tb_cocotb.v

AUTHORS

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DATES

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INFORMATION

Brief

Test bench wrapper for cocotb

License MIT

tb_cocotb

```
module tb_cocotb #(
parameter
DELIMITER
  =
";",
parameter
TERMINATION
  =
"\n",
parameter
SBUS_WIDTH
```

```
 =
1,
parameter
USER_WIDTH
 =
4,
parameter
DEST_WIDTH
 =
4,
parameter
PREFIX_LEN
 =
1,
parameter
DATA_PREFIX
 =
"#",
parameter
DEST_PREFIX
 =
"&",
parameter
USER_PREFIX
 =
"*"
) ( input aclk, input arstn, input [(SBUS_WIDTH*8)-1:0] s_axis_tdata, input
```

Test bench for data to string converter. This will run a file through the system and write its output. These can then be compared to check for errors. If the files are identical, no errors. A FST file will be written.

Parameters

DELIMITER break value between multple strings
parameter

TERMINATION termination value of full string from serial port, byte only. (\n = 0A \r = 0D).
parameter

SBUS_WIDTH bus width of master (data) output
parameter

USER_WIDTH user width of master bus, only in 4 bit nibbles, and at least 4 bits.
parameter

DEST_WIDTH dest width of master bus, only in 4 bit nibbles, and at least 4 bits.
parameter

PREFIX_LEN length of following prefix strings.
parameter

DATA_PREFIX prefix for data hex strings
parameter

DEST_PREFIX prefix for destination hex strings
parameter

USER_PREFIX prefix for user hex strings
parameter

Ports

aclk Clock for AXIS

arstn Negative reset for AXIS

s_axis_tdata Input data

s_axis_tvalid	When set active high the input data is valid
s_axis_tuser	User data to convert.
s_axis_tdest	Destination data to convert
s_axis_tready	When active high the device is ready for input data.
m_axis_tdata	Output data
m_axis_tvalid	When active high the output data is valid
m_axis_tready	When set active high the output device is ready for data.

INSTANTIATED MODULES

dut

```
axis_data_to_axis_string #(
                                                                    .
DELIMITER(DELIMITER),
                                                                    .
TERMINATION(TERMINATION),
                                                                    .
SBUS_WIDTH(SBUS_WIDTH),
                                                                    .
USER_WIDTH(USER_WIDTH),
                                                                    .
DEST_WIDTH(DEST_WIDTH),
                                                                    .
PREFIX_LEN(PREFIX_LEN),
                                                                    .
DATA_PREFIX(DATA_PREFIX),
                                                                    .
DEST_PREFIX(DEST_PREFIX),
                                                                    .
USER_PREFIX(USER_PREFIX)
) dut ( .aclk(aclk), .arstn(arstn), .m_axis_tdata(m_axis_tdata), .m_axis_tva
```

Device under test, axis_data_to_axis_string