DUMMY TAIL PCBS 1 of 2 REV2.0 Tony smith 20/02/03

JM A,B,C,D ARE 20 PIN HEADERS WHICH ALLOW THE 5 CONTROL LINES ARRIVING ON J4 TO BE CONNECTED ACROSS TO J11 WHEN USING THE NIKHEF HYBRID THE BOARD HAS CUTTABLE LINKS BETWEEN JMA AND JMB TO PROVIDE A DEFAULT FOR THE LIVERPOOL HYBRID. FOR THE NIKHEF HYBRID A 20 WAY RIBBON CABLE IS REQUIRED BETWEEN JMC AND JMB.
EVEN NUMBERED PINS ON THESE CONNECTORS ARE GROUNDED

JM A,B,C,D ARE 20 PIN HEADERS WHICH ALLOW THE 5 CONTROL LINES ARRIVING

LONG TAIL A (SHORTEST IN EXPERIMENT with Lpool Hybrid)

AMP 177983-4 receptacle

J1

JMA3 JMA1 JMB3 JMB1 JMA7 JMA5 JMB7 JMB5 JMA13 JMA15 JMA17 JMA19 JMB13 JMB15 JMB17 JMB19 JMA9 JMA11 JMB9 JMB11

USE MALE PART IF NOT USING FEEDTHROUGHS

50 WAY CANNON FEMALE NUMBERED AS MALE PART

J11

FT11 FEEDTHROUGH

K11 50 WAY CANNON FEMALE

N.B. NIKHEF HYBRIDS HAVE CONNECTORS ON WRONG SIDE OF TAILS SO THE PINOUT IS DIFFERENT. eSSENTIALLY ALL THE ANALOG CHANNELS ARE IN REVERSE ORDER AND CONTROL LINES ON THE OUTER TWO CABLES ARE SWAPPED BUT THE HT IS ON THE SAME CABLE.

J11			LIVERPOOL HYBRID	NIKHEF HYBRIDS
GND	GND		GND	
VCC	VCC		VCC	
S22_p				
S22_n				
S21_p	SDA		SDA	
S21_n	SDARET		SDARET	
S20_p	ANA1-3		ANA1-3	ANA14-0
S20_n	ANA1-3N		ANA1-3N	ANA14-0N
S19_p	ANA1-2		ANA1-2	ANA14-1
S19_n	ANA1-2N		ANA1-2N	ANA14-1N
S18_p	ANA1-1		ANA1-1	ANA14-2
S18_n	ANA1-1N		ANA1-1N	ANA14-2N
S17_p	ANA1-0		ANA1-0	ANA14-3
S17_n	ANA1-0N		ANA1-0N	ANA14-3N
S16_p	ANA0-3		ANA0-3	ANA15-0
S16_n	ANA0-3N		ANA0-3N	ANA15-0N
S15_p	ANA0-2		ANA0-2	ANA15-1
S15_n	ANA0-2N		ANA0-2N	ANA15-1N
S14_p	ANA0-1		ANA0-1	ANA15-2
S14_n	ANA0-1N		ANA0-1N	ANA15-2N
S13_p	ANA0-0		ANA0-0	ANA15-3
S13_n	ANA0-0N		ANA0-0N	ANA15-3N
S12_p	COMPCLK		COMPCLK	
S12_n	COMPCLKN		COMPCLKN	
GND	GND		GND	
VCC	VCC		VCC	
S11_p	SCL		SCL	
S11_n	SCL_RET		SCL_RET	
S10_p	ANA3-3		ANA3-3	ANA12-0
S10_n	ANA3-3N		ANA3-3N	ANA12-0N
S9_p	ANA3-2		ANA3-2	ANA12-1
S9_n	ANA3-2N		ANA3-2N	ANA12-1N
S8_p	ANA3-1		ANA3-1	ANA12-2
S8_n	ANA3-1N		ANA3-1N	ANA12-2N
S7_p	ANA3-0		ANA3-0	ANA12-3
S7_n	ANA3-0N		ANA3-0N	ANA12-3N
S6_p	ANA2-3		ANA2-3	ANA13-0
S6_n	ANA2-3N		ANA2-3N	ANA13-0N
S5_p	ANA2-2		ANA2-2	ANA13-1
S5_n	ANA2-2N		ANA2-2N	ANA13-1N
S4_p	ANA2-1		ANA2-1	ANA13-2
S4_n	ANA2-1N		ANA2-1N	ANA13-2N
S3_p	ANA2-0		ANA2-0	ANA13-3
S3_n	ANA2-0N		ANA2-0N	ANA13-3N
S2_p	CLOCK		CLOCK	
S2_n	CLOCKN		CLOCKN	
S1_p	TRIGGER		TRIGGER	
S1_n	TRIGGERN		TRIGGERN	
GND	GND		GND	
VCC	VCC		VCC	

LONG TAIL B

AMP 177983-4 receptacle

J2

USE MALE PART IF NOT USING FEEDTHROUGHS

50 WAY CANNON FEMALE NUMBERED AS MALE PART

J12

FT12 FEEDTHROUGH

K12 50 WAY CANNON FEMALE

N.B. NIKHEF HYBRIDS HAVE CONNECTORS ON WRONG SIDE OF TAILS SO THE PINOUT IS DIFFERENT. eSSENTIALLY ALL THE ANALOG CHANNELS ARE IN REVERSE ORDER AND CONTROL LINES ON THE OUTER TWO CABLES ARE SWAPPED BUT THE HT IS ON THE SAME CABLE.

J12					
GND	GND		GND		GND
VCC	VCC		VCC		VCC
S22_p	NTCB		NTCB		NTCB
S22_n	NTCA		NTCA		NTCA
S21_p	NTCA2		NTCA2		NTCA2
S21_n	NTCB2		NTCB2		NTCB2
S20_p	ANA5-3		ANA5-3		ANA10-0
S20_n	ANA5-3N		ANA5-3N		ANA10-0N
S19_p	ANA5-2		ANA5-2		ANA10-1
S19_n	ANA5-2N		ANA5-2N		ANA10-1N
S18_p	ANA5-1		ANA5-1		ANA10-2
S18_n	ANA5-1N		ANA5-1N		ANA10-2N
S17_p	ANA5-0		ANA5-0		ANA10-3
S17_n	ANA5-0N		ANA5-0N		ANA10-3N
S16_p	ANA4-3		ANA4-3		ANA11-0
S16_n	ANA4-3N		ANA4-3N		ANA11-0N
S15_p	ANA4-2		ANA4-2		ANA11-1
S15_n	ANA4-2N		ANA4-2N		ANA11-1N
S14_p	ANA4-1		ANA4-1		ANA11-2
S14_n	ANA4-1N		ANA4-1N		ANA11-2N
S13_p	ANA4-0		ANA4-0		ANA11-3
S13_n	ANA4-0N		ANA4-0N		ANA11-3N
S12_p					
S12_n					
GND	GND		GND		GND
VCC	VCC		VCC		VCC
S11_p	TEMPV+		TEMPV+		
S11_n	TEMPLEFT		TEMPLEFT		
S10_p	ANA7-3		ANA7-3		ANA8-0
S10_n	ANA7-3N		ANA7-3N		ANA8-0N
S9_p	ANA7-2		ANA7-2		ANA8-1
S9_n	ANA7-2N		ANA7-2N		ANA8-1N
S8_p	ANA7-1		ANA7-1		ANA8-2
S8_n	ANA7-1N		ANA7-1N		ANA8-2N
S7_p	ANA7-0		ANA7-0		ANA8-3
S7_n	ANA7-0N		ANA7-0N		ANA8-3N
S6_p	ANA6-3		ANA6-3		ANA9-0
S6_n	ANA6-3N		ANA6-3N		ANA9-0N
S5_p	ANA6-2		ANA6-2		ANA9-1
S5_n	ANA6-2N		ANA6-2N		ANA9-1N
S4_p	ANA6-1		ANA6-1		ANA9-2
S4_n	ANA6-1N		ANA6-1N		ANA9-2N
S3_p	ANA6-0		ANA6-0		ANA9-3
S3_n	ANA6-0N		ANA6-0N		ANA9-3N
S2_p	TEMPMID		TEMPMID		
S2_n	TEMPRIGHT		TEMPRIGHT		
S1_p	PSEN+		PSEN+		
S1_n	PSEN-		PSEN-		
GND	GND		GND		GND
VCC	VCC		VCC		VCC