

Application Note: AN10101

How to enable ASCII tracing when running on the simulator

This application note is a short how-to on programming/using the xTIMEcomposer tools. It shows how to enable ASCII tracing when running on the simulator.

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 ASCII tracing when running on the simulator

The simulator optionally provides a textual instruction trace.

For example, compile the following code:

```
#include <xs1.h>

port p = XS1_PORT_1A;
int main() {
  int x;
  p :> x;
  return 0;
}
```

When enabled, the input from the port 'p' into variable 'x' will produce the corresponding line in the trace file.

```
tile[0]_{@}0- -A-.---000100cc (main + 8) : in <math>r0(0x0), res[r0(0x10200)]_{@}2127
```

See the xTIMEcomposer User Guide (Tracing Table (see XM-000930-PC)) for further information on the trace format.



2 To enable tracing from within xTIMEcomposer Studio

The ASCII simulator trace can be enabled via:

Run -> Run Configurations -> Simulator -> Trace to console

This will send the trace directly to the console view as the application is running.

Note: If required, the trace can be redirected to a file via:

Run -> Run Configurations -> Simulator -> Trace to file

Alternatively, on completion we can automatically switch to the simulator tracing perspective and load the trace file using:

Run -> Run Configurations -> Simulator -> Open in trace view



3 To enable tracing from the command line

The ASCII simulator trace can be enabled via the -t xsim command line option:

xsim -t a.xe

If tracing of fetch no-ops (FNOPS) is required, it can be enabled via the *-enable-fnop-tracing* xsim command line option:

xsim -t --enable-fnop-tracing a.xe

This will insert the lines of the following format into the trace at the relevant locations:

tile[0]@0 FNOP @2655



Copyright © 2016, All Rights Reserved.

Xmos Ltd. is the owner or licensee of this design, code, or Information (collectively, the "Information") and is providing it to you "AS IS" with no warranty of any kind, express or implied and shall have no liability in relation to its use. Xmos Ltd. makes no representation that the Information, or any particular implementation thereof, is or will be free from any claims of infringement and again, shall have no liability in relation to any such claims.