Application Note: AN10079

How to read the time from a timer

This application note is a short how-to on programming/using the xTIMEcomposer tools. It shows how to read the time from a timer.

Required tools and libraries

This application note is based on the following components:

- xTIMEcomposer Tools - Version 14.0.0

Required hardware

Programming how-tos are generally not specific to any particular hardware and can usually run on all XMOS devices. See the contents of the note for full details.

1 How to read the time from a timer

A timer is a xCORE resource with a 32-bit counter that is continually incremented at a rate of 100MHz. You can declare a timer as follows:

```
timer t;
```

Timers may be declared as local variables inside a function or as global variables. An input statement can be used to read the value of a timer's counter (i.e. read the current time). This is done via the operator :> used to specify an input:

```
unsigned int time;

t :> time;
```

This will input the current time from the timer t to the variable time.