



lib_device_control: Device Control for xcore (README)

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vendor	XMOS
version	5.0.0
scope	General Use
description	A library to control XMOS devices from a host
category	General Purpose
keywords	USB, Serial interface, IO
devices	xcore-200, xcore.ai

1 Summary

The Device Control Library provides the ability to configure and control an XMOS device from a host over a number of transport layers.

2 Features

- ▶ Simple read/write API
- ▶ Fully acknowledged protocol
- ▶ Includes different transports including I2C slave, USB requests, xSCOPE over xCONNECT and SPI slave
- ▶ Supports multiple resources per task

The table below shows combinations of host and transport mechanisms that are currently supported. Adding new transport layers and/or hosts is straightforward where the hardware supports it.



Table 1: Supported Device Control Library Transports

Host	I2C	USB	xSCOPE	SPI
PC / Windows		Yes	Yes	
PC / OSX		Yes	Yes	
Raspberry Pi / Linux	Yes	TBD		Yes
xCORE	Yes			

2.1 Typical resource usage

Less than 1KB of code space is needed for the target device, plus whatever the chosen transport layer library requires. The API is in the form of function calls, so no additional logical cores are consumed. I/O requirements also depend on which transport layer is used.

3 Known issues

- None

4 Development repo

- [lib_device_control](https://www.github.com/xmos/lib_device_control) (https://www.github.com/xmos/lib_device_control)

5 Required tools

- XMOS XTC Tools: 15.3.1

6 Required libraries (dependencies)

- [lib_logging](https://www.xmos.com/libraries/lib_logging) (https://www.xmos.com/libraries/lib_logging)
- [lib_xassert](https://www.xmos.com/libraries/lib_xassert) (https://www.xmos.com/libraries/lib_xassert)

7 Related application notes

- None

8 Support

This package is supported by XMOS Ltd. Issues can be raised against the software at www.xmos.com/support or using GitHub [issues](#).



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