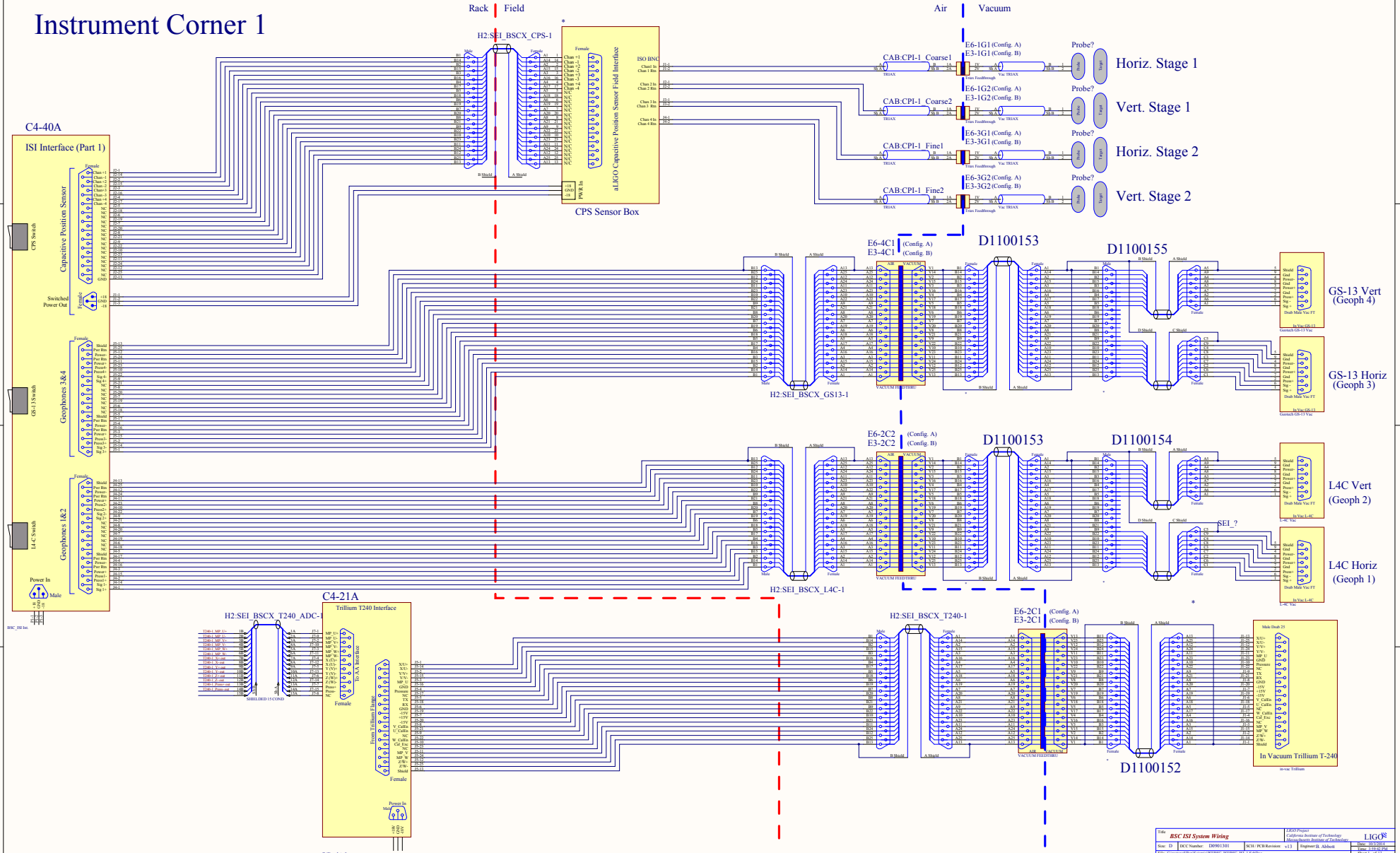
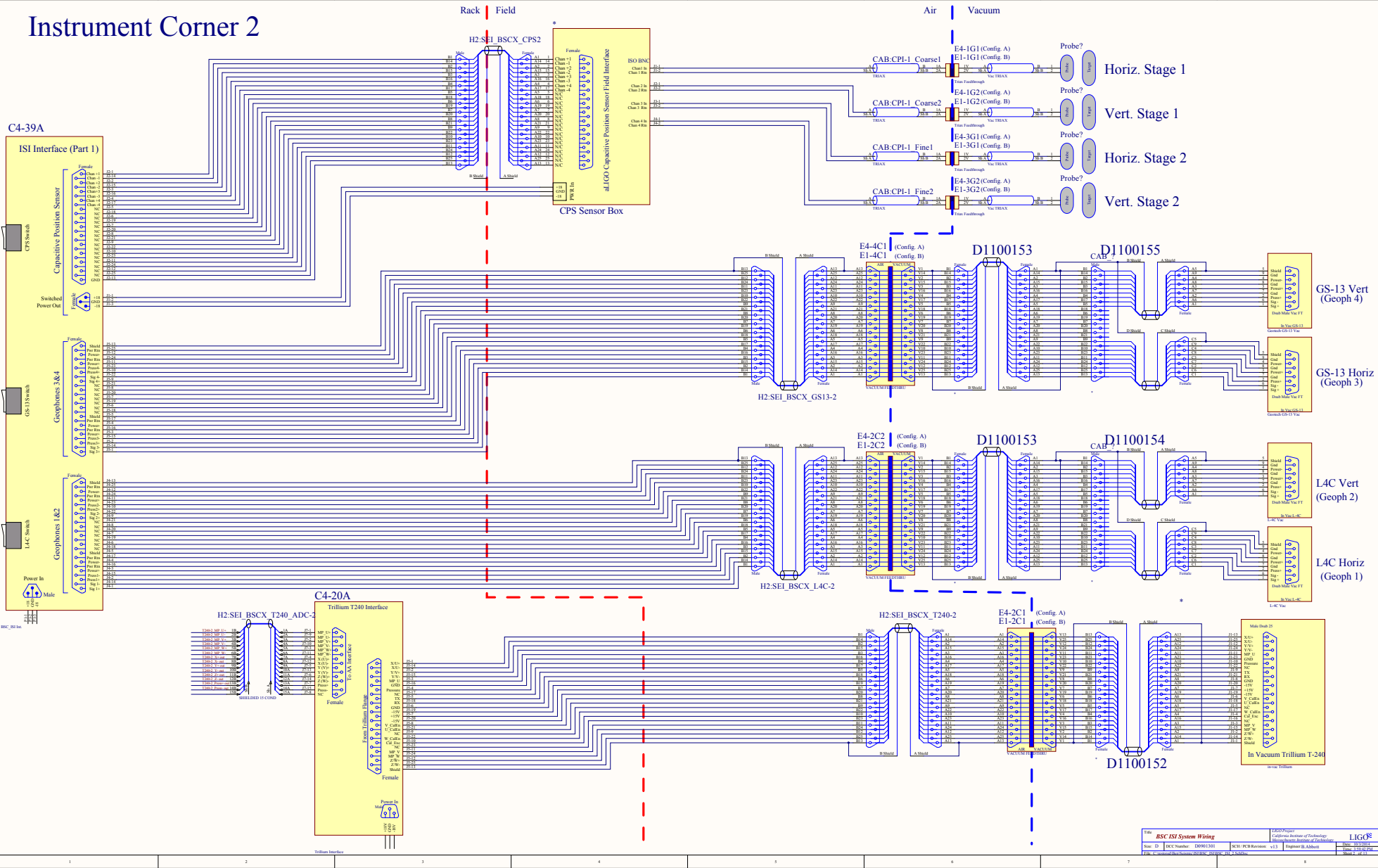


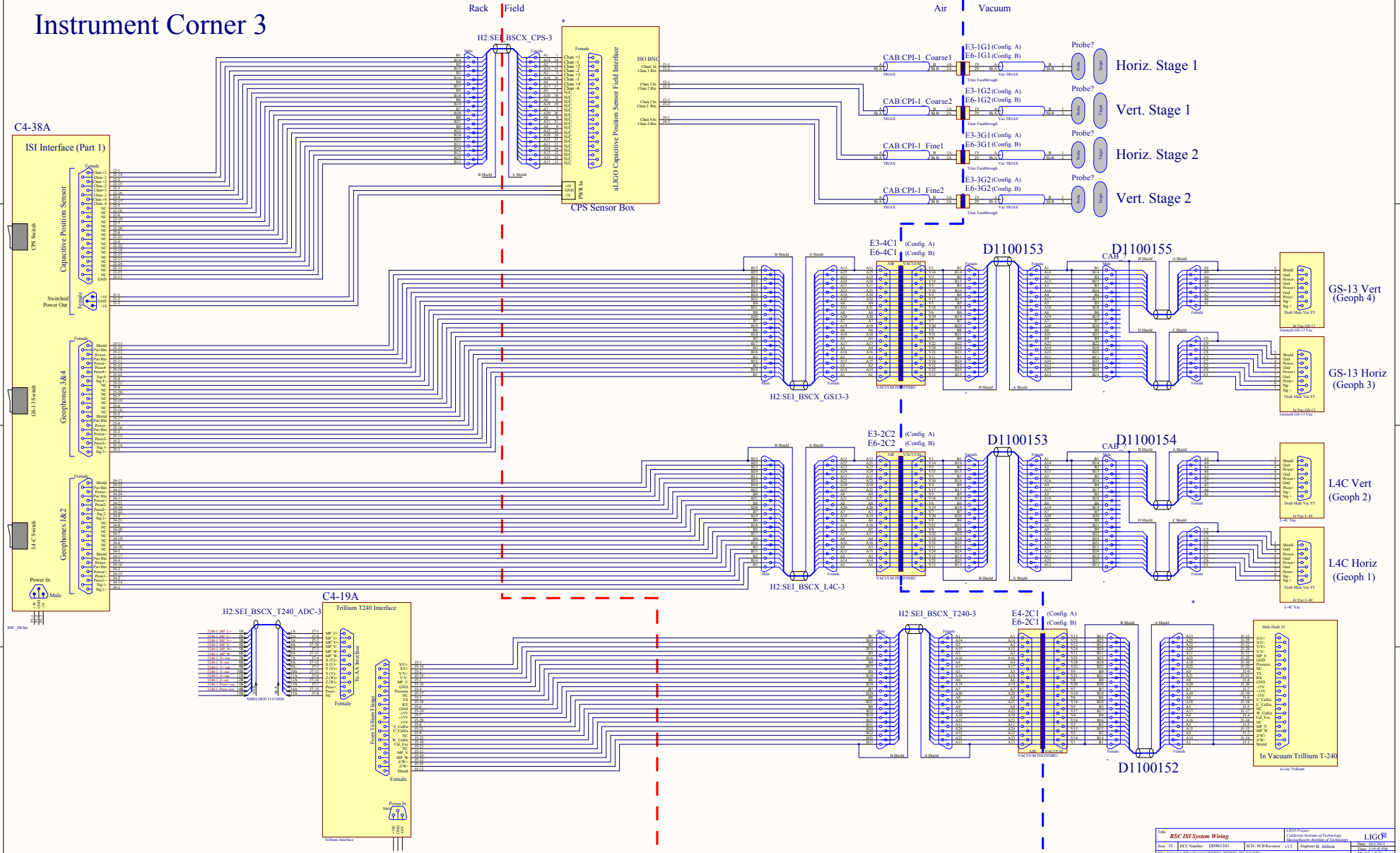
Instrument Corner 1



Instrument Corner 2



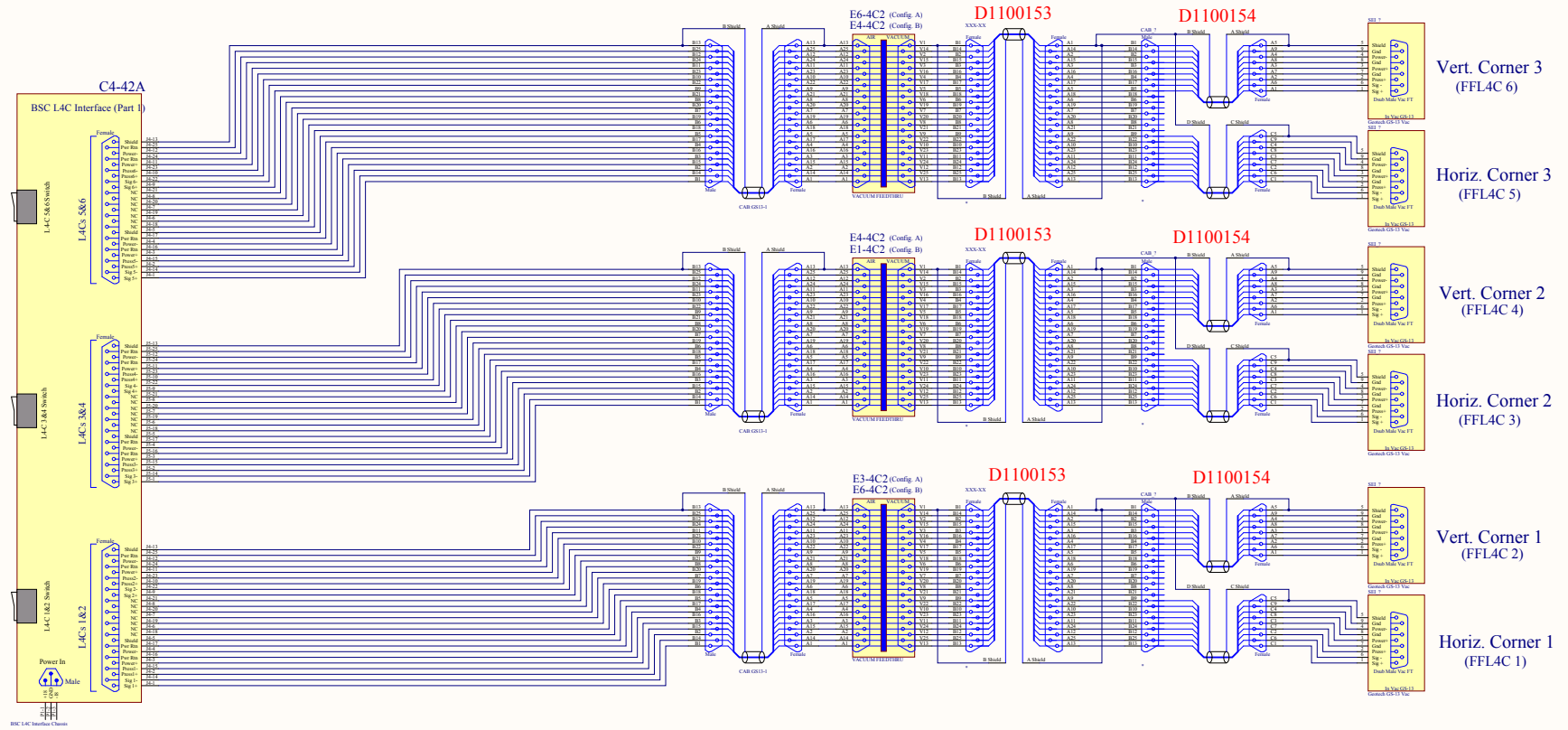
Instrument Corner 3



L4C Feed Forward Geophones

This page has not been implemented yet.

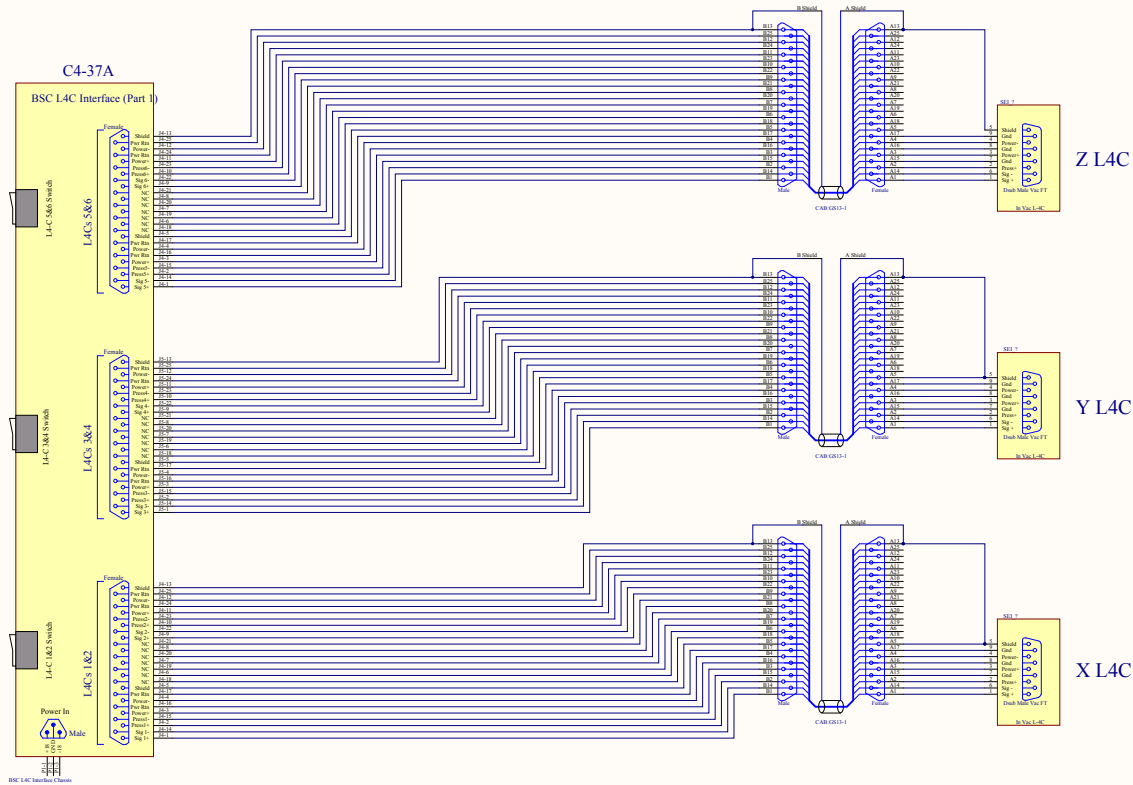
Red cables have not been ordered yet.

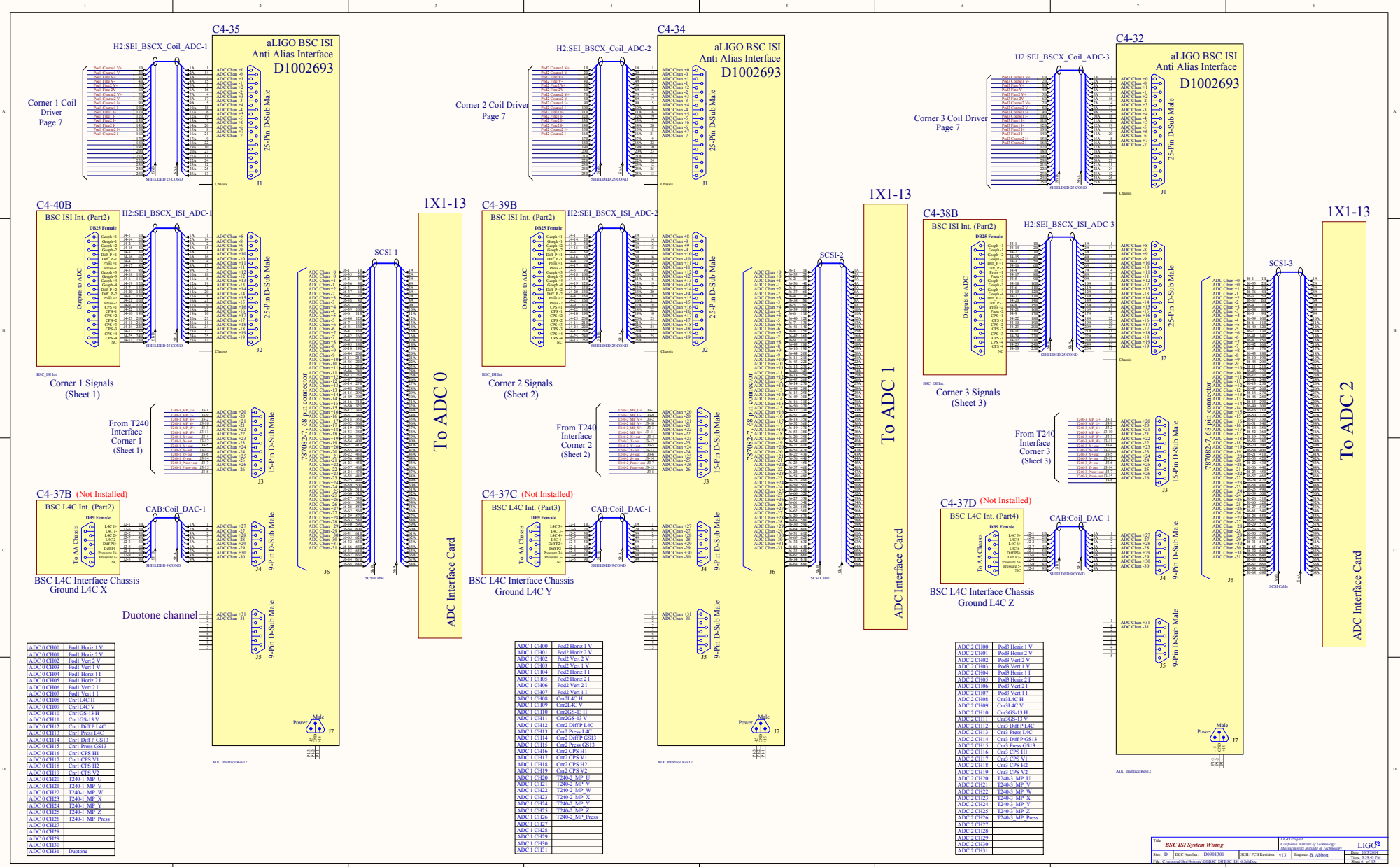


| | | | |
|-------------------------------------|---------------|------------------------|--|
| Title: BSC 333 System Wiring | | | |
| Author: | D | SKC Number: 020951.001 | 4200 Project |
| Drawn: | | | Customer Number: 01 of 0000000 |
| Checked: | | | Customer Name: Institute of Technology |
| Project Number: | 000 000 000 0 | Revision: 01.0 | Drawn with the C-Basic software Copyright © 1984 |

This page has not been implemented yet.

L4C Ground Sense geophones

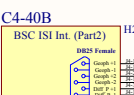




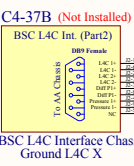
Corner 1 Coil Driver Page 7

Corner 2 Coil Driver Page 7

Corner 3 Coil Driver Page 7



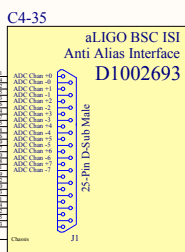
Corner 1 Signals (Sheet 1)



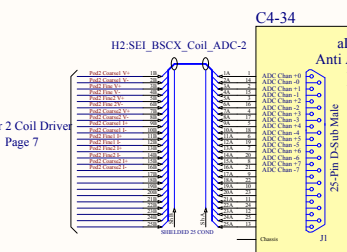
BSC L4C Interface Chassis Ground L4C X



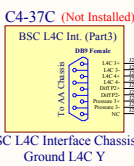
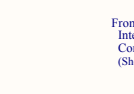
| | |
|------------|------------------|
| ADC 0 CH00 | Post1 Horiz 1 V |
| ADC 0 CH01 | Post1 Horiz 2 V |
| ADC 0 CH02 | Post1 Vert 2 V |
| ADC 0 CH03 | Post1 Vert 1 V |
| ADC 0 CH04 | Post1 Horiz 1 I |
| ADC 0 CH05 | Post1 Horiz 2 I |
| ADC 0 CH06 | Post1 Vert 2 I |
| ADC 0 CH07 | Post1 Vert 1 I |
| ADC 0 CH08 | Ctrl L4C H |
| ADC 0 CH09 | Ctrl L4C V |
| ADC 0 CH10 | Ctrl QSG 13 H |
| ADC 0 CH11 | Ctrl QSG 13 V |
| ADC 0 CH12 | Ctrl Diff P L4C |
| ADC 0 CH13 | Ctrl Press L4C |
| ADC 0 CH14 | Ctrl Diff P QSG1 |
| ADC 0 CH15 | Ctrl Press QSG1 |
| ADC 0 CH16 | Ctrl CPS H |
| ADC 0 CH17 | Ctrl CPS V1 |
| ADC 0 CH18 | Ctrl CPS H2 |
| ADC 0 CH19 | Ctrl CPS V2 |
| ADC 0 CH20 | T240-1 MP 1 |
| ADC 0 CH21 | T240-1 MP 2 |
| ADC 0 CH22 | T240-1 MP W |
| ADC 0 CH23 | T240-1 MP S |
| ADC 0 CH24 | T240-1 MP V |
| ADC 0 CH25 | T240-1 MP Z |
| ADC 0 CH26 | T240-1 MP Press |
| ADC 0 CH27 | |
| ADC 0 CH28 | |
| ADC 0 CH29 | |
| ADC 0 CH30 | |
| ADC 0 CH31 | Duotone |



To ADC 0
ADC Interface Card



Corner 2 Signals (Sheet 2)

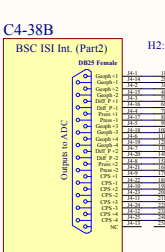


BSC L4C Interface Chassis Ground L4C Y

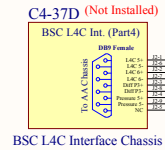
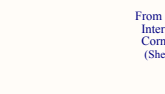
| | |
|------------|------------------|
| ADC 1 CH00 | Post1 Horiz 1 V |
| ADC 1 CH01 | Post1 Horiz 2 V |
| ADC 1 CH02 | Post1 Vert 2 V |
| ADC 1 CH03 | Post1 Vert 1 V |
| ADC 1 CH04 | Post1 Horiz 1 I |
| ADC 1 CH05 | Post1 Horiz 2 I |
| ADC 1 CH06 | Post1 Vert 2 I |
| ADC 1 CH07 | Post1 Vert 1 I |
| ADC 1 CH08 | Ctrl 2-4C H |
| ADC 1 CH09 | Ctrl 2-4C V |
| ADC 1 CH10 | Ctrl QSG 13 H |
| ADC 1 CH11 | Ctrl QSG 13 V |
| ADC 1 CH12 | Ctrl Diff P L4C |
| ADC 1 CH13 | Ctrl Press L4C |
| ADC 1 CH14 | Ctrl Diff P QSG1 |
| ADC 1 CH15 | Ctrl Press QSG1 |
| ADC 1 CH16 | Ctrl CPS H1 |
| ADC 1 CH17 | Ctrl CPS V1 |
| ADC 1 CH18 | Ctrl CPS H2 |
| ADC 1 CH19 | Ctrl CPS V2 |
| ADC 1 CH20 | T240-2 MP 1 |
| ADC 1 CH21 | T240-2 MP 2 |
| ADC 1 CH22 | T240-2 MP W |
| ADC 1 CH23 | T240-2 MP S |
| ADC 1 CH24 | T240-2 MP V |
| ADC 1 CH25 | T240-2 MP Z |
| ADC 1 CH26 | T240-2 MP Press |
| ADC 1 CH27 | |
| ADC 1 CH28 | |
| ADC 1 CH29 | |
| ADC 1 CH30 | |
| ADC 1 CH31 | |

To ADC 1
ADC Interface Card

To ADC 2
ADC Interface Card

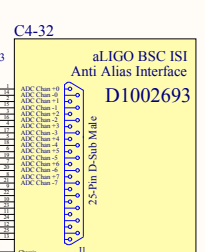


Corner 3 Signals (Sheet 3)

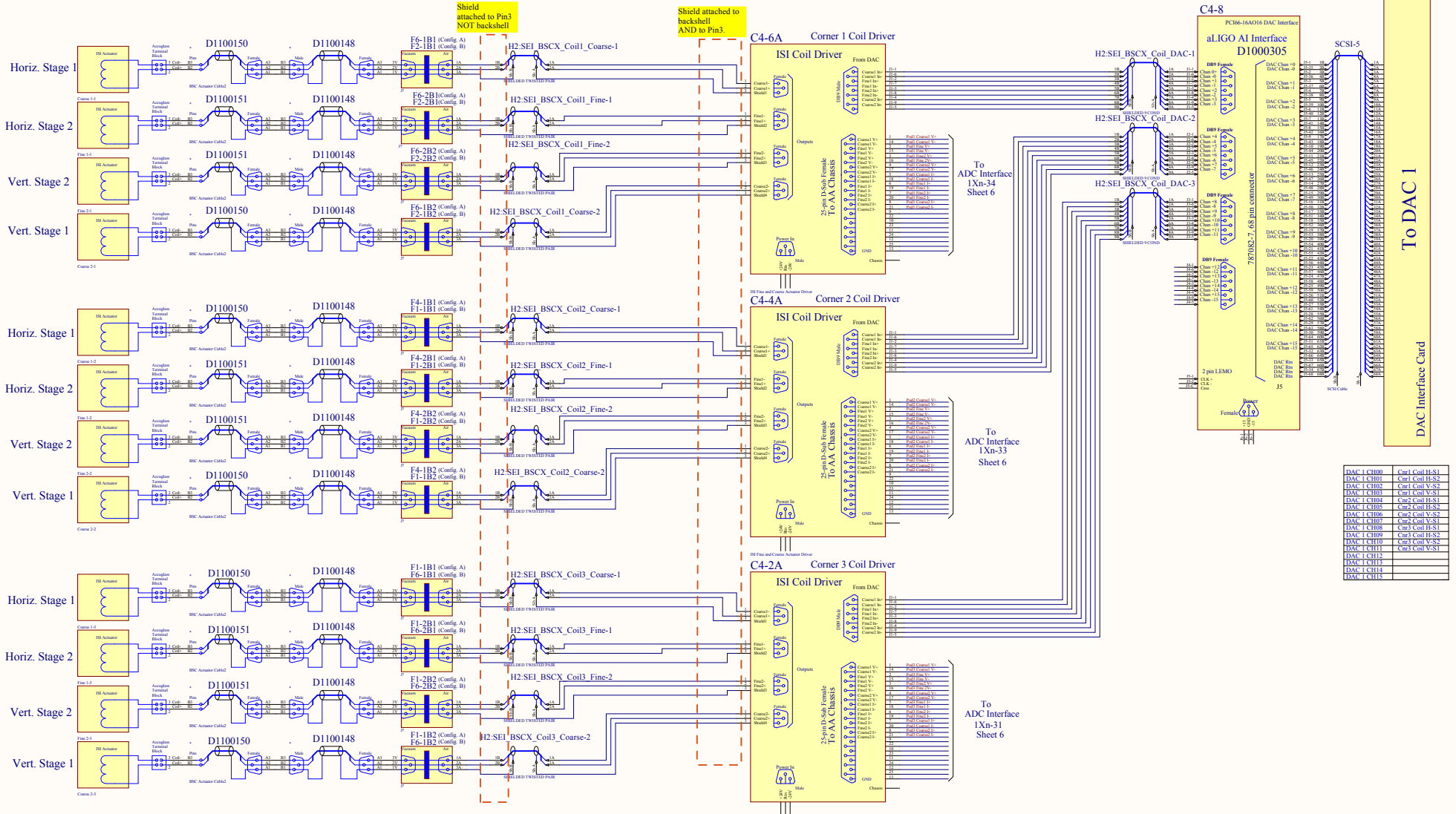


BSC L4C Interface Chassis Ground L4C Z

| | |
|------------|------------------|
| ADC 2 CH00 | Post1 Horiz 1 V |
| ADC 2 CH01 | Post1 Horiz 2 V |
| ADC 2 CH02 | Post1 Vert 2 V |
| ADC 2 CH03 | Post1 Vert 1 V |
| ADC 2 CH04 | Post1 Horiz 1 I |
| ADC 2 CH05 | Post1 Horiz 2 I |
| ADC 2 CH06 | Post1 Vert 2 I |
| ADC 2 CH07 | Post1 Vert 1 I |
| ADC 2 CH08 | Ctrl 4C H |
| ADC 2 CH09 | Ctrl 4C V |
| ADC 2 CH10 | Ctrl QSG 13 H |
| ADC 2 CH11 | Ctrl Diff P L4C |
| ADC 2 CH12 | Ctrl Press L4C |
| ADC 2 CH13 | Ctrl Diff P QSG1 |
| ADC 2 CH14 | Ctrl Press QSG1 |
| ADC 2 CH15 | Ctrl CPS H1 |
| ADC 2 CH16 | Ctrl CPS V1 |
| ADC 2 CH17 | Ctrl CPS H2 |
| ADC 2 CH18 | Ctrl CPS V2 |
| ADC 2 CH19 | T240-3 MP 1 |
| ADC 2 CH20 | T240-3 MP 2 |
| ADC 2 CH21 | T240-3 MP V |
| ADC 2 CH22 | T240-3 MP W |
| ADC 2 CH23 | T240-3 MP S |
| ADC 2 CH24 | T240-3 MP Z |
| ADC 2 CH25 | T240-3 MP Press |
| ADC 2 CH26 | |
| ADC 2 CH27 | |
| ADC 2 CH28 | |
| ADC 2 CH29 | |
| ADC 2 CH30 | |
| ADC 2 CH31 | |



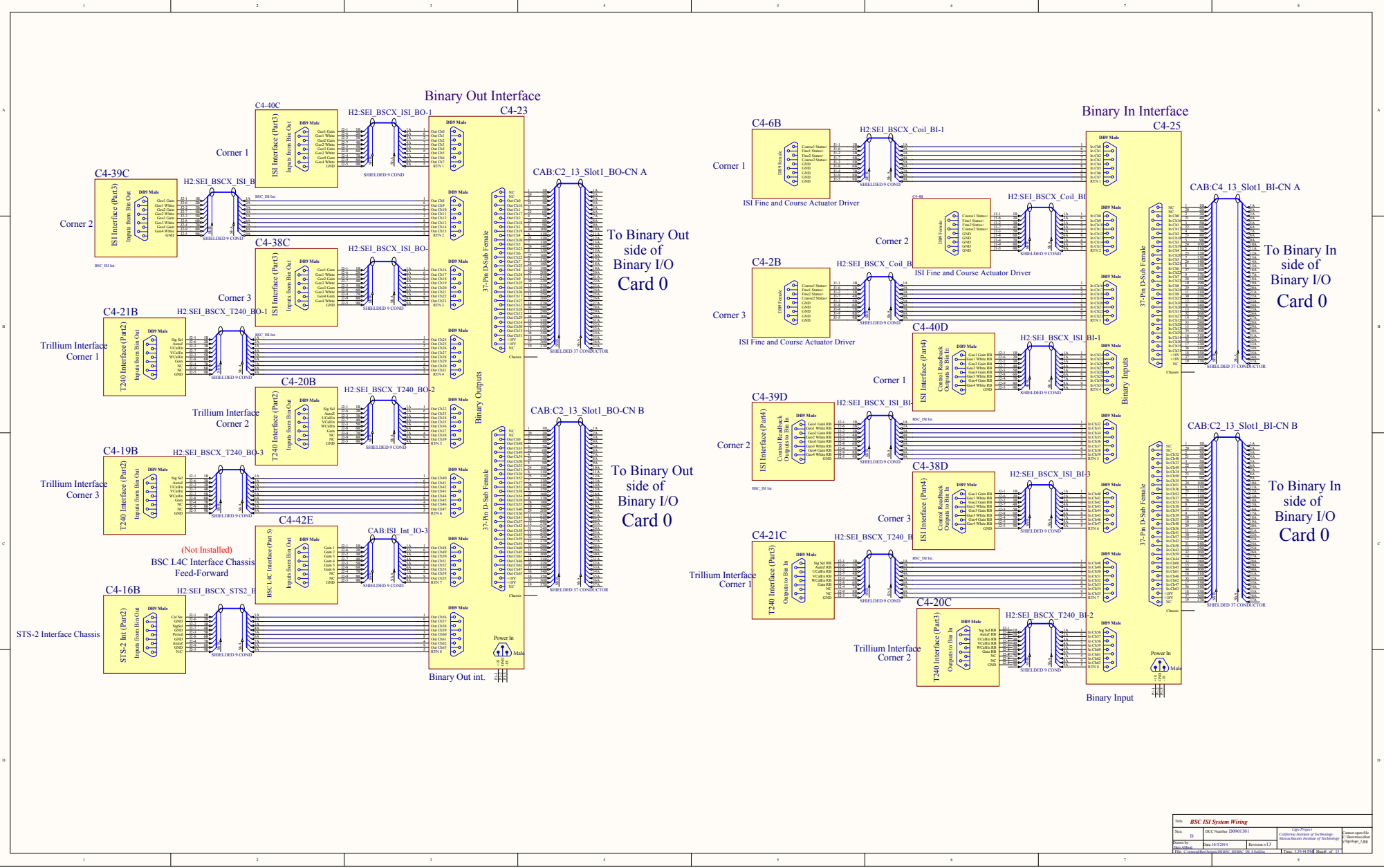
To ADC 2
ADC Interface Card



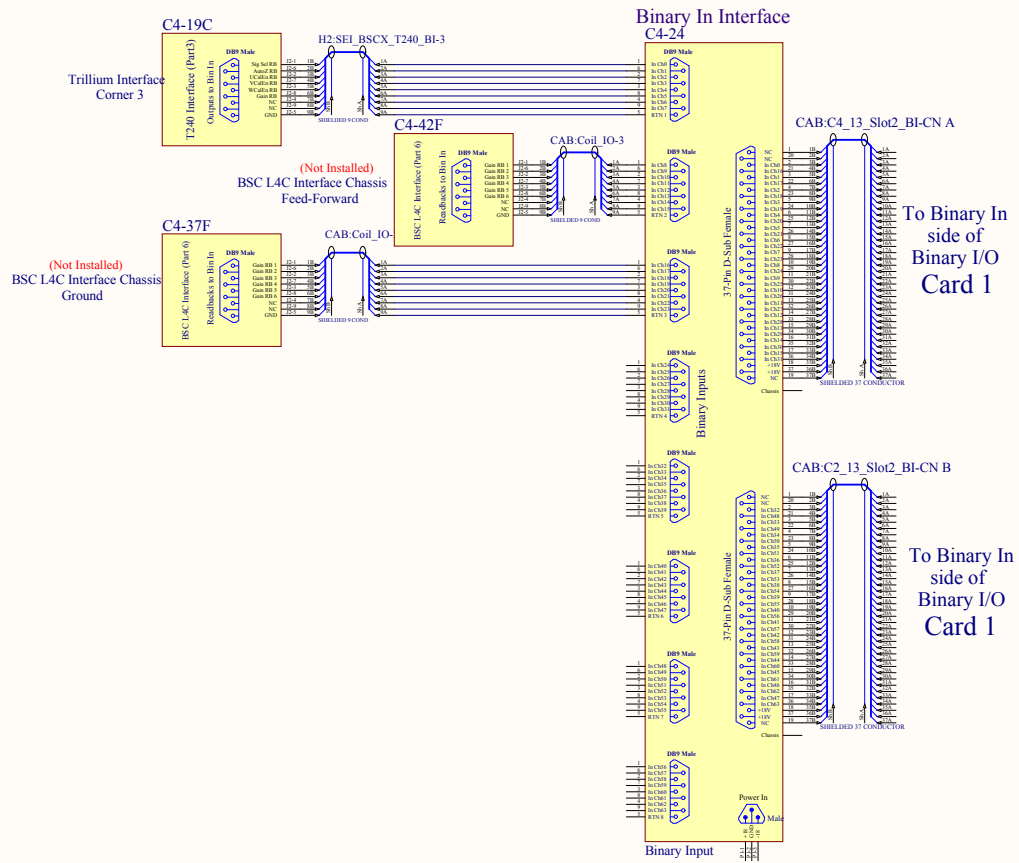
Shield attached to backshell NOT backshell

Shield attached to backshell AND to Pin3

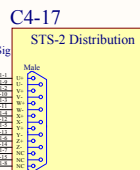
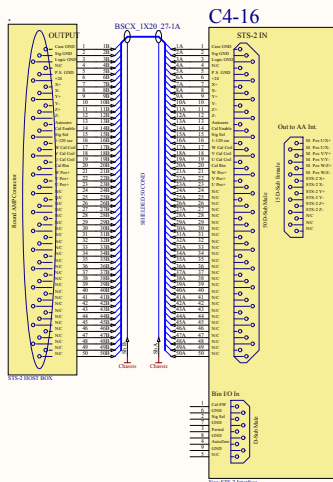
| | |
|------------|----------------|
| DAC 1 CH00 | Com1 Coil H-S1 |
| DAC 1 CH01 | Com1 Coil H-S2 |
| DAC 1 CH02 | Com1 Coil V-S1 |
| DAC 1 CH03 | Com1 Coil V-S2 |
| DAC 1 CH04 | Com2 Coil H-S1 |
| DAC 1 CH05 | Com2 Coil H-S2 |
| DAC 1 CH06 | Com2 Coil V-S1 |
| DAC 1 CH07 | Com2 Coil V-S2 |
| DAC 1 CH08 | Com3 Coil H-S1 |
| DAC 1 CH09 | Com3 Coil H-S2 |
| DAC 1 CH10 | Com3 Coil V-S1 |
| DAC 1 CH11 | Com3 Coil V-S2 |
| DAC 1 CH12 | |
| DAC 1 CH13 | |
| DAC 1 CH14 | |
| DAC 1 CH15 | |



| | | | |
|-----------------------|------------------------|----------------|---------------------------------|
| BSC ISI System Wiring | | | |
| Rev: D | ISC Number: 020901.001 | 4400 Project | Drawn and checked by: [Name] |
| Rev: [Blank] | Rev: 003/2014 | Revision: 1/3 | Checked and approved by: [Name] |
| Date: [Blank] | | Scale: [Blank] | Project: [Blank] |



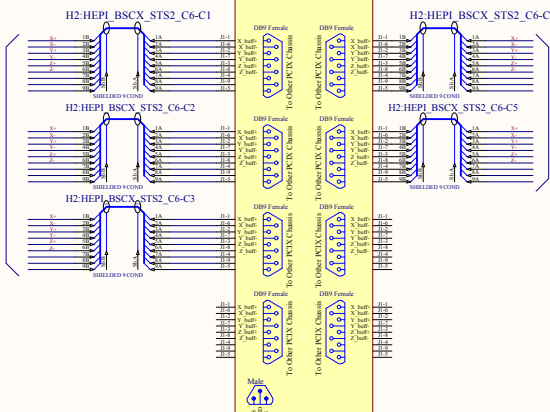
STS A (BSC1)
 STS B (BSC2)
 STS C (BSC3)



STS-2 Distribution Chassis not needed on end stations.
 (Only One STS-2 at each end)

STS A (BSC1)
 STS B (BSC2)
 STS C (BSC3)

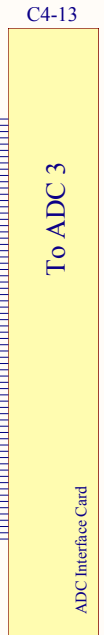
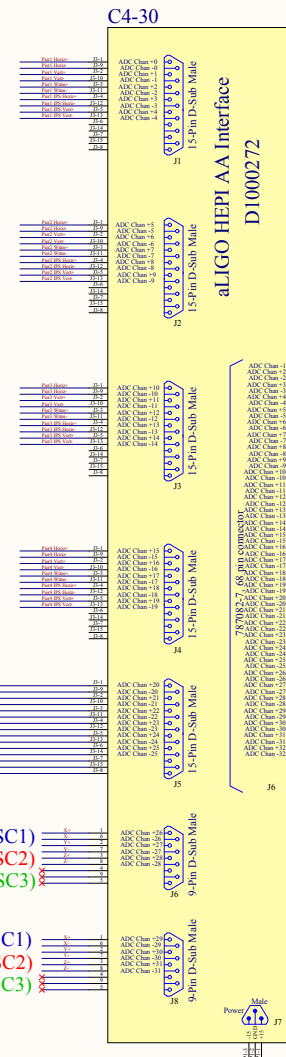
These signals go To the HAM ISI Spare ADC Inputs



These signals go To the other 2 BSC ADC Inputs Like these:

STS B (BSC1)
 STS C (BSC2)
 STS A (BSC3)

STS C (BSC1)
 STS A (BSC2)
 STS B (BSC3)



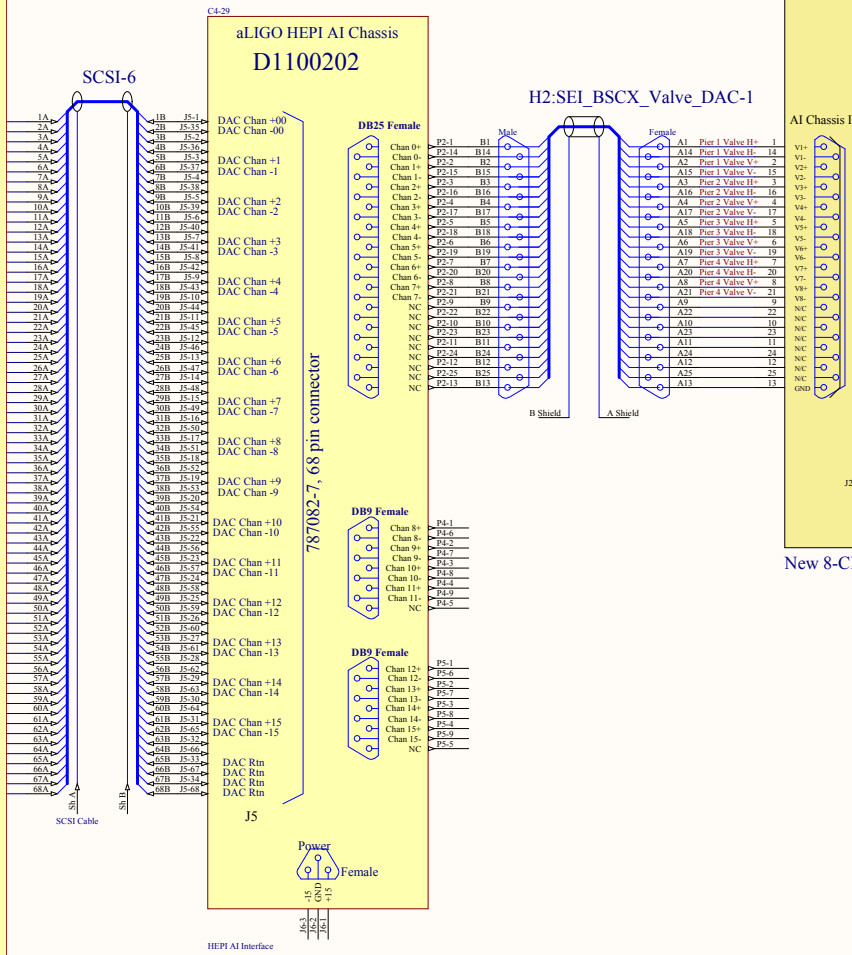
| | |
|-------------|------------------|
| ADC_3_C1000 | Pixel Horiz |
| ADC_3_C1001 | Pixel Vert |
| ADC_3_C1002 | Pixel Writ |
| ADC_3_C1003 | Pixel IFS Horiz |
| ADC_3_C1004 | Pixel IFS Vert |
| ADC_3_C1005 | Pixel2 Vert |
| ADC_3_C1006 | Pixel2 IFS Horiz |
| ADC_3_C1007 | Pixel2 IFS Vert |
| ADC_3_C1008 | Pixel2 IFS Horiz |
| ADC_3_C1009 | Pixel2 IFS Vert |
| ADC_3_C1010 | Pixel3 Horiz |
| ADC_3_C1011 | Pixel3 Vert |
| ADC_3_C1012 | Pixel3 Writ |
| ADC_3_C1013 | Pixel3 IFS Horiz |
| ADC_3_C1014 | Pixel3 IFS Vert |
| ADC_3_C1015 | Pixel4 Horiz |
| ADC_3_C1016 | Pixel4 Vert |
| ADC_3_C1017 | Pixel4 Writ |
| ADC_3_C1018 | Pixel4 IFS Horiz |
| ADC_3_C1019 | Pixel4 IFS Vert |
| ADC_3_C1020 | Local STS-2 U |
| ADC_3_C1021 | Local STS-2 W |
| ADC_3_C1022 | Local STS-2 X |
| ADC_3_C1023 | Local STS-2 Y |
| ADC_3_C1024 | Local STS-2 Z |
| ADC_3_C1025 | First STS-2 X |
| ADC_3_C1026 | First STS-2 Y |
| ADC_3_C1027 | First STS-2 Z |
| ADC_3_C1028 | Second STS-2 X |
| ADC_3_C1029 | Second STS-2 Y |
| ADC_3_C1030 | Second STS-2 Z |
| ADC_3_C1031 | Second STS-2 Z |

| | |
|------------|-------------------|
| DAC 0 CH00 | Pier1 Valve Horiz |
| DAC 0 CH01 | Pier1 Valve Vert |
| DAC 0 CH02 | Pier2 Valve Horiz |
| DAC 0 CH03 | Pier2 Valve Vert |
| DAC 0 CH04 | Pier3 Valve Horiz |
| DAC 0 CH05 | Pier3 Valve Vert |
| DAC 0 CH06 | Pier4 Valve Horiz |
| DAC 0 CH07 | Pier4 Valve Vert |
| DAC 0 CH08 | Pier4 Valve Vert |
| DAC 0 CH09 | |
| DAC 0 CH10 | |
| DAC 0 CH11 | |
| DAC 0 CH12 | |
| DAC 0 CH13 | |
| DAC 0 CH14 | |
| DAC 0 CH15 | |

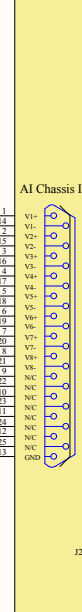
1X1-13

To DAC 0

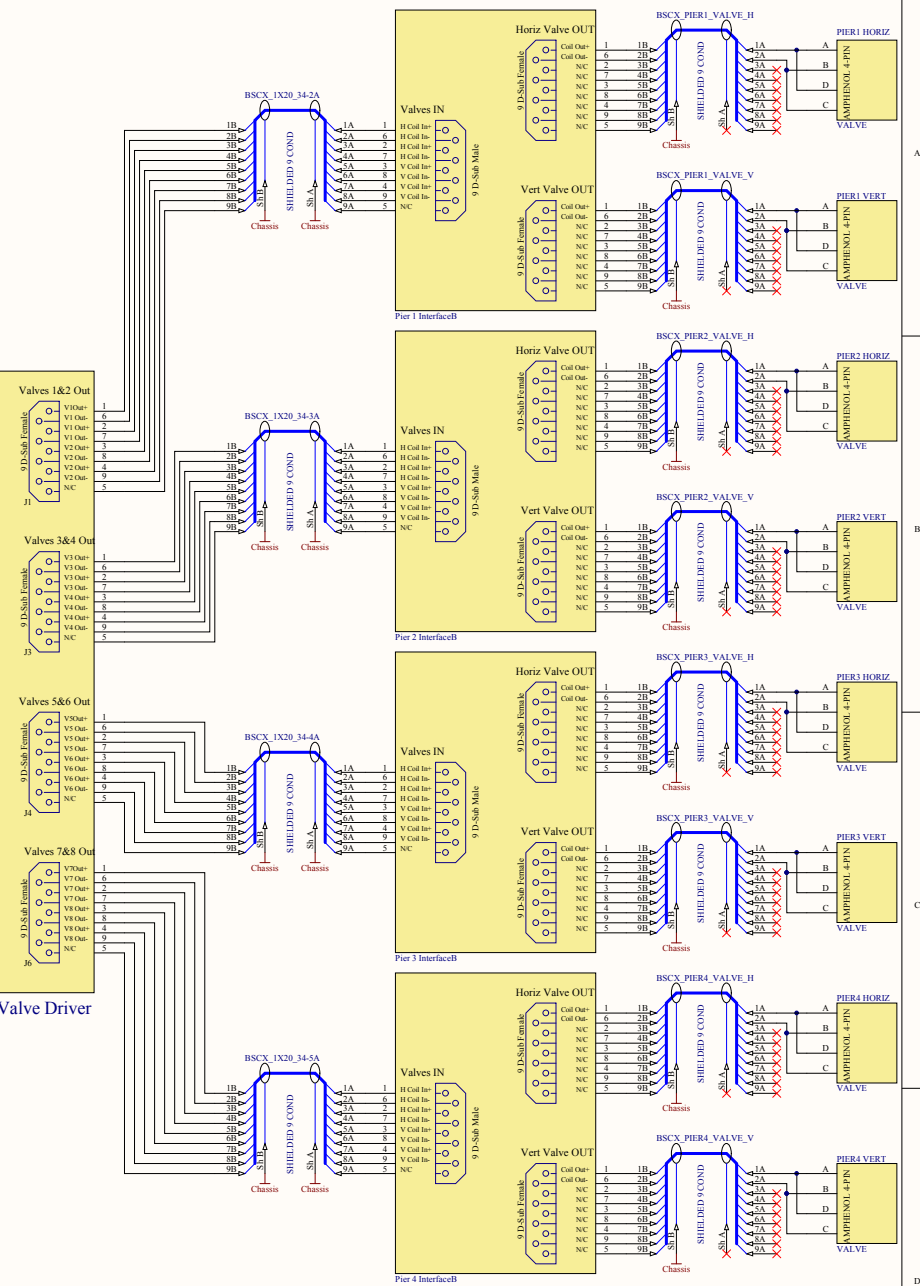
DAC Interface Card



C4-27



New 8-CH Valve Driver



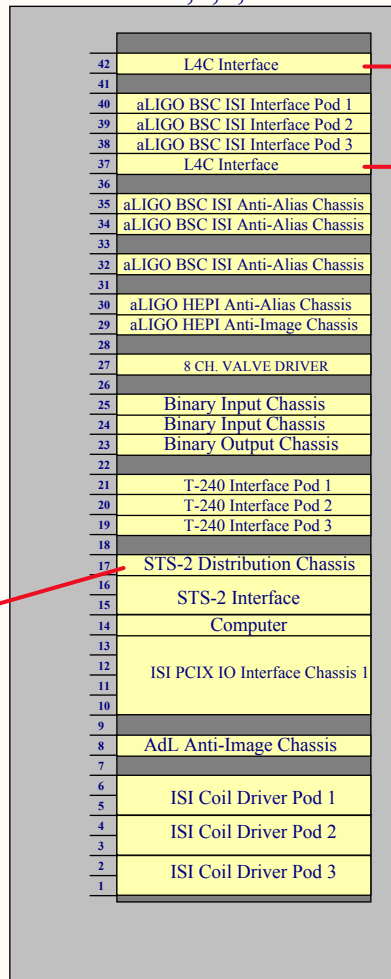
| | | | |
|--|----------------------|---|---|
| Title: aLIGO BSC ISI HEPI System Schematics | | | |
| Size: C | DCC Number: D0901301 | Ligo Project California Institute of Technology Massachusetts Institute of Technology | Cannot open file C:\Beimiscellan\ligologo.1jpp |
| Drawn by: Ben Abbott | Date: 10/3/2014 | Revision: v13 | |
| File: C:\csrc\src\BSC\ISI\BSC_ISIHEPI_SchDoc | | Time: 3:59:45 PM Sheet 12 of 13 | |

L1-SEI-C4, C5, C6, and Ends BSC 1,2,3,4&5

Per Chamber Per aLIGO (x16 BSCs)

| | |
|------------------------|-----|
| BSC AA Chassis = 3 | 48 |
| HEPI AA Chassis = 1 | 16 |
| HEPI AI Chassis = 1 | 16 |
| aLIGO AI Chassis = 1 | 16 |
| Filter Boards = 20 | 320 |
| Binary In Chassis = 2 | 32 |
| Binary Out Chassis = 1 | 16 |
| BSC ISI Int = 3 | 48 |
| Trillium Chassis = 3 | 48 |
| 8Ch. Valve = 1 | 16 |
| STS Dist Chassis = 1 | 16 |
| STS Int. Chassis = 1 | 16 |
| Coil dvr. Chassis = 3 | 48 |

STS-2 Distribution not
Installed at End Stations.



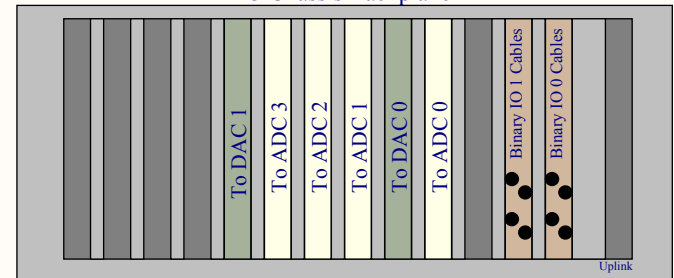
L4C Interface Not Installed

L4C Interface Not Installed

HEPI Components

STS-2 Input
/Distribution

IO Chassis Backplane



| | | | |
|---|----------------------|---------------|---|
| Title BSC ISI System Wiring | | | |
| Size: B | DCC Number: D0901301 | | Ligo Project California Institute of Technology Massachusetts Institute of Technology |
| Drawn by: Ben Abbott | Date: 10/3/2014 | Revision: v13 | Cannot open file C:\Ben\miscellan y\ligologo_1.jpg |
| File: C:\restored\Ben\Seismic\ISI\BSC_ISI\BSC_ISI_10_SchDoc | | | Time: 3:59:45 PM Sheet 13 of 13 |