# Tests of **GainControl** Submodule Functionality

The aim is to verify that the submodule is working as expected. The tests are divided into simulation tests and physical tests.

## Intended Functionality

The intended functionality of the GainControl submodule is

1. To respond to a requested gain change by incrementing or decrementing the gain using the GPIOs

## Simulation

Simulation tests are carried out to test the functionality above .

### Simulation 1

This test tests functionality point 1, that the module must respond to gain change by incrementing or decrementing the gain.

Works as intended.

Test script GainControl\_test1.tcl with gain\_control.vhd as top.

### Simulation 2

This test tests the ADCControl submodule along with a single gain\_controller in order to verify the interaction between the two.

Works as intended.

Test script GainControl\_test2.tcl with GainControl\_test2.bd as top.