	E10
DATA_10	52	C10
DATA_11	53	H11
DATA_12	54	A10
DATA_13	55	C11
DATA_14	56	G11
DATA_15	57	B12
DATA_16	60	E11
DATA_17	61	G12
DATA_18	62	D12
DATA_19	63	A13
DATA_20	64	H13
DATA_21	65	B13
DATA_22	66	F13
DATA_23	67	G14
DATA_24	69	E14
DATA_25	70	B14
DATA_26	71	C14
DATA_27	72	A16
DATA_28	73	A17
DATA_29	74	C16
DATA_30	75	B16
DATA_31	76	A21
BE_0	4	D17
BE_1	5	C19
BE_2	6	C20
BE_3	7	E17
CLK	58	F19
OE	13	H19
RD	12	E16
WR	11	G16
RXF	9	G19
TXE	8	E19
RESET	15	G9
SIWU	10	G8
WAKEUP	16	F7
GPIO0	17	H8
GPIO1	18	G7

**FT601 Interface**

ftd_data[0]
ftd_data[1]
ftd_data[2]
ftd_data[3]
ftd_data[4]
ftd_data[5]
ftd_data[6]
ftd_data[7]
ftd_data[8]
ftd_data[9]
ftd_data[10]
ftd_data[11]
ftd_data[12]
ftd_data[13]
ftd_data[14]
ftd_data[15]
ftd_data[16]
ftd_data[17]
ftd_data[18]
ftd_data[19]
ftd_data[20]
ftd_data[21]
ftd_data[22]
ftd_data[23]
ftd_data[24]
ftd_data[25]
ftd_data[26]
ftd_data[27]
ftd_data[28]
ftd_data[29]
ftd_data[30]
ftd_data[31]
ftd_be[0]
ftd_be[1]
ftd_be[2]
ftd_be[3]
ftd_clk
ftd_oe_n
ftd_rld_n
ftd_wr_n
ftd_rxf_n
ftd_txe_n
ftd_reseth
ftd_siwu
ftd_wakeupn
ftd_gpio0
ftd_gpio1

**Power**

37	VBUS
20	VCC33
4	VCC33
18	VCC33
28	VDDA
14	VCCIO
49	VCCIO
59	VCCIO
68	VCCIO
1	VD10
10	VD10
13	VD10
48	VD10
39	DV10
2	AVDD
4	GND
19	GND
26	GND
29	GND
36	GND
77	GND
78	GND

U2C  
FT601Q\_Aligned

**USB**

25	DM
23	DP
34	RIDN
35	RIDP
31	TODN
32	TODP
21	XI
22	XO
27	RREF

U2B  
FT601Q\_Aligned

CONFIG/JTAG	
R6	CDONE
R6	CRESET_N
J22	REF_RES_2A
K23	REF_RES_2B
A22	REF_RES_2C
F18	REF_RES_3A
C14	REF_RES_3B
D6	REF_RES_3C
B5	REF_RES_4A
J1	REF_RES_4B
T2	REF_RES_4C
U5	TCK
U6	TDI
T4	TDO
T5	TMS

U3G  
Ti90G529\_Functions

Unassigned GPIO	
B4	GPIOB_N_32_CD129
A3	GPIOB_N_33_CD130
G5	GPIOB_N_34
C4	GPIOB_P_32_CD128
A4	GPIOB_P_33_CD131
V6	GPIO_L00_PLLIN1
W6	GPIO_L01
U3	GPIO_L02
W5	GPIO_L03_CLK24
U2	GPIO_L04_CLK25
T3	GPIO_L05_CLK26
V1	GPIO_L06_CLK27
V5	GPIO_L21
U23	GPIO_L36_PLLIN1
W22	GPIO_L40
W23	GPIO_L41
W23	GPIO_L42
W19	GPIO_L43
W20	GPIO_L44
G23	GPIO_T_N_23
G17	GPIO_T_N_33
G18	GPIO_T_N_34
G23	GPIO_T_P_23_PLLIN0
F17	GPIO_T_P_33

U3J  
Ti90G529\_Functions