

How to use the select statement with a timeout

version	1.1.1
scope	Example. This code is provided as example code for a user to base their code on.
description	How to use the select statement with a timeout
boards	Unless otherwise specified, this example runs on the SliceKIT Core Board, but can easily be run on any XMOS device by using a different XN file.

A select statement waits for one of a set of inputs to become ready, performs the selected input and then executes a corresponding body of code. There are however occasions when it is not reasonable to wait on one of the inputs to become ready. In this instance a timer can be used to exit the select statement if no input has become ready within a defined timeout period.

The current time is input from timer `t`. The value of `time` is then extended by the `TIMEOUT_PERIOD` to give a time in the future.

```
t :> time;
time += TIMEOUT_PERIOD;
```

If data is available from the port before the `TIMEOUT_PERIOD` expires then the `port_input` case is executed and the data can be printed out. However, if no data becomes available within the `TIMEOUT_PERIOD` then the timeout case is executed and the select statement exits with no input received from the port.

```
select {
  case port_input when pinsreq(port_input_data) :> port_input_data :
    printstr("Input received on port_input : ");
    printintln(port_input_data);
    break;
  case t when timerafter(time) :> void :
    printstrln("Select statement timeout waiting on input.");
    break;
}
```