

tb_dc_block_ram.v

AUTHORS

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DATES

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INFORMATION

Brief

Test bench for Generic Dual Port RAM

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dc_block_ram

```
module tb_dc_block_ram #(
  parameter
  RAM_DEPTH
  =
  256,
  parameter
  BYTE_WIDTH
  =
  4,
  parameter
  ADDR_WIDTH
  =
  32,
  parameter
```

```

    HEX_FILE
    =
    ""
    parameter
    RAM_TYPE
    =
    "block"
    )()

```

Test bench for Generic Dual Port RAM

Parameters

RAM_DEPTH parameter	Number of words using the size of BYTE_WIDTH.
BYTE_WIDTH parameter	Width of the data bus in bytes.
ADDR_WIDTH parameter	Width of the address bus in bits.
HEX_FILE parameter	Read a hex value text file as the initial state of the RAM.
RAM_TYPE parameter	Used to set the ram_style attribute.

INSTANTIATED MODULES

clk_stim

```

clk_stimulus #(
    CLOCKS(1),
    CLOCK_BASE(1000000),
    RESETS(1),
    RESET_BASE(2000)
) clk_stim ( .clkv(tb_dut_clk), .rstnv(tb_dut_rstn), .rstv() )

```

Generate a 50/50 duty cycle set of clocks and reset.

inst_dc_block_ram

```

dc_block_ram #(
    RAM_DEPTH(RAM_DEPTH),
    BYTE_WIDTH(BYTE_WIDTH),
    ADDR_WIDTH(ADDR_WIDTH),
    HEX_FILE(HEX_FILE),
    RAM_TYPE(RAM_TYPE)
) inst_dc_block_ram ( .rd_clk(tb_dut_clk), .rd_rstn(tb_dut_rstn), .rd_en(tb_

```

Module instance of dc_block_ram