# Led\_control module

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| --- | --- | --- |
| Input name | Full name | Purpose |
| led\_enable | LED enable | This toggle on the separate led pins 1-6 a 1 in the vector means that that pin is to be enabled a 0 that it should be off |
| clock | Clock | Clock |
| reset | Reset signal | Reset |
| mtne\_mode | Maintenance mode enable | Turns all leds on to check for functionality. |

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| Parameter name | Full name | Purpose |
| None |  |  |

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| Output name | Full name | Purpose |
| led\_output | LED output | This signal is what drives the led chains in the sequence. |

## Modules instantiated.

* Clock divider

## General Overview.

This module turns the leds off and on in a configurable pattern. It uses a counter driven by a slowed down clock to turn the individual output buts on and off in a sequence that is configurable at compile. The individual pins can be enabled separately from the counter driven [pattern to allow different combinations of led chains to be used.

## Notable points.

* At the end of the module a series of assigns are present to drive the pins. By changing the last part of the conditional statement ( the section reading ***led\_counter===4'd***x) to any interger between 0 and 15 the patterns can be altered to have the desired effect.