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# SOM based LX2160XE72232B CPU

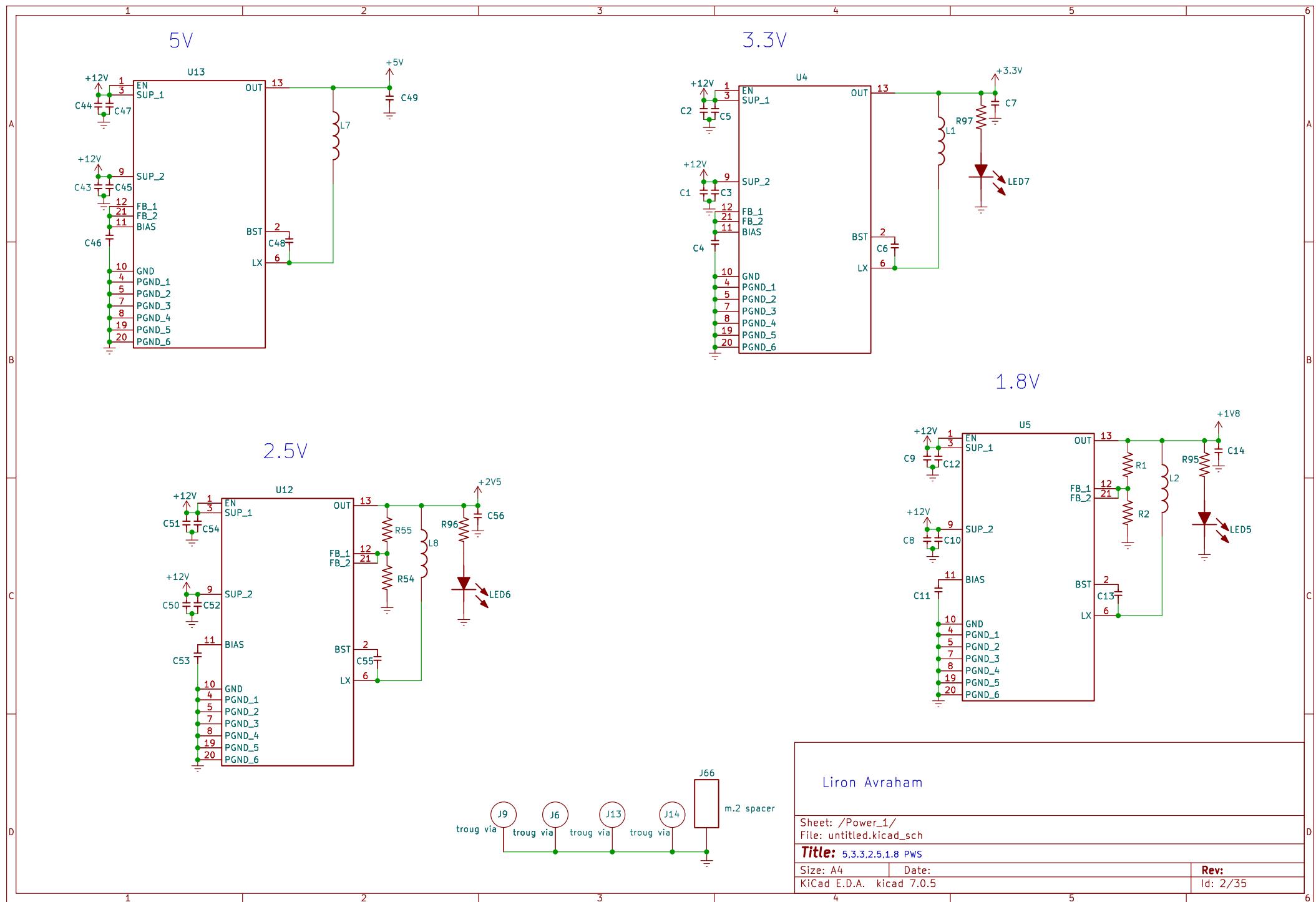
Liron Avraham

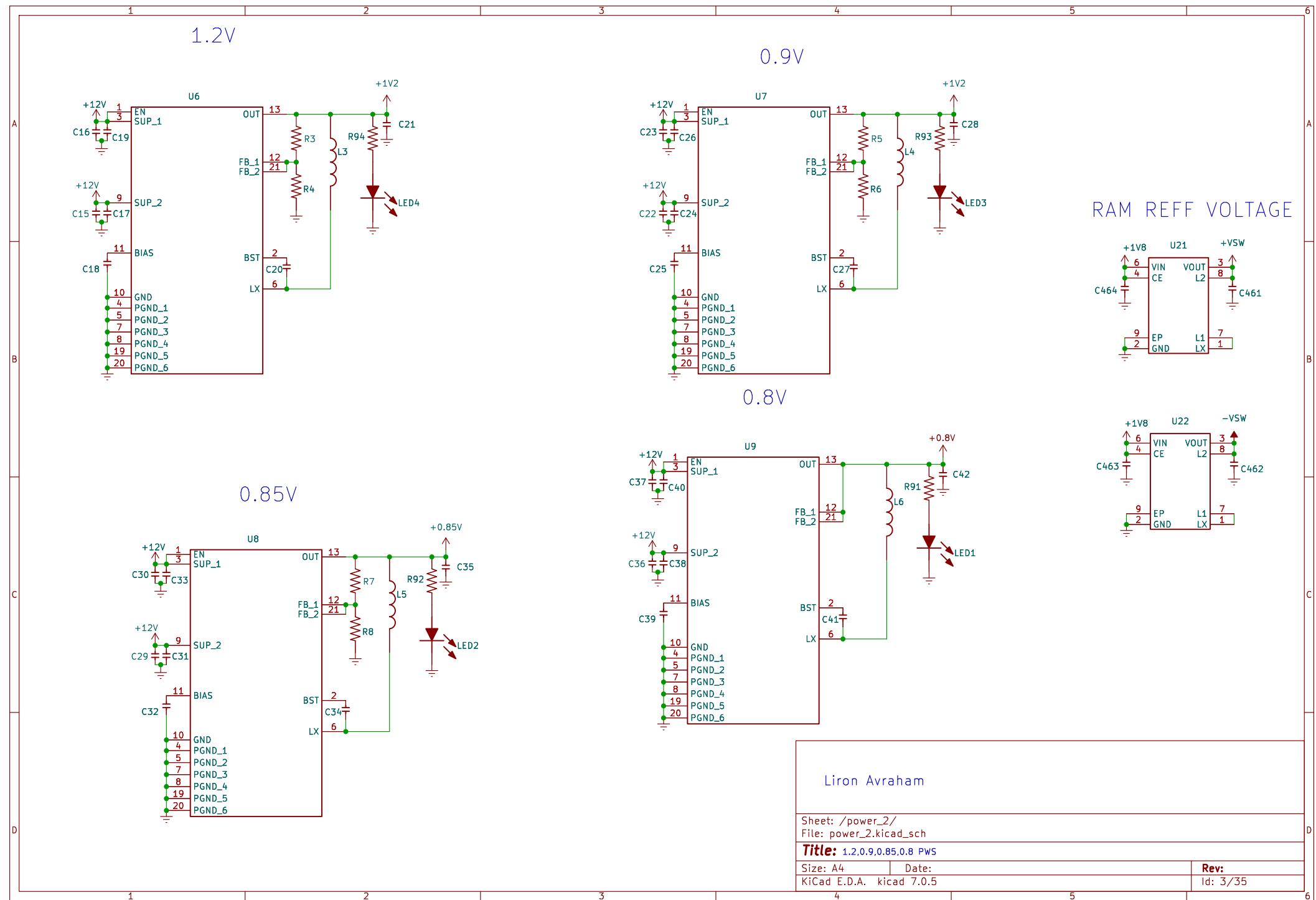
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File: LX2160XE72232B BASED CPU.kicad\_sch

**Title:**

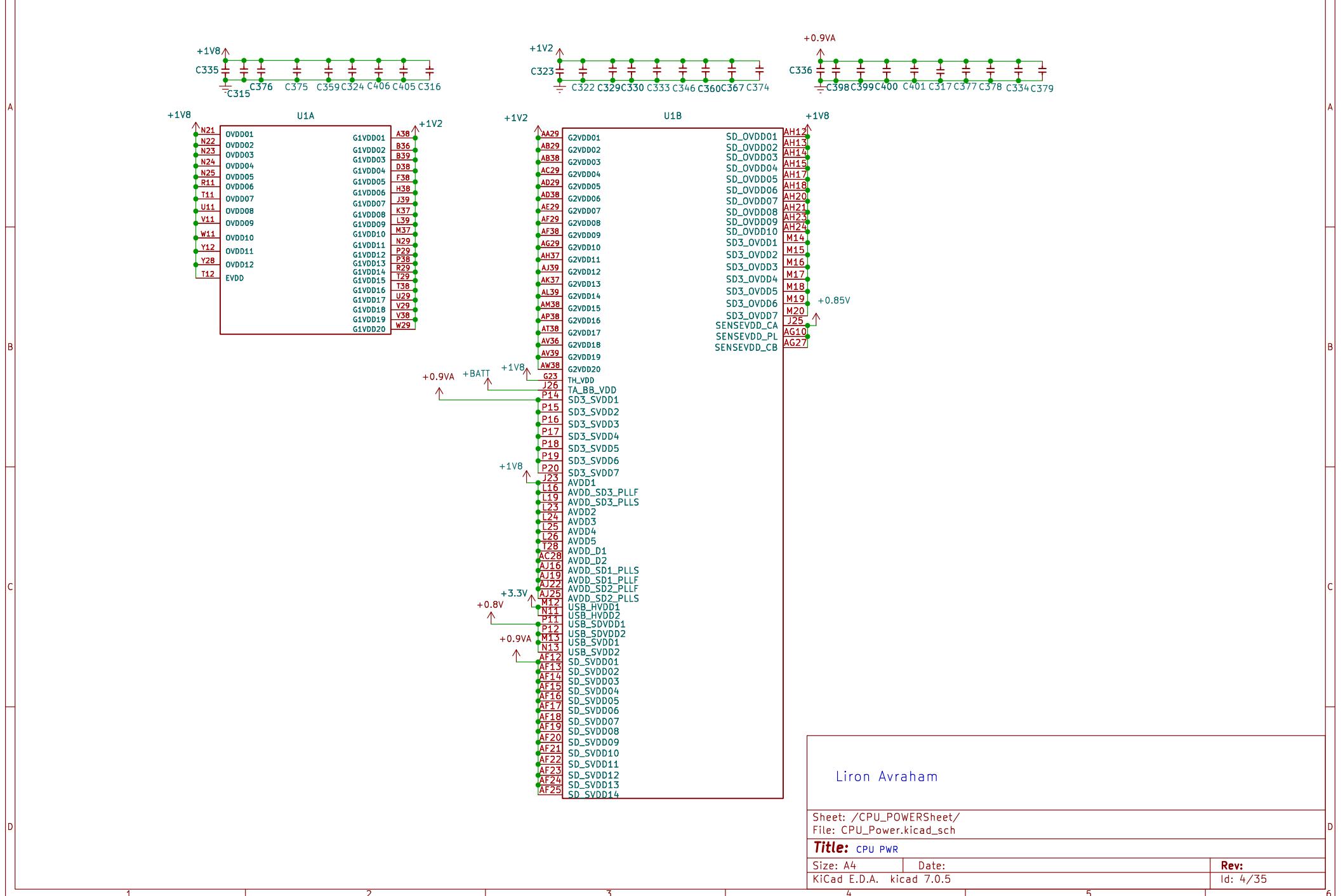
Size: A4 | Date:  
KiCad E.D.A. kicad 7.0.5

**Rev:**  
Id: 1/35

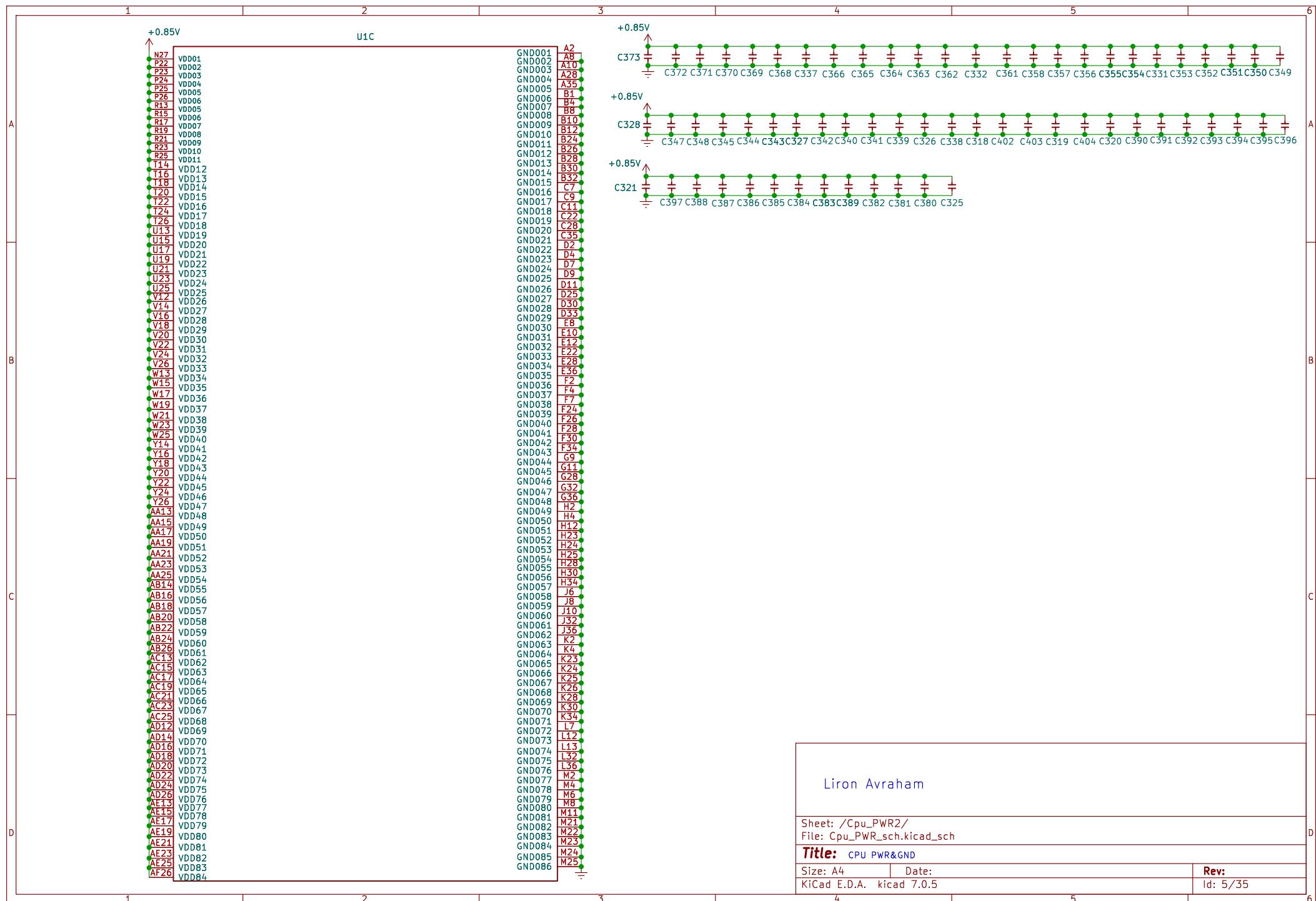




1 2 3 4 5 6



1 2 3 4 5 6



U1D

M28	GND087	GND174	W22
M34	GND088	GND175	W24
N5	GND089	GND176	W26
N7	GND090	GND177	W28
N10	GND091	GND178	Y30
N12	GND092	GND179	Y6
N26	GND093	GND180	Y10
N28	GND094	GND181	Y15
N30	GND095	GND182	Y15
N32	GND096	GND183	Y17
N36	GND097	GND184	Y19
P2	GND098	GND185	Y21
P5	GND099	GND186	Y23
P6	GND100	GND187	Y25
P7	GND101	GND188	Y27
P8	GND102	GND189	Y30
P9	GND103	GND190	Y32
P10	GND104	GND191	Y35
P13	GND105	GND192	Y37
P21	GND106	GND193	AA4
P23	GND107	GND194	AA8
P25	GND108	GND195	AA10
P27	GND109	GND196	AA12
P30	GND110	GND197	AA14
P34	GND111	GND198	AA16
R4	GND112	GND199	AA18
R10	GND113	GND200	AA20
R12	GND114	GND201	AA22
R14	GND115	GND202	AA24
R16	GND116	GND203	AA26
R18	GND117	GND204	AA28
R22	GND119	GND205	AA30
R24	GND120	GND206	AB6
R26	GND121	GND207	AB10
R28	GND122	GND208	AB13
R30	GND123	GND209	AB15
R32	GND124	GND210	AB17
R36	GND125	GND211	AB19
T1	GND126	GND212	AB21
T3	GND127	GND213	AB23
T6	GND128	GND214	AB25
T10	GND129	GND215	AB27
T13	GND130	GND216	AB30
T15	GND131	GND217	AC4
T17	GND132	GND218	AC4
T19	GND133	GND219	AC8
T21	GND134	GND220	AC10
T23	GND135	GND221	AC14
T25	GND136	GND222	AC16
T27	GND137	GND223	AC18
T30	GND138	GND224	AC20
T34	GND139	GND225	AC22
U4	GND140	GND226	AC24
U8	GND141	GND227	AC26
U10	GND142	GND228	AC30
U12	GND143	GND229	AC32
U14	GND144	GND230	AC36
U16	GND145	GND231	AD6
U18	GND146	GND232	AD10
U20	GND147	GND233	AD13
U22	GND148	GND234	AD15
U24	GND149	GND235	AD17
U26	GND150	GND236	AD19
U30	GND151	GND237	AD21
U32	GND152	GND238	AD23
U36	GND153	GND239	AD25
V6	GND154	GND240	AD27
V10	GND155	GND241	AD30
V13	GND156	GND242	AD34
V15	GND157	GND243	AE4
V17	GND158	GND244	AE8
V19	GND159	GND245	AE10
V21	GND160	GND246	AE12
V23	GND161	GND247	AE14
V25	GND162	GND248	AE16
V27	GND163	GND249	AE18
V30	GND164	GND250	AE20
V34	GND165	GND251	AE22
W4	GND166	GND252	AE24
W8	GND167	GND253	AE26
W10	GND168	GND254	AE28
W14	GND169	GND255	AE30
W16	GND170	GND256	AE32
W18	GND171	GND257	AE36
W20	GND172	GND258	AF6
	GND173	GND259	AF10

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Sheet: /CPU\_PWR3/  
 File: CPU\_PWR3.kicad\_sch

**Title:** CPU GND

Size: A4 Date:  
 KiCad E.D.A. kicad 7.0.5

Rev:  
 Id: 6/35

A

AF27	GND260	SD_GND30	AK19
AF30	GND261	SD_GND31	AK20
AF34	GND262	SD_GND32	AK21
AG4	GND263	SD_GND33	AK22
AG9	GND264	SD_GND34	AK23
AG11	GND265	SD_GND35	AK24
AG30	GND266	SD_GND36	AK25
AG32	GND267	SD_GND37	AK26
AG36	GND268	SD_GND38	AK27
AH7	GND269	SD_GND39	A19
AH11	GND270	SD_GND40	A11
AH28	GND271	SD_GND41	A13
AH34	GND272	SD_GND42	A15
AJ5	GND273	SD_GND43	A17
AJ10	GND274	SD_GND44	A19
AJ32	GND275	SD_GND45	AL21
AJ36	GND276	SD_GND46	AL23
AK4	GND277	SD_GND47	AL25
AK7	GND278	SD_GND48	AL27
AK9	GND279	SD_GND49	AM9
AK28	GND280	SD_GND50	AM11
AK30	GND281	SD_GND51	AM13
AK34	GND282	SD_GND52	AM15
AL5	GND283	SD_GND53	AM17
AL32	GND284	SD_GND54	AM18
AL36	GND285	SD_GND55	AM19
AM3	GND286	SD_GND56	AM21
AM8	GND287	SD_GND57	AM23
AM28	GND288	SD_GND58	AM25
AM30	GND289	SD_GND59	AN8
AM34	GND290	SD_GND60	AN10
AN6	GND291	SD_GND61	AN12
AN32	GND292	SD_GND62	AN14
AN36	GND293	SD_GND63	AN15
AP3	GND294	SD_GND64	AN14
AP5	GND295	SD_GND65	AN16
AP30	GND296	SD_GND66	AN18
AP34	GND297	SD_GND67	AN20
AR8	GND298	SD_GND68	AN22
AR28	GND299	SD_GND69	AN23
AR36	GND300	SD_GND70	AN24
AT4	GND301	SD_GND71	AN25
AT6	GND302	SD_GND72	AN26
AT30	GND303	SD_GND73	AP8
AT33	GND304	SD_GND74	AP10
AU3	GND305	SD_GND75	AP12
AU8	GND306	SD_GND76	AP14
AU28	GND307	SD_GND77	AP16
AU35	GND308	SD_GND78	AP18
AV4	GND309	SD_GND79	AP20
AV6	GND310	SD_GND80	AP22
AV30	GND311	SD_GND81	AP26
AV32	GND312	SD_GND82	AP28
AW2	GND313	SD_GND83	AR9
AW35	GND314	SD_GND84	AR10
J24	SENSEGND_CA	SD_GND85	AR11
AG26	SENSEGND_CB	SD_GND86	AR12
AJ11	SENSEGND_PL	SD_GND87	AR14
AG12	SD_GND01	SD_GND88	AR15
AG13	SD_GND02	SD_GND89	AR16
AG14	SD_GND03	SD_GND90	AR19
AG15	SD_GND04	SD_GND91	AR17
AG16	SD_GND05	SD_GND92	AR18
AG17	SD_GND06	SD_GND93	AR19
AG18	SD_GND07	SD_GND94	AR20
AG19	SD_GND08	SD_GND95	AR21
AG20	SD_GND09	SD_GND96	AR22
AG21	SD_GND10	SD_GND97	AR24
AG22	SD_GND11	SD_GND98	AR25
AG23	SD_GND12	SD_GND99	AR26
AG24	SD_GND13	SD_GND100	AR27
AG25	SD_GND14	SD_GND101	A19
AH16	SD_GND15	SD_GND102	A11
AH19	SD_GND16	SD_GND103	A13
AH22	SD_GND17	SD_GND104	A15
AH25	SD_GND18	SD_GND105	A17
AH27	SD_GND19	SD_GND106	A19
AJ12	SD_GND19	SD_GND107	A21
AK10	SD_GND20	SD_GND108	A23
K11	SD_GND21	SD_GND109	A25
K12	SD_GND22	SD_GND110	A27
AK13	SD_GND23	SD_GND111	AU9
AK14	SD_GND24	SD_GND112	AU11
AK15	SD_GND25	SD_GND113	AU13
AK16	SD_GND26	SD_GND114	AU15
AK17	SD_GND27	SD_GND115	AU17
AK18	SD_GND28		
	SD_GND29		

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Sheet: /CPU\_PWR4/  
 File: CPU\_PWR4.kicad\_sch

Title: CPU GND

Size: A4 Date:  
 KiCad E.D.A. kicad 7.0.5

Rev:  
 Id: 7/35

U1F

AU19	SD_GND116	K19
AU23	SD_GND117	K20
AU25	SD_GND118	K21
AU27	SD_GND119	L14
AV8	SD_GND120	L21
AV10	SD_GND121	N14
AV12	SD_GND122	N15
AV14	SD_GND123	N16
AV16	SD_GND124	N17
AV18	SD_GND125	N18
AV20	SD_GND126	N19
AV22	SD_GND127	N20
AV24	SD_GND128	K11
AV26	SD_GND129	K22
AV28	SD_GND130	L8
AW8	SD_GND131	N19
AW10	SD_GND132	M5
AW12	SD_GND133	P28
AW14	SD_GND134	R5
AW16	SD_GND135	R6
AW18	SD_GND136	R7
AW20	SD_GND137	R8
AW22	SD_GND138	R9
AW24	SD_GND139	R27
AW26	SD_GND140	T2
AW28	SD_GND141	T4
A12	SD3_GND01	T5
A14	SD3_GND02	T7
A16	SD3_GND03	T8
A18	SD3_GND04	T9
A20	SD3_GND05	U1
A22	SD3_GND06	U2
B14	SD3_GND07	U3
B16	SD3_GND08	U5
B18	SD3_GND09	U6
B20	SD3_GND10	U7
B22	SD3_GND11	U9
C13	SD3_GND12	U27
C15	SD3_GND13	V1
C17	SD3_GND14	V2
C19	SD3_GND15	V3
C21	SD3_GND16	V4
D13	SD3_GND17	V5
D15	SD3_GND18	V7
D17	SD3_GND19	V8
D19	SD3_GND20	V9
D21	SD3_GND21	V28
E13	SD3_GND22	W1
E14	SD3_GND23	W2
E15	SD3_GND24	W3
E16	SD3_GND25	W5
E18	SD3_GND26	W6
E19	SD3_GND27	W7
E20	SD3_GND28	W9
E21	SD3_GND29	W27
F12	SD3_GND30	Y1
F14	SD3_GND31	Y2
F16	SD3_GND32	Y3
F18	SD3_GND33	Y4
F20	SD3_GND34	Y5
F22	SD3_GND35	Y7
G12	SD3_GND36	Y8
G14	SD3_GND37	Y9
G16	SD3_GND38	Y11
G17	SD3_GND39	AA1
G18	SD3_GND40	AA2
G20	SD3_GND41	AA3
G22	SD3_GND42	AA5
H13	SD3_GND43	AA6
H15	SD3_GND44	AA7
H17	SD3_GND45	AA9
H19	SD3_GND46	AA9
H21	SD3_GND47	AA11
H22	SD3_GND48	AA27
J13	SD3_GND49	AB1
J15	SD3_GND49	AB2
J17	SD3_GND50	AB3
J19	SD3_GND51	AB4
J21	SD3_GND52	AB5
K13	SD3_GND53	AB7
K14	SD3_GND54	AB8
K15	SD3_GND55	AB9
K16	SD3_GND56	AB11
K17	SD3_GND57	AB12
K18	SD3_GND58	AC1
	SD3_GND59	

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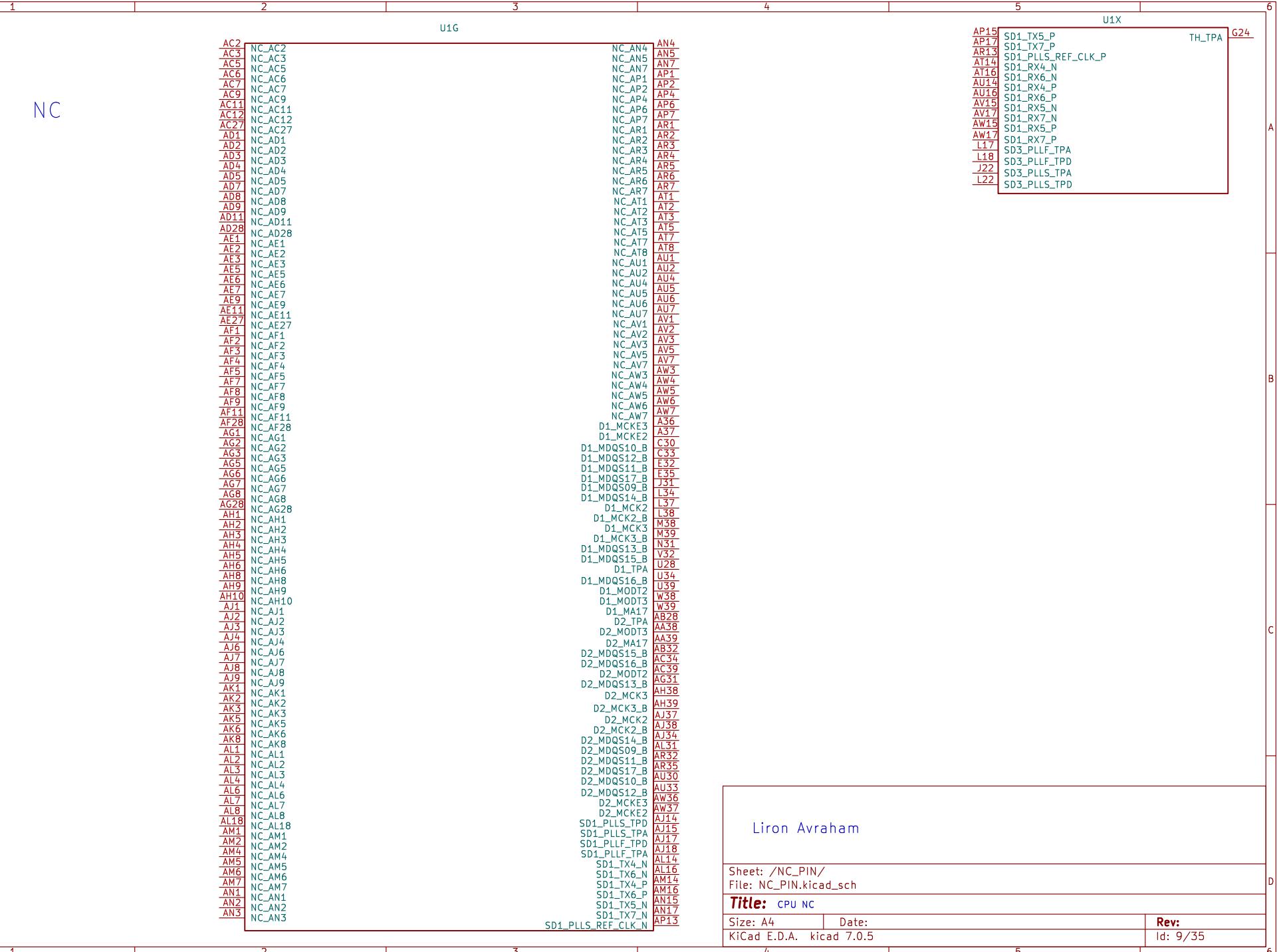
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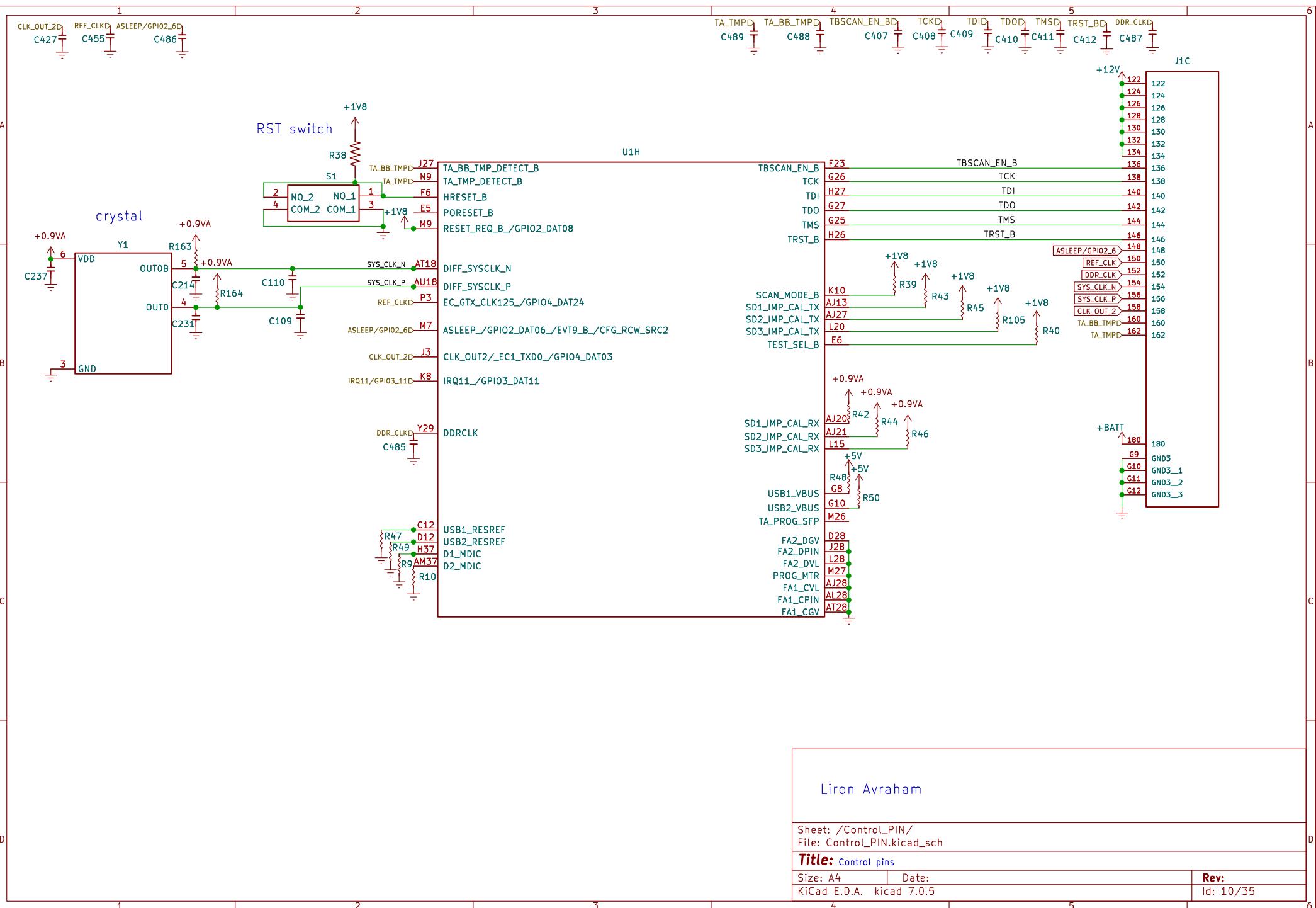
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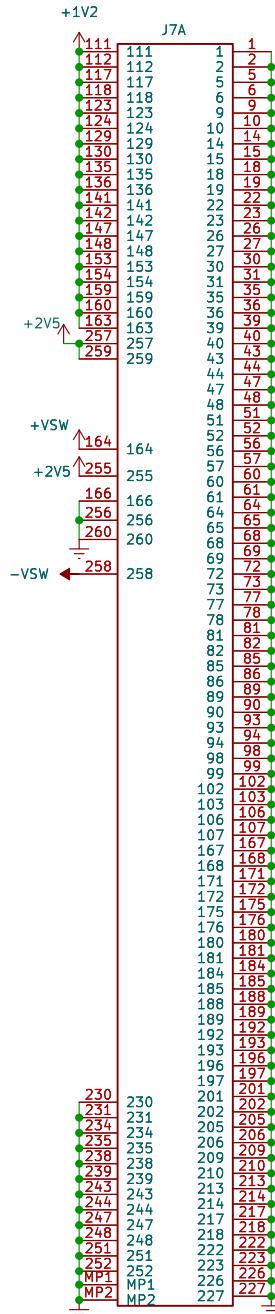
Size: A4 Date:

KiCad E.D.A. kicad 7.0.5

**Rev:**  
Id: 8/35







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Sheet: /Low\_Ram\_Con\_PWR/  
File: Low\_Ram\_Con\_PWR\_sch.kicad\_sch

**Title:** Low Ram connector PWR pins

Size: A4 Date:

KiCad E.D.A. kicad 7.0.5

**Rev:**  
Id: 11/35

A

J7B	3	H29	U11
4	4	J29	D1_MDQ05
7	7	L29	D1_MDQ04
8	8	K29	D1_MDQ01
11	11	K32	D1_MDQ00
12	12	J30	D1_MDM00_B/D1_MDBI00_B/D1_MDQS09
13	13	K31	D1_MDQS06
16	16	L30	D1_MDQ06
17	17	L31	D1_MDQ07
20	20	M29	D1_MDQ02
21	21	M30	D1_MDQ03
24	24	D29	D1_MDQ12
25	25	A29	D1_MDQ13
28	28	B29	D1_MDQ08
29	29	A30	D1_MDQ09
32	32	E30	D1_MDQS01
33	33	C29	D1_MDM01_B/D1_MDBI01_B/D1_MDQS10
34	34	E29	D1_MDQS01_B
37	37	D31	D1_MDQ14
38	38	F29	D1_MDQ15
41	41	G29	D1_MDQ10
42	42	G30	D1_MDQ11
45	45	E31	D1_MDQ21
46	46	F31	D1_MDQ20
49	49	H31	D1_MDQ17
50	50	G31	D1_MDQ16
53	53	F33	D1_MDQ502
54	54	D32	D1_MDM02_B/D1_MDBI02_B/D1_MDQS11
55	55	F32	D1_MDQS02_B
58	58	G33	D1_MDQ22
59	59	H32	D1_MDQ23
62	62	H33	D1_MDQ18
63	63	J33	A31
66	66	A31	D1_MDQ28
67	67	B31	D1_MDQ29
70	70	C31	D1_MDQ24
71	71	A32	D1_MDQ25
74	74	B32	D1_MDQS03
75	75	C32	D1_MDM03_B/D1_MDBI03_B/D1_MDQS12
76	76	A33	D1_MDQS03_B
79	79	A34	D1_MDQ30
80	80	B34	D1_MDQ31
83	83	C34	D1_MDQ26
84	84	B35	D1_MDQ27
87	87	D34	D1_MECC5
88	88	E33	D1_MECC4
91	91	D36	D1_MECC1
92	92	F35	D1_MECC0
95	95	E34	D1_MDQS08
96	96	F35	D1_MDM08_B/D1_MDBI08_B/D1_MDQS17
97	97	G34	D1_MDQS08_B
100	100	G34	D1_MECC6
101	101	H35	D1_MECC2
104	104	G35	D1_MECC7
105	105	H36	D1_MECC3
108	108	Y38	D1_MRESET_B
109	109	B37	D1_MCKE0
110	110	C36	D1_MCKE1
113	113	C36	D1_MBG1
114	114	B38	D1_MACT_B
115	115	C37	D1_MBGO
116	116	C39	D1_MALERT_B
119	119	D37	D1_MA12
120	120	E37	D1_MA11
121	121	D39	D1_MA09
122	122	E38	D1_MA07
125	125	E39	D1_MA08
126	126	F39	D1_MA05
127	127	F37	D1_MA06
128	128	G37	D1_MA04
131	131	G38	D1_MA03
132	132	H39	D1_MA02
133	133	G39	D1_MA01
134	134		
137	137	J37	D1_MCK0
138	138	K38	D1_MCK1
139	139	J38	D1_MCK0_B
140	140	K39	D1_MCK1_B
143	143	N39	D1_MPAR
144	144	N38	D1_MA00
145	145	N37	D1_MBA1
146	146	P39	D1_MA10

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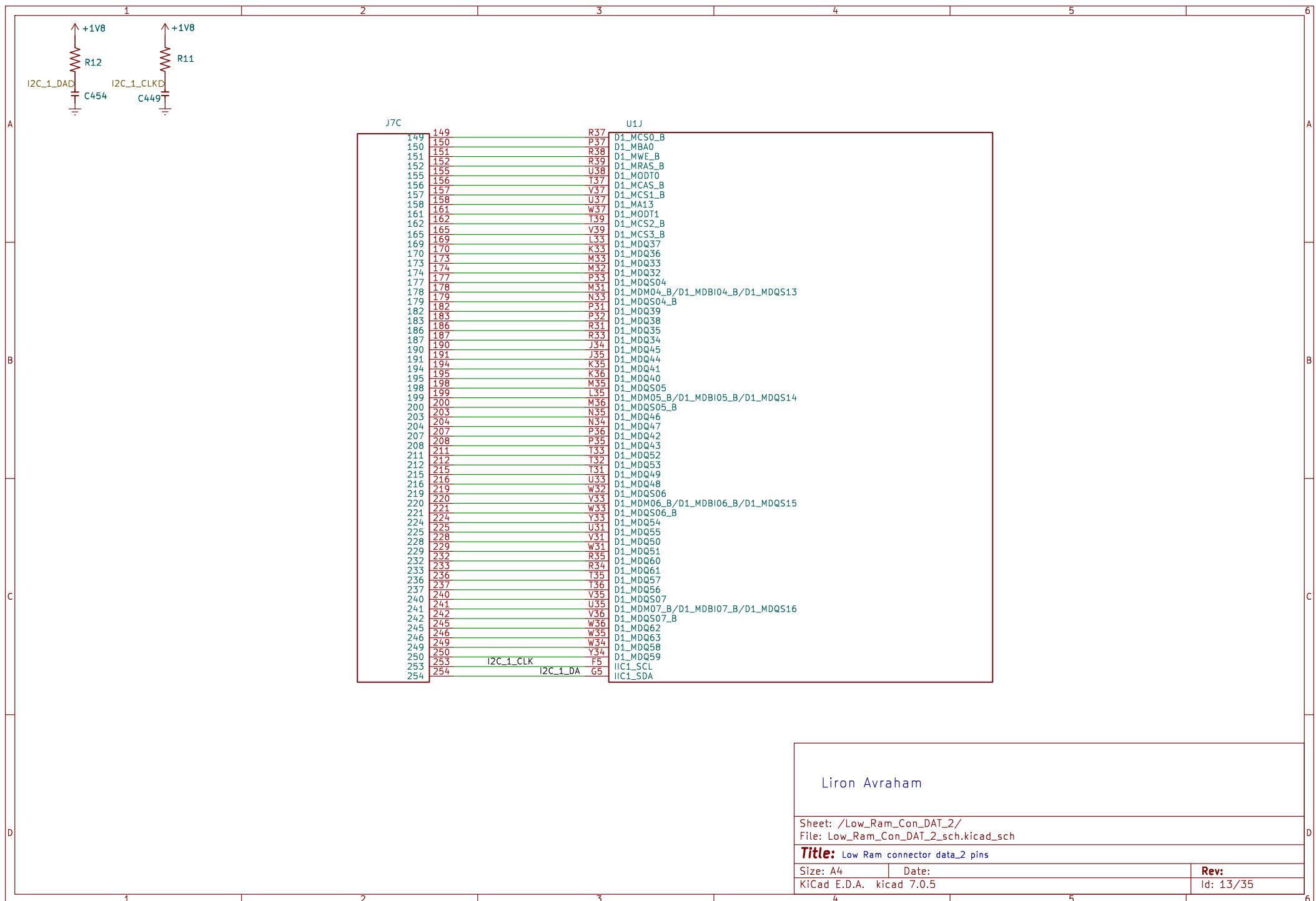
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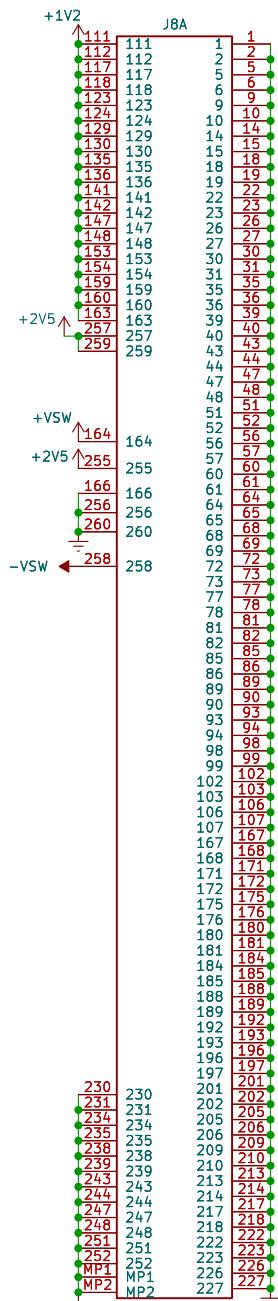
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Size: A4 Date:

KiCad E.D.A. kicad 7.0.5

Rev:  
 Id: 12/35





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Sheet: /High\_Ram\_Con\_PWR/  
File: High\_Ram\_Con\_PWR\_sch.kicad\_sch

**Title:** High Ram connector PWR pins

Size: A4 Date:

KiCad E.D.A. kicad 7.0.5

**Rev:**  
Id: 14/35

A

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A

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J8B	U1K
3	AM29
4	D2_MDQ05
7	AL29
8	D2_MDQ04
11	AJ29
12	D2_MDQ01
13	AK29
16	D2_MDQ00
17	AL30
20	D2_MDM00_B/D2_MDBI00_B/D2_MDQS09
21	AK31
24	D2_MDQ500
25	AJ30
28	D2_MDQ06
29	AH29
32	D2_MDQ07
33	AJ31
34	D2_MDQ02
37	AH30
38	D2_MDQ03
41	AT29
42	D2_MDQ12
45	AV29
46	D2_MDQ08
49	AW30
50	D2_MDQ09
53	AR30
54	D2_MDQS01
55	AU29
58	D2_MDM01_B/D2_MDBI01_B/D2_MDQS10
59	AR29
62	D2_MDQS01_B
63	AP29
66	D2_MDQ15
67	AT31
70	D2_MDQ14
71	AN29
74	D2_MDQ10
75	AN30
76	D2_MDQ11
79	AR31
80	D2_MDQ21
83	AM32
84	D2_MDQ20
87	AP31
88	D2_MDQ16
91	AM33
92	D2_MDQ17
95	AN31
96	D2_MDQ18
97	AP33
100	D2_MDQ19
101	AT32
104	D2_MDQ28
105	AN32
108	D2_MDQ02_B/D2_MDBI02_B/D2_MDQS11
109	AP32
110	D2_MDQ502_B
113	AN33
114	D2_MDQ22
115	AM32
116	D2_MDQ23
119	AL33
120	D2_MDQ18
121	AV31
122	D2_MDQ24
125	AU31
126	D2_MDQ25
127	AW32
128	D2_MDQ03_B
131	AU32
132	D2_MDQ30
133	AV33
134	D2_MDQ03
137	AU34
138	D2_MDQ26
139	AT34
140	D2_MECC5
143	AR33
144	D2_MECC4
145	AT35
146	D2_MECC1
146	AP36
146	D2_MECC0
146	AR34
146	D2_MDM08_B/D2_MDBI08_B/D2_MDQS17
146	AP35
146	D2_MDQS08_B
146	AN34
146	D2_MECC6
146	AM35
146	D2_MECC2
146	AN35
146	D2_MECC7
146	AM36
146	D2_MECC3
146	Y39
146	D2_MRRESET_B
146	AV37
146	D2_MCKE0
146	AU36
146	D2_MKE1
146	AU38
146	D2_MBGB1
146	AV38
146	D2_MACT_B
146	AU37
146	D2_MBGO
146	AU39
146	D2_MALEFT_B
146	AT37
146	D2_MA12
146	AR37
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146	AN38
146	D2_MA03
146	AM39
146	D2_MA02
146	AN39
146	D2_MA01
146	AL37
146	D2_MCK0
146	AK38
146	D2_MCK1
146	AL38
146	D2_MCK0_B
146	AK39
146	D2_MCK1_B
146	AC39
146	D2_MPAB
146	AG39
146	D2_MA00
146	AG39
146	D2_MA01
146	AT39
146	D2_MA10

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Sheet: /High\_Ram\_Con\_DAT\_1/

File: High\_Ram\_Con\_DAT\_1.kicad\_sch

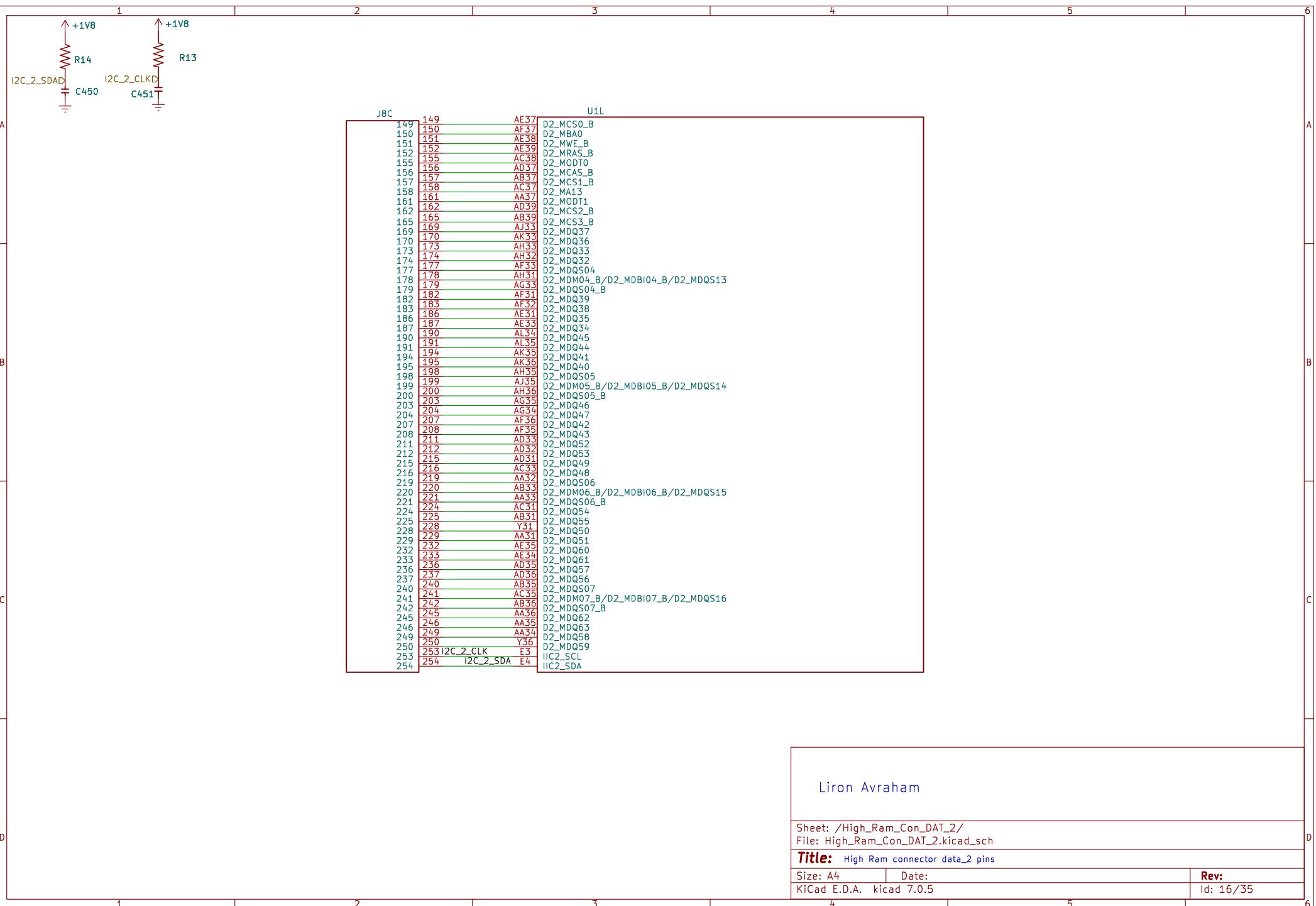
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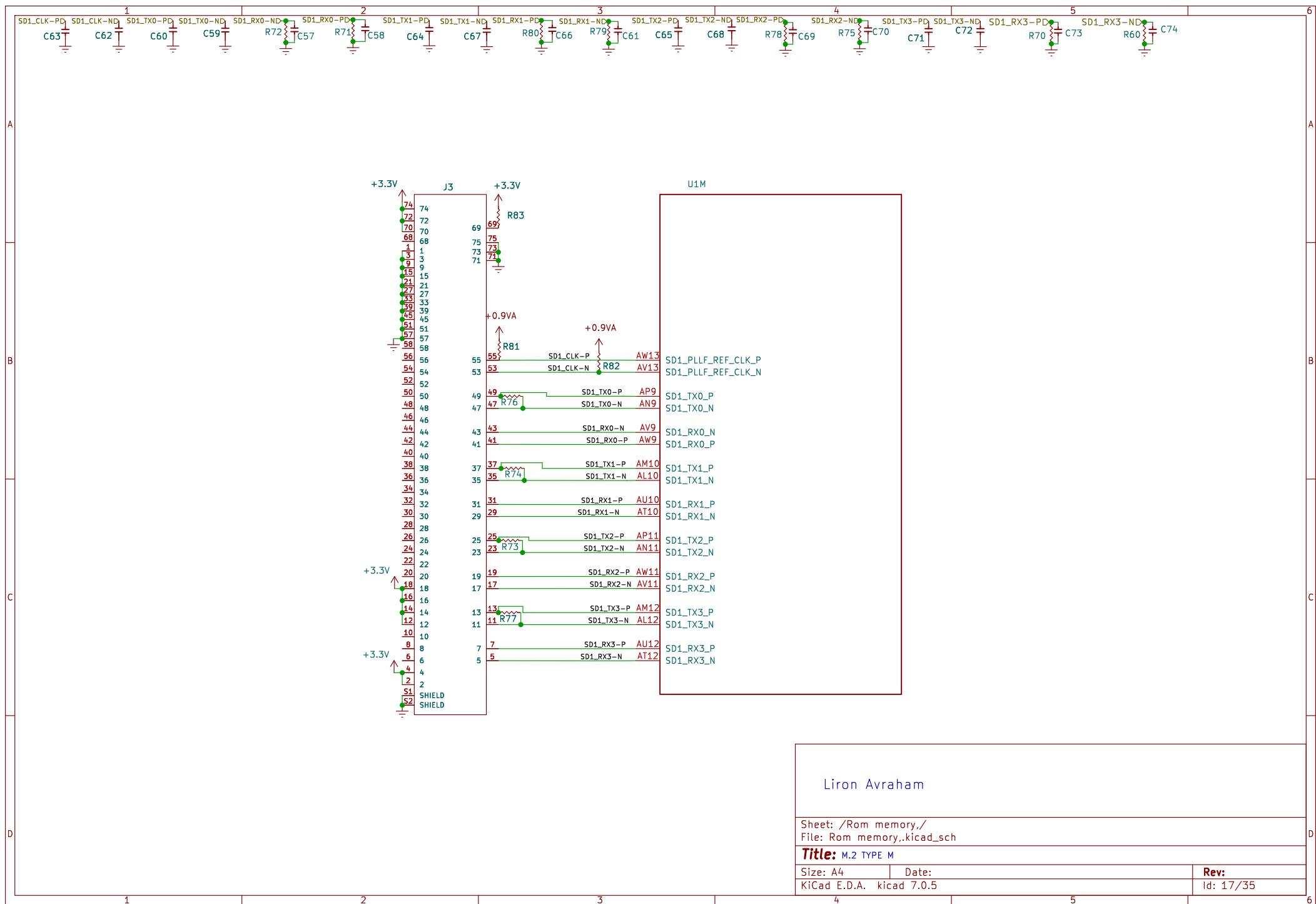
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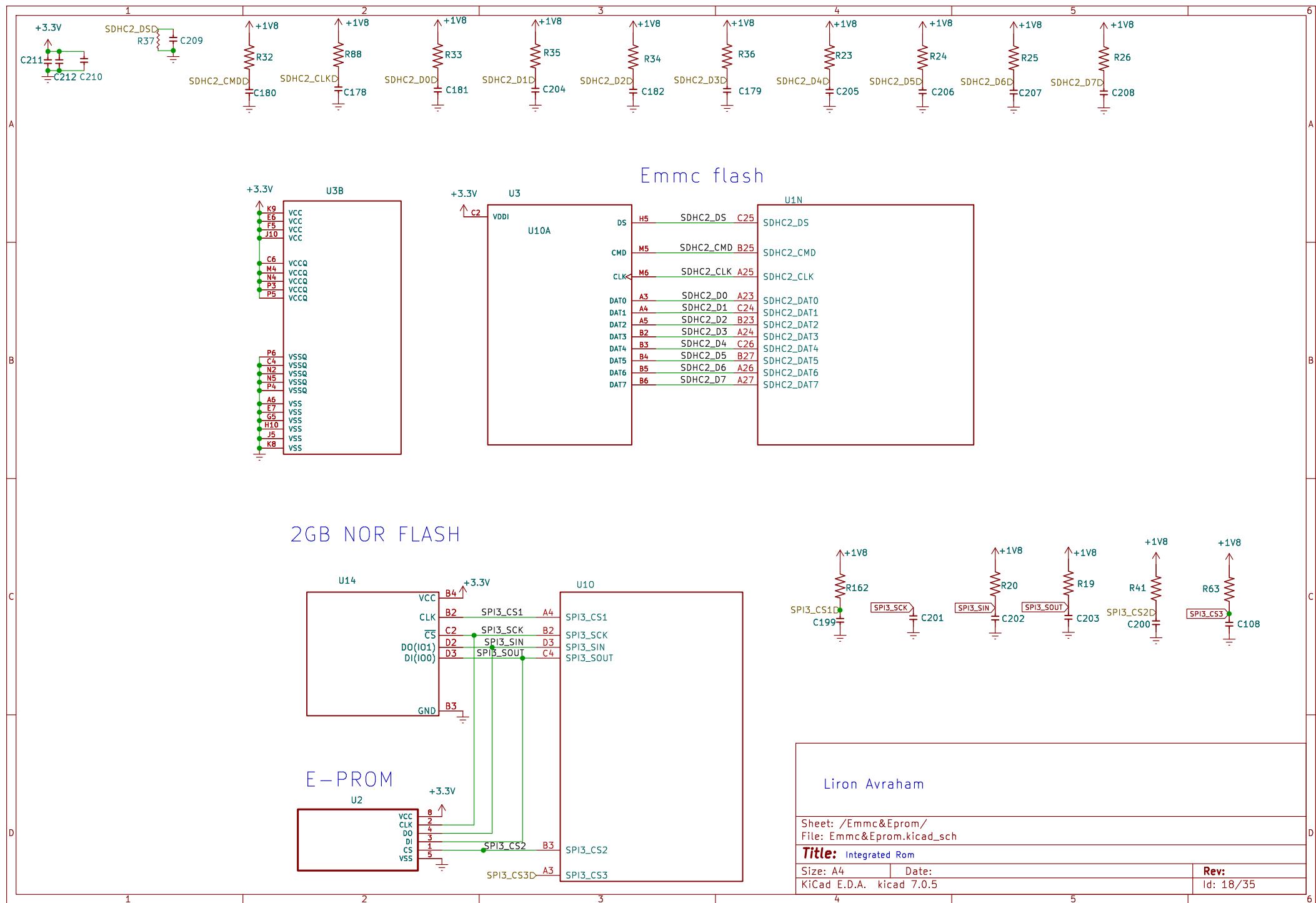
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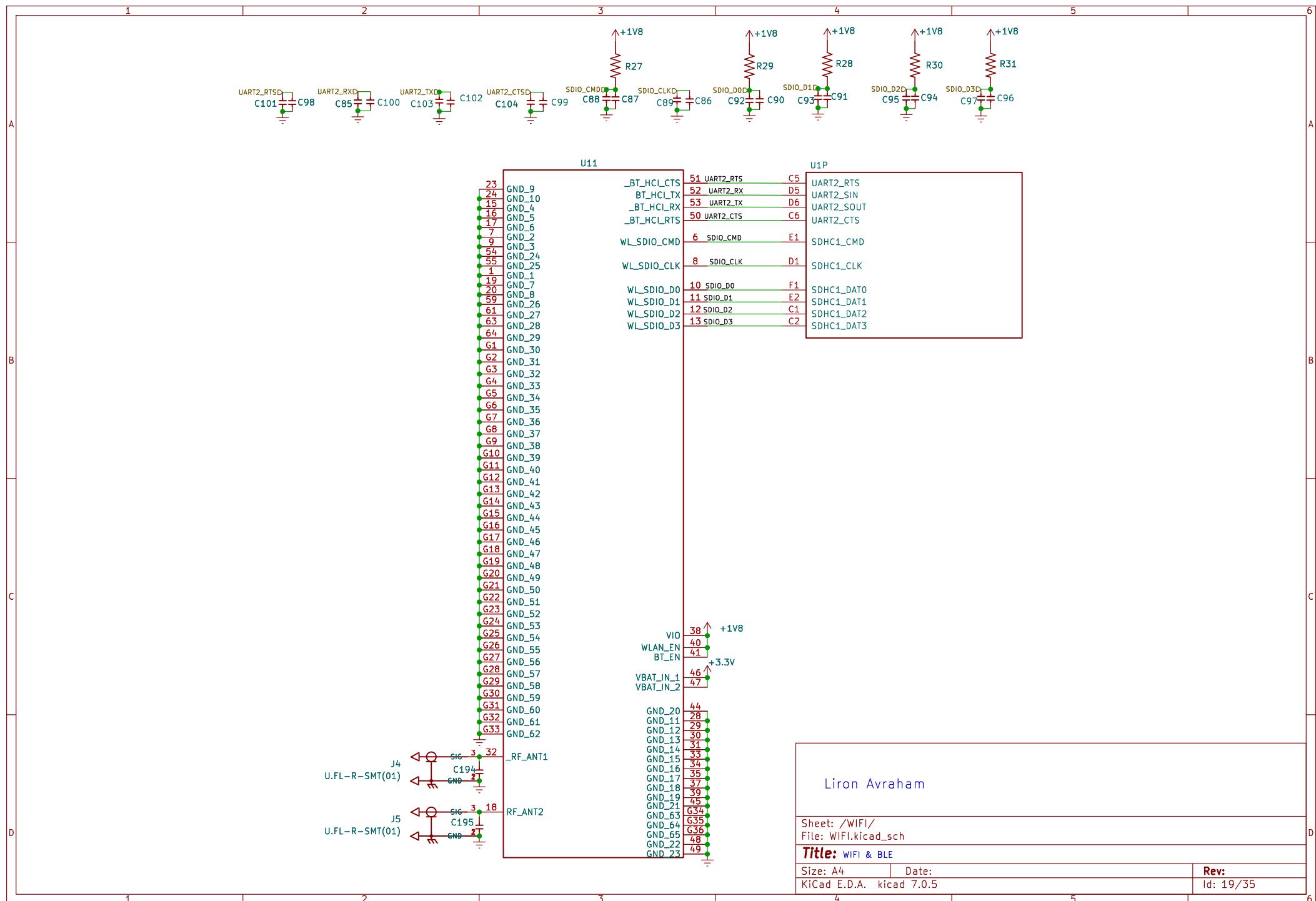
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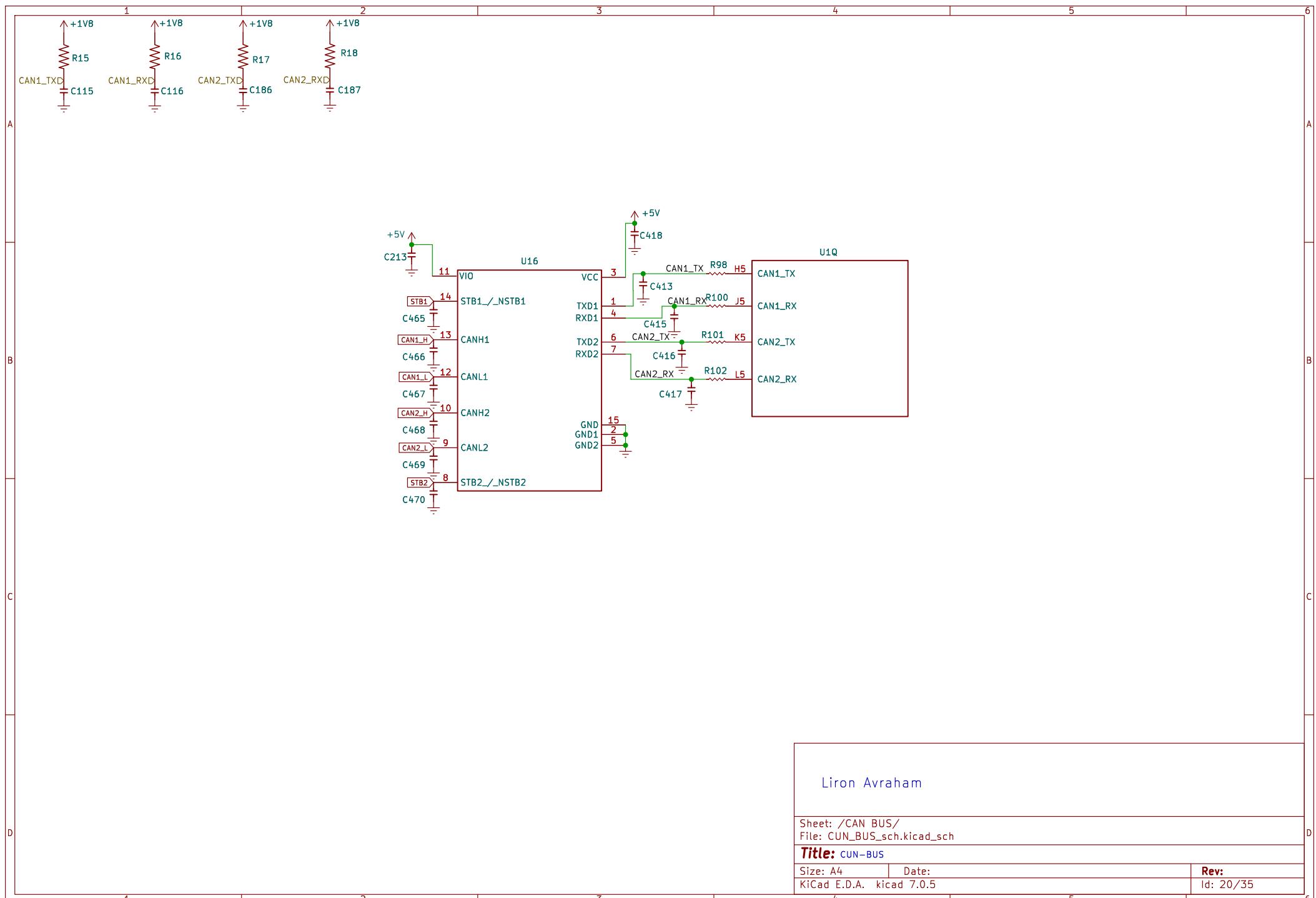
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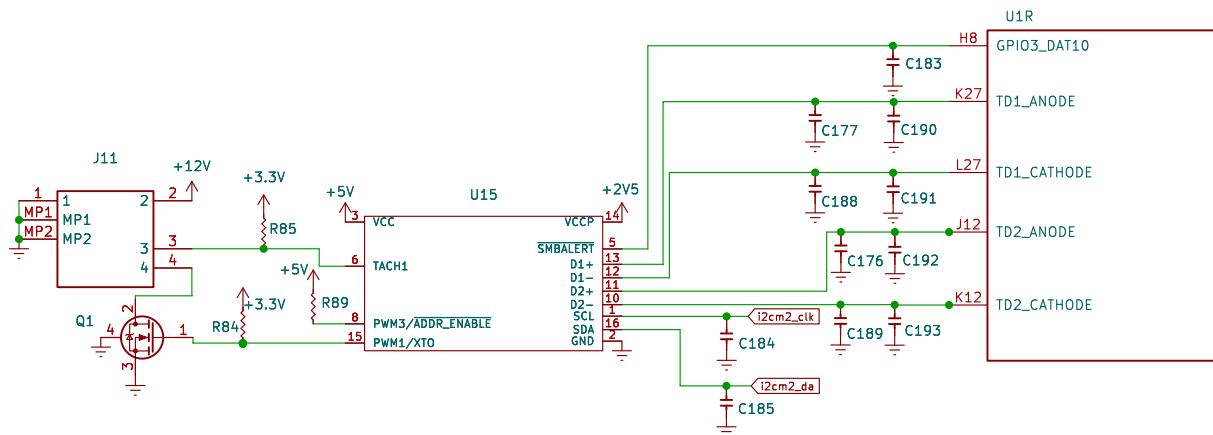
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File: Fan\_control\_sch.kicad\_sch

Title: PWM fan control

Size: A4 Date:  
KiCad E.D.A. kicad 7.0.5

Rev:  
Id: 21/35

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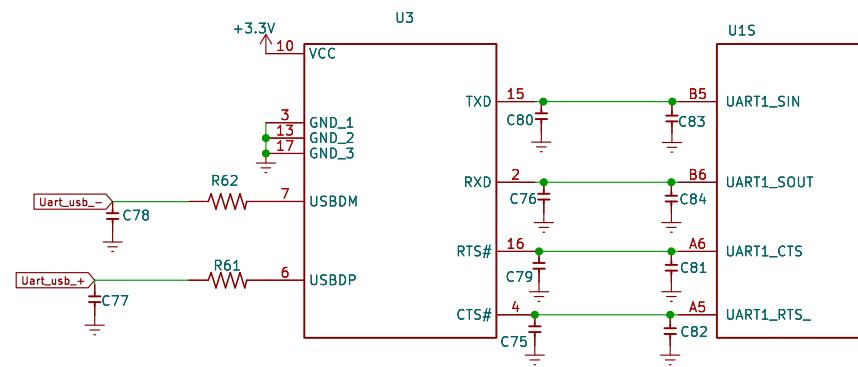
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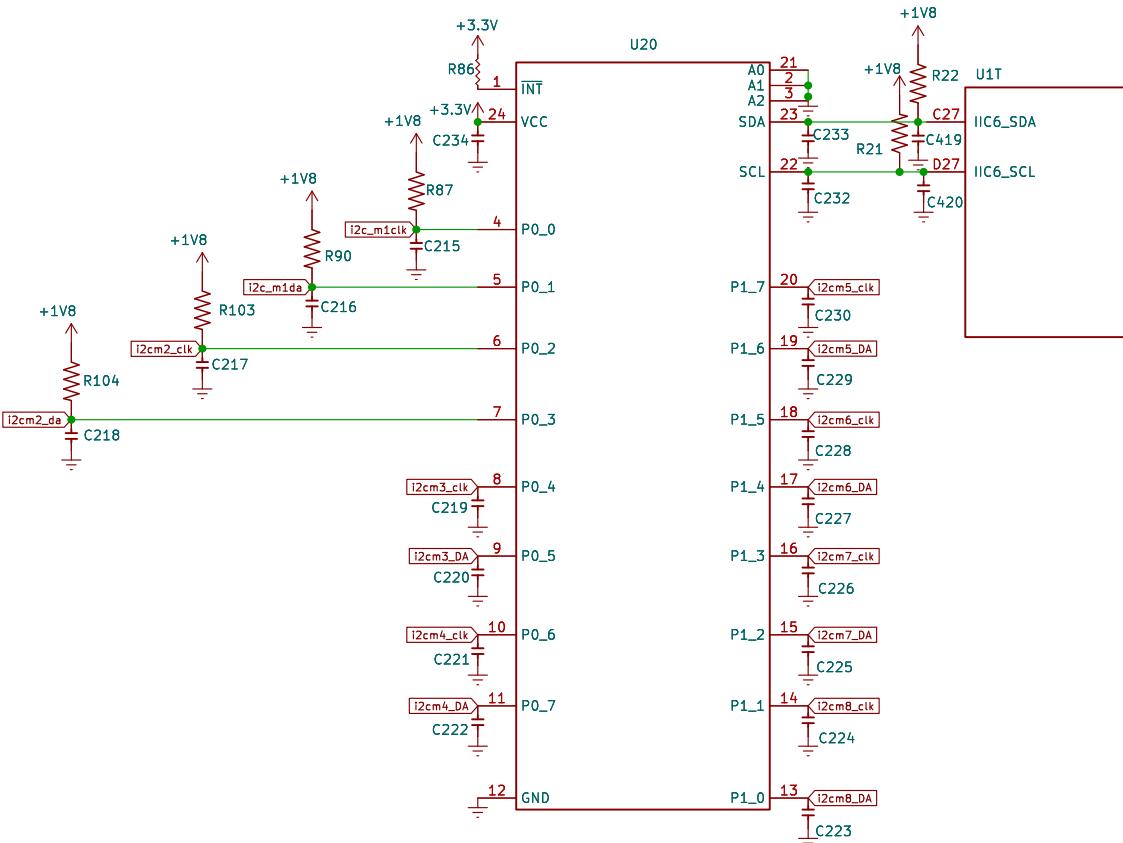
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**Title:** Uart to USB

Size: A4 | Date:  
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Id: 22/35

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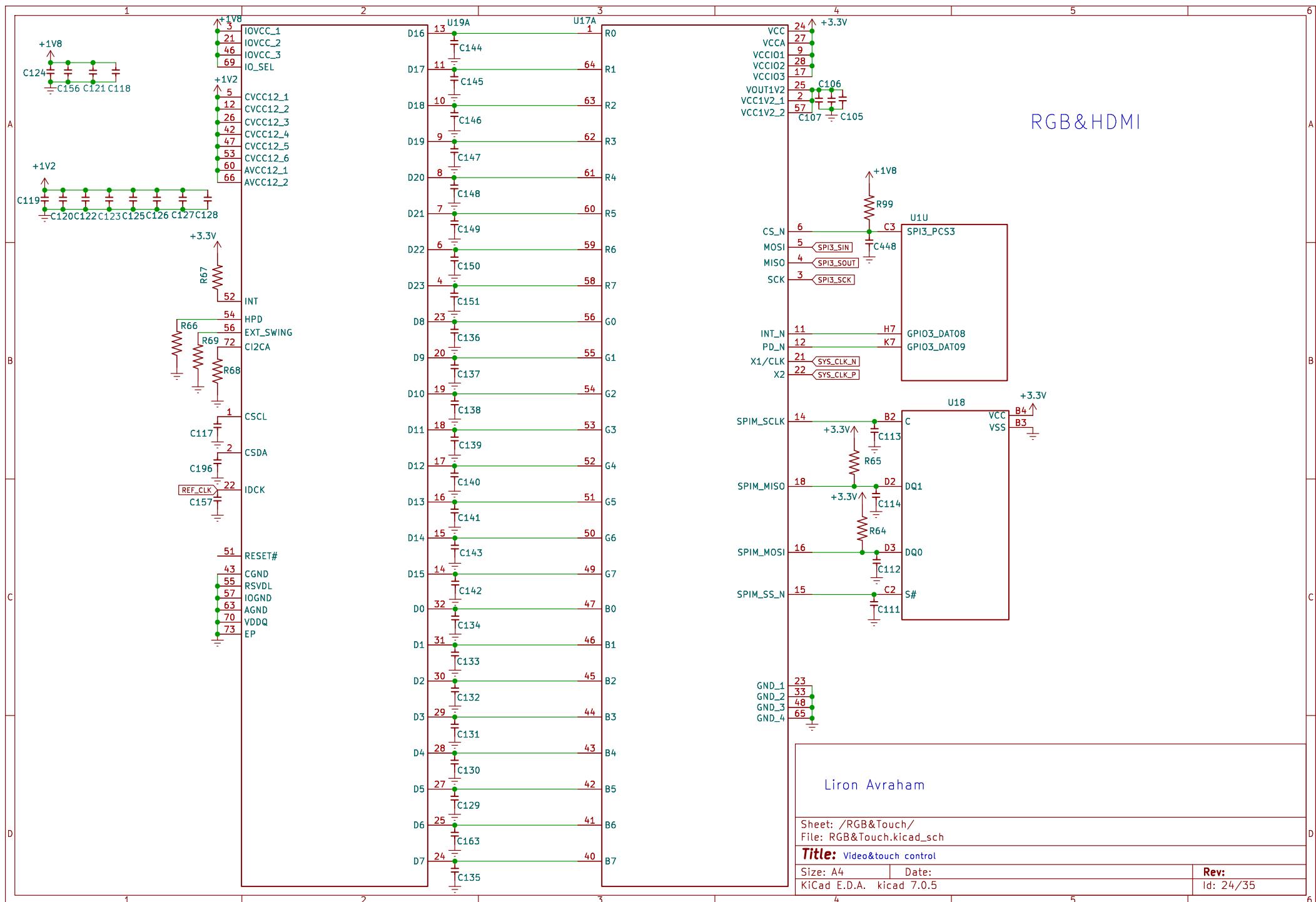
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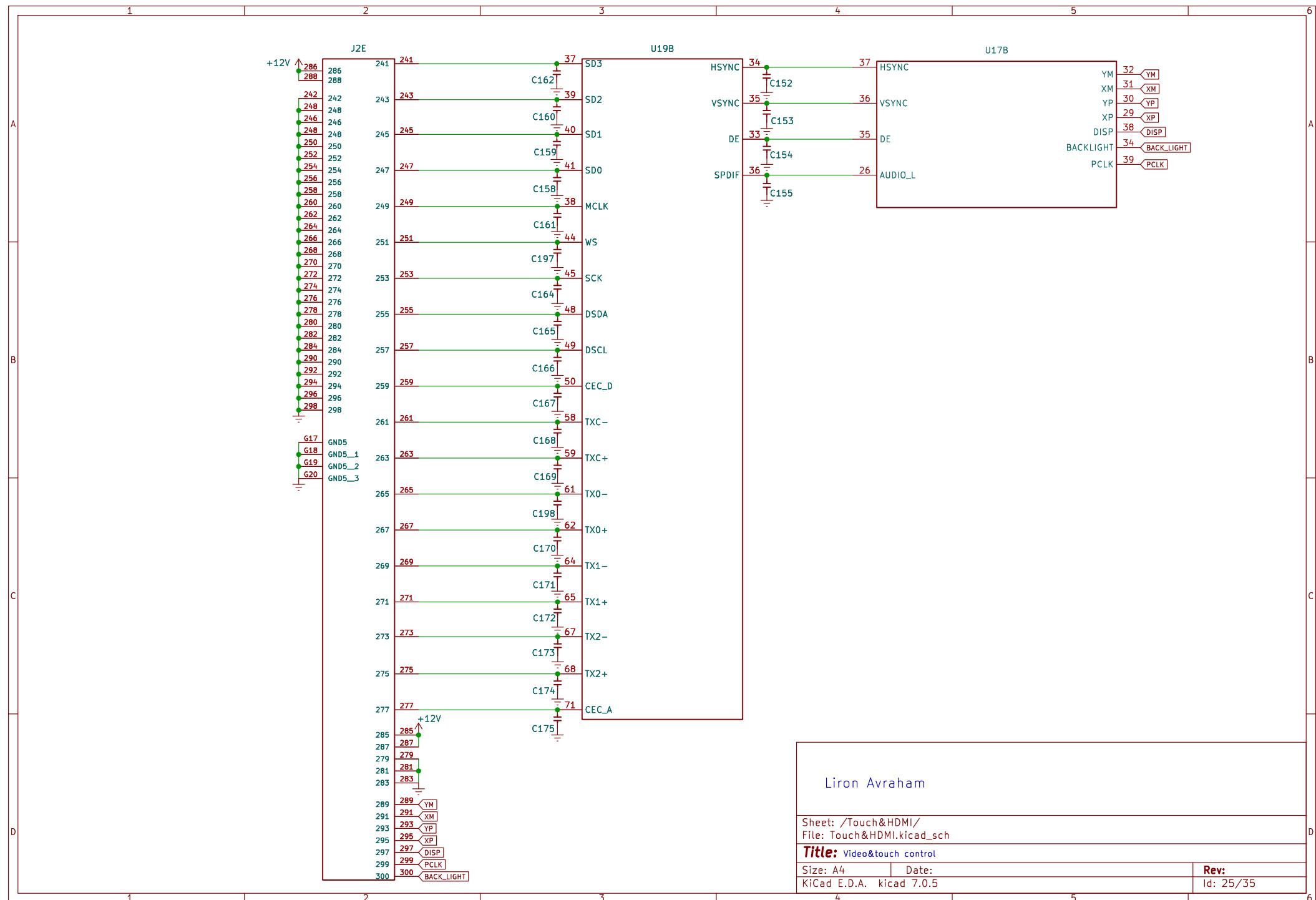
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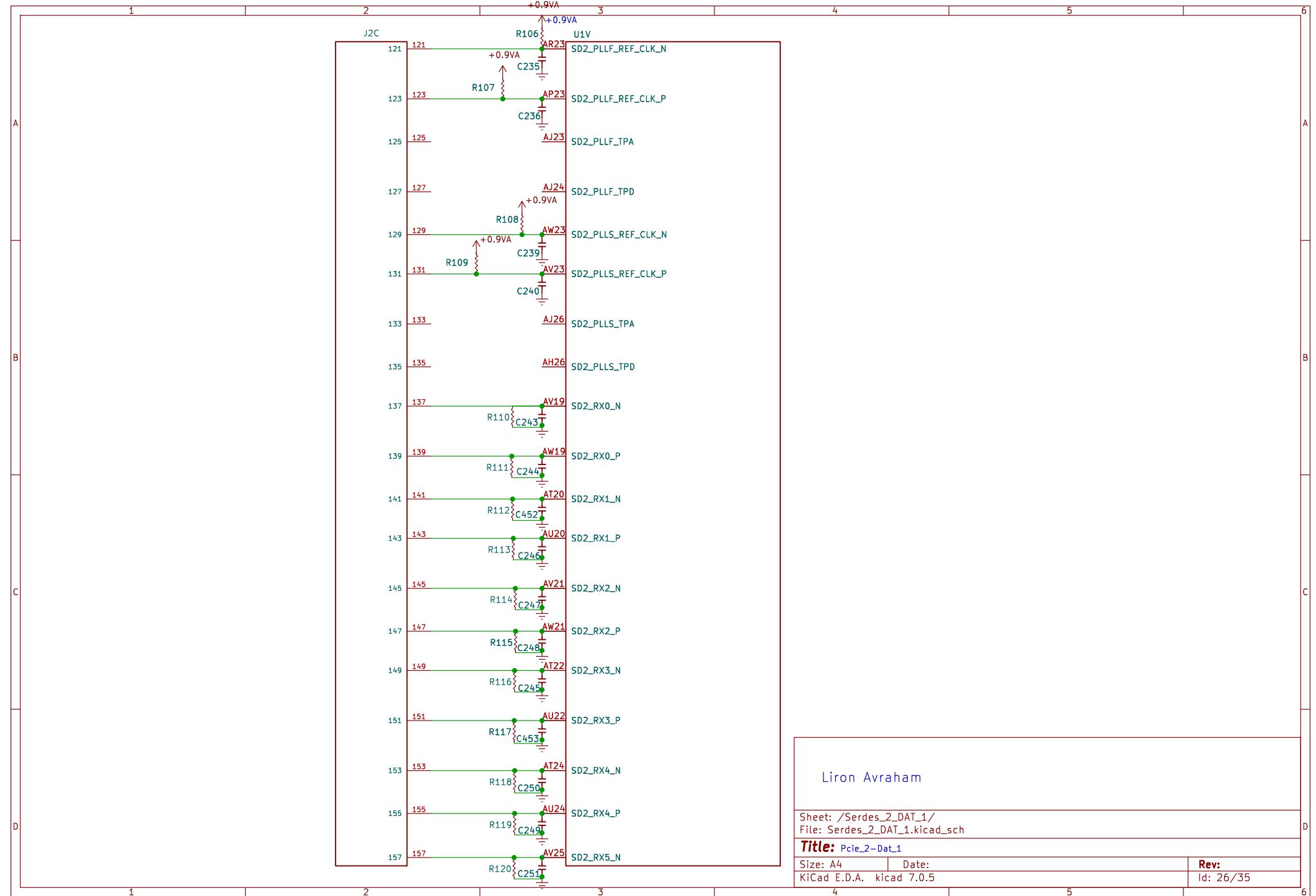
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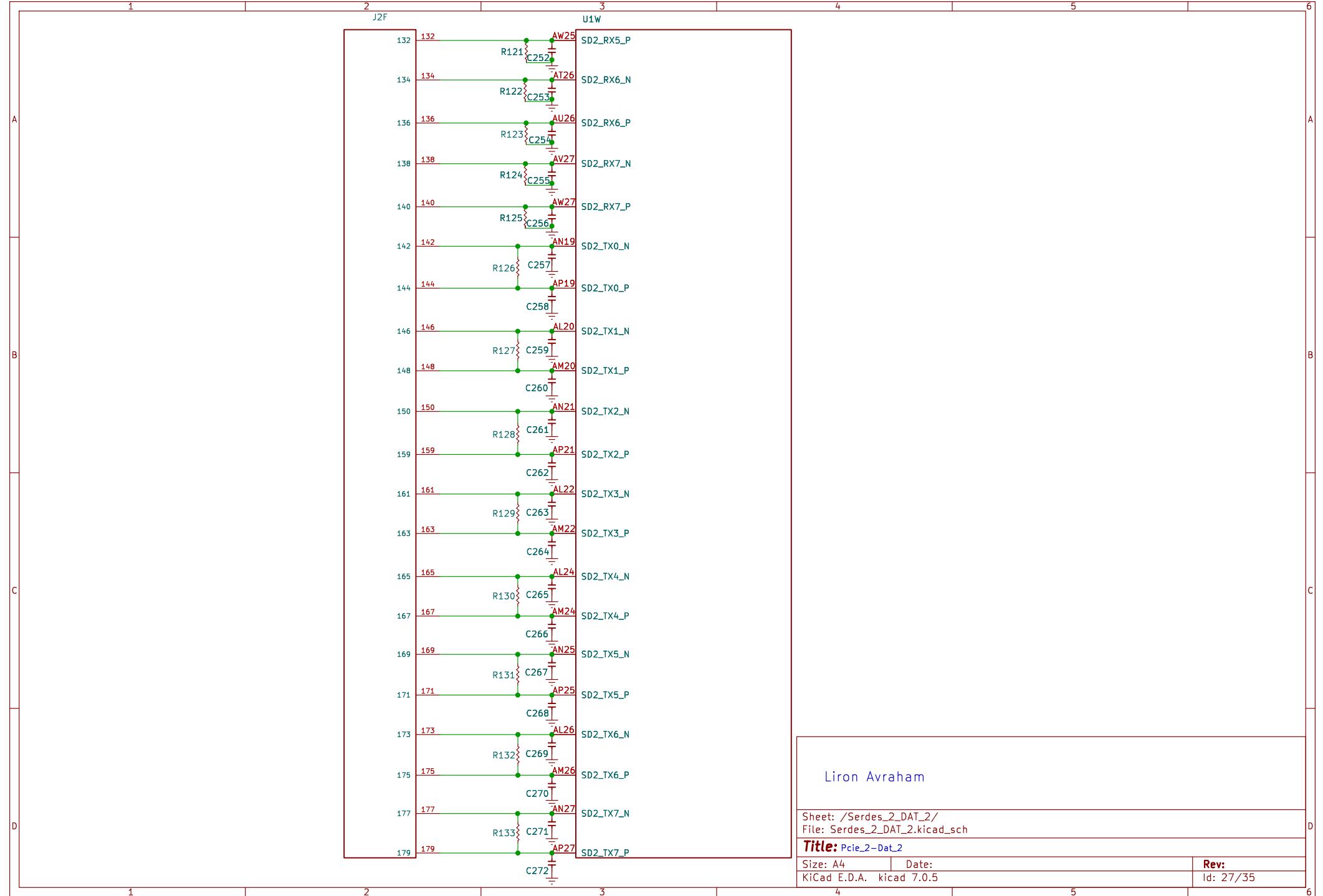
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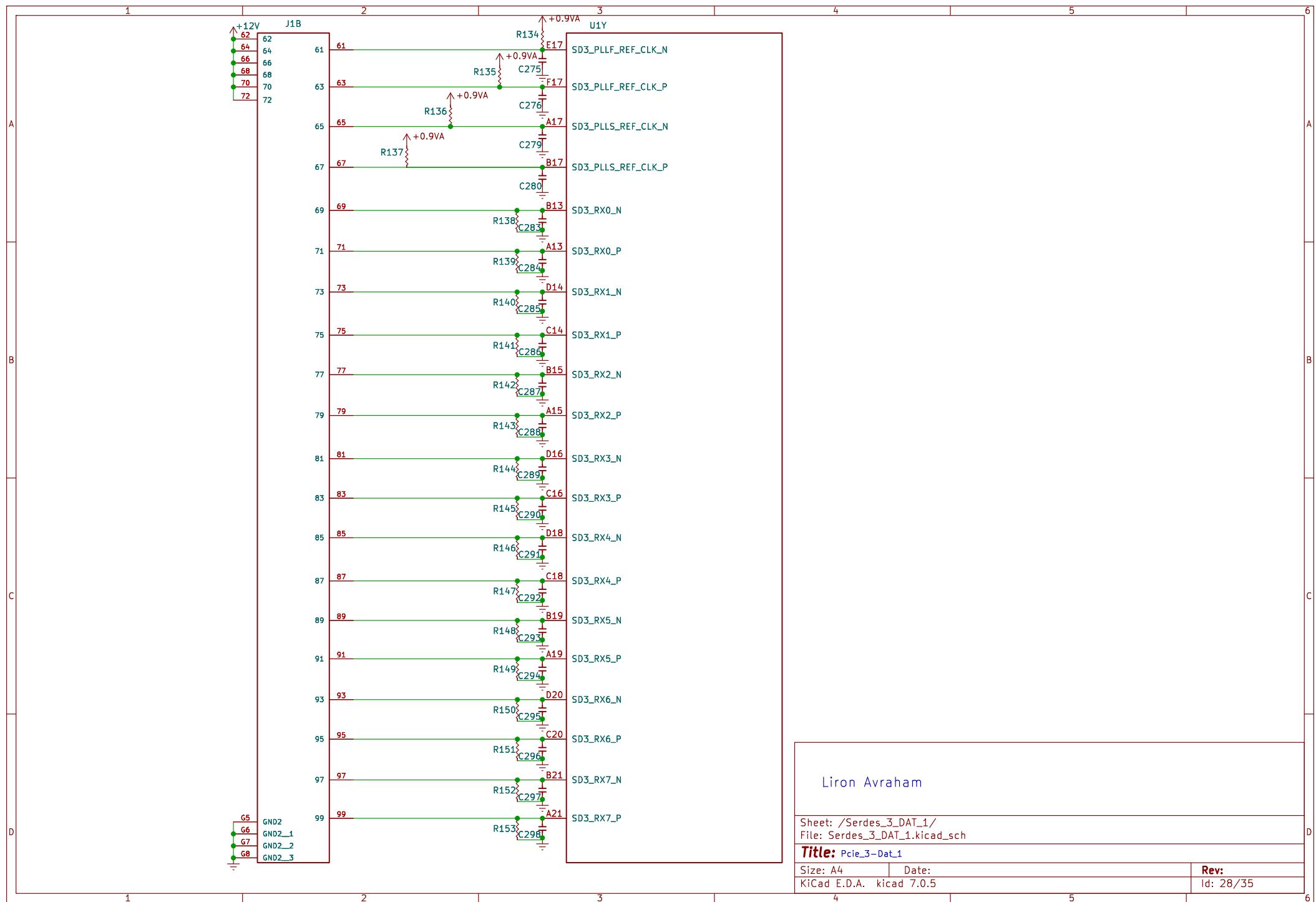
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Id: 23/35

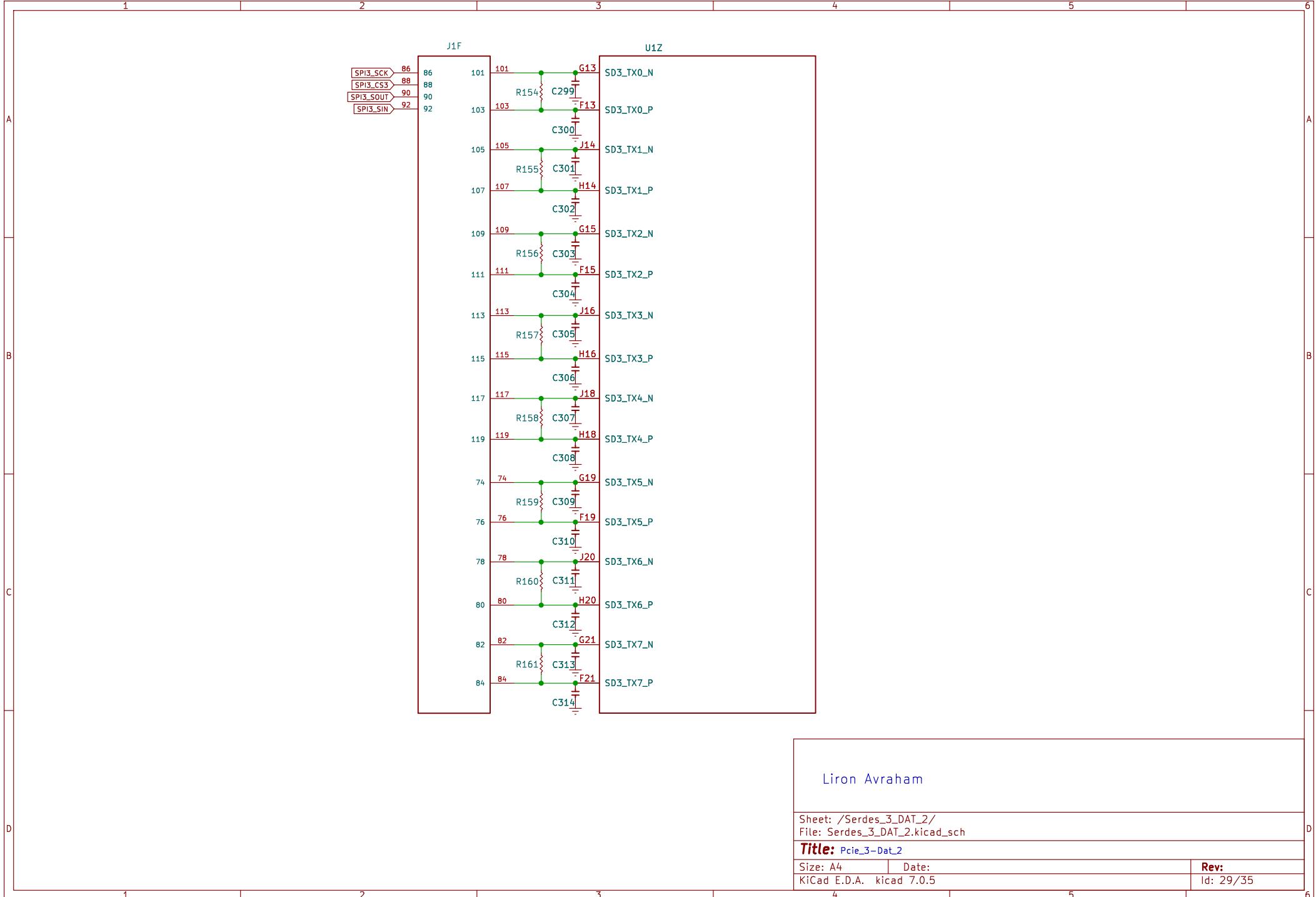


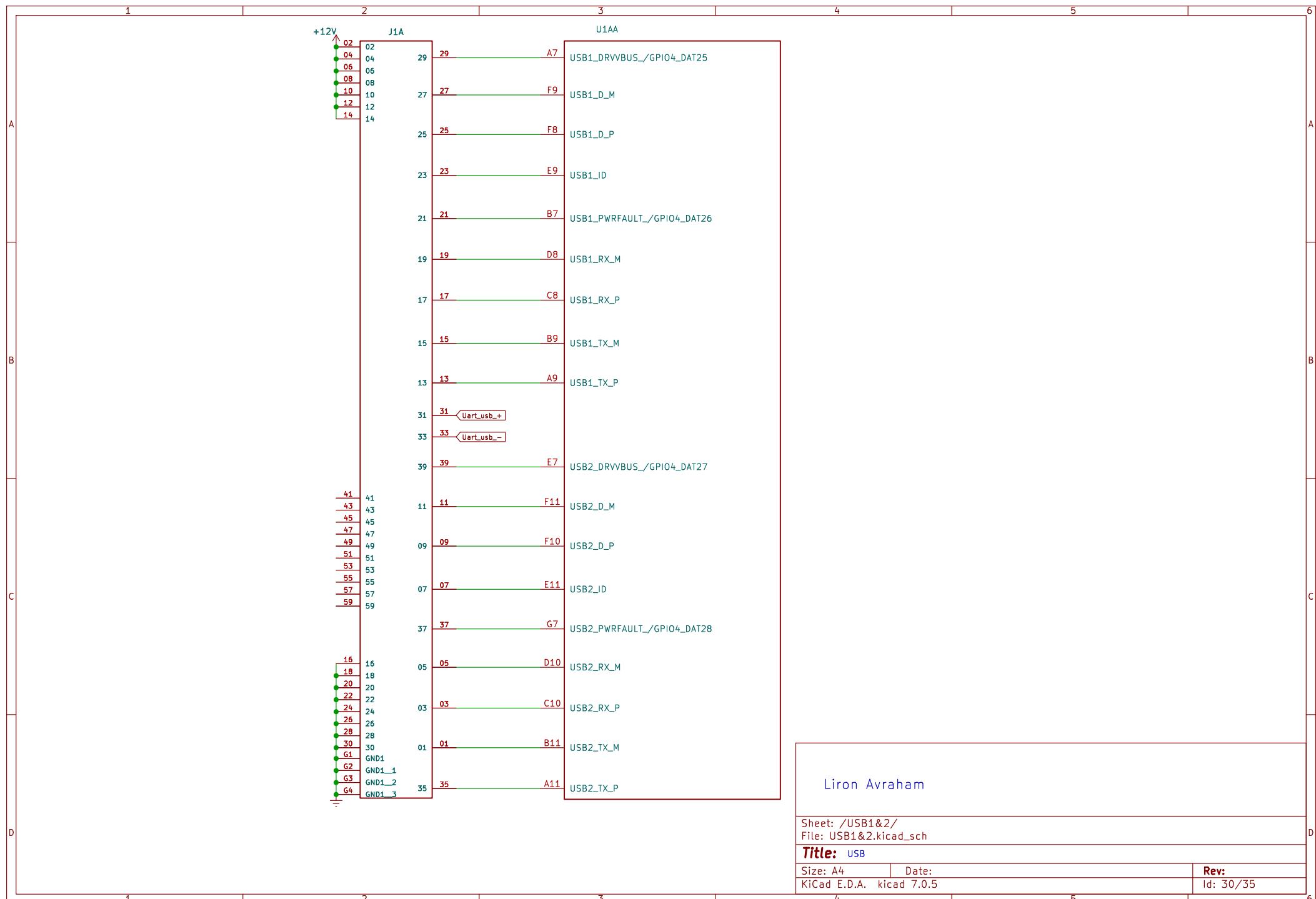


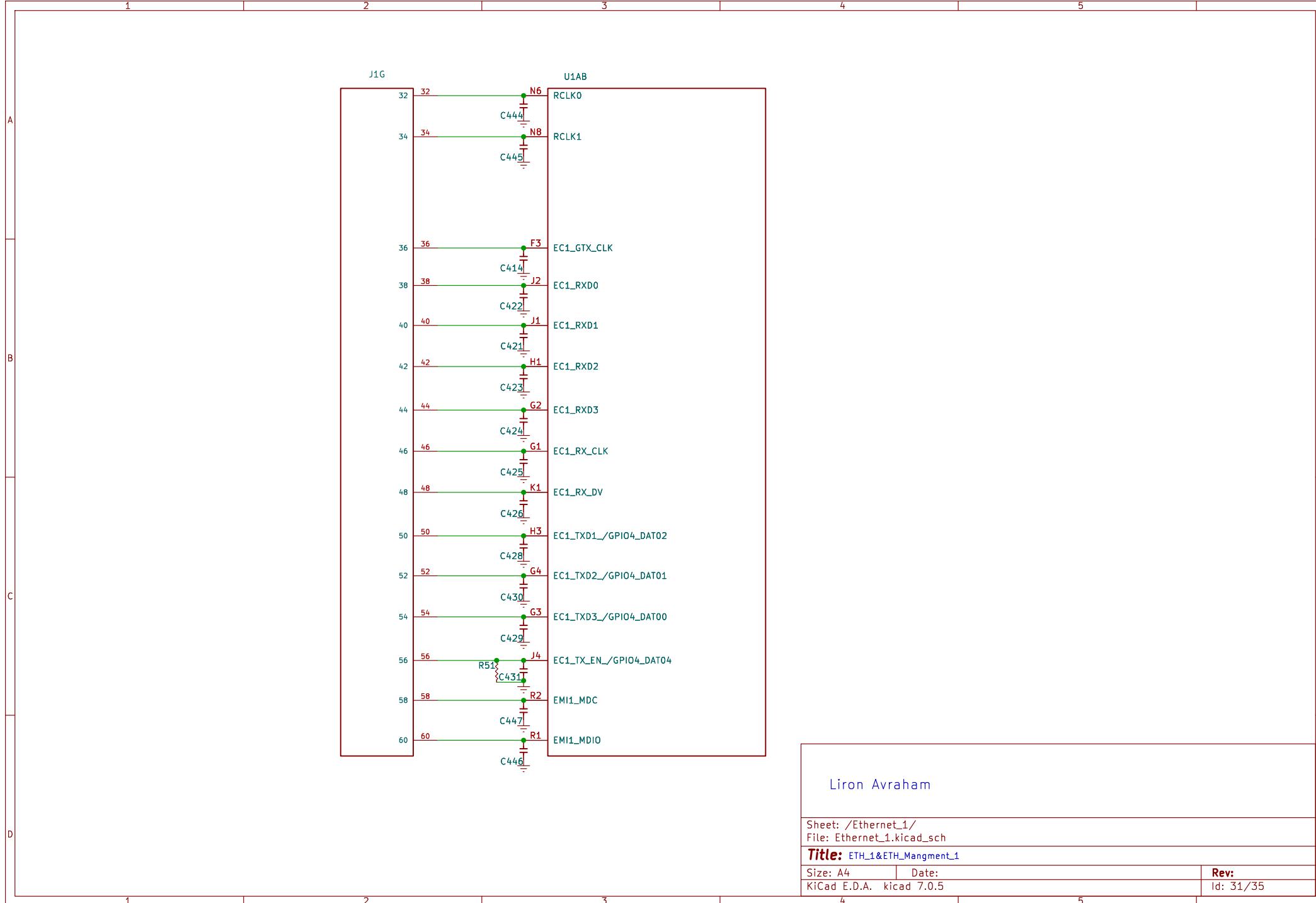


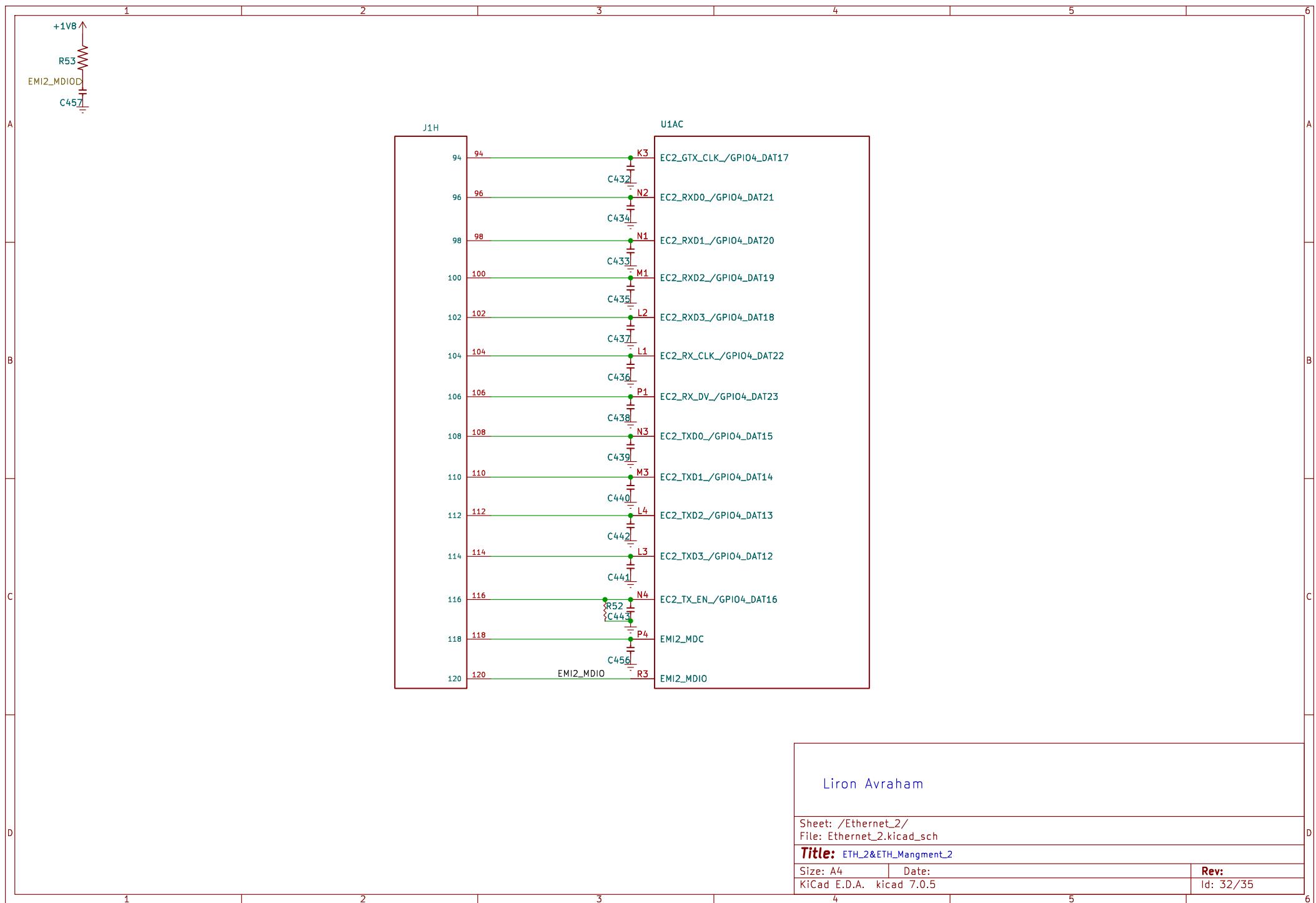












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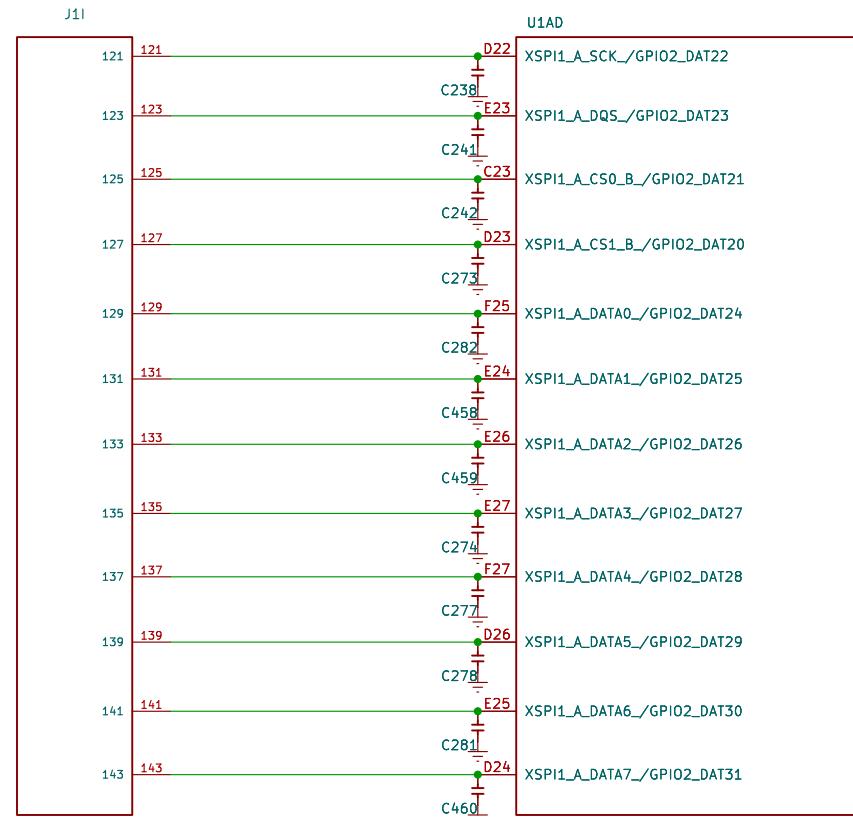
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File: XSPI.kicad\_sch

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Size: A4 | Date:  
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**Rev:**  
Id: 33/35

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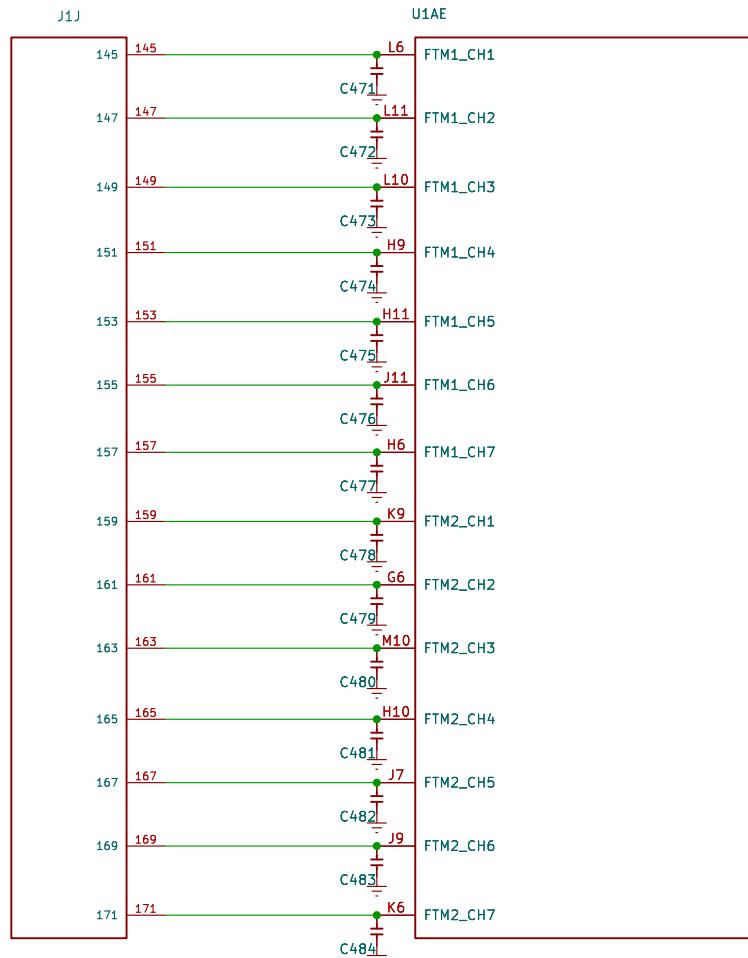
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Liron Avraham

Sheet: /PWM\_Signals/  
File: PWM\_Signals.kicad\_sch

**Title:** PWM Signal

Size: A4 Date:  
KiCad E.D.A. kicad 7.0.5

**Rev:**  
Id: 34/35

