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Application Note: AN10127

# How to pass arguments to the target application

This application note is a short how-to on programming/using the xTIMEcomposer tools. It shows how to pass arguments to the target application.

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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 pass arguments to the target application

The xTIMEcomposer tools support the passing of arguments to the target application via *argc/argv* parameters in *main*.

You must first specify the maximum size of the buffer to use to contain the command line arguments in target memory. This is specified using the *-cmdline-buffer-bytes* compiler switch. As seen in the *Makefile*, in this case we have set it to 128 bytes.

Now compile the following code snippet:

```
#include <stdio.h>

int main(int argc, char *argv[]) {
    printf("argc = %d\n", argc);
    for (unsigned int i = 0; i < argc; ++i) {
        printf("argv[%d] = %s\n", i, argv[i]);
    }
    return 0;
}
```

This code simply displays both the total number of command line arguments passed, and each of their values.

The resulting executable can then be run from the command line:

```
> xrun --io --args bin/AN10127_xtimecomposer_target_argument_support.xe a b
```

This will produce the following output:

```
argc = 3
argv[0] = bin/AN10127_xtimecomposer_target_argument_support.xe
argv[1] = a
argv[2] = b
```

Likewise, arguments can be passed to the target if calling *xgdb* directly:

```
> xgdb --args a.xe bin/AN10127_xtimecomposer_target_argument_support.xe a b
```

Finally, if running on the simulator, the mechanism is the same:

```
> xsim --args a.xe bin/AN10127_xtimecomposer_target_argument_support.xe a b
```

If you are developing from within the xTIMEcomposer studio, arguments can be specified using the *Arguments* tab in the run/debug configurations.