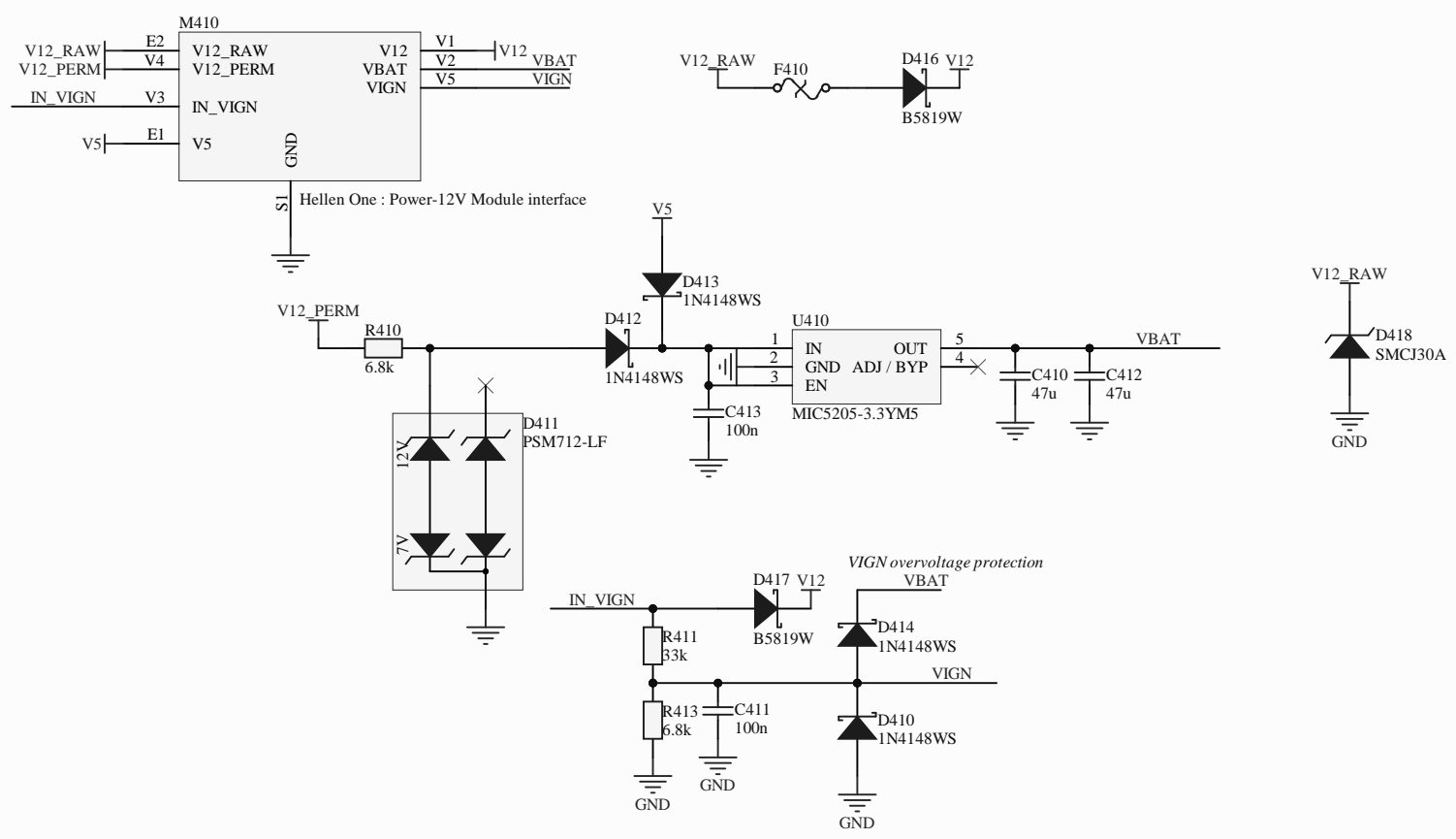


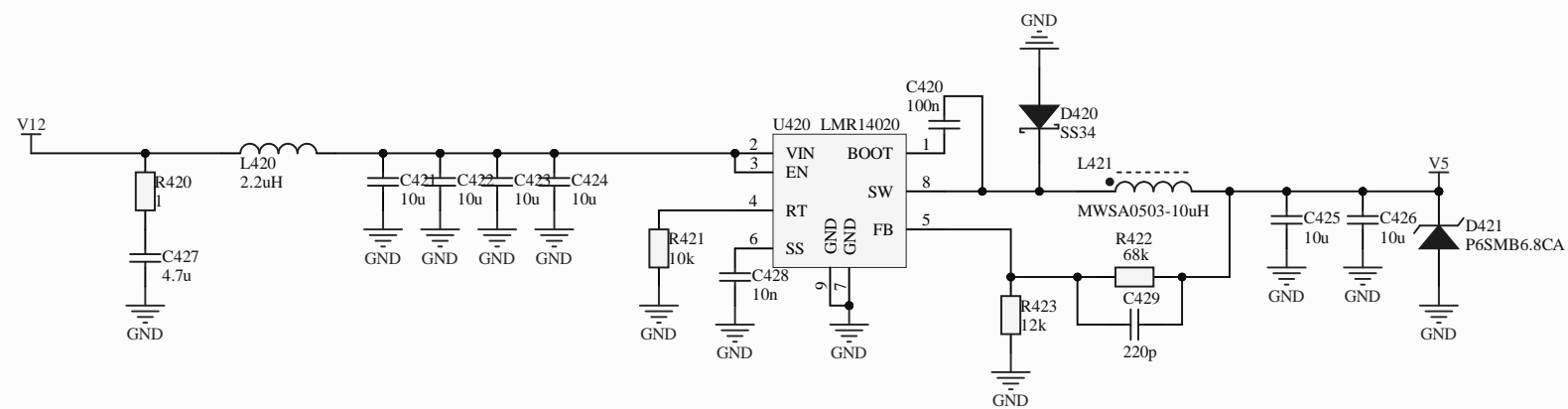
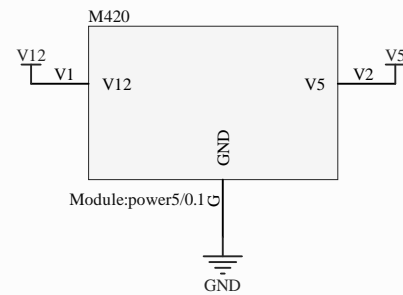
General purpose bus  
 Ignition  
 Injection  
 Outputs  
 Analog inputs (sensors)  
 Discrete inputs

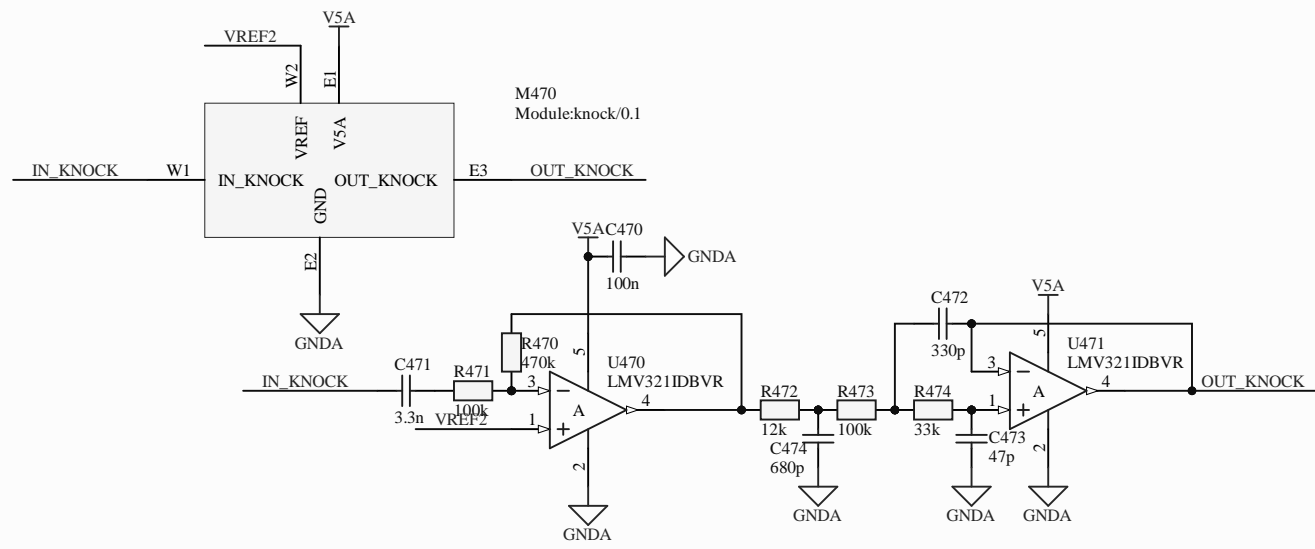
Bus types

FOR OFF ROAD PURPOSES ONLY  
 This is not for applications with  
 emissions or safety regulations  
 (AKA not for street use). This is for  
 closed stages, track  
 and equipment.

Hellen-One-PCB-Logo

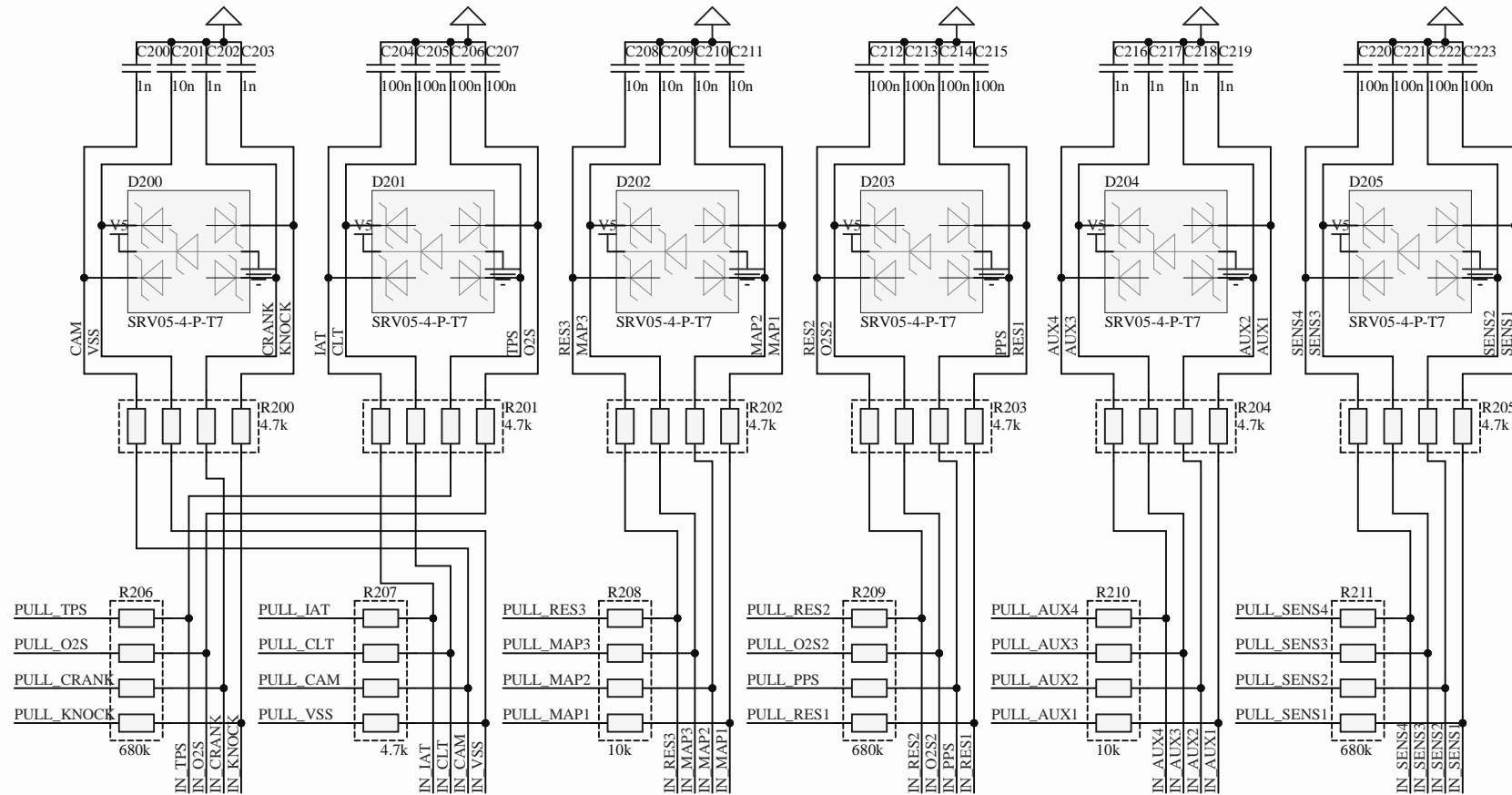






M200D			
PULL_CRANK J21	PULL_CRANK	PULL_MAP1	J14 PULL_MAP1
PULL_CAM J17	PULL_CAM	PULL_MAP2	J13 PULL_MAP2
PULL_VSS J18	PULL_VSS	PULL_MAP3	J12 PULL_MAP3
PULL_TPS J19	PULL_TPS	PULL_AUX1	J10 PULL_AUX1
PULL_PPS J5	PULL_PPS	PULL_AUX2	J9 PULL_AUX2
PULL_IAT J15	PULL_IAT	PULL_AUX3	J8 PULL_AUX3
PULL_CLT J16	PULL_CLT	PULL_AUX4	J7 PULL_AUX4
PULL_O2S J20	PULL_O2S	PULL_SENS1	J26 PULL_SENS1
PULL_O2S2 J4	PULL_O2S2	PULL_SENS2	J25 PULL_SENS2
PULL_RES1 J6	PULL_RES1	PULL_SENS3	J24 PULL_SENS3
PULL_RES2 J3	PULL_RES2	PULL_SENS4	J23 PULL_SENS4
PULL_RES3 J11	PULL_RES3	PULL_KNOCK	J22 PULL_KNOCK

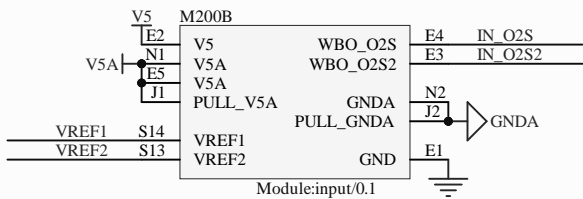
Module:input/0.1



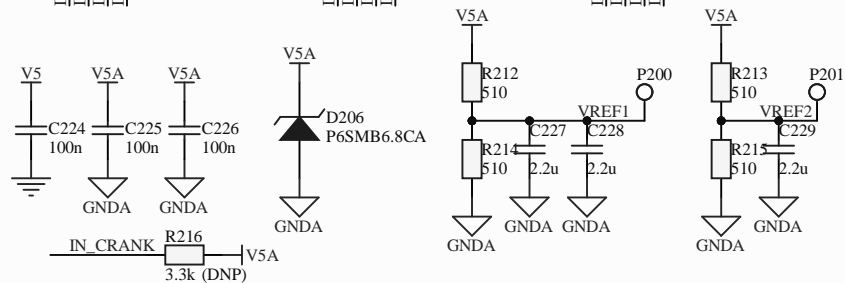
M200C		M200A	
IN_CRANK S8	IN_CRANK	N21	CRANK
IN_CAM S5	IN_CAM	N19	CAM
IN_VSS S6	IN_VSS	N20	VSS
IN_TPS S10	IN_TPS	N17	TPS
IN_PPS S24	IN_PPS	N5	PPS
IN_IAT S16	IN_IAT	N15	IAT
IN_CLT S15	IN_CLT	N16	CLT
IN_O2S S9	IN_O2S	N18	O2S
IN_O2S2 S25	IN_O2S2	N4	O2S2
IN_RES1 S23	IN_RES1	N6	RES1
IN_RES2 S26	IN_RES2	N3	RES2
IN_RES3 S22	IN_RES3	N11	RES3
IN_MAP1 S11	IN_MAP1	N14	MAP1
IN_MAP2 S12	IN_MAP2	N13	MAP2
IN_MAP3 S19	IN_MAP3	N12	MAP3
IN_AUX1 S17	IN_AUX1	N10	AUX1
IN_AUX2 S18	IN_AUX2	N9	AUX2
IN_AUX3 S20	IN_AUX3	N8	AUX3
IN_AUX4 S21	IN_AUX4	N7	AUX4
IN_SENS1 S1	IN_SENS1	N26	SENS1
IN_SENS2 S2	IN_SENS2	N25	SENS2
IN_SENS3 S3	IN_SENS3	N24	SENS3
IN_SENS4 S4	IN_SENS4	N23	SENS4
IN_KNOCK S7	IN_KNOCK	N22	KNOCK

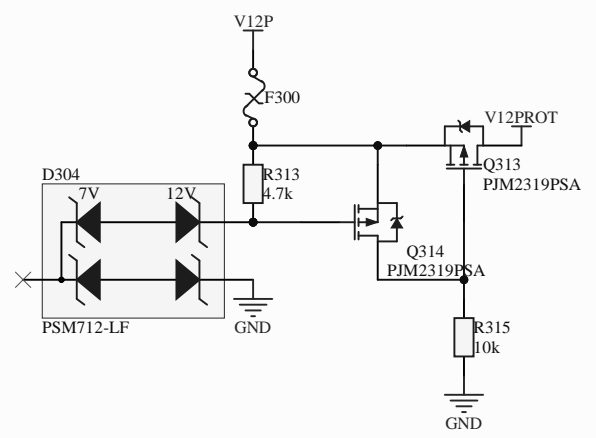
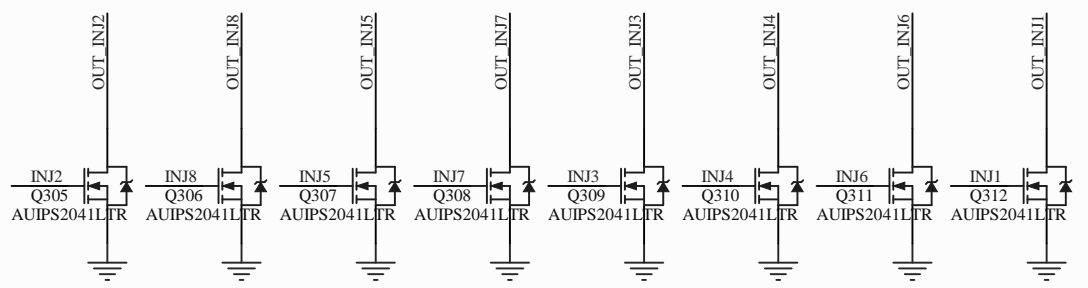
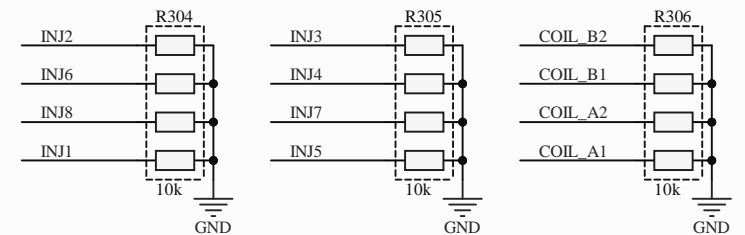
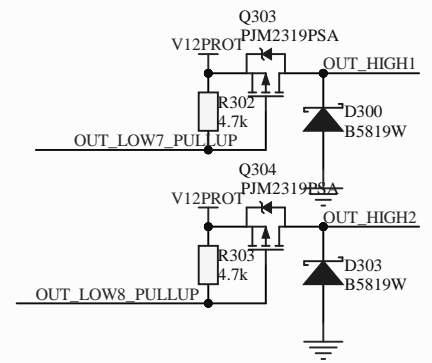
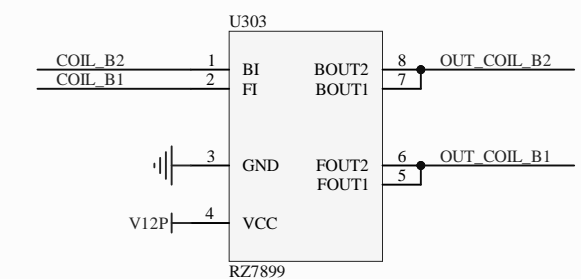
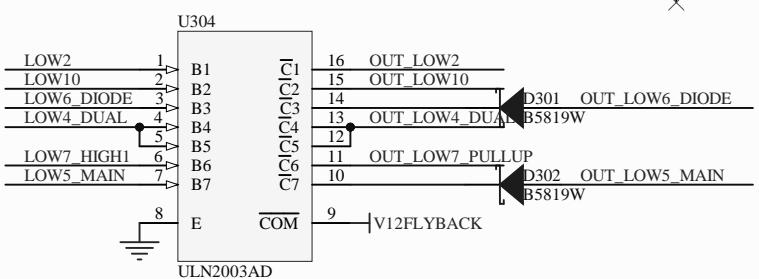
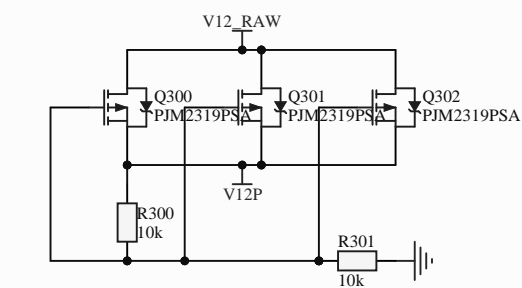
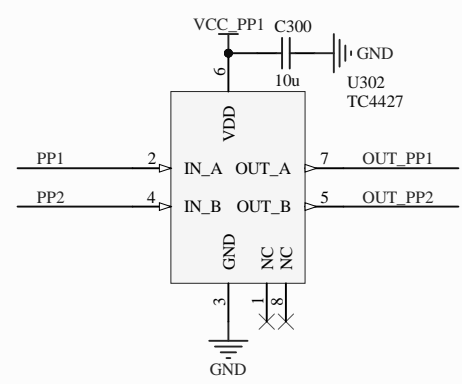
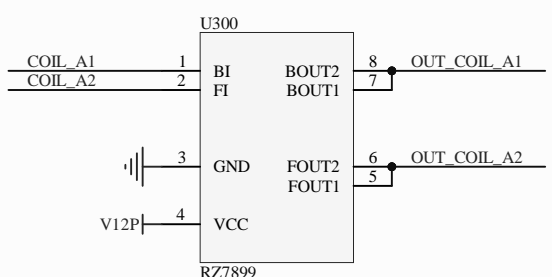
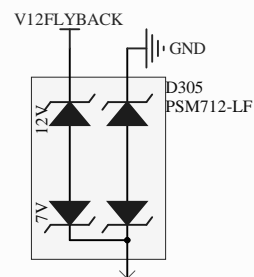
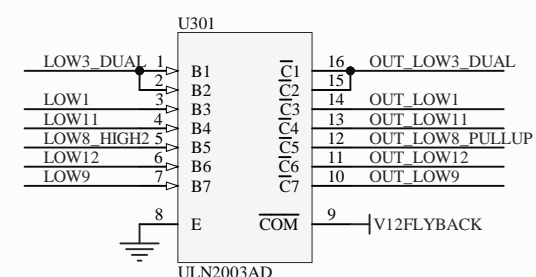
Module:input/0.1

Module:input/0.1



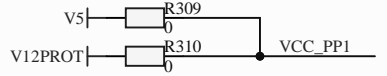
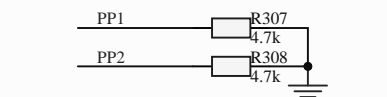
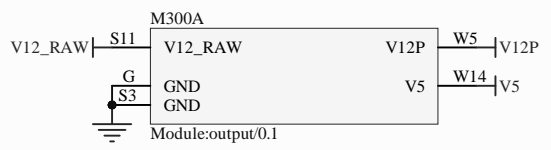
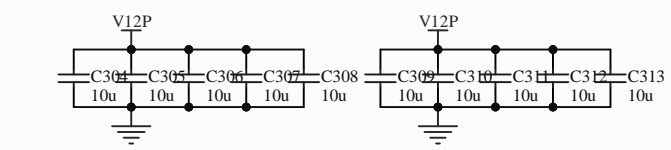
Module:input/0.1





INJ1	W24	INJ1
INJ2	W23	INJ2
INJ3	W20	INJ3
INJ4	W19	INJ4
INJ5	W18	INJ5
INJ6	W17	INJ6
INJ7	W16	INJ7
INJ8	W15	INJ8
PP1	W28	PP1
PP2	W22	PP2
COIL_A1	W33	SOLENOID_A1
COIL_A2	W32	SOLENOID_A2
COIL_B1	W31	SOLENOID_B1
COIL_B2	W30	SOLENOID_B2
LOW1	W21	LOW1
LOW2	W29	LOW2
LOW3_DUAL	W38	LOW3_DUAL
LOW4_DUAL	W34	LOW4_DUAL
LOW5_MAIN	W40	LOW5_MAIN
LOW6_DIODE	W25	LOW6_DIODE
LOW7_HIGH1	W39	LOW7_HIGH1
LOW8_HIGH2	W37	LOW8_HIGH2
LOW9	W27	LOW9
LOW10	W26	LOW10
LOW11	W35	LOW11
LOW12	W36	LOW12

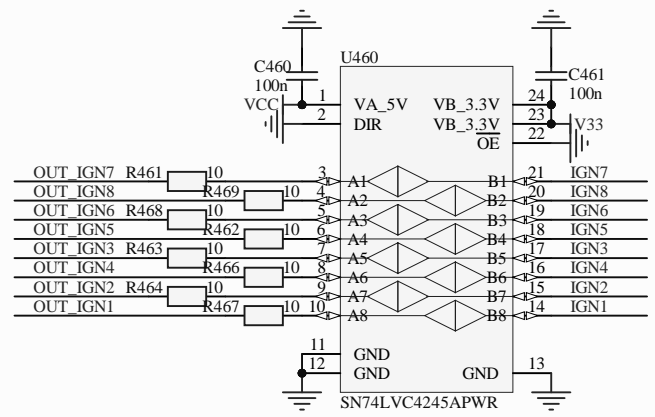
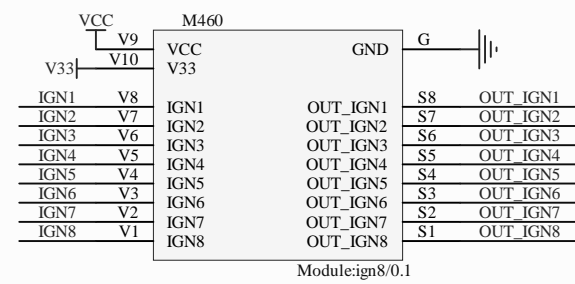
OUT_INJ1	S18	OUT_INJ1
OUT_INJ2	S16	OUT_INJ2
OUT_INJ3	S17	OUT_INJ3
OUT_INJ4	W7	OUT_INJ4
OUT_INJ5	W10	OUT_INJ5
OUT_INJ6	S15	OUT_INJ6
OUT_INJ7	W12	OUT_INJ7
OUT_INJ8	W11	OUT_INJ8
OUT_PP1	W6	OUT_PP1
OUT_PP2	S6	OUT_PP2
OUT_SOLENOID_A1	S1	OUT_COIL_A1
OUT_SOLENOID_A2	S2	OUT_COIL_A2
OUT_SOLENOID_B1	S4	OUT_COIL_B1
OUT_SOLENOID_B2	S5	OUT_COIL_B2
OUT_LOW1	S8	OUT_LOW1
OUT_LOW2	W1	OUT_LOW2
OUT_LOW3_DUAL	S7	OUT_LOW3_DUAL
OUT_LOW4_DUAL	W4	OUT_LOW4_DUAL
OUT_LOW5_MAIN	W13	OUT_LOW5_MAIN
OUT_LOW6_DIODE	W3	OUT_LOW6_DIODE
OUT_LOW7_PULLUP	W9	OUT_LOW7_PULLUP
OUT_LOW8_PULLUP	S12	OUT_LOW8_PULLUP
OUT_LOW9	S14	OUT_LOW9
OUT_LOW10	W2	OUT_LOW10
OUT_LOW11	S10	OUT_LOW11
OUT_LOW12	S13	OUT_LOW12
OUT_HIGH1	W8	OUT_HIGH1
OUT_HIGH2	S9	OUT_HIGH2

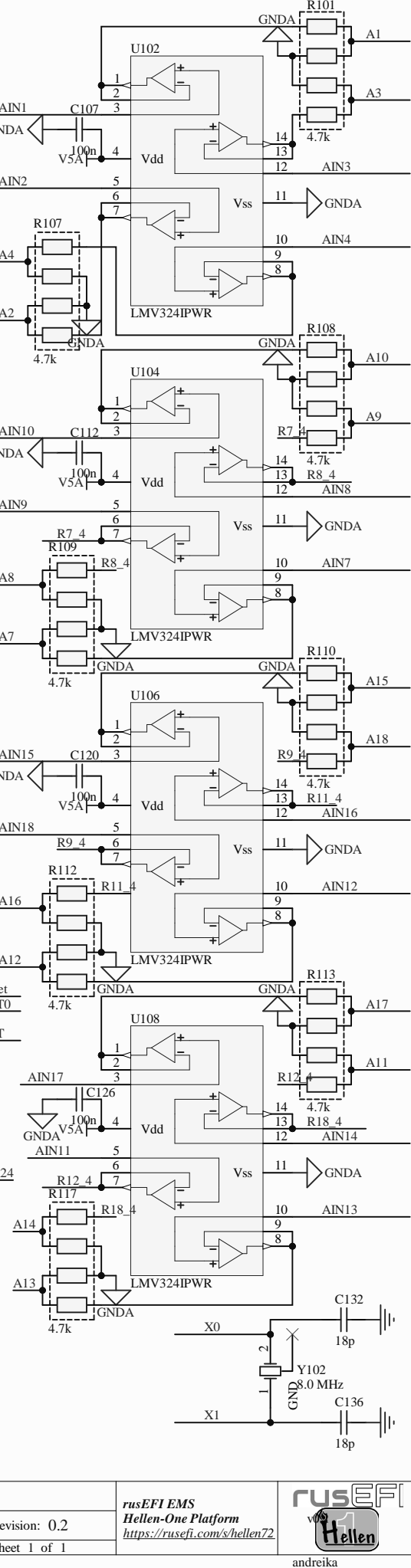
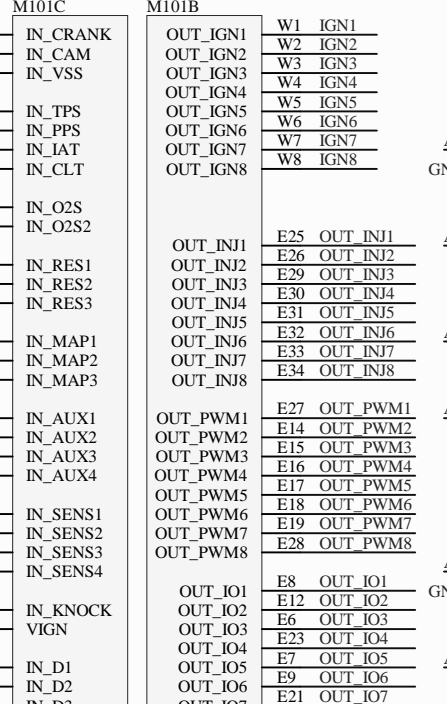
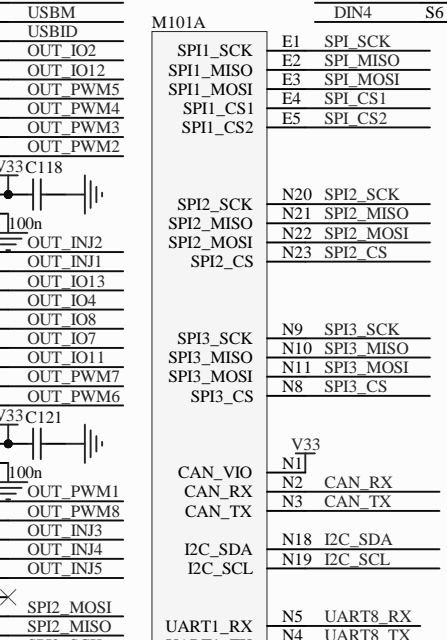
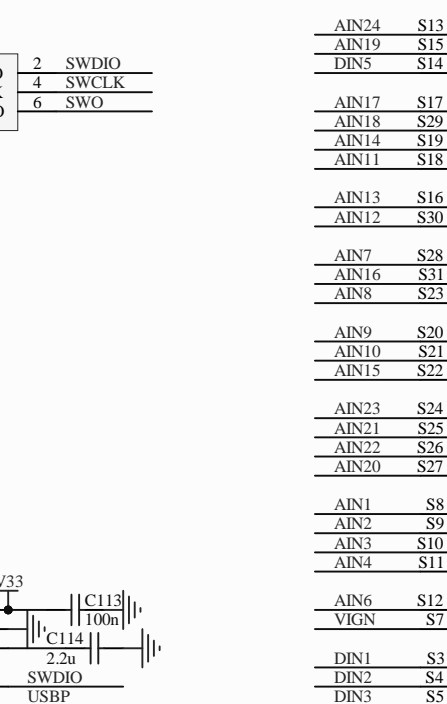
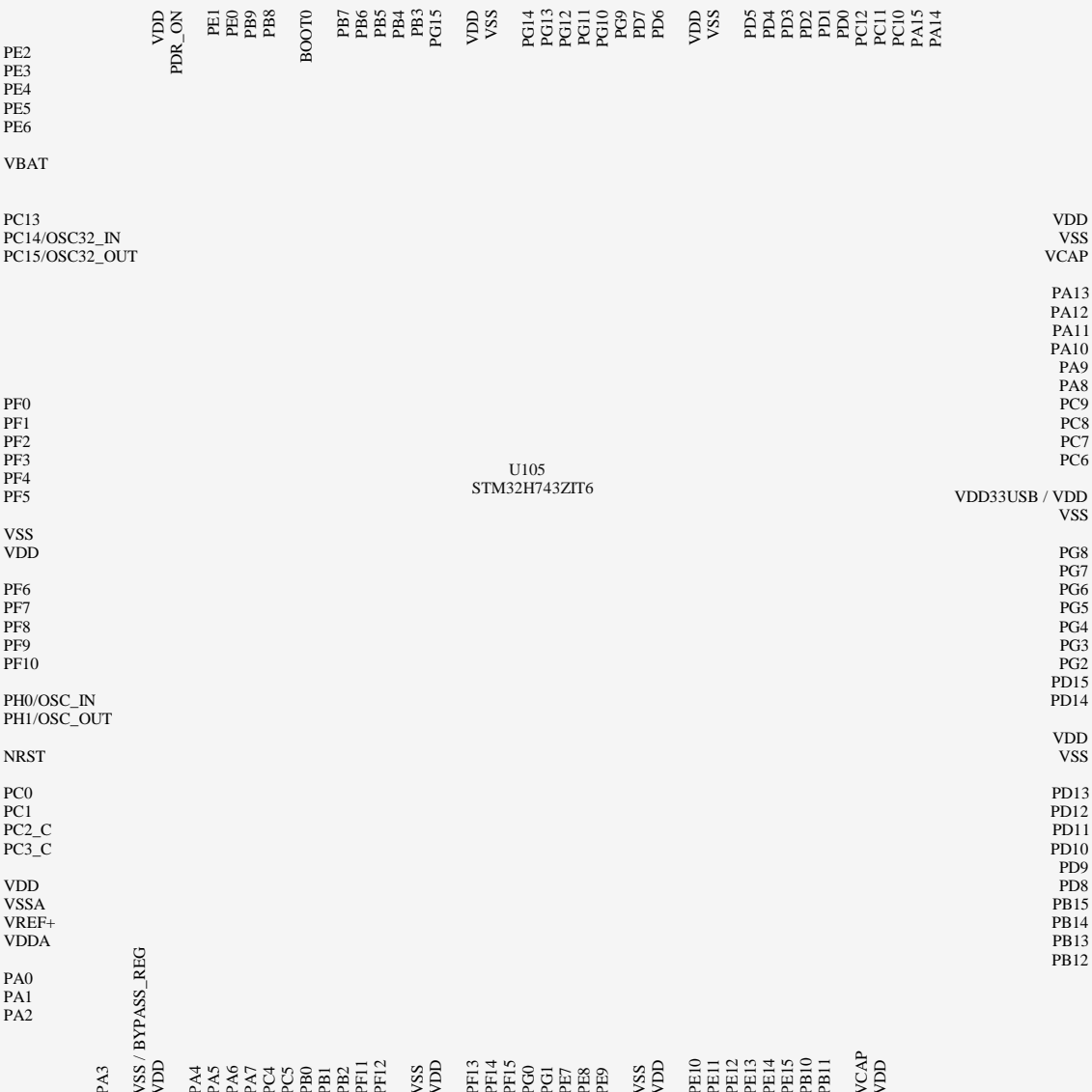
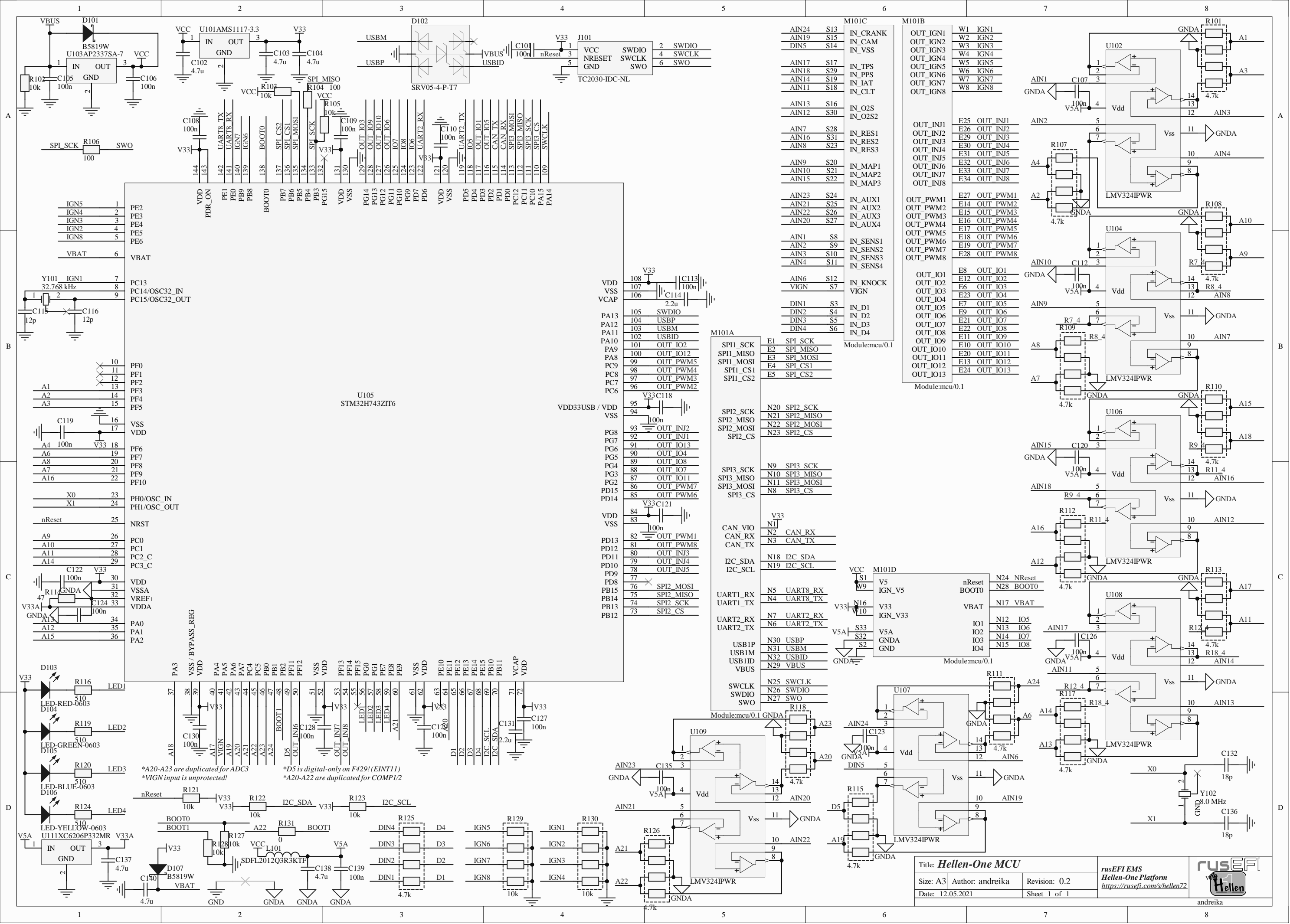


\* These can be removed in the board compilation file

Module:output/0.1

Module:output/0.1

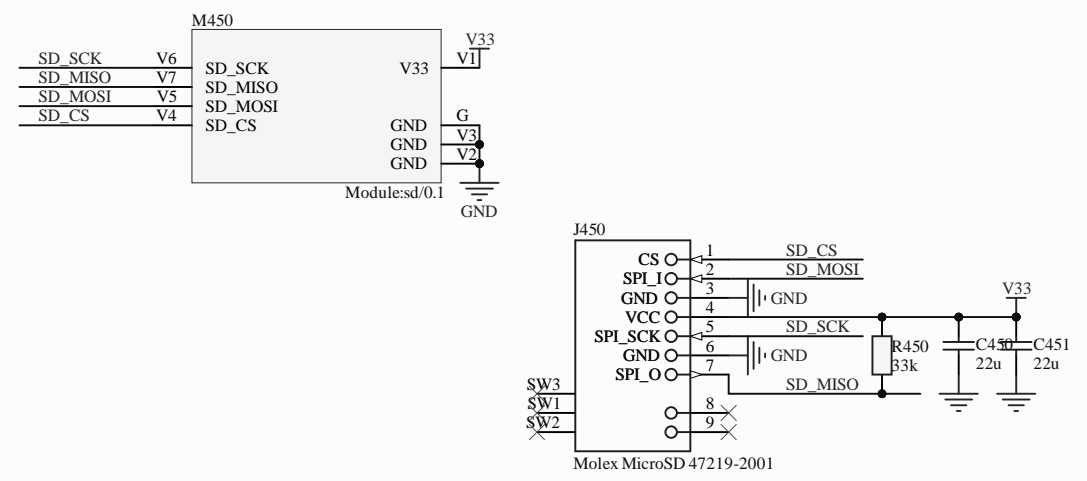


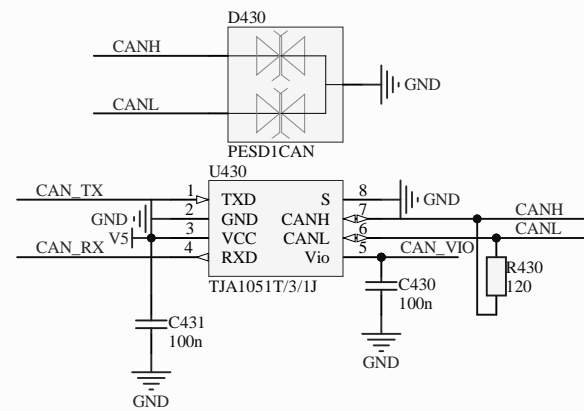
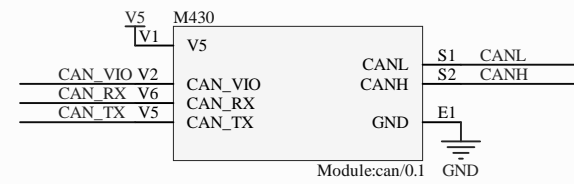


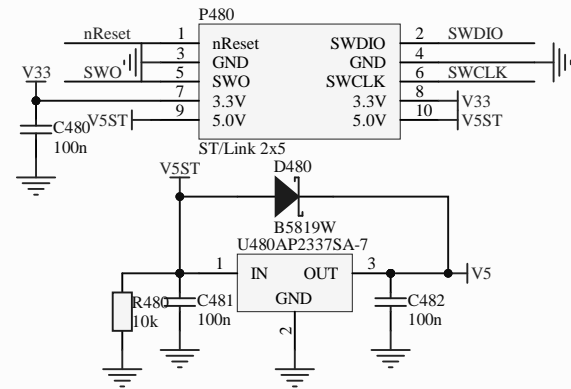
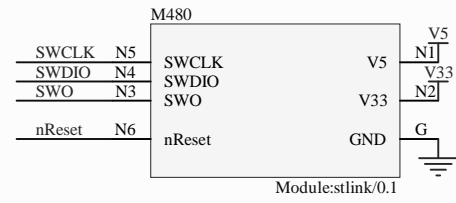
\*A20-A23 are duplicated for ADC3  
\*VIGN input is unprotected!

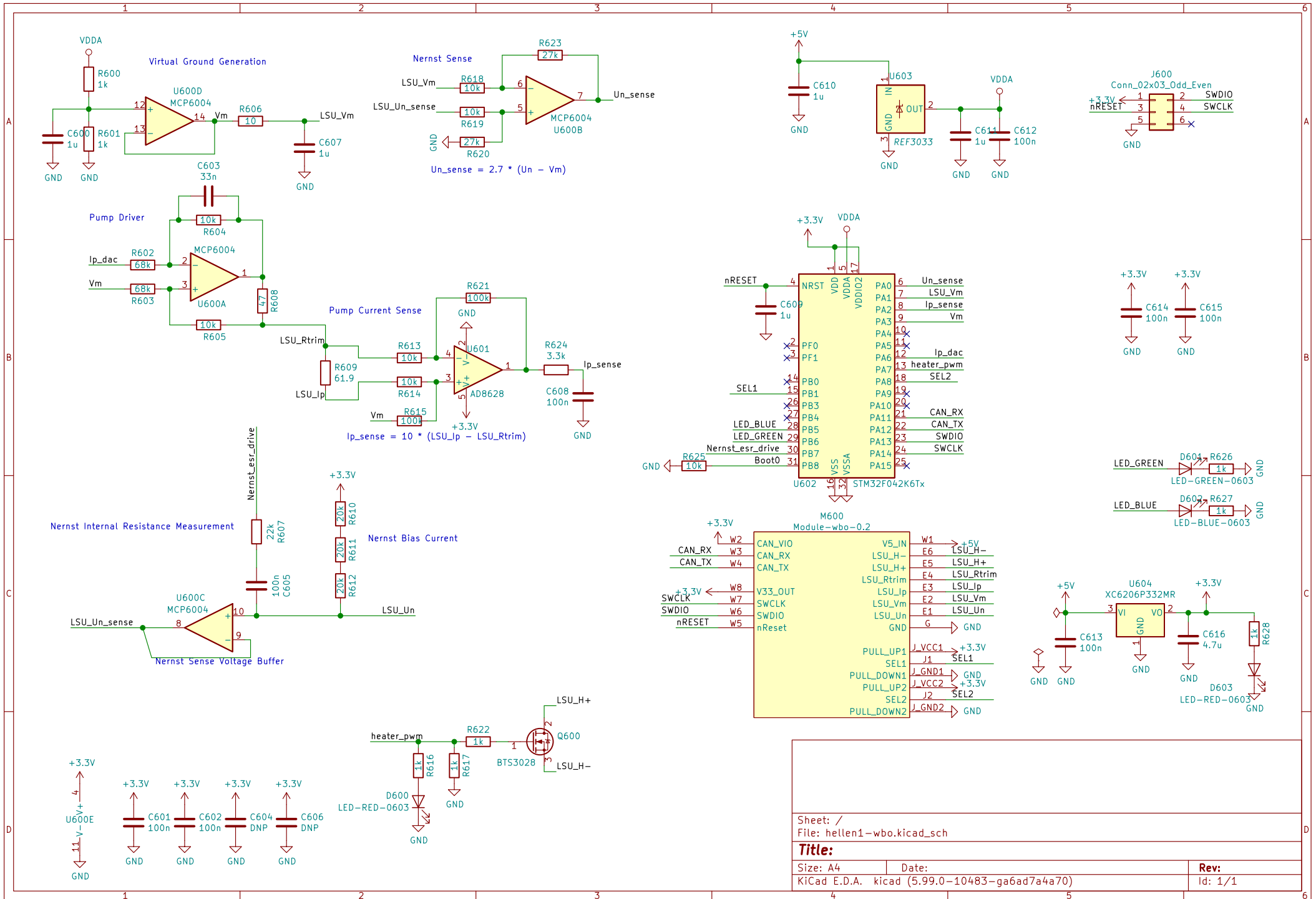
\*D5 is digital-only on F429! (EINT11)  
\*A20-A22 are duplicated for COMP1/2











Sheet: /	
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<b>Title:</b>	
Size: A4	Date:
KiCad E.D.A. kicad (5.99.0-10483-ga6ad7a4a70)	
Rev:	Id: 1/1