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Luis Ardila
Carsten Schmerbeck
Karlsruhe Institute of Technology (KIT)



Sheet: /
File: fba_template.kicad_sch

Title: ATCA Template

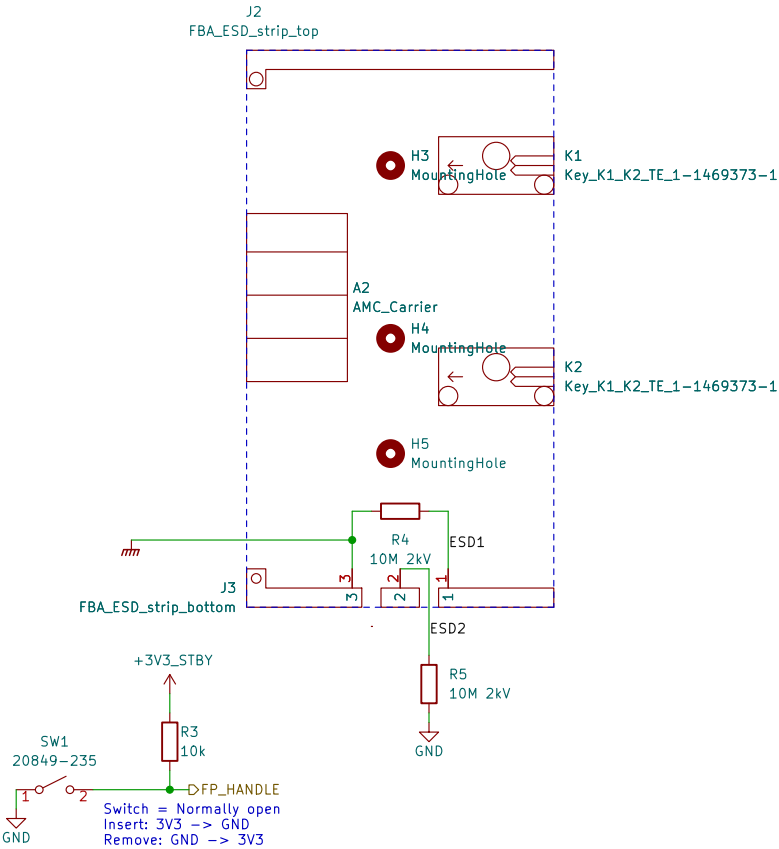
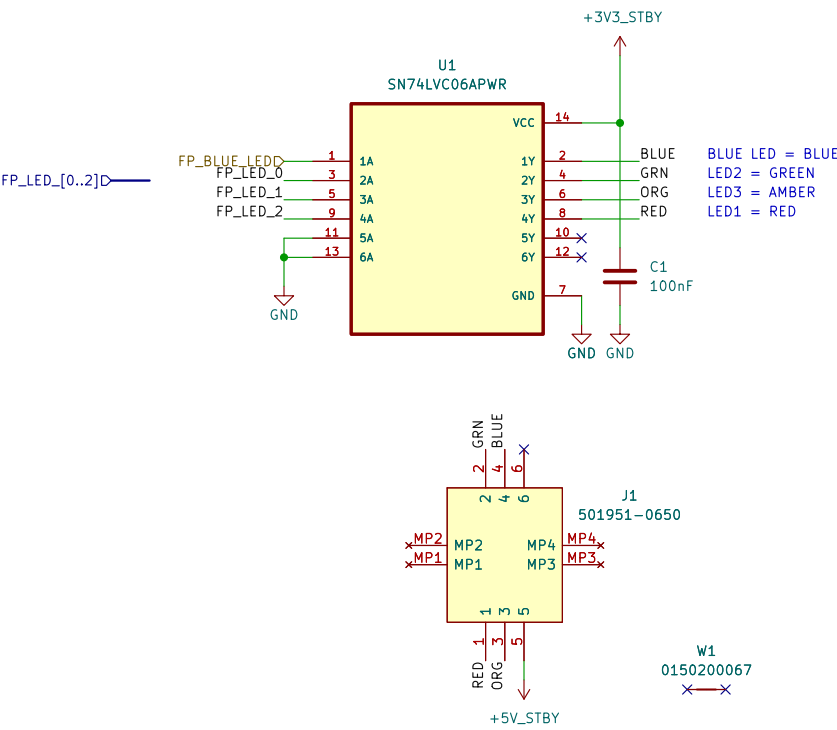
Size: A4 Date: 2022-09-07

KiCad E.D.A. kicad 6.0.7

Rev: 1.0

Id: 1/41

Front Panel LEDs



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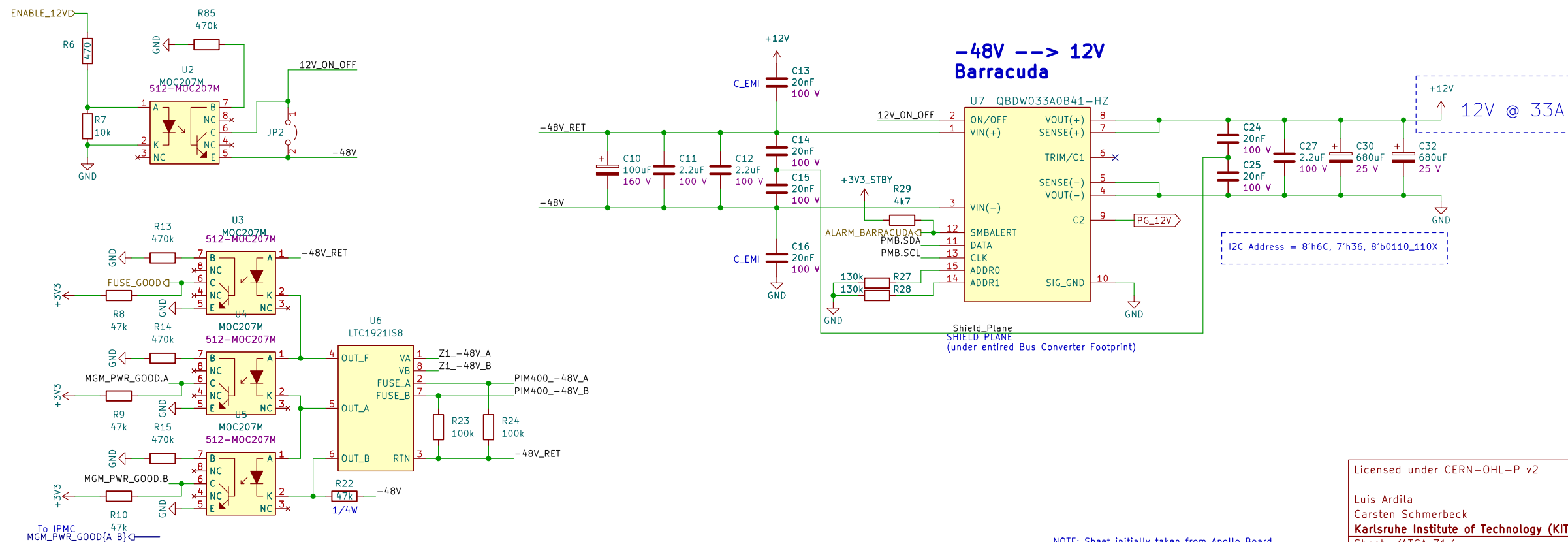
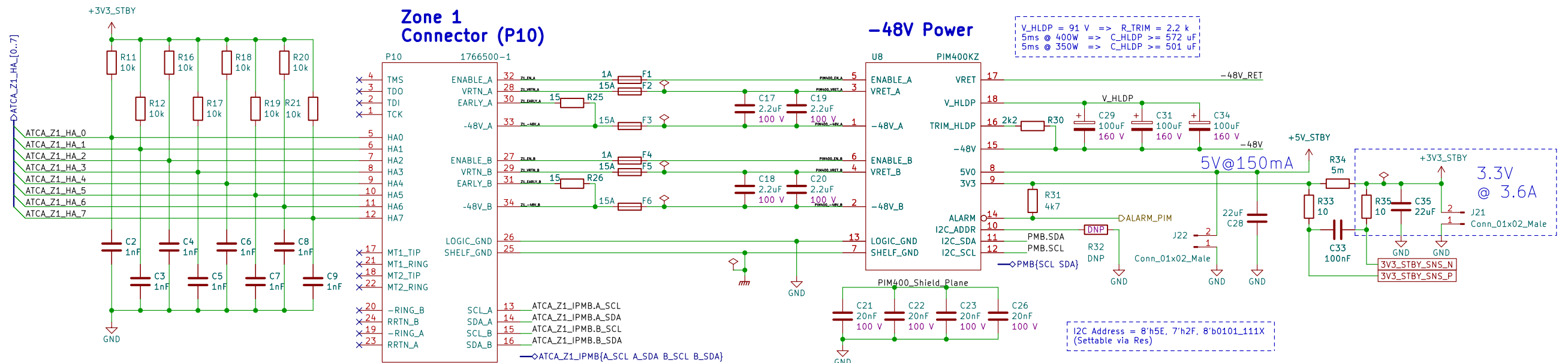
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Carsten Schmerbeck
Karlsruhe Institute of Technology (KIT)

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File: mech.kicad_sch

Title: ATCA Template

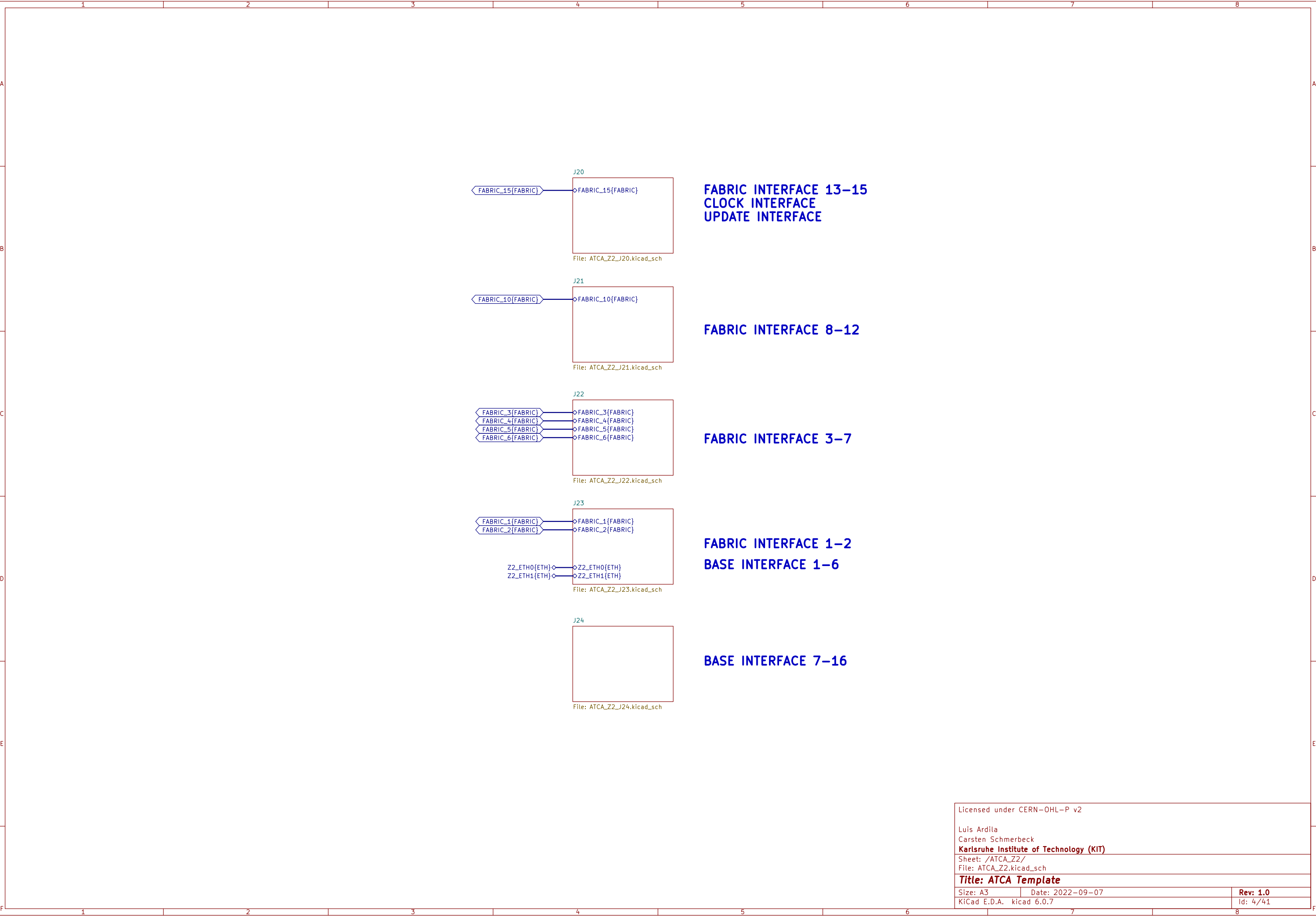
Size: A3
Date: 2022-09-07

Rev: 1.0
Id: 2/41



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Luis Ardila Carsten Schmerbeck Karlsruhe Institute of Technology (KIT)		
Sheet: /ATCA_Z1/ File: ATCA_Z1.kicad_sch		
Title: ATCA Template		
Size: A3	Date: 2022-09-07	Rev: 1.0
KiCad E.D.A. kicad 6.0.7		Id: 3/41

NOTE: Sheet initially taken from Apollo Board



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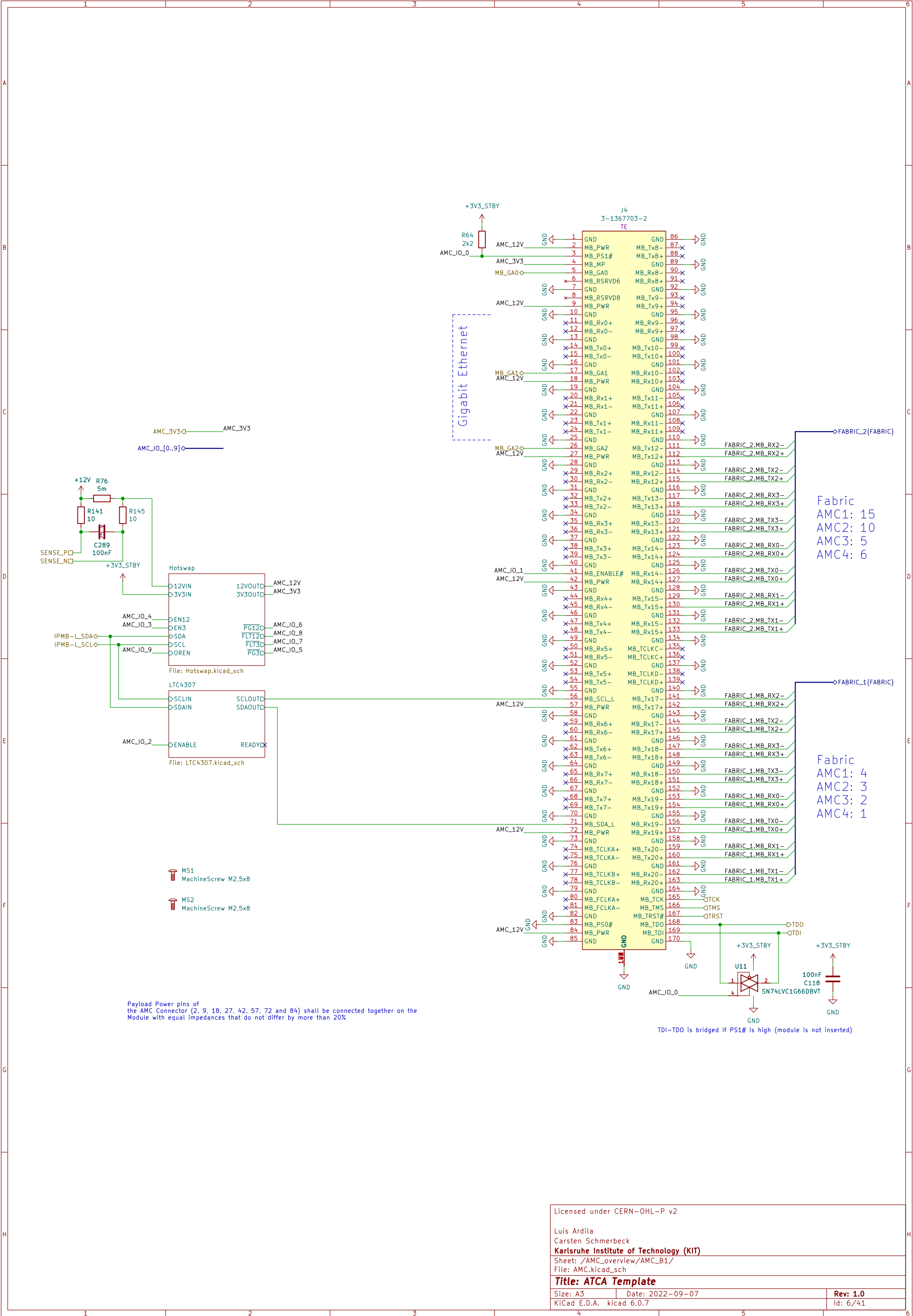
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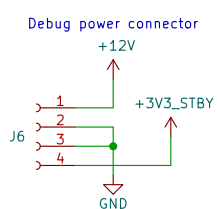
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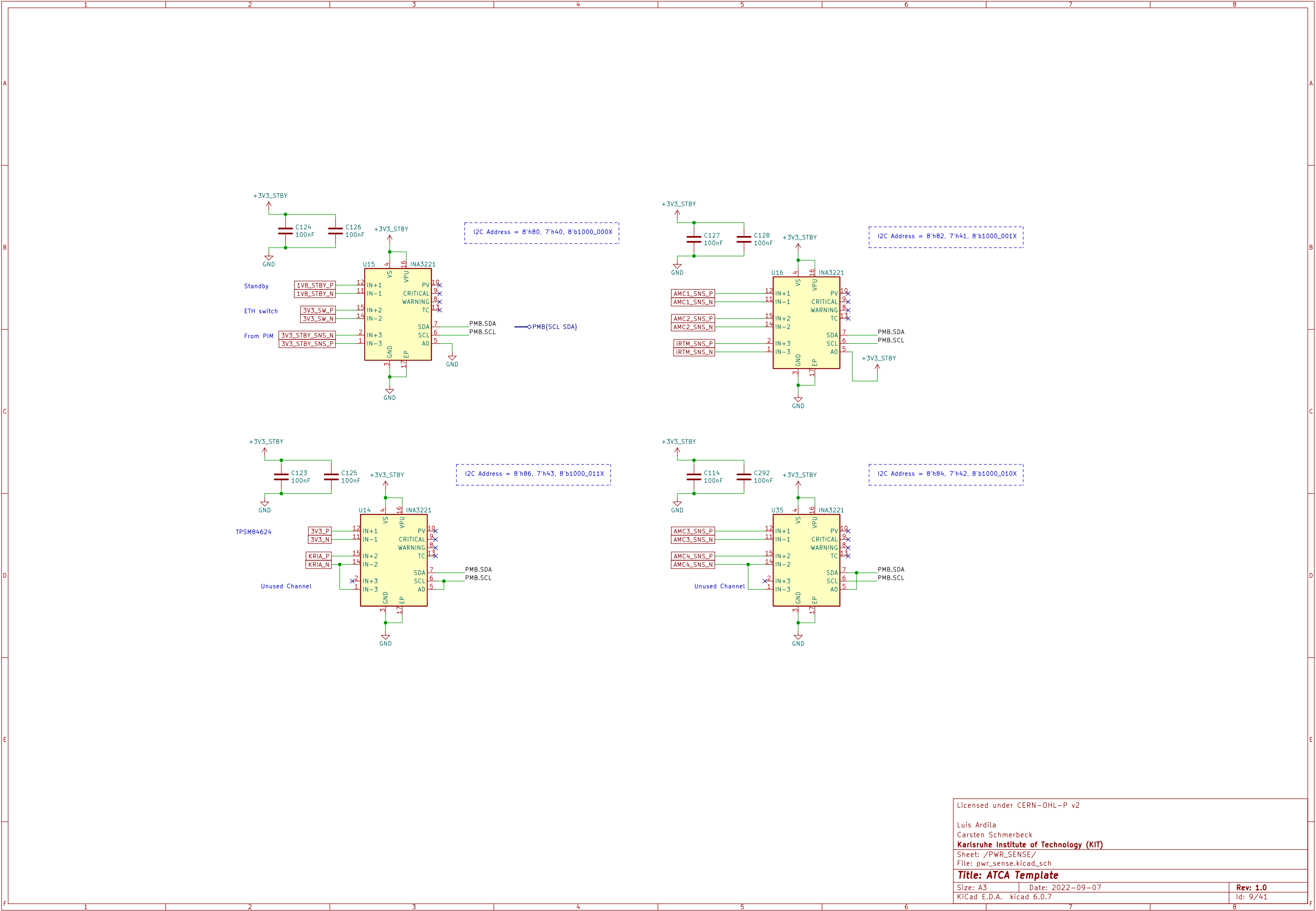
Size: A3Date: 2022–09–07KiCad E.D.A. kicad 6.0.7

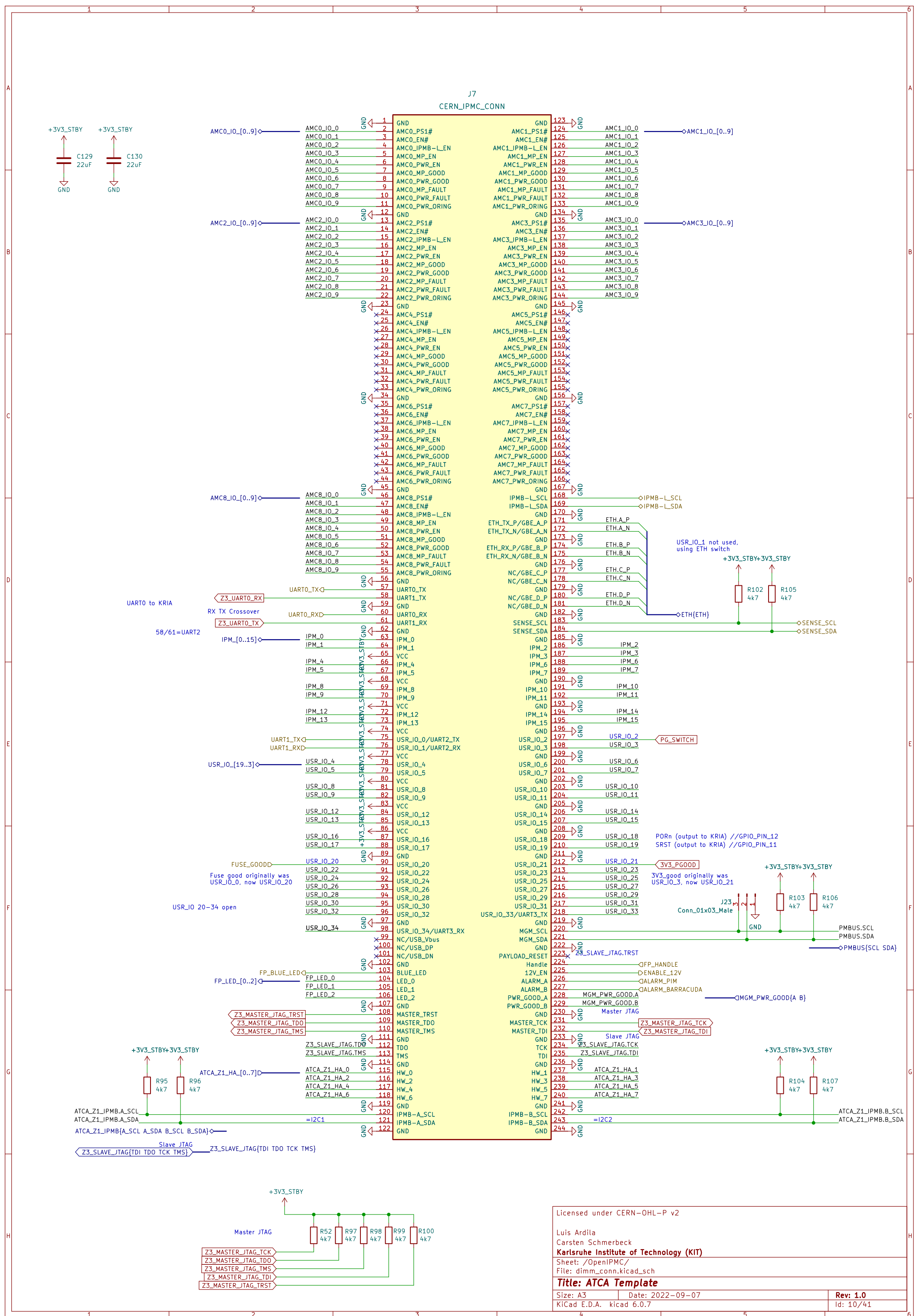
Rev: 1.0Id: 4/41

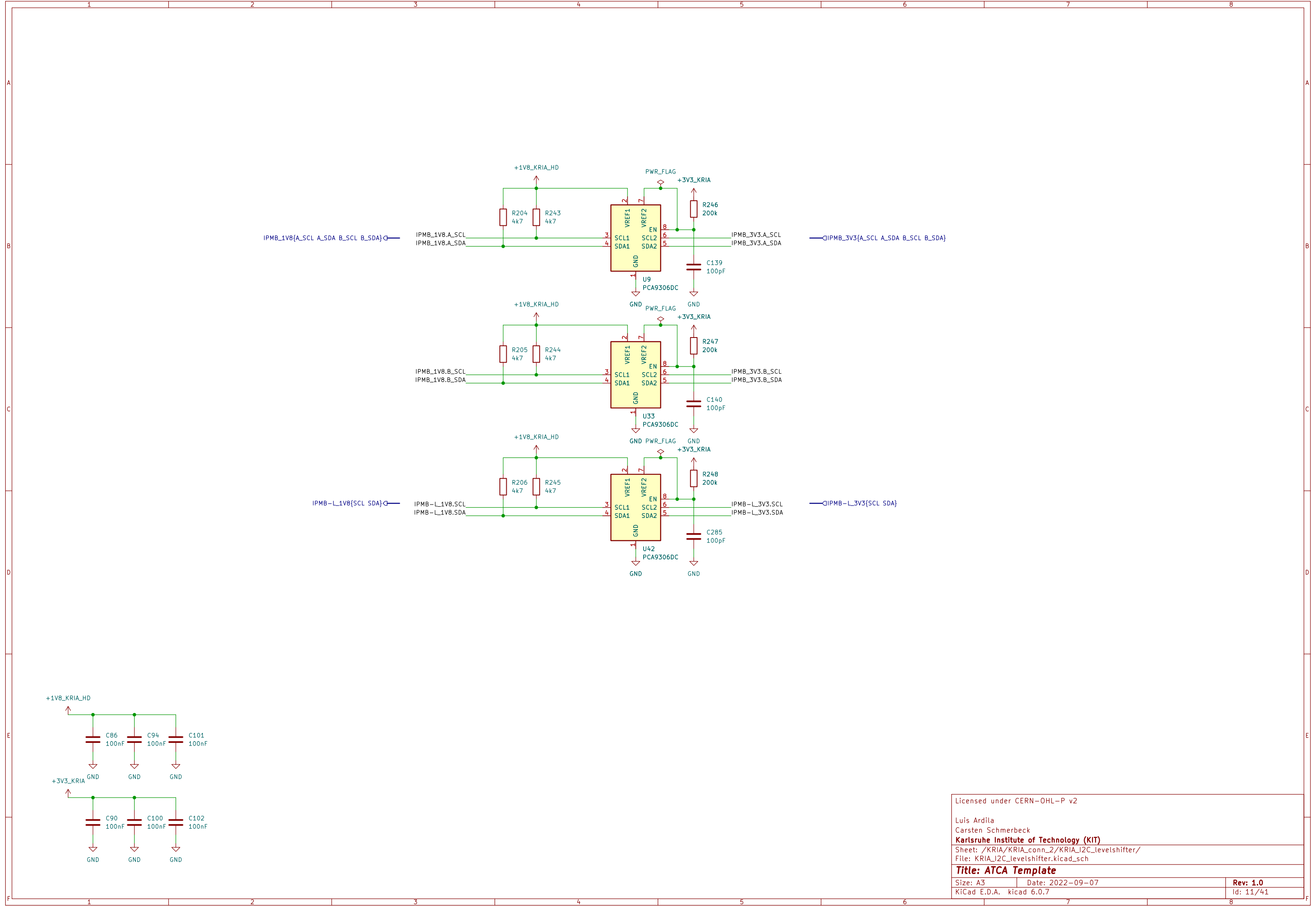


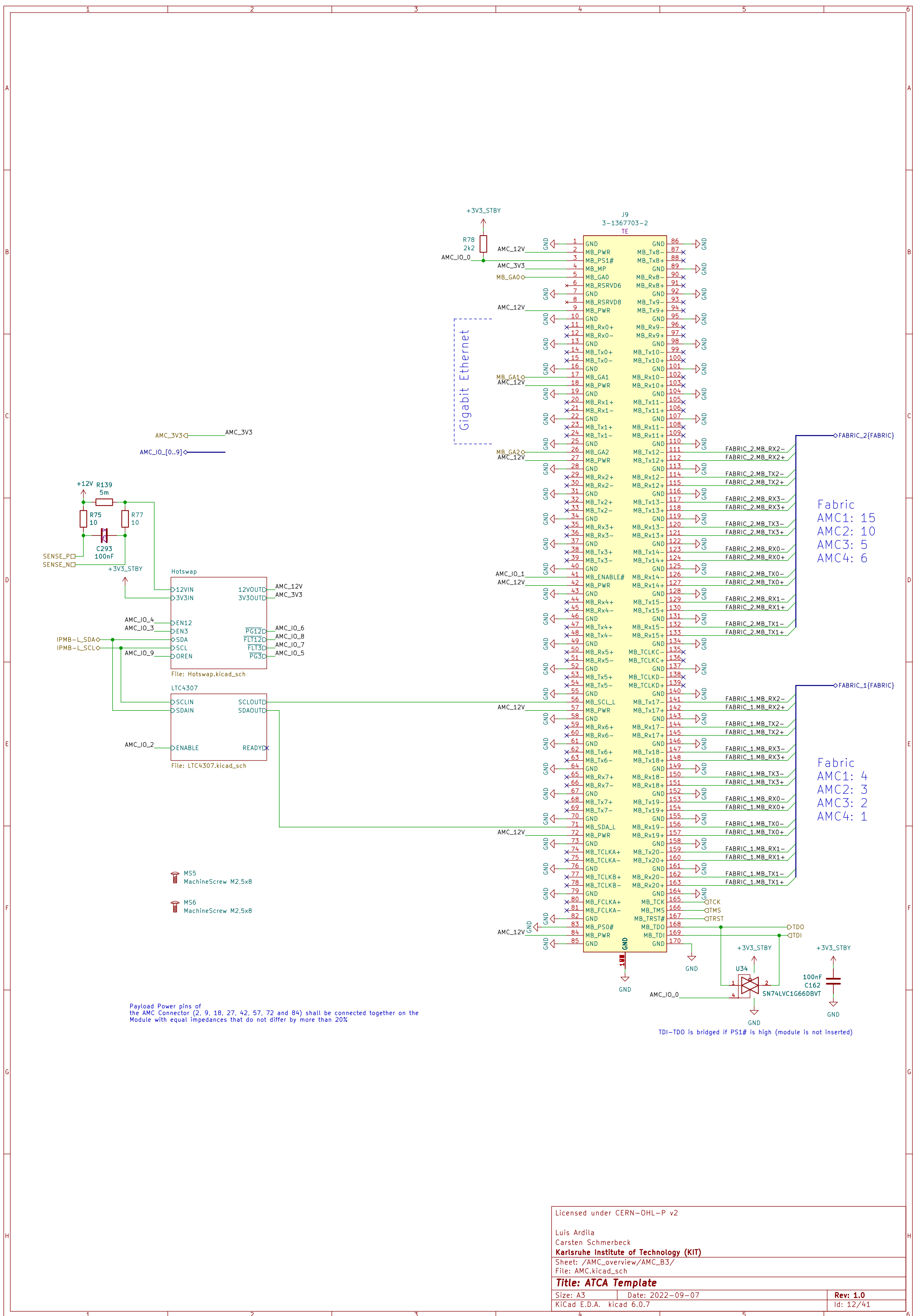


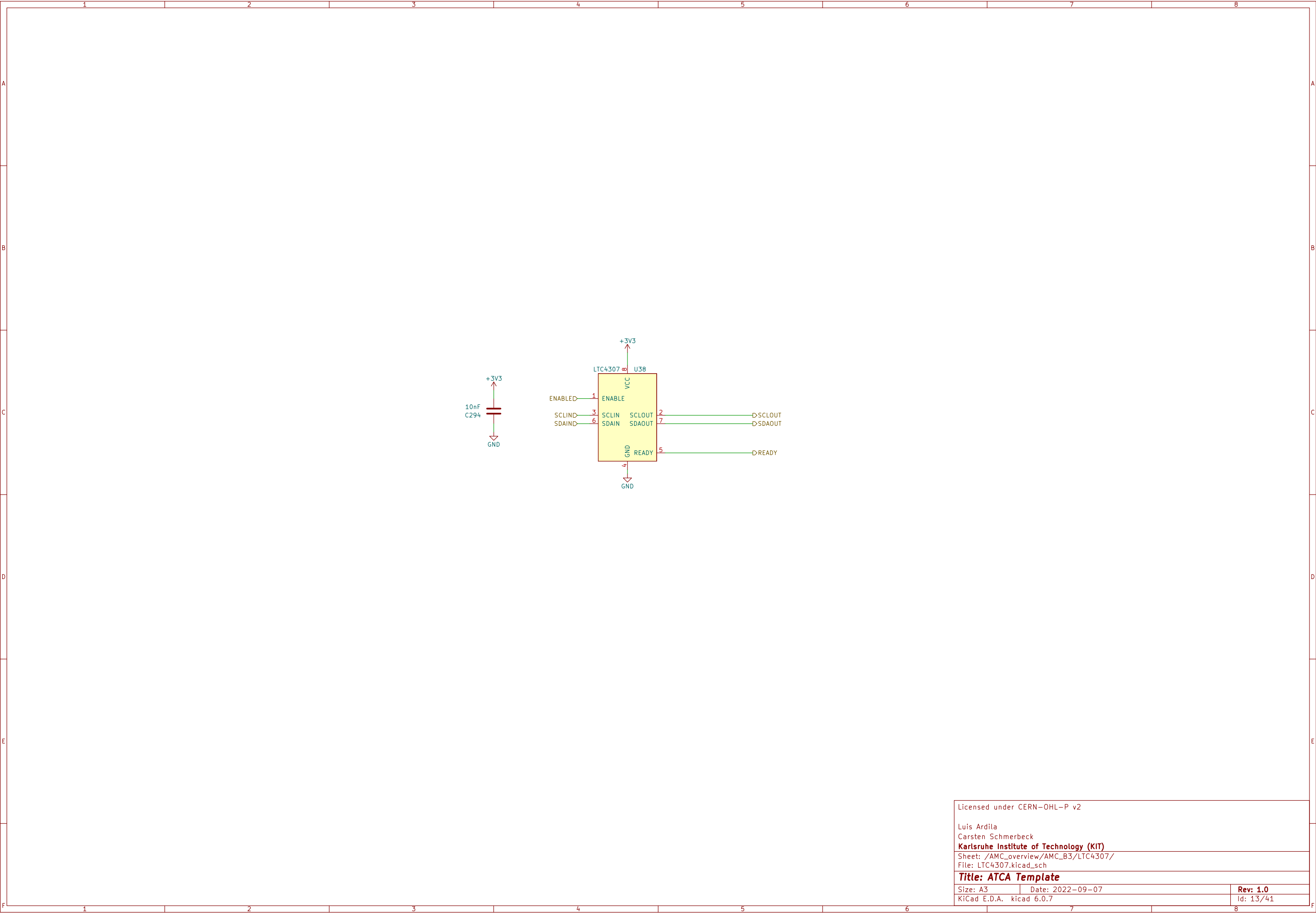
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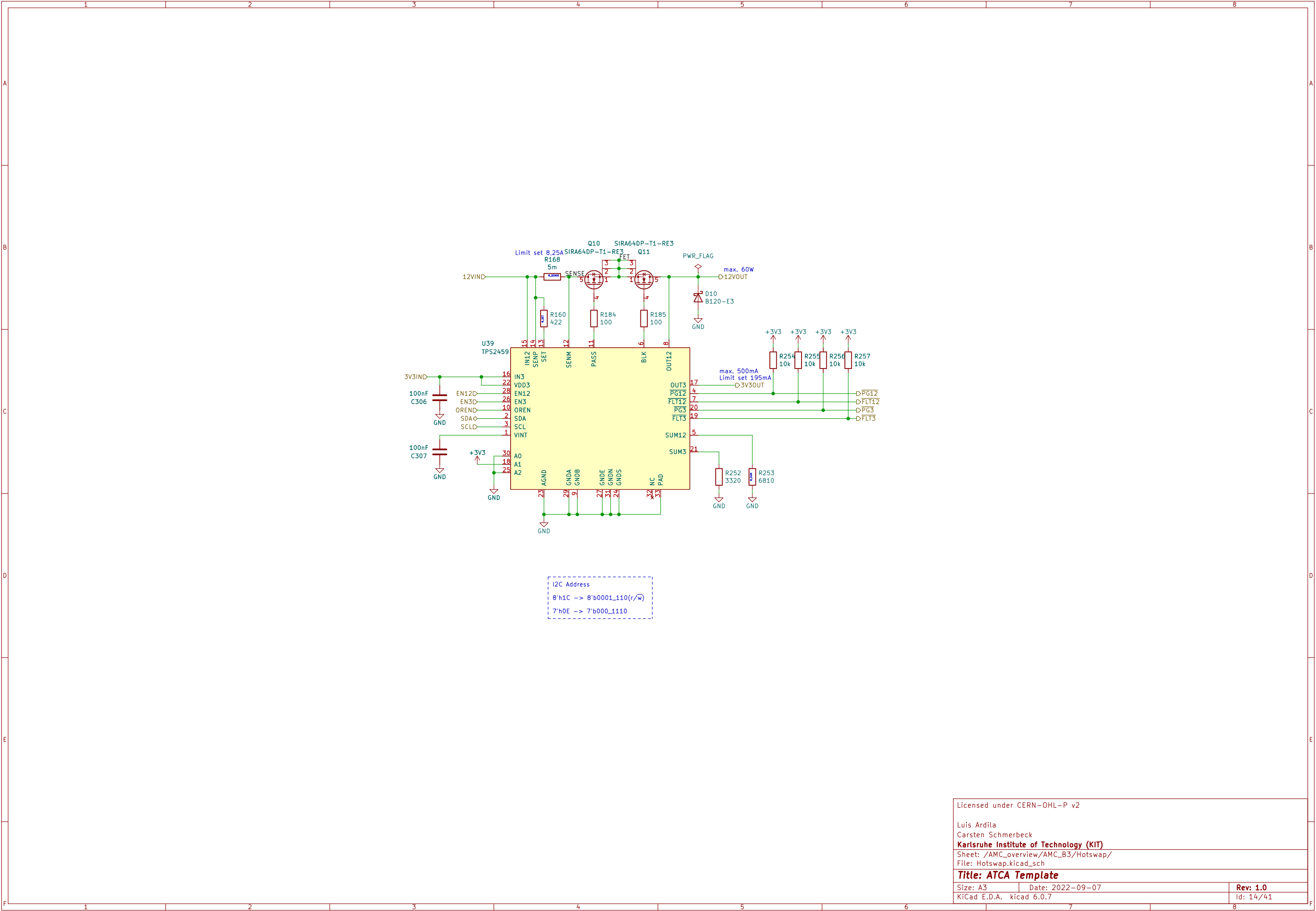


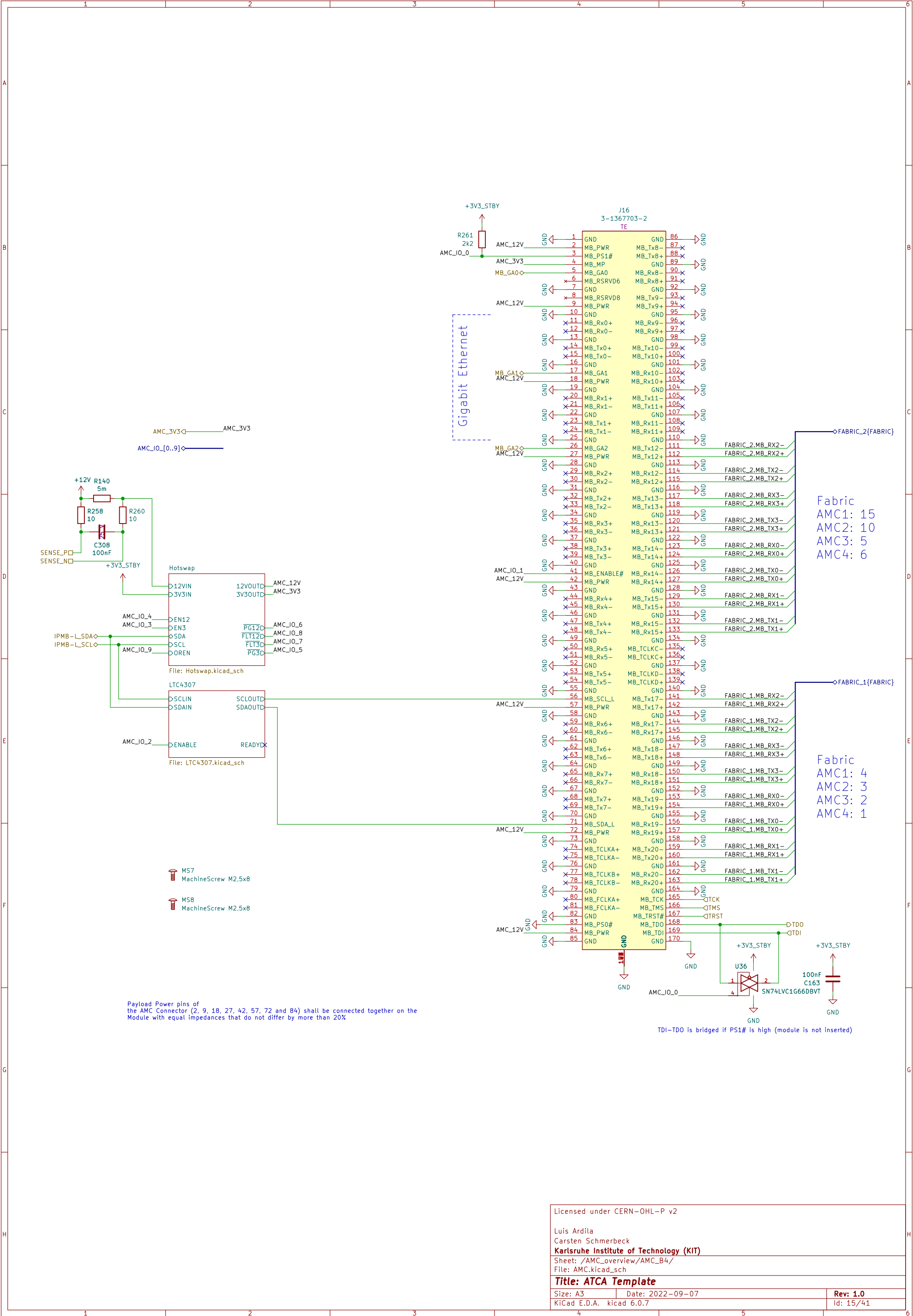


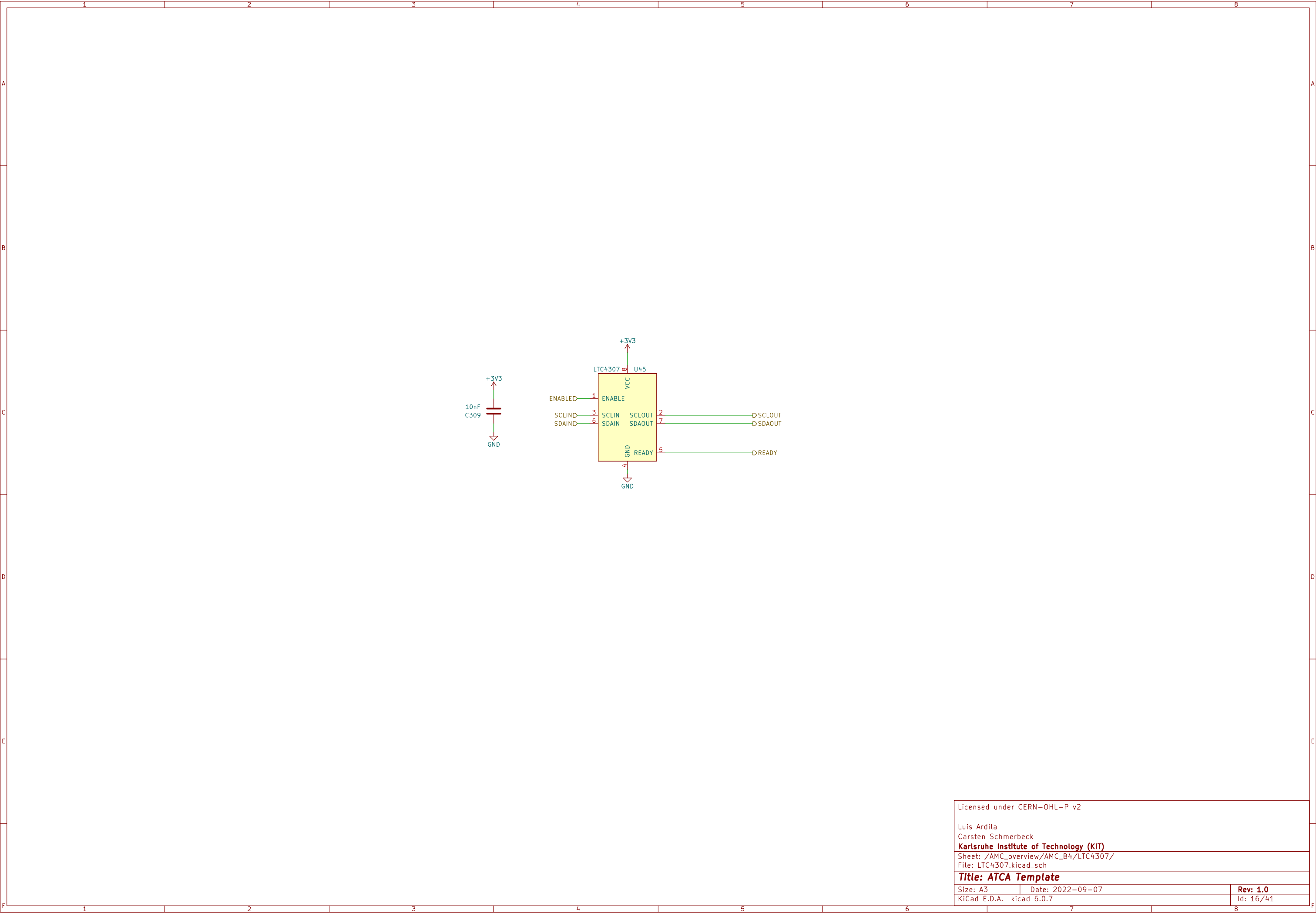


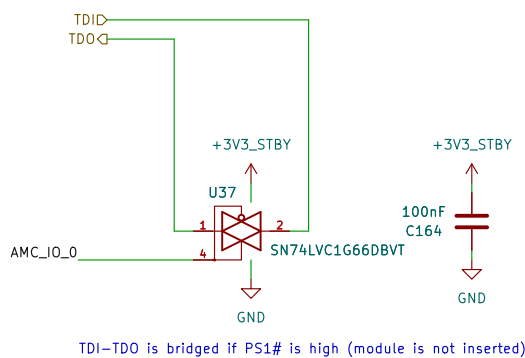
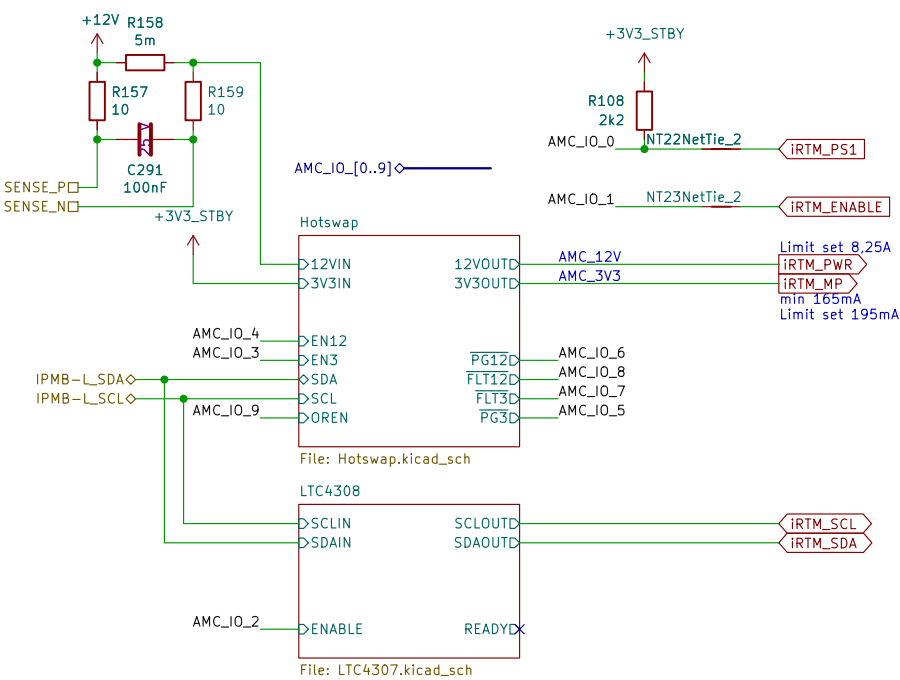


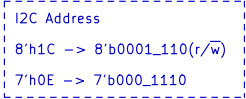






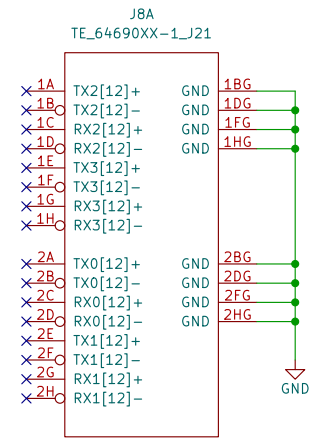




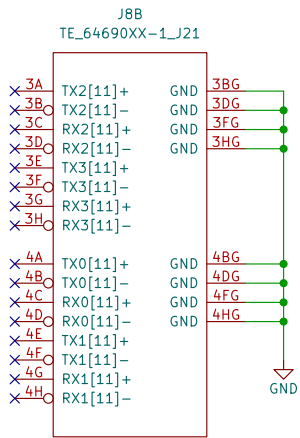


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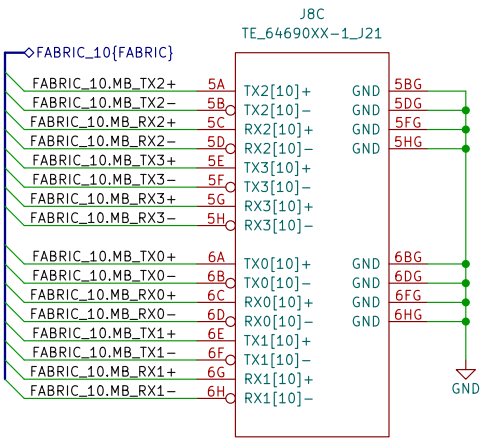
FABRIC INTERFACE 12



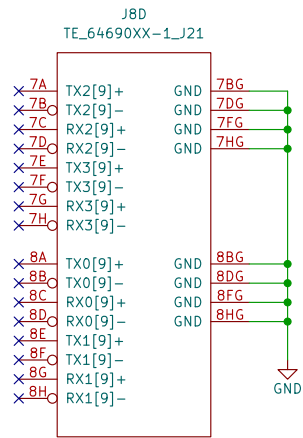
FABRIC INTERFACE 11



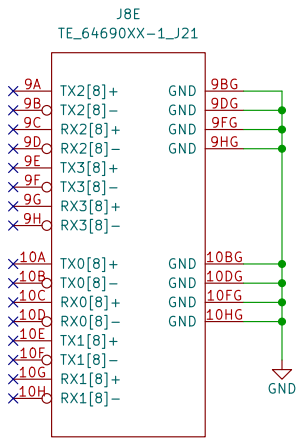
FABRIC INTERFACE 10



FABRIC INTERFACE 9



FABRIC INTERFACE 8



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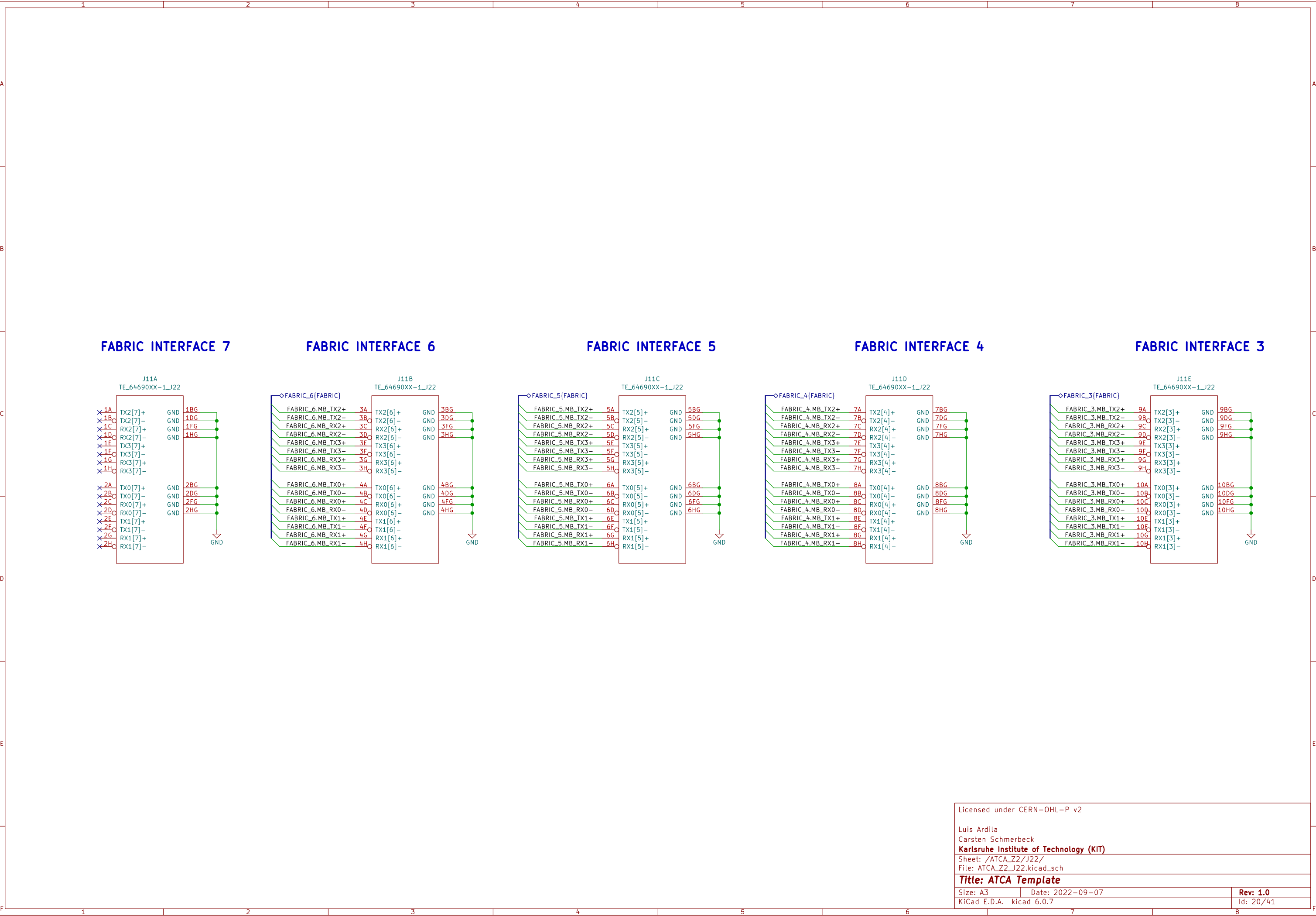
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Sheet: /ATCA_Z2/J21/
File: ATCA_Z2_J21.kicad_sch

Title: ATCA Template

Size: A3 | Date: 2022-09-07
KiCad E.D.A. | kicad 6.0.7

Rev: 1.0
Id: 19/41



FABRIC INTERFACE 6

J11B
TE_64690XX-1_J22

FABRIC_6{FABRIC}

FABRIC_6.MB_TX2+

FABRIC_6.MB_TX2-

FABRIC_6.MB_RX2+

FABRIC_6.MB_RX2-

FABRIC_6.MB_TX3+

FABRIC_6.MB_TX3-

FABRIC_6.MB_RX3+

FABRIC_6.MB_RX3-

FABRIC_6.MB_TX0+

FABRIC_6.MB_TX0-

FABRIC_6.MB_RX0+

FABRIC_6.MB_RX0-

FABRIC_6.MB_TX1+

FABRIC_6.MB_TX1-

FABRIC_6.MB_RX1+

FABRIC_6.MB_RX1-

3A

3B

3C

3D

3E

3F

3G

3H

4A

4B

4C

4D

4E

4F

4G

4H

TX2[6]+

TX2[6]-

RX2[6]+

RX2[6]-

TX3[6]+

TX3[6]-

RX3[6]+

RX3[6]-

TX0[6]+

TX0[6]-

RX0[6]+

RX0[6]-

TX1[6]+

TX1[6]-

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RX1[6]-

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FABRIC INTERFACE 5

J11C
TE_64690XX-1_J22

FABRIC_5{FABRIC}

FABRIC_5.MB_TX2+

FABRIC_5.MB_TX2-

FABRIC_5.MB_RX2+

FABRIC_5.MB_RX2-

FABRIC_5.MB_TX3+

FABRIC_5.MB_TX3-

FABRIC_5.MB_RX3+

FABRIC_5.MB_RX3-

FABRIC_5.MB_TX0+

FABRIC_5.MB_TX0-

FABRIC_5.MB_RX0+

FABRIC_5.MB_RX0-

FABRIC_5.MB_TX1+

FABRIC_5.MB_TX1-

FABRIC_5.MB_RX1+

FABRIC_5.MB_RX1-

5A

5B

5C

5D

5E

5F

5G

5H

6A

6B

6C

6D

6E

6F

6G

6H

TX2[5]+

TX2[5]-

RX2[5]+

RX2[5]-

TX3[5]+

TX3[5]-

RX3[5]+

RX3[5]-

TX0[5]+

TX0[5]-

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FABRIC INTERFACE 4

J11D
TE_64690XX-1_J22

FABRIC_4{FABRIC}

FABRIC_4.MB_TX2+

FABRIC_4.MB_TX2-

FABRIC_4.MB_RX2+

FABRIC_4.MB_RX2-

FABRIC_4.MB_TX3+

FABRIC_4.MB_TX3-

FABRIC_4.MB_RX3+

FABRIC_4.MB_RX3-

FABRIC_4.MB_TX0+

FABRIC_4.MB_TX0-

FABRIC_4.MB_RX0+

FABRIC_4.MB_RX0-

FABRIC_4.MB_TX1+

FABRIC_4.MB_TX1-

FABRIC_4.MB_RX1+

FABRIC_4.MB_RX1-

7A

7B

7C

7D

7E

7F

7G

7H

8A

8B

8C

8D

8E

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8G

8H

TX2[4]+

TX2[4]-

RX2[4]+

RX2[4]-

TX3[4]+

TX3[4]-

RX3[4]+

RX3[4]-

TX0[4]+

TX0[4]-

RX0[4]+

RX0[4]-

TX1[4]+

TX1[4]-

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RX1[4]-

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FABRIC INTERFACE 3

J11E
TE_64690XX-1_J22

FABRIC_3{FABRIC}

FABRIC_3.MB_TX2+

FABRIC_3.MB_TX2-

FABRIC_3.MB_RX2+

FABRIC_3.MB_RX2-

FABRIC_3.MB_TX3+

FABRIC_3.MB_TX3-

FABRIC_3.MB_RX3+

FABRIC_3.MB_RX3-

FABRIC_3.MB_TX0+

FABRIC_3.MB_TX0-

FABRIC_3.MB_RX0+

FABRIC_3.MB_RX0-

FABRIC_3.MB_TX1+

FABRIC_3.MB_TX1-

FABRIC_3.MB_RX1+

FABRIC_3.MB_RX1-

9A

9B

9C

9D

9E

9F

9G

9H

10A

10B

10C

10D

10E

10F

10G

10H

TX2[3]+

TX2[3]-

RX2[3]+

RX2[3]-

TX3[3]+

TX3[3]-

RX3[3]+

RX3[3]-

TX0[3]+

TX0[3]-

RX0[3]+

RX0[3]-

TX1[3]+

TX1[3]-

RX1[3]+

RX1[3]-

GND

GND

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GND

9BG

9DG

9FG

9HG

10BG

10DG

10FG

10HG

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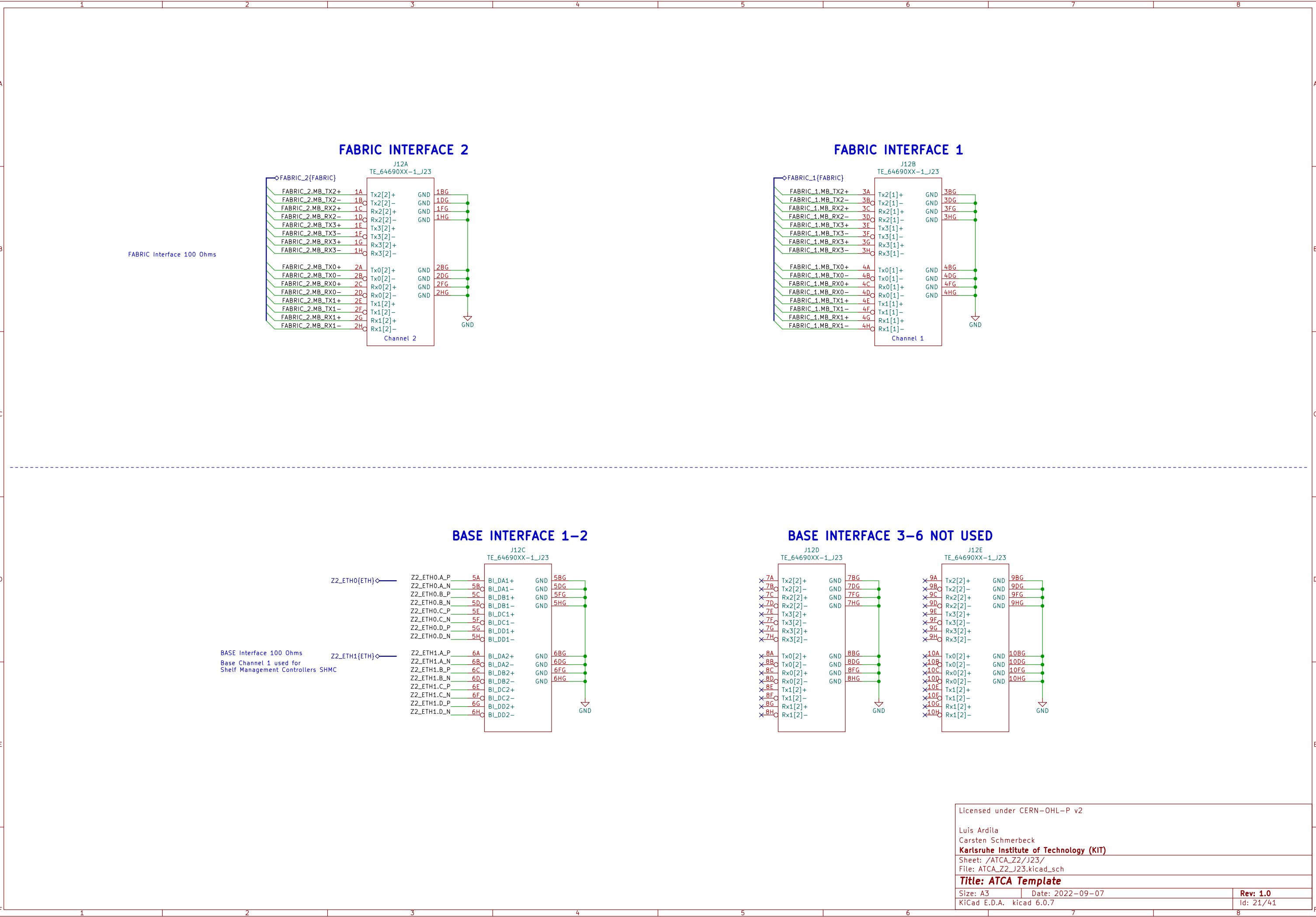
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1 2 3 4 5 6 7 8

A

B

C

D

E

F

BASE INTERFACE

J17A
TE_64690XX-1_J24

1A BI_DA7+ GND 1BG
1B BI_DA7- GND 1DG
1C BI_DB7+ GND 1FG
1D BI_DB7- GND 1HG
1E BI_DC7+
1F BI_DC7-
1G BI_DD7+
1H BI_DD7-
2A BI_DA8+ GND 2BG
2B BI_DA8- GND 2DG
2C BI_DB8+ GND 2FG
2D BI_DB8- GND 2HG
2E BI_DC8+
2F BI_DC8-
2G BI_DD8+
2H BI_DD8-
GND

J17B
TE_64690XX-1_J24

3A BI_DA9+ GND 3BG
3B BI_DA9- GND 3DG
3C BI_DB9+ GND 3FG
3D BI_DB9- GND 3HG
3E BI_DC9+
3F BI_DC9-
3G BI_DD9+
3H BI_DD9-
4A BI_DA10+ GND 4BG
4B BI_DA10- GND 4DG
4C BI_DB10+ GND 4FG
4D BI_DB10- GND 4HG
4E BI_DC10+
4F BI_DC10-
4G BI_DD10+
4H BI_DD10-
GND

J17C
TE_64690XX-1_J24

5A BI_DA11+ GND 5BG
5B BI_DA11- GND 5DG
5C BI_DB11+ GND 5FG
5D BI_DB11- GND 5HG
5E BI_DC11+
5F BI_DC11-
5G BI_DD11+
5H BI_DD11-
6A BI_DA12+ GND 6BG
6B BI_DA12- GND 6DG
6C BI_DB12+ GND 6FG
6D BI_DB12- GND 6HG
6E BI_DC12+
6F BI_DC12-
6G BI_DD12+
6H BI_DD12-
GND

J17D
TE_64690XX-1_J24

7A BI_DA13+ GND 7BG
7B BI_DA13- GND 7DG
7C BI_DB13+ GND 7FG
7D BI_DB13- GND 7HG
7E BI_DC13+
7F BI_DC13-
7G BI_DD13+
7H BI_DD13-
8A BI_DA14+ GND 8BG
8B BI_DA14- GND 8DG
8C BI_DB14+ GND 8FG
8D BI_DB14- GND 8HG
8E BI_DC14+
8F BI_DC14-
8G BI_DD14+
8H BI_DD14-
GND

J17E
TE_64690XX-1_J24

9A BI_DA15+ GND 9BG
9B BI_DA15- GND 9DG
9C BI_DB15+ GND 9FG
9D BI_DB15- GND 9HG
9E BI_DC15+
9F BI_DC15-
9G BI_DD15+
9H BI_DD15-
10A BI_DA16+ GND 10BG
10B BI_DA16- GND 10DG
10C BI_DB16+ GND 10FG
10D BI_DB16- GND 10HG
10E BI_DC16+
10F BI_DC16-
10G BI_DD16+
10H BI_DD16-
GND

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Sheet: /ATCA_Z2/J24/
File: ATCA_Z2_J24.kicad_sch

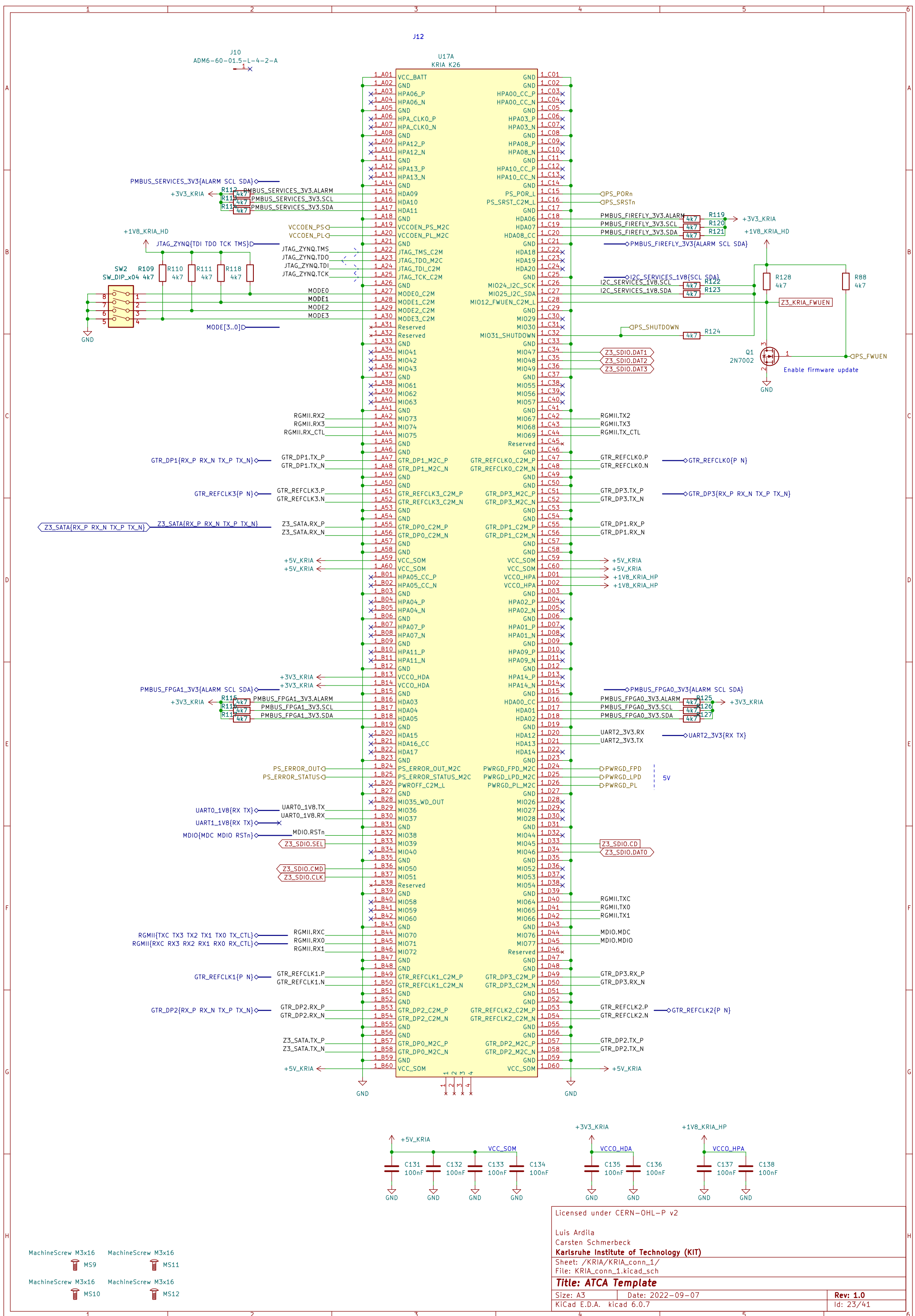
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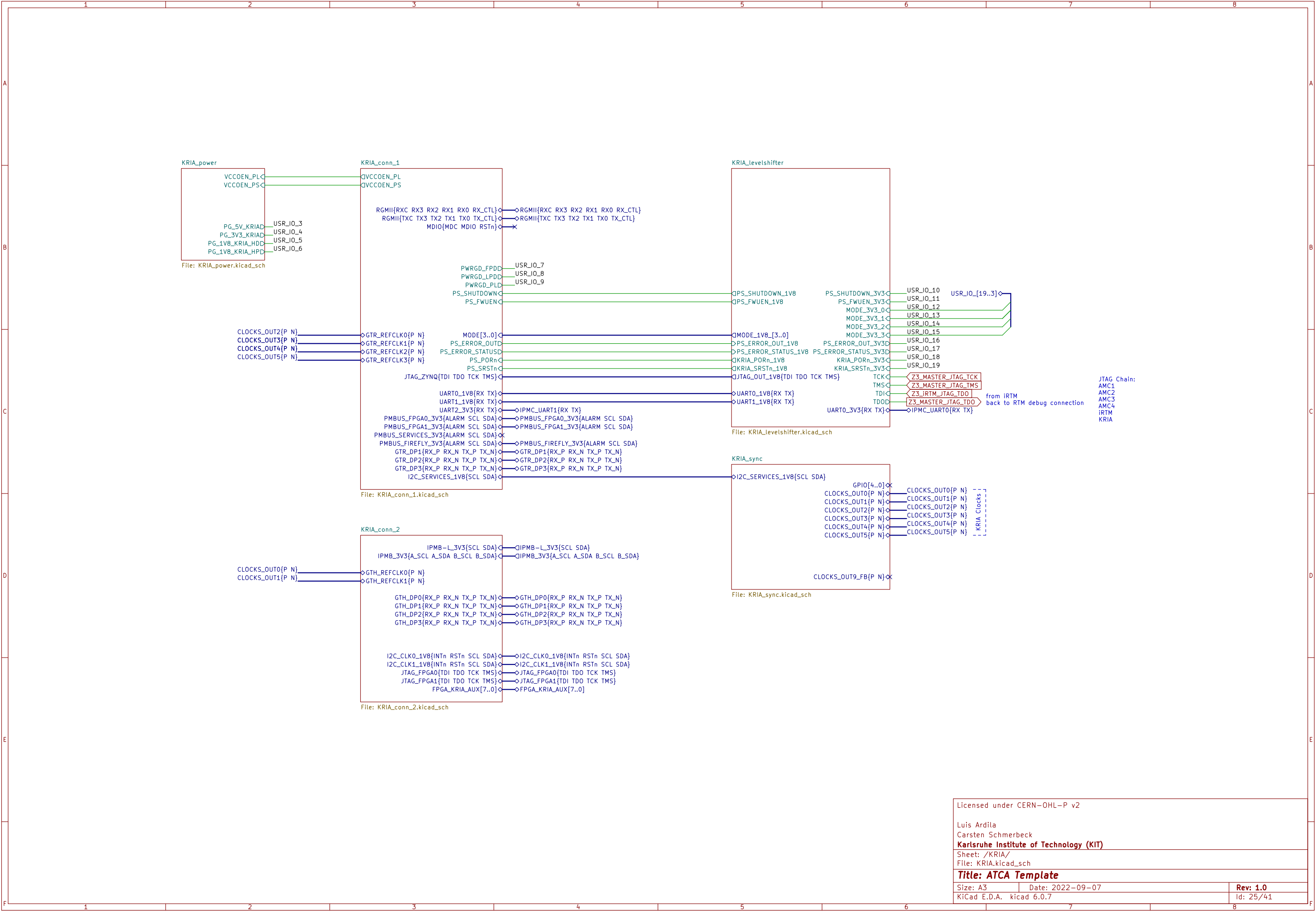
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KiCad E.D.A. kicad 6.0.7		Id: 22/41

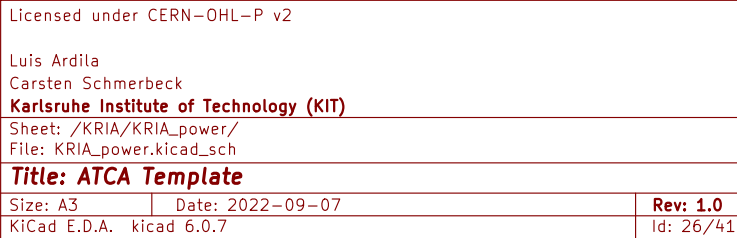
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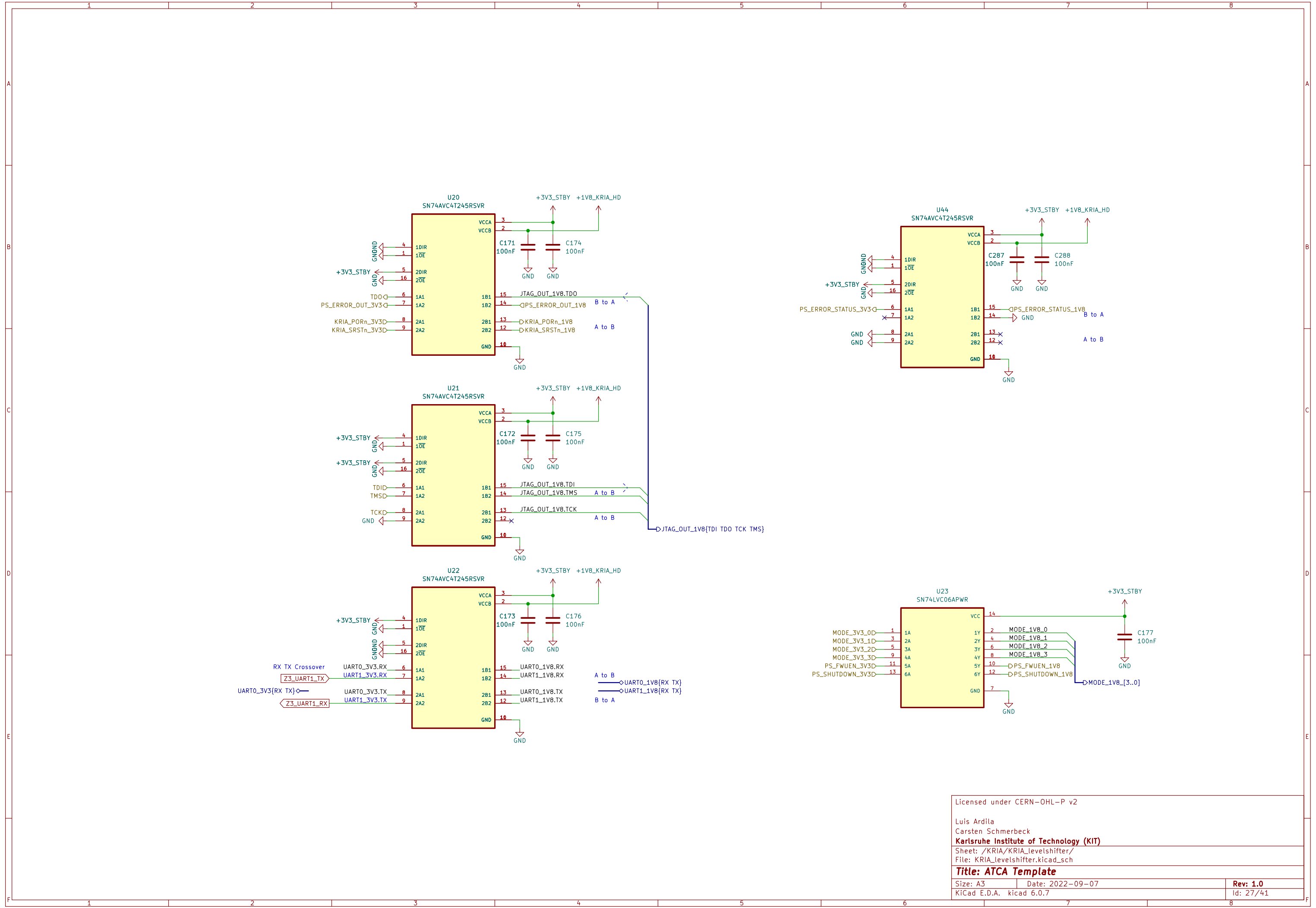
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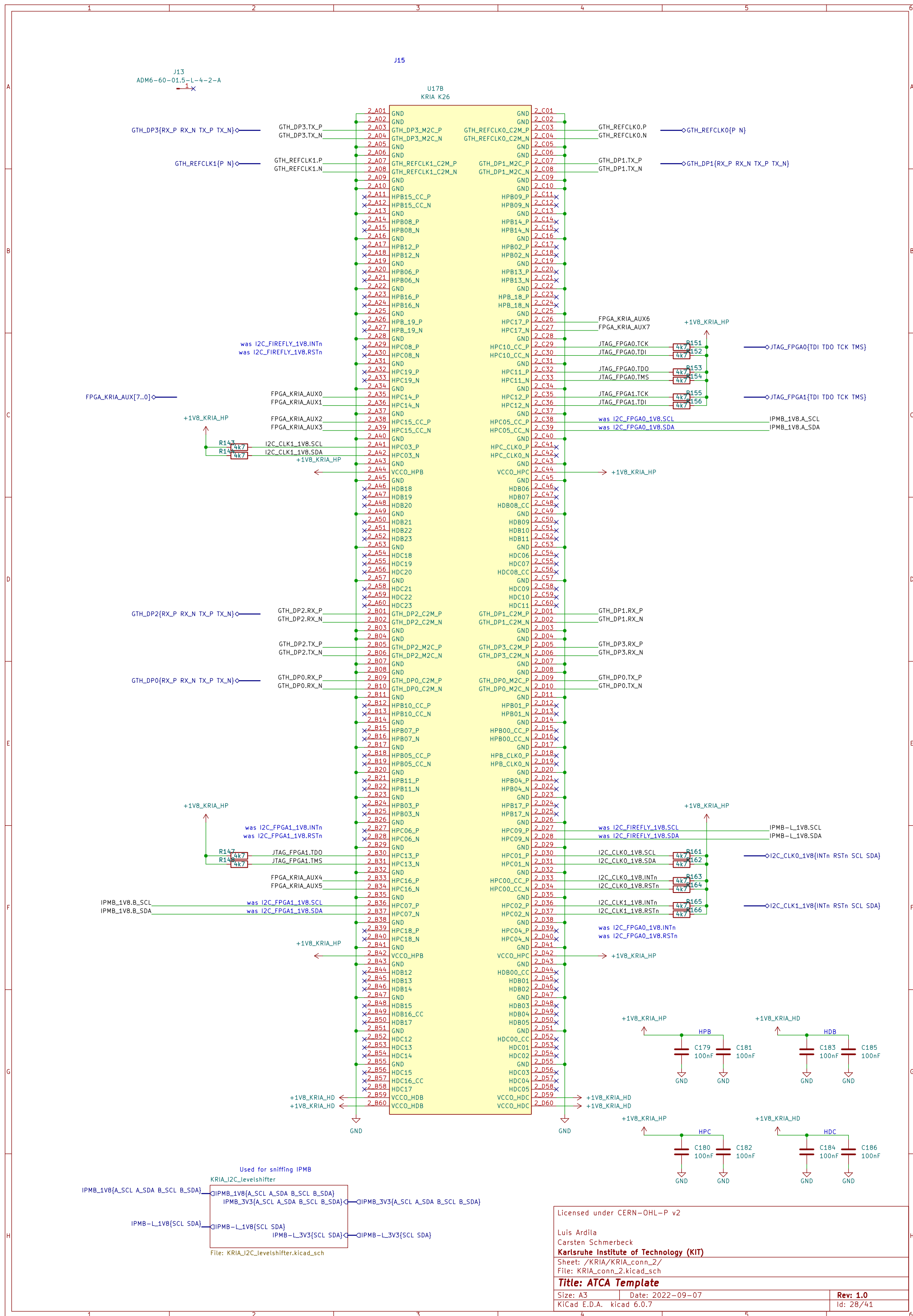
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KiCad E.D.A. - kicad 6.0.7		Id: 22/41

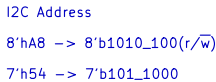
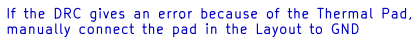








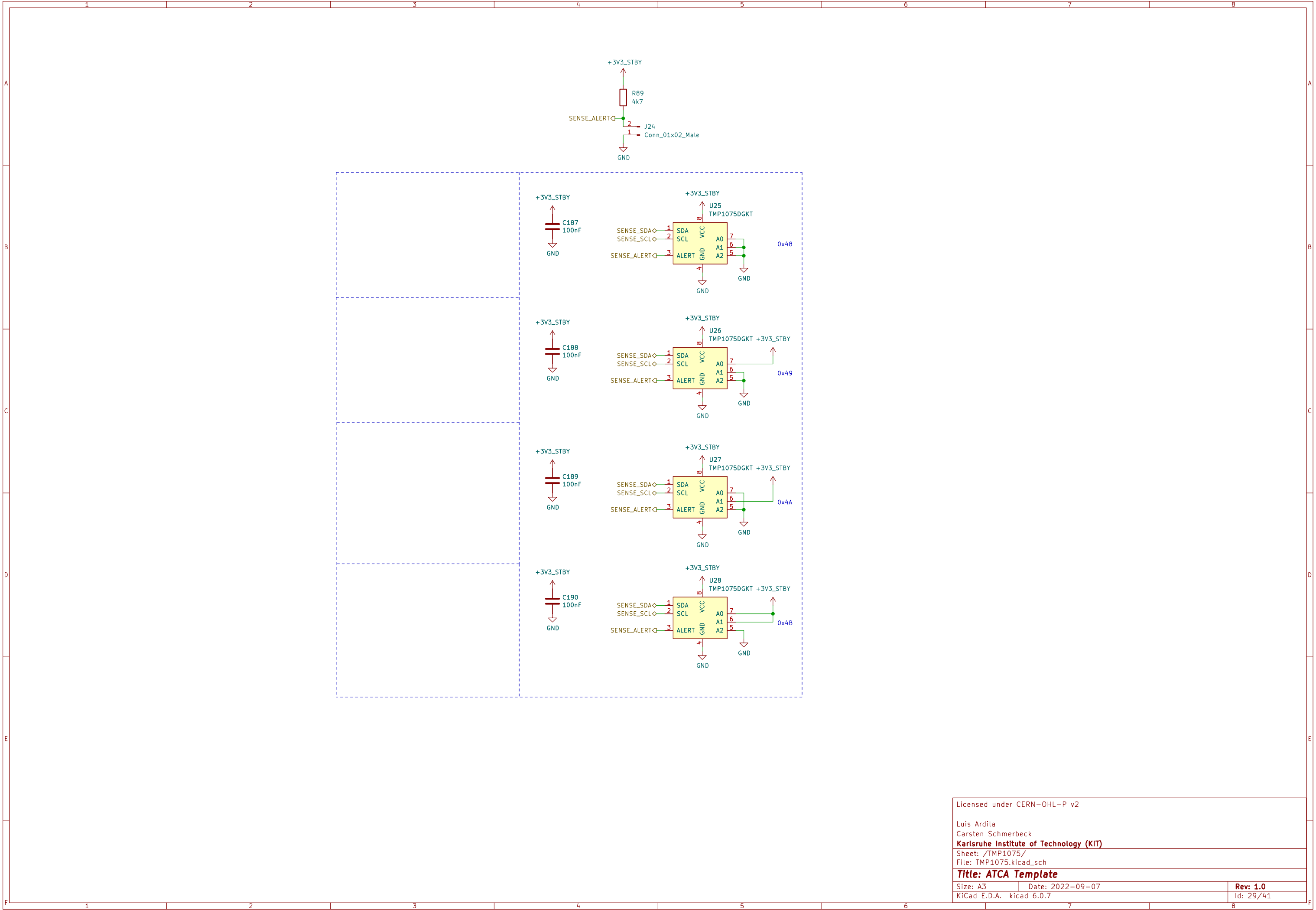




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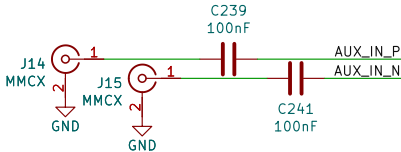
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KiCad E.D.A. kicad 6.0.7	

Size: A3	Date: 2022-09-07	Rev: 1.0
KiCad E.D.A. kicad 6.0.7		Id: 28/41



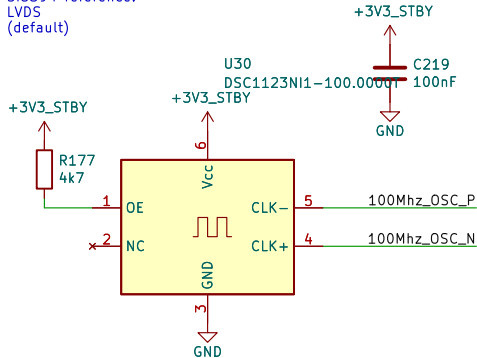
Aux Input

Si5394 reference.
LVDS (AC-coupled)
(DNP SMA's)



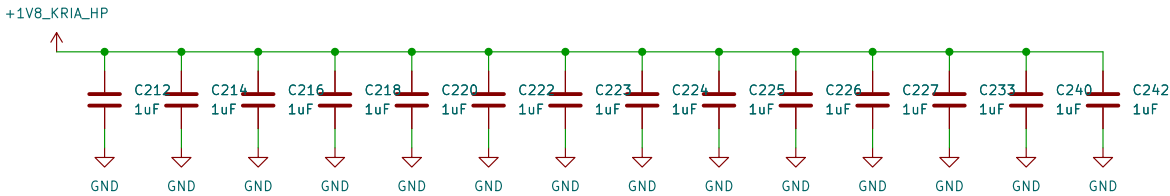
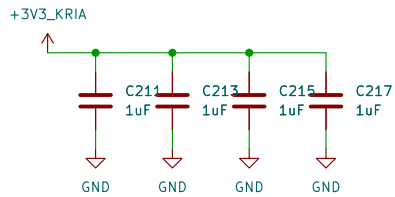
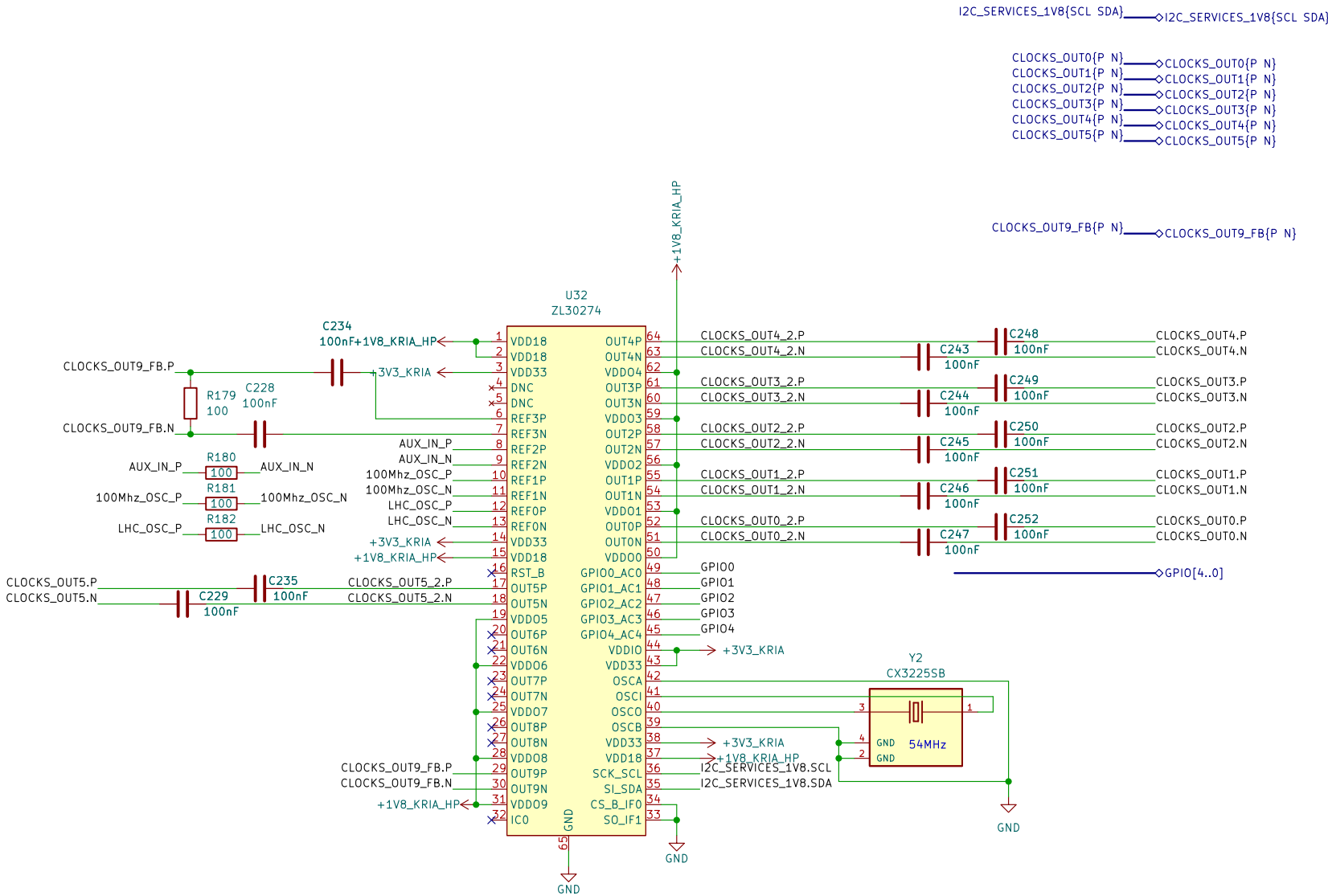
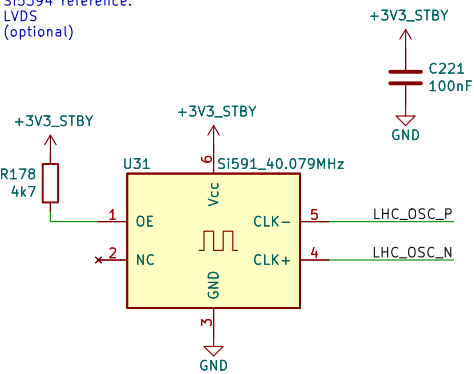
100MHz OSC

Si5394 reference.
LVDS
(default)



LHC OSC

Si5394 reference.
LVDS
(optional)



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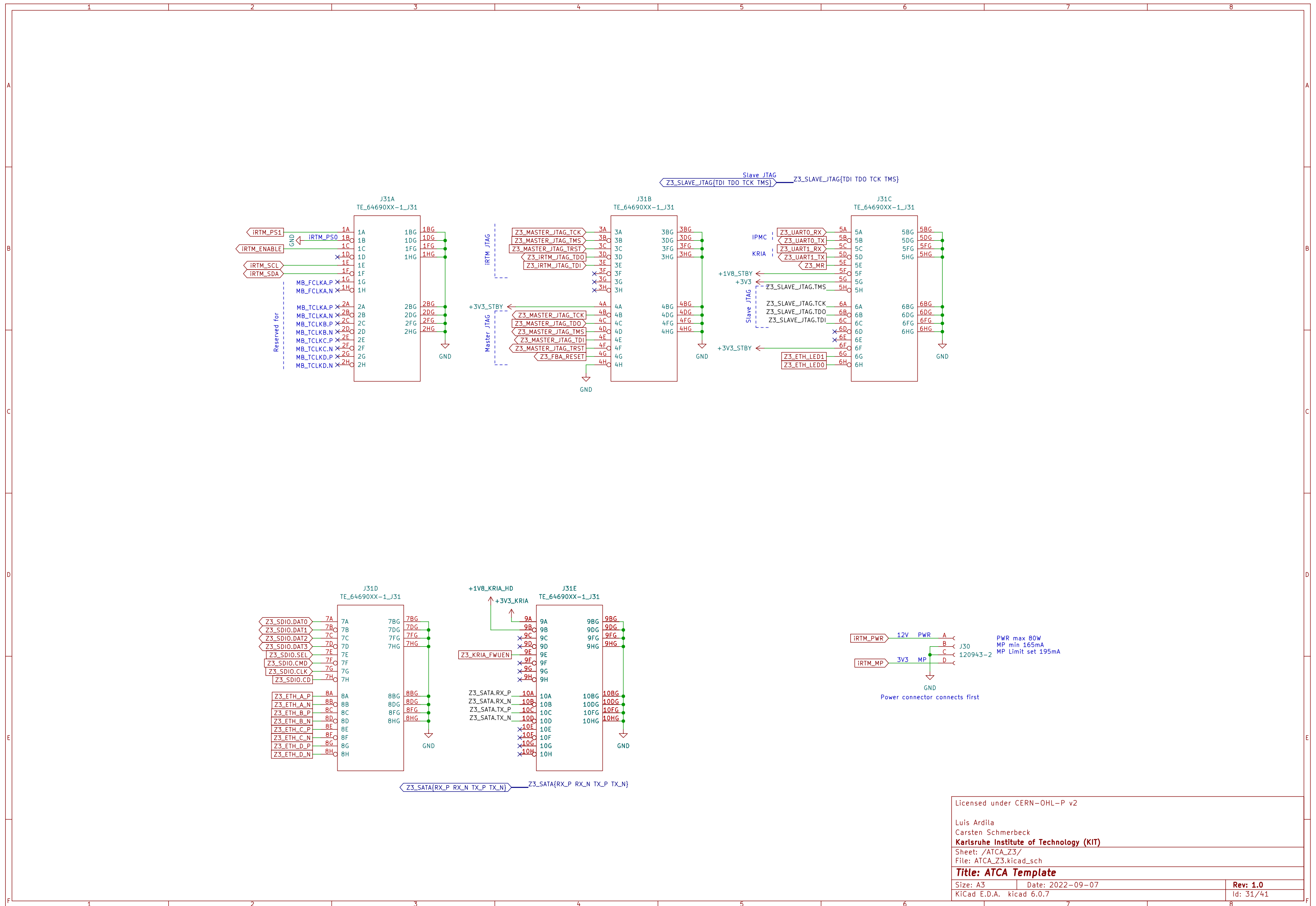
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Carsten Schmerbeck
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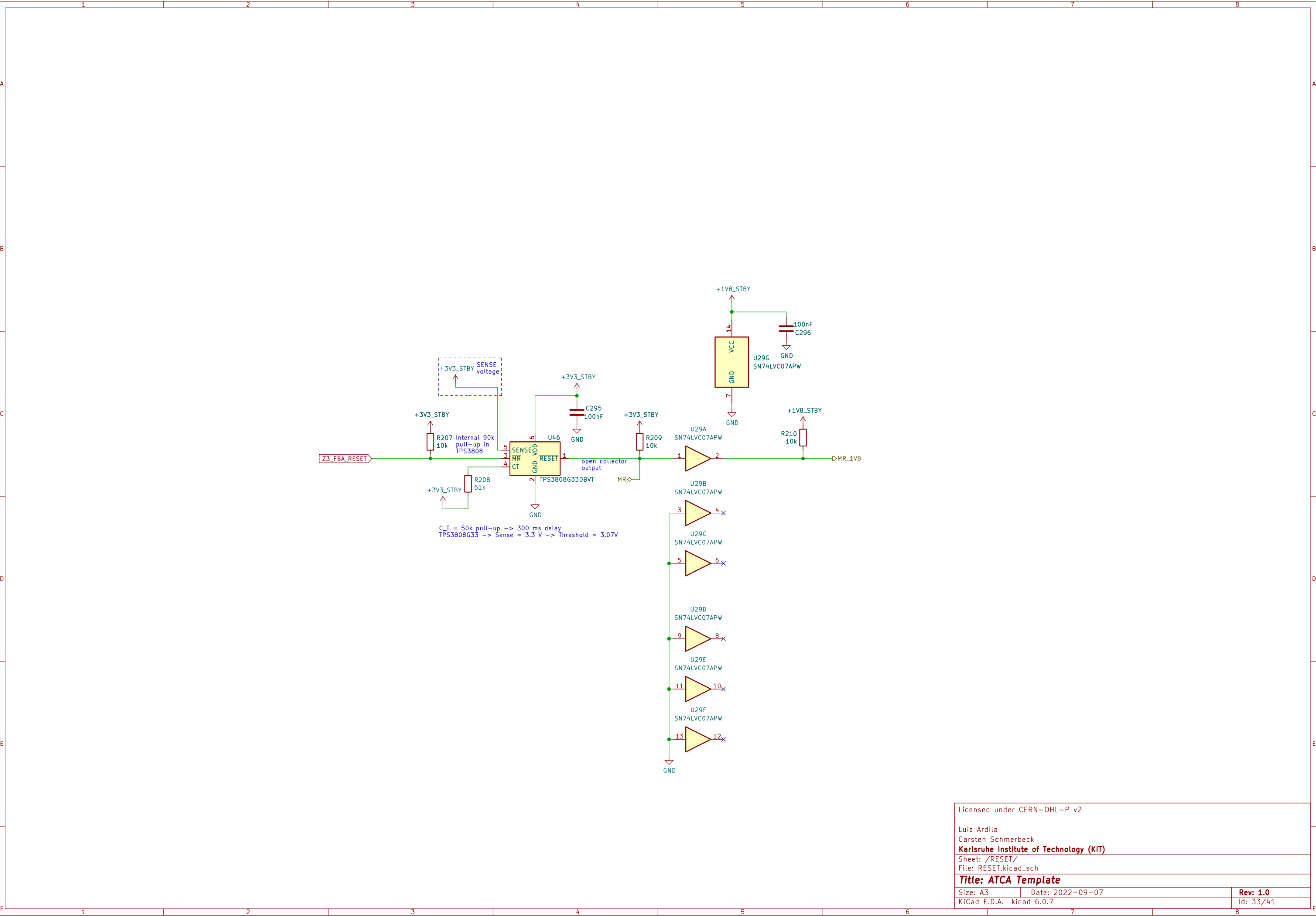
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Title: ATCA Template

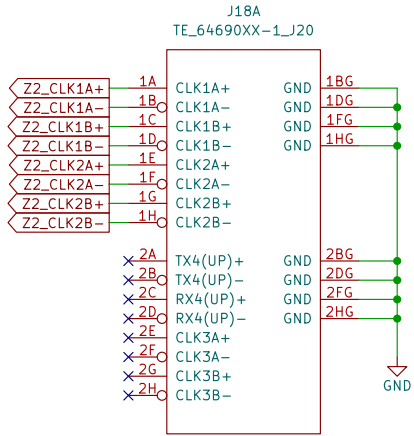
Size: A3 Date: 2022-09-07
KiCad E.D.A. kicad 6.0.7

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Id: 30/41



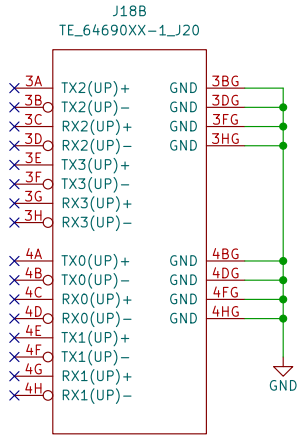


CLOCK INTERFACE

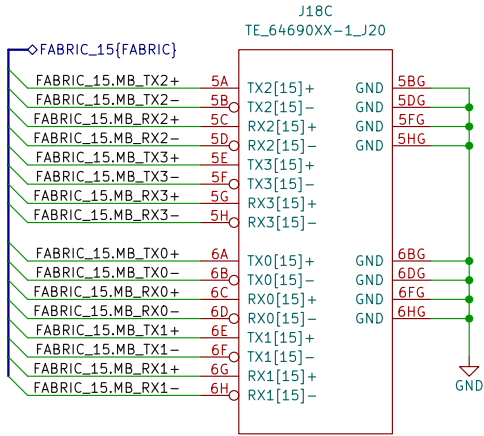


CLK1 = 8 KHZ
CLK2 = 19.44 MHz
CLK3 = 19.44 MHz

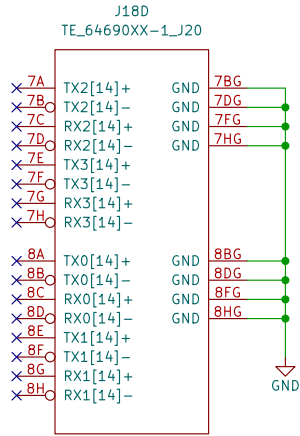
UPDATE INTERFACE



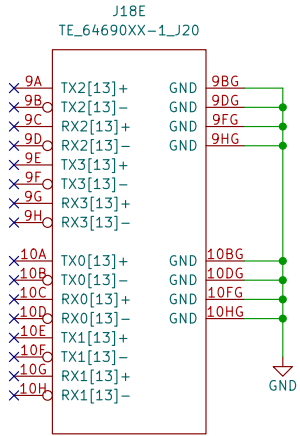
FABRIC INTERFACE 15



FABRIC INTERFACE 14

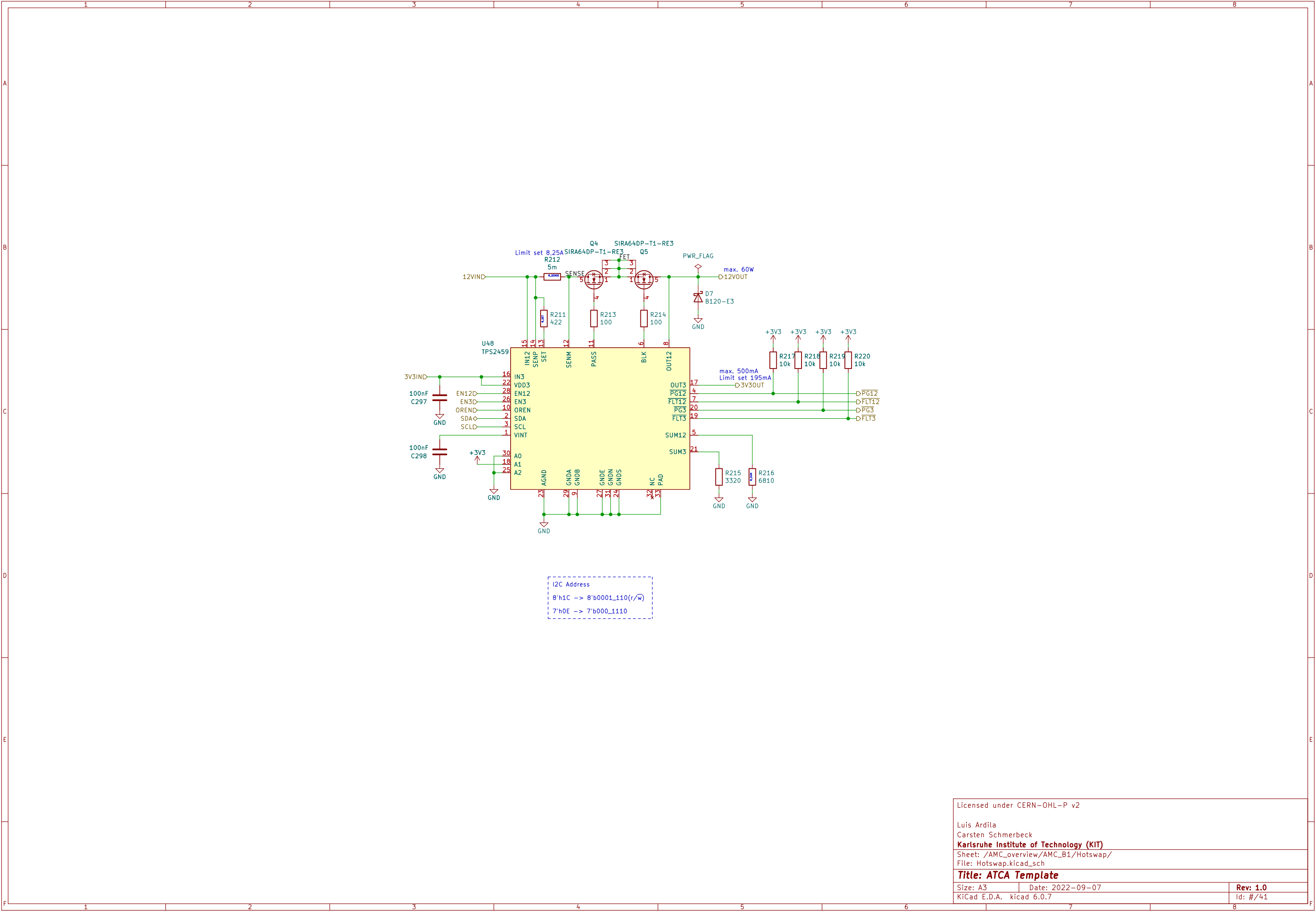


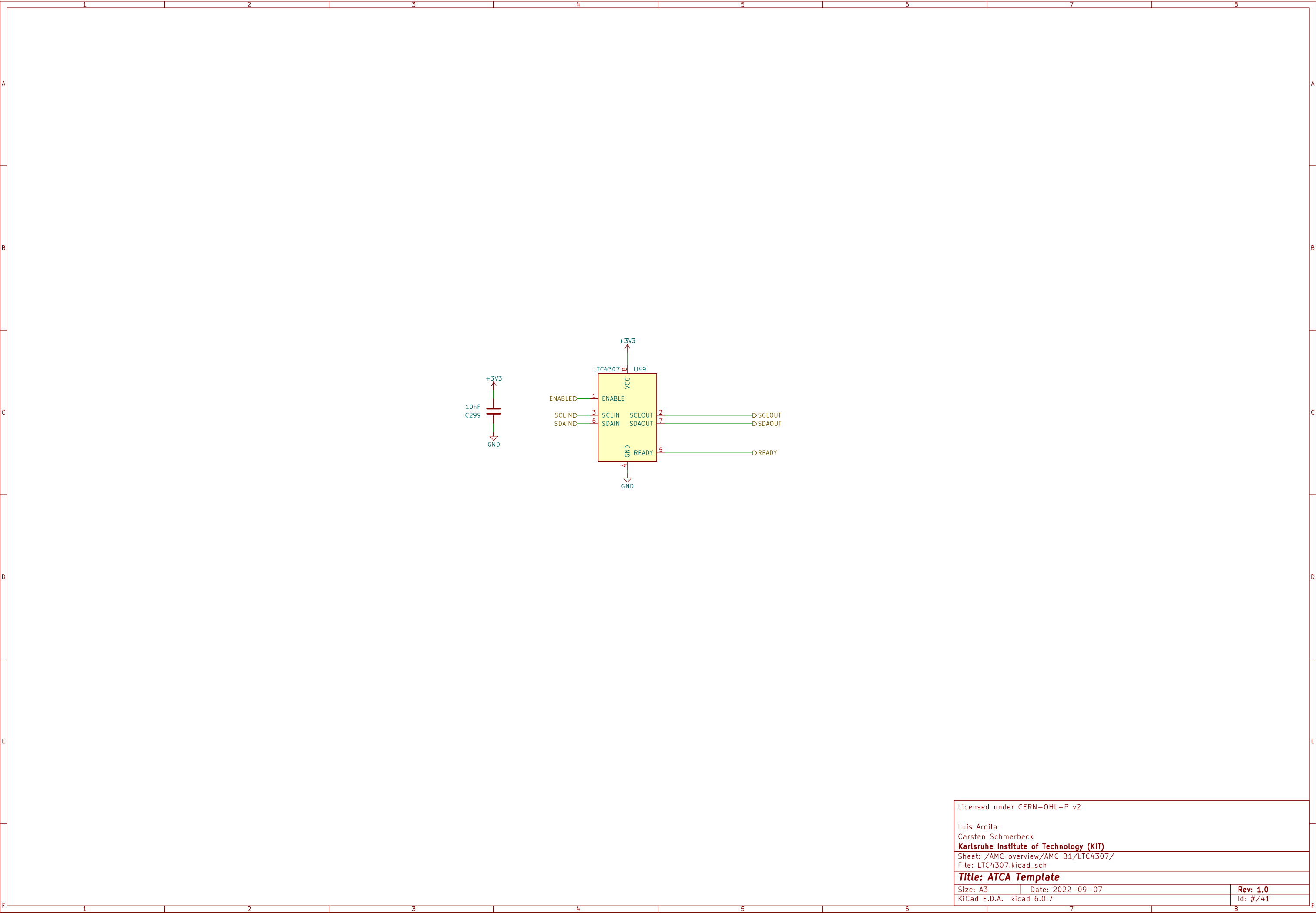
FABRIC INTERFACE 13

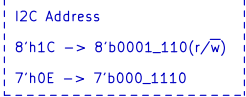


	1	2	3	4	5	6
A						
B						
C						
D						
	1	2	3	4	5	6

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Luis Ardila Carsten Schmerbeck Karlsruhe Institute of Technology (KIT)		
Sheet: /AMC_overview/AMC_CLK/ File: AMC_CLK.kicad_sch		
Title: ATCA Template		
Size: A4	Date:	Rev: 1.0
KiCad E.D.A. kicad 6.0.7		Id: 41/41







Rev: 1.0
Id: #/41

