

ACM206R3-SCH-C1.pdf

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DSN:	TITLE: Altera Cyclone V F31 FPGA board	<b>C1</b>
DOC. No.:	<b>ACM-206</b>	
FILE: CONFIG.sch	DATE: 2026/04/01 11:59:26	Sheet: 2 / 7

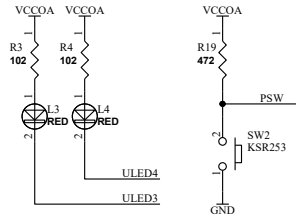
# Bank Group A(3.3V)

VCCOA VCCOA

GND GND

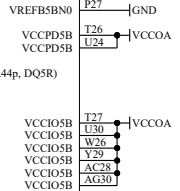
IOA[0..63] IOA[0..63]

GCLK50 A GCLK50 A

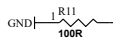


FPGA	
IOA16	V24
IOA17	V25
IOA47	A28
IOA46	A29
IOA25	AA28
IOA54	Y28
IOA45	AH29
IOA44	AG29
IOA51	V26
IOA50	U26
IOA15	AJ30
IOA14	AH30
IOA11	AE30
IOA10	AF30
IOA27	AG28
IOA26	AF28
U21	
U22	
IOA13	U21
IOA12	AF29
IOA53	V27
IOA52	W28
IOA43	AE28
IOA42	AD28
IOA34	U27
IOA35	U28
IOA41	AD29
IOA40	AC29
IOA7	AA29
IOA6	AA30
IOA38	AB27
IOA39	AB28
U23	
IOA8	AB29
IOA9	AC30
IOA52	T26
IOA53	T25
IOA5	Y30
IOA4	W30
IOA49	T25
IOA48	U25
IOA36	V29
IOA37	W29
IOA1	T30
IOA0	R30
IOA2	U29
IOA3	V30

GCLK50 A

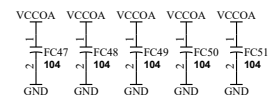
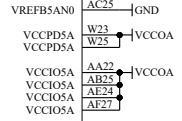


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FPGA	
AD23	IO, RZQ_1, (DIFFIO TX R1p, DIFFOUT R1p, DQ1R)
AC24	IO, PR_REQUEST, (DIFFIO TX R1a, DIFFOUT R1a, DQ1R)
W22	IO, INIT_DONE, (DIFFIO RX R2p, DIFFOUT R2p)
Y21	IO, CRC_ERROR, (DIFFIO RX R2n, DIFFOUT R2n)
AD24	IO, <C<E, (DIFFIO TX R3p, DIFFOUT R3p, DQ1R)
AD25	IO, CxP_CONF_DONE, (DIFFIO TX R3n, DIFFOUT R3n, DQ1R)
Y25	IO, (DIFFIO RX R4p, DIFFOUT R4p, DQ1R)
Y26	IO, (DIFFIO RX R4n, DIFFOUT R4n, DQ1R)
AB26	IO, DEV_OE, (DIFFIO TX R5p, DIFFOUT R5p)
AA26	IO, DEV_CLKn, (DIFFIO TX R5n, DIFFOUT R5n, DQ1R)
Y23	IO, nPERSTL0, (DIFFIO RX R6p, DIFFOUT R6p, DQ51R)
W24	IO, nPERSTL1, (DIFFIO RX R6n, DIFFOUT R6n, DQ51R)
AC26	IO, (DIFFIO TX R7p, DIFFOUT R7p, DQ1R)
Y22	IO, (DIFFIO TX R7n, DIFFOUT R7n)
AA23	IO, (DIFFIO RX R8p, DIFFOUT R8p, DQ1R)
AA23	IO, (DIFFIO RX R8n, DIFFOUT R8n, DQ1R)
AA24	IO, (DIFFIO RX R17p, DIFFOUT R17p)
AA24	IO, (DIFFIO RX R17n, DIFFOUT R17n)
AA25	IO, (DIFFIO TX R18p, DIFFOUT R18p, DQ2R)
AF24	IO, (DIFFIO TX R18n, DIFFOUT R18n, DQ2R)
AD27	IO, (DIFFIO RX R19p, DIFFOUT R19p, DQ2R)
AD27	IO, (DIFFIO RX R19n, DIFFOUT R19n, DQ2R)
AE26	IO, (DIFFIO TX R20p, DIFFOUT R20p, DQ2R)
AE26	IO, (DIFFIO TX R20n, DIFFOUT R20n, DQ2R)
V21	IO, (DIFFIO RX R21p, DIFFOUT R21p, DQ2R)
V21	IO, (DIFFIO RX R21n, DIFFOUT R21n, DQ2R)
W22	IO, (DIFFIO TX R22p, DIFFOUT R22p)
W22	IO, (DIFFIO TX R22n, DIFFOUT R22n, DQ2R)
W27	IO, (DIFFIO RX R23p, DIFFOUT R23p, DQ2R)
W27	IO, (DIFFIO RX R23n, DIFFOUT R23n, DQ2R)
AH27	IO, (DIFFIO TX R24p, DIFFOUT R24p, DQ2R)
AG27	IO, (DIFFIO TX R24n, DIFFOUT R24n)

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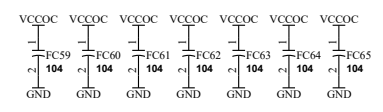
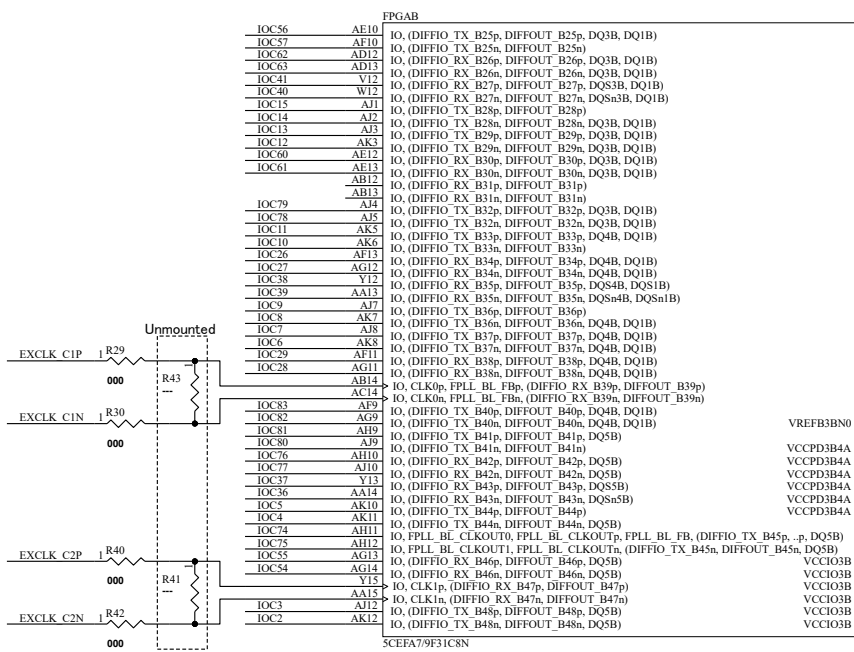
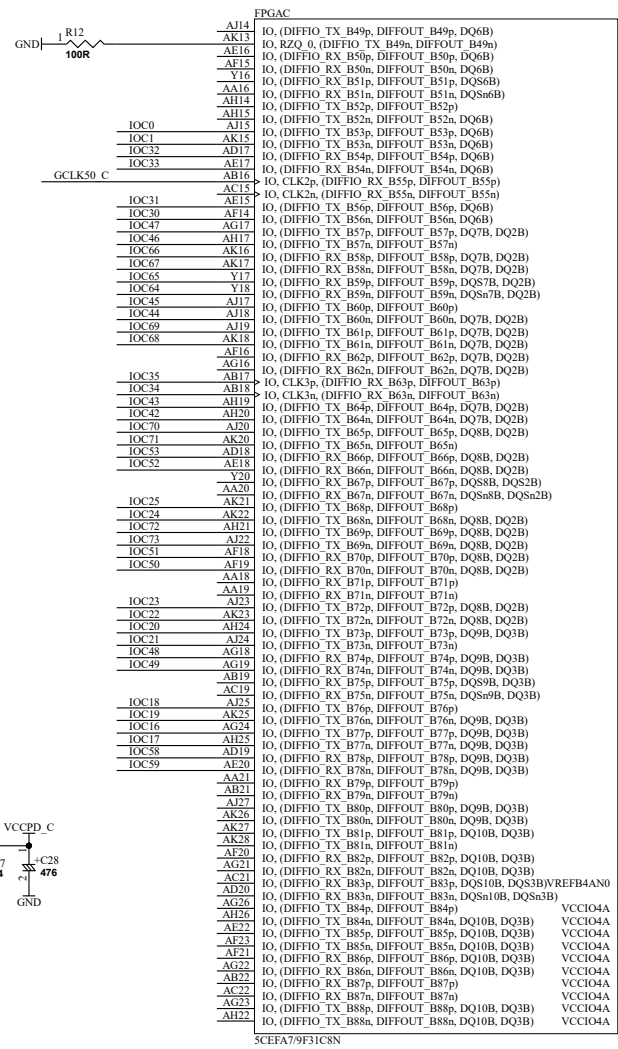
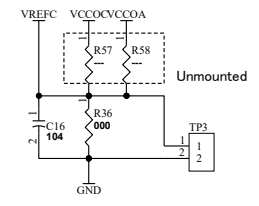
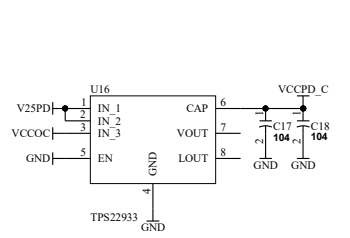
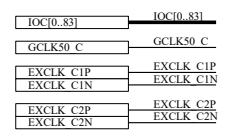
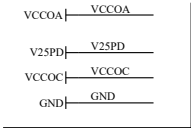


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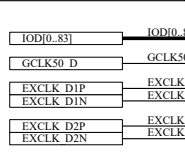
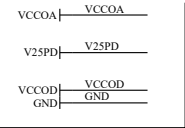
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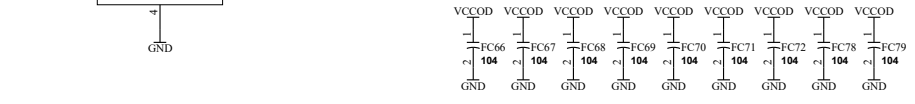
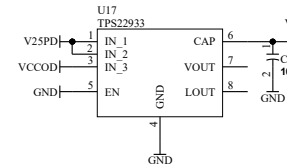
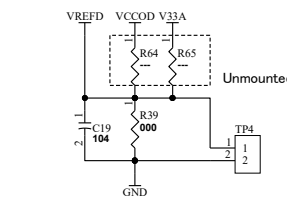
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FILE: IOC.sch	DATE: 2026/04/01 11:59:26	Sheet 5 / 7

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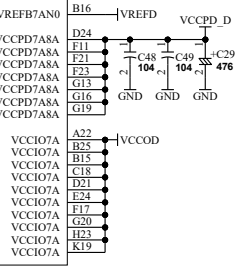
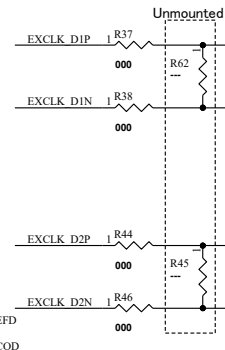
# Bank Group D



FPGA	IO	Function
L15	IO, CLK9p, (DIFFIO RX T49p, DIFFOUT T49p)	
K15	IO, CLK9n, (DIFFIO RX T49n, DIFFOUT T49n)	
B11	IO, (DIFFIO TX T50p, DIFFOUT T50p, DQ6T)	
A11	IO, (DIFFIO TX T50n, DIFFOUT T50n, DQ6T)	
F16	IO, (DIFFIO RX T51p, DIFFOUT T51p, DQ6T)	
E16	IO, (DIFFIO RX T51n, DIFFOUT T51n, DQ6T)	
F9	IO, FPLL_TL_CLKOUT0, FPLL_TL_CLKOUTp, FPLL_TL_FB, (DIFFIO TX T52p, DIFFOUT T52p, DQ6T)	
E10	IO, FPLL_TL_CLKOUT1, FPLL_TL_CLKOUTn, (DIFFIO TX T52n, DIFFOUT T52n, DQ6T)	
M9	IO, (DIFFIO RX T53p, DIFFOUT T53p, DQ86T)	
M8	IO, (DIFFIO RX T53n, DIFFOUT T53n, DQ86T)	
D9	IO, (DIFFIO TX T54p, DIFFOUT T54p, DQ6T)	
C10	IO, (DIFFIO TX T54n, DIFFOUT T54n, DQ6T)	
E15	IO, (DIFFIO RX T55p, DIFFOUT T55p, DQ6T)	
E15	IO, (DIFFIO RX T55n, DIFFOUT T55n, DQ6T)	
A10	IO, (DIFFIO TX T56p, DIFFOUT T56p, DQ6T)	
A9	IO, (DIFFIO TX T56n, DIFFOUT T56n, DQ6T)	
L14	IO, CLK8p, FPLL_TL_FBp, (DIFFIO RX T57p, DIFFOUT T57p)	
L13	IO, CLK8n, FPLL_TL_FBn, (DIFFIO RX T57n, DIFFOUT T57n)	
C9	IO, (DIFFIO TX T58p, DIFFOUT T58p, DQ7T)	
B8	IO, (DIFFIO TX T58n, DIFFOUT T58n, DQ7T)	
E12	IO, (DIFFIO RX T59p, DIFFOUT T59p, DQ7T)	
D13	IO, (DIFFIO RX T59n, DIFFOUT T59n, DQ7T)	
B7	IO, (DIFFIO TX T60p, DIFFOUT T60p, DQ7T)	
A8	IO, (DIFFIO TX T60n, DIFFOUT T60n, DQ7T)	
J15	IO, (DIFFIO RX T61p, DIFFOUT T61p, DQ82T)	
H15	IO, (DIFFIO RX T61n, DIFFOUT T61n, DQ82T)	
B6	IO, (DIFFIO TX T62p, DIFFOUT T62p)	
A6	IO, (DIFFIO TX T62n, DIFFOUT T62n, DQ7T)	
E11	IO, (DIFFIO RX T63p, DIFFOUT T63p, DQ7T)	
D10	IO, (DIFFIO RX T63n, DIFFOUT T63n, DQ7T)	
C7	IO, (DIFFIO TX T64p, DIFFOUT T64p, DQ7T)	
L10	IO, (DIFFIO TX T64n, DIFFOUT T64n)	
L9	IO, (DIFFIO RX T65p, DIFFOUT T65p)	
F13	IO, (DIFFIO RX T65n, DIFFOUT T65n, DQ8T)	
E13	IO, (DIFFIO TX T66p, DIFFOUT T66p, DQ8T)	
E14	IO, (DIFFIO RX T67p, DIFFOUT T67p, DQ8T)	
A5	IO, (DIFFIO RX T68p, DIFFOUT T68p, DQ8T)	
A4	IO, (DIFFIO TX T68n, DIFFOUT T68n, DQ8T)	
J14	IO, (DIFFIO RX T69p, DIFFOUT T69p, DQ88T)	
H14	IO, (DIFFIO RX T69n, DIFFOUT T69n, DQ88T)	
J7	IO, (DIFFIO TX T70p, DIFFOUT T70p)	
H7	IO, (DIFFIO TX T70n, DIFFOUT T70n, DQ8T)	
L11	IO, (DIFFIO RX T71p, DIFFOUT T71p, DQ8T)	
K11	IO, (DIFFIO RX T71n, DIFFOUT T71n, DQ8T)	
H9	IO, (DIFFIO TX T72p, DIFFOUT T72p, DQ8T)	
P12	IO, (DIFFIO RX T72n, DIFFOUT T72n)	
N12	IO, (DIFFIO RX T73n, DIFFOUT T73n)	
G9	IO, (DIFFIO TX T74p, DIFFOUT T74p, DQ9T, DQ3T)	
F8	IO, (DIFFIO TX T74n, DIFFOUT T74n, DQ9T, DQ3T)	
G12	IO, (DIFFIO RX T75p, DIFFOUT T75p, DQ9T, DQ3T)	
E8	IO, (DIFFIO TX T76p, DIFFOUT T76p, DQ9T, DQ3T)	
L8	IO, (DIFFIO TX T76n, DIFFOUT T76n, DQ9T, DQ3T)	
K13	IO, (DIFFIO RX T77p, DIFFOUT T77p, DQ89T, DQ83T)	
J13	IO, (DIFFIO RX T77n, DIFFOUT T77n, DQ89T, DQ83T)	
A3	IO, (DIFFIO TX T78p, DIFFOUT T78p)	
A2	IO, (DIFFIO TX T78n, DIFFOUT T78n, DQ9T, DQ3T)	
N11	IO, (DIFFIO RX T79p, DIFFOUT T79p, DQ9T, DQ3T)	
D7	IO, (DIFFIO RX T79n, DIFFOUT T79n, DQ9T, DQ3T)	
D6	IO, (DIFFIO TX T80p, DIFFOUT T80p)	
R12	IO, (DIFFIO RX T81p, DIFFOUT T81p)	
K11	IO, (DIFFIO TX T81n, DIFFOUT T81n)	
E7	IO, (DIFFIO TX T82p, DIFFOUT T82p, DQ10T, DQ3T)	
E6	IO, (DIFFIO TX T82n, DIFFOUT T82n, DQ10T, DQ3T)	
K12	IO, (DIFFIO RX T83p, DIFFOUT T83p, DQ10T, DQ3T)	
J10	IO, (DIFFIO TX T83n, DIFFOUT T83n, DQ10T, DQ3T)	
J10	IO, (DIFFIO RX T84p, DIFFOUT T84p, DQ10T, DQ3T)	
N10	IO, (DIFFIO TX T84n, DIFFOUT T84n, DQ10T, DQ3T)	
N9	IO, (DIFFIO RX T85p, DIFFOUT T85p, DQ810T, DQ3T)	
G6	IO, (DIFFIO TX T85n, DIFFOUT T85n, DQ810T, DQ3T)	
F6	IO, (DIFFIO TX T86p, DIFFOUT T86p)	
M12	IO, (DIFFIO TX T86n, DIFFOUT T86n, DQ10T, DQ3T)	
M12	IO, (DIFFIO RX T87p, DIFFOUT T87p, DQ10T, DQ3T)	
M11	IO, (DIFFIO TX T87n, DIFFOUT T87n, DQ10T, DQ3T)	
G8	IO, (DIFFIO RX T88p, DIFFOUT T88p, DQ10T, DQ3T)	
G7	IO, (DIFFIO TX T88n, DIFFOUT T88n)	



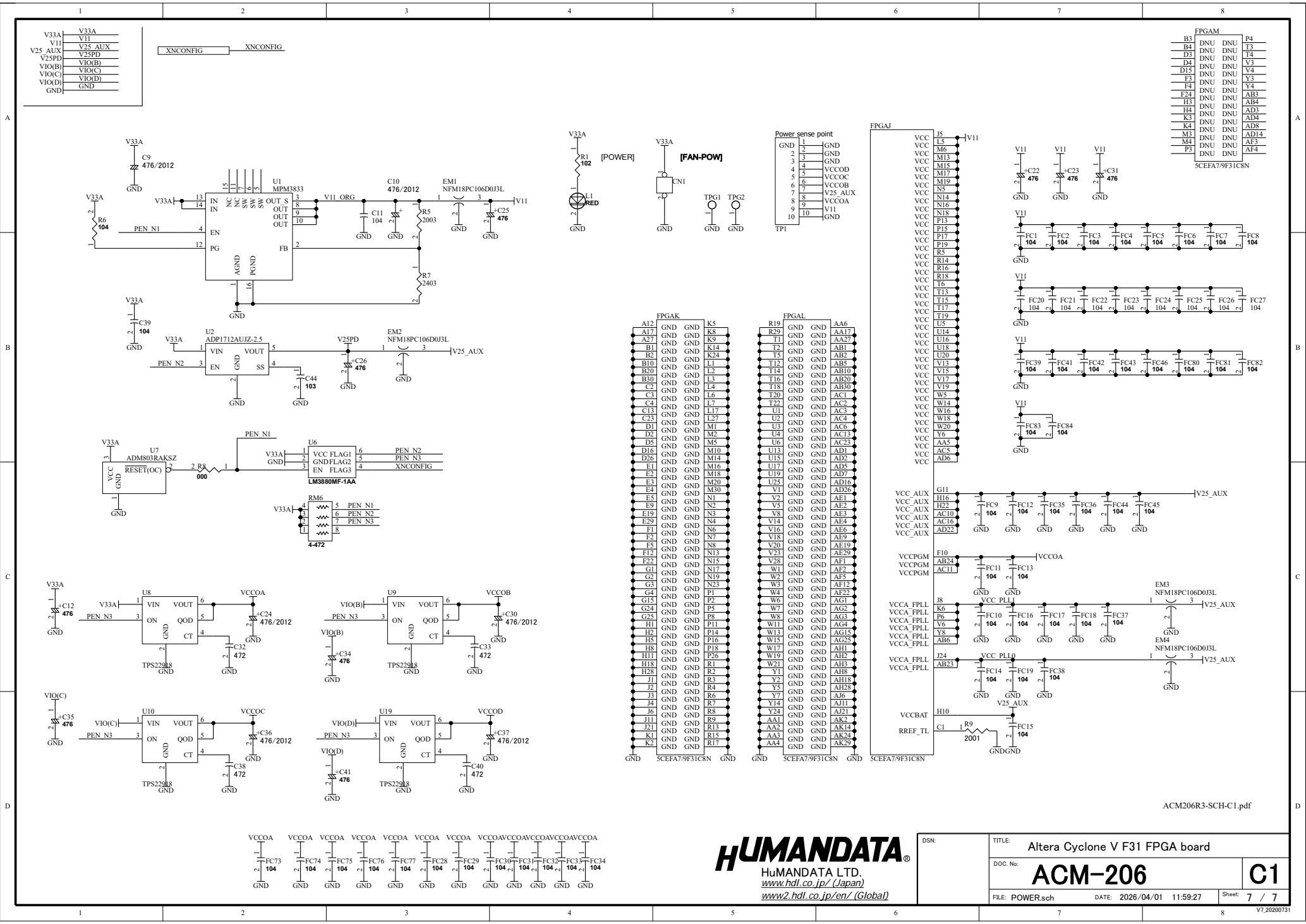
FPGA	IO	Function
H21	IO, (DIFFIO RX T9p, DIFFOUT T9p)	
G21	IO, (DIFFIO RX T9n, DIFFOUT T9n)	
E26	IO, (DIFFIO TX T10p, DIFFOUT T10p, DQ1T, DQ1T)	
E25	IO, (DIFFIO TX T10n, DIFFOUT T10n, DQ1T, DQ1T)	
G27	IO, (DIFFIO RX T11p, DIFFOUT T11p, DQ1T, DQ1T)	
G27	IO, (DIFFIO RX T11n, DIFFOUT T11n, DQ1T, DQ1T)	
C27	IO, (DIFFIO TX T12p, DIFFOUT T12p, DQ1T, DQ1T)	
C26	IO, (DIFFIO TX T12n, DIFFOUT T12n, DQ1T, DQ1T)	
L20	IO, (DIFFIO RX T13p, DIFFOUT T13p, DQ81T, DQ81T)	
L19	IO, (DIFFIO RX T13n, DIFFOUT T13n, DQ81T, DQ81T)	
B27	IO, (DIFFIO TX T14p, DIFFOUT T14p)	
A28	IO, (DIFFIO TX T14n, DIFFOUT T14n, DQ1T, DQ1T)	
E27	IO, (DIFFIO RX T15p, DIFFOUT T15p, DQ1T, DQ1T)	
E27	IO, (DIFFIO RX T15n, DIFFOUT T15n, DQ1T, DQ1T)	
B26	IO, (DIFFIO TX T16p, DIFFOUT T16p, DQ1T, DQ1T)	
A26	IO, (DIFFIO TX T16n, DIFFOUT T16n, DQ1T, DQ1T)	
L20	IO, (DIFFIO RX T17p, DIFFOUT T17p)	
L20	IO, (DIFFIO RX T17n, DIFFOUT T17n)	
D25	IO, (DIFFIO TX T18p, DIFFOUT T18p, DQ2T, DQ1T)	
C25	IO, (DIFFIO TX T18n, DIFFOUT T18n, DQ2T, DQ1T)	
C21	IO, (DIFFIO RX T19p, DIFFOUT T19p, DQ2T, DQ1T)	
C20	IO, (DIFFIO RX T19n, DIFFOUT T19n, DQ2T, DQ1T)	
D23	IO, (DIFFIO TX T20p, DIFFOUT T20p, DQ2T, DQ1T)	
C22	IO, (DIFFIO TX T20n, DIFFOUT T20n, DQ2T, DQ1T)	
K20	IO, (DIFFIO RX T21p, DIFFOUT T21p, DQ82T, DQ1T)	
J19	IO, (DIFFIO RX T21n, DIFFOUT T21n, DQ82T, DQ1T)	
E23	IO, (DIFFIO TX T22p, DIFFOUT T22p)	
D20	IO, (DIFFIO TX T22n, DIFFOUT T22n, DQ2T, DQ1T)	
C19	IO, (DIFFIO RX T23p, DIFFOUT T23p, DQ2T, DQ1T)	
A25	IO, (DIFFIO RX T23n, DIFFOUT T23n, DQ2T, DQ1T)	
A24	IO, (DIFFIO TX T24p, DIFFOUT T24p, DQ1T)	
L20	IO, (DIFFIO RX T25p, DIFFOUT T25p)	
E20	IO, (DIFFIO RX T25n, DIFFOUT T25n)	
C24	IO, (DIFFIO TX T26p, DIFFOUT T26p, DQ3T, DQ2T)	
B24	IO, (DIFFIO TX T26n, DIFFOUT T26n, DQ3T, DQ2T)	
F19	IO, (DIFFIO RX T27p, DIFFOUT T27p, DQ3T, DQ2T)	
E18	IO, (DIFFIO RX T27n, DIFFOUT T27n, DQ3T, DQ2T)	
B23	IO, (DIFFIO TX T28p, DIFFOUT T28p, DQ3T, DQ2T)	
A23	IO, (DIFFIO TX T28n, DIFFOUT T28n, DQ3T, DQ2T)	
L18	IO, (DIFFIO RX T29p, DIFFOUT T29p, DQ82T, DQ82T)	
K18	IO, (DIFFIO RX T29n, DIFFOUT T29n, DQ82T, DQ82T)	
B21	IO, (DIFFIO TX T30p, DIFFOUT T30p)	
D19	IO, (DIFFIO TX T30n, DIFFOUT T30n, DQ3T, DQ2T)	
D18	IO, (DIFFIO RX T31p, DIFFOUT T31p, DQ3T, DQ2T)	
A21	IO, (DIFFIO RX T31n, DIFFOUT T31n, DQ3T, DQ2T)	
A20	IO, (DIFFIO TX T32p, DIFFOUT T32p, DQ3T, DQ2T)	
H19	IO, (DIFFIO TX T32n, DIFFOUT T32n, DQ3T, DQ2T)	
J18	IO, CLK11n, (DIFFIO RX T33n, DIFFOUT T33n)	
B19	IO, (DIFFIO TX T34p, DIFFOUT T34p, DQ4T, DQ2T)	
G18	IO, (DIFFIO TX T34n, DIFFOUT T34n, DQ4T, DQ2T)	
F18	IO, (DIFFIO RX T35p, DIFFOUT T35p, DQ4T, DQ2T)	
B18	IO, (DIFFIO TX T35n, DIFFOUT T35n, DQ4T, DQ2T)	
K16	IO, (DIFFIO TX T36p, DIFFOUT T36p, DQ4T, DQ2T)	
L16	IO, (DIFFIO RX T37p, DIFFOUT T37p, DQ84T, DQ2T)	
D14	IO, (DIFFIO TX T37n, DIFFOUT T37n, DQ84T, DQ2T)	
C14	IO, (DIFFIO TX T38p, DIFFOUT T38p)	
C17	IO, (DIFFIO TX T38n, DIFFOUT T38n, DQ4T, DQ2T)	
B17	IO, (DIFFIO RX T39p, DIFFOUT T39p, DQ4T, DQ2T)	
A15	IO, (DIFFIO RX T39n, DIFFOUT T39n, DQ4T, DQ2T)	
G17	IO, CLK10p, (DIFFIO RX T41p, DIFFOUT T41p)	
B14	IO, (DIFFIO TX T40p, DIFFOUT T40p)	
A14	IO, (DIFFIO TX T40n, DIFFOUT T40n, DQ4T, DQ2T)	
E17	IO, (DIFFIO RX T42p, DIFFOUT T42p, DQ8T)	
D17	IO, (DIFFIO TX T42n, DIFFOUT T42n, DQ8T)	
D17	IO, (DIFFIO RX T43p, DIFFOUT T43p, DQ8T)	
C12	IO, (DIFFIO TX T43n, DIFFOUT T43n, DQ8T)	
K17	IO, (DIFFIO RX T44p, DIFFOUT T44p, DQ8T)	
E14	IO, (DIFFIO TX T44n, DIFFOUT T44n, DQ8T)	
B17	IO, (DIFFIO RX T45p, DIFFOUT T45p, DQ82T)	
F7	IO, (DIFFIO RX T45n, DIFFOUT T45n, DQ82T)	
A13	IO, (DIFFIO TX T46p, DIFFOUT T46p)	
C16	IO, (DIFFIO TX T46n, DIFFOUT T46n, DQ8T)	
C15	IO, (DIFFIO RX T47p, DIFFOUT T47p, DQ8T)	
C11	IO, (DIFFIO TX T47n, DIFFOUT T47n, DQ8T)	
B12	IO, (DIFFIO RX T48p, DIFFOUT T48p, DQ8T)	
B12	IO, (DIFFIO TX T48n, DIFFOUT T48n)	



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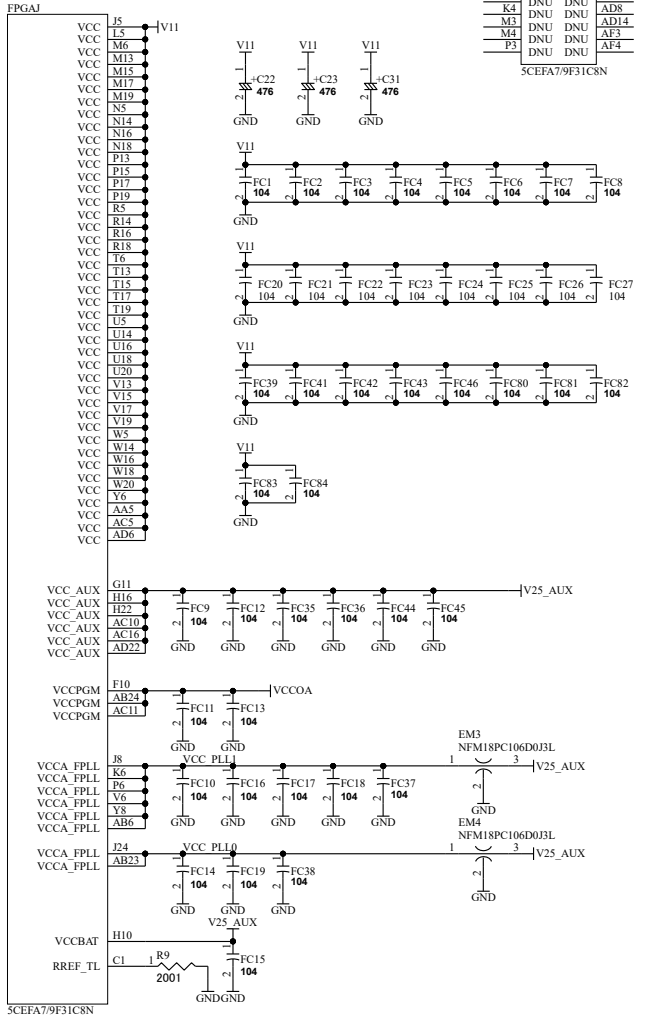


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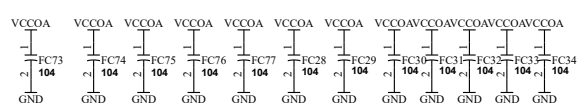


FPGAM			
B3	DNV	DNV	T3
B4	DNV	DNV	T4
D3	DNV	DNV	T4
D4	DNV	DNV	V3
D5	DNV	DNV	V4
F3	DNV	DNV	Y3
F4	DNV	DNV	Y4
F24	DNV	DNV	AB3
H3	DNV	DNV	AB4
H4	DNV	DNV	AD3
K4	DNV	DNV	AD8
M3	DNV	DNV	AD14
M4	DNV	DNV	AF3
P3	DNV	DNV	AF4

FPGA		FPGA	
A12	GND	K5	GND
A17	GND	K8	GND
A27	GND	K9	GND
B1	GND	K14	GND
B2	GND	K24	GND
B10	GND	L1	GND
B20	GND	L2	GND
B30	GND	L3	GND
C2	GND	L4	GND
C3	GND	L6	GND
C4	GND	L7	GND
C13	GND	L17	GND
C23	GND	L27	GND
D1	GND	M1	GND
D2	GND	M2	GND
D5	GND	M5	GND
D16	GND	M10	GND
D26	GND	M14	GND
E2	GND	M16	GND
E3	GND	M18	GND
E4	GND	M20	GND
E9	GND	N1	GND
E19	GND	N3	GND
F1	GND	N6	GND
F2	GND	N7	GND
F5	GND	N8	GND
F12	GND	N15	GND
F22	GND	N17	GND
G1	GND	N19	GND
G2	GND	N23	GND
G3	GND	N23	GND
G4	GND	P1	GND
G15	GND	P2	GND
G24	GND	P5	GND
G25	GND	P8	GND
H1	GND	P11	GND
H2	GND	P14	GND
H5	GND	P16	GND
H8	GND	P18	GND
H11	GND	P26	GND
H18	GND	R1	GND
H28	GND	R3	GND
J1	GND	R3	GND
J2	GND	R4	GND
J3	GND	R6	GND
J4	GND	R7	GND
J6	GND	R8	GND
J11	GND	R9	GND
J21	GND	R13	GND
K1	GND	R15	GND
K2	GND	R17	GND



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DOC. No.:	<b>ACM-206</b>	
FILE: POWER.sch	DATE: 2026/04/01 11:59:27	Sheet 7 / 7