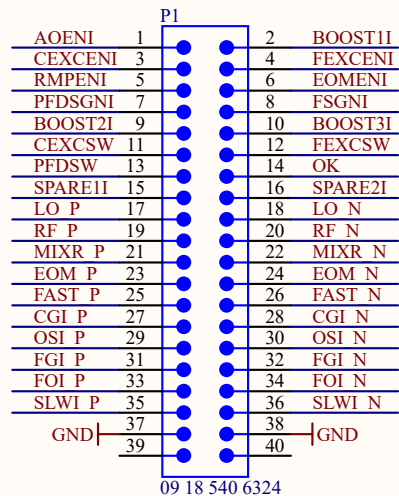
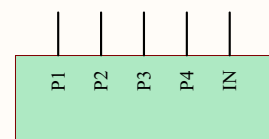
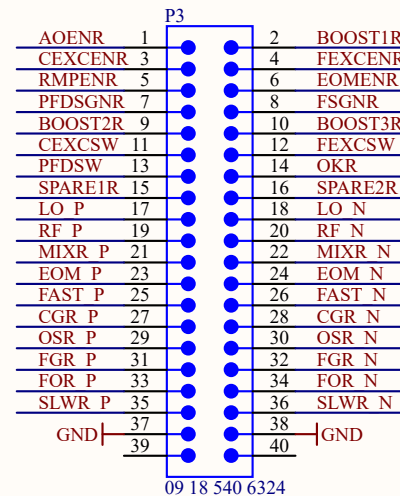


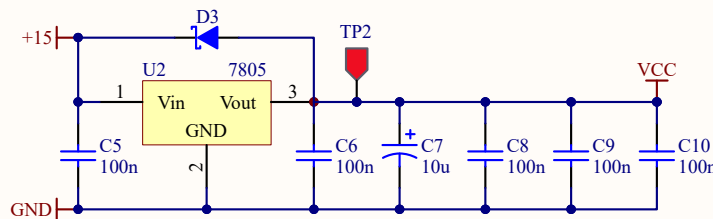
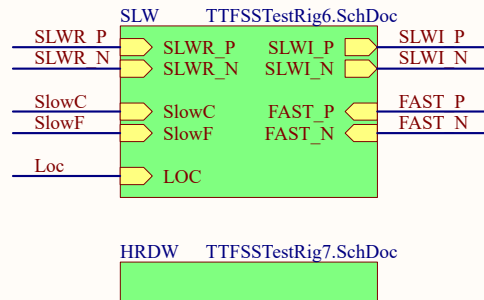
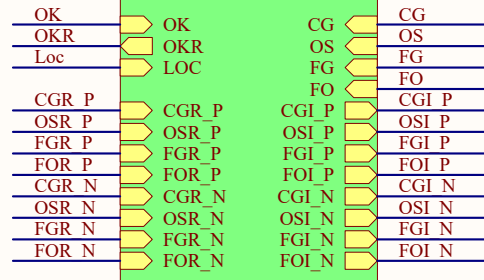
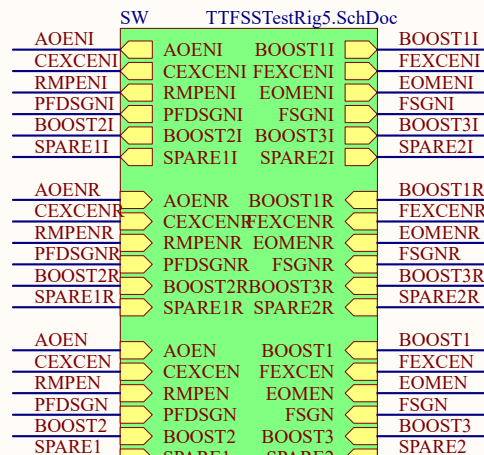
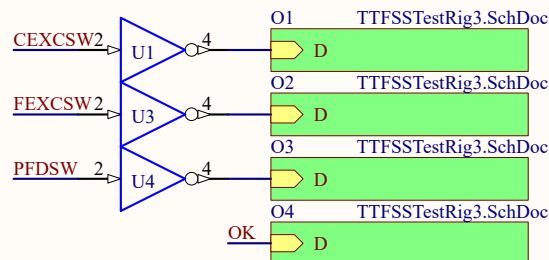
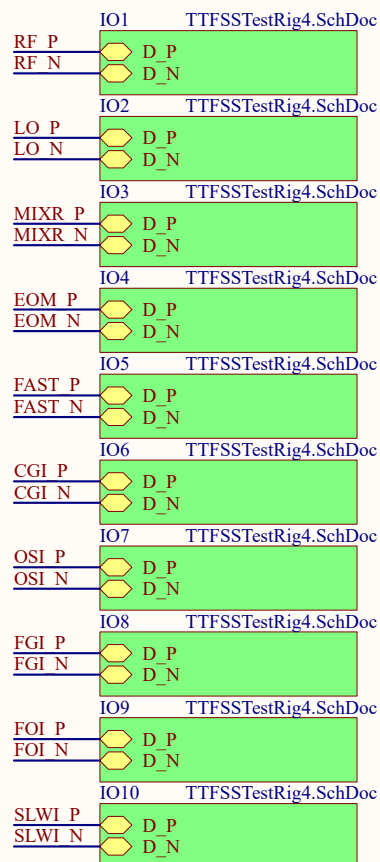
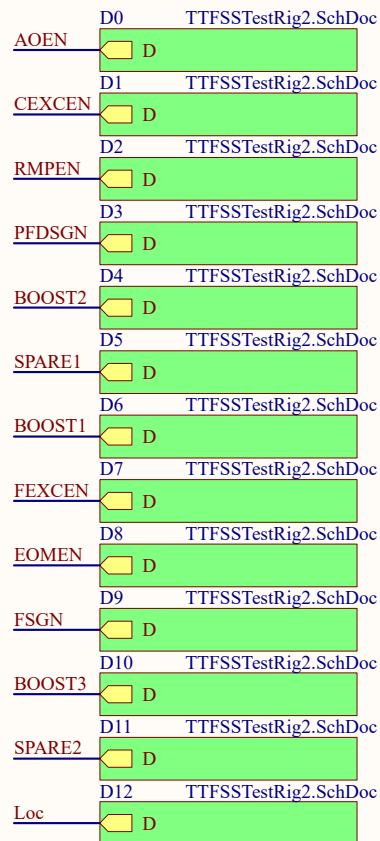
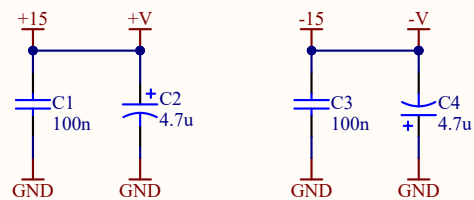
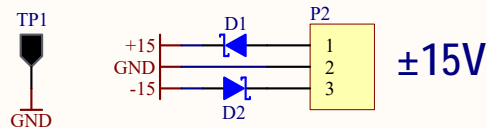
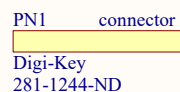
### TTFSS



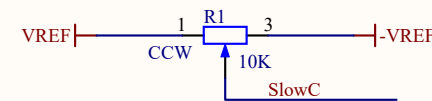
### Remote



PCB1  
Chassis Power Board  
LIGO  
D1000217-v1

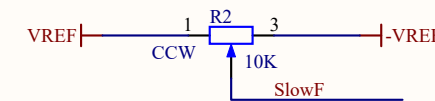


### Slow Coarse Actuation



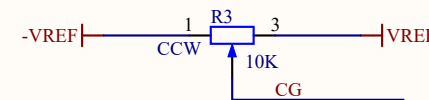
R1A Potentiometer  
Mouser  
652-3610S-1-103

### Slow Fine Actuation



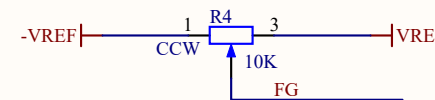
R2A Potentiometer  
Mouser  
652-3610S-1-103

### Common Gain Control



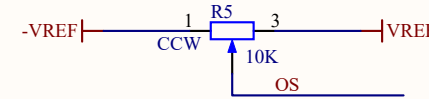
R3A Potentiometer  
Mouser  
652-3610S-1-103

### Fast Gain Control



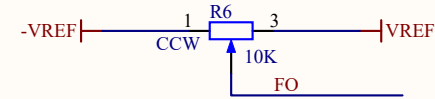
R4A Potentiometer  
Mouser  
652-3610S-1-103

### Common Offset Control



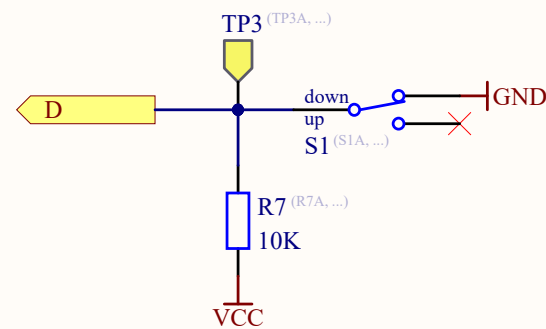
R5A Potentiometer  
Mouser  
652-3610S-1-103

### Fast Offset Control



R6A Potentiometer  
Mouser  
652-3610S-1-103

Title <b>4G TTFSS Tester</b>		
Size B	Number <b>D1700362</b>	Revision <b>1</b>
Date: 8/14/2017	Sheet 1 of 7	
File: D:\Users\...\TTFSSTestRig1.SchDoc	Drawn By: Daniel Sigg	



Title			<b>4G TTFSS Tester</b>		
Size	Number	Revision			
A	<b>D1700362</b>	<b>1</b>			
Date:	8/14/2017	Sheet 2 of 7			
File:	D:\Users\...\TTFSSTestRig2.SchDoc	Drawn By:		Daniel Sigg	

1

2

3

4

A

A

B

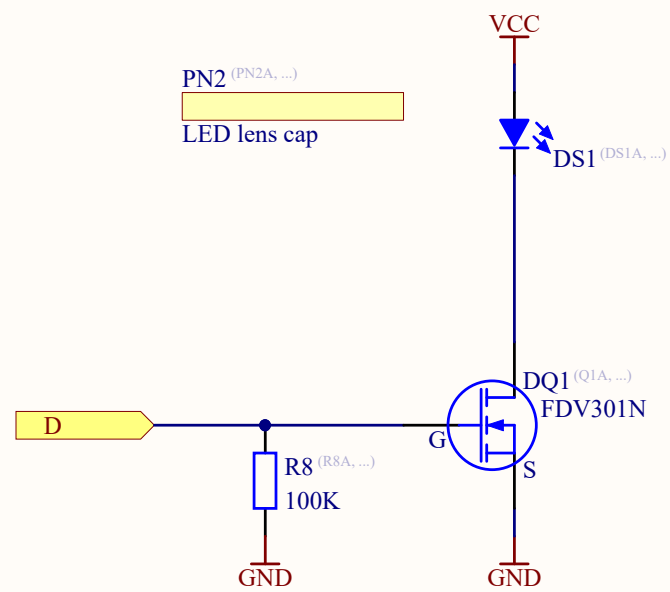
B

C

C

D

D



Title			<b>4G TTFSS Tester</b>		
Size	Number	Revision			
A	<b>D1700362</b>	<b>1</b>			
Date:	8/14/2017	Sheet 3 of 7			
File:	D:\Users\...\TTFSSTestRig3.SchDoc	Drawn By:		Daniel Sigg	

1

2

3

4

1

2

3

4

A

A

B

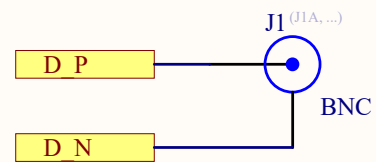
B

C

C

D

D



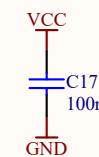
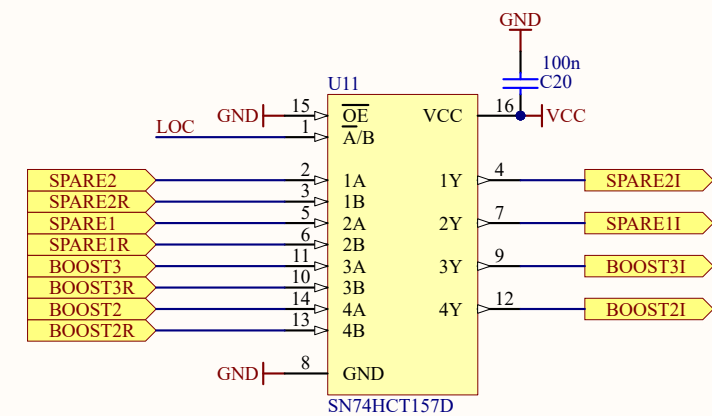
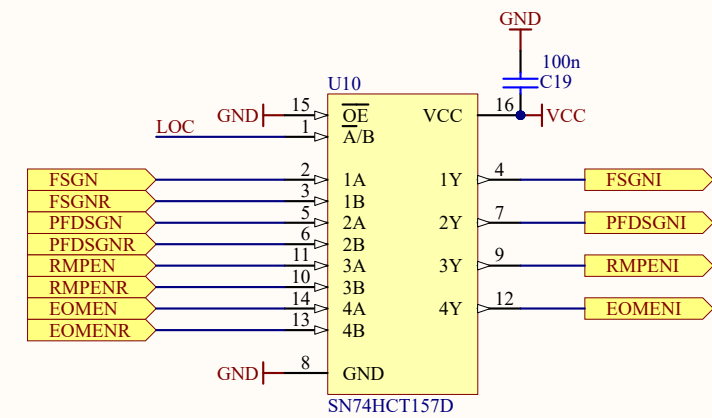
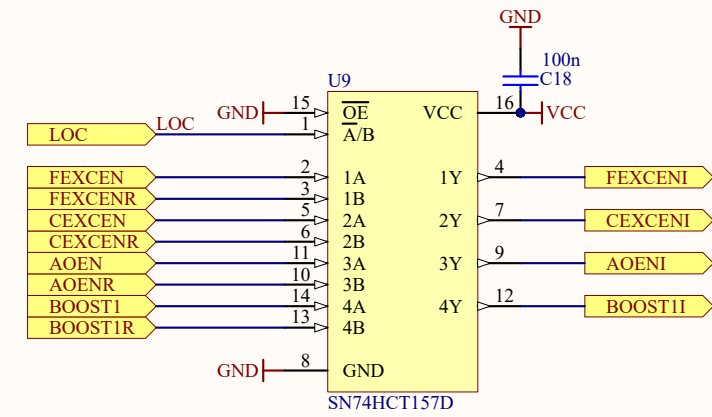
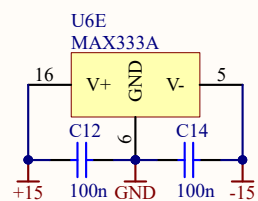
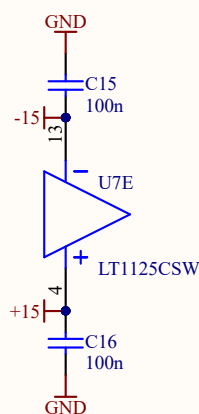
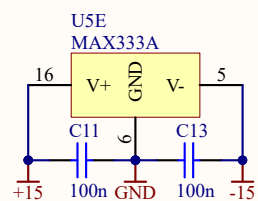
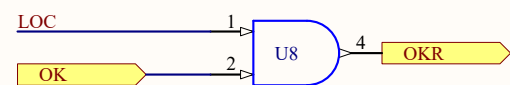
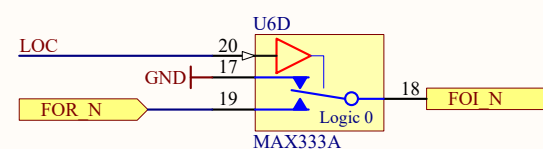
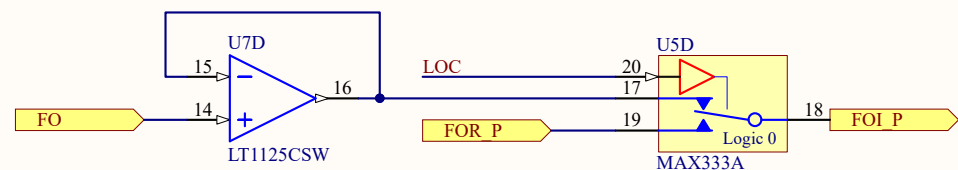
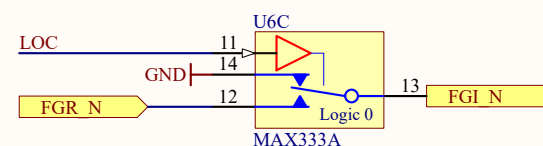
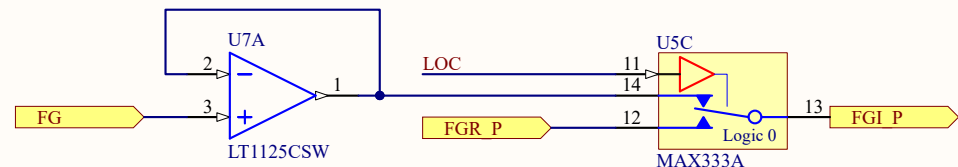
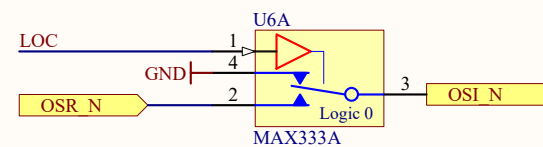
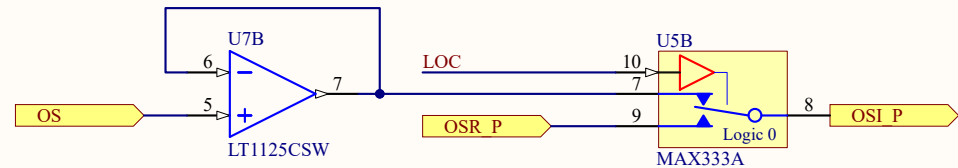
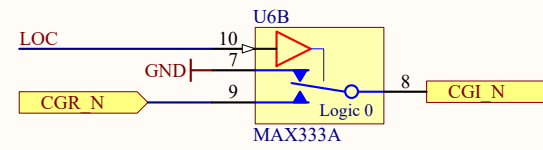
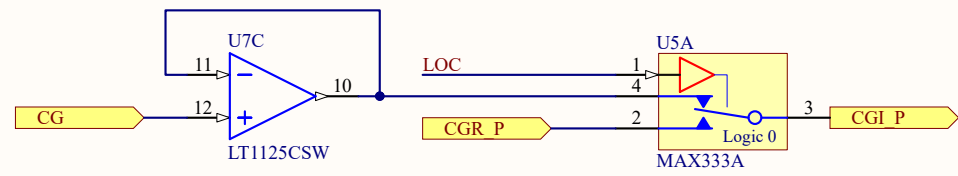
Title		<b>4G TTFSS Tester</b>	
Size	Number	Revision	
A	<b>D1700362</b>	<b>1</b>	
Date:	8/14/2017	Sheet 4 of 7	
File:	D:\Users\...\TTFSSTestRig4.SchDoc	Drawn By: Daniel Sigg	

1

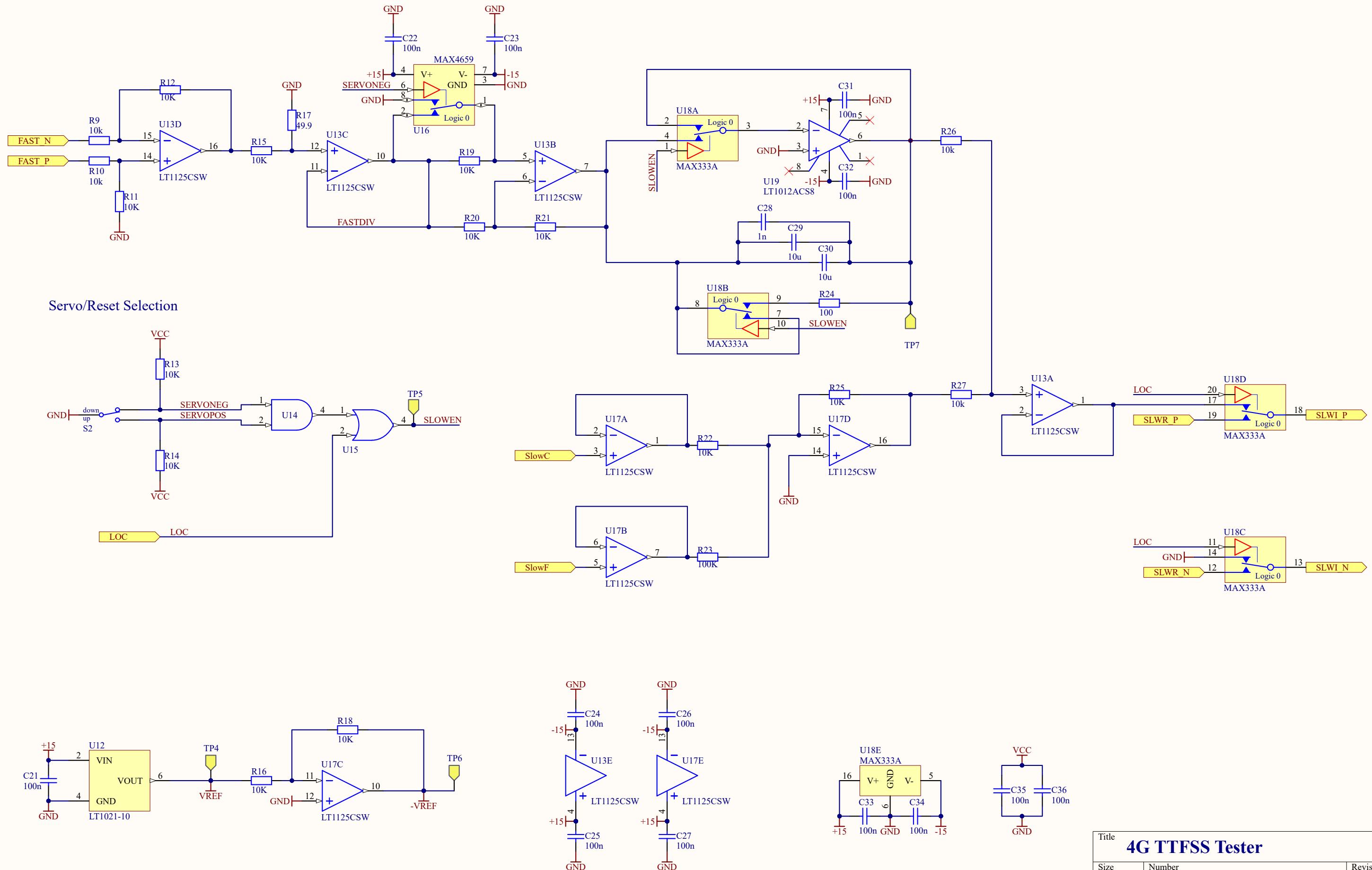
2

3

4



Title <b>4G TTFSS Tester</b>		
Size B	Number <b>D1700362</b>	Revision <b>1</b>
Date: 8/14/2017	Sheet 5 of 7	
File: D:\Users\...\TTFSSTestRig5.SchDoc	Drawn By: Daniel Sigg	



Title		
<b>4G TTFSS Tester</b>		
Size	Number	Revision
B	<b>D1700362</b>	<b>1</b>
Date:	8/14/2017	Sheet 6 of 7
File:	D:\Users\...\TTFSSTestRig6.SchDoc	Drawn By: Daniel Sigg

**Panels**

PN3 Front Panel  
LIGO  
D1003365-v1  
PN4 Rear Panel  
LIGO  
D1003366-v1

H1 Handle, 3"  
H2 Handle, 3"  
Mouser  
534-9109  
H3 Ferrule  
H4 Ferrule  
H5 Ferrule  
H6 Ferrule  
Mouser  
534-9121

M1 #6-32 3/8" flat  
M2 #6-32 3/8" flat  
M3 #6-32 3/8" flat  
M4 #6-32 3/8" flat  
McMaster-Carr  
91099A215

**Standoffs**

H7 Standoff M-F  
H8 Standoff M-F  
H9 Standoff M-F  
H10 Standoff M-F  
H11 Standoff M-F  
H12 Standoff M-F  
H13 Standoff M-F  
H14 Standoff M-F  
H15 Standoff M-F  
H16 Standoff M-F  
H17 Standoff M-F  
H18 Standoff M-F  
Mouser  
855-R40-3001402

H19 Standoff F-F  
H20 Standoff F-F  
H21 Standoff F-F  
H22 Standoff F-F  
H23 Standoff F-F  
H24 Standoff F-F  
Mouser  
855-R40-1002002

M5 M4-8mm, flat  
M6 M4-8mm, flat  
M7 M4-8mm, flat  
M8 M4-8mm, flat  
M9 M4-8mm, flat  
M10 M4-8mm, flat  
McMaster-Carr  
91420A218  
M11 M4 nut  
M12 M4 nut  
M13 M4 nut  
M14 M4 nut  
M15 M4 nut  
M16 M4 nut  
McMaster-Carr  
90591A141  
M17 M4 lock washer  
M18 M4 lock washer  
M19 M4 lock washer  
M20 M4 lock washer  
M21 M4 lock washer  
M22 M4 lock washer  
McMaster-Carr  
93925A250

**BNC**

E1 BNC lock washer  
E2 BNC lock washer  
E3 BNC lock washer  
E4 BNC lock washer  
E5 BNC lock washer  
E6 BNC lock washer  
E7 BNC lock washer  
E8 BNC lock washer  
E9 BNC lock washer  
E10 BNC lock washer  
Newark  
78M7215  
E11 BNC nut  
E12 BNC nut  
E13 BNC nut  
E14 BNC nut  
E15 BNC nut  
E16 BNC nut  
E17 BNC nut  
E18 BNC nut  
E19 BNC nut  
E20 BNC nut  
Newark  
78M7214

**D-sub**

PN5 DB37 cable  
Digi-Key  
M7PSK-3706J-ND  
PN6 IDC header  
PN7 IDC header  
Digi-Key  
MKC40A-ND  
PN8 Jack screw  
PN9 Jack screw  
Newark  
80K5431

**Power Entry**

PN10 Banana jack  
Newark  
39F1574  
PN11 Banana jack  
Newark  
39F1575  
PN12 Banana jack  
Newark  
39F1573  
PN13 3W3 D-sub  
Newark  
94X3536  
PN14 Jack screw

**Power PCB**

H25 #4 screw, flat, 3/8"  
H26 #4 lock washer  
H27 #4 nut  
H28 insulator  
Mouser  
532-53-77-4ACG  
H29 ins. should. washer  
Mouser  
532-7721-7PPS  
H30 #4 screw, flat, 1/2"  
H31 #4 lock washer  
H32 #4 nut  
H33 insulator  
Mouser  
532-53-77-4ACG  
H34 ins. should. washer  
Mouser  
532-7721-7PPS  
M23 #4-40 1/4" flat  
M24 #4-40 1/4" flat  
M25 #4-40 1/4" flat  
M26 #4-40 1/4" flat

H35 #4 standoff, 1/4"  
H36 #4 standoff, 1/4"  
H37 #4 standoff, 1/4"  
H38 #4 standoff, 1/4"  
Digi-Key  
36-8713-ND  
H39 #4 lock washer  
H40 #4 nut  
H41 #4 lock washer  
H42 #4 nut  
H43 #4 lock washer  
H44 #4 nut  
H45 #4 lock washer  
McMaster-Carr  
91113A005  
H46 #4 nut  
McMaster-Carr  
90480A005

**Internal**

PN15 Molex 4-pin  
Digi-Key  
WM2102-ND  
PN16 Molex contact  
PN17 Molex contact  
PN18 Molex contact  
Digi-Key  
WM1114-ND  
PN19 Molex 3-pin  
Digi-Key  
WM2123-ND  
PN20 Molex contact  
PN21 Molex contact  
PN22 Molex contact

**Heatsink**

H47 #4 screw, 3/8"  
H48 #4 lock washer  
H49 #4 nut  
U2\_B heatsink  
Digi-Key  
294-1039-ND

Title <b>4G TTFSS Tester</b>		
Size B	Number <b>D1700362</b>	Revision <b>1</b>
Date: 8/14/2017	Sheet 7 of 7	
File: D:\Users\...\TTFSSTestRig7.SchDoc	Drawn By: Daniel Sigg	