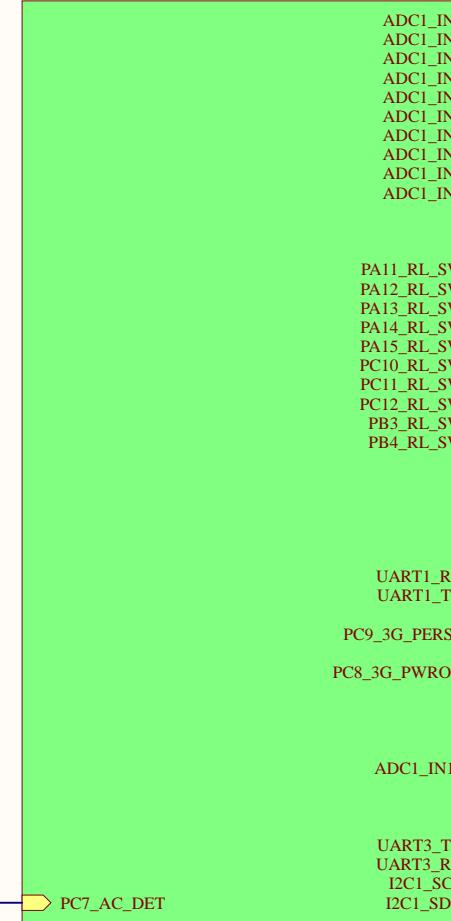
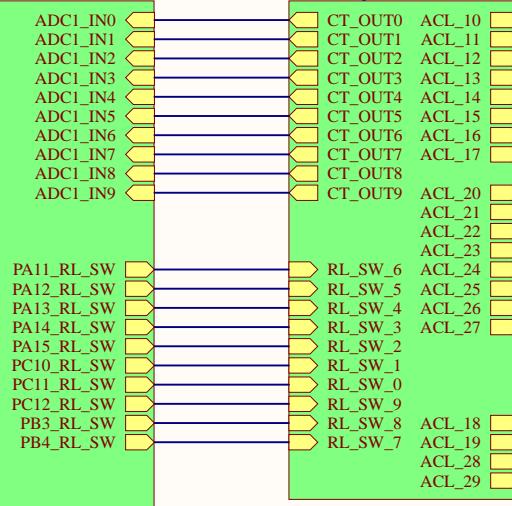
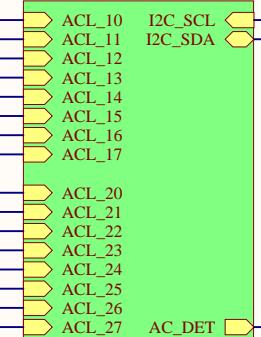
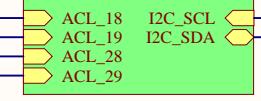
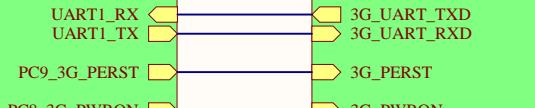
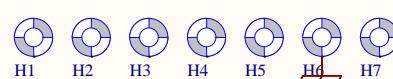
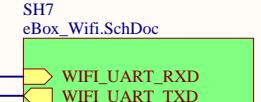
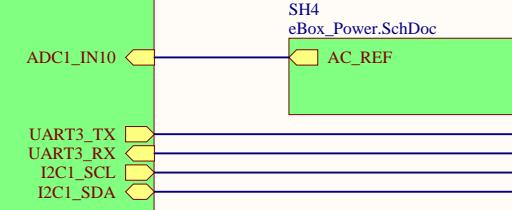
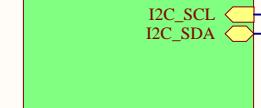


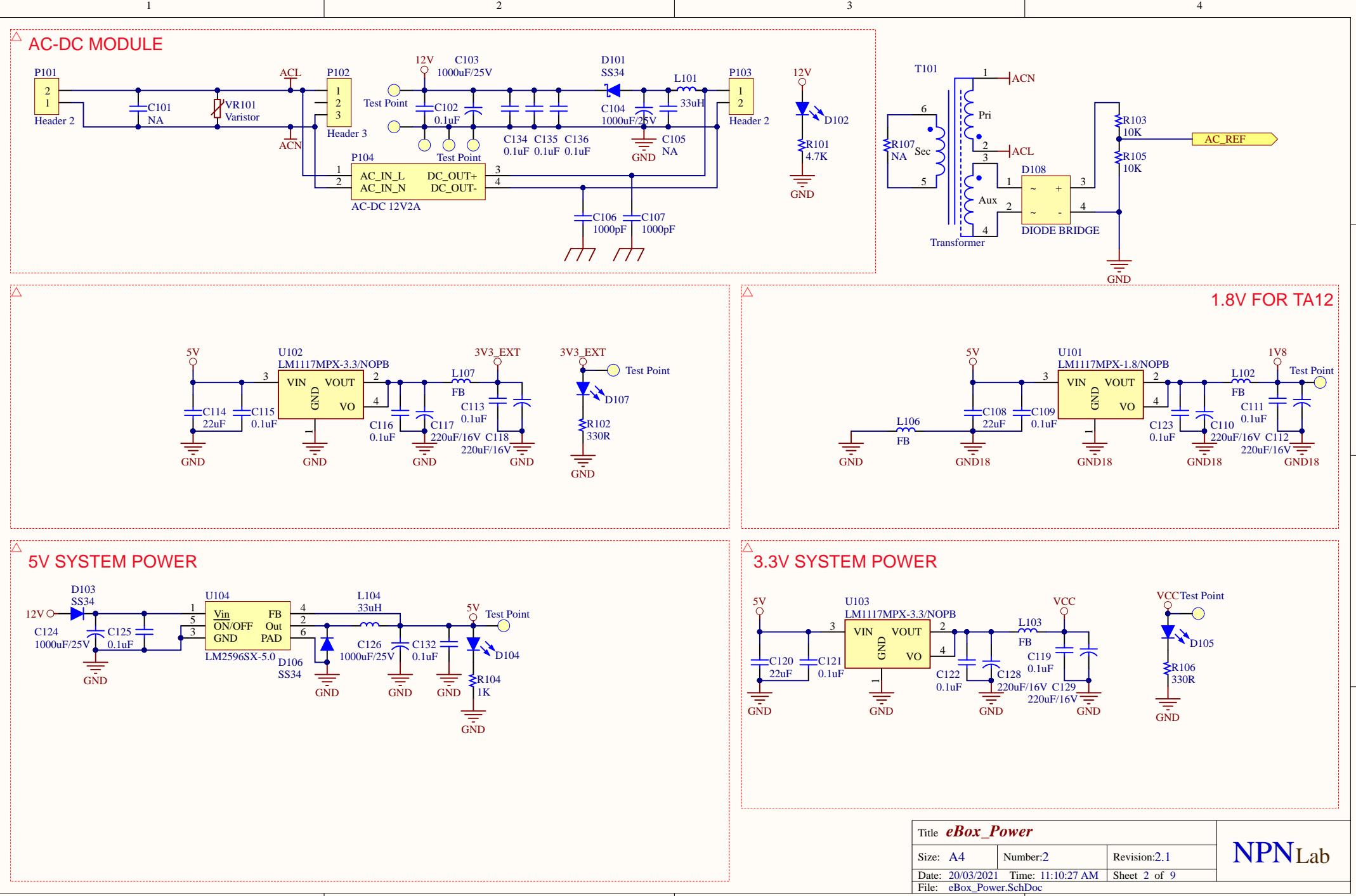
**History**

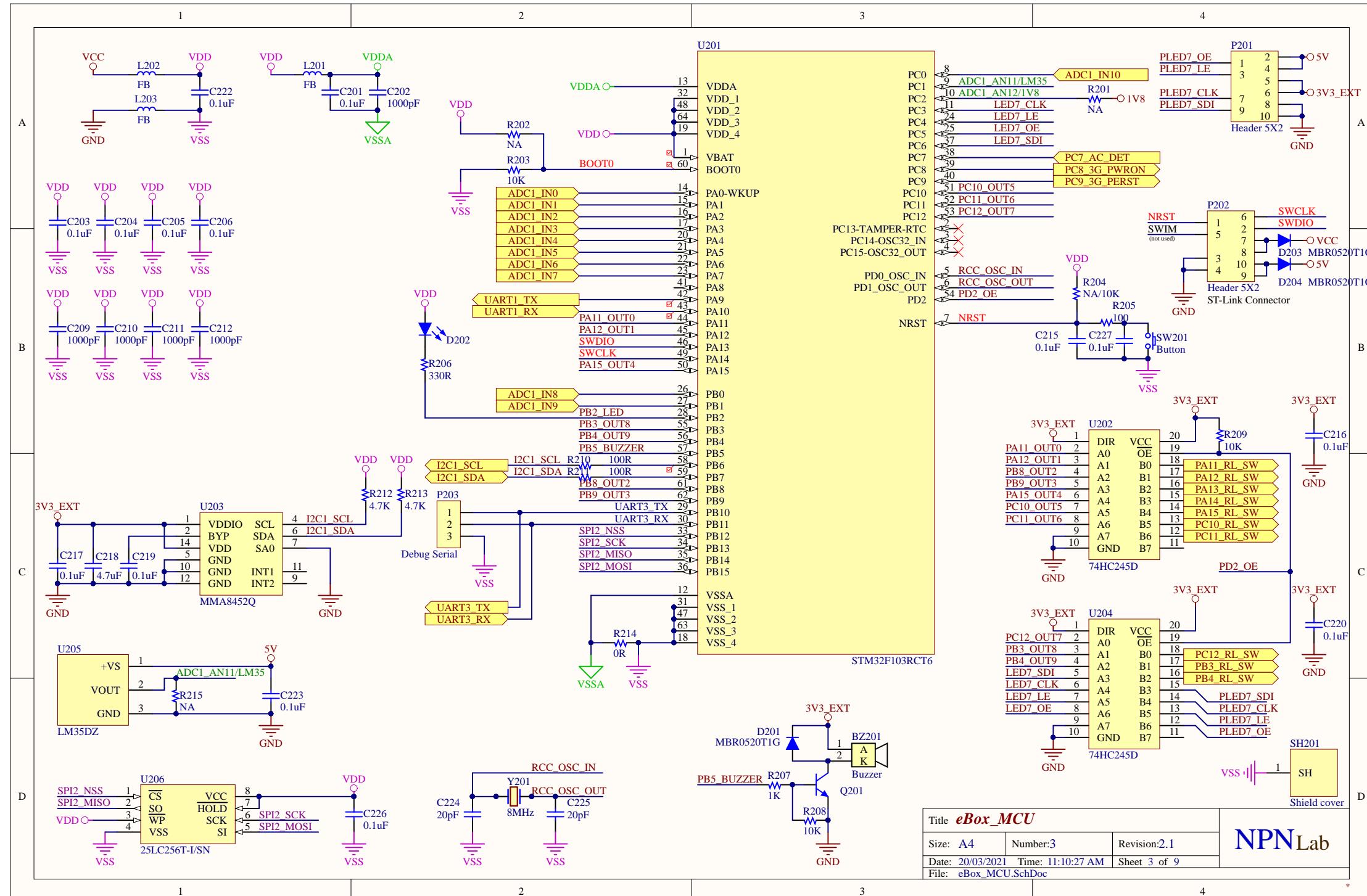
Date (d/m/y)	Version	Note
02/12/2019	0.1	Draft version
04/12/2019	0.2	- Add resistors for CTs - Add 1.8V power for CTs - Add buffer ICs for MCU - Replace single transistors by darlington transistors array. - Fixbug
07/12/2019	0.3	- Add LED signal for relay - Change CTs - Add feedback signals from AC ports - Add WAKE-UP pin for 3G module
09/12/2019	0.4	- Add Buzzer - Add PCB document - Fixbug
12/12/2019	0.5	[x] Thêm chân nạp cho STM32 [x] Chính số cho nguồn 3G (R1,R2) hoặc recommend cái nào thì tò dậm [x] Thêm test point cho máy chở nguồn 12v, 3v3, 1v8 [x] Đèn led blink trạng thái chân B2 [x] Sim 5320 cũng ra hàng rào hoặc test point uart để test
24/12/2019	0.6	- Add PCB layout
29/12/2019	0.7	- Fix bug
27/02/2020	1.0	-
25/05/2020	2.0	- Pre-mass production (20 pcs)
12/03/2021	2.1	- Keep CTs 1 to 8 is 5A the same, the others change to 10A - Add wifi modules ESP-01 and ESP-05. Just use only one, the other for backup. - Bigger screw hole for more easy assembly - Fix the transformer footprint

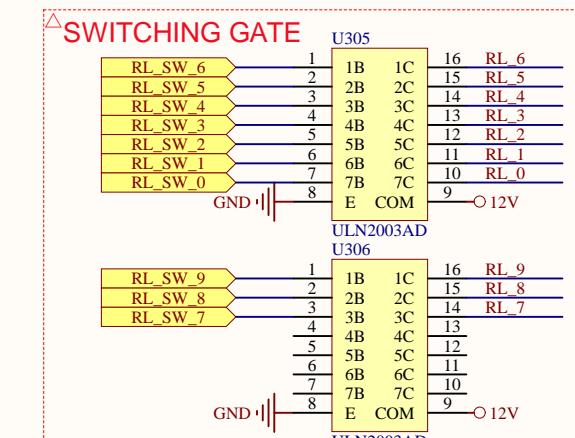
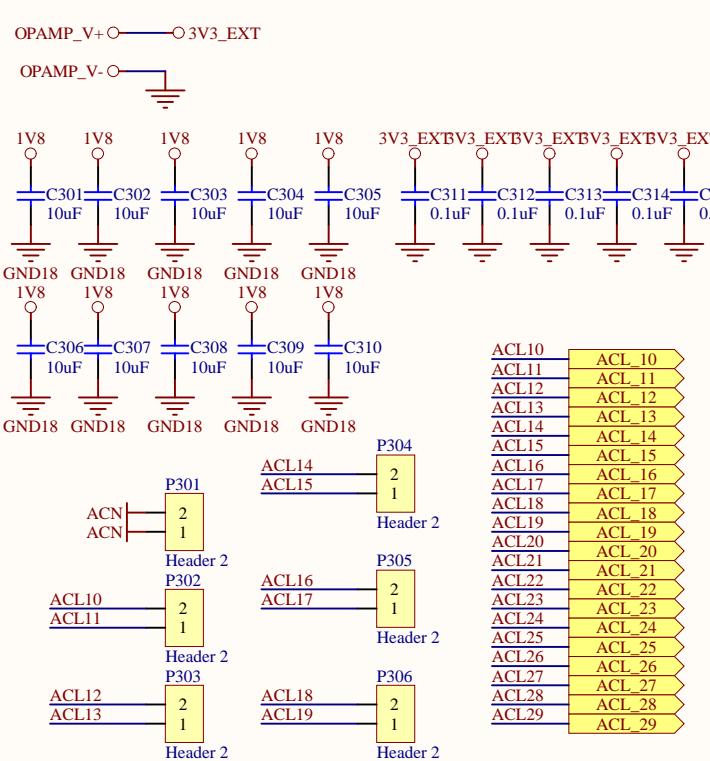
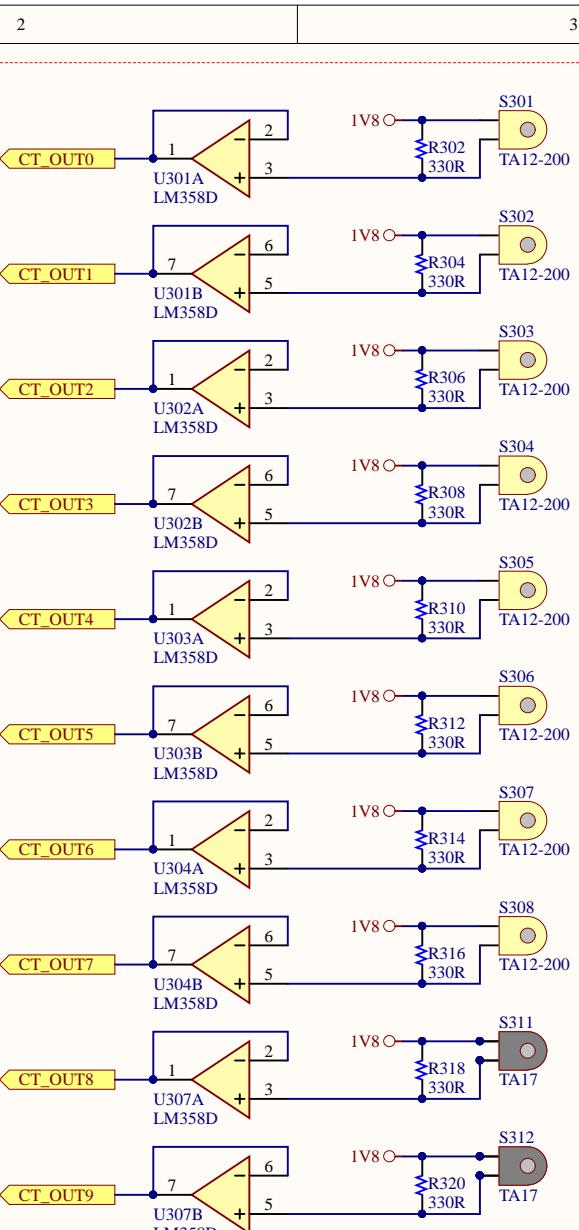
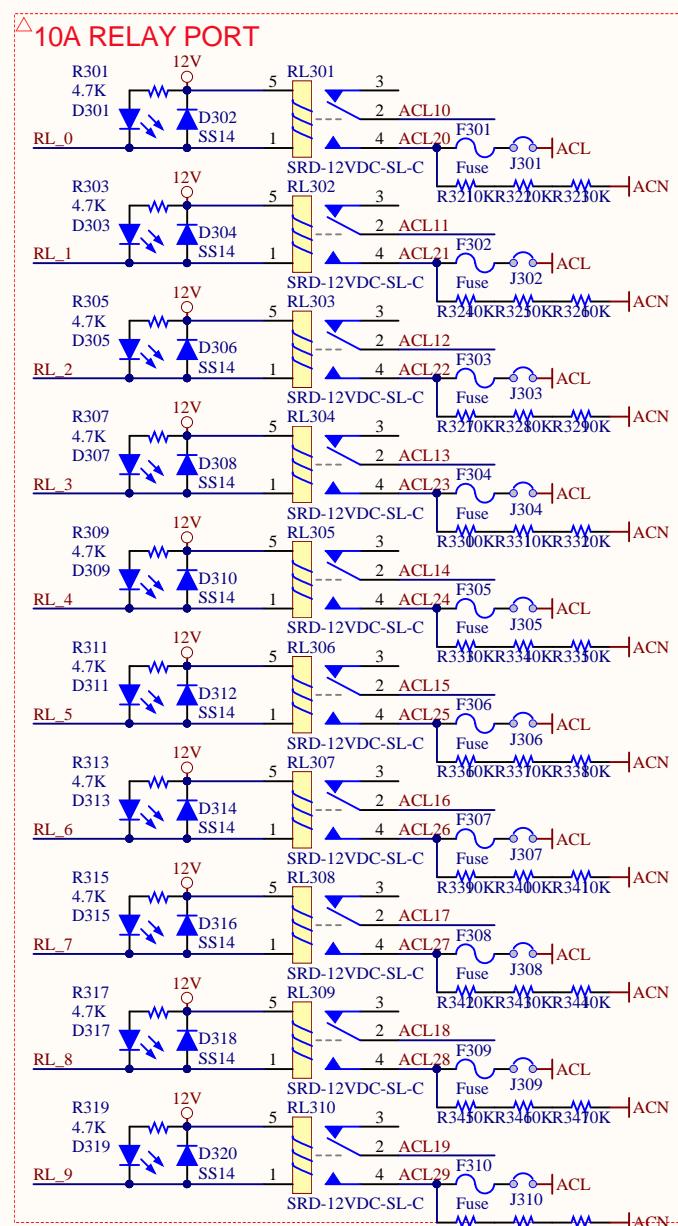
SH1  
eBox\_MCU.SchDocSH2  
eBox\_Peripherals.SchDocSH5  
eBox\_ACdetect.SchDocSH6  
eBox\_ACdetect2.SchDocSH3  
eBox\_3G.SchDocSH7  
eBox\_LCD.SchDocTitle **eBox\_Notes**

Size: A4	Number: 1	Revision: 2.1
Date: 20/03/2021	Time: 11:10:27 AM	Sheet 1 of 9
File: eBox_Notes.SchDoc		

**NPN Lab**







Title: **eBox\_Peripherals**  
 Size: **A4** Number: **4** Revision: **2.1**  
 Date: **20/03/2021** Time: **11:10:28 AM** Sheet: **4** of **9**  
 File: **eBox\_Peripherals.SchDoc**

**NPN Lab**

A

A

B

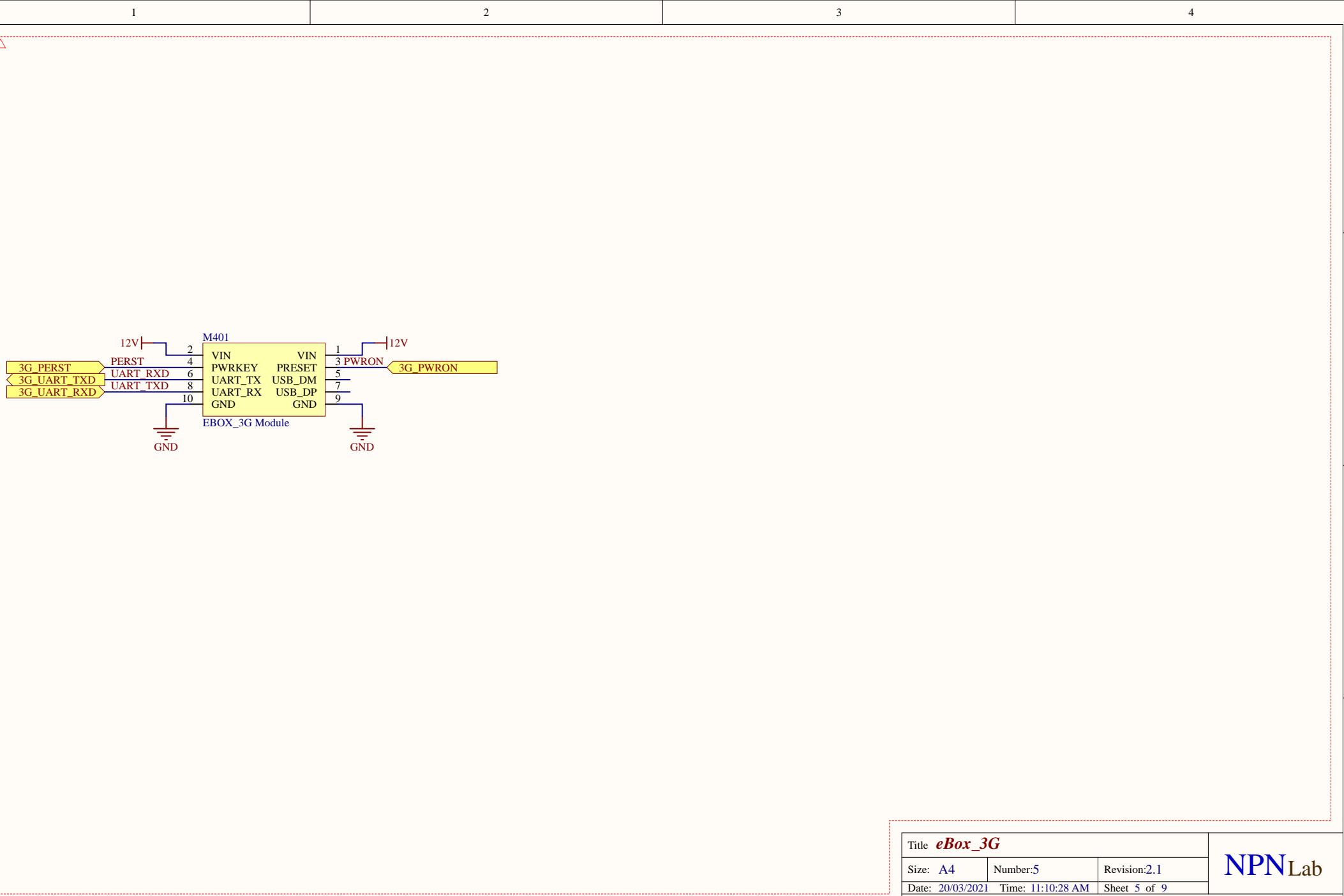
B

C

C

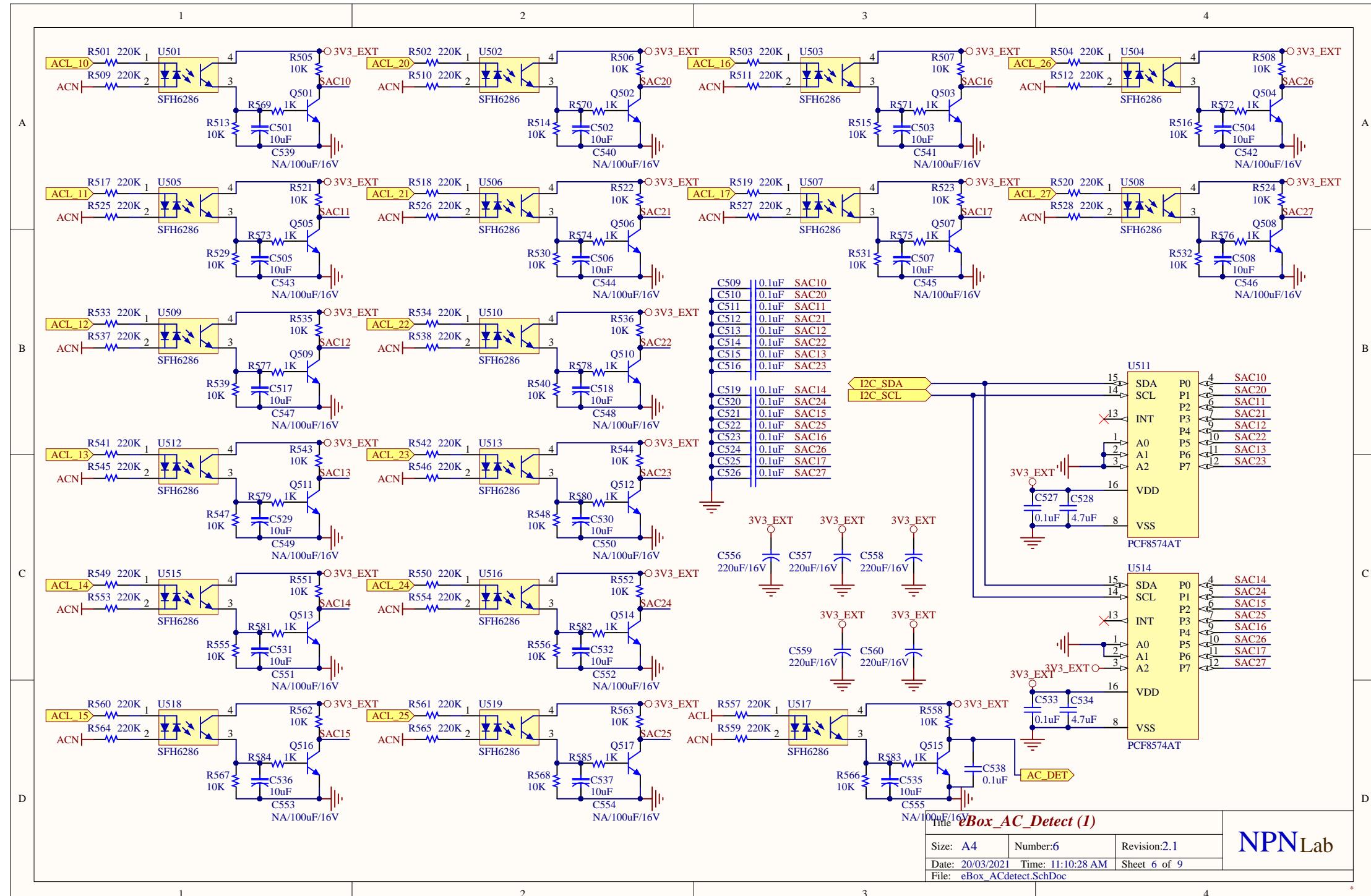
D

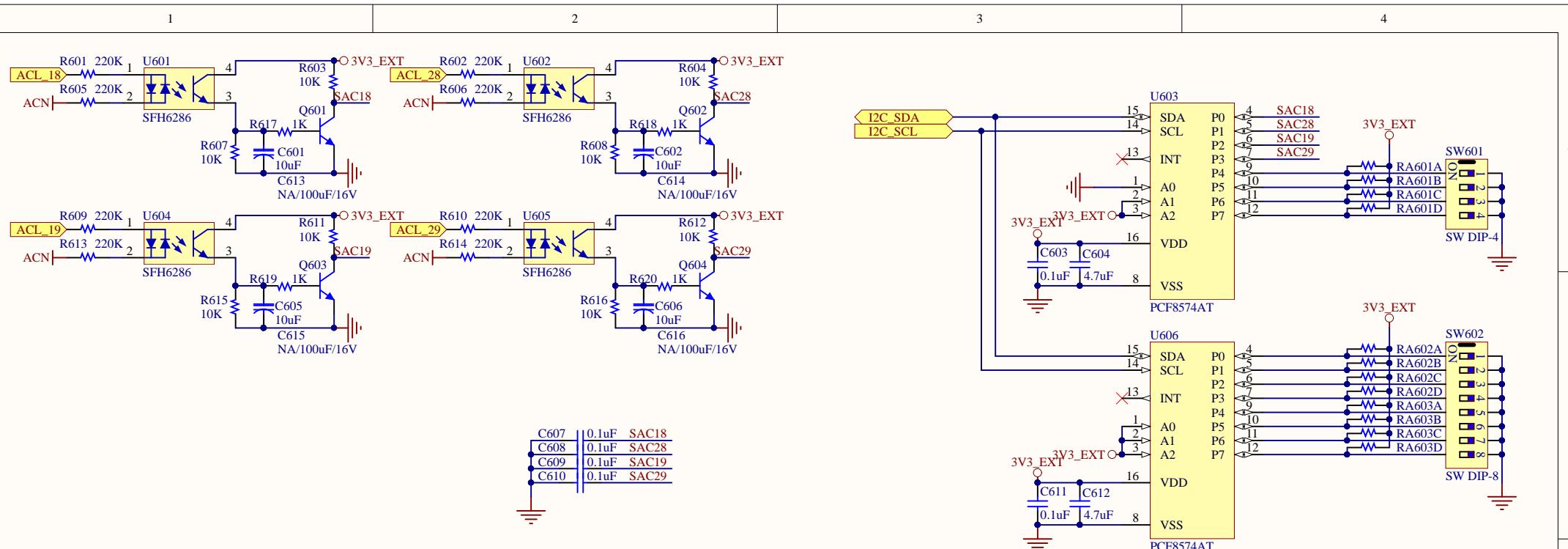
D

Title *eBox\_3G*

Size: A4	Number: 5	Revision: 2.1
Date: 20/03/2021	Time: 11:10:28 AM	Sheet 5 of 9
File: eBox_3G.SchDoc		

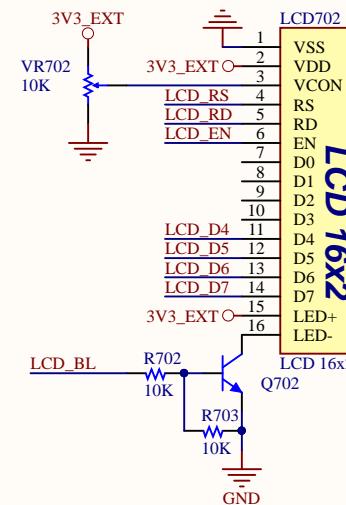
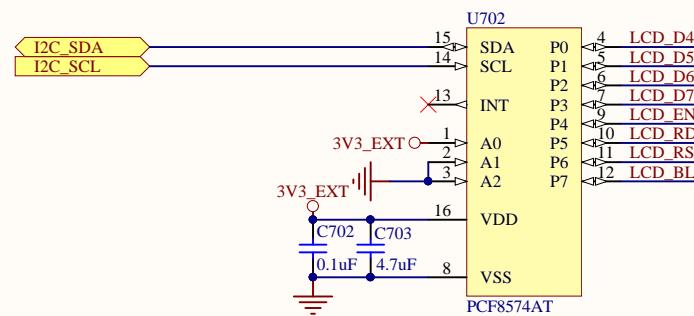
**NPN Lab**





Title <b>eBox_AC_Detect (2)</b>		
Size: A4	Number: 7	Revision: 2.1
Date: 20/03/2021	Time: 11:10:29 AM	Sheet 7 of 9
File: eBox_ACdetect2.SchDoc		

**NPN Lab**

Title **eBox\_LCD**

Size: A4	Number: 8	Revision: 2.1
Date: 20/03/2021	Time: 11:10:29 AM	Sheet 8 of 9
File: eBox_LCD.SchDoc		*

**NPN Lab**

A

A

B

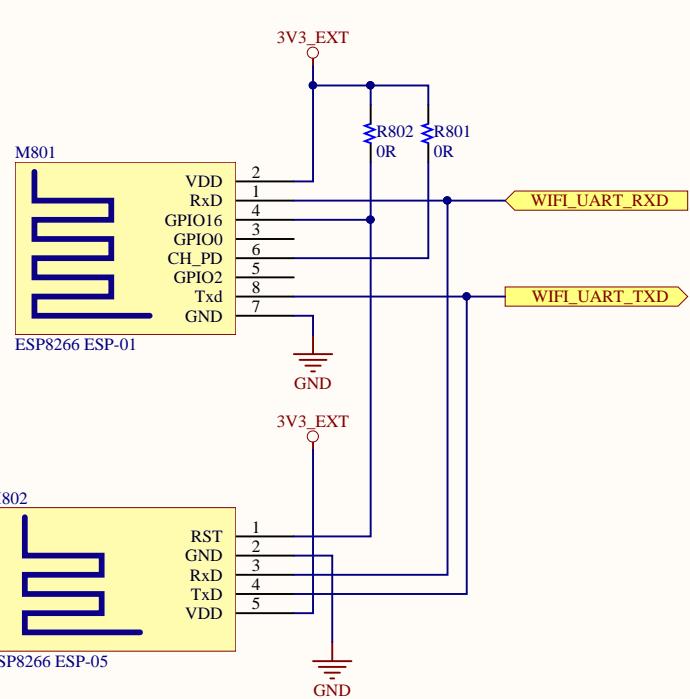
B

C

C

D

D

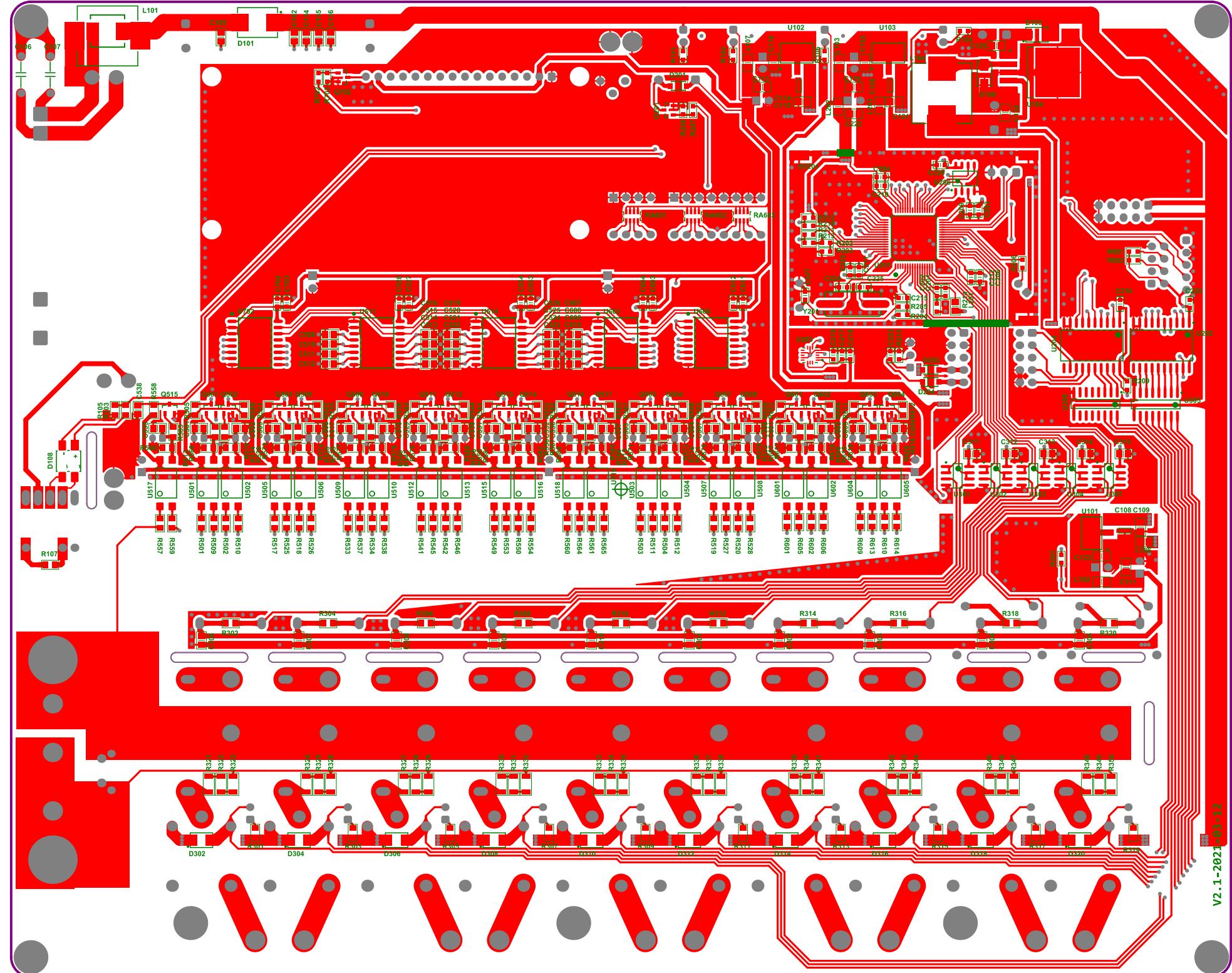


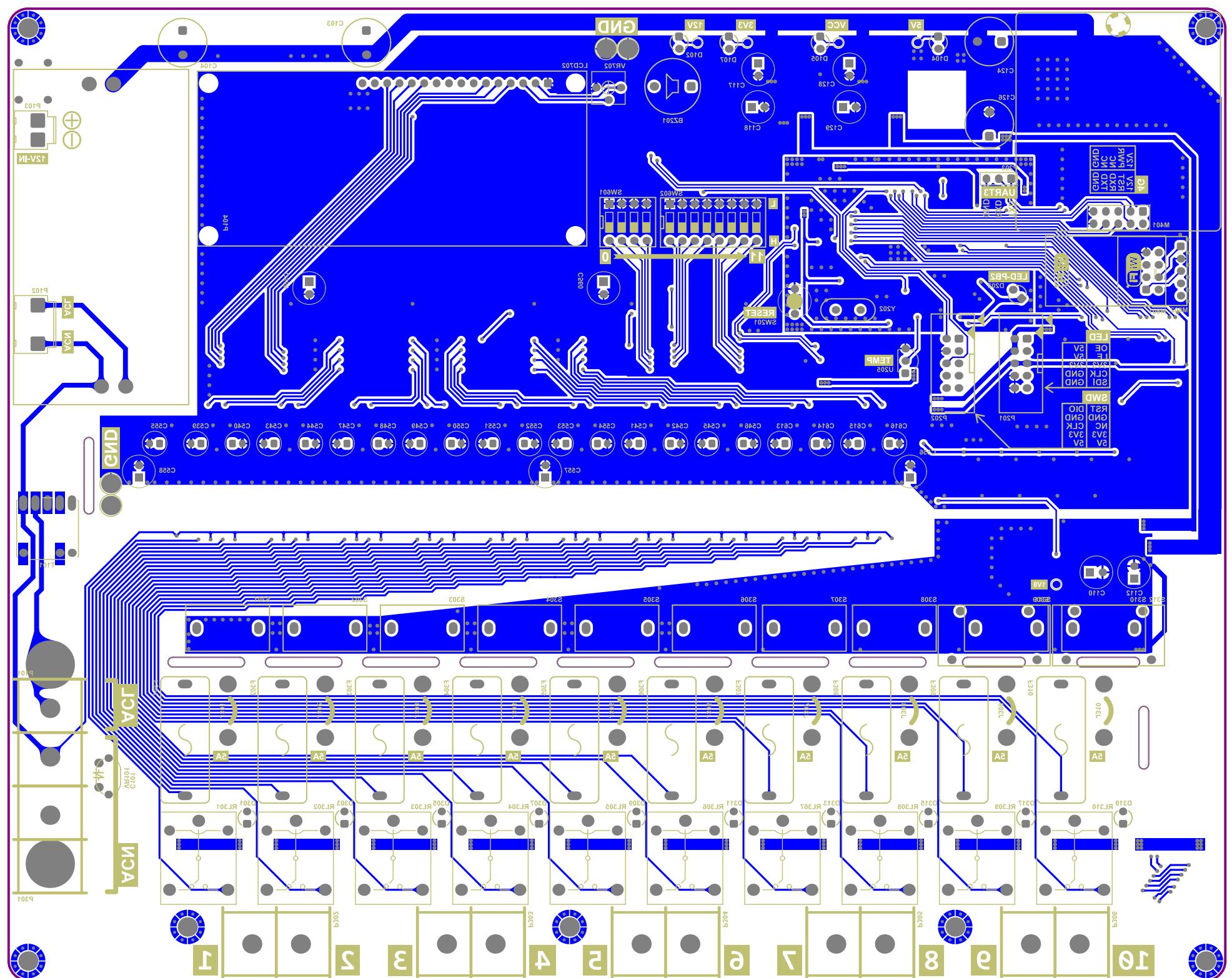
3V3\_EXT

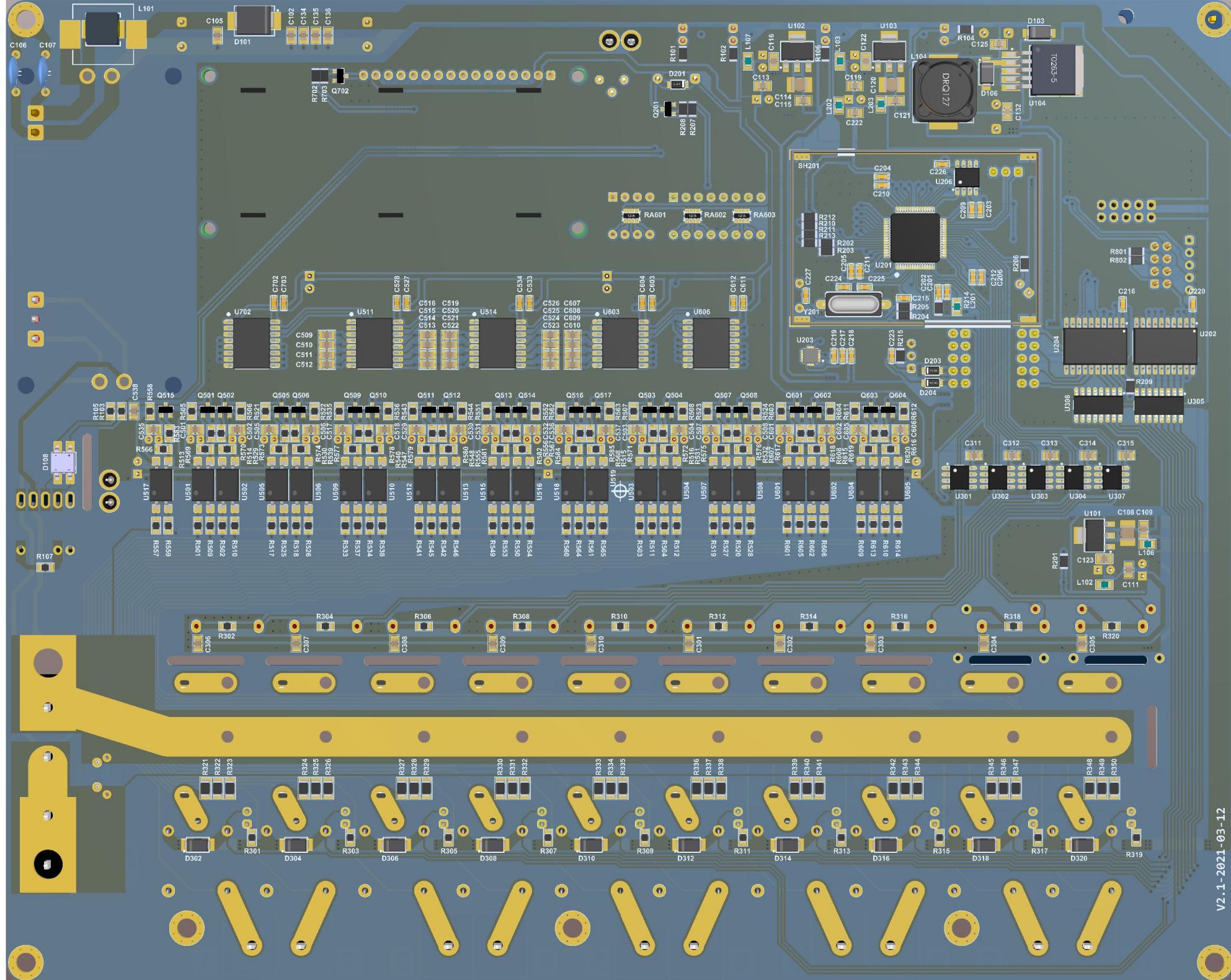
Title **eBox\_3G**

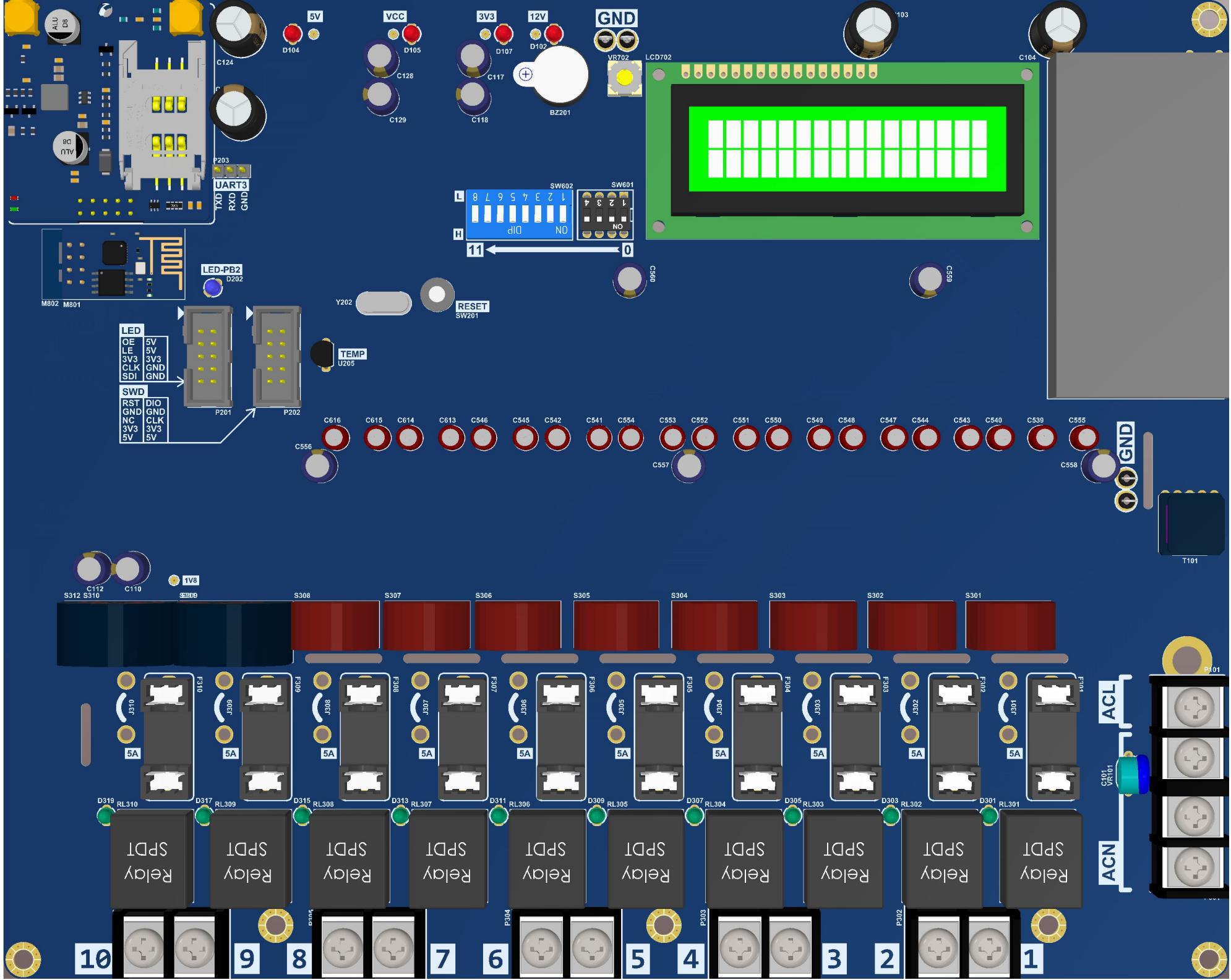
Size: A4	Number: 9	Revision: 2.1
Date: 20/03/2021	Time: 11:10:29 AM	Sheet 9 of 9
File: eBox_Wifi.SchDoc		

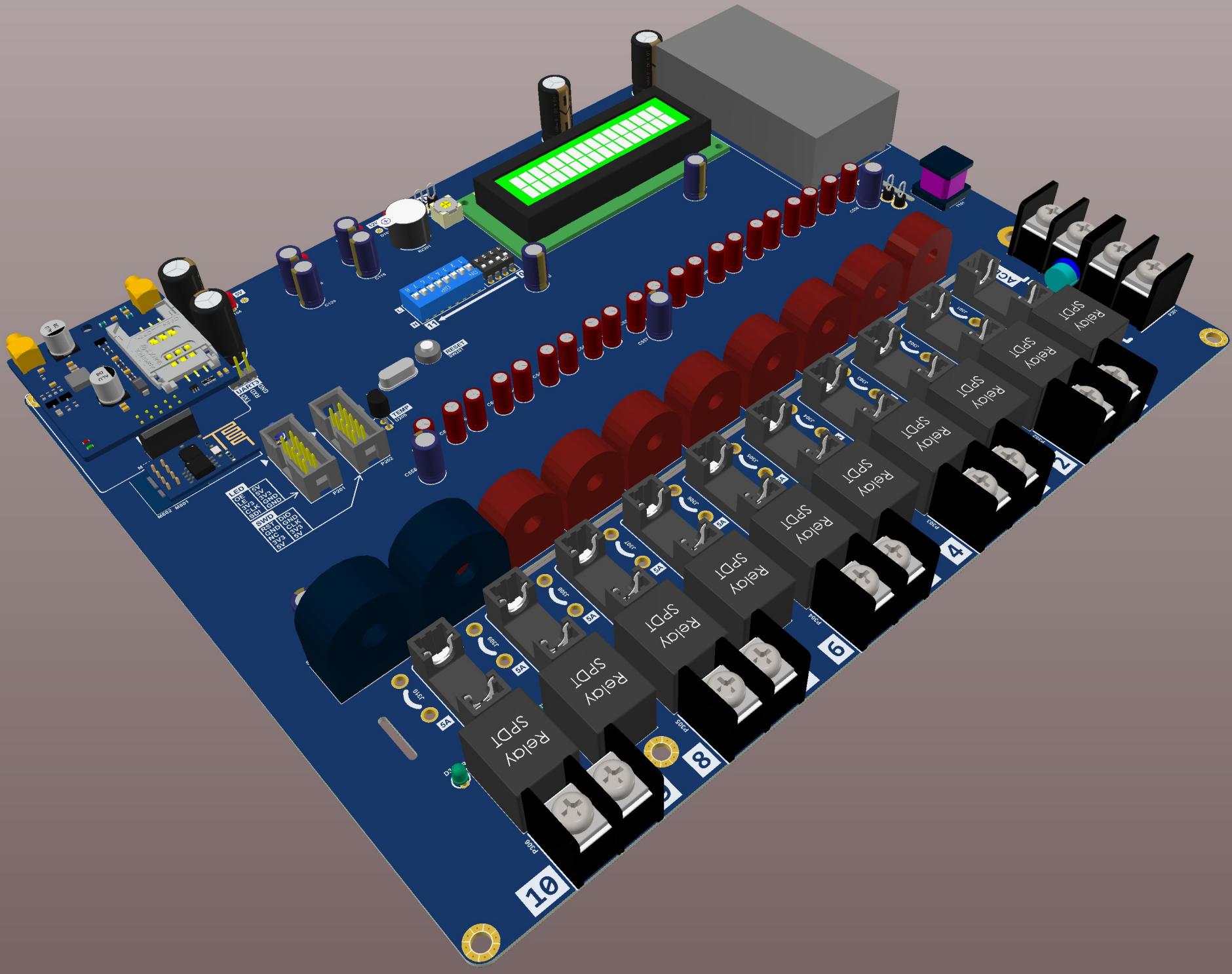
**NPN Lab**

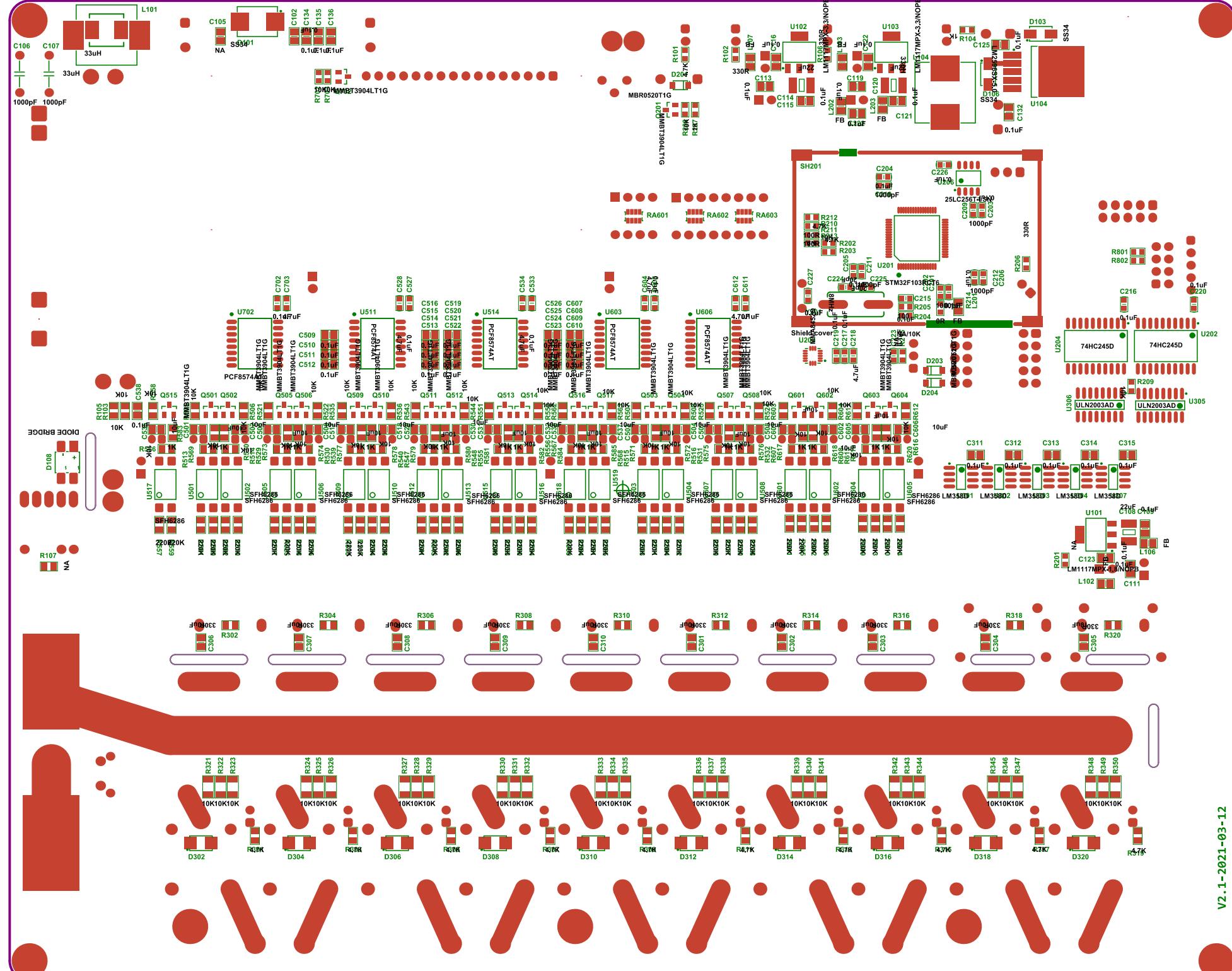












V2.1-2021-03-12

