

Application Note: AN10095

How to use the xSCOPE start/stop event type

This application note is a short how-to on programming/using the xTIMEcomposer tools. It shows how to use the xSCOPE start/stop event type.

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 the xSCOPE start/stop event type

xSCOPE is fully supported on hardware platforms which provide an XMOS link between the target device and the XSYS development connector, it is also supported via xSIM.

View the document (xSCOPE overview (see [XM-000957-PC](#))) for further information on tracing data from XMOS applications.

This example provides a simple demonstration of using the xSCOPE start/stop event type for data logging from within an xCORE application. The start/stop event type is used for recording the time taken for between two points in an application. This allows a user to see how long the device has spent in specific code sections for performance analysis and debugging

The probe configuration is handled by the user providing a config.xscope file which is picked up as part of the application build.

This example assumes you are familiar with creating a run configuration and enabling the associated xSCOPE options in that run configuration in xTIMEcomposer Studio or using the command line tools.

In order to use xSCOPE the correct header file must be included in the application

```
#include <xscope.h>
```

Within a function make a call to `xscope_start()` / `xscope_stop()` for a specified probe to signal a toggle in state from start to stop. This allows the time period between these points to be measured.

```
void function_1(void)
{
    xscope_start(FUNCTION_1);
    wait(150000);
    xscope_stop(FUNCTION_1);
}
```