

Application Note: AN10089

How to redirect printing functions via xS-COPE

This application note is a short how-to on programming/using the xTIMEcomposer tools. It shows how to redirect printing functions via xSCOPE.

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 redirect printing functions via xSCOPE

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 using xSIM.

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

This example provides a demonstration of redirecting the standard printing routines available in the xTIMEcomposer tools via the xSCOPE trace system. Redirecting printing over xSCOPE provides a streaming print capability that does not stop the xCORE device when a print message is issued. The allows printing to be done from applications which have real time constraints providing a valuable debugging tool for the developer.

In this case the standard printf() call is redirected via xSCOPE.

The redirection is handled by the user providing a config.xscope file which is picked up as part of the application build. In this example basic print redirection is specified which sends print messages via xSCOPE without additional information.

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.

```
int main (void) {
   par {
     on tile[0]: {
        for (int i = 0; i < 10; i++) {
            printf("value of i is %d\n", i);
        }
     }
   }
   return 0;
}</pre>
```



Copyright © 2015, 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.