

Note that pin 2 (EMU_n) and pin 9 (TRST_n) are not connected in the ByteBlaster

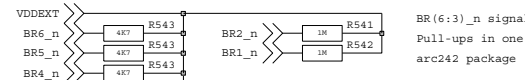
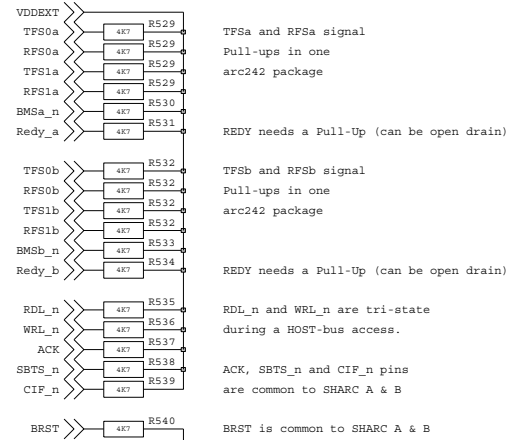
- TCK (J21) 1
- EMU_n (J21) 2
- TMS (J21) 3
- GND (J21) 4
- TDI (J21) 5
- VCC (J21) 6
- TDO (J21) 7
- GND (J21) 8
- TRST_n (J21) 9
- P_ENA (J21) 10

Series termination is added because Sharc_TDO might be a long traces. Place close to the buffers and buffers close to each other.

Parallel termination for Sharc_TCK/TMS. Place termination at the end of the line.

Series termination is added because Sharc_TDI might be a long trace. Place close to the driving buffer.

The SHARC Datasheet explicitly states that TRST_n is (Pulsed) Low after Power-Up. Note. Parallel Termination can be placed depending on the resistor configuration.



BR_n pins are common to SHARC A & B. Unused BR_n lines need Pull-Up (see datasheet). Note that BR2_n and BR1_n pull-ups can be installed when only SHARC A is mounted on the board.

PAGE and PA_n are common to SHARC A & B. No need for Pull-Ups.

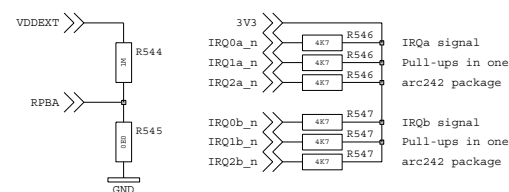
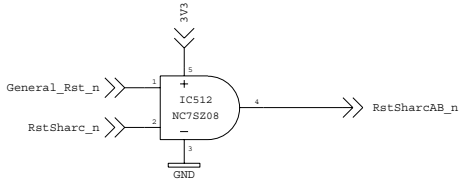
MS0_n .. MS3_n, RDH_n, RDL_n, WRH_n and WRL_n are common to SHARC A & B and have internal Pull-Ups.

HBR_n and HBG_n are common to SHARC A & B. No need for Pull-Ups. HBR_n is always driven by the FPGA. HBG_n is always driven by the Bus Master.

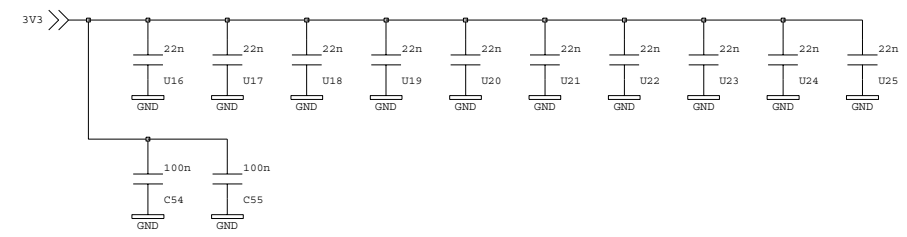
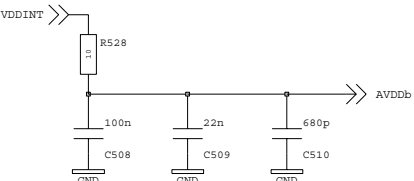
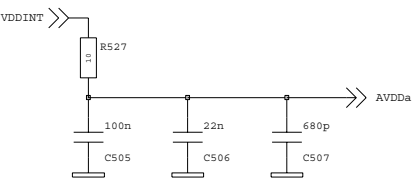
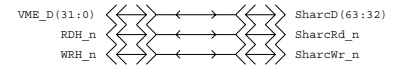
DMAR1_n and DMAR2_n are common to SHARC A & B. No need for Pull-Ups. They are always driven by the FPGA.

DMAG1_n and DMAG2_n are common to SHARC A & B. No need for Pull-Ups, they are driven by the Bus Master.

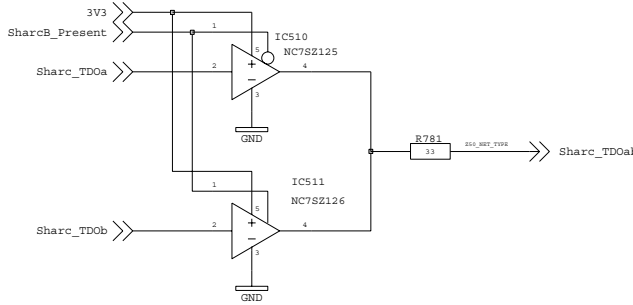
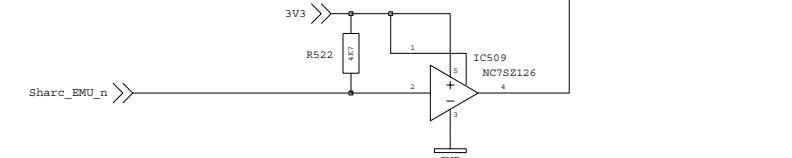
Both Sharcs are reset when there is a General_Rst_n, or when a reset is asked via the bit Set/Clr register in VME64x CSR space.



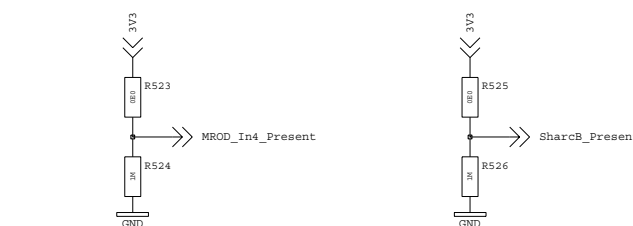
Rotating Priority Bus Arbitration select is set to "Fixed Priority" by default (SHARC A has priority).



Select either Sharc_TDO3 or 4 depending on whether SharcF (MROD_In4) is placed on the board. MROD_In4_Present = '0' => SharcF is absent. MROD_In4_Present = '1' => SharcF is present.



Select either Sharc_TDOa or b depending on whether SharcB is placed on the board. SharcB_Present = '0' => SharcB is absent. SharcB_Present = '1' => SharcB is present.



MROD-Out		Rev	V2	3
		Date	7 Feb 2006	
SHARC JTAG and Auxiliary connections		Time	1:26:10 pm	
Proj:	MROD-X	Proj.No:	38405	
Peter Jansweijer		peterj@nikhef.nl		
NIKHEF	NATIONAAL INSTITUUT VOOR KERN-FYSICA EN HOGE ENERGIE-FYSICA KRUISLAAN 409, 020-592 2000 1098 SJ AMSTERDAM NEDERLAND	Size	A3	4 1 4 A
		Dim	420 x 297 mm	
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