

Application Note: AN10023

How to pass arrays over interface calls

This application note is a short how-to on programming/using the xTIMEcomposer tools. It shows how to pass arrays over interface calls.

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 arrays over interface calls

Interface functions can take array arguments like normal functions:

```
interface my_interface {  
    void msg(int a[]);  
};
```

The client end can pass an array into the function:

```
void task1(client interface my_interface c)  
{  
    int a[5] = {0,1,2,3,4};  
    c.msg(a);  
}
```

On the server end the select case can access elements of the array. The compiler may translate that array access into xCONNECT inter-task communication in the hardware.

```
void task2(server interface my_interface c)  
{  
    select {  
    case c.msg(int a[]):  
        printintln(a[2]);  
        printintln(a[3]);  
        break;  
    }  
}
```