

Vcilcu

1) Functional Description

This VCI target is a memory mapped peripheral implementing a vectorized interrupt controller, a timer controller, and an Inter-processor interrupt controller.

It can concentrate up to

- 32 independent interrupt lines
- 32 independent timers
- 32 IPI registers

multiplexing to up to 32 output lines

Complete specification is in xicu-1.0.pdf.

2) Component definition & usage

source:trunk/soclib/module/infrastructure_component/interrupt_infrastructure/vci_xicu/caba/metadata/vci_xicu.sd

See [SoclibCc/VciParameters](#)

```
Uses( 'vci_xicu', **vci_parameters )
```

3) CABA Implementation

CABA sources

- interface :
[source:trunk/soclib/soclib/module/infrastructure_component/interrupt_infrastructure/vci_xicu/caba/source/include/vc](#)
- implementation :
[source:trunk/soclib/soclib/module/infrastructure_component/interrupt_infrastructure/vci_xicu/caba/source/src/vci_xic](#)

CABA Constructor parameters

```
VciXicu(  
    sc_module_name name, // Component Name  
    const soclib::common::InTab &index, // Target index  
    const soclib::common::MappingTable &mt, // Mapping Table  
    size_t pti_count, // Number of programmeble timers  
    size_t hwi_count, // Number of hardware interrupt lines  
    size_t wti_count, // Number of write-triggerred interrupts (IPI)  
    size_t irq_count); // Number of output lines
```

CABA Ports

- sc_in<bool> **p_clk** : Global system clock
- sc_in<bool> **p_resetn** : Global system reset
- soclib::caba::VciTarget<vci_param> **p_vci** : VCI port

- `sc_out<bool> *p_irq` : Output interrupt ports (`irq_count`)
- `sc_in<bool> *p_hwi` : Input interrupts ports (`hwi_count`)