

A

A

B

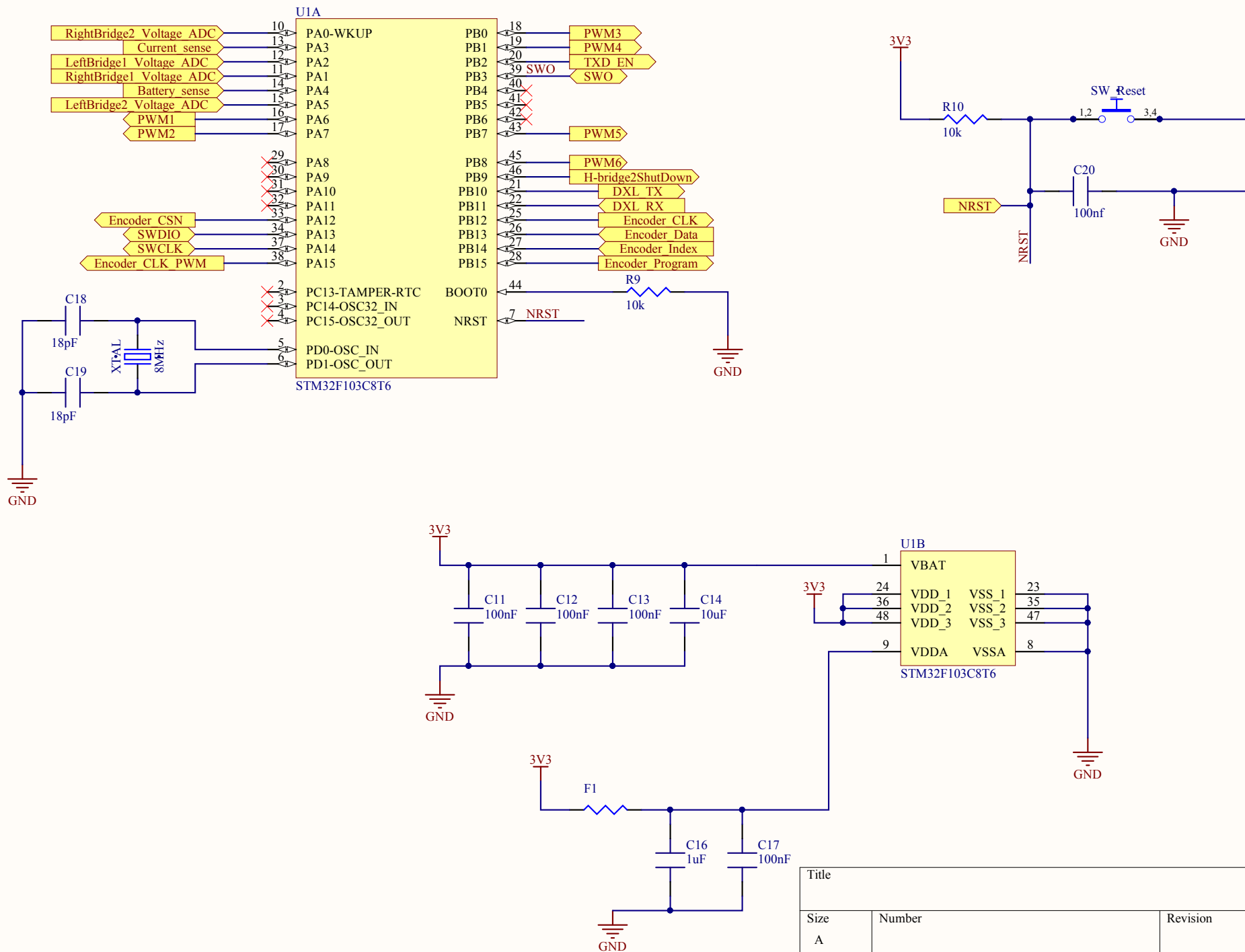
B

C

C

D

D



A

B

C

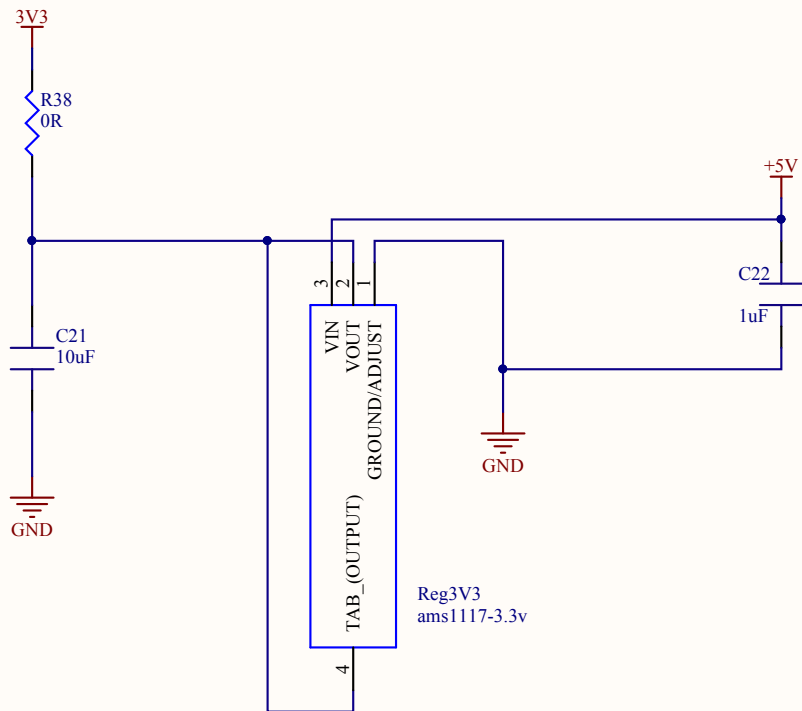
D

1

2

3V3 Regulator

Convert 5Volt from (+5V Regulator) to 3.3Volt for microcontroller Power

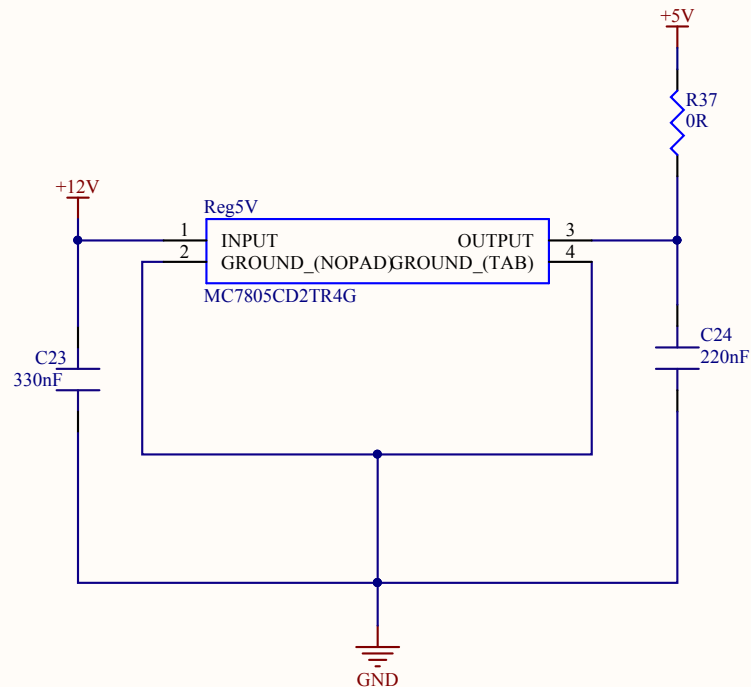


3

4

+5V Regulator

Convert 12Volt from Battery to 5Volt



A

B

C

D

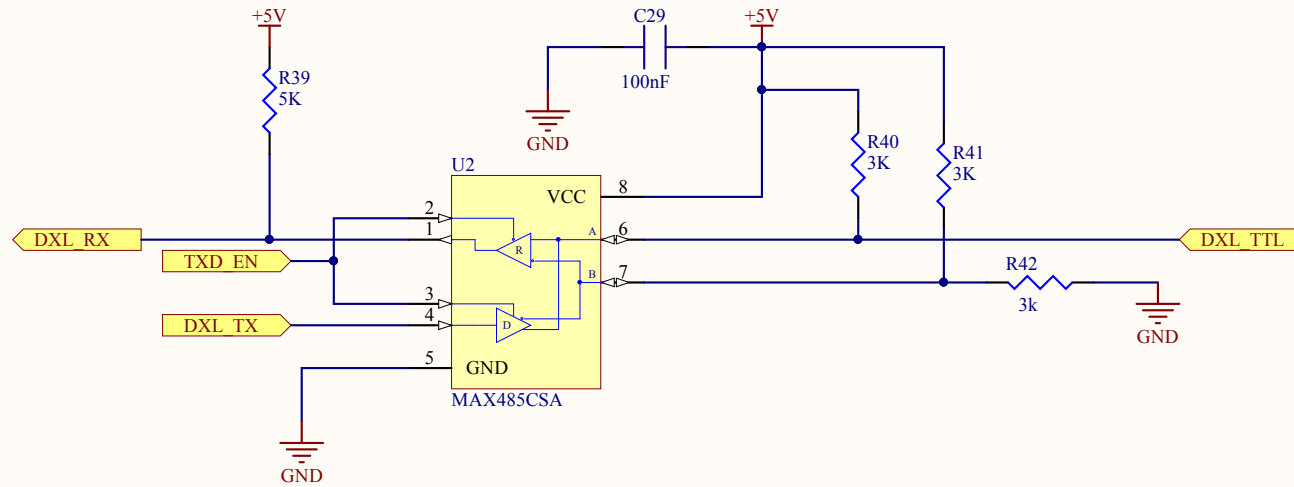
Title		
Size	Number	Revision
A		
Date:	3/29/2019	Sheet of
File:	C:\Users\...\[3]Regulator(+5V&3V3).SchDoc	Drawn By:

1

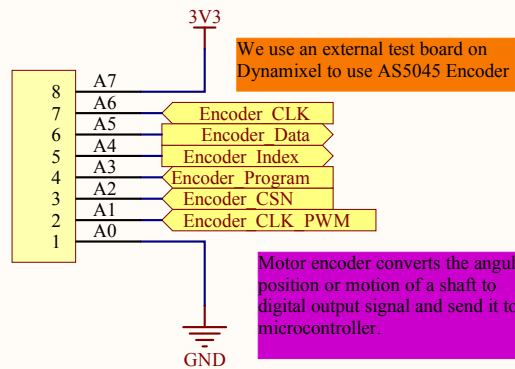
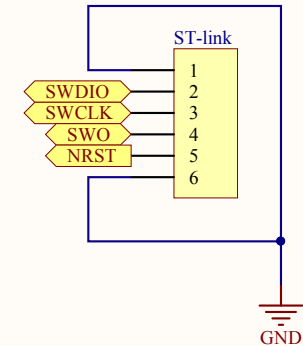
2

3

4



For programming Microcontroller with SWD



We use an external test board on Dynamixel to use AS5045 Encoder

Motor encoder converts the angular position or motion of a shaft to digital output signal and send it to microcontroller.

Title		
Size	Number	Revision
A		
Date:	3/29/2019	Sheet of
File:	C:\Users\...[4]Signal ports(USART&ST-link)Encoder.SchDoc	Encoder

SOURCE

Motor DXL



DXL TTL

like Dynamixel , we use TTL for test
beacuse in next version Battery will
Remove from Board.



Battery



XT60

SW_Power

IN

OUT

+12V

R13
15k

Battery_sense

R14
4k7



+12V

H-bridge1(+12V)

H-b1(+12V)



H-bridge1(+12V)

+12V

H-bridge2(+12V)

H-b2(+12V)

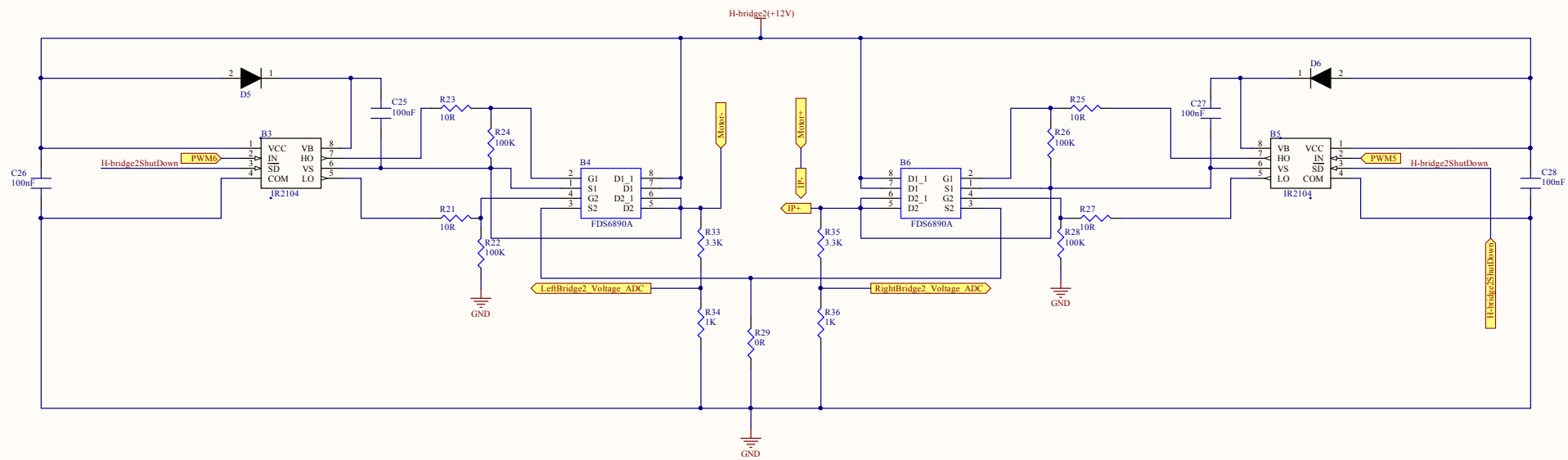


H-bridge2(+12V)

Spacer2

Spacer4

Title		
Size	Number	Revision
A		
Date:	3/29/2019	Sheet of
File:	C:\Users\...\[5]Power ports(DXL&Battery)Sch.Dwg	
	By:	



Title		
Size	Number	Revision
Tabloid		
Date:	3/29/2019	Sheet of
File:	C:\Users\j61\H-bridge2.SchDoc	Drawn By:

MRL-HSL
MotorDriver_Version1.0
Winter 2019



SW_Reset

Reg5V

Motor+ H-b2(+m) H-b2(-m)

Motor- H-b1(+m) H-b1(-m)

SW_Power

Battery

DXL_Encoder

Motor_DXL