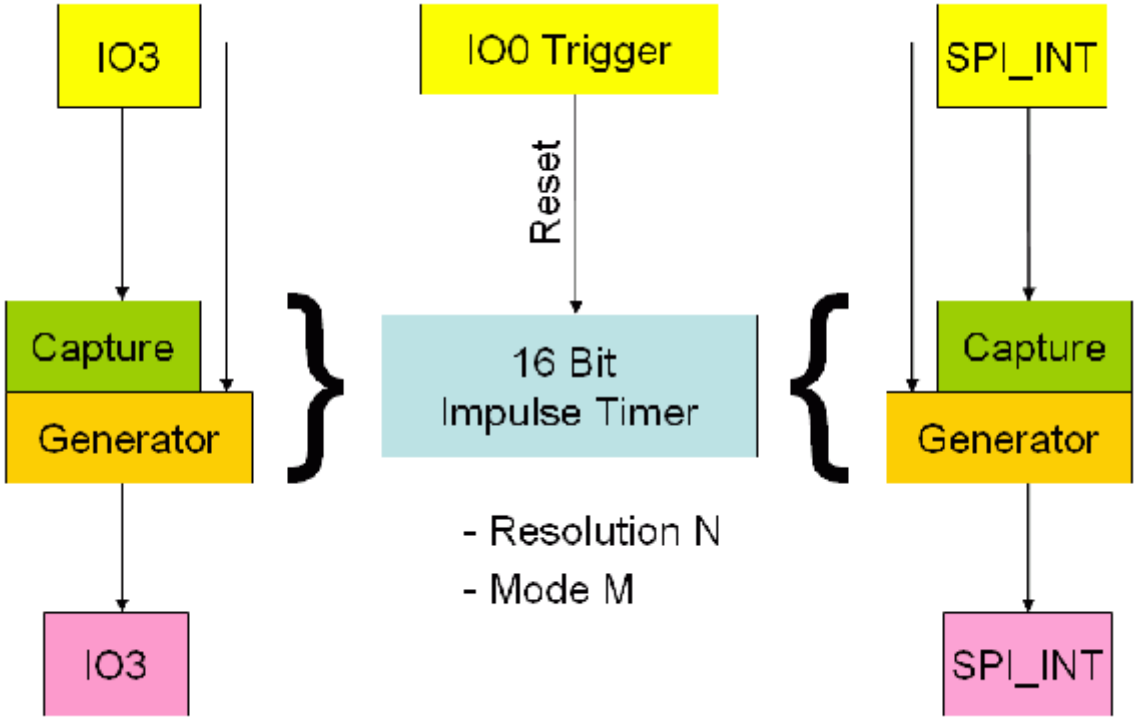
# Impulse handling with Netzer IO

Netzer is able to generate and capture signals at IO3 and SPI_INT.




The image shows the structure of the impulse generator/capture.

The impulse module is divided into two modes, the unsynchronized mode and the IO0 synchronized mode. Both, IO3 and SPI_INT, can either work in unsynchronized or in IO0 synchronized mode.

Furthermore a mode M can be configured:

- Continuous mode
- Single
- Triggered by IO0

Resolution N can be either 100ns, 200ns, 400ns or 800ns. All raw values associated with Capture/Generator module must be multiplied by N to get the final time value.

Last but not least channels can be configured for capturing (measuring impulses) or generating impulses.

## Unsynchronized mode

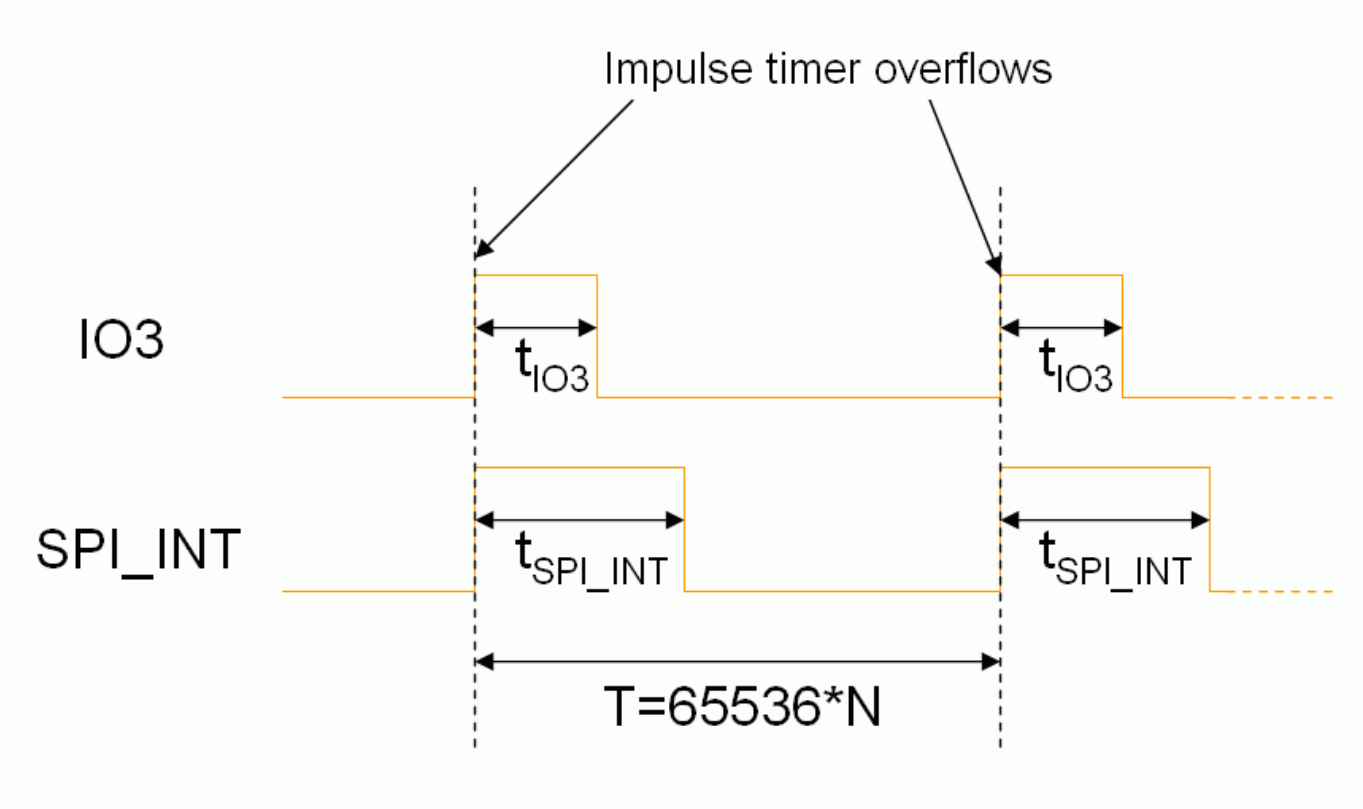
The impulse timer is free running in this mode. Changes on IO0 will not reset the impulse timer.

The examples below show both signals IO3 and SPI_INT. Of course impulse module can be configured

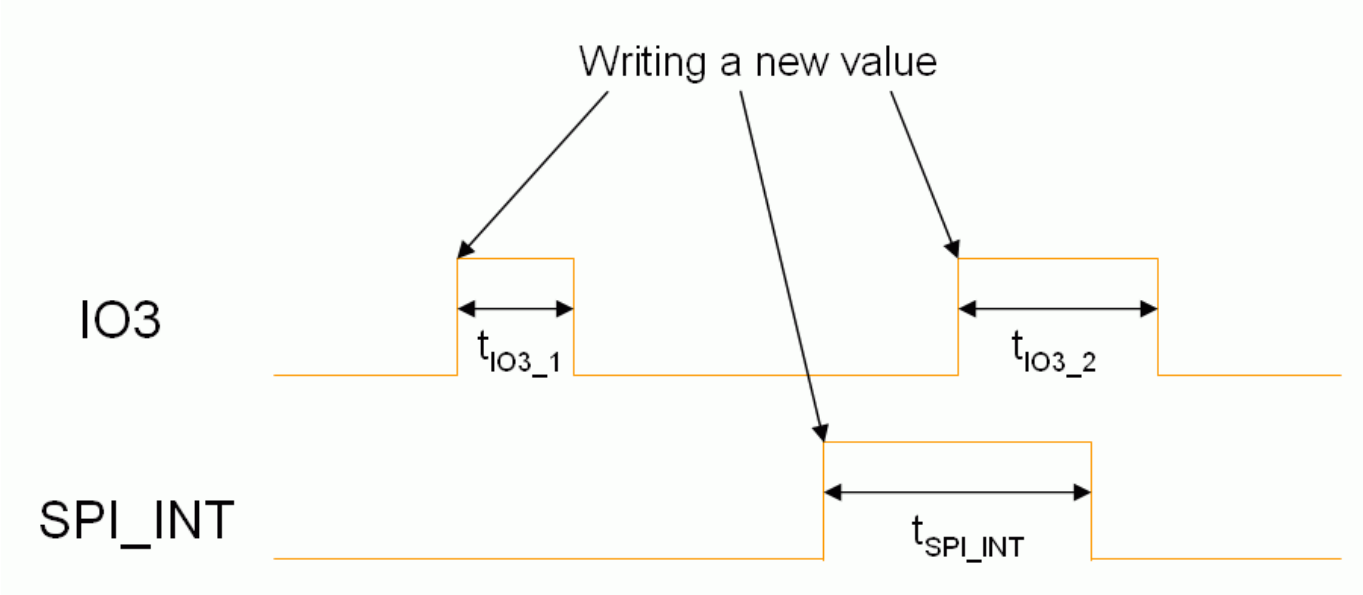
to use only one of them.

The examples only show positive logic. Simple invert the signals to get negative logic examples.

### Generating impulses in continuous mode




### Generating impulses in single mode



## Generating impulses in IO0 triggered mode

This mode shall not be used.

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