

# SoCLib components documentation

## VCI Targets

- VciRam : A multi-segment embedded Ram controller
- VciMultiTty : A memory mapped multi-TTY controller
- VciMultiTimer : A memory mapped multi-Timer controller
- VciIcu : A memory mapped interrupt controller
- VciLocks : A memory mapped locks controller

## VCI Initiators

- VciXcacheWrapper : A generic, VCI compliant, cache controller for 32 bits RISC processors
- VciCcXcacheWrapper : A generic, VCI compliant, cache controller for 32 bits RISC processors with directory-based cache coherence support
- VciVcacheWrapper : A generic, VCI compliant, cache controller for 32 bits RISC processors supporting virtual memory
- VciXcache : An old cache controller for 32 bits RISC processors (deprecated)
- VciDma : A DMA engine
- VciFdAccess : A file system access controller
- VciMwmmrController : A Mwmr channels controller

## VCI Interconnects

- VciVgmn : A VCI compliant generic micro-network
- VciLocalCrossbar : A VCI compliant crossbar
- VciPibus : A VCI compliant PIBUS implementation
- VciRing? : A VCI compliant ring interconnect
- VciDspin : A VCI compliant DSPIN micro-network

## Common utilities

- TtyWrapper : A simulator-side TTY abstraction tool, used by VciMultiTty
- MappingTable : A tool to declare and list all memory segments in a platform
- ElfLoader? : An ELF binary file loader utility

## Optional utilities

- ProcessWrapper : A simulator-side fork/exec abstraction tool, with process' stdin/stdout communication
- FbController : A simulator-side framebuffer abstraction tool
  
- VciTargetFsm : A generic caba class for handling the VCI fsm part of target components, so that you can focus on the functionality

## Instruction Set Simulators

- Mips : Mips-R3000
- Ppc405 : PPC405
- MicroBlaze : MicroBlaze

- NiosII : NiosII
- ARM7TDMI : ARM7TDMI
- ARM966 : ARM966