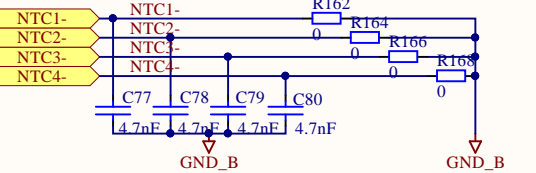
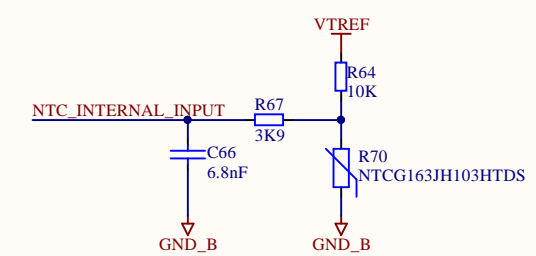
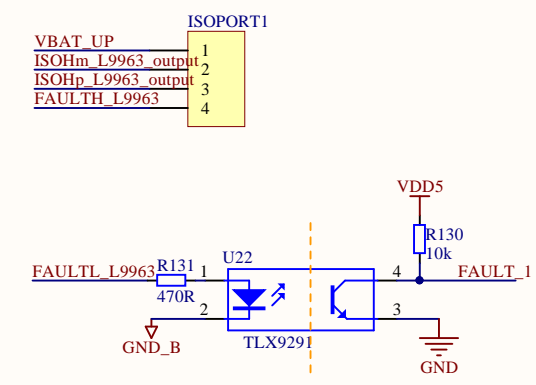


L9963/L9963T transceiver assembly note:

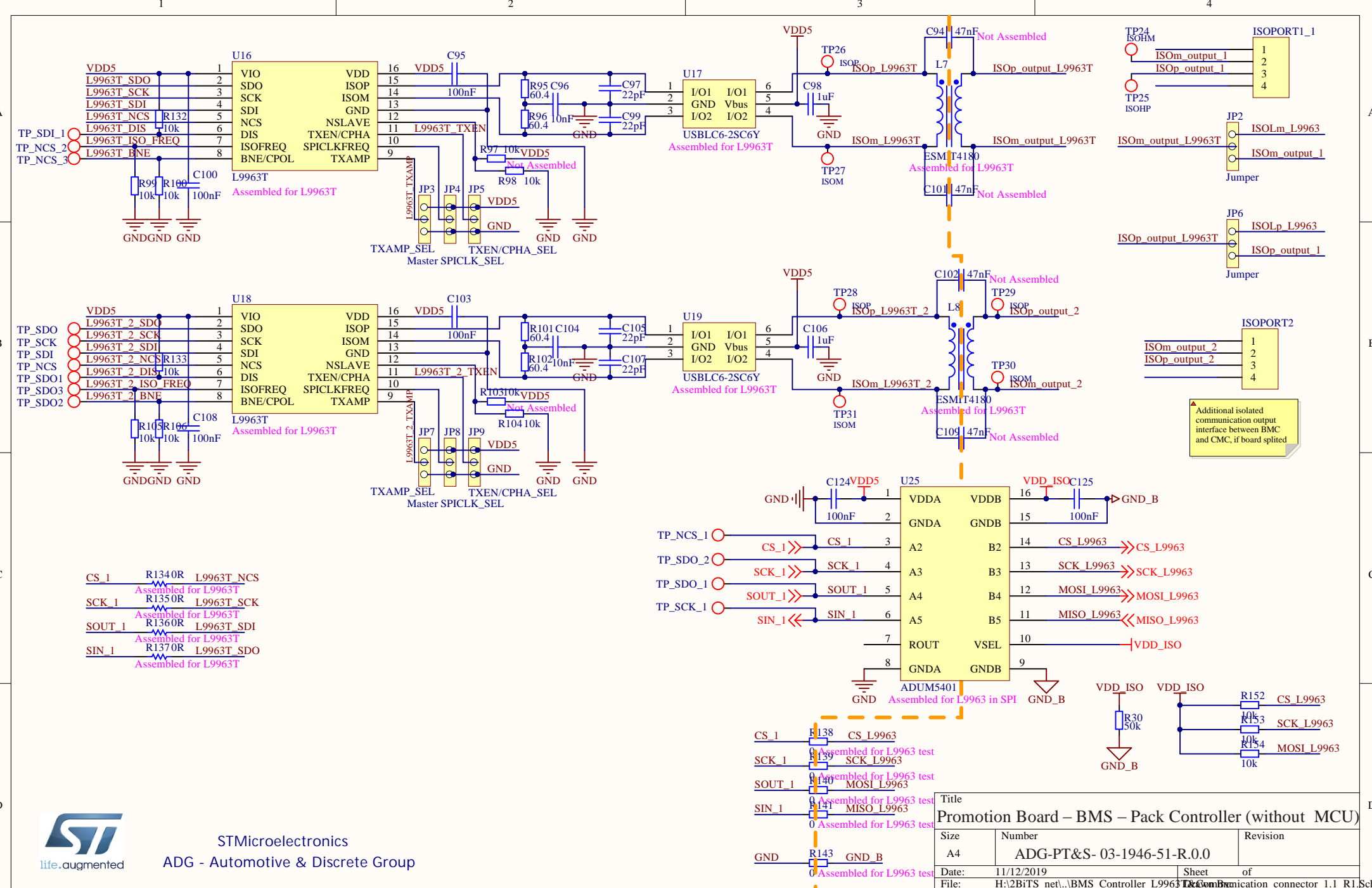
P2		C14	
VBAT CELL	15	1	
C13	16	2	C12
C11	17	3	C10
C9	18	4	C8
C7	19	5	C6
C5	20	6	C4
C3	21	7	C2
C1	22	8	C0
GND_B	23	9	GND_B
ISENSEP	24	10	ISENSEM
NTC1+	25	11	NTC1-
NTC2+	26	12	NTC2-
NTC3+	27	13	NTC3-
NTC4+	28	14	NTC4-

Additional cell input connector for single board BMS demonstration like 48v BMS



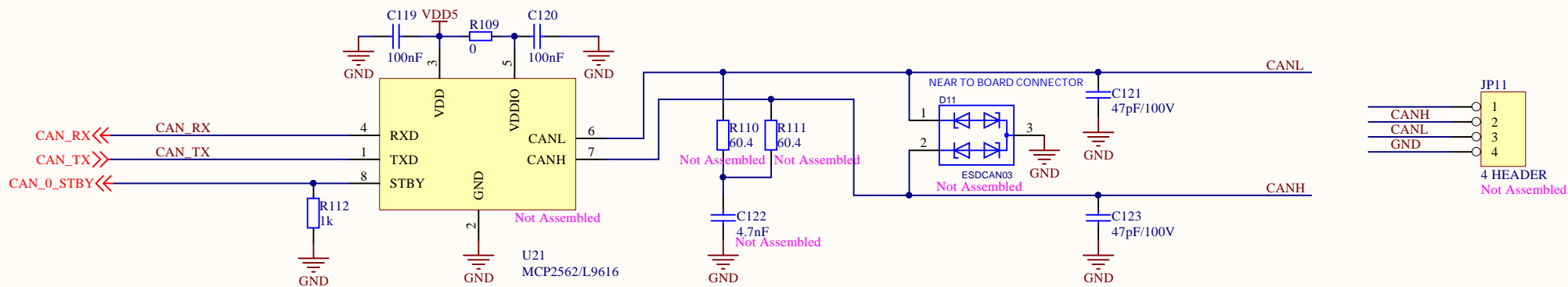
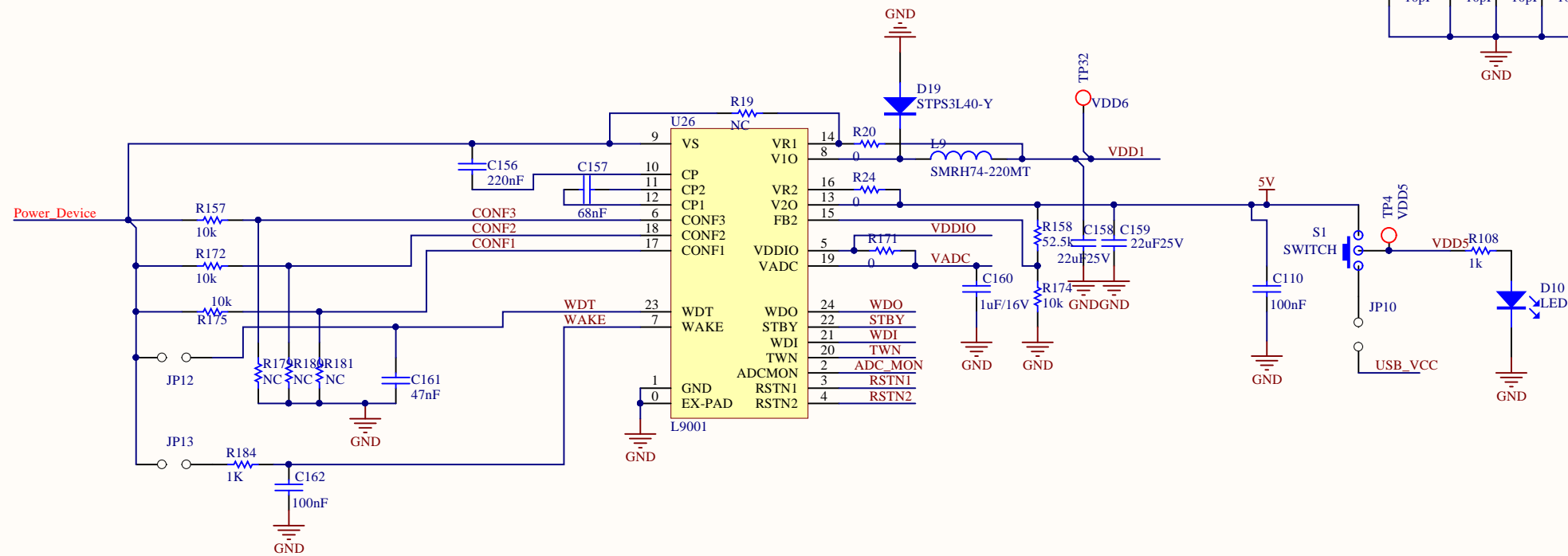
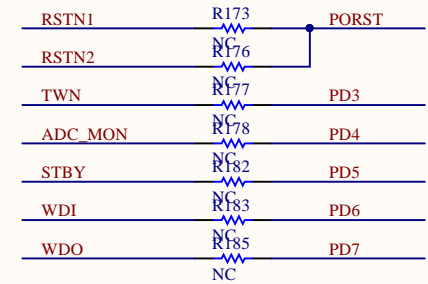
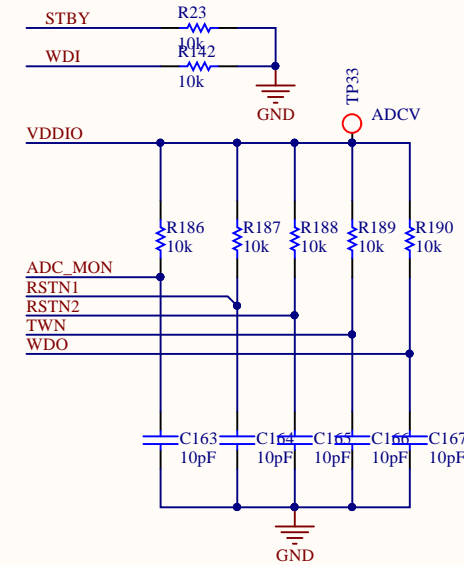
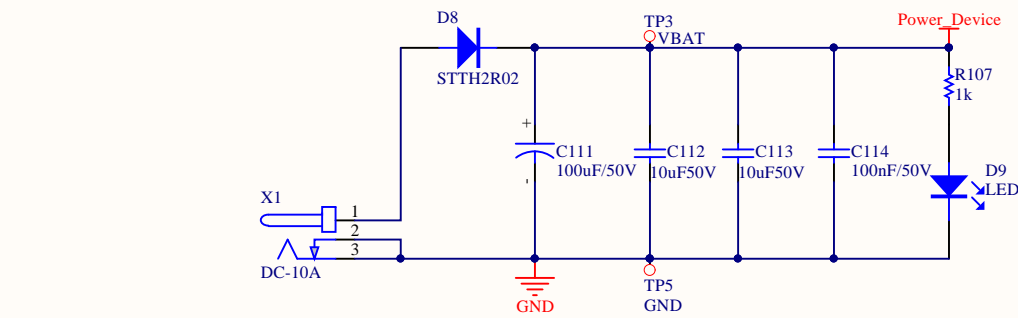
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Title		
Promotion Board – BMS – Pack Controller (without MCU)		
Size	Number	Revision
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Date:	11/12/2019	Sheet of
File:	H:\2BiTS_net\...\BMS_Controller_L9963\BMS_SchDoc	



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Title		
Promotion Board - BMS - Pack Controller (without MCU)		
Size	Number	Revision
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Date:	11/12/2019	Sheet of
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Title		
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Size	Number	Revision
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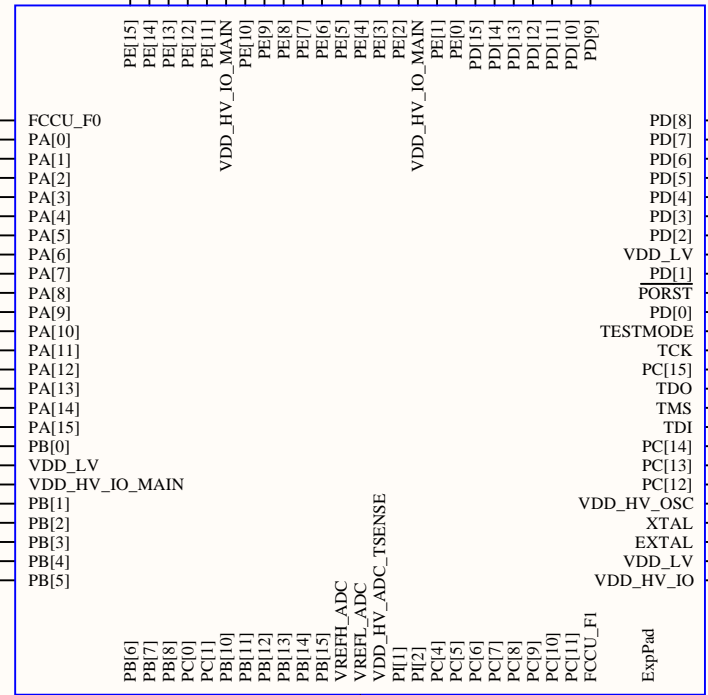
PE1 R1440R L9963T_2_DIS
Assembled for L9963T
PE2 R1450R L9963T_2_ISO_FREQ
Assembled for L9963T
PA11 R1460R L9963T_2_BNE
Assembled for L9963T
PA14 R1550R FAULT_1

FCCU_F0 1
PA0 2
PA1 3
PA2 4
PA3 5
PA4 6
PA5 7
PA6 8
PA7 9
PA8 10
PA9 11
PA10 12
PA11 13
PA12 14
PA13 15
PA14 16
PA15 17
PB0 18
VDD_LV 19
VDD_HV_IO_MAIN 20
CAN_TX R120 35K PB1 21
CAN_RX R121 33R PB2 22
PB3 23
PB4 24
PB5 25

PC7 R1490R L9963T_DIS
Assembled for L9963T
PC5 R1500R L9963T_ISO_FREQ
Assembled for L9963T
PC4 R1510R L9963T_BNE
Assembled for L9963T

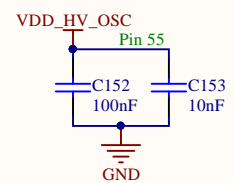
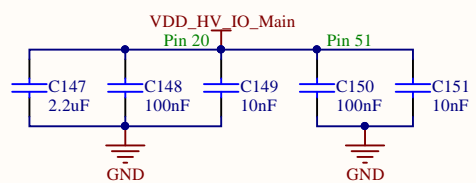
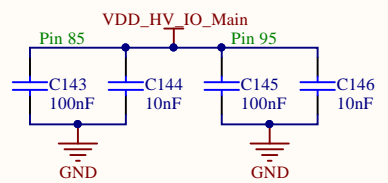
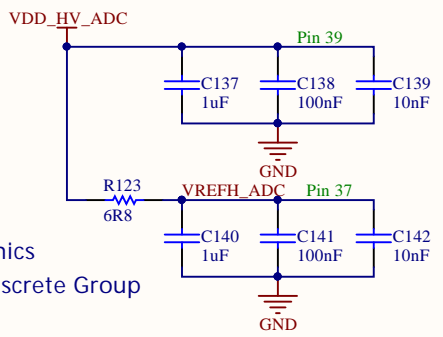
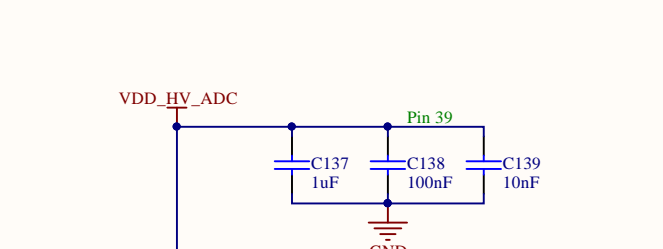
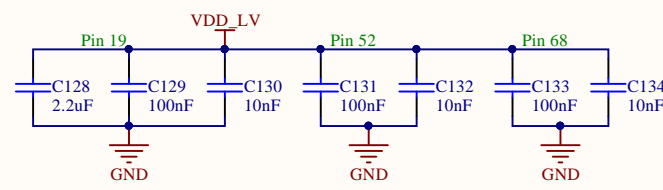
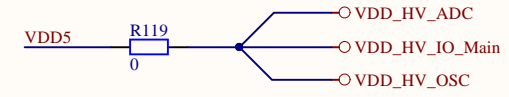
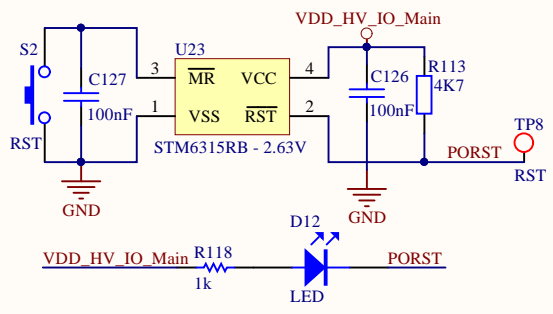
L9963T_TXEN R192 0 PD9
L9963T_2_TXEN R191 0 PD8

U24
SPC574S64E3



PD[8] 75 PD8
PD[7] 74 PD7
PD[6] 73 PD6
PD[5] 72 PD5
PD[4] 71 PD4
PD[3] 70 PD3
PD[2] 69 PD2
VDD_LV 68 VDD_LV
PD[1] 67 PD1
PORST 66 PORST
PD[0] 65 PD0
GND 64 GND
TCK 63 TCK
PC[15] 62 PC15
TDO 61 TDO
TMS 60 TMS
TDI 59 TDI
PC[14] 58 PC14
PC[13] 57 PC13
PC[12] 56 PC12
VDD_HV_OSC 55 VDD_HV_OSC
XTAL 54 XTAL
EXTAL 53 EXTAL
VDD_LV 52 VDD_LV
VDD_HV_IO 51 VDD_HV_IO_MAIN

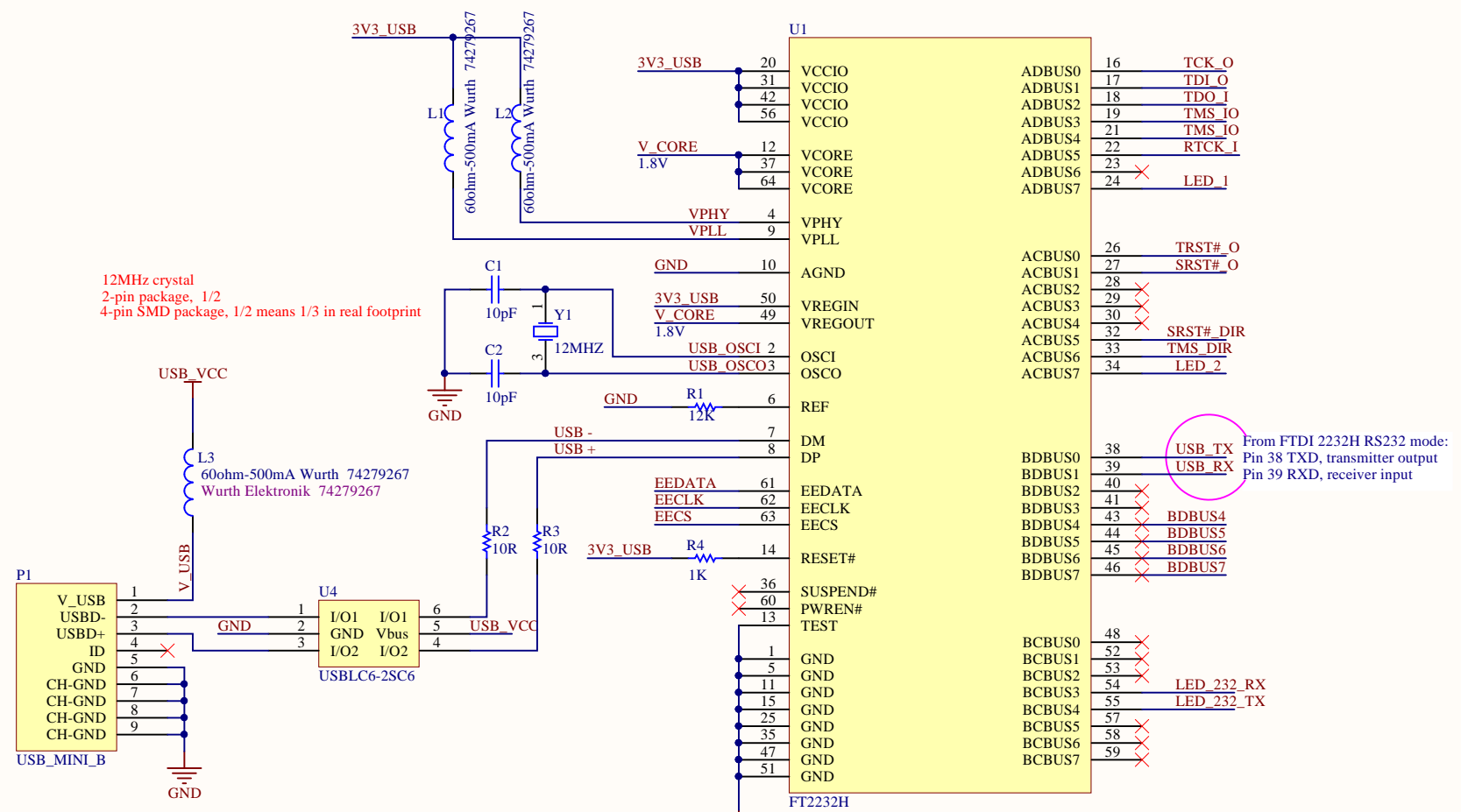
TP9 GND



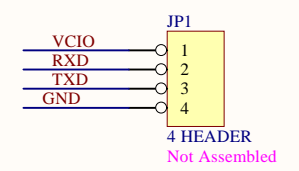
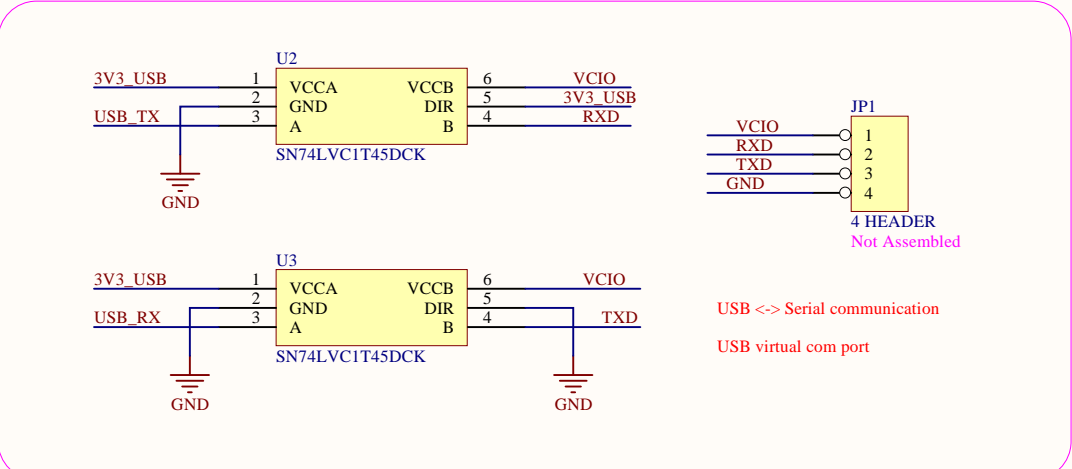
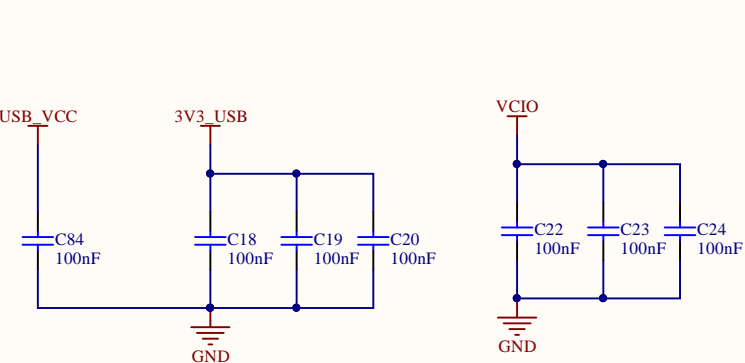
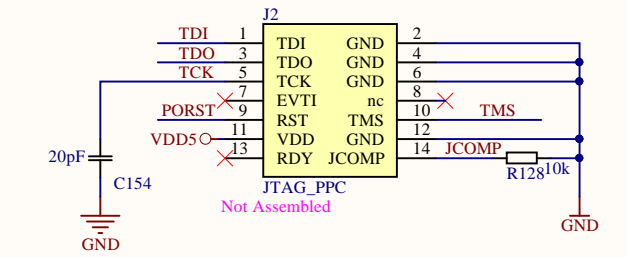
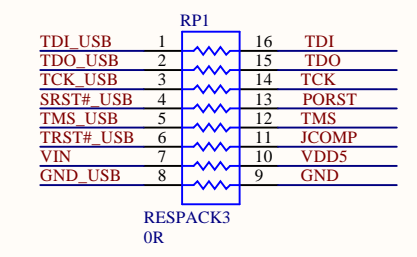
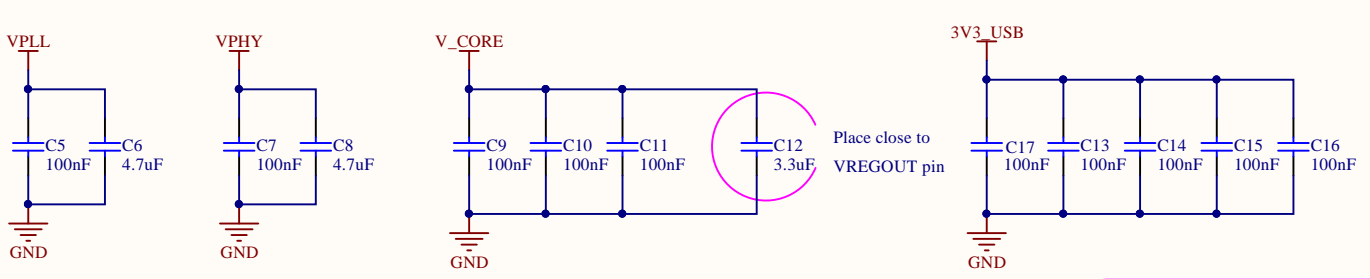
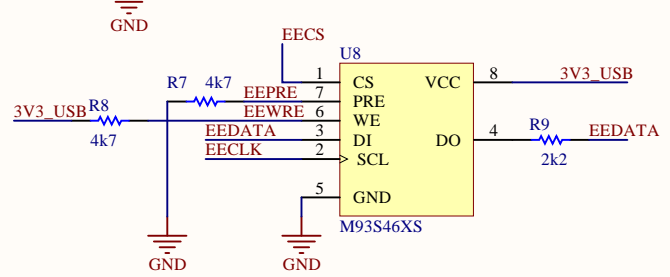
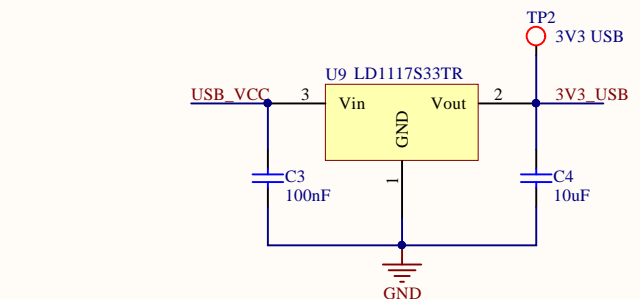
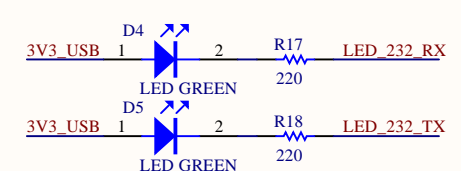
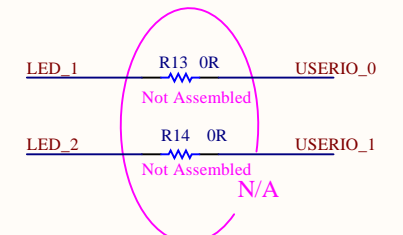
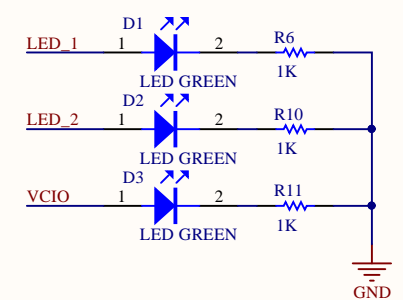
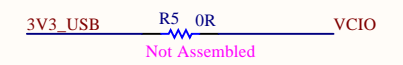
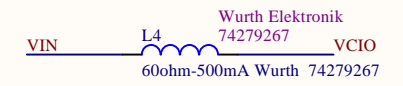
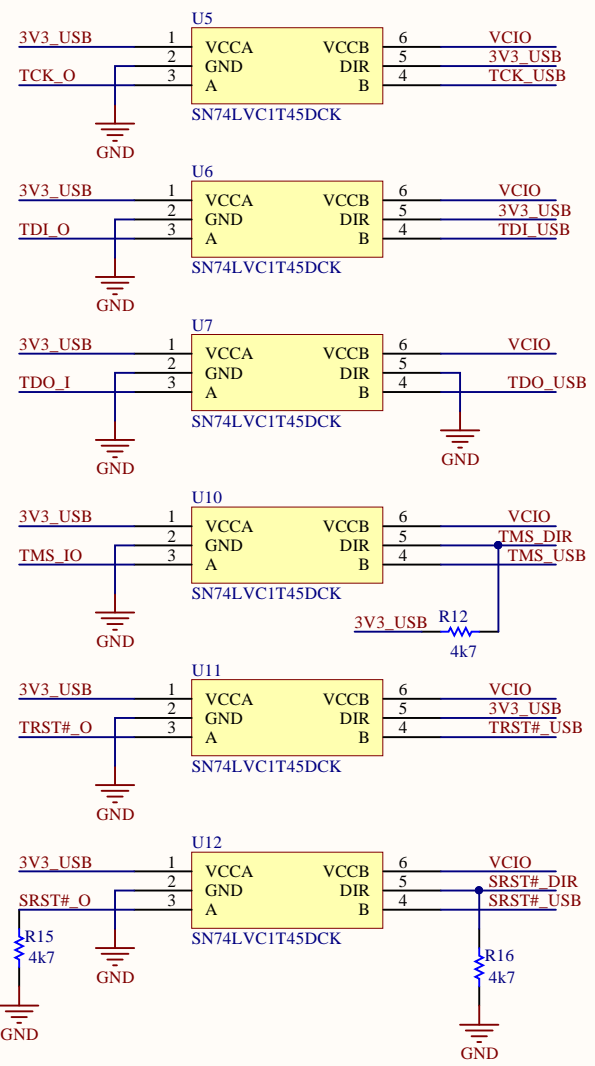
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Size	Number	Revision
A4	ADG-PT&S- 03-1946-51-R.0.0	
Date:	11/12/2019	Sheet of
File:	H:\2BiTS_net\...BMS_Controller_SphaerD100\B_SchDoc	

12MHz crystal
2-pin package, 1/2
4-pin SMD package, 1/2 means 1/3 in real footprint



74LVC1T45 Operation
DIR HIGH, Direction A->B FT2232H->Micro
DIR LOW Direction B->A Micro->FT2232H



Title		
Promotion Board – BMS – Pack Controller (without MCU)		
Size	Number	Revision
A3	ADG-PT&S- 03-1946-51-R.0.0	
Date:	11/12/2019	Sheet of
File:	H:\2BiTs_net\..USB section (PLS) 1.2	Dr: sch Byc