SR3-TOP

SRM-TOP

Vacuum Flange

Seismic Table

SUS-C7-41A

UK Top Coil Driver D0902747

DB9 Female

DB9 Male

PD Outputs to White

Coil Driver Inputs from Dewhite

DB25 Female

DB15 Female

Coil Driver Outputs to Sat

CAB_H1:SUS_HAM5-71[1..9]

To AA Interface Sheet 6

SR3 Top 1, Top 2, Top 3, Left

CAB_H1:SUS_HAM5-91[1..9]

To AI Interface Sheet 7

SR3 Top 1, Top 2, Top 3, Left

CAB_H1:SUS_HAM5-4

CAB_H1:SUS_HAM5-5

UK OSEM Module

DB25 Male

DB15 Male

Coil Driver Inputs

D0901284

HAM5-1

CAB_H1:SUS_HAM5-1

SHIELDED 25 COND

HAM5-D3-1

AIR VACUUM

VACUUM FEEDTHRU

CAB_H1:SUS_HAM5-150

DB25 Female

DB25 Male

B Shield

VAC CABLE 25 PIN

A Shield

CAB_H1:SUS_HAM5-149

Female Micro

Adl. OSEM Micro D Male

PD-K
PD-A
LED-A
LED-K
NC
NC
FN Coil
ST Coil
Shield

SR3 TOP1

SR3 TOP2

SR3 TOP3

SR3 LEFT

SUS-C7-40A

UK Top Coil Driver D0902747

CAB_H1:SUS_HAM5-72[1..9]

To AA Interface Sheet 6

SR3 Right, SR3 Side, SRM Top1, SRM Top2

CAB_H1:SUS_HAM5-92[1..9]

To AI Interface Sheet 7

SR3 Right, SR3 Side, SRM Top1, SRM Top2

CAB_H1:SUS_HAM5-6

CAB_H1:SUS_HAM5-7

UK OSEM Module

HAM5-2

CAB_H1:SUS_HAM5-2

HAM5-D3-2

CAB_H1:SUS_HAM5-152

CAB_H1:SUS_HAM5-151

SR3 RIGHT

SR3 SIDE

SUS-C7-39A

UK Top Coil Driver D0902747

CAB_H1:SUS_HAM5-73[1..9]

To AA Interface Sheet 6

SRM Top 3, Left, Right, Side

CAB_H1:SUS_HAM5-93[1..9]

To AI Interface Sheet 7

SRM Top 3, Left, Right, Side

CAB_H1:SUS_HAM5-8

CAB_H1:SUS_HAM5-9

UK OSEM Module

HAM5-3

CAB_H1:SUS_HAM5-3

HAM5-D3-3

CAB_H1:SUS_HAM5-154

CAB_H1:SUS_HAM5-153

SRM TOP1

SRM TOP2

SRM TOP3

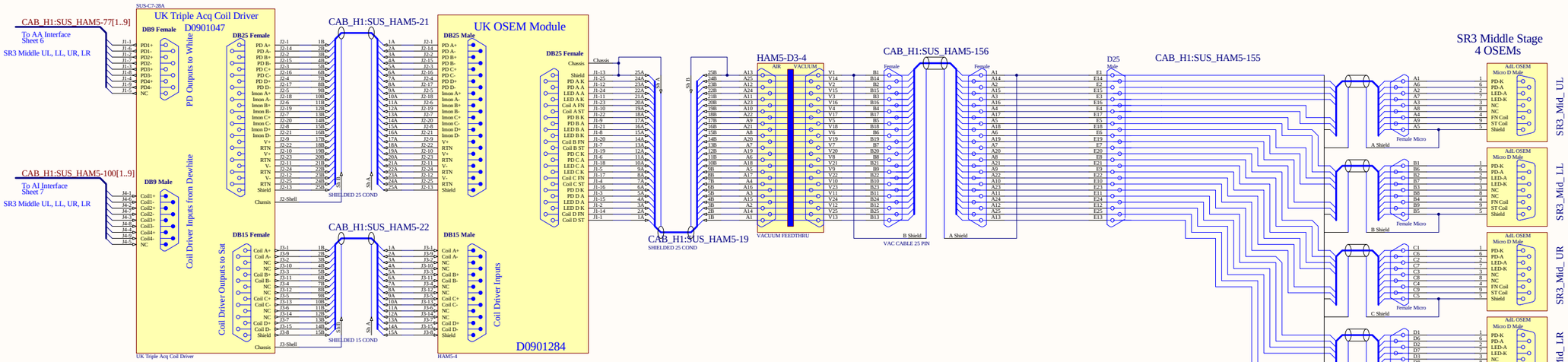
SRM LEFT

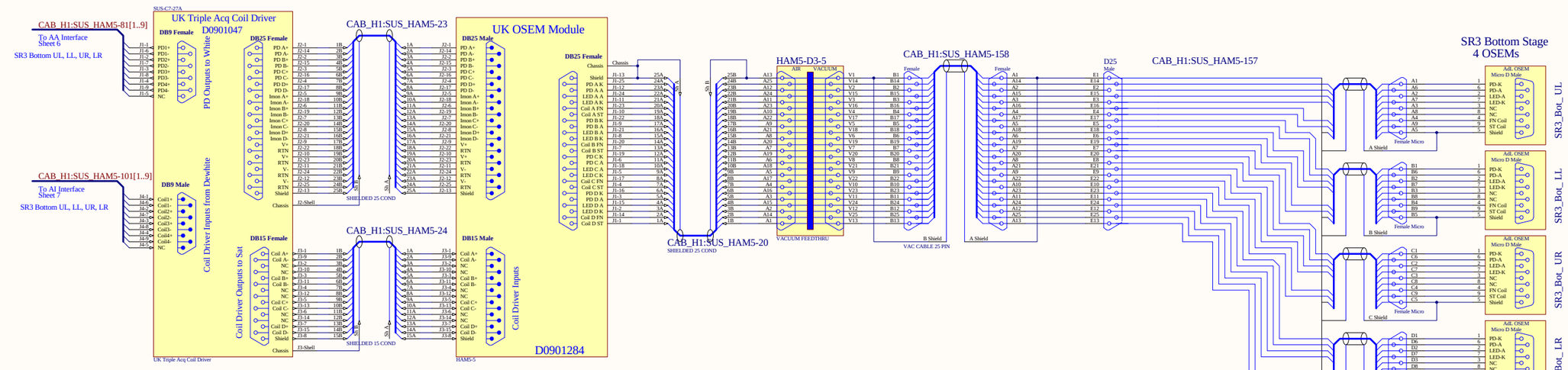
SRM RIGHT

SRM SIDE

Title: aLIGO SUS HAM 5-6 Controls Wiring	LIGO Project, California Institute of Technology, Massachusetts Institute of Technology	LIGO	
Size: D	DCC Number: D1002740	SCH / PCB Revision: v4	Engineer: J. Heefner
File: Y:\Documents\Altium\My Designs\Adl_SUS_SystemWiring\HAM5_6_SUS\HAM5_6_SUS1.SchDoc		Date: 10/17/2011 Time: 3:39:33 PM Sheet 1 of 10	

SR3 Middle and Bottom Stages





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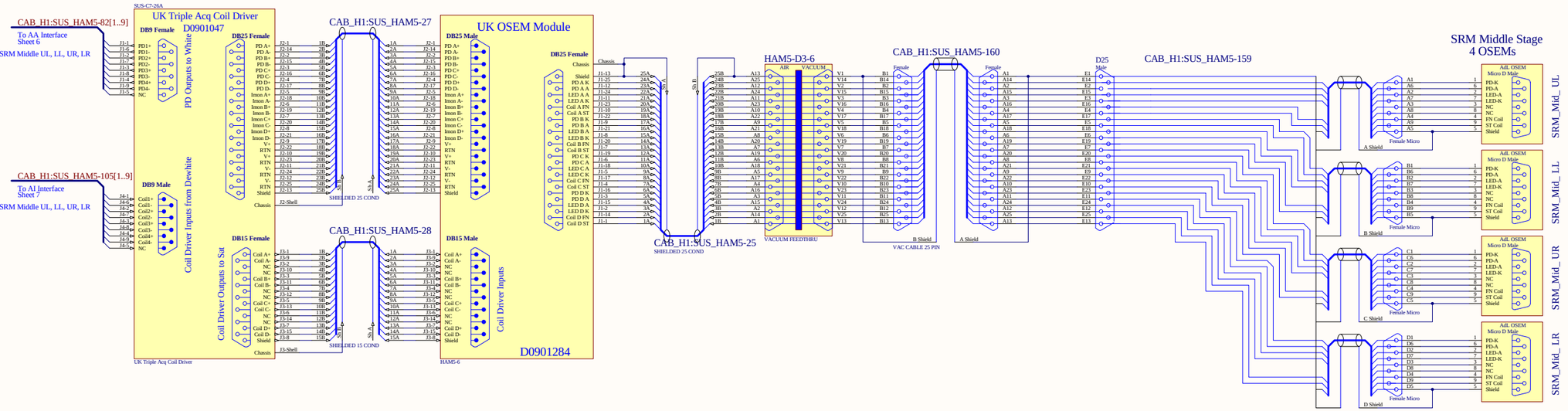
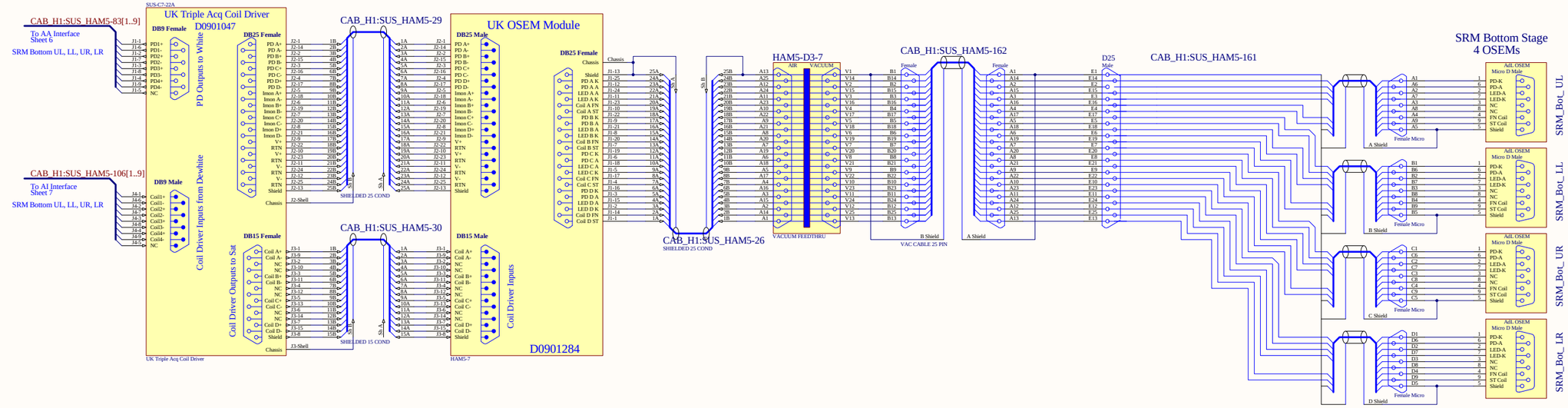
SRM Middle and Bottom Stages





Title: *aLIGO SUS HAM 5-6 Controls Wiring*		LIGO Project, California Institute of Technology, Massachusetts Institute of Technology	LIGO
Size: D	DCC Number: D1002740	SCH / PCB Revision: v4	Engineer: J. Heefner
File: Y:\Documents\Altium\My Designs\Adl_ SUS_SystemWiring\HAM5_6_SUSHAM5_6_SUS3.SchDoc			Date: 10/17/2011 Time: 3:39:33 PM Sheet 3 of 16

Title	aLIGO SUS HAM 5-6 Controls Wiring	LIGO Project, California Institute of Technology, Massachusetts Institute of Technology	
Size: D	DCC Number: D1002740	SCH / PCB Revision: v4	Engineer: J. Heefner
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Sheet 4 of 15			

HAM5-6 SUS Front End CPU ADC Connections

CAB_H1:SUS_HAM5-71
CAB_H1:SUS_HAM5-72
CAB_H1:SUS_HAM5-73
CAB_H1:SUS_HAM6-74
CAB_H1:SUS_HAM6-75
CAB_H1:SUS_HAM5-77
CAB_H1:SUS_HAM5-81
CAB_H1:SUS_HAM5-78
CAB_H1:SUS_HAM5-79
CAB_H1:SUS_HAM5-80
CAB_H1:SUS_HAM5-82
CAB_H1:SUS_HAM5-83
CAB_H1:SUS_HAM5-167
CAB_H1:SUS_HAM5-89
CAB_H1:SUS_HAM5-90

To Top Coil Driver Sheet 1 SR3 Top 1, Top 2, Top 3, Left
To Top Coil Driver Sheet 1 SR3 Right, SR3 Side, SRM Top1, SRM Top 2
To Top Coil Driver Sheet 1 SRM Top 3, Left, Right, Side
To Top Coil Driver Sheet 1 OMC Top 1, Top 2, Top 3, Left
To Top Coil Driver Sheet 1 OMC Right, OMC Side, SPARE, SPARE
To Triple Acq Coil Driver Sheet 2 SR3 Middle UL, LL, UR, LR
To Triple Acq Coil Driver Sheet 2 SR3 Bottom UL, LL, UR, LR
SPARE---
To Triple Acq Coil Driver Sheet 3 SRM Middle UL, LL, UR, LR
To Triple Acq Coil Driver Sheet 3 SRM Bottom UL, LL, UR, LR
To HAM5 Optical Lever

SHIELDED 9 COND

aLIGO AA Chassis D0902783 8 x 4CH Version

DB9 Male

787082-7, 68 pin connector

aLIGO 16 Bit ADC Adapter D0902006

P50E-080P1-SR1-TG, 80 pin connector

General Standards PCI66-16AI64SSA 32 CH ADC Module

SUS-C8-29-0-INSIDEA
SUS-C8-29-0-BACK
SUS-C8-29-2-INSIDEA
SUS-C8-29-2-BACK
SUS-C7-34
SUS-C7-33

Power Female +15 GND -15 J5-1 J5-2 J5-3

ADC0 Channel Index HAM5-6 SUS Front End

CH 0-- SR3 TOP1
CH1-- SR3 TOP2
CH2-- SR3 TOP3
CH3-- SR3 LEFT
CH4-- SR3 RIGHT
CH5-- SR3 SIDE
CH6-- SRM TOP1
CH7-- SRM TOP2
CH8-- SRM TOP3
CH9-- SRM LEFT
CH10-- SRM RIGHT
CH11-- SRM SIDE
CH12-- OMC TOP1
CH13-- OMC TOP2
CH14-- OMC TOP3
CH15-- OMC LEFT
CH16-- OMC RIGHT
CH17-- OMC SIDE
CH 18-- SPARE
CH 19-- SPARE
CH20-- SR3 MID UL
CH21-- SR3 MID LL
CH22-- SR3 MID UR
CH23-- SR3 MID LR
CH24-- SR3 BOT UL
CH25-- SR3 BOT LL
CH26-- SR3 BOT UR
CH27-- SR3 BOT LR
CH28-- SPARE
CH29-- SPARE
CH30-- Spare
CH31-- Spare

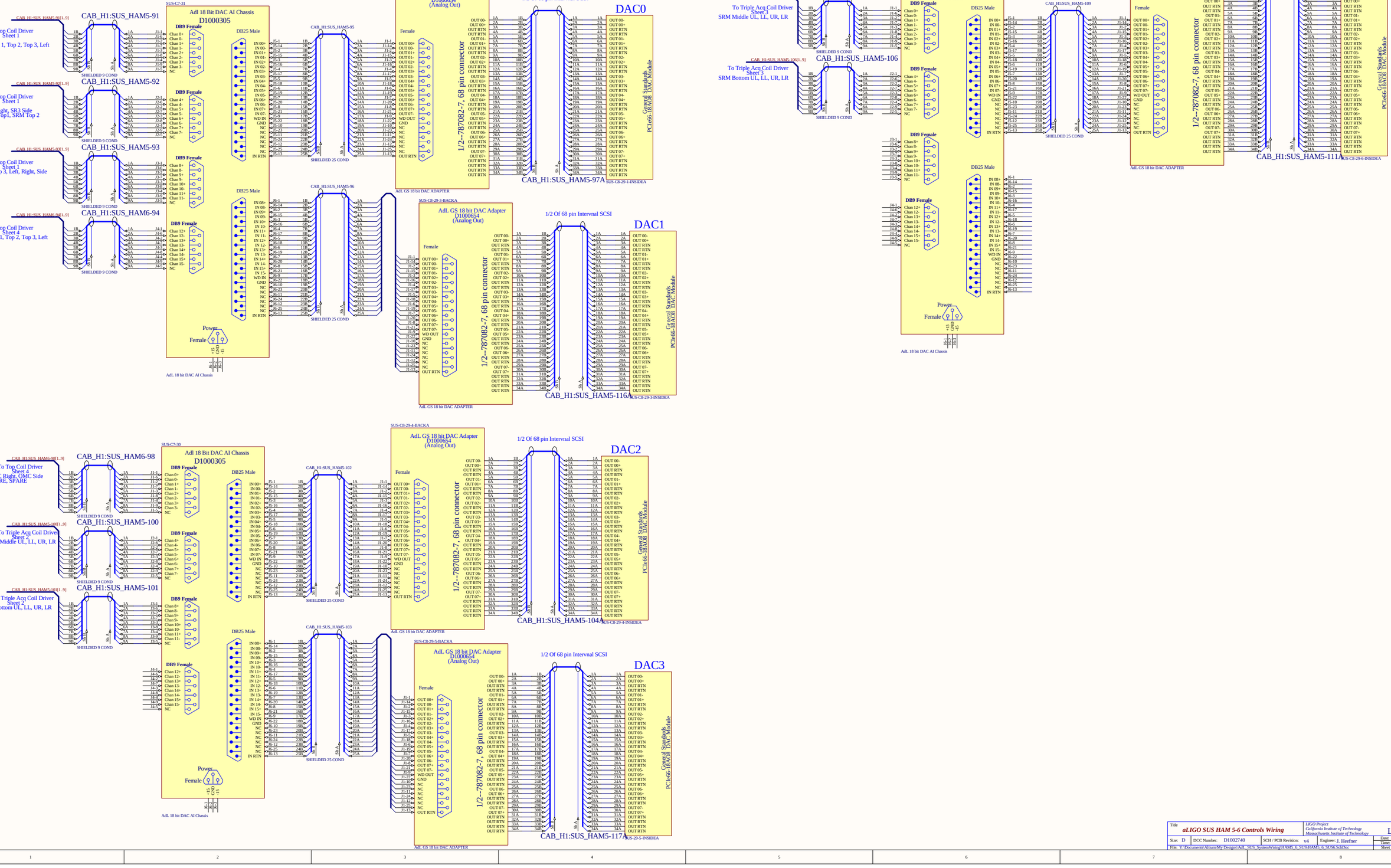
ADC1 Channel Index HAM3-4 SUS Front End

CH 0--SRM MID UL
CH1-- SRM MID LL
CH2-- SRM MID UR
CH3-- SRM MID LR
CH4-- SRM BOT UL
CH5-- SRM BOT LL
CH6-- SRM BOT UR
CH7-- SRM BOT LR
CH8-- HAM5 OPT LEVER QUAD 1
CH9-- HAM5 OPT LEVER QUAD 2
CH10-- HAM5 OPT LEVER QUAD 3
CH11-- HAM5 OPT LEV QUAD 4
CH12-- SPARE
CH13-- SPARE
CH14-- SPARE
CH15-- SPARE
CH16-- SPARE
CH17-- SPARE
CH18-- SPARE
CH19-- SPARE
CH20-- SPARE
CH21-- SPARE
CH22-- SPARE
CH23-- SPARE
CH24-- SPARE
CH25-- SPARE
CH26-- SPARE
CH27-- SPARE
CH28-- SPARE
CH29-- SPARE
CH30-- SPARE
CH31-- SPARE

Title: aLIGO SUS HAM 5-6 Controls Wiring	LIGO Project, California Institute of Technology, Massachusetts Institute of Technology		LIGO
Size: D	DCC Number: D1002740	SCH / PCB Revision: v4	Engineer: J. Heefner
Date: 10/17/2011	Time: 3:39:33 PM	File: Y:\Documents\Altium\My Designs\Adl_SUS_SystemWiring\HAM5_6_SUS\HAM5_6_SUS5.SchDoc	Sheet 5 of 16

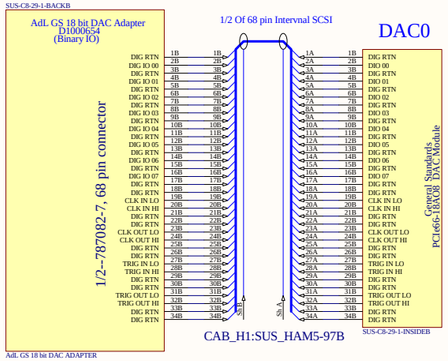
HAM5-4 SUS Front End CPU DAC Connections

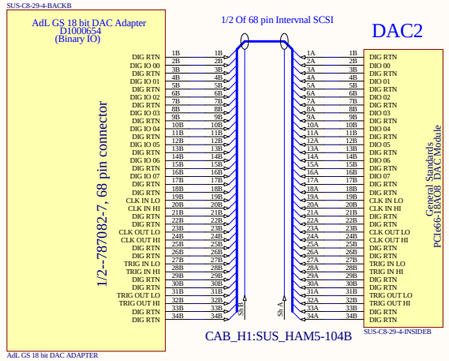
See Sheet 8 for DAC Binary Connections and Channel Lists

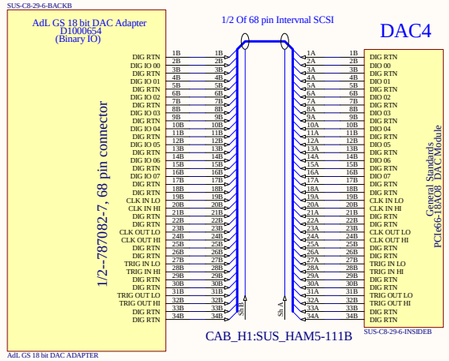


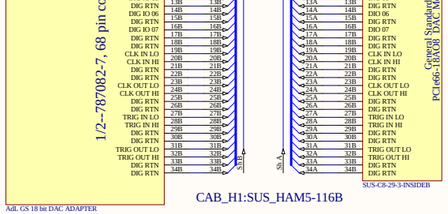
Title: aLIGO SUS HAM 5-6 Controls Wiring	LIGO Project, California Institute of Technology, Massachusetts Institute of Technology		
Size: D	DCC Number: D1002740	SCH / PCB Revision: v4	Engineer: J. Heefner
File: Y:\Documents\Altium\My Designs\Adl_ SUS_SystemWiring\HAM5_6_SUS\HAM5_6_SUS6.SchDoc			Date: 10/17/2011
			Time: 3:39:33 PM
			Sheet 6 of 16

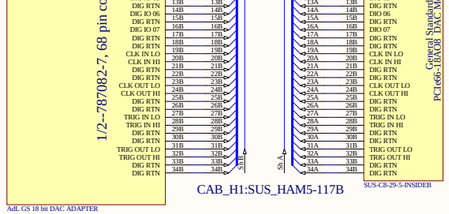
HAM5-6 SUS Front End CPU DAC BIO Connections and Channel Assignments











DAC Channel Index
HAM5-6 SUS Front End

Chan #	DAC 0	DAC 1	DAC 2	DAC 3	DAC 4
0	SR3 TOP1	SRM TOP3	OMC RIGHT	SR3 BOT UL	SRM Mid UL
1	SR3 TOP2	SRM LEFT	OMC SIDE	SR3 BOT LL	SRM Mid LL
2	SR3 TOP3	SRM RIGHT	SPARE	SR3 BOT UR	SRM Mid UR
3	SR3 LEFT	SRM SIDE	SPARE	SR3 BOT LR	SRM Mid LR
4	SR3 RIGHT	OMC TOP1	SR3 MID UL	SPARE	SRM Bot UL
5	SR3 SIDE	OMC TOP2	SR3 MID LL	SPARE	SRM Bot LL
6	SRM TOP1	OMC TOP3	SR3 MID UR	SPARE	SRM Bot UR
7	SRM TOP2	OMC LEFT	SR3 MID LR	SPARE	SRM Bot LR

Need to fix channel index and cable numbers

Title: aLIGO SUS HAM 5-6 Controls Wiring	LIGO Project, California Institute of Technology, Massachusetts Institute of Technology		
Size: D	DCC Number: D1002740	SCH / PCB Revision: v4	Engineer: J. Heefner
Date: 10/17/2011	Time: 3:39:34 PM	Sheet 7 of 16	
File: Y:\Documents\Altium\My Designs\AdL_SUS_SystemWiring\HAM5_6_SUS\HAM5_6_SUS7 SchDoc			

Coil Driver Monitor Connections

SUS-C7-41B

UK TOP Coil Driver
D0902747

DB25 Female

Monitors

Slow I Mon 1 J1-1
GND J1-14
Fast I Mon 1 J1-2
GND J1-15
Volt Mon 1 J1-3
GND J1-16
Slow I Mon 2 J1-4
GND J1-17
Fast I Mon 2 J1-5
GND J1-18
Volt Mon 2 J1-6
GND J1-19
Slow I Mon 3 J1-7
GND J1-20
Fast I Mon 3 J1-8
GND J1-21
Volt Mon 3 J1-9
GND J1-22
Slow I Mon 4 J1-10
GND J1-23
Fast I Mon 4 J1-11
GND J1-24
Volt Mon 4 J1-12
GND J1-25
GND J1-13

CAB_H1:SUS_HAM5-121[1-25]

To AA Chassis
Sheet 9
SR3 Top1, Top2, Top3, Left

DB9 Female

Noise Monitors

Noise Mon 1 J2-1
GND J2-6
Noise Mon 2 J2-2
GND J2-7
Noise Mon 3 J2-3
GND J2-8
Noise Mon 4 J2-4
GND J2-9
GND J2-5

CAB_H1:SUS_HAM5-119[1-9]

To AA Chassis
Sheet 9
SR3 Top1, Top2, Top3, Left

UK Top Coil Driver (Final)

SUS-C7-37B

UK TOP Coil Driver
D0902747

DB25 Female

Monitors

Slow I Mon 1 J1-1
GND J1-14
Fast I Mon 1 J1-2
GND J1-15
Volt Mon 1 J1-3
GND J1-16
Slow I Mon 2 J1-4
GND J1-17
Fast I Mon 2 J1-5
GND J1-18
Volt Mon 2 J1-6
GND J1-19
Slow I Mon 3 J1-7
GND J1-20
Fast I Mon 3 J1-8
GND J1-21
Volt Mon 3 J1-9
GND J1-22
Slow I Mon 4 J1-10
GND J1-23
Fast I Mon 4 J1-11
GND J1-24
Volt Mon 4 J1-12
GND J1-25
GND J1-13

CAB_H1:SUS_HAM6-128[1-25]

To AA Chassis
Sheet 10
OMC Top1, Top2, Top3, Left

DB9 Female

Noise Monitors

Noise Mon 1 J2-1
GND J2-6
Noise Mon 2 J2-2
GND J2-7
Noise Mon 3 J2-3
GND J2-8
Noise Mon 4 J2-4
GND J2-9
GND J2-5

CAB_H1:SUS_HAM6-126[1-9]

To AA Chassis
Sheet 10
OMC Top1, Top2, Top3, Left

UK Top Coil Driver (Final)

SUS-C7-28B

UK Triple Acq Coil Driver
D0901047

DB25 Female

Monitors

Slow I Mon 1 J1-1
GND J1-14
Fast I Mon 1 J1-2
GND J1-15
Volt Mon 1 J1-3
GND J1-16
Slow I Mon 2 J1-4
GND J1-17
Fast I Mon 2 J1-5
GND J1-18
Volt Mon 2 J1-6
GND J1-19
Slow I Mon 3 J1-7
GND J1-20
Fast I Mon 3 J1-8
GND J1-21
Volt Mon 3 J1-9
GND J1-22
Slow I Mon 4 J1-10
GND J1-23
Fast I Mon 4 J1-11
GND J1-24
Volt Mon 4 J1-12
GND J1-25
GND J1-13

CAB_H1:SUS_HAM5-139[1-25]

To AA Chassis
Sheet 11
SR3 Middle UL, LL, UR, LR

DB9 Female

Noise Monitors

Noise Mon 1 J2-1
GND J2-6
Noise Mon 2 J2-2
GND J2-7
Noise Mon 3 J2-3
GND J2-8
Noise Mon 4 J2-4
GND J2-9
GND J2-5

CAB_H1:SUS_HAM5-137[1-9]

To AA Chassis
Sheet 11
SR3 Middle UL, LL, UR, LR

UK Triple Acq Coil Driver

SUS-C7-26B

UK Triple Acq Coil Driver
D0901047

DB25 Female

Monitors

Slow I Mon 1 J1-1
GND J1-14
Fast I Mon 1 J1-2
GND J1-15
Volt Mon 1 J1-3
GND J1-16
Slow I Mon 2 J1-4
GND J1-17
Fast I Mon 2 J1-5
GND J1-18
Volt Mon 2 J1-6
GND J1-19
Slow I Mon 3 J1-7
GND J1-20
Fast I Mon 3 J1-8
GND J1-21
Volt Mon 3 J1-9
GND J1-22
Slow I Mon 4 J1-10
GND J1-23
Fast I Mon 4 J1-11
GND J1-24
Volt Mon 4 J1-12
GND J1-25
GND J1-13

CAB_H1:SUS_HAM5-145[1-25]

To AA Chassis
Sheet 12
SRM Middle UL, LL, UR, LR

DB9 Female

Noise Monitors

Noise Mon 1 J2-1
GND J2-6
Noise Mon 2 J2-2
GND J2-7
Noise Mon 3 J2-3
GND J2-8
Noise Mon 4 J2-4
GND J2-9
GND J2-5

CAB_H1:SUS_HAM5-143[1-9]

To AA Chassis
Sheet 12
SRM Middle UL, LL, UR, LR

UK Triple Acq Coil Driver

SUS-C7-40B

UK TOP Coil Driver
D0902747

DB25 Female

Monitors

Slow I Mon 1 J1-1
GND J1-14
Fast I Mon 1 J1-2
GND J1-15
Volt Mon 1 J1-3
GND J1-16
Slow I Mon 2 J1-4
GND J1-17
Fast I Mon 2 J1-5
GND J1-18
Volt Mon 2 J1-6
GND J1-19
Slow I Mon 3 J1-7
GND J1-20
Fast I Mon 3 J1-8
GND J1-21
Volt Mon 3 J1-9
GND J1-22
Slow I Mon 4 J1-10
GND J1-23
Fast I Mon 4 J1-11
GND J1-24
Volt Mon 4 J1-12
GND J1-25
GND J1-13

CAB_H1:SUS_HAM5-122[1-25]

To AA Chassis
Sheet 10
SR3 Right, Side, SRM Top1, Top2

DB9 Female

Noise Monitors

Noise Mon 1 J2-1
GND J2-6
Noise Mon 2 J2-2
GND J2-7
Noise Mon 3 J2-3
GND J2-8
Noise Mon 4 J2-4
GND J2-9
GND J2-5

CAB_H1:SUS_HAM5-120[1-9]

To AA Chassis
Sheet 9
SR3 Right, Side, SRM Top1, Top2

UK Top Coil Driver (Final)

SUS-C7-36B

UK TOP Coil Driver
D0902747

DB25 Female

Monitors

Slow I Mon 1 J1-1
GND J1-14
Fast I Mon 1 J1-2
GND J1-15
Volt Mon 1 J1-3
GND J1-16
Slow I Mon 2 J1-4
GND J1-17
Fast I Mon 2 J1-5
GND J1-18
Volt Mon 2 J1-6
GND J1-19
Slow I Mon 3 J1-7
GND J1-20
Fast I Mon 3 J1-8
GND J1-21
Volt Mon 3 J1-9
GND J1-22
Slow I Mon 4 J1-10
GND J1-23
Fast I Mon 4 J1-11
GND J1-24
Volt Mon 4 J1-12
GND J1-25
GND J1-13

CAB_H1:SUS_HAM6-133[1-25]

To AA Chassis
Sheet 11
OMC Right, Side, SPARE, SPARE

DB9 Female

Noise Monitors

Noise Mon 1 J2-1
GND J2-6
Noise Mon 2 J2-2
GND J2-7
Noise Mon 3 J2-3
GND J2-8
Noise Mon 4 J2-4
GND J2-9
GND J2-5

CAB_H1:SUS_HAM6-131[1-9]

To AA Chassis
Sheet 11
OMC Right, Side,SPARE, SPARE

UK Top Coil Driver (Final)

SUS-C7-27B

UK Triple Acq Coil Driver
D0901047

DB25 Female

Monitors

Slow I Mon 1 J1-1
GND J1-14
Fast I Mon 1 J1-2
GND J1-15
Volt Mon 1 J1-3
GND J1-16
Slow I Mon 2 J1-4
GND J1-17
Fast I Mon 2 J1-5
GND J1-18
Volt Mon 2 J1-6
GND J1-19
Slow I Mon 3 J1-7
GND J1-20
Fast I Mon 3 J1-8
GND J1-21
Volt Mon 3 J1-9
GND J1-22
Slow I Mon 4 J1-10
GND J1-23
Fast I Mon 4 J1-11
GND J1-24
Volt Mon 4 J1-12
GND J1-25
GND J1-13

CAB_H1:SUS_HAM5-140[1-25]

To AA Chassis
Sheet 11
SR3 Bottom UL, LL, UR, LR

DB9 Female

Noise Monitors

Noise Mon 1 J2-1
GND J2-6
Noise Mon 2 J2-2
GND J2-7
Noise Mon 3 J2-3
GND J2-8
Noise Mon 4 J2-4
GND J2-9
GND J2-5

CAB_H1:SUS_HAM5-138[1-9]

To AA Chassis
Sheet 11
SR3 Bottom UL, LL, UR, LR

UK Triple Acq Coil Driver

SUS-C7-22B

UK Triple Acq Coil Driver
D0901047

DB25 Female

Monitors

Slow I Mon 1 J1-1
GND J1-14
Fast I Mon 1 J1-2
GND J1-15
Volt Mon 1 J1-3
GND J1-16
Slow I Mon 2 J1-4
GND J1-17
Fast I Mon 2 J1-5
GND J1-18
Volt Mon 2 J1-6
GND J1-19
Slow I Mon 3 J1-7
GND J1-20
Fast I Mon 3 J1-8
GND J1-21
Volt Mon 3 J1-9
GND J1-22
Slow I Mon 4 J1-10
GND J1-23
Fast I Mon 4 J1-11
GND J1-24
Volt Mon 4 J1-12
GND J1-25
GND J1-13

CAB_H1:SUS_HAM5-146[1-25]

To AA Chassis
Sheet 12
SRM Bottom UL, LL, UR, LR

DB9 Female

Noise Monitors

Noise Mon 1 J2-1
GND J2-6
Noise Mon 2 J2-2
GND J2-7
Noise Mon 3 J2-3
GND J2-8
Noise Mon 4 J2-4
GND J2-9
GND J2-5

CAB_H1:SUS_HAM5-144[1-9]

To AA Chassis
Sheet 12
SRM Bottom UL, LL, UR, LR

UK Triple Acq Coil Driver

SUS-C7-39B

UK TOP Coil Driver
D0902747

DB25 Female

Monitors

Slow I Mon 1 J1-1
GND J1-14
Fast I Mon 1 J1-2
GND J1-15
Volt Mon 1 J1-3
GND J1-16
Slow I Mon 2 J1-4
GND J1-17
Fast I Mon 2 J1-5
GND J1-18
Volt Mon 2 J1-6
GND J1-19
Slow I Mon 3 J1-7
GND J1-20
Fast I Mon 3 J1-8
GND J1-21
Volt Mon 3 J1-9
GND J1-22
Slow I Mon 4 J1-10
GND J1-23
Fast I Mon 4 J1-11
GND J1-24
Volt Mon 4 J1-12
GND J1-25
GND J1-13

CAB_H1:SUS_HAM5-127[1-25]

To AA Chassis
Sheet 10
SRM Top3, Left, Right, Side

DB9 Female

Noise Monitors

Noise Mon 1 J2-1
GND J2-6
Noise Mon 2 J2-2
GND J2-7
Noise Mon 3 J2-3
GND J2-8
Noise Mon 4 J2-4
GND J2-9
GND J2-5

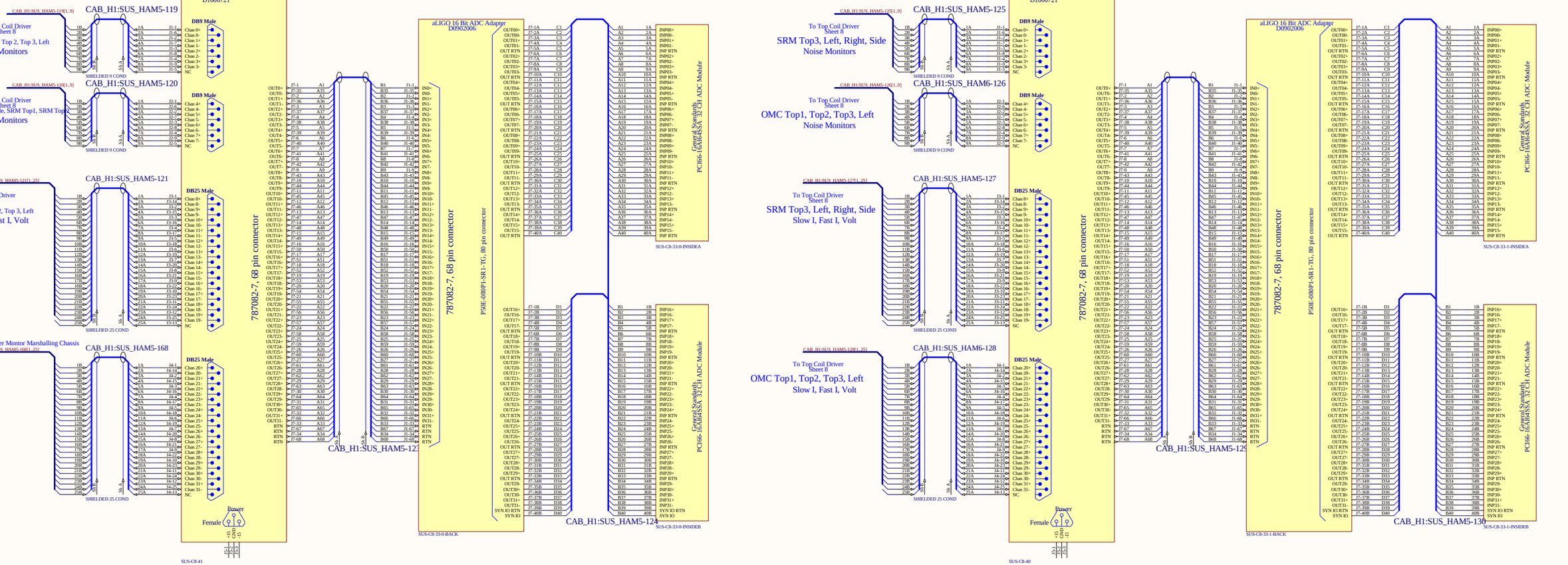
CAB_H1:SUS_HAM5-125[1-9]

To AA Chassis
Sheet 10
SRM Top3, Left, Right, Side

UK Top Coil Driver (Final)

Title: aLIGO SUS HAM 5-6 Controls Wiring	LIGO Project, California Institute of Technology, Massachusetts Institute of Technology		
Size: D	DCC Number: D100740	SCH / PCB Revision: v4	Engineer: J. Heefner
File: Y:\Documents\Altium\My Designs\AdL_SUS_SystemWiring\HAM5_6_SUSHAM5_6_SUSB.SchDoc			Date: 10/17/2011 Time: 3:29:34 PM Sheet 8 of 16

HAM5-6 SUS Monitor CPU ADC 0 & 1 Connections



ADC0 Channel Index
HAM5-6 SUS Monitor

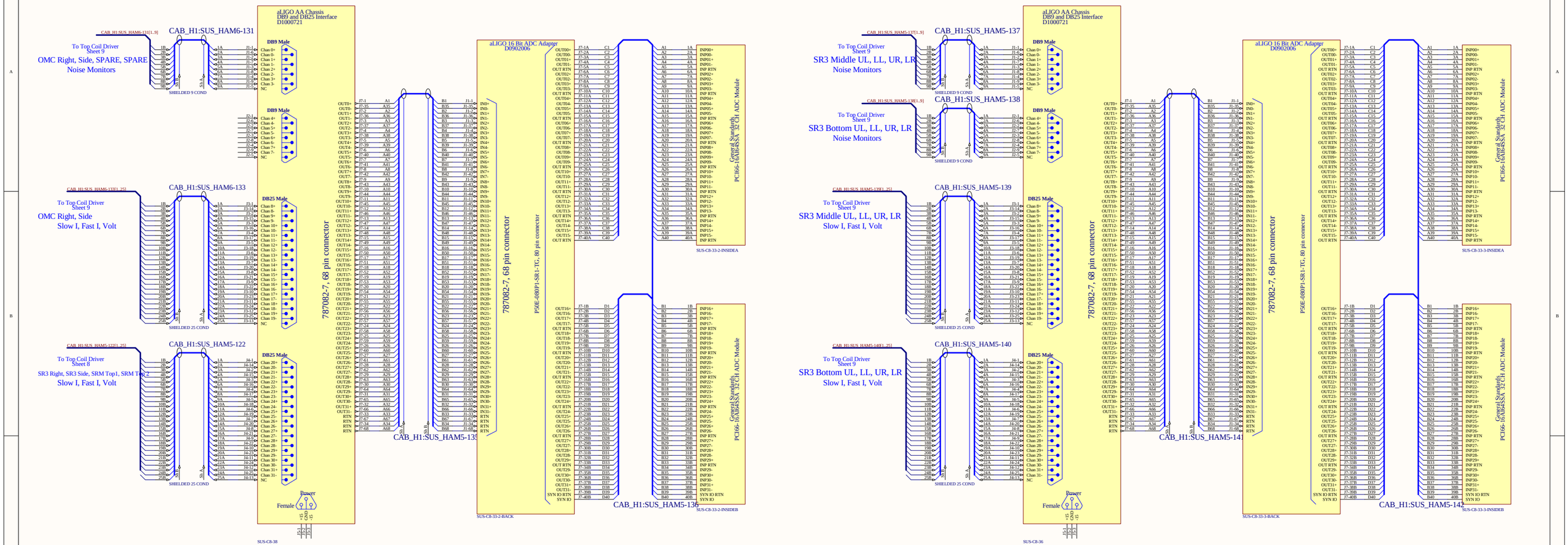
CH 0-- SR3 TOP1 NM
CH1-- SR3 TOP2 NM
CH2-- SR3TOP3 NM
CH3-- SR3 LEFT NM
CH4-- SR3 RIGHT NM
CH5-- SR3 SIDE NM
CH6--SPARE
CH7-- SPARE
CH8-- SR3 TOP1 SLOW I
CH9-- SR3 TOP1 FAST I
CH10-- SR3 TOP1 VOLT
CH11-- SR3 TOP2 SLOW I
CH12-- SR3 TOP2 FAST I
CH13-- SR3 TOP2 VOLT
CH14-- SR3 TOP3 SLOW I
CH15-- SR3 TOP3 FAST I
CH16-- SR3 TOP3 VOLT
CH17-- SR3 LEFT SLOW I
CH18-- SR3 LEFT FAST I
CH19-- SR3 LEFT VOLT
CH20-- HAM5 Optical Lever Power Monitor
CH21-- SPARE
CH22-- SPARE
CH23--SPARE
CH24-- SPARE
CH25-- SPARE
CH26-- SPARE
CH27-- SPARE
CH28-- SPARE
CH29-- SPARE
CH30-- SPARE
CH31-- Duotone

ADC1 Channel Index
HAM5-6 SUS Monitor

CH 0-- SRM TOP3 NM
CH1-- SRM LEFT NM
CH2-- SRM RIGHT NM
CH3-- SR3 SIDE NM
CH4-- OMC TOP1 NM
CH5-- OMC TOP2 NM
CH6--OMC TOP3 NM
CH7-- OMC LEFT NM
CH8-- SRM TOP3 SLOW I
CH9-- SRM TOP3 FAST I
CH10-- SRM TOP3 VOLT
CH11-- SRM LEFT SLOW I
CH12-- SRM LEFT FAST I
CH13-- SRM LEFT VOLT
CH14-- SRM RIGHT SLOW I
CH15-- SRM RIGHT FAST I
CH16-- SRM RIGHT VOLT
CH17-- SRM SIDE SLOW I
CH18-- SRM SIDE FAST I
CH19-- SRM SIDE VOLT
CH20-- OMC TOP1 SLOW I
CH21-- OMC TOP1 FAST I
CH22-- OMC TOP1 VOLT
CH23-- OMC TOP2 SLOW 1
CH24-- OMC TOP2 FAST I
CH25-- OMC TOP2 VOLT
CH26-- OMC TOP3 SLOW I
CH27-- OMC TOP3 FAST I
CH28-- OMC TOP3 VOLT
CH29-- OMC LEFT SLOW I
CH30-- OMC LEFT FAST I
CH31-- OMC LEFT VOLT

Title: **aLIGO SUS HAM 5-6 Controls Wiring**		LIGO Project, California Institute of Technology, Massachusetts Institute of Technology	LIGO
Size: D	DCC Number: D1002740	SCH / PCB Revision: v4	Engineer: J. Heefner
File: Y:\Documents\Altium\My Designs\Adl_ SUS_SystemWiring\HAM5_6_SUS\HAM5_6_SUS0.SchDoc			Date: 10/17/2011 Time: 3:39:34 PM Sheet 9 of 16

HAM5-6 SUS Monitor CPU ADC 2 & 3 Connections



ADC2 Channel Index
HAM5-6 SUS Monitor

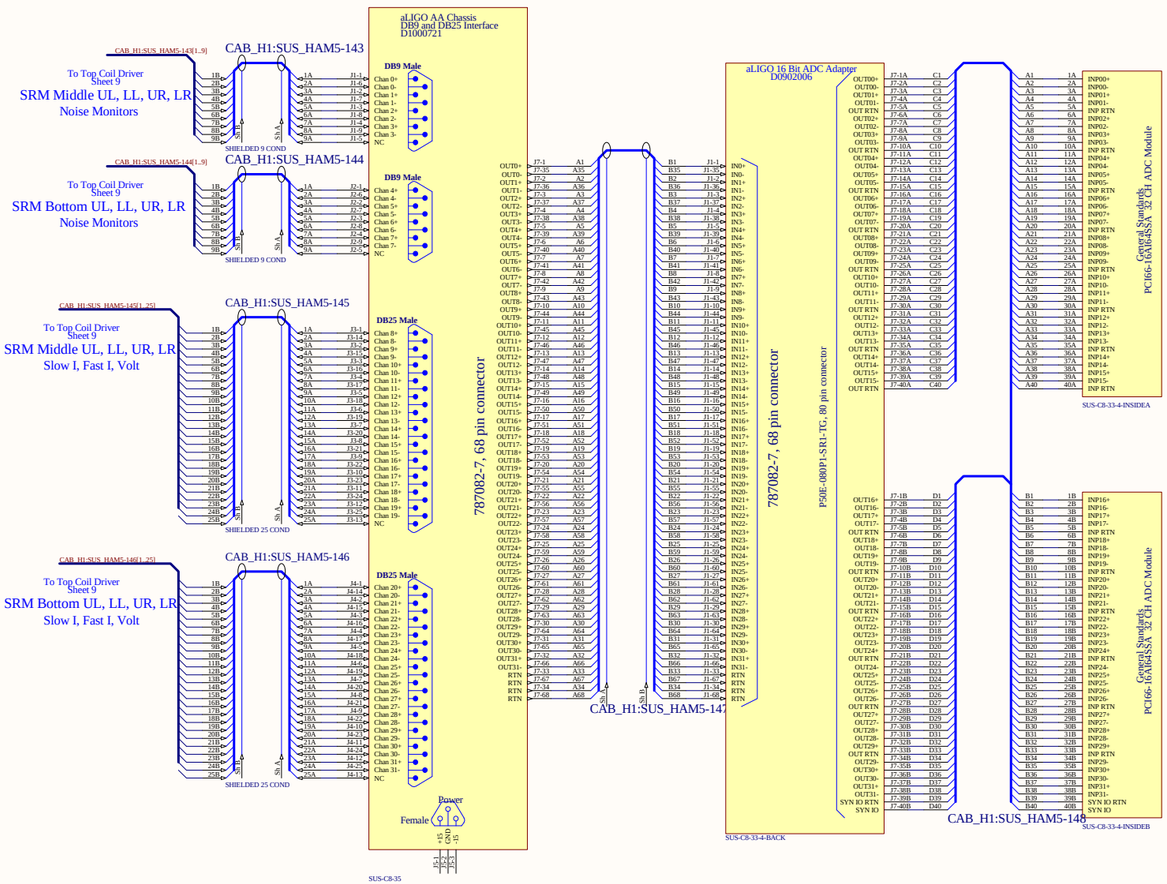
CH 0-- OMC RIGHT NM	CH20-- SR3 RIGHT SLOW I
CH1-- OMC SIDE NM	CH21-- SR3 RIGHT FAST I
CH2-- SPARE	CH22-- SR3 RIGHT VOLT
CH3-- SPARE	CH23-- SR3 SIDE SLOW 1
CH4-- SPARE	CH24-- SR3 SIDE FAST I
CH5-- SPARE	CH25-- SR3 SIDE VOLT
CH6-- SPARE	CH26-- SRM TOP1 SLOW I
CH7-- SPARE	CH27-- SRM TOP1 FAST I
CH8-- OMC RIGHT SLOW I	CH28-- SRM TOP1 VOLT
CH9-- OMC RIGHT FAST I	CH29-- SRM TOP2 SLOW I
CH10-- OMC RIGHT VOLT	CH30-- SRM TOP2 FAST I
CH11-- OMC SIDE SLOW I	CH31-- SRM TOP2 VOLT
CH12-- OMC SIDE FAST I	
CH13-- OMC SIDE VOLT	
CH14-- SPARE	
CH15-- SPARE	
CH16-- SPARE	
CH17-- SPARE	
CH18-- SPARE	
CH19-- SPARE	

ADC3 Channel Index
HAM5-6 SUS Monitor

CH 0-- SR3 MID UL NM	CH16-- SR3 MID UR VOLT
CH1-- SR3 MID LL NM	CH17-- SR3 MID LR SLOW I
CH2-- SR3 MID UR NM	CH18-- SR3 MID LR FAST I
CH3-- SR3 MID LR NM	CH19-- SR3 MID LR VOLT
CH4-- SR3 BOT UL NM	CH20-- SR3 BOT UL SLOW I
CH5-- SR3 BOT LL NM	CH21-- SR3 BOT UL FAST I
CH6-- SR3 BOT UR NM	CH22-- SR3 BOT UL VOLT
CH7-- SR3 BOT LR NM	CH23-- SR3 BOT LL SLOW I
CH8-- SR3 MID UL SLOW I	CH24-- SR3 BOT LL FAST I
CH9-- SR3 MID UL FAST I	CH25-- SR3 BOT LL VOLT
CH10-- SR3 MID UL VOLT	CH26-- SR3 BOT UR SLOW I
CH11-- SR3 MID LL SLOW I	CH27-- SR3 BOT UR FAST I
CH12-- SR3 MID LL FAST I	CH28-- SR3 BOT UR VOLT
CH13-- SR3 MID LL VOLT	CH29-- SR3 BOT LR SLOW I
CH14-- SR3 MID UR SLOW I	CH30-- SR3 BOT LR FAST I
CH15-- SR3 MID UR FAST I	CH31-- SR3 BOT LR VOLT

Title	aLIGO SUS HAM 5-6 Controls Wiring	LIGO Project, California Institute of Technology, Massachusetts Institute of Technology	LIGO
Size: D	DCC Number: D1002740	SCH / PCB Revision: v4	Engineer: J. Heefner
File: Y:\Documents\Altium\My Designs\Ad\... SUS_SystemWiring\HAM5_6_SUS10.SchDoc			Date: 10/17/2011 Time: 3:39:34 PM Sheet 10 of 16

HAM5-6 SUS Monitor CPU ADC 4 Connections



ADC4 Channel Index HAM5-6 SUS Monitor
CH 0-- SRM MID UL NM
CH1-- SRM MID LL NM
CH2-- SRM MID UR NM
CH3-- SRM MID LR NM
CH4-- SRM BOT UL NM
CH5-- SRM BOT LL NM
CH6-- PR2 BOT UR NM
CH7-- SRM BOT LR NM
CH8-- SRM MID UL SLOW I
CH9-- SRM MID UL FAST I
CH10-- SRM MID UL VOLT
CH11-- SRM MID LL SLOW I
CH12-- SRM MID LL FAST I
CH13-- SRM MID LL VOLT
CH14-- SRM MID UR SLOW I
CH15-- SRM MID UR FAST I
CH16-- SRM MID UR VOLT
CH17-- SRM MID LR SLOW I
CH18-- SRM MID LR FAST I
CH19-- SRM MID LR VOLT
CH20-- SRM BOT UL SLOW I
CH21-- SRM BOT UL FAST I
CH22-- SRM BOT UL VOLT
CH23-- SRM BOT LL SLOW I
CH24-- SRM BOT LL FAST I
CH25-- SRM BOT LL VOLT
CH26-- SRM BOT UR SLOW I
CH27-- SRM BOT UR FAST I
CH28-- SRM BOT UR VOLT
CH29-- SRM BOT LR SLOW I
CH30-- SRM BOT LR FAST I
CH31-- SRM BOT LR VOLT

Title: aLIGO SUS HAM 5-6 Controls Wiring			LIGO Project, California Institute of Technology, Massachusetts Institute of Technology	
Size: D	DCC Number: D1002740	SCH / PCB Revision: v4	Engineer: J. Heefner	Date: 10/17/2011
File: Y:\Documents\Altium\My Designs\Atlf_SUS_SystemWiring\HAM5_6_SUS\HAM5_6_SUS11.SchDoc				Time: 3:39:34 PM
				Sheet 11 of 16

SUS-C7-41C

SR3 TOP Binary IO

UK TOP Coil Driver D0902747

UK Top Coil Driver (Final)

DB37 Female

Binary Monitors

LP1mon_CH1 J6-1
GND J6-20
GND J6-2
GND J6-21
GND J6-3
GND J6-22
Testmon_CH1 J6-4
GND J6-23
LP1mon_CH2 J6-5
GND J6-24
GND J6-6
GND J6-25
GND J6-7
GND J6-26
Testmon_CH2 J6-8
GND J6-27
LP1mon_CH3 J6-9
GND J6-28
GND J6-10
GND J6-29
GND J6-11
GND J6-30
Testmon_CH3 J6-12
GND J6-31
LP1mon_CH4 J6-13
GND J6-32
GND J6-14
GND J6-33
GND J6-15
GND J6-34
Testmon_CH4 J6-16
GND J6-35
GND J6-17
GND J6-36
GND J6-18
GND J6-37
GND J6-19

CAB_H1:SUS_HAM5-43

CAB_H1:SUS_HAM5-43[1..9]

1B 2B 3B 4B 5B 6B 7B 8B 9B — SHIELD — 1A 2A 3A 4A 5A 6A 7A 8A 9A

SHIELDED DB37 M to DB9 F Cable

To BI Interface
Sheet 15
SR3 Top1, Top2, Top3, Left

DB37 Male

Binary Controls

LP1_CH1 J7-1
GND J7-20
GND J7-2
GND J7-21
GND J7-3
GND J7-22
TEST1 J7-4
GND J7-23
LP1_CH2 J7-5
GND J7-24
GND J7-6
GND J7-25
GND J7-7
GND J7-26
TEST2 J7-8
GND J7-27
LP1_CH3 J7-9
GND J7-28
GND J7-10
GND J7-29
GND J7-11
GND J7-30
TEST3 J7-12
GND J7-31
LP1_CH4 J7-13
GND J7-32
GND J7-14
GND J7-33
GND J7-15
GND J7-34
TEST4 J7-16
GND J7-35
NC J7-17
GND J7-36
NC J7-18
GND J7-37
NC J7-19

CAB_H1:SUS_HAM5-44

CAB_H1:SUS_HAM5-44[1..9]

1B 2B 3B 4B 5B 6B 7B 8B 9B — SHIELD — 1A 2A 3A 4A 5A 6A 7A 8A 9A

SHIELDED DB37 f to DB9 M Cable

To BO Interface
Sheet 15
SR3 Top1, Top2, Top3, Left

SUS-C7-40C

SR3-SRM TOP Binary IO

UK TOP Coil Driver D0902747

UK Top Coil Driver (Final)

DB37 Female

Binary Monitors

LP1mon_CH1 J6-1
GND J6-20
GND J6-2
GND J6-21
GND J6-3
GND J6-22
Testmon_CH1 J6-4
GND J6-23
LP1mon_CH2 J6-5
GND J6-24
GND J6-6
GND J6-25
GND J6-7
GND J6-26
Testmon_CH2 J6-8
GND J6-27
LP1mon_CH3 J6-9
GND J6-28
GND J6-10
GND J6-29
GND J6-11
GND J6-30
Testmon_CH3 J6-12
GND J6-31
LP1mon_CH4 J6-13
GND J6-32
GND J6-14
GND J6-33
GND J6-15
GND J6-34
Testmon_CH4 J6-16
GND J6-35
GND J6-17
GND J6-36
GND J6-18
GND J6-37
GND J6-19

CAB_H1:SUS_HAM5-45

CAB_H1:SUS_HAM5-45[1..9]

1B 2B 3B 4B 5B 6B 7B 8B 9B — SHIELD — 1A 2A 3A 4A 5A 6A 7A 8A 9A

SHIELDED DB37 M to DB9 F Cable

To BI Interface
Sheet 15
SR3 Right, SR3 Side, SRM Top1, SRM Top2

DB37 Male

Binary Controls

LP1_CH1 J7-1
GND J7-20
GND J7-2
GND J7-21
GND J7-3
GND J7-22
TEST1 J7-4
GND J7-23
LP1_CH2 J7-5
GND J7-24
GND J7-6
GND J7-25
GND J7-7
GND J7-26
TEST2 J7-8
GND J7-27
LP1_CH3 J7-9
GND J7-28
GND J7-10
GND J7-29
GND J7-11
GND J7-30
TEST3 J7-12
GND J7-31
LP1_CH4 J7-13
GND J7-32
GND J7-14
GND J7-33
GND J7-15
GND J7-34
TEST4 J7-16
GND J7-35
NC J7-17
GND J7-36
NC J7-18
GND J7-37
NC J7-19

CAB_H1:SUS_HAM5-46

CAB_H1:SUS_HAM5-46[1..9]

1B 2B 3B 4B 5B 6B 7B 8B 9B — SHIELD — 1A 2A 3A 4A 5A 6A 7A 8A 9A

SHIELDED DB9 M to DB37 F Cable

To BO Interface
Sheet 15
SR3 Right, SR3 Side, SRM Top1, SRM Top2

SUS-C7-39C

SRM TOP Binary IO

UK TOP Coil Driver D0902747

UK Top Coil Driver (Final)

DB37 Female

Binary Monitors

LP1mon_CH1 J6-1
GND J6-20
GND J6-2
GND J6-21
GND J6-3
GND J6-22
Testmon_CH1 J6-4
GND J6-23
LP1mon_CH2 J6-5
GND J6-24
GND J6-6
GND J6-25
GND J6-7
GND J6-26
Testmon_CH2 J6-8
GND J6-27
LP1mon_CH3 J6-9
GND J6-28
GND J6-10
GND J6-29
GND J6-11
GND J6-30
Testmon_CH3 J6-12
GND J6-31
LP1mon_CH4 J6-13
GND J6-32
GND J6-14
GND J6-33
GND J6-15
GND J6-34
Testmon_CH4 J6-16
GND J6-35
GND J6-17
GND J6-36
GND J6-18
GND J6-37
GND J6-19

CAB_H1:SUS_HAM5-47

CAB_H1:SUS_HAM5-47[1..9]

1B 2B 3B 4B 5B 6B 7B 8B 9B — SHIELD — 1A 2A 3A 4A 5A 6A 7A 8A 9A

SHIELDED DB37 M to DB9 F Cable

To BI Interface
Sheet 16
SRM Top 3, Left, Right, Side

DB37 Male

Binary Controls

LP1_CH1 J7-1
GND J7-20
GND J7-2
GND J7-21
GND J7-3
GND J7-22
TEST1 J7-4
GND J7-23
LP1_CH2 J7-5
GND J7-24
GND J7-6
GND J7-25
GND J7-7
GND J7-26
TEST2 J7-8
GND J7-27
LP1_CH3 J7-9
GND J7-28
GND J7-10
GND J7-29
GND J7-11
GND J7-30
TEST3 J7-12
GND J7-31
LP1_CH4 J7-13
GND J7-32
GND J7-14
GND J7-33
GND J7-15
GND J7-34
TEST4 J7-16
GND J7-35
NC J7-17
GND J7-36
NC J7-18
GND J7-37
NC J7-19

CAB_H1:SUS_HAM5-48

CAB_H1:SUS_HAM5-48[1..9]

1B 2B 3B 4B 5B 6B 7B 8B 9B — SHIELD — 1A 2A 3A 4A 5A 6A 7A 8A 9A

SHIELDED DB9 M to DB37 F Cable

To BO Interface
Sheet 16
SRM Top 3, Left, Right, Side

SUS-C7-37C

OMC TOP Binary IO

UK TOP Coil Driver D0902747

UK Top Coil Driver (Final)

DB37 Female

Binary Monitors

LP1mon_CH1 J6-1
GND J6-20
GND J6-2
GND J6-21
GND J6-3
GND J6-22
Testmon_CH1 J6-4
GND J6-23
LP1mon_CH2 J6-5
GND J6-24
GND J6-6
GND J6-25
GND J6-7
GND J6-26
Testmon_CH2 J6-8
GND J6-27
LP1mon_CH3 J6-9
GND J6-28
GND J6-10
GND J6-29
GND J6-11
GND J6-30
Testmon_CH3 J6-12
GND J6-31
LP1mon_CH4 J6-13
GND J6-32
GND J6-14
GND J6-33
GND J6-15
GND J6-34
Testmon_CH4 J6-16
GND J6-35
GND J6-17
GND J6-36
GND J6-18
GND J6-37
GND J6-19

CAB_H1:SUS_HAM6-49

CAB_H1:SUS_HAM6-49[1..9]

1B 2B 3B 4B 5B 6B 7B 8B 9B — SHIELD — 1A 2A 3A 4A 5A 6A 7A 8A 9A

SHIELDED DB37 M to DB9 F Cable

To BI Interface
Sheet 16
OMC Top1, Top2, Top3, Left

DB37 Male

Binary Controls

LP1_CH1 J7-1
GND J7-20
GND J7-2
GND J7-21
GND J7-3
GND J7-22
TEST1 J7-4
GND J7-23
LP1_CH2 J7-5
GND J7-24
GND J7-6
GND J7-25
GND J7-7
GND J7-26
TEST2 J7-8
GND J7-27
LP1_CH3 J7-9
GND J7-28
GND J7-10
GND J7-29
GND J7-11
GND J7-30
TEST3 J7-12
GND J7-31
LP1_CH4 J7-13
GND J7-32
GND J7-14
GND J7-33
GND J7-15
GND J7-34
TEST4 J7-16
GND J7-35
NC J7-17
GND J7-36
NC J7-18
GND J7-37
NC J7-19

CAB_H1:SUS_HAM6-50

CAB_H1:SUS_HAM6-50[1..9]

1B 2B 3B 4B 5B 6B 7B 8B 9B — SHIELD — 1A 2A 3A 4A 5A 6A 7A 8A 9A

SHIELDED DB37 f to DB9 M Cable

To BO Interface
Sheet 16
OMC Top1, Top2, Top3, Left

SUS-C7-36C

OMC TOP Binary IO

UK TOP Coil Driver D0902747

UK Top Coil Driver (Final)

DB37 Female

Binary Monitors

LP1mon_CH1 J6-1
GND J6-20
GND J6-2
GND J6-21
GND J6-3
GND J6-22
Testmon_CH1 J6-4
GND J6-23
LP1mon_CH2 J6-5
GND J6-24
GND J6-6
GND J6-25
GND J6-7
GND J6-26
Testmon_CH2 J6-8
GND J6-27
LP1mon_CH3 J6-9
GND J6-28
GND J6-10
GND J6-29
GND J6-11
GND J6-30
Testmon_CH3 J6-12
GND J6-31
LP1mon_CH4 J6-13
GND J6-32
GND J6-14
GND J6-33
GND J6-15
GND J6-34
Testmon_CH4 J6-16
GND J6-35
GND J6-17
GND J6-36
GND J6-18
GND J6-37
GND J6-19

CAB_H1:SUS_HAM6-51

CAB_H1:SUS_HAM6-51[1..9]

1B 2B 3B 4B 5B 6B 7B 8B 9B — SHIELD — 1A 2A 3A 4A 5A 6A 7A 8A 9A

SHIELDED DB37 M to DB9 F Cable

To BI Interface
Sheet 16
OMC Right, OMC Side,

DB37 Male

Binary Controls

LP1_CH1 J7-1
GND J7-20
GND J7-2
GND J7-21
GND J7-3
GND J7-22
TEST1 J7-4
GND J7-23
LP1_CH2 J7-5
GND J7-24
GND J7-6
GND J7-25
GND J7-7
GND J7-26
TEST2 J7-8
GND J7-27
LP1_CH3 J7-9
GND J7-28
GND J7-10
GND J7-29
GND J7-11
GND J7-30
TEST3 J7-12
GND J7-31
LP1_CH4 J7-13
GND J7-32
GND J7-14
GND J7-33
GND J7-15
GND J7-34
TEST4 J7-16
GND J7-35
NC J7-17
GND J7-36
NC J7-18
GND J7-37
NC J7-19

CAB_H1:SUS_HAM6-52

CAB_H1:SUS_HAM6-52[1..9]

1B 2B 3B 4B 5B 6B 7B 8B 9B — SHIELD — 1A 2A 3A 4A 5A 6A 7A 8A 9A

SHIELDED DB9 M to DB37 F Cable

To BO Interface
Sheet 16
OMC Right, OMC Side

Title: aLIGO SUS HAM 5-6 Controls Wiring		LIGO Project, California Institute of Technology, Massachusetts Institute of Technology	LIGO
Size: D	DCC Number: D1002740	SCH / PCB Revision: v4	Engineer: J. Heefner
File: Y:\Documents\Altium\My Designs\Adl_SUS_SystemWiring\HAM5_6_SUS\HAM5_6_SUS12.SchDoc			Date: 10/17/2011 Time: 3:39:34 PM Sheet 12 of 18

Triple Lower Stage Coil Driver Binary IO Connections

SUS-C7-28C

UK Triple Acq Coil Driver D0901047

SR3 Middle Binary IO

Binary Monitors — DB25 Female

CAB_H1:SUS_HAM5-55 — CAB_H1:SUS_HAM5-55{1..9}

LP On 1	J6-1	1B	1A
GND	J6-14	2B	2A
Acq Mode 1	J6-2	3B	3A
GND	J6-15	4B	4A
Chan On 1	J6-3	5B	5A
GND	J6-16	6B	6A
LP On 2	J6-4	7B	7A
GND	J6-17	8B	8A
Acq Mode 2	J6-5	9B	9A
GND	J6-18	10B	10A
Chan On 2	J6-6	11B	11A
GND	J6-19	12B	12A
LP On 3	J6-7	13B	13A
GND	J6-20	14B	14A
Acq Mode 3	J6-8	15B	15A
GND	J6-21	16B	16A
Chan On 3	J6-9	17B	17A
GND	J6-22	18B	18A
LP On 4	J6-10	19B	19A
GND	J6-23	20B	20A
Acq Mode 4	J6-11	21B	21A
GND	J6-24	22B	22A
Chan On 4	J6-12	23B	23A
GND	J6-25	24B	24A
GND	J6-13	25B	25A

SHIELDED 25 COND

To BI Interface
Sheet 15
SR3 Middle Monitors
UL, LL, UR, LR

Binary Commands — DB25 Male

CAB_H1:SUS_HAM5-56 — CAB_H1:SUS_HAM5-56{1..9}

LP Enable 1	J7-1	1B	1A
GND	J7-14	2B	2A
Acq Enable 1	J7-2	3B	3A
GND	J7-15	4B	4A
Chan Enable 1	J7-3	5B	5A
GND	J7-16	6B	6A
LP Enable 2	J7-4	7B	7A
GND	J7-17	8B	8A
Acq Enable 2	J7-5	9B	9A
GND	J7-18	10B	10A
Chan Enable 2	J7-6	11B	11A
GND	J7-19	12B	12A
LP Enable 3	J7-7	13B	13A
GND	J7-20	14B	14A
Acq Enable 3	J7-8	15B	15A
GND	J7-21	16B	16A
Chan Enable 3	J7-9	17B	17A
GND	J7-22	18B	18A
LP Enable 4	J7-10	19B	19A
GND	J7-23	20B	20A
Acq Enable 4	J7-11	21B	21A
GND	J7-24	22B	22A
Chan Enable 4	J7-12	23B	23A
GND	J7-25	24B	24A
GND	J7-13	25B	25A

SHIELDED 25 COND

To BO Interface
Sheet 15
SR3 Middle Commands
UL, LL, UR, LR

UK Triple Acq Coil Driver

SUS-C7-26C

UK Triple Acq Coil Driver D0901047

SRM Middle Binary IO

Binary Monitors — DB25 Female

CAB_H1:SUS_HAM5-59 — CAB_H1:SUS_HAM5-59{1..9}

LP On 1	J6-1	1B	1A
GND	J6-14	2B	2A
Acq Mode 1	J6-2	3B	3A
GND	J6-15	4B	4A
Chan On 1	J6-3	5B	5A
GND	J6-16	6B	6A
LP On 2	J6-4	7B	7A
GND	J6-17	8B	8A
Acq Mode 2	J6-5	9B	9A
GND	J6-18	10B	10A
Chan On 2	J6-6	11B	11A
GND	J6-19	12B	12A
LP On 3	J6-7	13B	13A
GND	J6-20	14B	14A
Acq Mode 3	J6-8	15B	15A
GND	J6-21	16B	16A
Chan On 3	J6-9	17B	17A
GND	J6-22	18B	18A
LP On 4	J6-10	19B	19A
GND	J6-23	20B	20A
Acq Mode 4	J6-11	21B	21A
GND	J6-24	22B	22A
Chan On 4	J6-12	23B	23A
GND	J6-25	24B	24A
GND	J6-13	25B	25A

SHIELDED 25 COND

To BI Interface
Sheet 15
SRM Middle Monitors
UL, LL, UR, LR

Binary Commands — DB25 Male

CAB_H1:SUS_HAM5-60 — CAB_H1:SUS_HAM5-60{1..9}

LP Enable 1	J7-1	1B	1A
GND	J7-14	2B	2A
Acq Enable 1	J7-2	3B	3A
GND	J7-15	4B	4A
Chan Enable 1	J7-3	5B	5A
GND	J7-16	6B	6A
LP Enable 2	J7-4	7B	7A
GND	J7-17	8B	8A
Acq Enable 2	J7-5	9B	9A
GND	J7-18	10B	10A
Chan Enable 2	J7-6	11B	11A
GND	J7-19	12B	12A
LP Enable 3	J7-7	13B	13A
GND	J7-20	14B	14A
Acq Enable 3	J7-8	15B	15A
GND	J7-21	16B	16A
Chan Enable 3	J7-9	17B	17A
GND	J7-22	18B	18A
LP Enable 4	J7-10	19B	19A
GND	J7-23	20B	20A
Acq Enable 4	J7-11	21B	21A
GND	J7-24	22B	22A
Chan Enable 4	J7-12	23B	23A
GND	J7-25	24B	24A
GND	J7-13	25B	25A

SHIELDED 25 COND

To BO Interface
Sheet 15
SRM Middle Commands
UL, LL, UR, LR

UK Triple Acq Coil Driver

SUS-C7-27C

UK Triple Acq Coil Driver D0901047

SR3 Bottom Binary IO

Binary Monitors — DB25 Female

CAB_H1:SUS_HAM5-57 — CAB_H1:SUS_HAM5-57{1..9}

LP On 1	J6-1	1B	1A
GND	J6-14	2B	2A
Acq Mode 1	J6-2	3B	3A
GND	J6-15	4B	4A
Chan On 1	J6-3	5B	5A
GND	J6-16	6B	6A
LP On 2	J6-4	7B	7A
GND	J6-17	8B	8A
Acq Mode 2	J6-5	9B	9A
GND	J6-18	10B	10A
Chan On 2	J6-6	11B	11A
GND	J6-19	12B	12A
LP On 3	J6-7	13B	13A
GND	J6-20	14B	14A
Acq Mode 3	J6-8	15B	15A
GND	J6-21	16B	16A
Chan On 3	J6-9	17B	17A
GND	J6-22	18B	18A
LP On 4	J6-10	19B	19A
GND	J6-23	20B	20A
Acq Mode 4	J6-11	21B	21A
GND	J6-24	22B	22A
Chan On 4	J6-12	23B	23A
GND	J6-25	24B	24A
GND	J6-13	25B	25A

SHIELDED 25 COND

To BI Interface
Sheet 15
SR3 Bottom Monitors
UL, LL, UR, LR

Binary Commands — DB25 Male

CAB_H1:SUS_HAM5-58 — CAB_H1:SUS_HAM5-58{1..9}

LP Enable 1	J7-1	1B	1A
GND	J7-14	2B	2A
Acq Enable 1	J7-2	3B	3A
GND	J7-15	4B	4A
Chan Enable 1	J7-3	5B	5A
GND	J7-16	6B	6A
LP Enable 2	J7-4	7B	7A
GND	J7-17	8B	8A
Acq Enable 2	J7-5	9B	9A
GND	J7-18	10B	10A
Chan Enable 2	J7-6	11B	11A
GND	J7-19	12B	12A
LP Enable 3	J7-7	13B	13A
GND	J7-20	14B	14A
Acq Enable 3	J7-8	15B	15A
GND	J7-21	16B	16A
Chan Enable 3	J7-9	17B	17A
GND	J7-22	18B	18A
LP Enable 4	J7-10	19B	19A
GND	J7-23	20B	20A
Acq Enable 4	J7-11	21B	21A
GND	J7-24	22B	22A
Chan Enable 4	J7-12	23B	23A
GND	J7-25	24B	24A
GND	J7-13	25B	25A

SHIELDED 25 COND

To BO Interface
Sheet 15
SR3 Bottom Commands
UL, LL, UR, LR

UK Triple Acq Coil Driver

SUS-C7-22C

UK Triple Acq Coil Driver D0901047

SRM Bottom Binary IO

Binary Monitors — DB25 Female

CAB_H1:SUS_HAM5-61 — CAB_H1:SUS_HAM5-61{1..9}

LP On 1	J6-1	1B	1A
GND	J6-14	2B	2A
Acq Mode 1	J6-2	3B	3A
GND	J6-15	4B	4A
Chan On 1	J6-3	5B	5A
GND	J6-16	6B	6A
LP On 2	J6-4	7B	7A
GND	J6-17	8B	8A
Acq Mode 2	J6-5	9B	9A
GND	J6-18	10B	10A
Chan On 2	J6-6	11B	11A
GND	J6-19	12B	12A
LP On 3	J6-7	13B	13A
GND	J6-20	14B	14A
Acq Mode 3	J6-8	15B	15A
GND	J6-21	16B	16A
Chan On 3	J6-9	17B	17A
GND	J6-22	18B	18A
LP On 4	J6-10	19B	19A
GND	J6-23	20B	20A
Acq Mode 4	J6-11	21B	21A
GND	J6-24	22B	22A
Chan On 4	J6-12	23B	23A
GND	J6-25	24B	24A
GND	J6-13	25B	25A

SHIELDED 25 COND

To BI Interface
Sheet 15
SRM Bottom Monitors
UL, LL, UR, LR

Binary Commands — DB25 Male

CAB_H1:SUS_HAM5-62 — CAB_H1:SUS_HAM5-62{1..9}

LP Enable 1	J7-1	1B	1A
GND	J7-14	2B	2A
Acq Enable 1	J7-2	3B	3A
GND	J7-15	4B	4A
Chan Enable 1	J7-3	5B	5A
GND	J7-16	6B	6A
LP Enable 2	J7-4	7B	7A
GND	J7-17	8B	8A
Acq Enable 2	J7-5	9B	9A
GND	J7-18	10B	10A
Chan Enable 2	J7-6	11B	11A
GND	J7-19	12B	12A
LP Enable 3	J7-7	13B	13A
GND	J7-20	14B	14A
Acq Enable 3	J7-8	15B	15A
GND	J7-21	16B	16A
Chan Enable 3	J7-9	17B	17A
GND	J7-22	18B	18A
LP Enable 4	J7-10	19B	19A
GND	J7-23	20B	20A
Acq Enable 4	J7-11	21B	21A
GND	J7-24	22B	22A
Chan Enable 4	J7-12	23B	23A
GND	J7-25	24B	24A
GND	J7-13	25B	25A

SHIELDED 25 COND

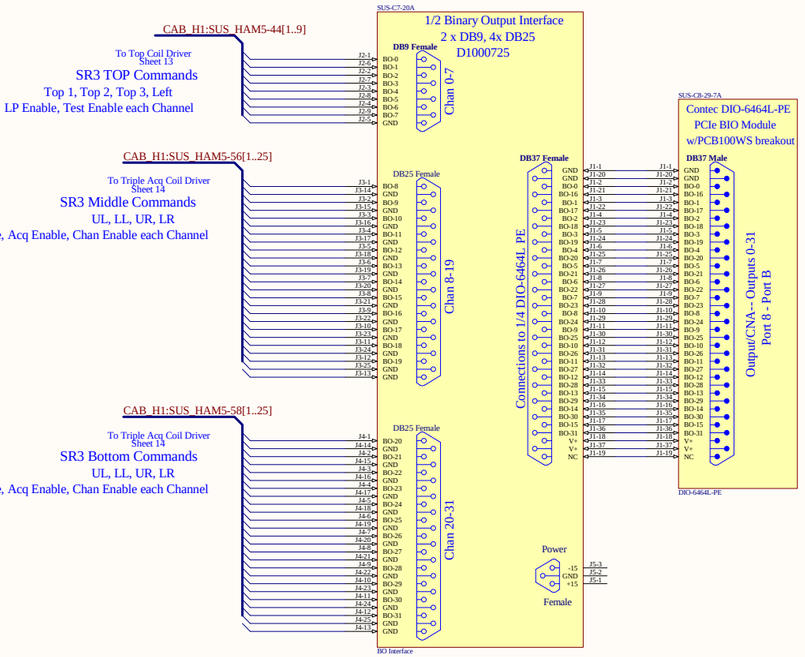
To BO Interface
Sheet 15
SRM Bottom Commands
UL, LL, UR, LR

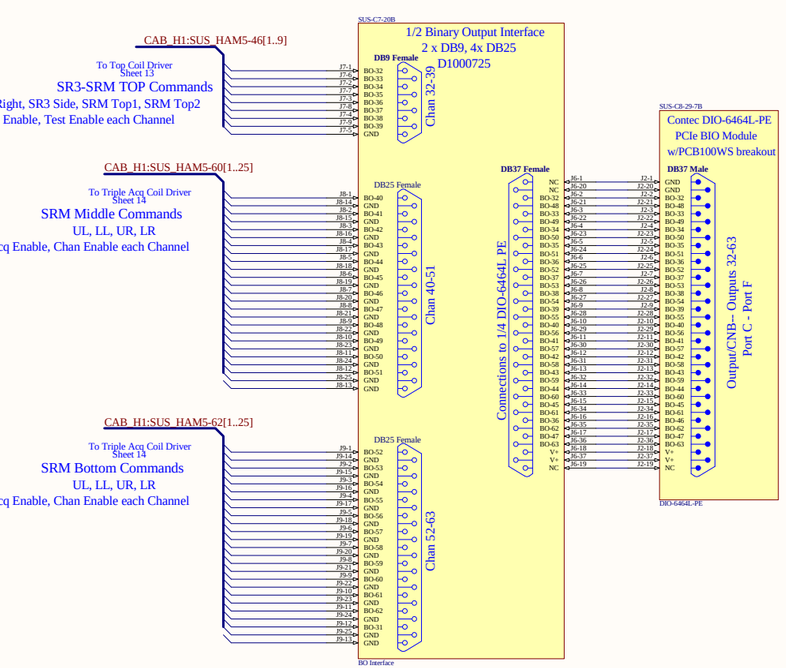
UK Triple Acq Coil Driver

Title: *aLIGO SUS HAM 5-6 Controls Wiring*		*LIGO Project* *California Institute of Technology* *Massachusetts Institute of Technology*	LIGO
Size: D	DCC Number: D1002740	SCH / PCB Revision: v4	Engineer: J. Heefner
Date: 10/17/2011	Time: 3:39:34 PM		
File: Y:\Documents\Altium\My Designs\Adl_SUS_SystemWiring\HAM5_6_SUS\HAM5_6_SUS13.SchDoc			Sheet 13 of 16

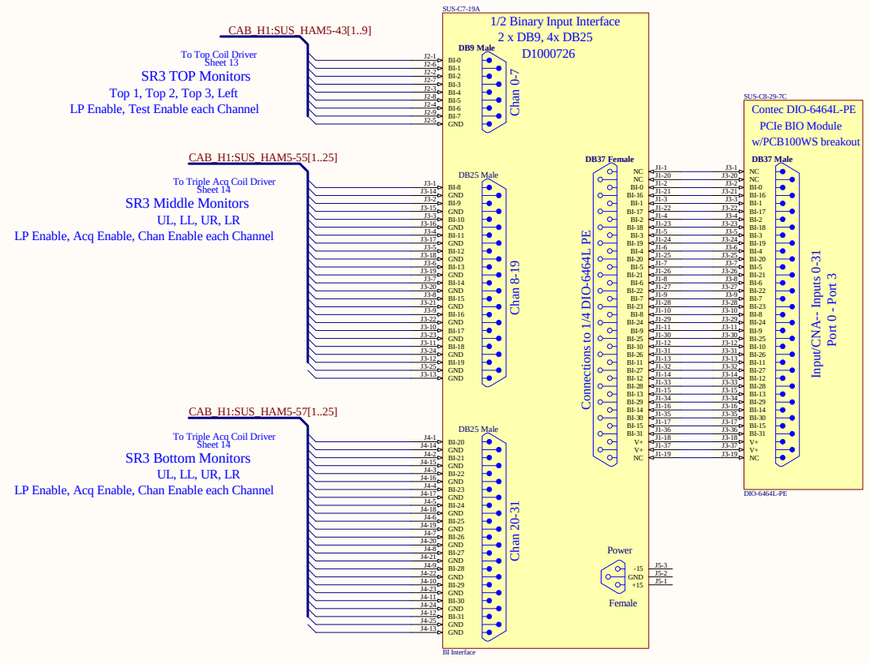
Binary IO Connections for Contec DIO-6464L-PE Module 0

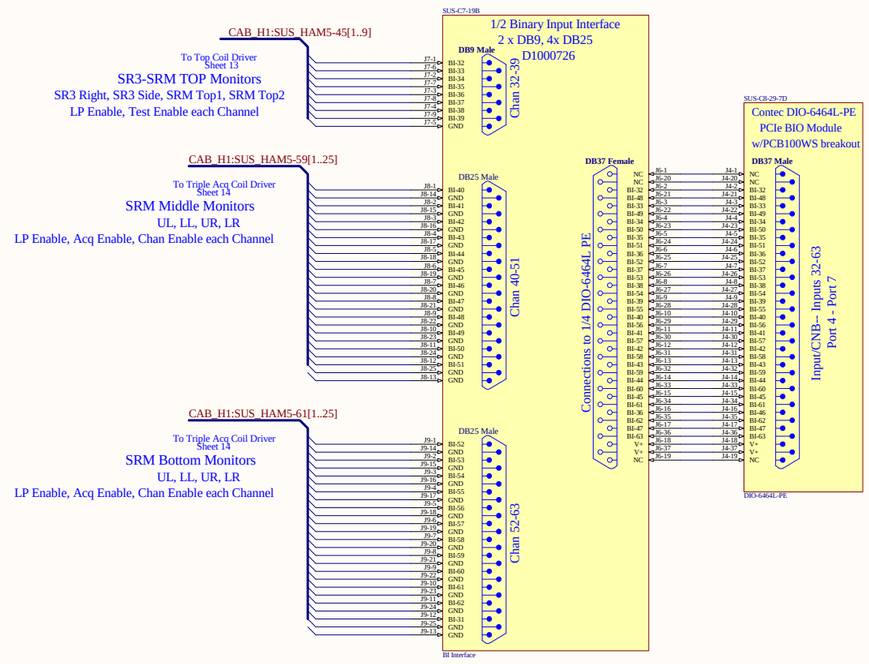
Commands--- Binary Outs





Monitors--- Binary Ins

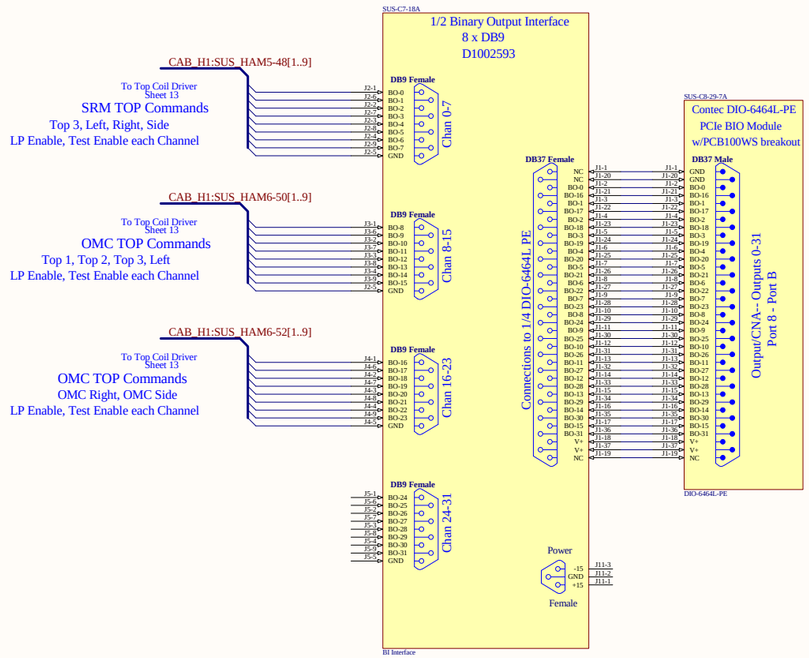




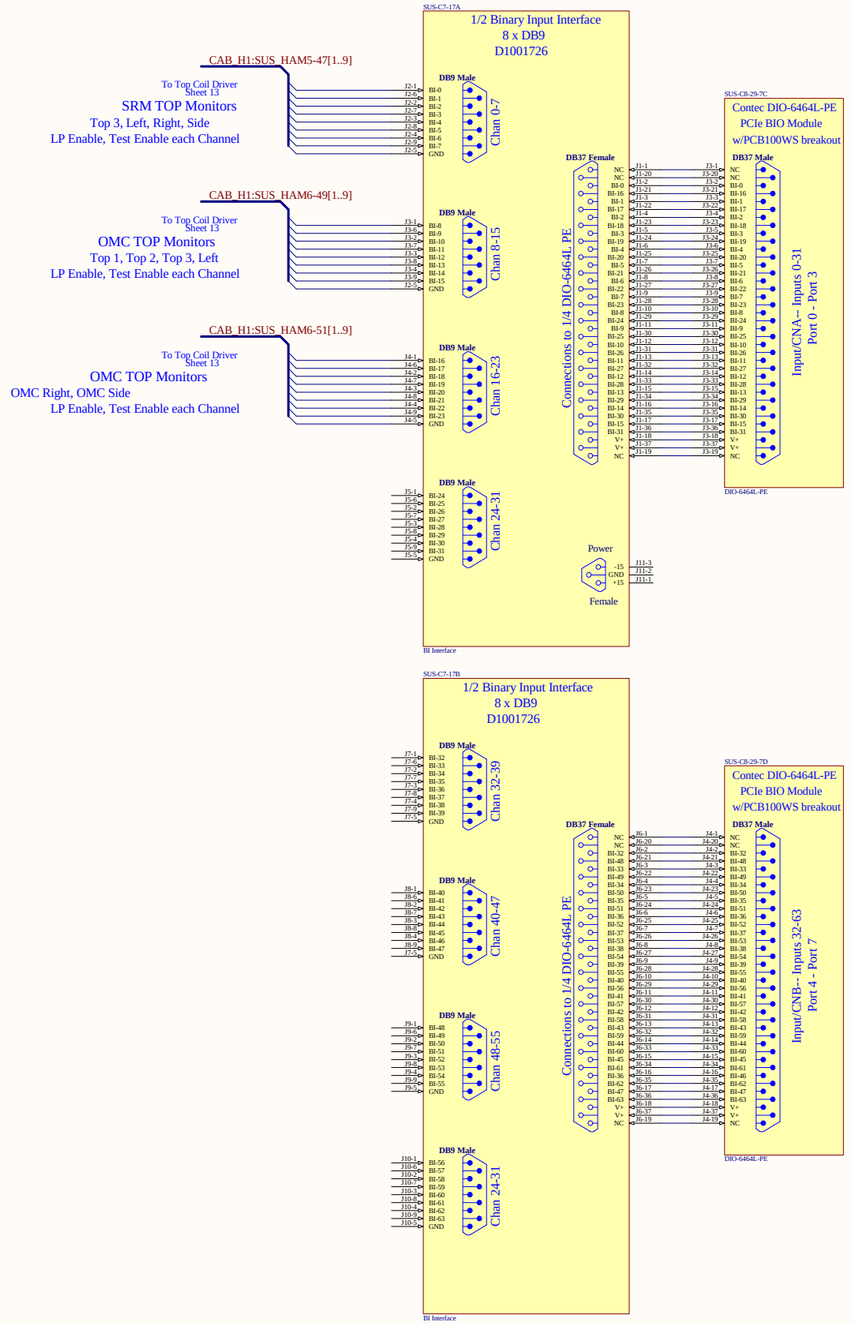
Title: **aLIGO SUS HAM 5-6 Controls Wiring**		LIGO Project, California Institute of Technology, Massachusetts Institute of Technology	LIGO
Size: D	DCC Number: D1002740	SCH / PCB Revision: v4	Engineer: J. Heefner
Date: 10/17/2011	Time: 3:39:34 PM	File: Y:\Documents\Altium\My Designs\Adl_SUS_SystemWiring\HAM5, 6_SUS\HAM5, 6_SUS14.SchDoc	Sheet 14 of 16

Binary IO Connections for Contec DIO-6464L-PE Module 1

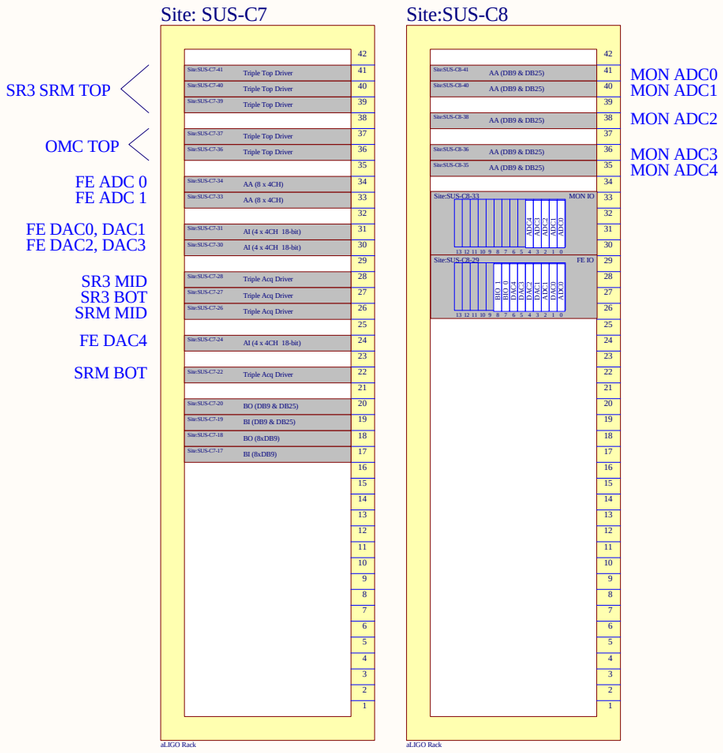
Commands--- Binary Outs



Monitors--- Binary Ins



Title: *aLIGO SUS HAM 5-6 Controls Wiring*			*LIGO Project* *California Institute of Technology* *Massachusetts Institute of Technology*	LIGO
Size: D	DCC Number: D1002740	SCH / PCB Revision: v4	Engineer: J. Heefner	Date: 10/17/2011
File: Y:\Documents\Altium\My Designs\Adl_ SUS_SystemWiring\HAM5_6_SUS\HAM5_6_SUS15.SchDoc				Time: 3:39:34 PM
				Sheet 15 of 16



Need to add optical levers for HAM5, HAM6

May want to add an additional DAC and put it in the first DAC slot for the duotone FB.

Title: **aLIGO SUS HAM 5-6 Controls Wiring**		LIGO Project, California Institute of Technology, Massachusetts Institute of Technology	LIGO
Size: D	DCC Number: D1002740	SCH / PCB Revision: v4	Engineer: J. Heefner
File: Y:\Documents\Alliant\My Designs\Adl...SUS_SystemWiring\HAM5_6_SUSHAM5_6_SUSRack.SchDoc			Date: 10/17/2011 Time: 3:39:34 PM Sheet 16 of 16