



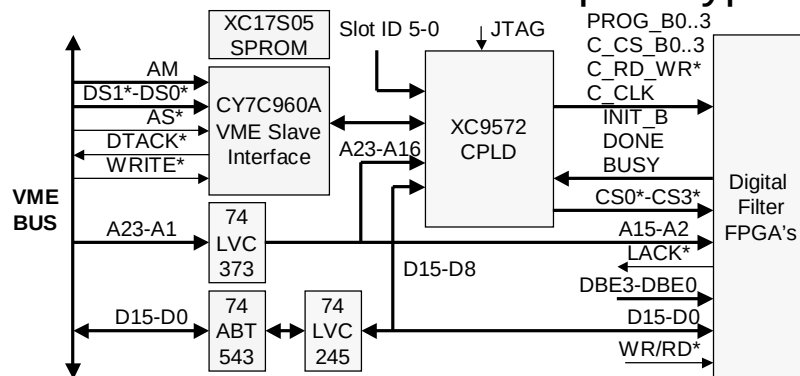
VME interface for ADFv2 board

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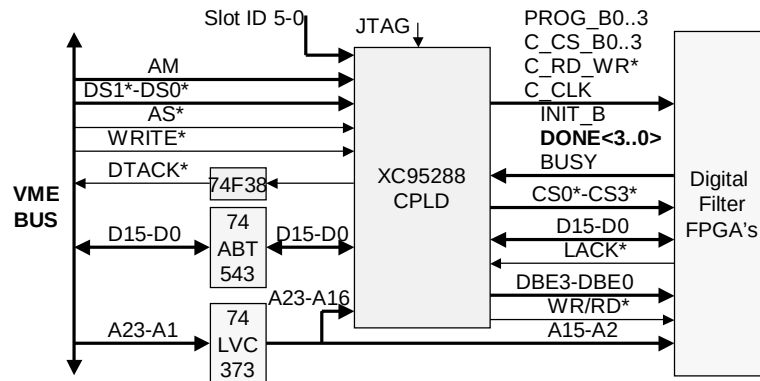
VME interface on ADF prototype



- VME interface A24 D16-D8 only; no DMA; no interrupt
- Provides 5V <-> 3.3V conversion; Virtex 2 I/O's not 5V tolerant
- Download FPGA firmware via VME
-> works fine but CY7C960A VME bridge is now obsolete



ADFv2 VME interface



- CY7C960A + XC9572 + 74245 functions fit in XC95288 CPLD
- 4 DONE signals readable over VME: easier to spot faulty FPGA

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3

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Benefits of new design

- Simpler design
 - Parts: CY7C960A, XC17S05, XC9572 (100 pins), 74LVC16245
 - Replaced by: XC95288 (144 pins) and 74F38
- Easier to maintain
 - Does not depend on Cypress software anymore
 - no configuration PROM to program
- Cheaper
 - Cost of parts removed: ~55\$
 - Cost of parts added: ~20\$ -> ~35\$ cheaper (only ~2% of board cost)
- More flexible
 - Programmable logic versus dedicated chip

-> Design validated by simulation; will be tested on ADFv2

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4

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