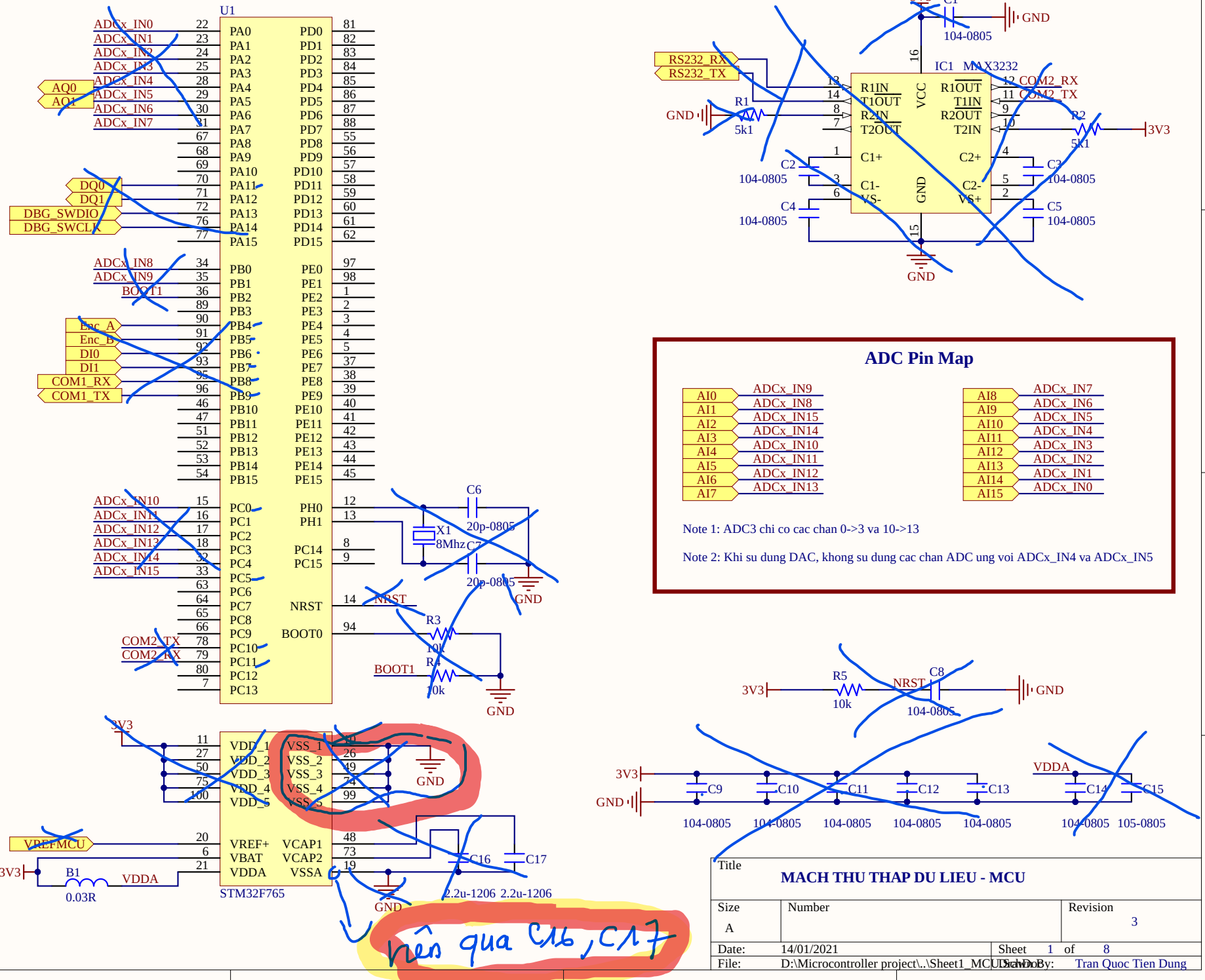
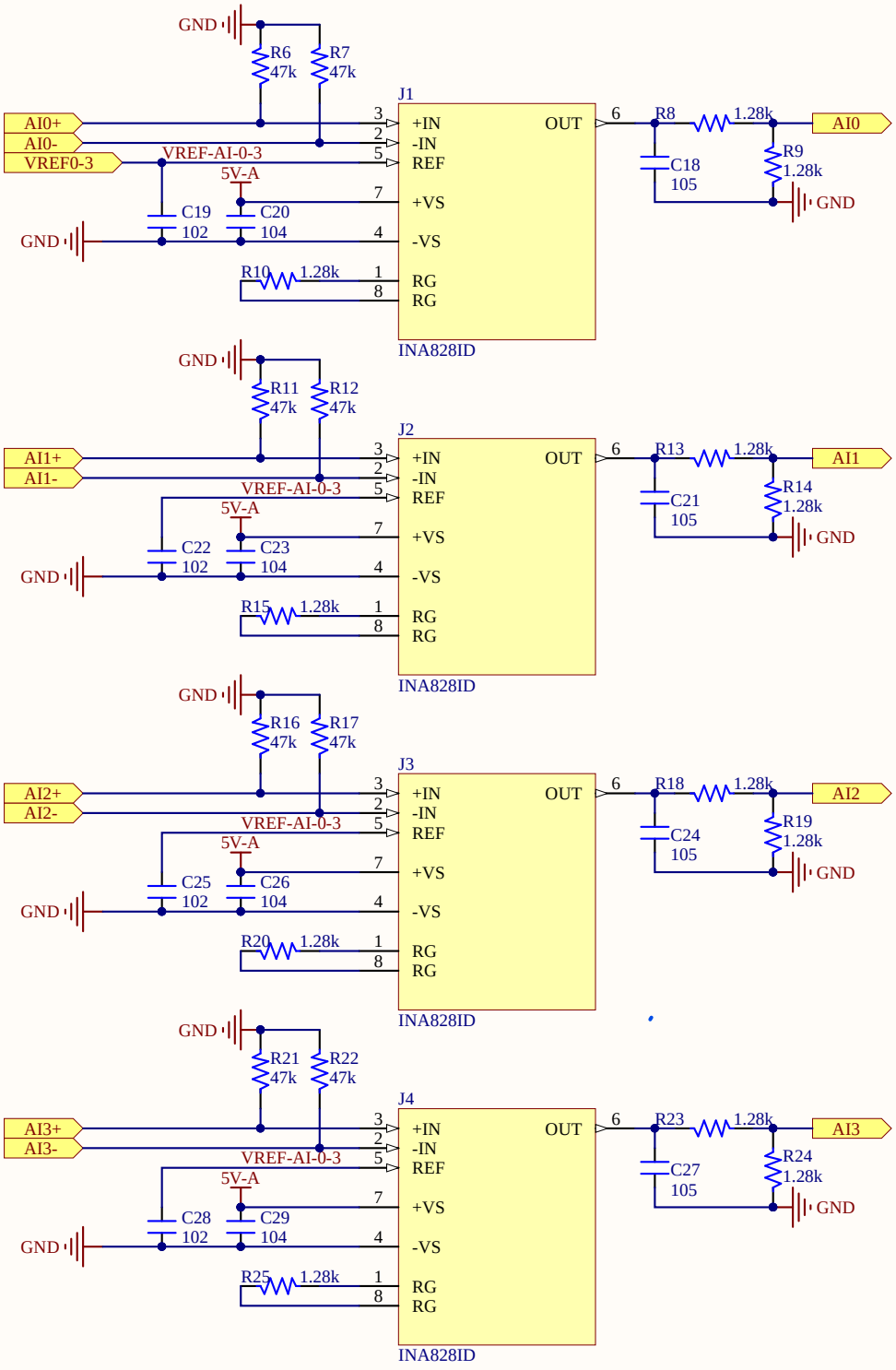
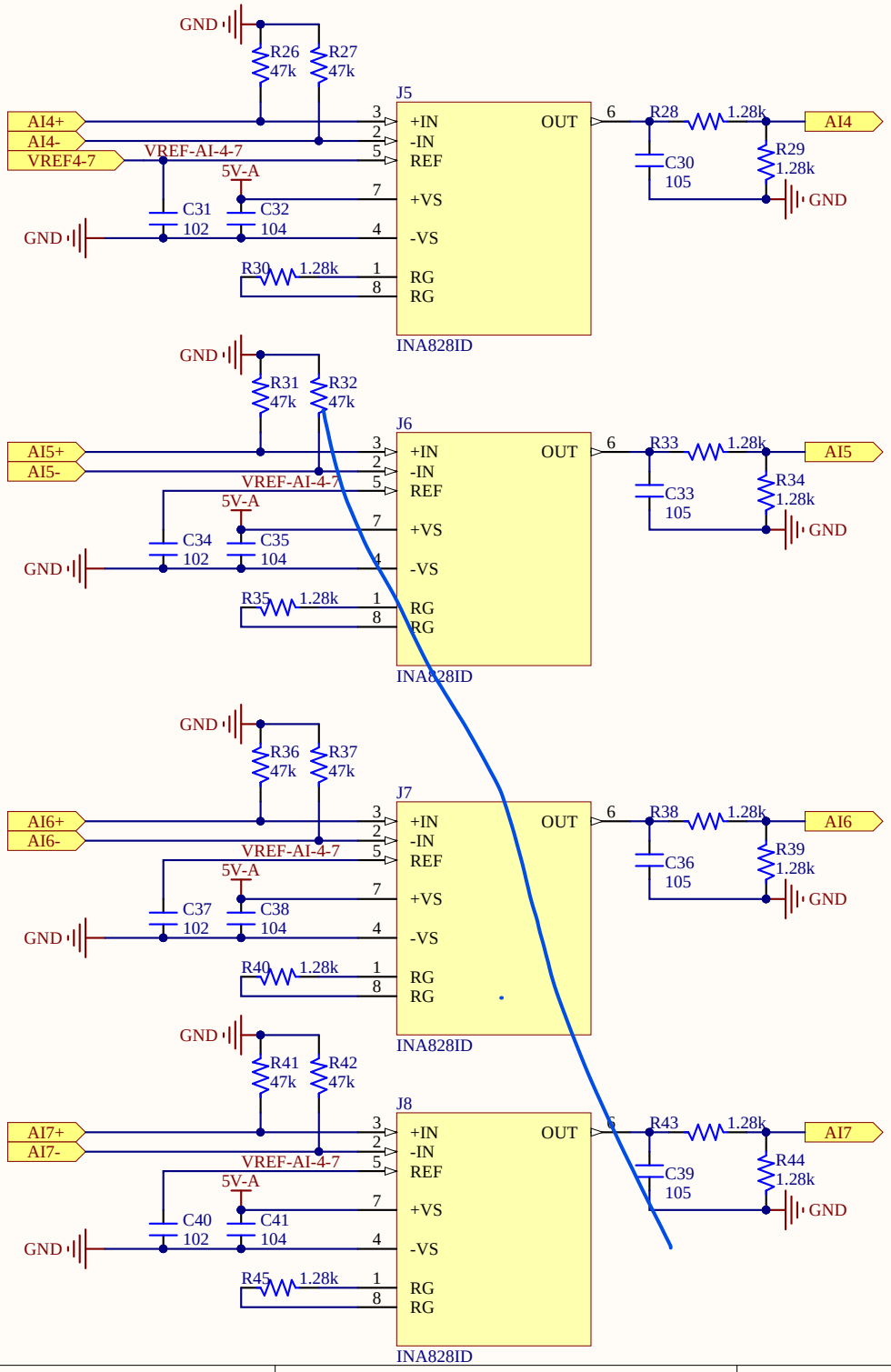

U1
STM32F765
ADCx_IN0
ADCx_IN1
ADCx_IN2
ADCx_IN3
ADCx_IN4
ADCx_IN5
ADCx_IN6
ADCx_IN7
AQ0
AQ1
DQ0
DQ1
DBG_SWDIO
DBG_SWCLK
ADCx_IN8
ADCx_IN9
BOOT1
Enc_A
Enc_B
DI0
DI1
COM1_RX
COM1_TX
ADCx_IN10
ADCx_IN11
ADCx_IN12
ADCx_IN13
ADCx_IN14
ADCx_IN15
COM2_TX
COM2_RX
NRST
BOOT0
VREFMCU
VDDA
B1
0.03R
3V3
GND
C6
C7
X1
8Mhz
20p-0805
R3
10k
R4
10k
C16
C17
2.2u-1206
IC1 MAX3232
R1IN
R1OUT
T1OUT
T1IN
R2IN
R2OUT
T2OUT
T2IN
VCC
C1+
C1-
VS-
C2+
C2-
VS+
C1
C2
C3
C4
C5
104-0805
R1
R2
5k1
RS232_RX
RS232_TX
COM2_RX
COM2_TX
ADC Pin Map
AI0 ADCx_IN9
AI1 ADCx_IN8
AI2 ADCx_IN15
AI3 ADCx_IN14
AI4 ADCx_IN10
AI5 ADCx_IN11
AI6 ADCx_IN12
AI7 ADCx_IN13
AI8 ADCx_IN7
AI9 ADCx_IN6
AI10 ADCx_IN5
AI11 ADCx_IN4
AI12 ADCx_IN3
AI13 ADCx_IN2
AI14 ADCx_IN1
AI15 ADCx_IN0
Note 1: ADC3 chi co cac chan 0->3 va 10->13
Note 2: Khi su dung DAC, khong su dung cac chan ADC ung voi ADCx_IN4 va ADCx_IN5
R5
10k
C8
C9
C10
C11
C12
C13
C14
C15
VDDA
105-0805
nên qua C16, C17
Title
MACH THU THAP DU LIEU - MCU
Size
A
Number
Revision
3
Date: 14/01/2021
Sheet 1 of 8
File: D:\Microcontroller project\..\Sheet1_MCU.SchDoc
Drawn By: Tran Quoc Tien Dung

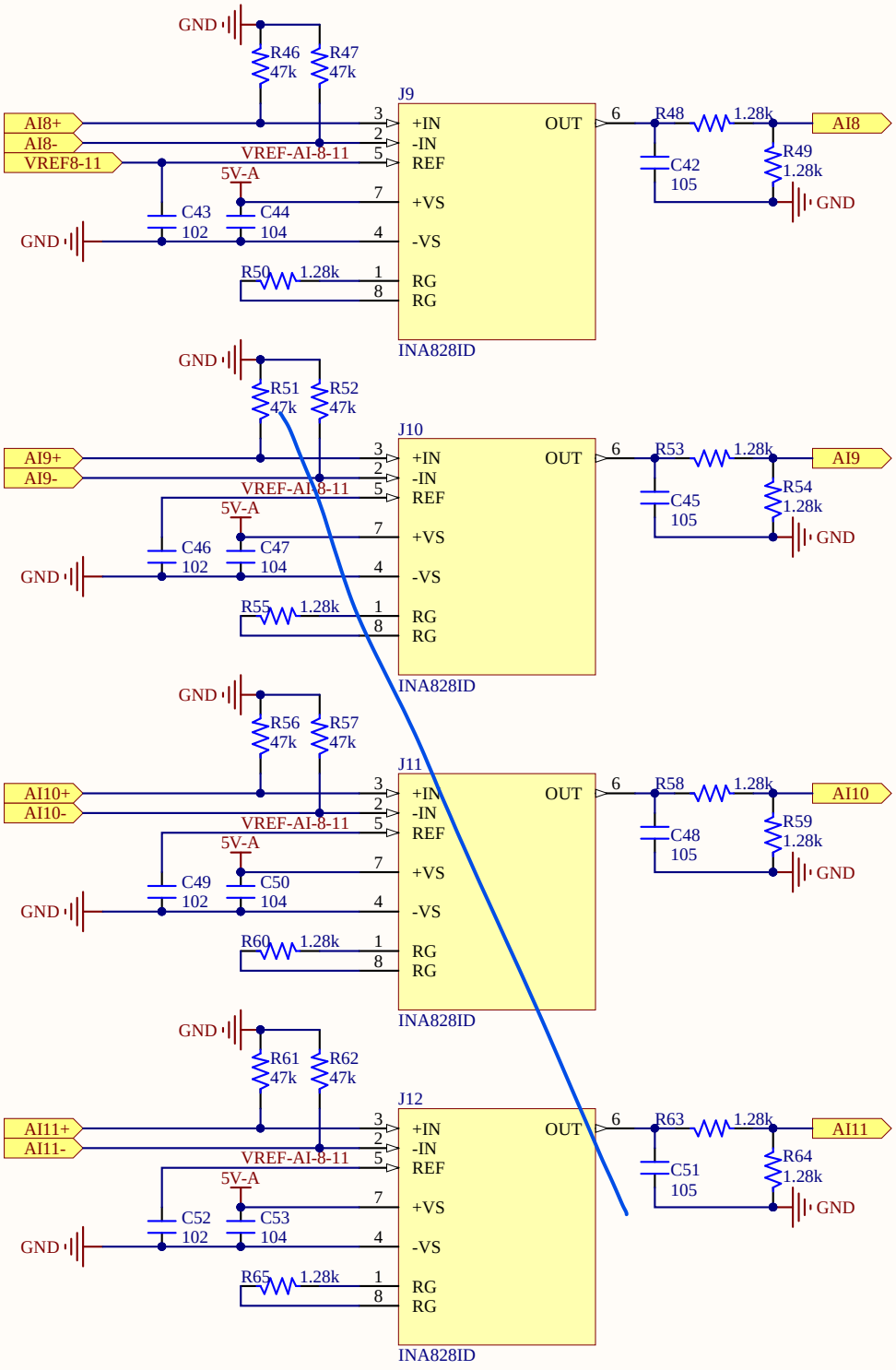


ADC là ADS 7953 - vqfn32

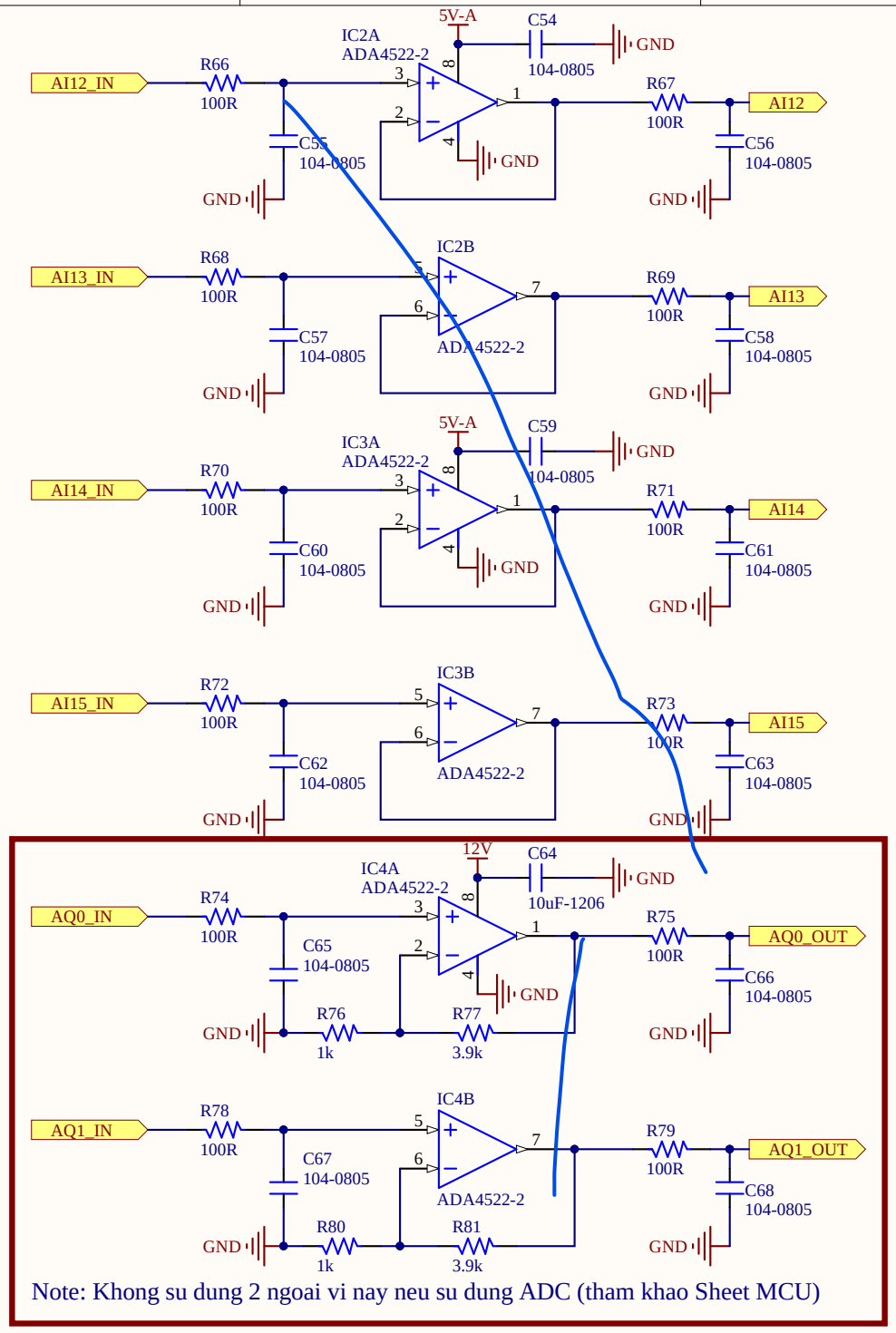
Title: **MACH THU THAP DU LIEU - AI Diff 0-3**		
Size: A	Number:	Revision: 3
Date: 14/01/2021	Sheet 2 of 8	
File: D:\Microcontroller project\..\Sheet2_AI Diff 0-3.SchDoc	Drawn By: Tran Quoc Tien Dung	



Title	**MACH THU THAP DU LIEU - AI Diff 4-7**	
Size: A	Number	Revision: 3
Date: 14/01/2021	Sheet 3 of 8	
File: D:\Microcontroller project\..\Sheet3_AI Diff 4-7.SchDoc	Drawn By: Tran Quoc Tien Dung	



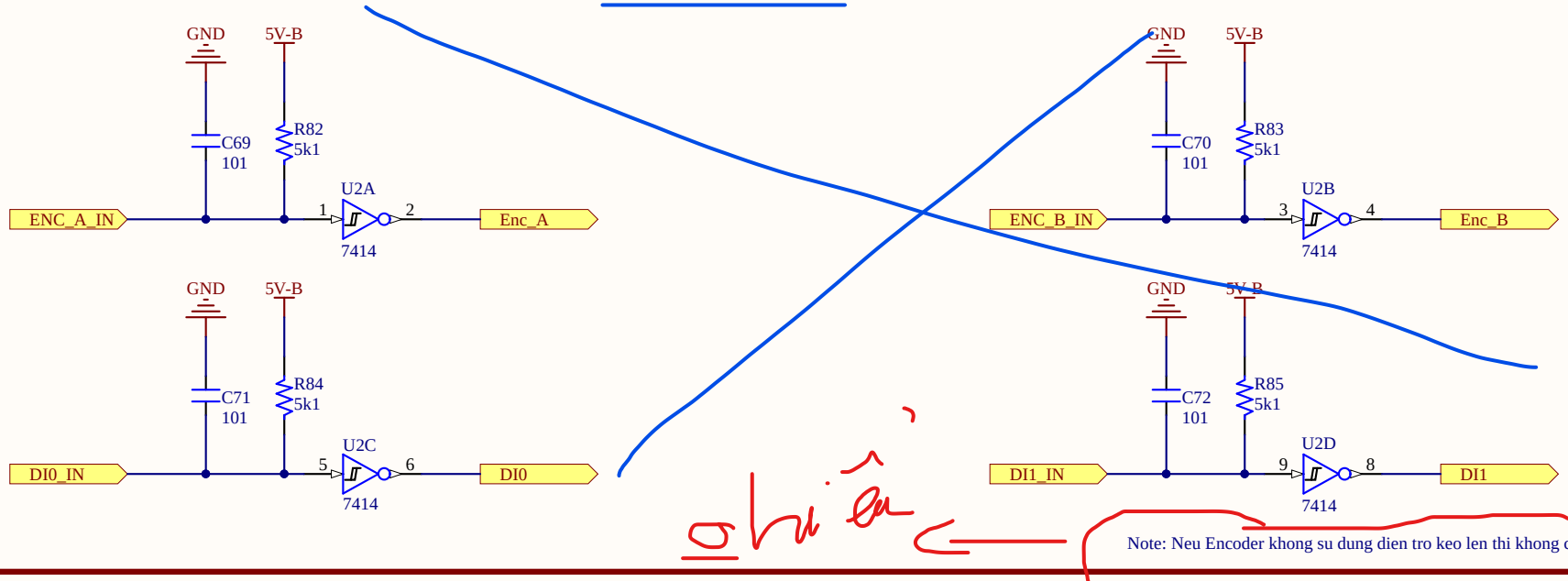
Title	**MACH THU THAP DU LIEU - AI Diff 8-11**	
Size: A	Number	Revision: 3
Date: 14/01/2021	Sheet 4 of 8	
File: D:\Microcontroller project\..\Sheet4_AI Diff 8-11.SchDoc	Drawn By: Tran Quoc Tien Dung	



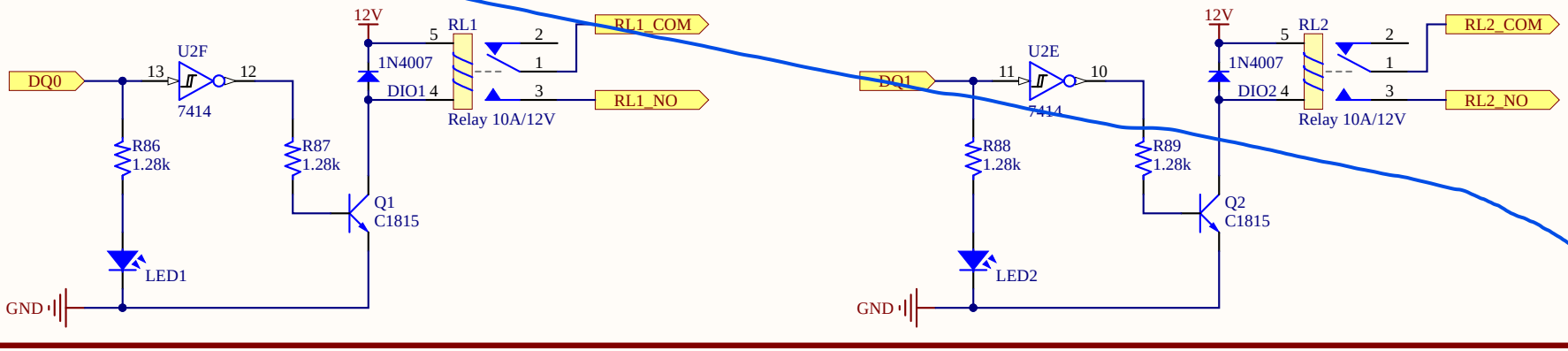
Note: Khong su dung 2 ngoai vi nay neu su dung ADC (tham khao Sheet MCU)

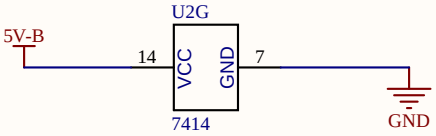
Title	**MACH THU THAP DU LIEU - AI 12-15 - AQ**	
Size: A	Number	Revision: 3
Date: 14/01/2021	Sheet 5 of 8	
File: D:\Microcontroller project\..\Sheet5_AI 12-15 - AQ.SchDoc	Drawn By: Tran Quoc Tien Dung	

ENCODER + DIGITAL INPUT

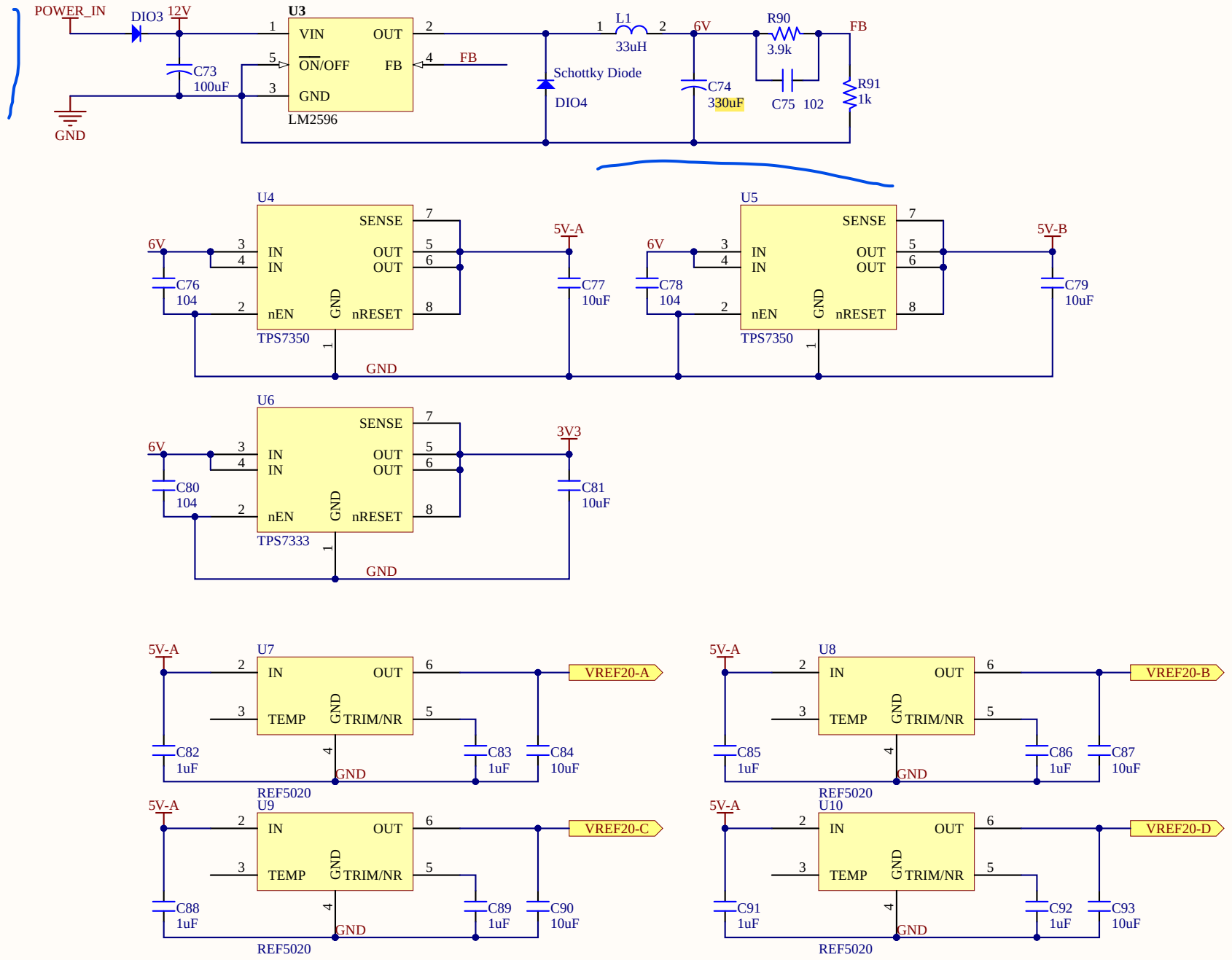


DIGITAL OUTPUT

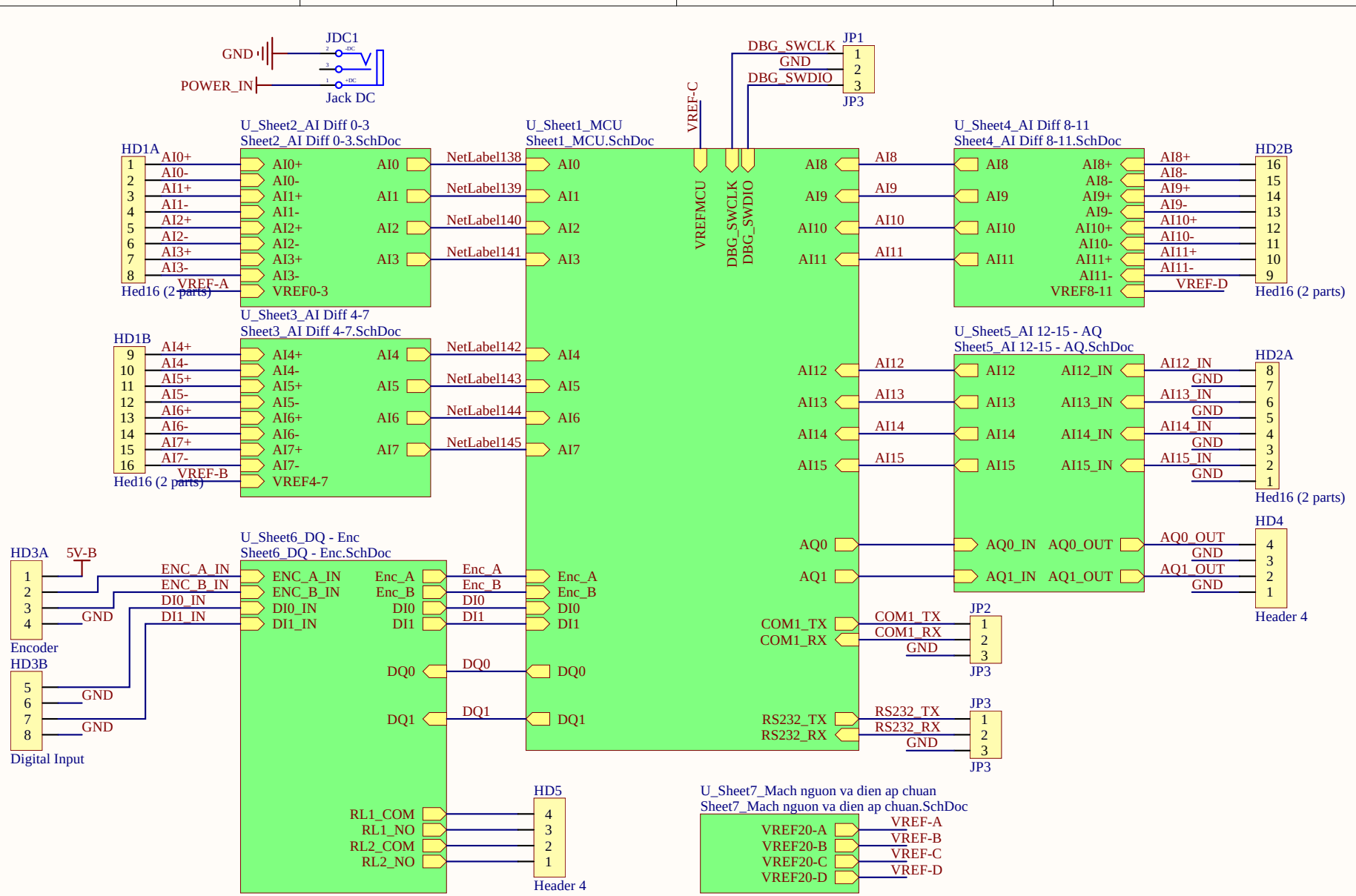




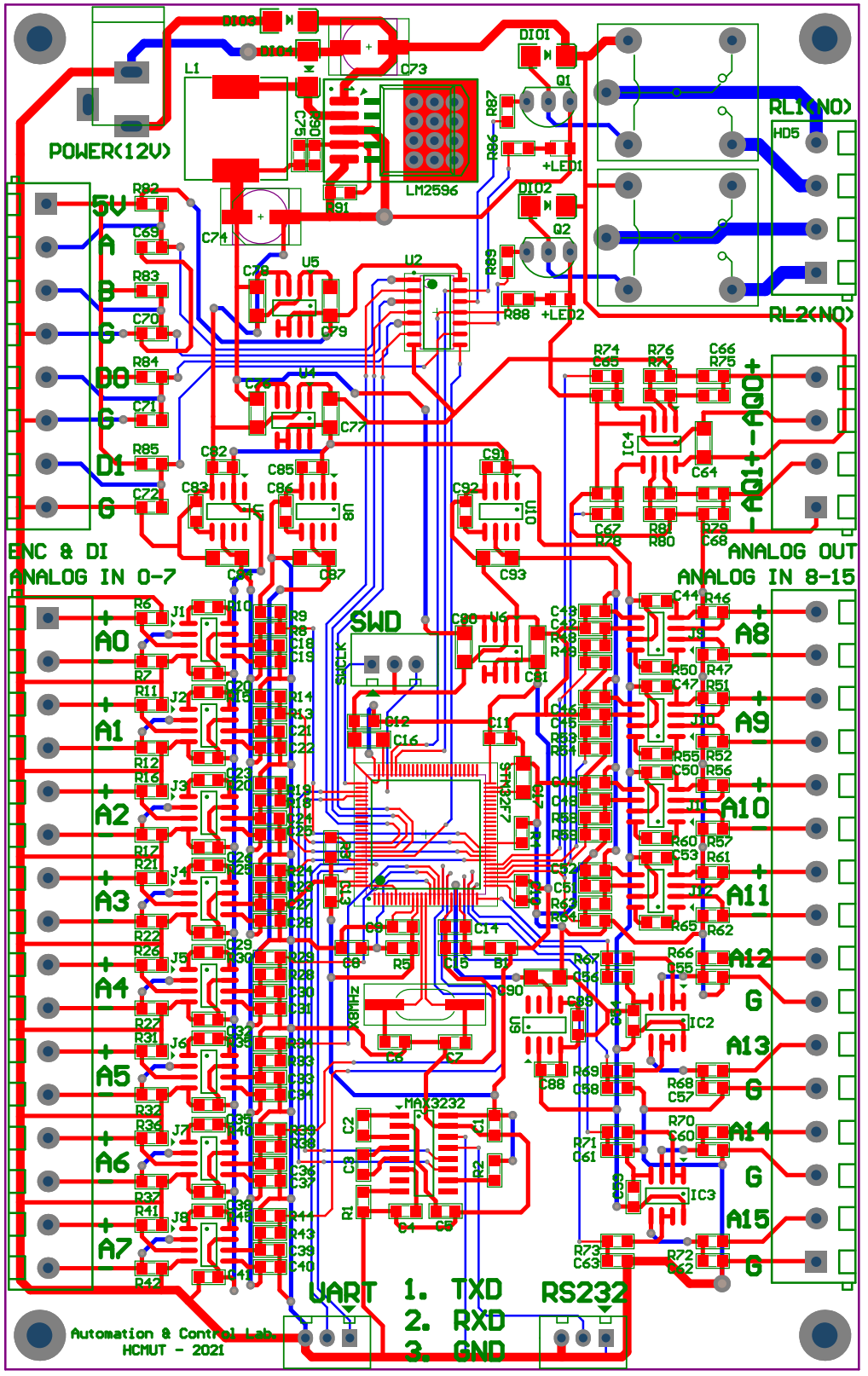
Title: MACH THU THAP DU LIEU - ENCODER + DI +DQ		
Size: A	Number:	Revision: 3
Date: 14/01/2021		Sheet 6 of 8
File: D:\Microcontroller project\..\Sheet6_DQ - Encoder.SchDoc		Drawn By: Tran Quoc Tien Dung



Title	**MACH THU THAP DU LIEU - Mach nguon + Dien ap chuan**	
Size: A	Number:	Revision: 3
Date: 14/01/2021	Sheet 7 of 8	
File: D:\Microcontroller project\..\Sheet7_Mach nguon dien ap chuan.SchDoc	Drawn By: Tran Quoc Thong	



Title	**MACH THU THAP DU LIEU - Connector**	
Size: A	Number:	Revision: 3
Date: 14/01/2021	Sheet 8 of 8	
File: D:\Microcontroller project\..\Sheet8_Connector.SchDoc	Drawn By: Tran Quoc Tien Dung	


POWER(12V)
LM2596
RL1(NO)
RL2(NO)
HD5
ENC & DI
ANALOG IN 0-7
ANALOG OUT
ANALOG IN 8-15
SWD
UART
1. TXD
2. RXD
3. GND
RS232
MAX3232
Automation & Control Lab.
HCMUT - 2021