

# tb\_cocotb\_up.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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### random\_bool

---

```
def random_bool()
```

Return a infinte 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

## reset\_dut

---

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

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

## write\_slave\_test

---

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

Coroutine that is identified as a test routine. Simply write data over uP bus to SPI mosi

### Parameters

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

## loop\_test

---

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

Coroutine that is identified as a test routine. Loop test SPI

### Parameters

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

## IRRDY\_test

---

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

Coroutine that is identified as a test routine. Receive Ready interrupt test

### Parameters

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

## ITRDY\_test

---

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

Coroutine that is identified as a test routine. Transmit Ready interrupt test

### Parameters

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

## ITOE\_test

---

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

Coroutine that is identified as a test routine. Transmit Written when not ready interrupt test

### Parameters

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

## IROE\_test

---

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

Coroutine that is identified as a test routine. Receive was never read, we missed data.

### Parameters

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

## SSO\_assert\_test

---

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

Coroutine that is identified as a test routine. Write control SS bit to assert all enable lines.

### Parameters

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

## end\_of\_packet\_test

---

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

Coroutine that is identified as a test routine. check if the packet 0xAA has been added every 10th word. No check on EOP receive at the moment.

### 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.