Application Note: AN10094

How to use realtime xSCOPE on the XMOS simulator

This application note is a short how-to on programming/using the xTIMEcomposer tools. It shows how to use realtime xSCOPE on the XMOS 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 use realtime xSCOPE on the XMOS simulator

Compile the following code:

```
#include <stdlib.h>
#include <xscope.h>
int main() {
    while (1) {
        xscope_int(VALUE, rand() * 100);
    }
    return 0;
}
```

Note: The probe used in the above example is defined in the config.xscope file.

2 To run using the xTIMEcomposer studio

Select *Run -> Run Configurations*, and double click on the *xCORE Application* option. This will create a new Run configuration. In the *Device options* group, check the *simulator* box. Realtime xSCOPE can be enabled via the checkbox in the xSCOPE tab. Running this example will open the *Real-Time Scope* view and display the corresponding values.

3   To run from the command line

xsim bin/Debug/realtime_Debug.xe –xscope '-realtime localhost:12345'

Run the above. To visualise the output open the xTIMEcomposer studio and select *Tools->XRTScope.* In the *Real-Time Scope* view, click the *Connect* button in the view toolbar. Select the IP address/port pair that matches the above command line, check the *is simulation* box, then click *Connect.*