Device Interface for motor/camera communication

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Contents

1 Introduction

The SpiNNaker is a very powerful device because it enables the user to run parallel simulations in a very efficient way. As already stated in other documents, it suffers however from various drawbacks, especially from the developer perspective. Indeed, when programming the device, the developer has very few debugging tools, the only one being the *io_printf* function, whose utilization is not advised because it alters the program behaviour.

For these reasons an emulator has been created. The emulator also enables someone who does not have the SpiNNaker to program on it anyway.
In order to speed up the development time, one should first implement his program on the emulator, with the possibility of using all the available debugigng tools, and then port the code to the actual device.

However, the emulator has some limitations, one of these being the fact that external devices (like motors or cameras) cannot be accessed. This is why a new emulator component has been designed.
devin (for DEVice INterface) is the component enabling the user to access the camera and the motors.
This document explores the way it has been constructed.