

General rules for the SoCLib hardware components

1. A) Introduction
2. B) Naming convention
3. C) Component indexation

A) Introduction

B) Naming convention

namespaces

SystemC being build upon C++, we use the C++ namespace constructs, to create unambiguous names. SoCLib defines the following namespaces:

- `soclib`
- `soclib::common`
- `soclib::caba *soclib::tlmt`

variables

The following conventions have been defined :

- All component port names should be prefixed with `p_`
- All component register names should be prefixed with `r_`
- All component member variable names should be prefixed with `m_`

C) Component indexation

In a VCI-based architecture, all initiators and targets must be indexed. Initiators and targets have different address spaces.

- The target index is used by interconnect components : those components decode the VCI address MSB bits to get the target index and route the VCI command packets.
- The initiator index is used by the interconnect components to route the VCI response packets : the initiator index is the VCI SRCID value.

Indexes can be :

- a simple scalar index, in case of a *flat* interconnect.
- a composite index, in case of a *clusterised* architectures, using a two level hierarchical interconnect. Each component is identified by two scalars: `cluster_index`, `local_index`.

The `common/int_tab.h` file defines an utility class storing a list of indexes : All indexes must be declared as `IntTabs`.