test.v

AUTHORS

JAY CONVERTINO

DATES

2025/03/17

INFORMATION

Brief

Test bench for apb using cocotb

License MIT

Copyright 2025 Jay Convertino

Permission is hereby granted, free of charge, to any person obtaining a copy of this software and associated documentation files (the "Software"), to deal in the Software without restriction, including without limitation the rights to use, copy, modify, merge, publish, distribute, sublicense, and/or sell copies of the Software, and to permit persons to whom the Software is furnished to do so, subject to the following conditions:

The above copyright notice and this permission notice shall be included in all copies or substantial portions of the Software

THE SOFTWARE IS PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND NONINFRINGEMENT. IN NO EVENT SHALL THE AUTHORS OR COPYRIGHT HOLDERS BE LIABLE FOR ANY CLAIM, DAMAGES OR OTHER LIABILITY, WHETHER IN AN ACTION OF CONTRACT, TORT OR OTHERWISE, ARISING FROM, OUT OF OR IN CONNECTION WITH THE SOFTWARE OR THE USE OR OTHER DEALINGS IN THE SOFTWARE.

test

```
module test #(
parameter
ADDRESS_WIDTH
= 16,
parameter
BUS_WIDTH
= 4
) ( input clk, input rst, inout s_wb_cyc, inout s_wb_stb, inout s_wb_we, income s_wb
```

Test of Wishbone Classic

Parameters

ADDRESS_WIDTH Width of the Wishbone address port in bits.

parameter

BUS_WIDTH Width of the Wishbone bus data port in bytes.

parameter

Ports

clk Clock

rst Positive reset

s_wb_cycBus Cycle in processs_wb_stbValid data transfer cycles_wb_weActive High write, low read

s_wb_addrs_wb_data_is_wb_selDevice Select

s_wb_ack Bus transaction terminated

s_wb_data_o Output data

s_wb_err Active high when a bus error is present