

# tb\_cocotb.py

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## AUTHORS

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## DATES

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## INFORMATION

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### Brief

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Cocotb test bench

### License MIT

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## FUNCTIONS

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### create\_string

---

```
def create_string(
    dut,
    tx_frame
)
```

Return a string equal to the core output

### Parameters

**dut** device under test passed from cocotb test function

**tx\_frame**      transmitted frame data

Returns: String

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## random\_bool

```
def random_bool()
```

Return a infinite cycle of random bools

Returns: List

---

## start\_clock

```
def start_clock(  
    dut  
)
```

Start the simulation clock generator.

### Parameters

**dut**      Device under test passed from cocotb test function

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## reset\_dut

```
async def reset_dut(  
    dut  
)
```

Cocotb coroutine for resets, used with await to make sure system is reset.

### Parameters

**dut**      Device under test passed from cocotb.

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## conversion\_test

```
@cocotb.test()  
async def conversion_test(  
    dut  
)
```

Coroutine that is identified as a test routine. This routine tests for correct output of data from string input. Core creates the expected output data, generates a string from that and then compares the input vs output raw data.

### Parameters

**dut**      Device under test passed from cocotb.

---

## conversion\_test\_random\_ready

```
@cocotb.test()
```

```
async def conversion_test_random_ready(  
    dut  
)
```

Coroutine that is identified as a test routine. This routine tests for correct output of data from string input. Core creates the expected output data, generates a string from that and then compares the input vs output raw data.

#### Parameters

**dut**     Device under test passed from cocotb.

### in\_reset

---

```
@cocotb.test()  
async def in_reset(  
    dut  
)
```

Coroutine that is identified as a test routine. This routine tests if device stays in unready state when in reset.

#### Parameters

**dut**     Device under test passed from cocotb.

### no\_clock

---

```
@cocotb.test()  
async def no_clock(  
    dut  
)
```

Coroutine that is identified as a test routine. This routine tests if no ready when clock is lost and device is left in reset.

#### Parameters

**dut**     Device under test passed from cocotb.