

module type differences:

sheet "uC"	section "outputs"	section "inputs"	R302	R303
Typ	yes	yes	yes	yes
PiDIO	yes	no	no	yes
PiDI	no	yes	yes	no

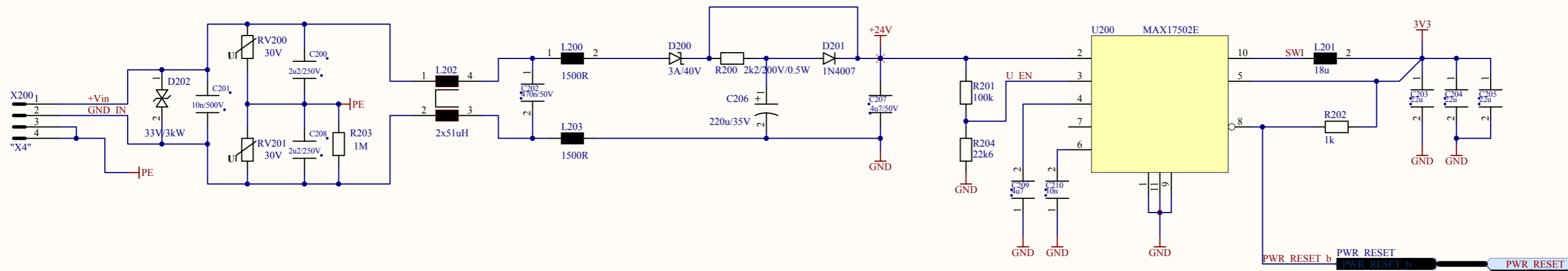
sheet "input"	R617	R618
Typ	no	no
PiDIO	yes	yes
PiDI	all parts on this sheet are not to be placed!	

sheet "InOut"	R800	R801	R802	R803
Typ	yes	yes	no	no
PiDIO	no	no	no	no
PiDI	yes	yes	yes	yes

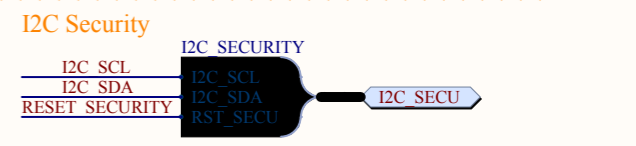
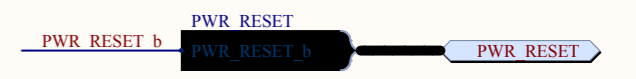
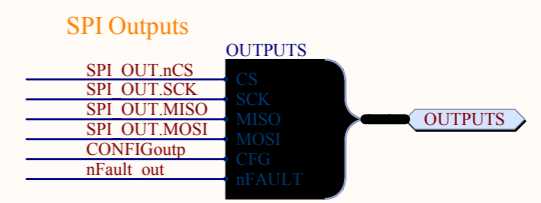
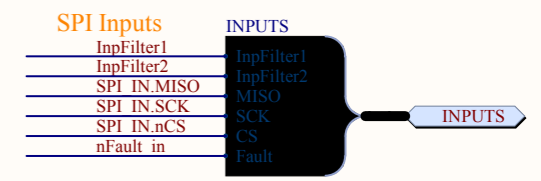
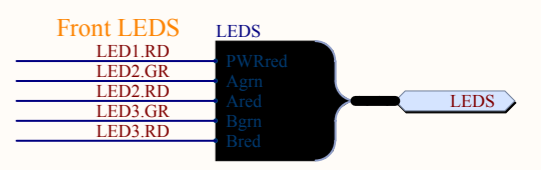
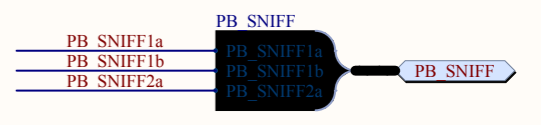
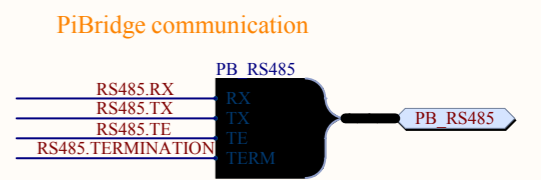
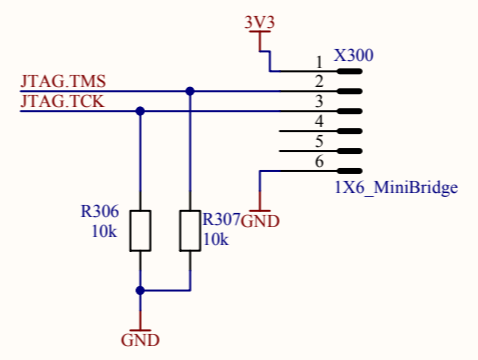
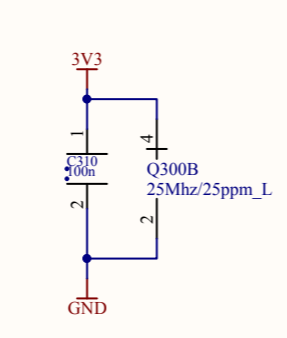
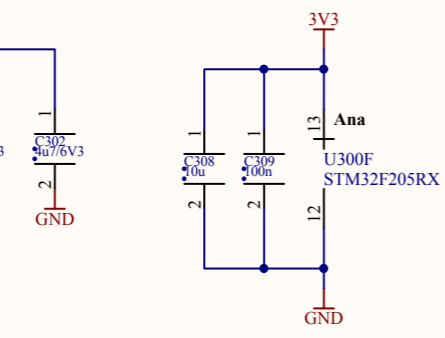
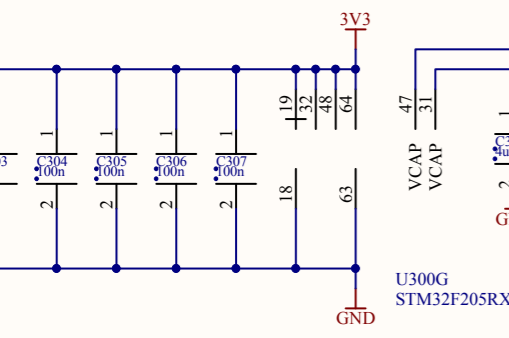
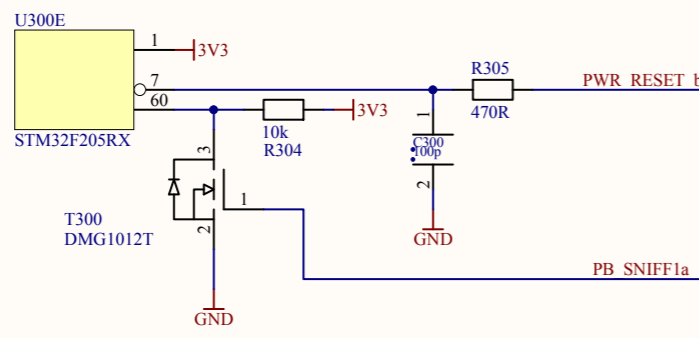
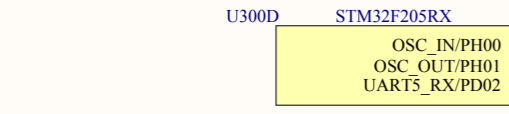
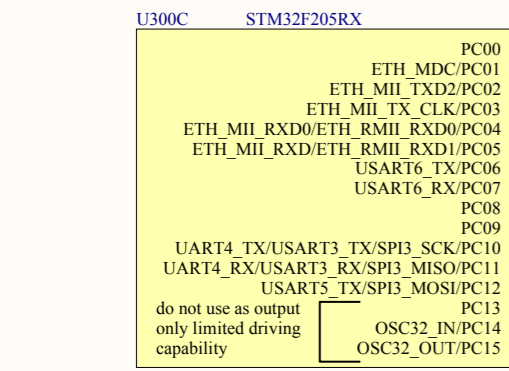
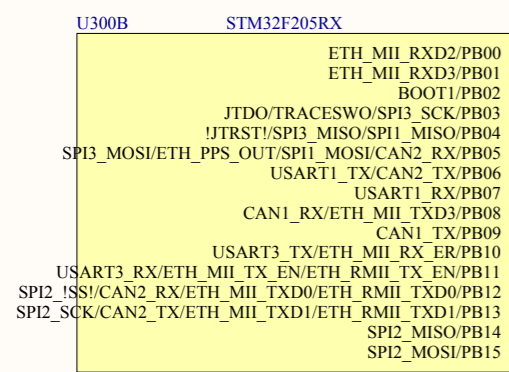
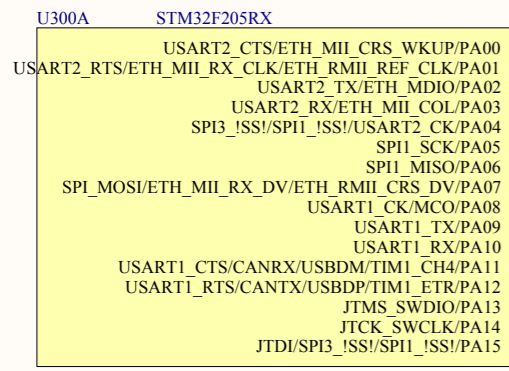
sheet "output"
for PiDI all parts on this sheet are not to be placed!



Project	LP0135 RevPi Dio.PrjPCB	Title	Overview
Author:	VdH	approved by:	*
Size:	A3	Number:	LP0135R03
Date:	14.02.2017	Time:	22:20:23
File:	overview.SchDoc	Revision:	03
			Sheet 1 of 9

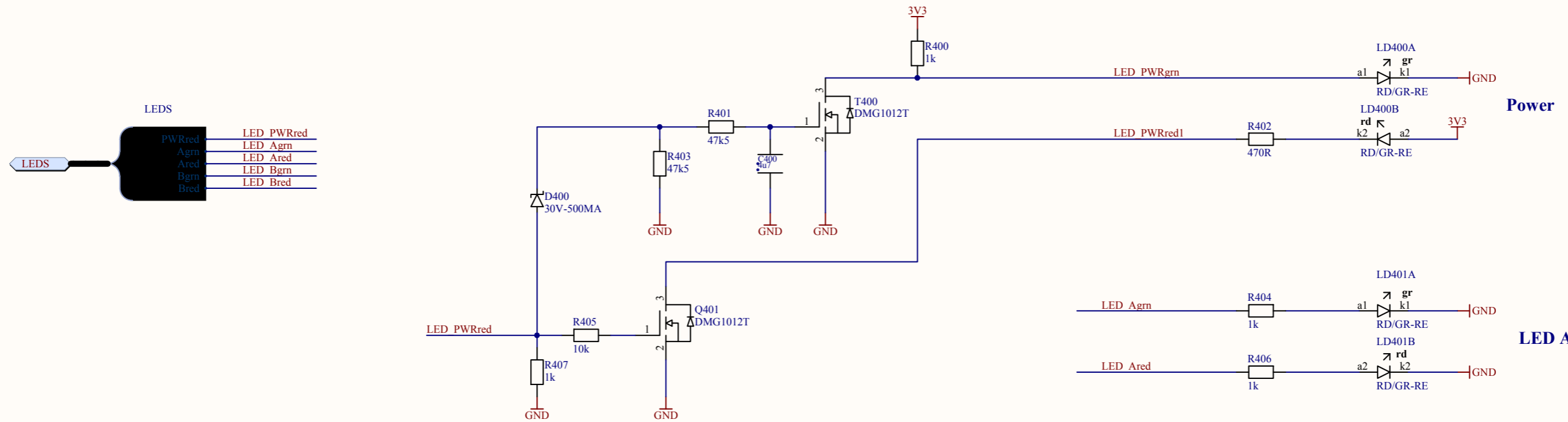


Project	LP0135_RevPi_Dio.PrjPCB	Title	Powersupply
Author:	VdH	approved by:	*
Size:	A3	Number:	LP0135R03
Date:	14.02.2017	Time:	22:20:23
File:	Powersupply.SchDoc		
		Revision:	03
		Sheet2	of 9



Automatic SW detection of module type:

Typ	PC7	PC8	R302	R303
PiDio14io	0	0	yes	yes
PiDio16o	1	0	no	yes
PiDio16i	0	1	yes	no



Green Power LED function:

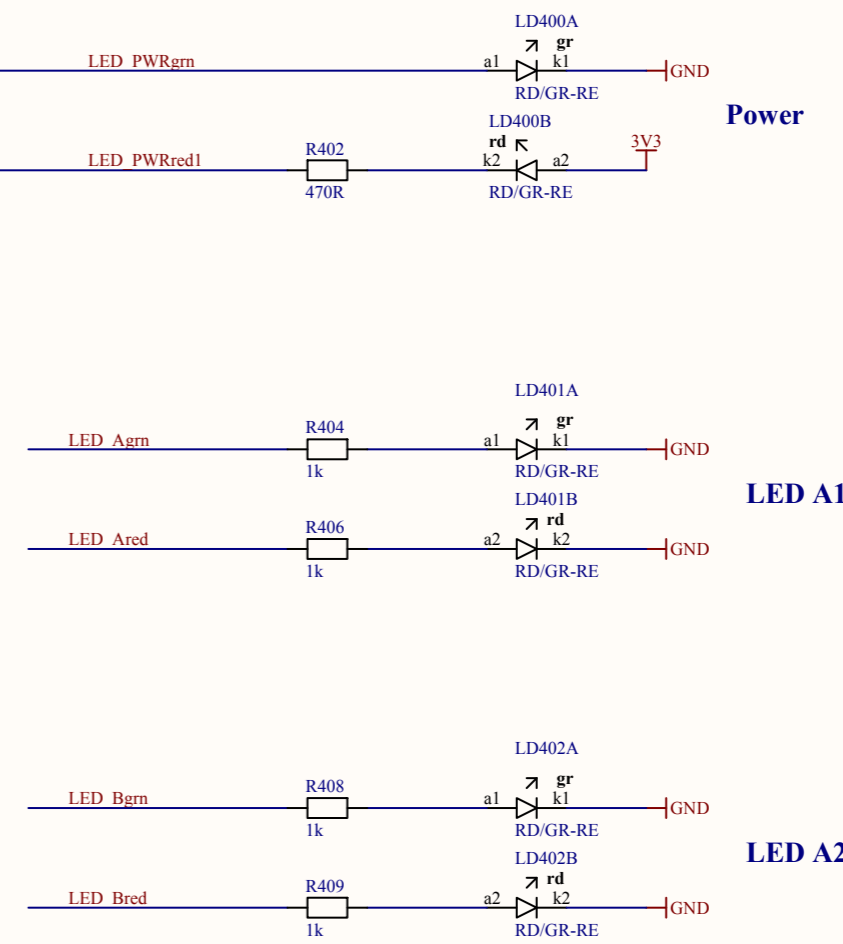
When system is switched on capacity draws gate of green LED to GND. Thus FET is off and LED_PWgrn is high and green LED is on.

During startup LED_PWRred is high impedance pulled down by 1k. Thus FET is off and LED_PWgrn is high and green LED is on.

After booting STM changes LED_PWRred to output low. Thus FET is off and LED_PWgrn is high and green LED is on.

On severe error STM sets LED_PWRred to output high. After charging Capacitor to 1.5 V FET will turn on (max. 1 s delay). Thus LED_PWgrn is low and green LED is off. This mode pulls $2 \times 3.3V/1k = 6.6 \text{ mA}$ current.

On fault condition STM sets LED_PWRred to 1Hz high / low oscillation. After charging Capacitor to 1.5 V (during high phase) FET will turn on. Discharge during low phase of LED_PWRred is much slower and capacitor is not discharged. Thus LED_PWgrn keeps low and green LED stays off. LED turns on again when LED_PWRred is low for more than 3 seconds.

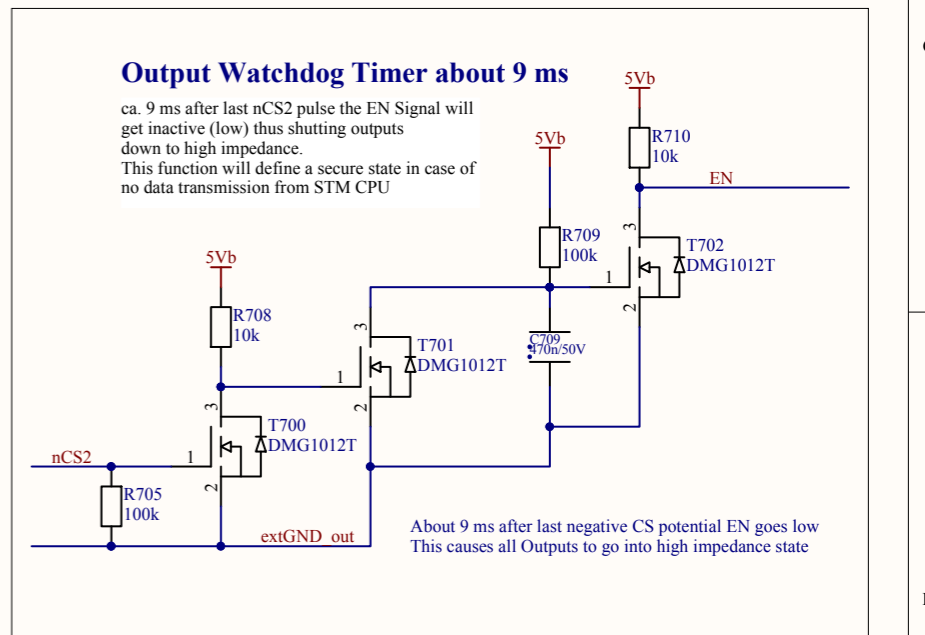
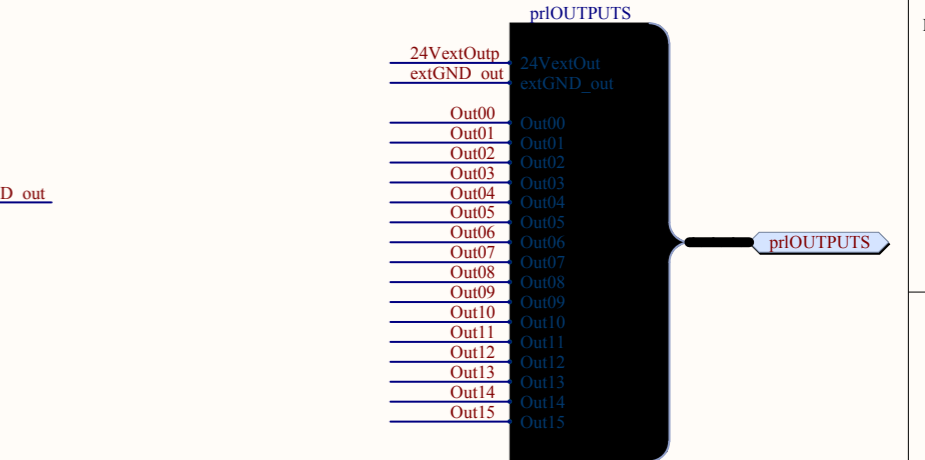
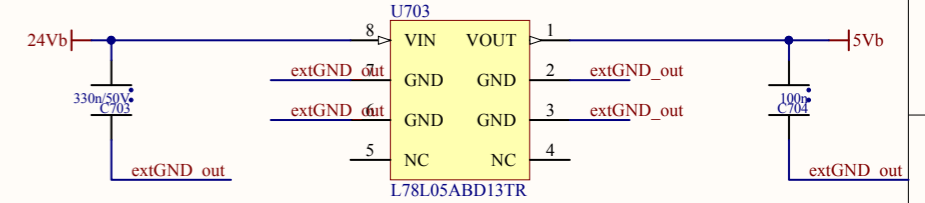
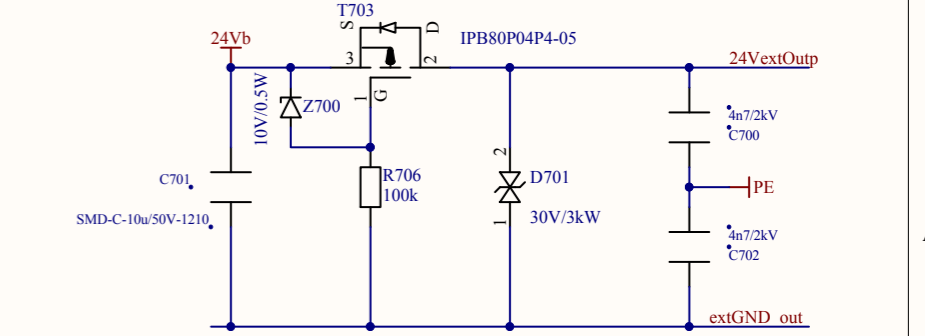
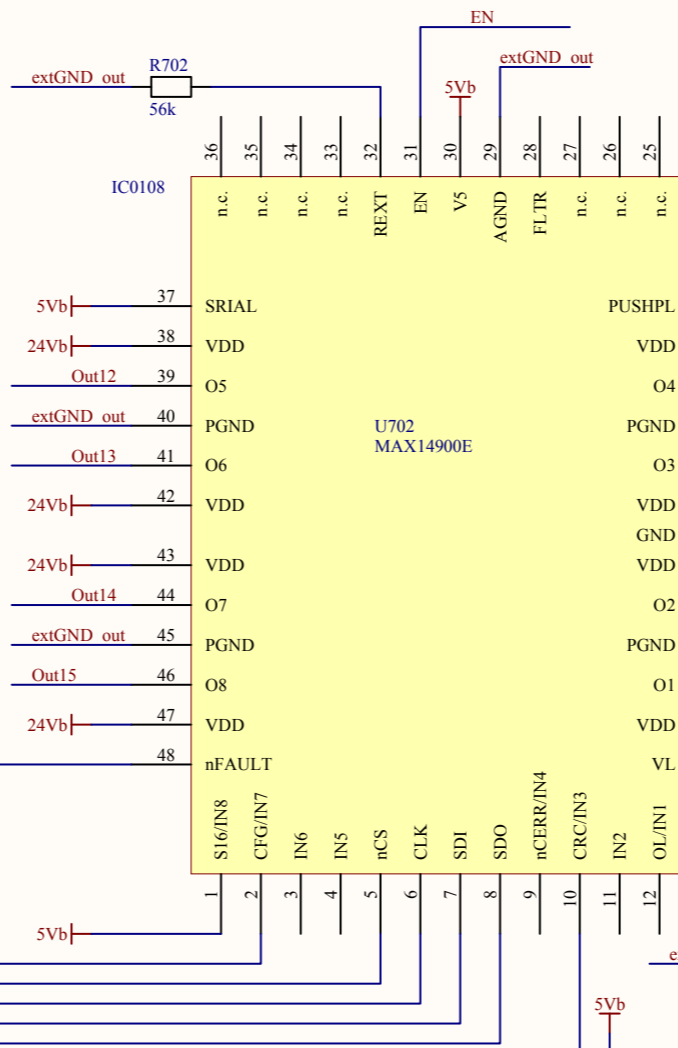
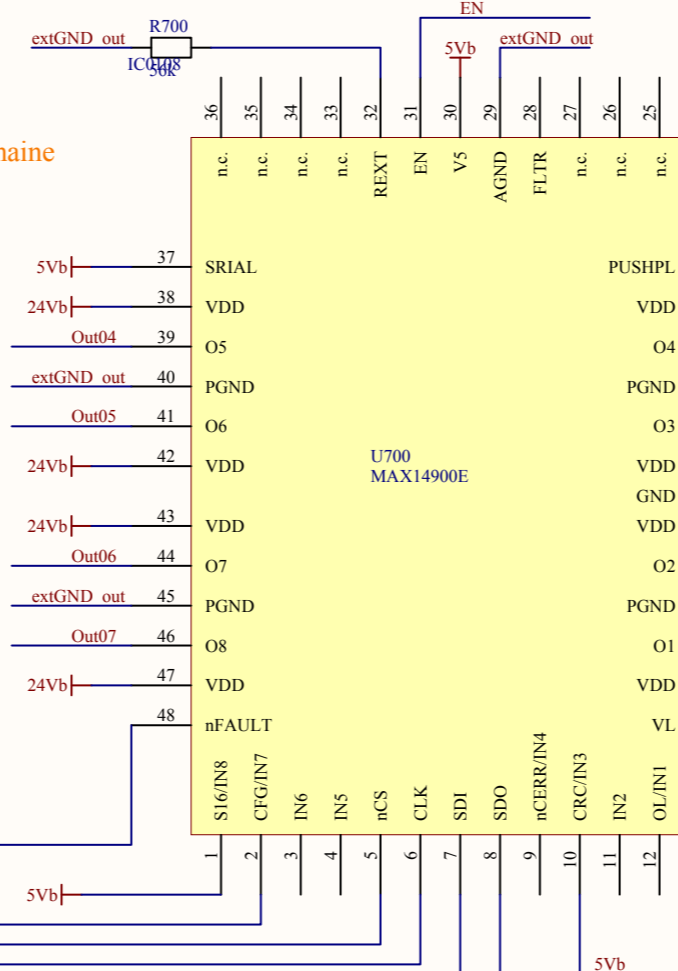
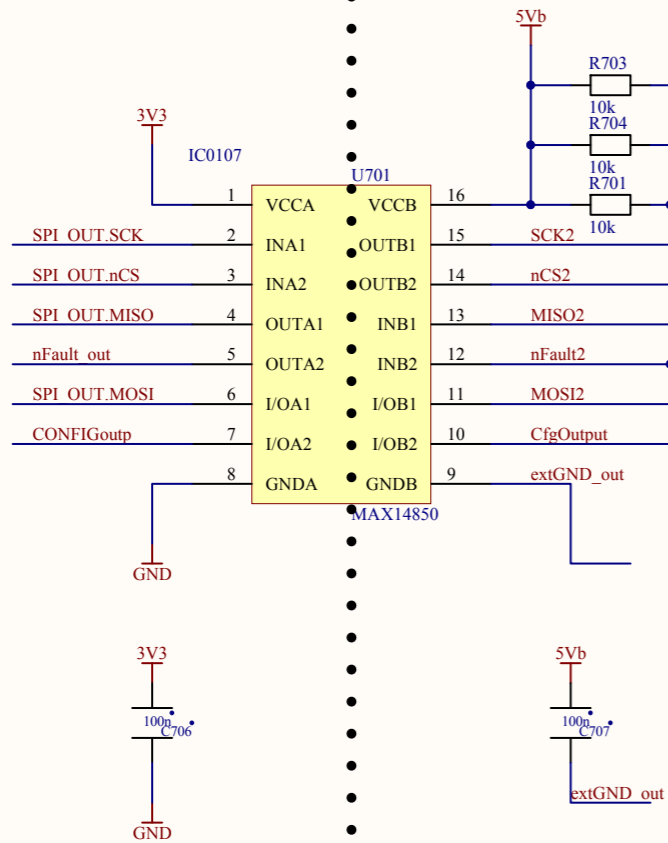
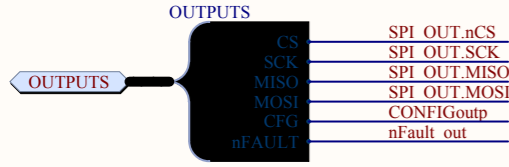


module type differences:
for PiDio16i all parts on this sheet are not to be placed!

3V3 internal GND Domaine

V_out_ext external outputs GND Domaine

3 mm clear space



module type differences:

Typ	R800	R801	R802	R803
PiDIO	yes	yes	no	no
PiI	no	no	no	no
PiDO	yes	yes	yes	yes

Connector X801

PiDO	PiDI	PiDO
1	IN0	n/u
2	IN1	n/u
3	IN2	n/u
4	IN3	n/u
5	IN4	n/u
6	IN5	n/u
7	IN6	n/u
8	IN7	n/u
9	IN8	n/u
10	IN9	n/u
11	IN10	n/u
12	IN11	n/u
13	IN12	OUT14
14	IN13	OUT15
15	IN14	OUT12
16	IN15	OUT13
17	n/u	OUT10
18	n/u	OUT11
19	n/u	OUT8
20	n/u	OUT9
21	n/u	OUT6
22	n/u	OUT7
23	n/u	OUT4
24	n/u	OUT5
25	n/u	OUT2
26	n/u	OUT3
27	n/u	OUT0
28	n/u	OUT1

