Assignment

This assignment will cover many aspects on using our product for agile development of power converters.

# Complete an assignment related to Test-Driven development

## System under test: DC Buck Converter

Typhoon HIL needs to develop a new product: a regulated DC power supply.

Because time-to-market is important, it is crucial that this development follows the best practices of software development.

The point-of-contact in the customer is Victor Maryama.

## Tasks:

1. The set of specifications for the converter and the control features to be implemented should be defined with the customer.
2. **Develop this system in an Agile fashion using Test-driven development.** Sprints are going to last one week.
3. Create and run automated tests using TyphoonTest (with TyphoonTest IDE). Use the embedded Python 3 already bundled with our software.
4. At the end of the assignment we would like to hear about the approach taken, difficulties found and check the automated tests created for the system.

## Comments

This task can be entirely done in Virtual HIL, with the control implemented using signal processing blocks.

In our software you can find ***Documentation Hub*** with user guides, technical notes and API documentation.

There is also more information about our software in <https://hil.academy/> where you can search for videos which explain some functionalities of our software.

For the TyphoonTest tool (not yet covered in HIL Academy), you can check the following webinar:

<https://info.typhoon-hil.com/recorded-webinar-typhoon-test-framework>

The content of the tests is entirely up to you, relying on your own reasoning to decide what the relevant tests are and how to implement the tests to be as efficient as possible. As a tip, check *fixtures* and *parametrization* features in pytest (<https://docs.pytest.org/en/latest/contents.html>).

During this assignment you can contact us freely for questions.