

Application Note: AN10099

# How to enable the gathering of statistics using the simulator

This application note is a short how-to on programming/using the xTIMEcomposer tools. It shows how to enable the gathering of statistics using the simulator.

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## 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 enable the gathering of statistics using the simulator

The xTIMEcomposer simulator can optionally output statistics on the current simulation run. This includes the number of core cycles taken, the proportion of these that was spent idle and the number of fetch no-ops. It also provides information on the number of times each instruction was executed.

For example, compile the following minimal code snippet:

```
int main() {  
    return 0;  
}
```

From within xTIMEcomposer Studio, enable collection of simulation statistics using:

*Run -> Run Configurations -> Simulator -> Display Statistics*

This will send the statistics output directly to the console view, in this case:

```
SimulationStats:  
-----  
FnopCount : 66  
InactiveProcessorCycles : 1595  
SimulationCycles : 2283  
...etc...
```

If running on the command line, statistics output can be enabled using the `-stats` xsim command line option:

```
xsim --stats a.xe
```