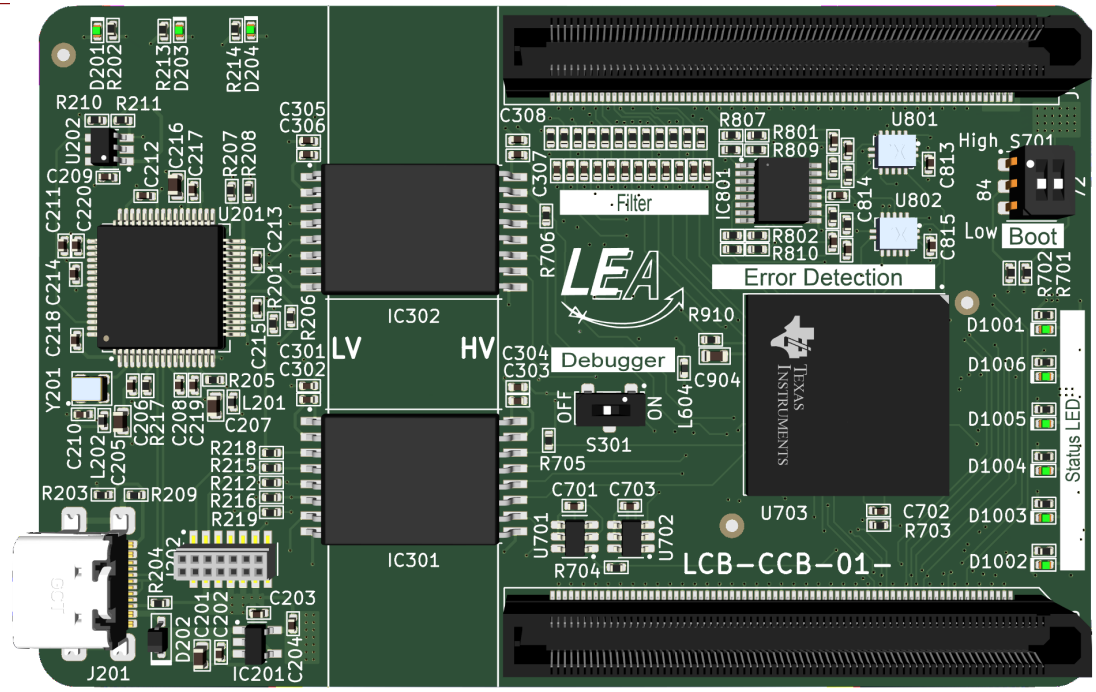
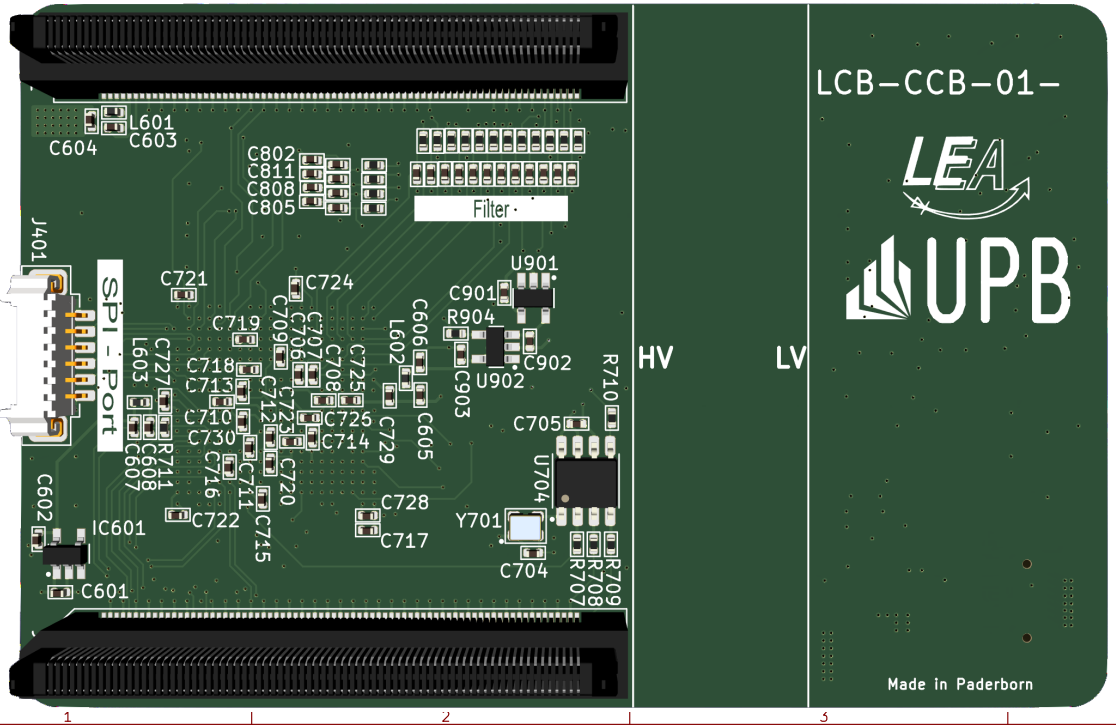




Connector Top

MCU

Status LEDs

Power

MCU GPIOs

Error Detection

XDS100

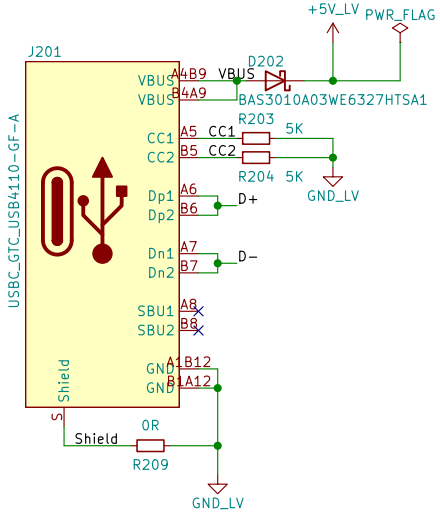
Connector Bottom

Analog Filter

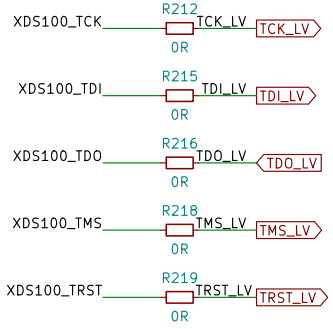
Isolation

Sheet: / File: Control_Board.kicad_sch		
Title:		
Size: A4	Date:	**Rev:**
KiCad E.D.A. kicad (6.0.2-0)		Id: 1/11

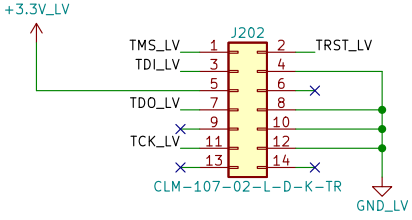
XDS100 USB-C Port



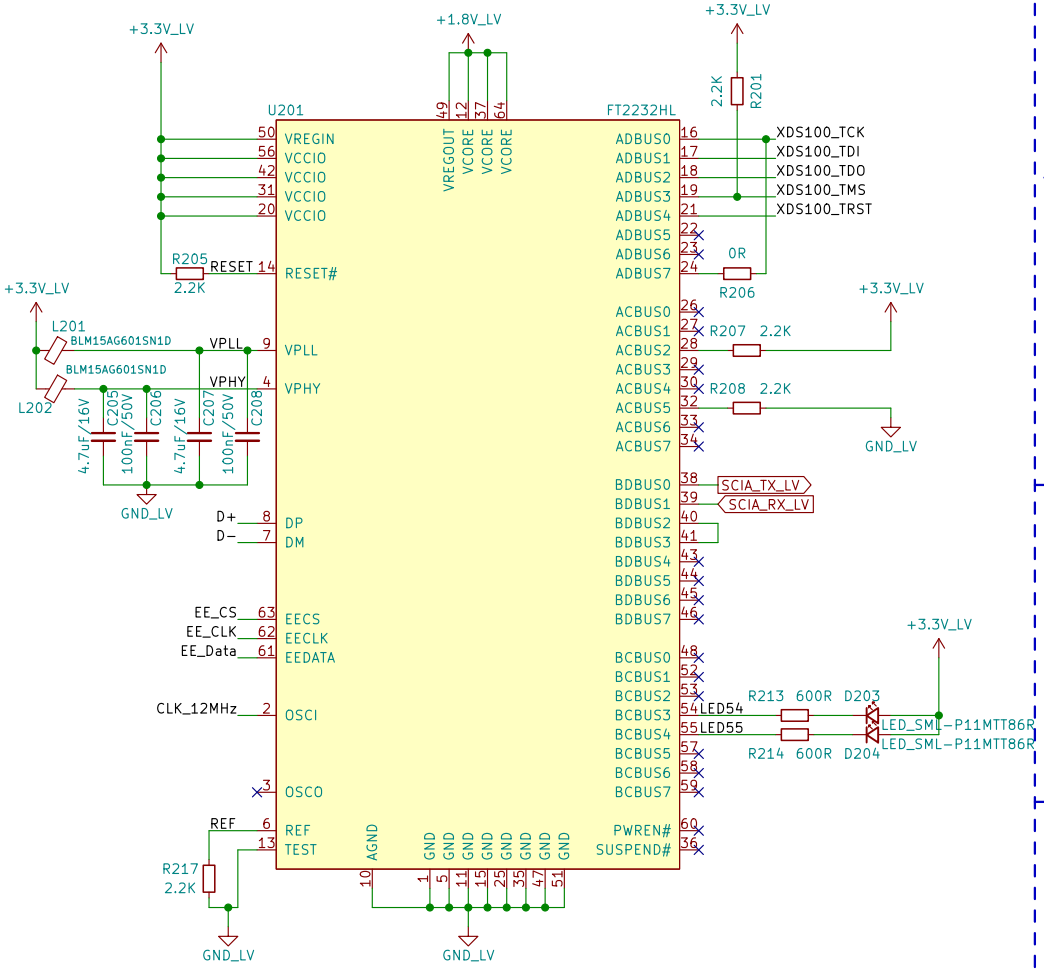
Disconnect XDS100



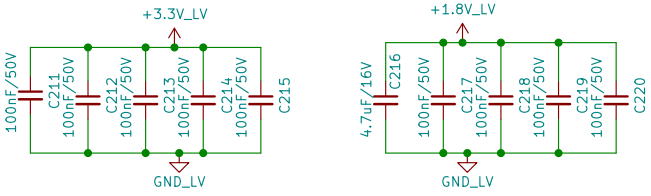
External Debugger



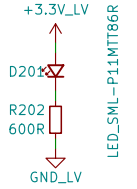
FTDI2232HL XDS100 MCU



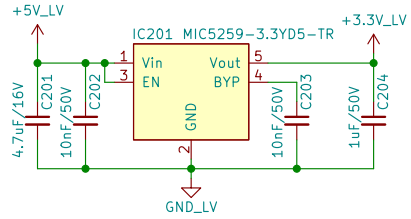
Decoupling Capacitors MCU FT2232HL



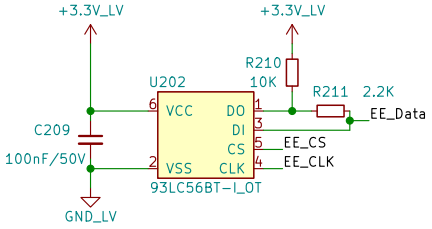
Power Status LED



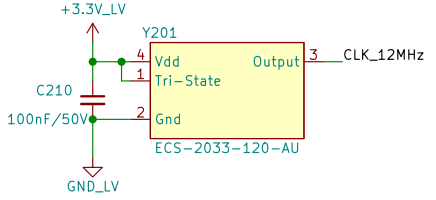
LDO 3.3V



EEPROM XDS100



12 MHz Clock



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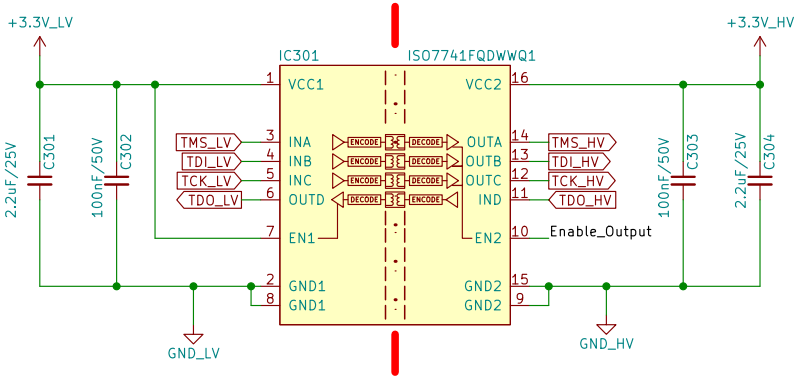
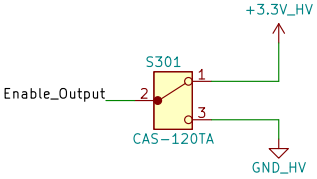
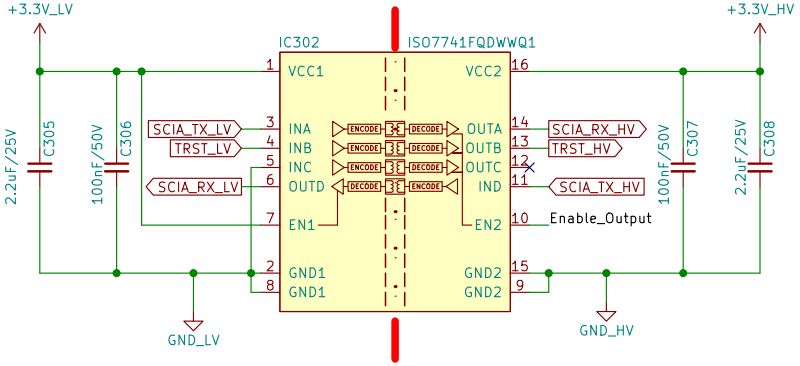
KiCad E.D.A. kicad (6.0.2-0)		Id: 2/11

JTAG and SCI ISOLATION







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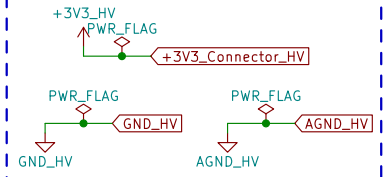
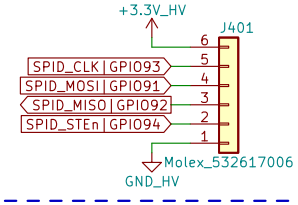
Size: A4	Date:	**Rev:**
KiCad E.D.A. kicad (6.0.2-0)		Id: 3/11

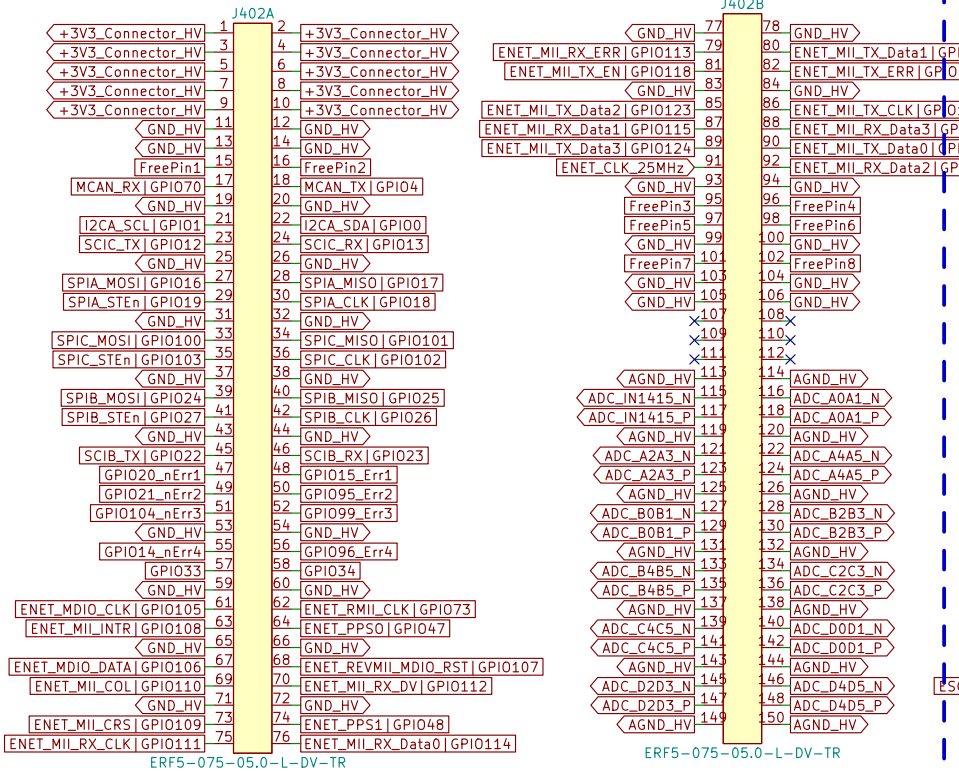
Supply for shield boards



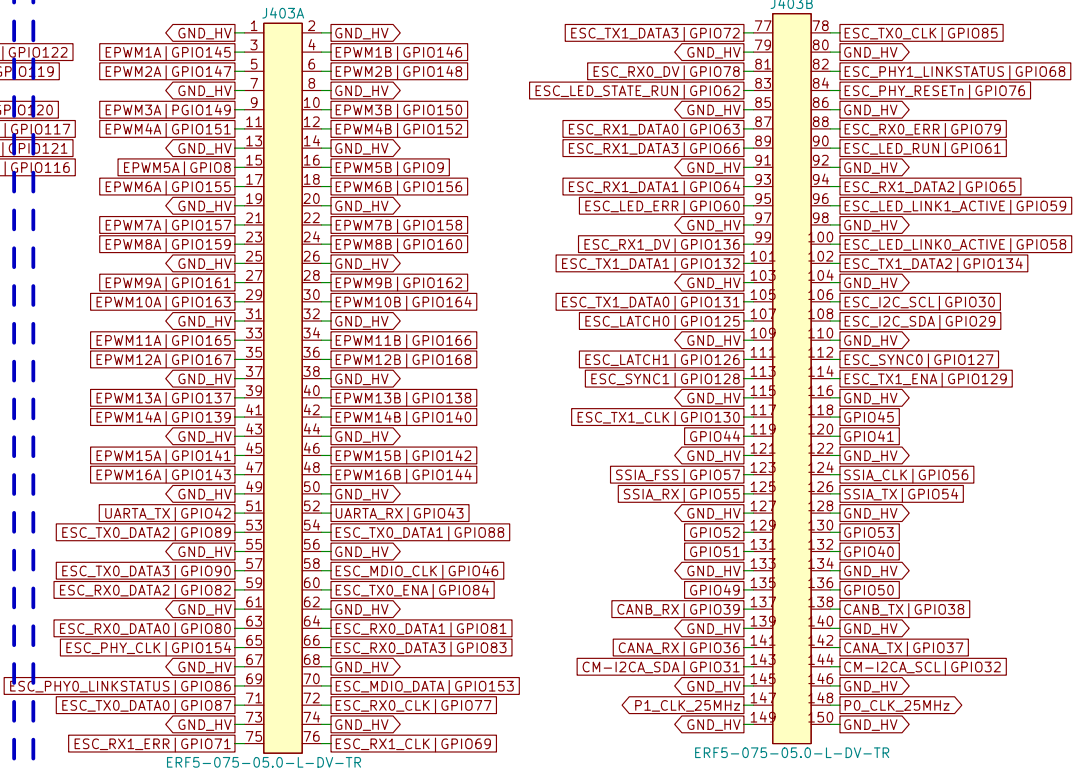
Supply and SPI for extension board



TOP LEFT CONNECTOR



TOP RIGHT CONNECTOR



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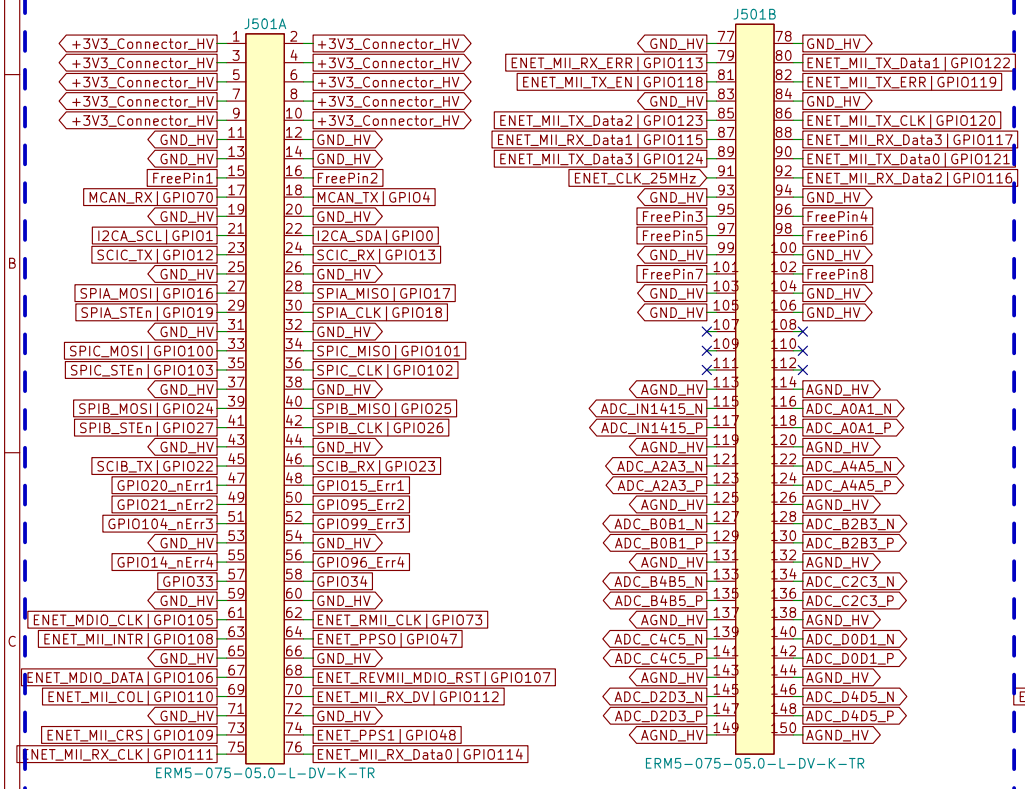
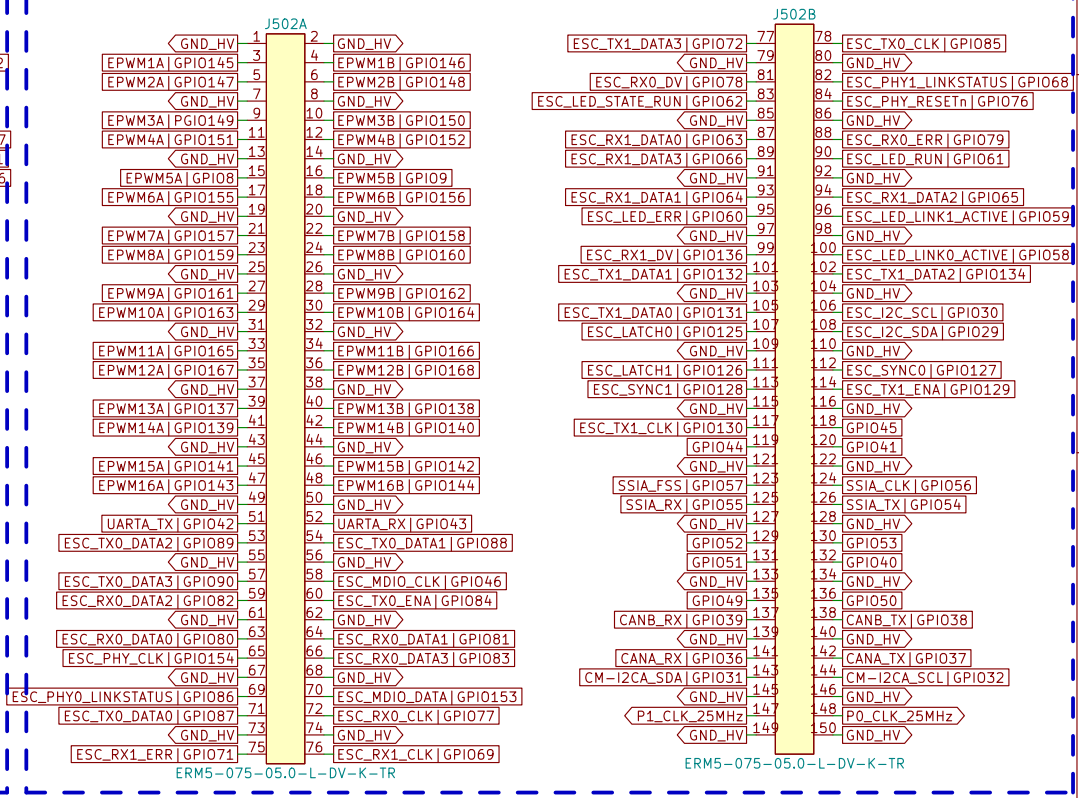
Size: A4	Date:	**Rev:**
KiCad E.D.A. kicad (6.0.2-0)		Id: 4/11

BOTTOM LEFT CONNECTOR



BOTTOM RIGHT CONNECTOR



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File: Connector_Bottom.kicad_sch

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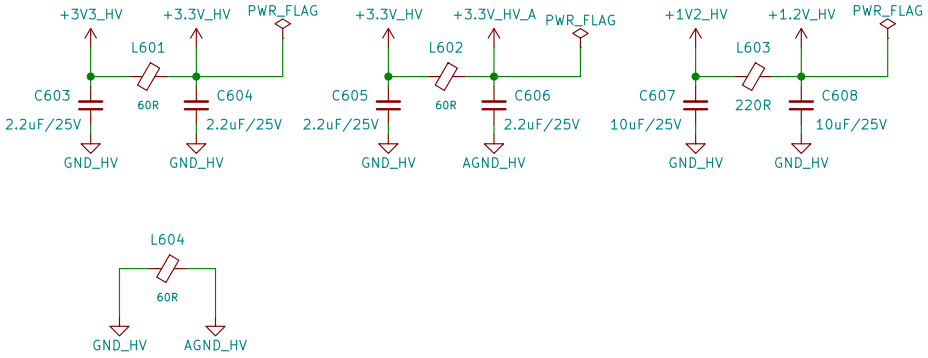
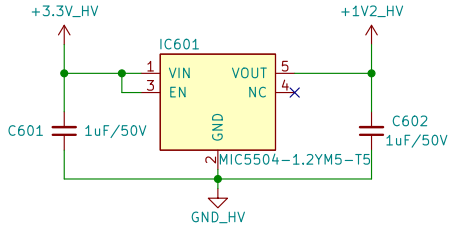
Size: A4	Date:	**Rev:**
KiCad E.D.A. kicad (6.0.2-0)		Id: 5/11

Ferrit Beads



LDO 1.2V for MCU Core



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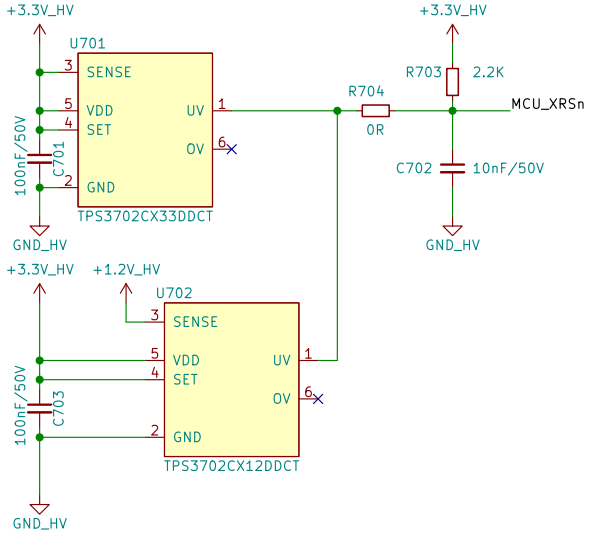
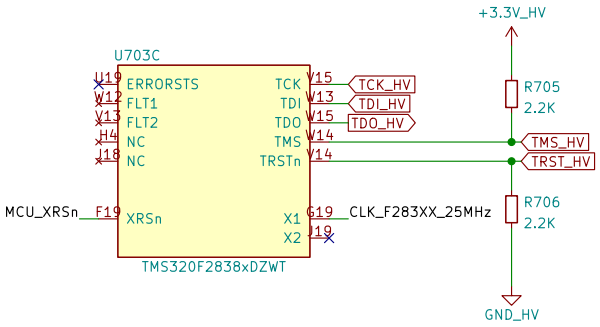
Size: A4	Date:	**Rev:**
KiCad E.D.A. kicad (6.0.2-0)		Id: 6/11

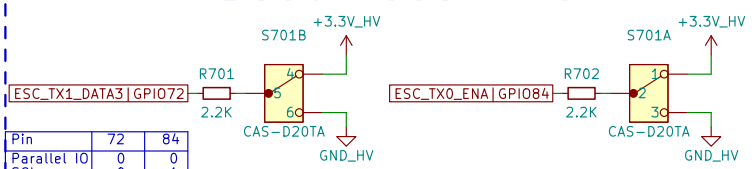
Power Supply Monitor



JTAG, CLK, Reset

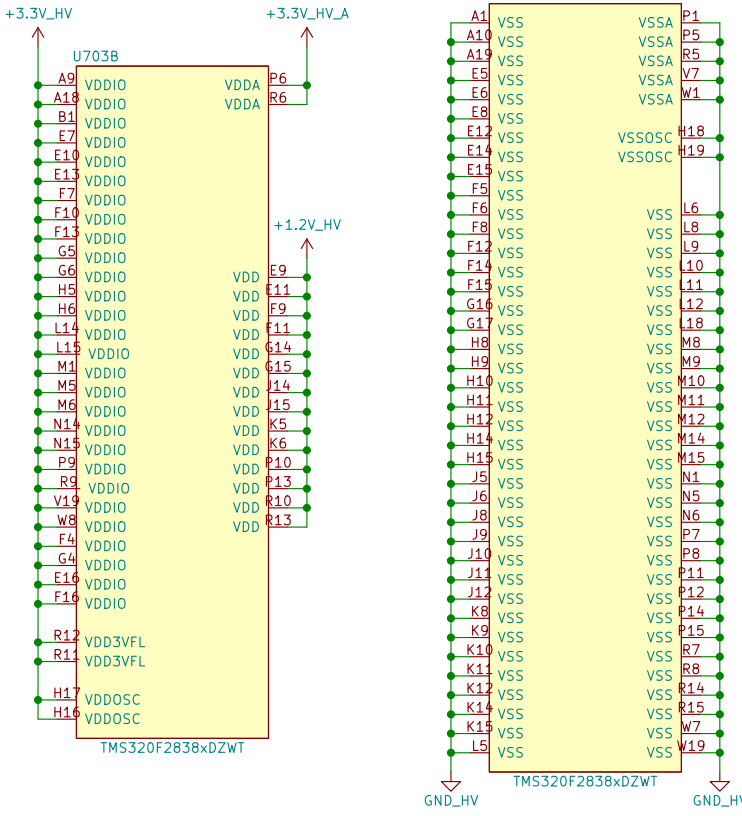


Boot Mode Pins

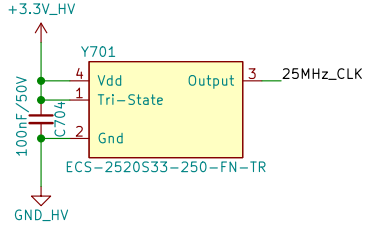


Pin	72	84
Parallel IO	0	0
SCI	0	1
Wait	1	0
Get/Flash	1	1

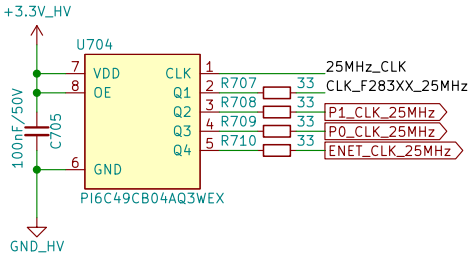
F2838x MCU Supply Pins



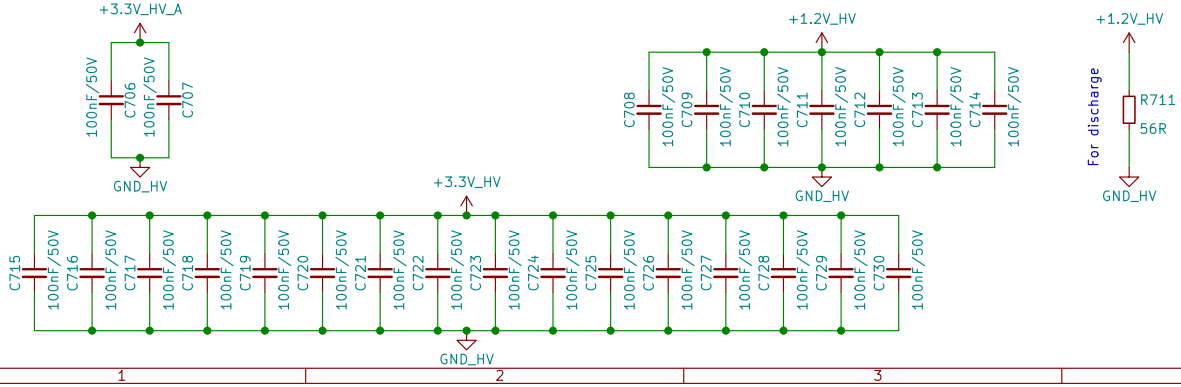
25MHz Clock



Clock Buffer



F2838x MCU Decoupling Capacitors



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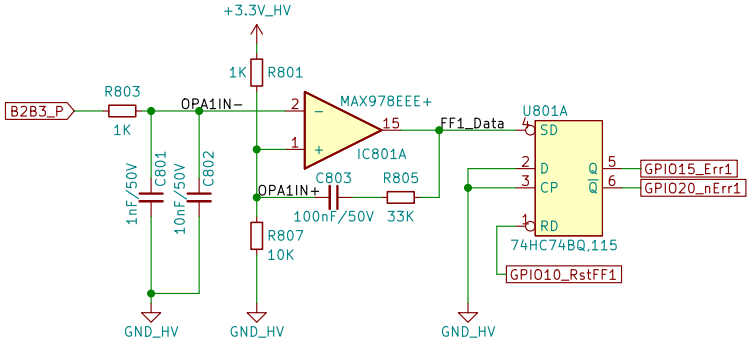
Title:

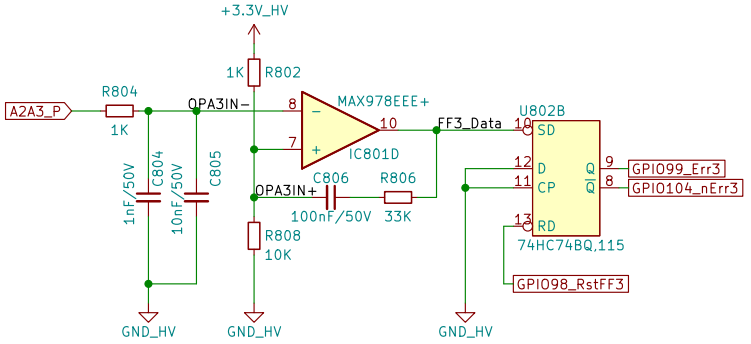
Size: A4 | Date: | **Rev:**

KiCad E.D.A. kicad (6.0.2-0) | Id: 7/11

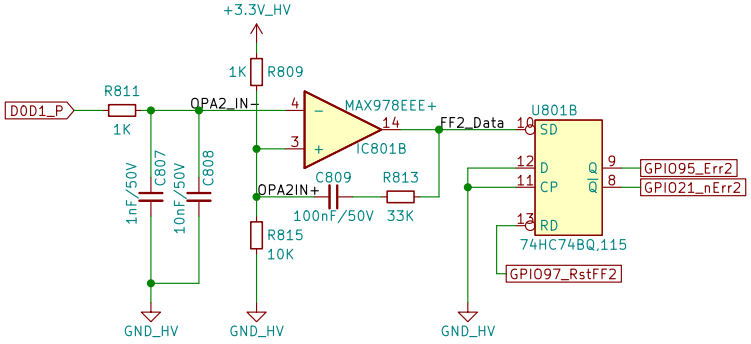
Error1 – B2B3P



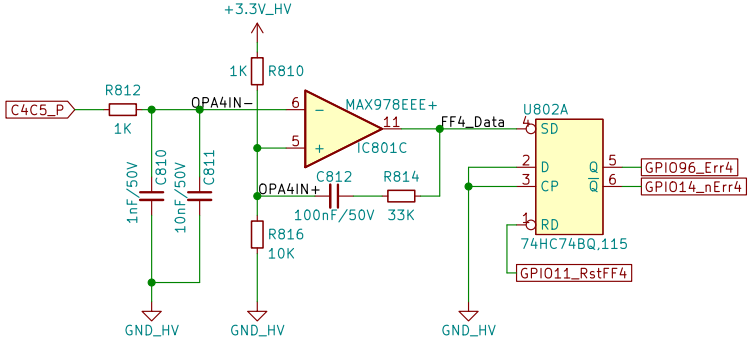
Error3 – A2A3



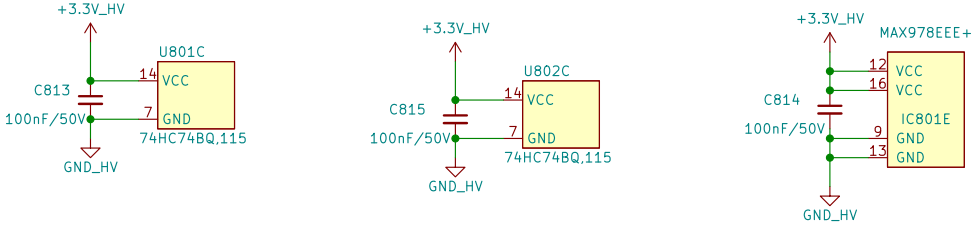
Error2 – D0D1



Error4 – C4C5



Power Supply



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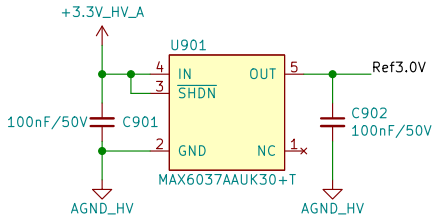
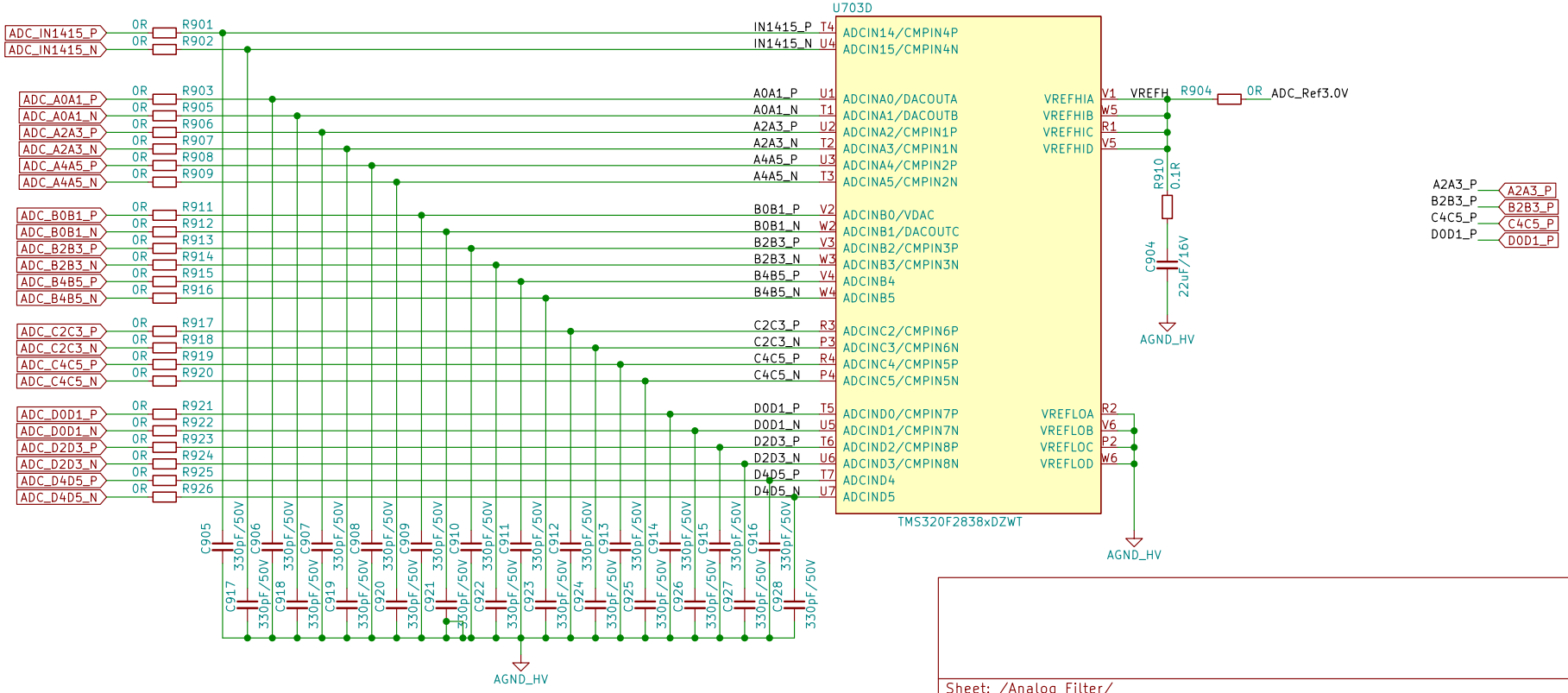
Size: A4	Date:	**Rev:**
KiCad E.D.A. kicad (6.0.2–0)		Id: 8/11

3V Referenz Voltage



3V Referenz Voltage Buffer

Analog Input Filter MCU F2838X



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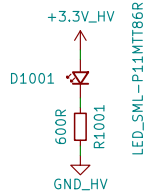
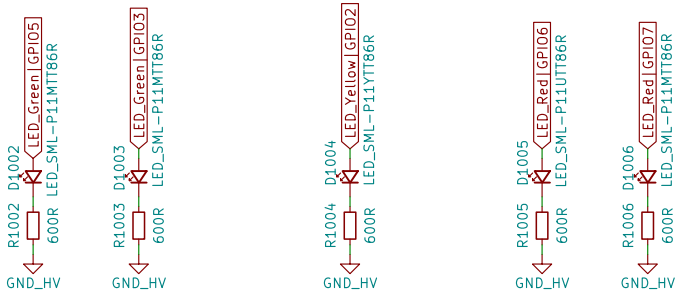
Size: A4	Date:	**Rev:**
KiCad E.D.A. kicad (6.0.2-0)		Id: 9/11

Power LED



Status LEDs



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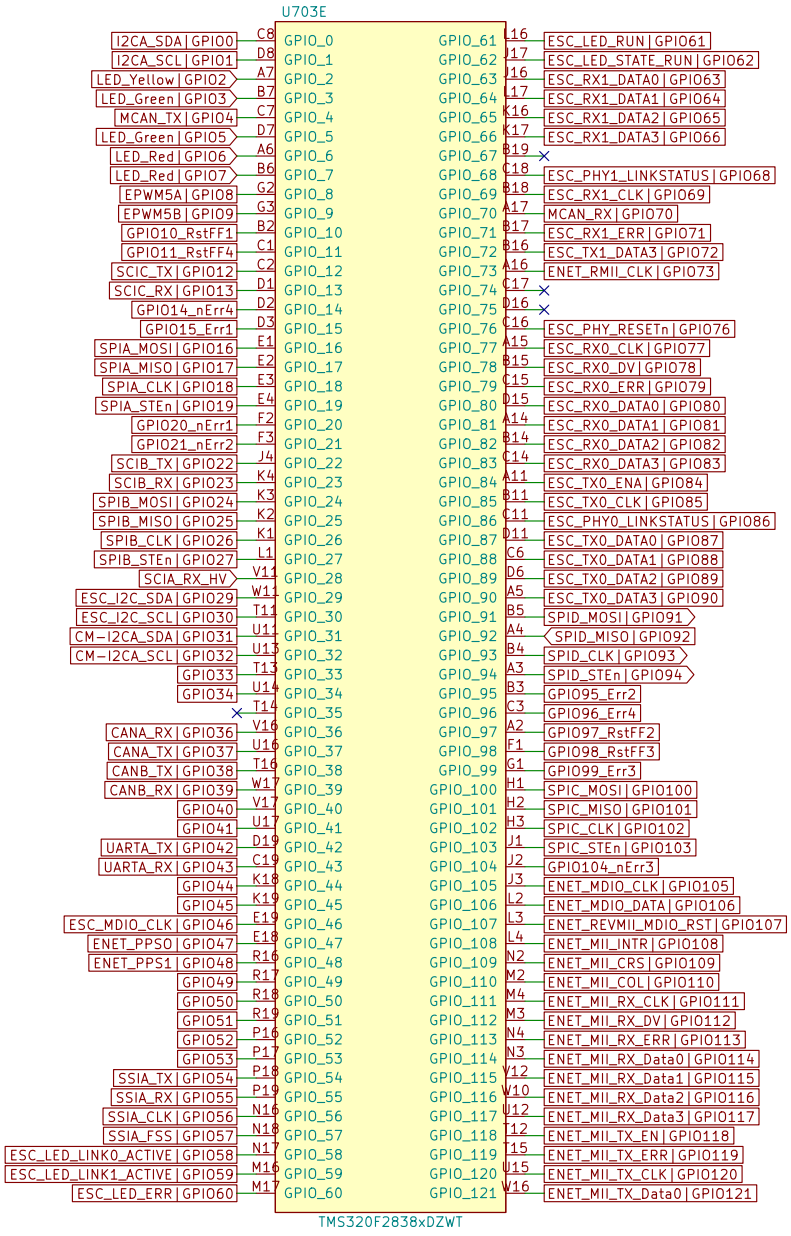
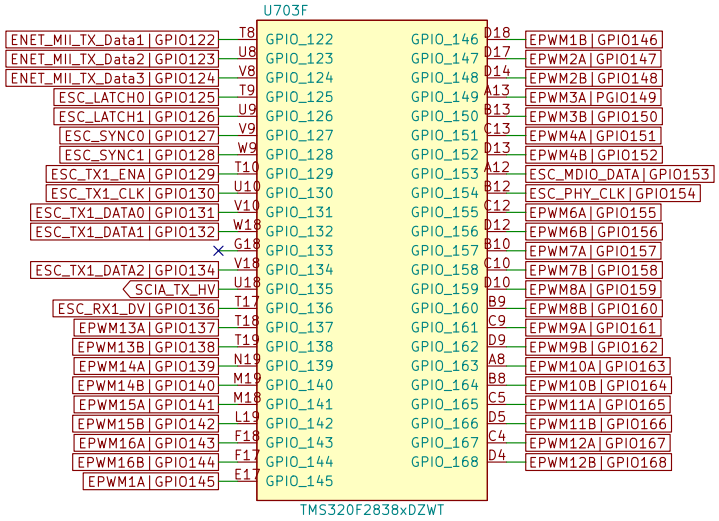
Size: A4	Date:	**Rev:**
KiCad E.D.A. kicad (6.0.2-0)		Id: 10/11

F2838x MCU GPIO configuration





Sheet: /MCU GPIOs/
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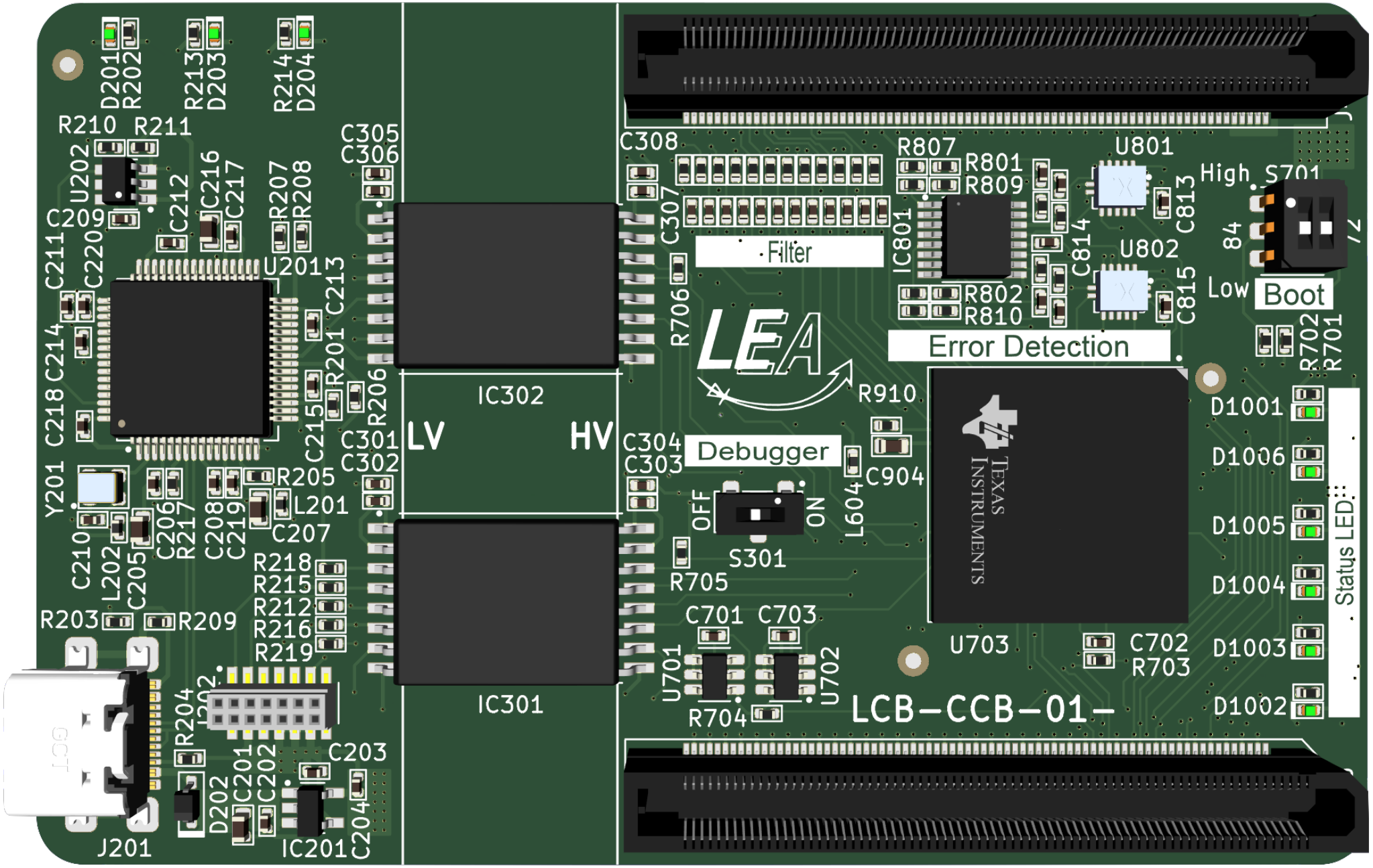
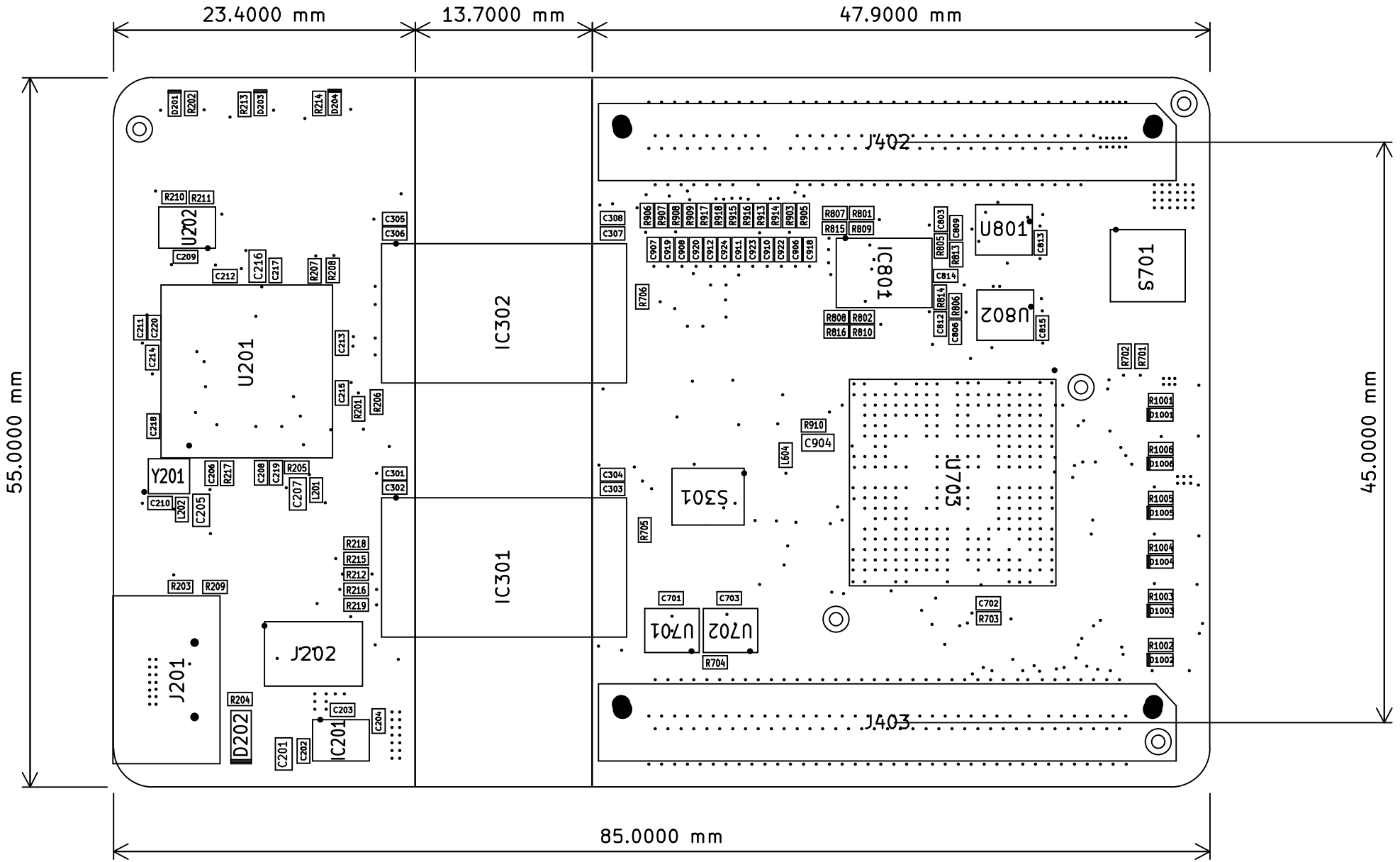
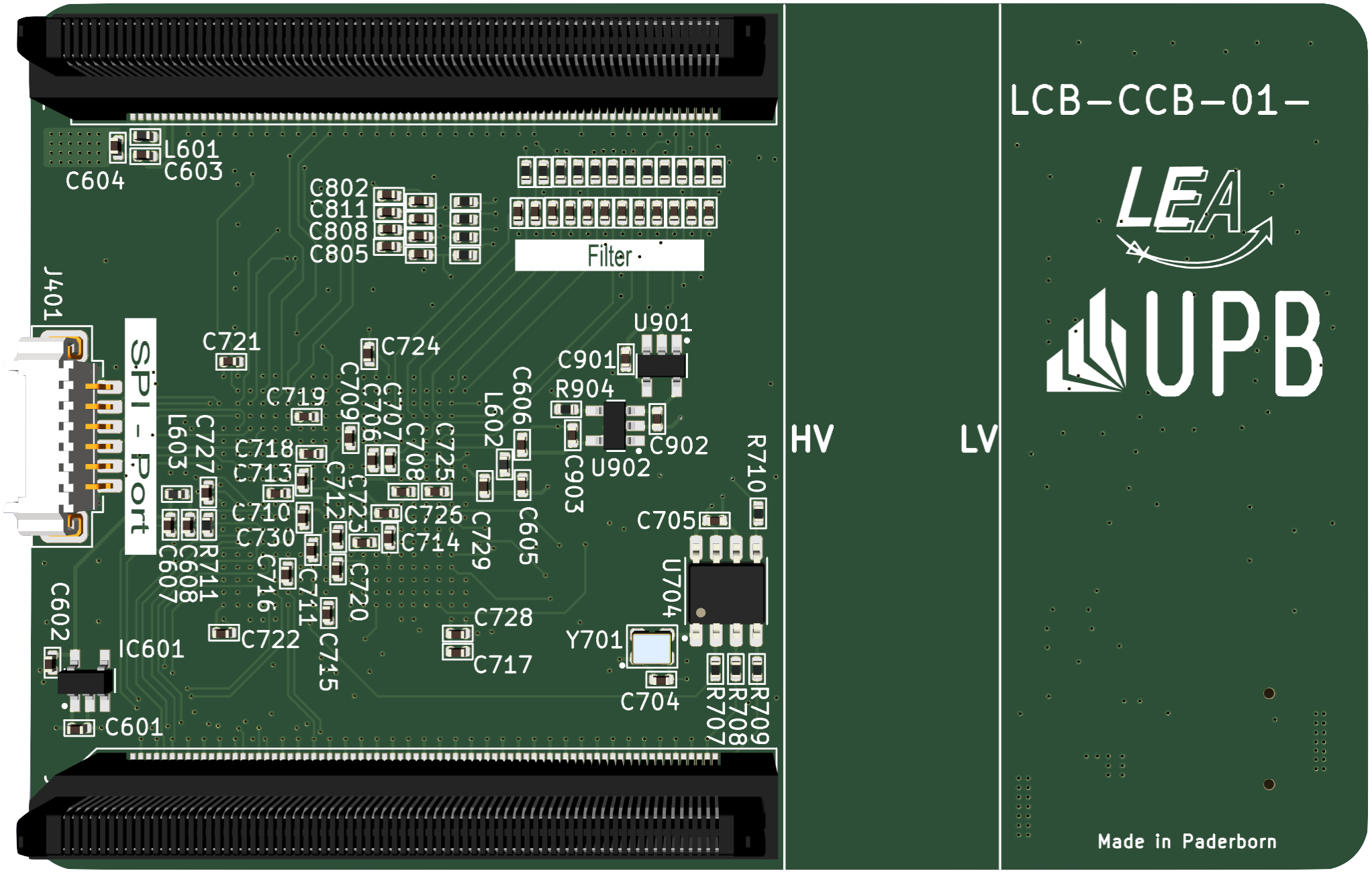
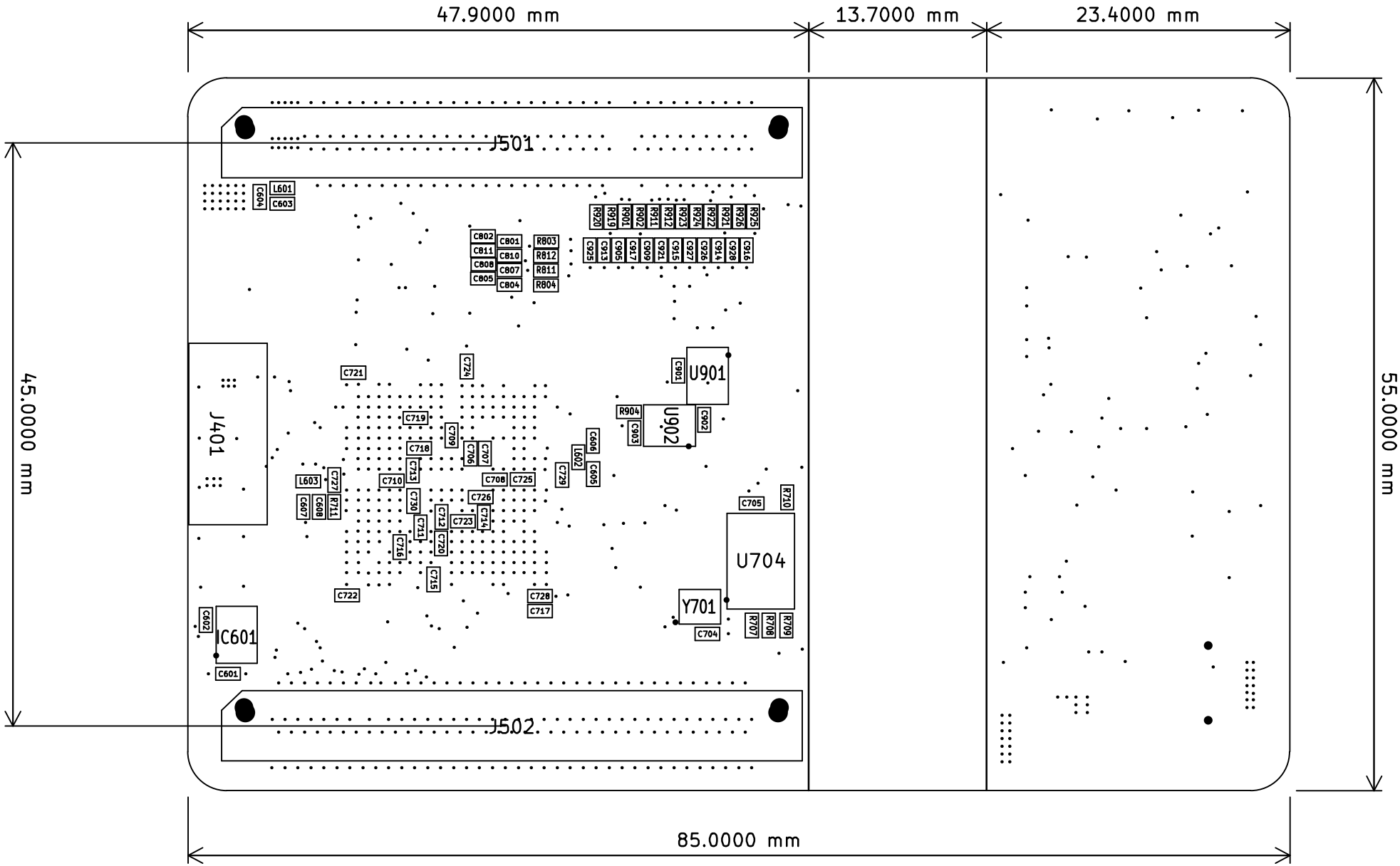
Size: A4	Date:	**Rev:**
KiCad E.D.A. kicad (6.0.2-0)		Id: 11/11


LV
HV
IC302
IC301
LEA
Filter
Debugger
Error Detection
Boot
High
Low
OFF
ON
S301
S701
U703
LCB-CCB-01-
Status LED:
TEXAS INSTRUMENTS
J201
IC201


23.4000 mm
13.7000 mm
47.9000 mm
55.0000 mm
45.0000 mm
85.0000 mm
J402
J403
U202
U201
IC302
IC301
U801
IC801
U802
S701
U703
S301
J201
J202
D202
IC201
U701
U702
Y201


LCB-CCB-01-
LEA
UPB
Made in Paderborn
HV
LV
Filter
SPI - Port
J401
L601
C603
C604
C802
C811
C808
C805
C721
C724
C719
C709
C706
C707
C708
C725
C718
C713
C712
C723
C726
C714
C710
C730
C716
C711
C720
C715
C722
C727
L603
C607
C608
R711
C602
IC601
C601
C728
C717
C729
L602
C606
C605
U901
C901
R904
C902
U902
C903
C705
U704
R710
Y701
C704
R707
R708
R709


47.9000 mm
13.7000 mm
23.4000 mm
45.0000 mm
55.0000 mm
85.0000 mm
J501
J502
J401
U901
U902
U704
IC601
Y701