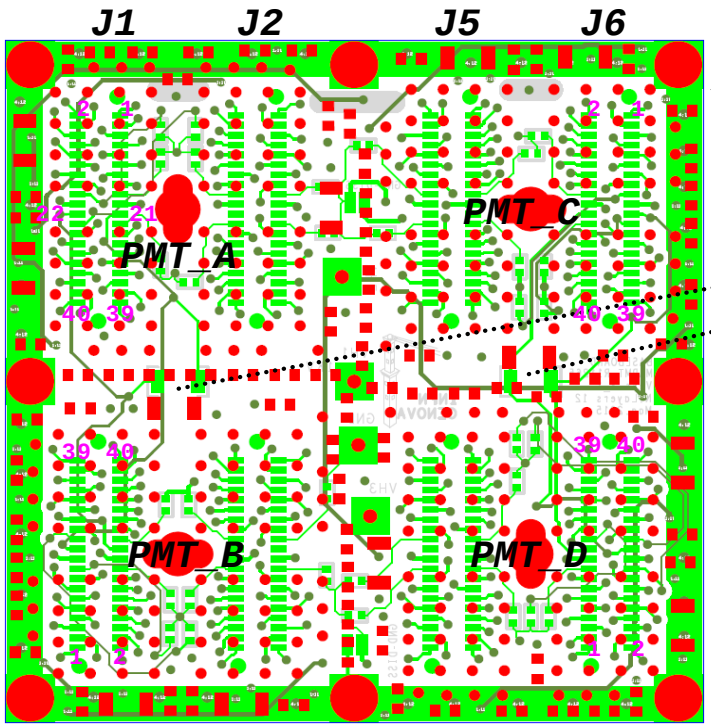
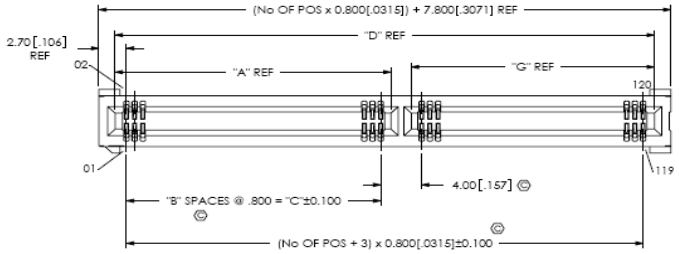
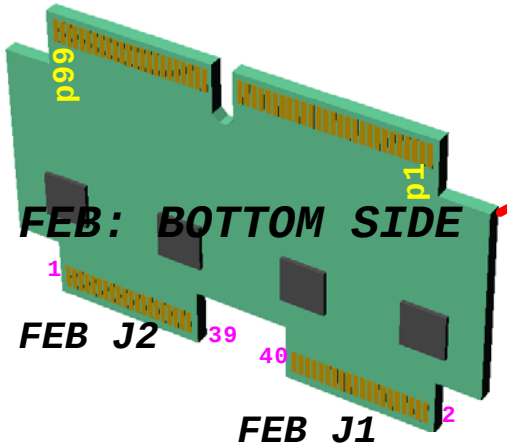
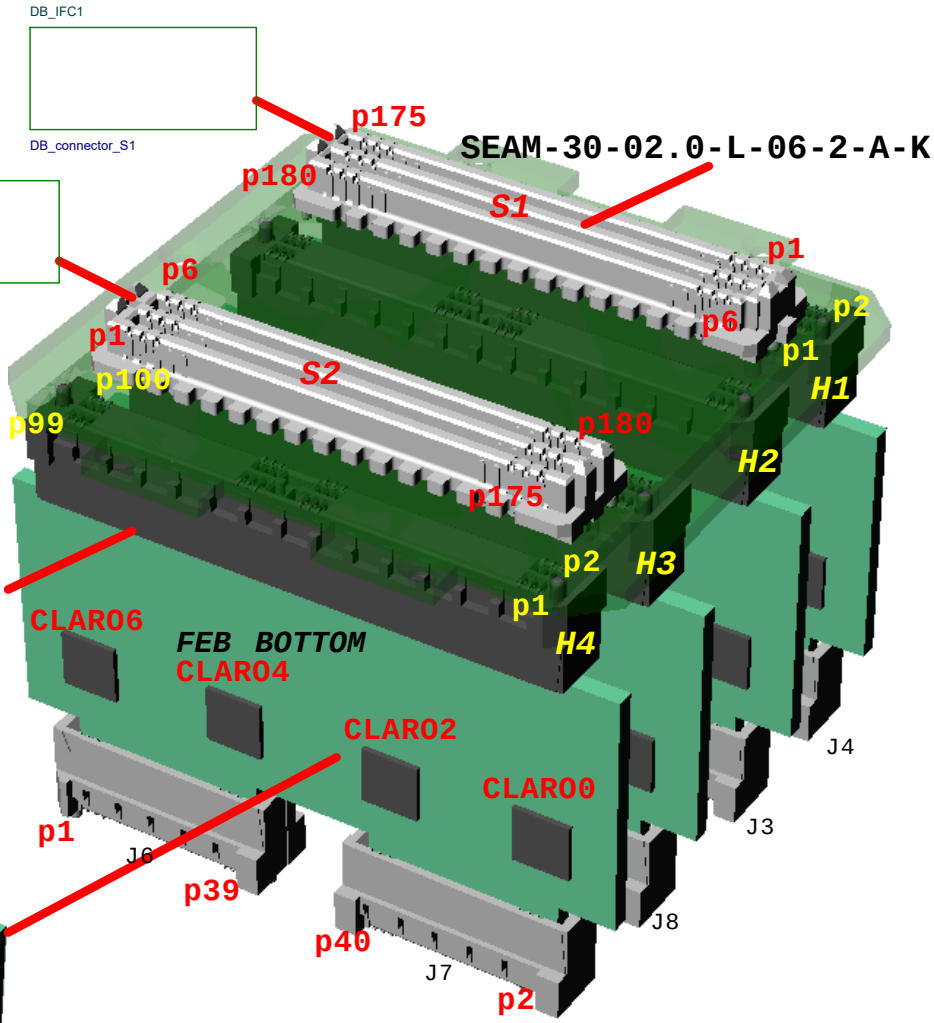


BASEBOARD (VIEW FROM PMT SIDE)

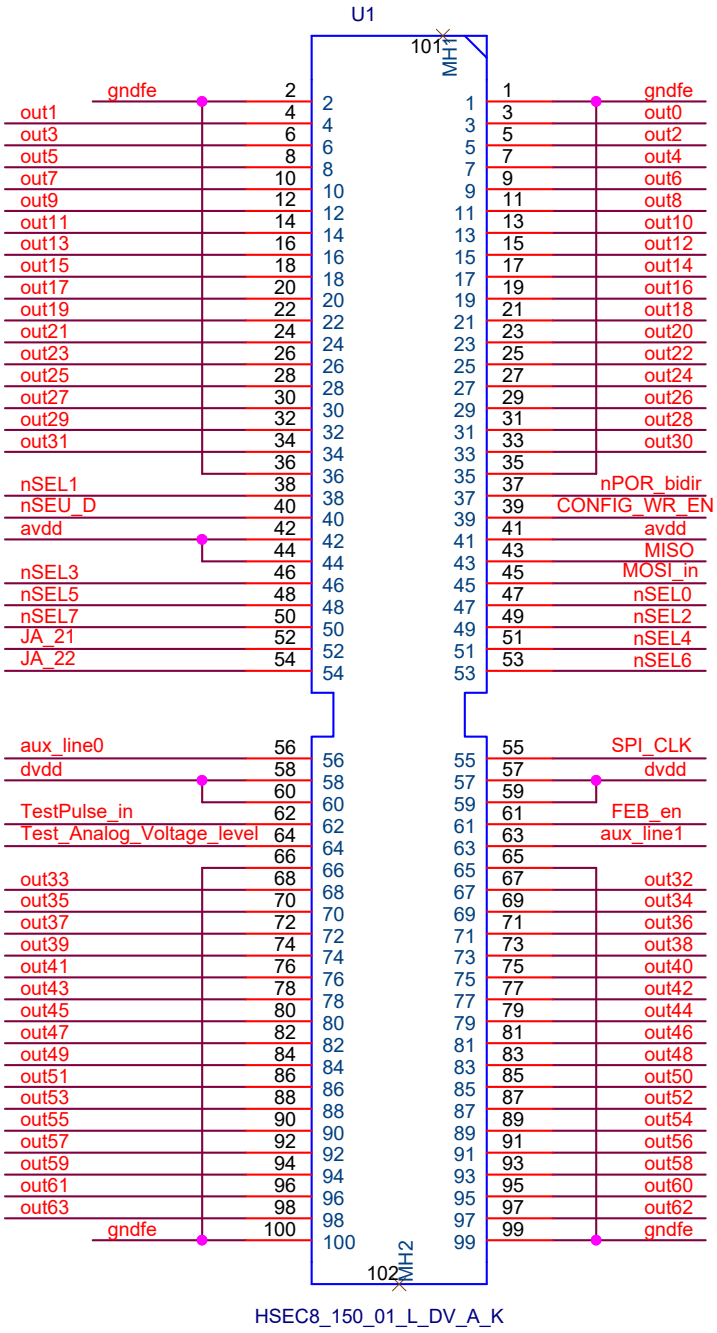


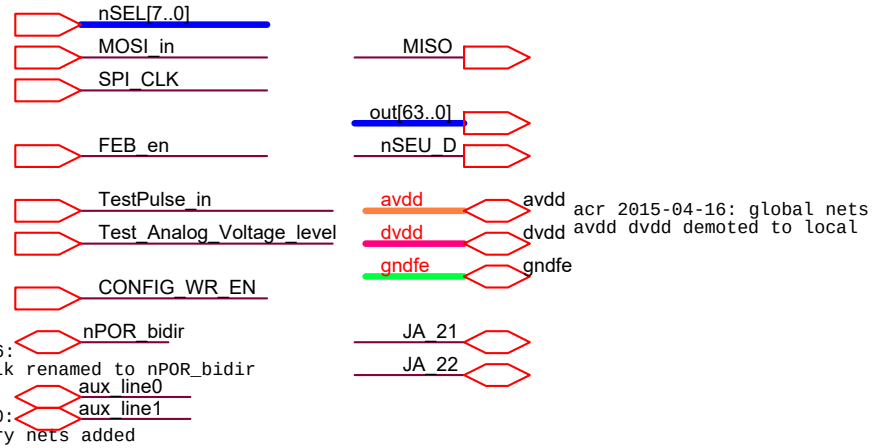
HSEC8_150_01_L_DV_A_K





	INFN-Ferrara / INFN Milano-Bicocca	
Title	Elementary Cell's (EC) backboard designer: Angelo Cotta Ramusino	
Size B	Document Number BB_sch_main	Rev 2.0
Date: Monday, February 29, 2016	Sheet 1 of 7	





acr 2015-04-16: global nets avdd dvdd demoted to local

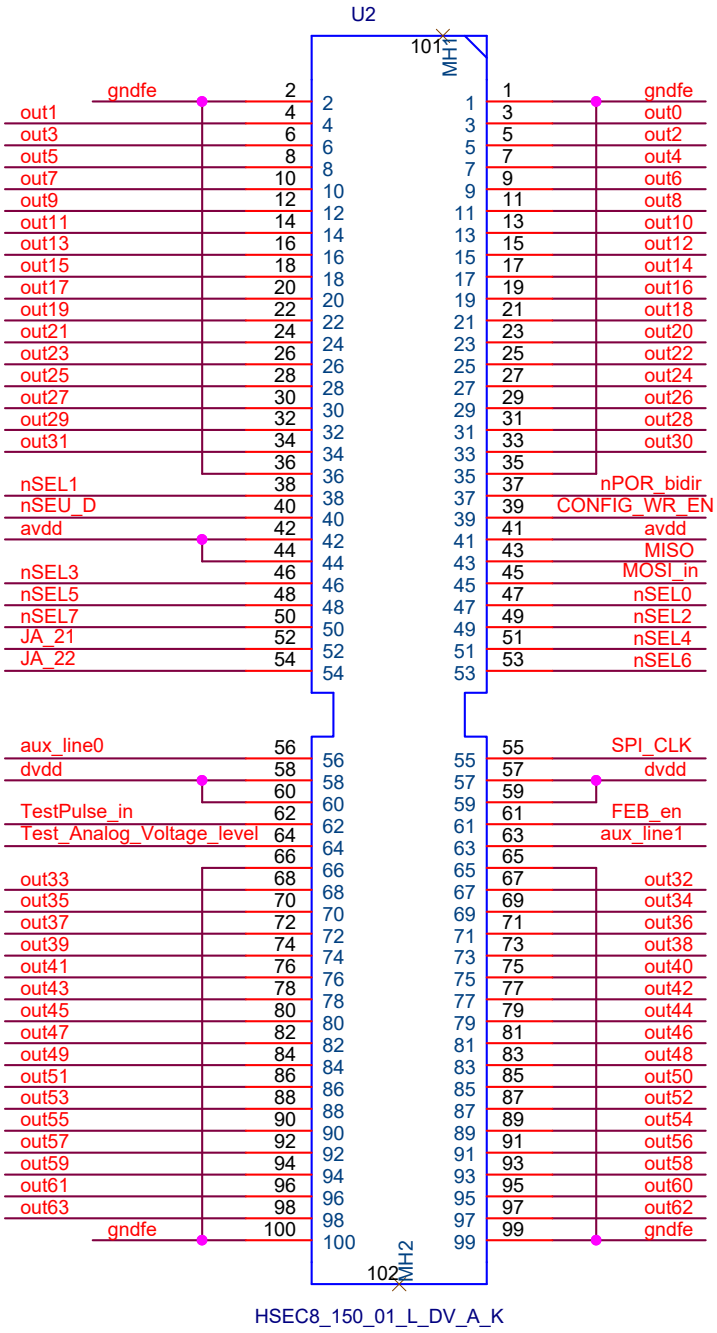
acr 2015-04-16: SEU_correct_clk renamed to nPOR_bidir

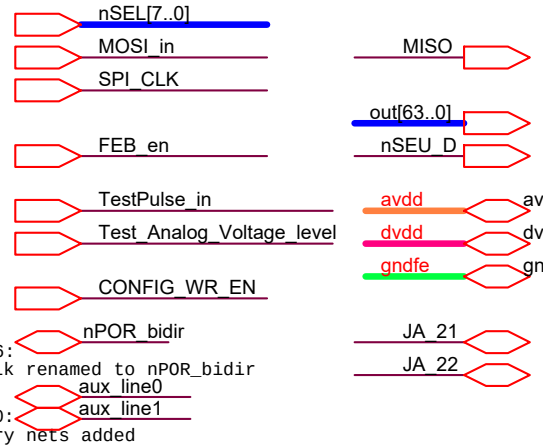
acr 2015-04-20: extra auxiliary nets added

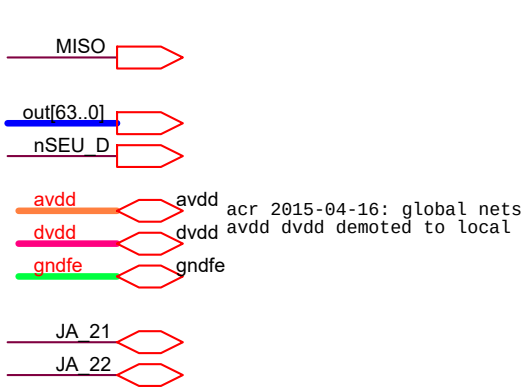
N.B.:
1) in this version the nSEL[7..0] lines from the GBT-SCA are routed to the nSEL input of the 8 CLARO8 and a single "FEB_en" signal is routed to all the "CHAIN_ENABLE" input of the CLARO8
2) the "aux_line1..0" could be used to connect a PT1000 located on the FEB unless needed for power down control

history of mods:
acr 20160105 renamed:
* SEU_D to nSEU_D
* Chain_En[7..0] to nSEL[7..0]
* nSEL_in to FEB_en

	INFN-Ferrara / INFN Milano-Bicocca
Title	Photo Detector Module's backboard designer: Angelo Cotta Ramusino
Size: A	Document Number: backboard_to_FEB_interface — Rev: 2.0
Date: Monday, February 29, 2016	Sheet 2 of 7







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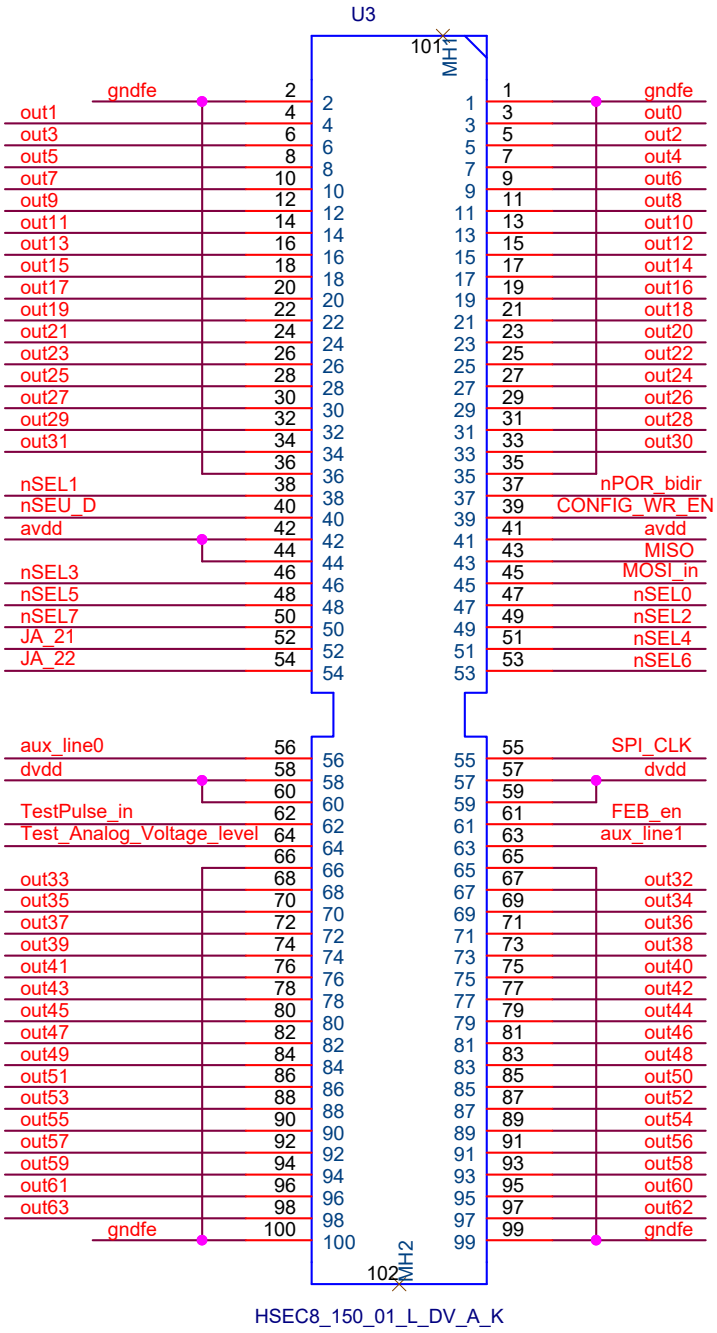
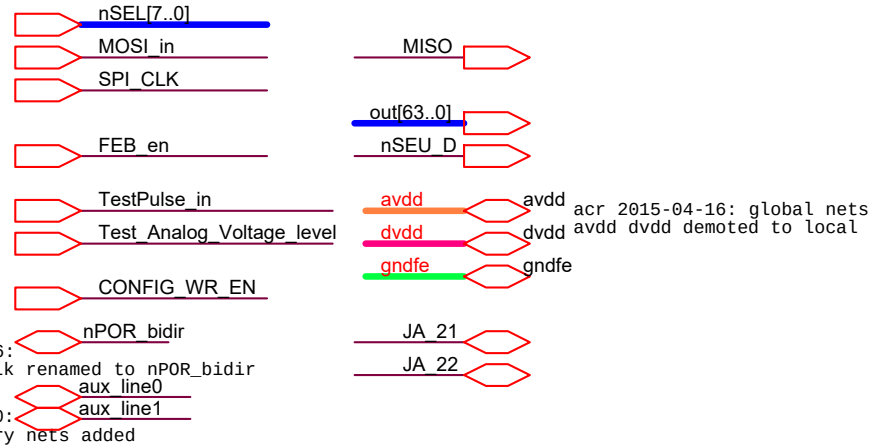
* Chain_En[7..0] to nSEL[7..0]
* nSEL_in to FEB_en
```

INFN	INFN-Ferrara / INFN Milano-Bicocca	
Title	Photo Detector Module's backboard designer: Angelo Cotta Ramusino	
Size: A	Document Number: backboard_to_FEB_interface	Rev: 1.0
Date: Monday, February 29, 2016	Sheet 3 of 7	





N.B.:

1) in this version the nSEL[7..0] lines from the GBT-SCA are routed to the nSEL input of the 8 CLARO8 and a single "FEB_en" signal is routed to all the "CHAIN_ENABLE" input of the CLARO8

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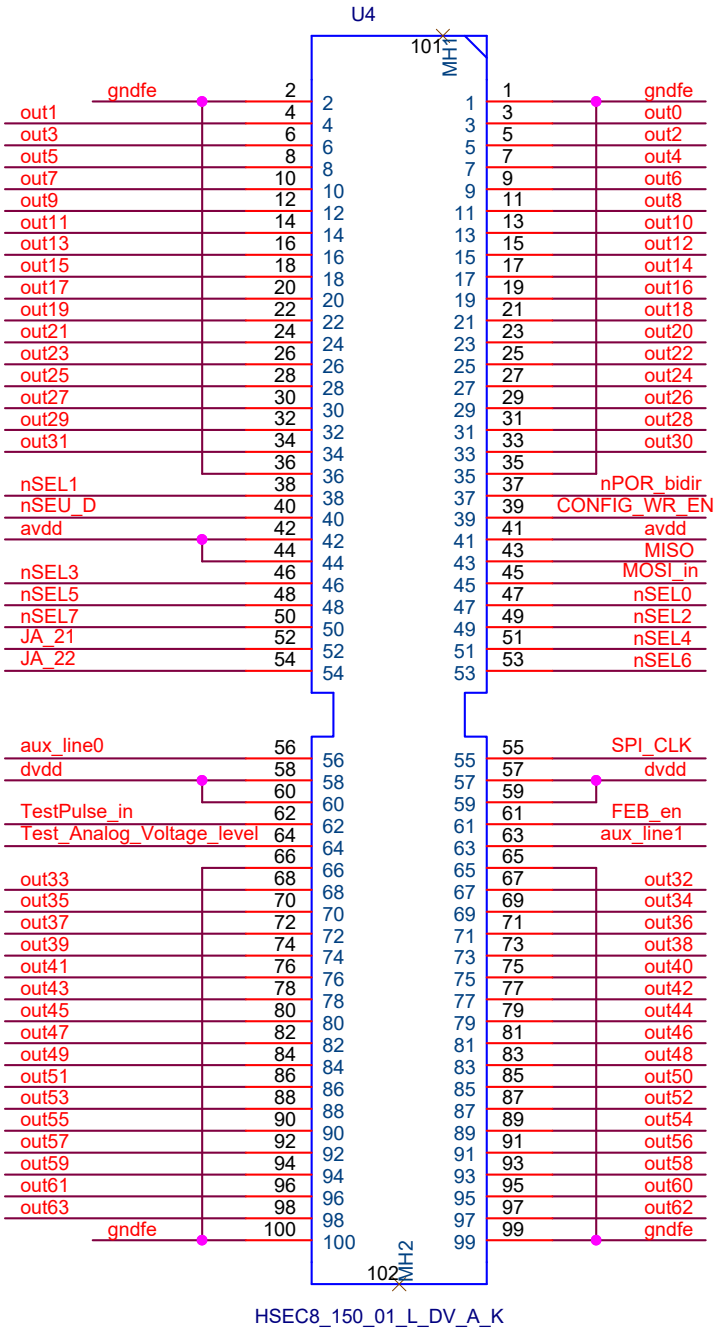
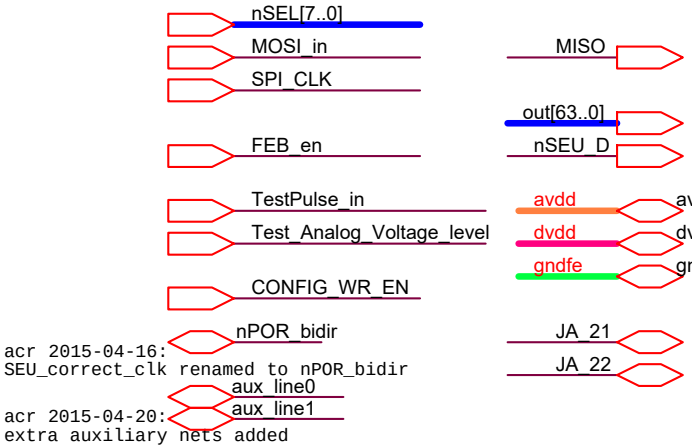
* nSEL_in to FEB_en
```

INFN	INFN-Ferrara / INFN Milano-Bicocca	
Title	Photo Detector Module's backboard designer: Angelo Cotta Ramusino	
Size: A	Document Number: backboard_to_FEB_interface	Rev: 1.0
Date: Monday, February 29, 2016	Sheet 4 of 7	





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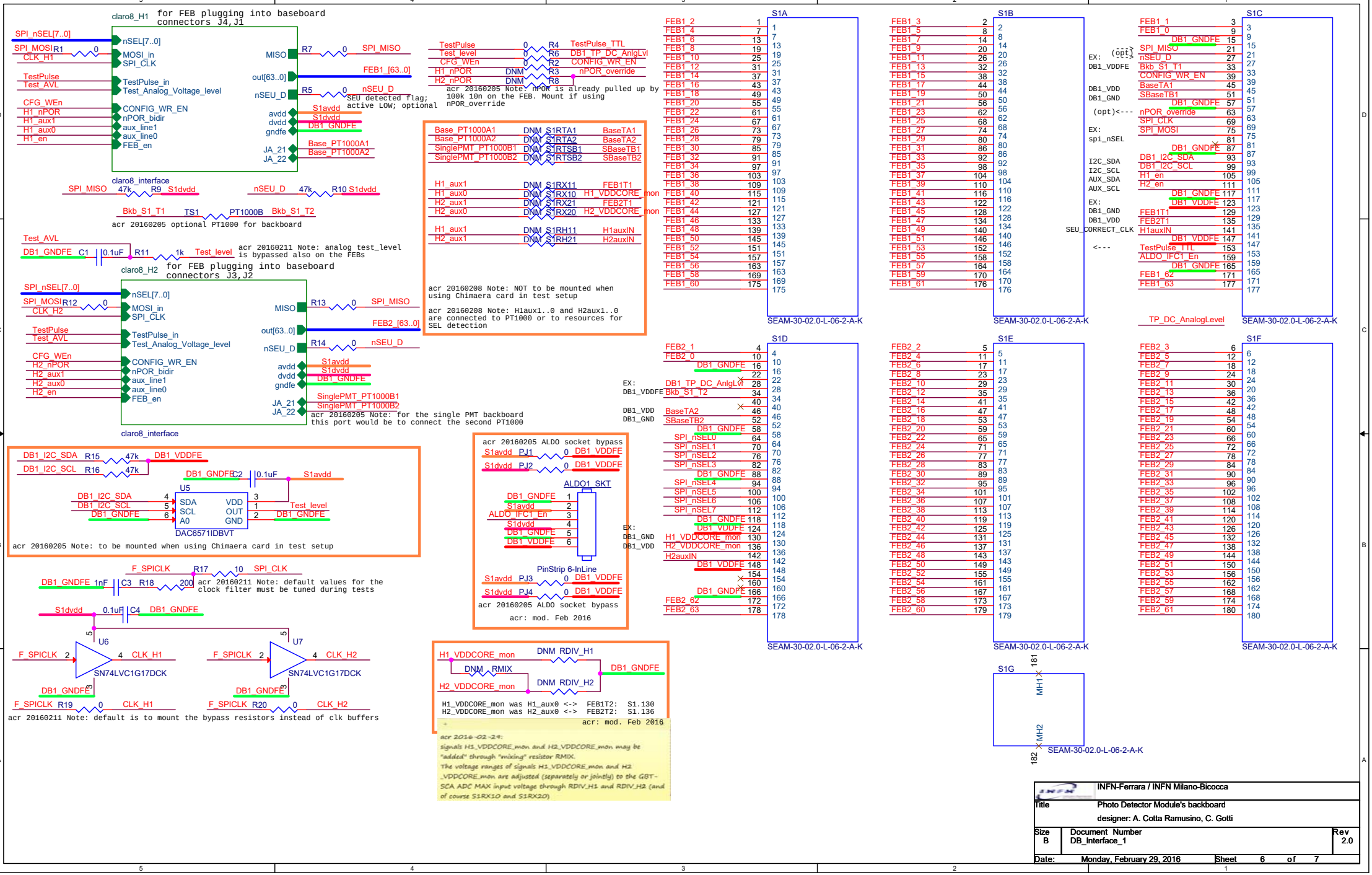
* nSEL_in to FEB_en
```

INFN	INFN-Ferrara / INFN Milano-Bicocca	
Title	Photo Detector Module's backboard designer: Angelo Cotta Ramusino	
Size: A	Document Number: backboard_to_FEB_interface	Rev: 2.0
Date: Monday, February 29, 2016	Sheet 5 of 7	



INFN-Ferrara / INFN Milano-Bicocca	
Title	Photo Detector Module's backboard
	designer: A. Cotta Ramusino, C. Gotti
Size B	Document Number DB_Interface_1 — Rev 2.0
Date: Monday, February 29, 2016	Sheet 6 of 7

claro8_H4 for FEB plugging into baseboard connectors J7,J6

claro8_H3 for FEB plugging into baseboard connectors J8,J5

claro8_interface

acr 20160205 optional PT1000 for backboard

acr 20160211 Note: analog_test_level is bypassed also on the FEBs

acr 20160208 Note: NOT to be mounted when using Chimaera card in test setup

acr 20160208 Note: H1aux1..0 and H2aux1..0 are connected to PT1000 or to resources for SEL detection

acr 20160210 Note: for the single PMT backboard this port would be empty (actually DB_IFC2 is not present in the backbord for the Single PMT)

acr 20160205 Note: to be mounted when using Chimaera card in test setup

DAC6571IDBVT

acr 20160205 ALDO socket bypass

ALDO2_SKT

PinStrip 6-InLine

acr 20160205 ALDO socket bypass

acr: mod. Feb 2016

acr 20160211 Note: default values for the clock filter must be tuned during tests

SN74LVC1G17DCK

acr 20160211 Note: default is to mount the bypass resistors instead of clk buffers

H3_VDDCORE_mon was H3_aux0 <-> FEB3T2: S2.130
H4_VDDCORE_mon was H4_aux0 <-> FEB4T2: S2.136

acr 2016-02-29:
signals H3_VDDCORE_mon and H4_VDDCORE_mon may be "added" through "mixing" resistor RMIXH3H4.
The voltage ranges of signals H3_VDDCORE_mon and H4_VDDCORE_mon are adjusted (separately or jointly) to the GBT-SCA ADC MAX input voltage through RDIV_H3 and RDIV_H4 (and of course S2RX10 and S2RX20)

acr 2016-02-10: swapped FEB4_63 and FEB4_62 as suggested by Steve Wotton

acr 2016-02-10: swapped FEB4_0 and FEB4_1 as suggested by Steve Wotton

SEAM-30-02.0-L-06-2-A-K

INFN-Ferrara / INFN Milano-Bicocca	
Title	Photo Detector Module's backboard
	designer: A. Cotta Ramusino, C. Gotti
Size B	Document Number DB_Interface_2 Rev 2.0
Date: Monday, February 29, 2016	Sheet 7 of 7