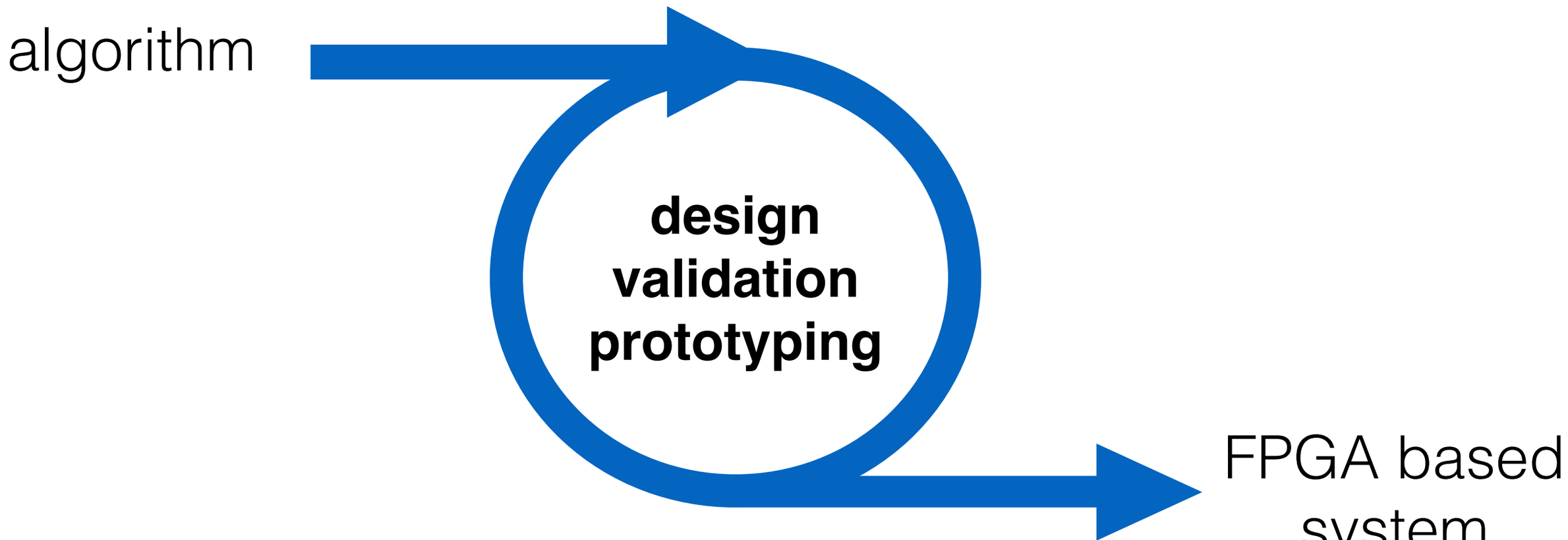
21 May 2014

ICL SDK4FPGA

framework



https://github.com/asuardi/SDK4FPGA.git

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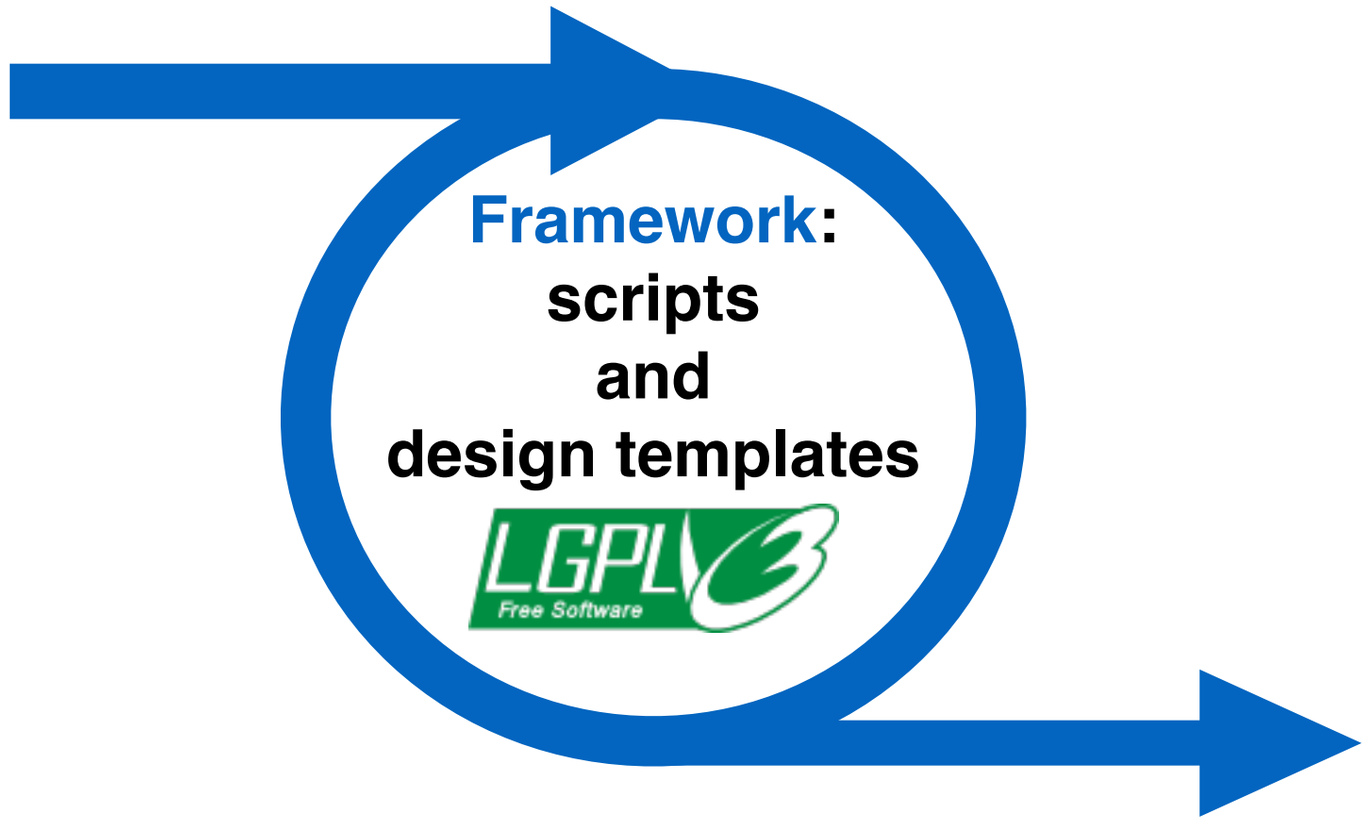
Why it ?

- **Enables** researchers and engineers (**with or without FPGA knowhow**) to build their own mathematical algorithms into an FPGA device.
- User needs **only** to **code** his **algorithm**
- **Abstracts low level** FPGA **details** from the user
- Gives **full control (NOT a black box)** of all FPGA project phases (test, build, prototype)

Ecosystem



Example designs:

- controller LQR
- controller FGM
- …

LGPL Free Software

Plugins:

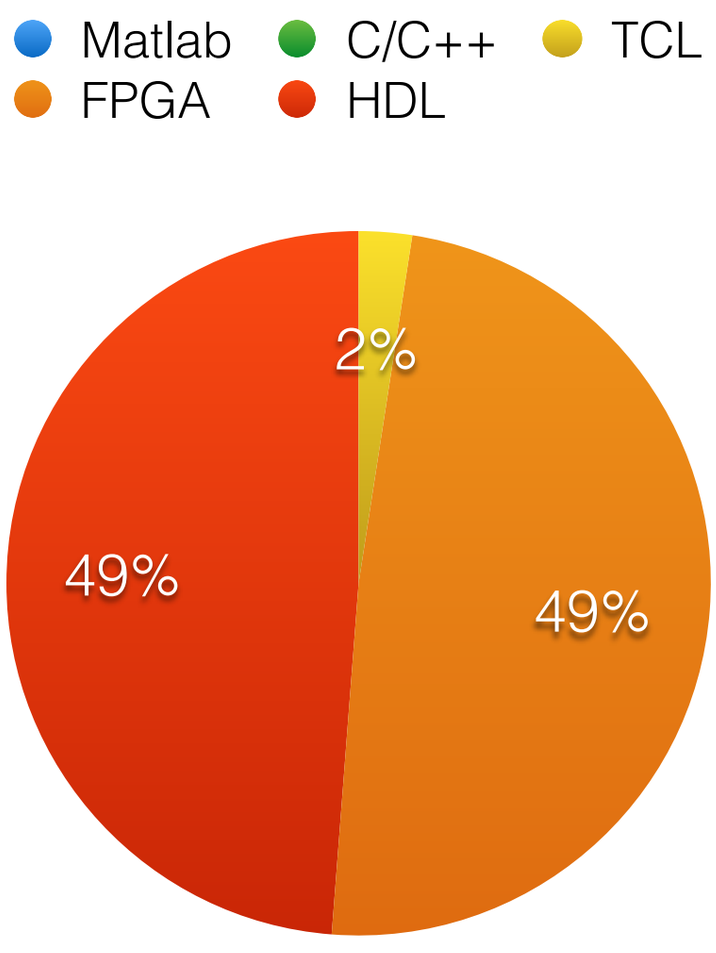
- design exploration 

- …

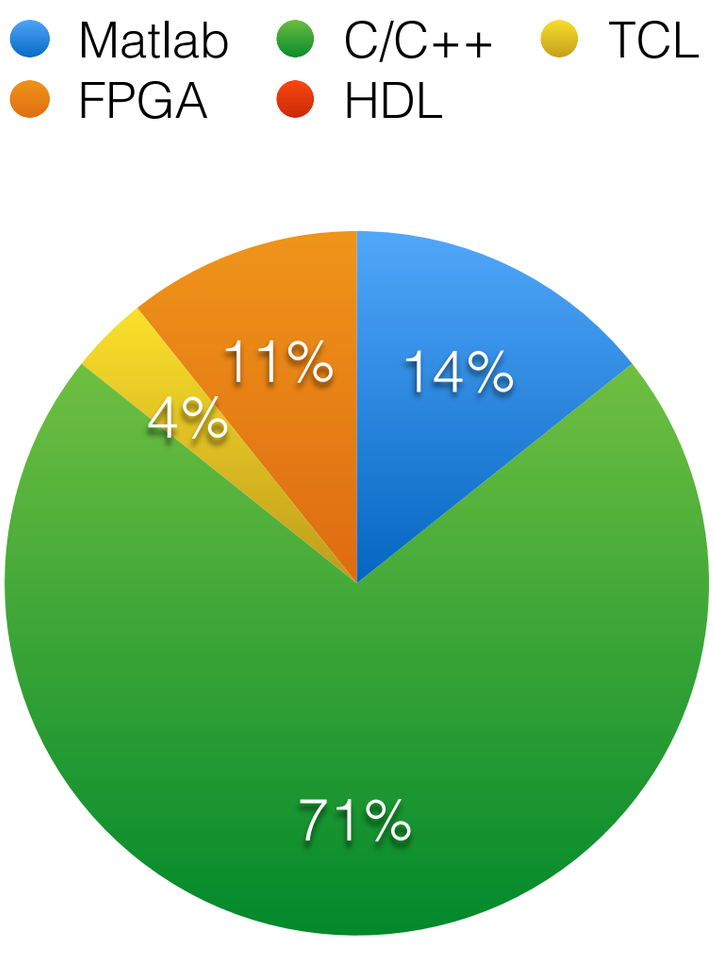
LGPL Free Software or 

What do I need

to set up an algorithm running in FPGA ?

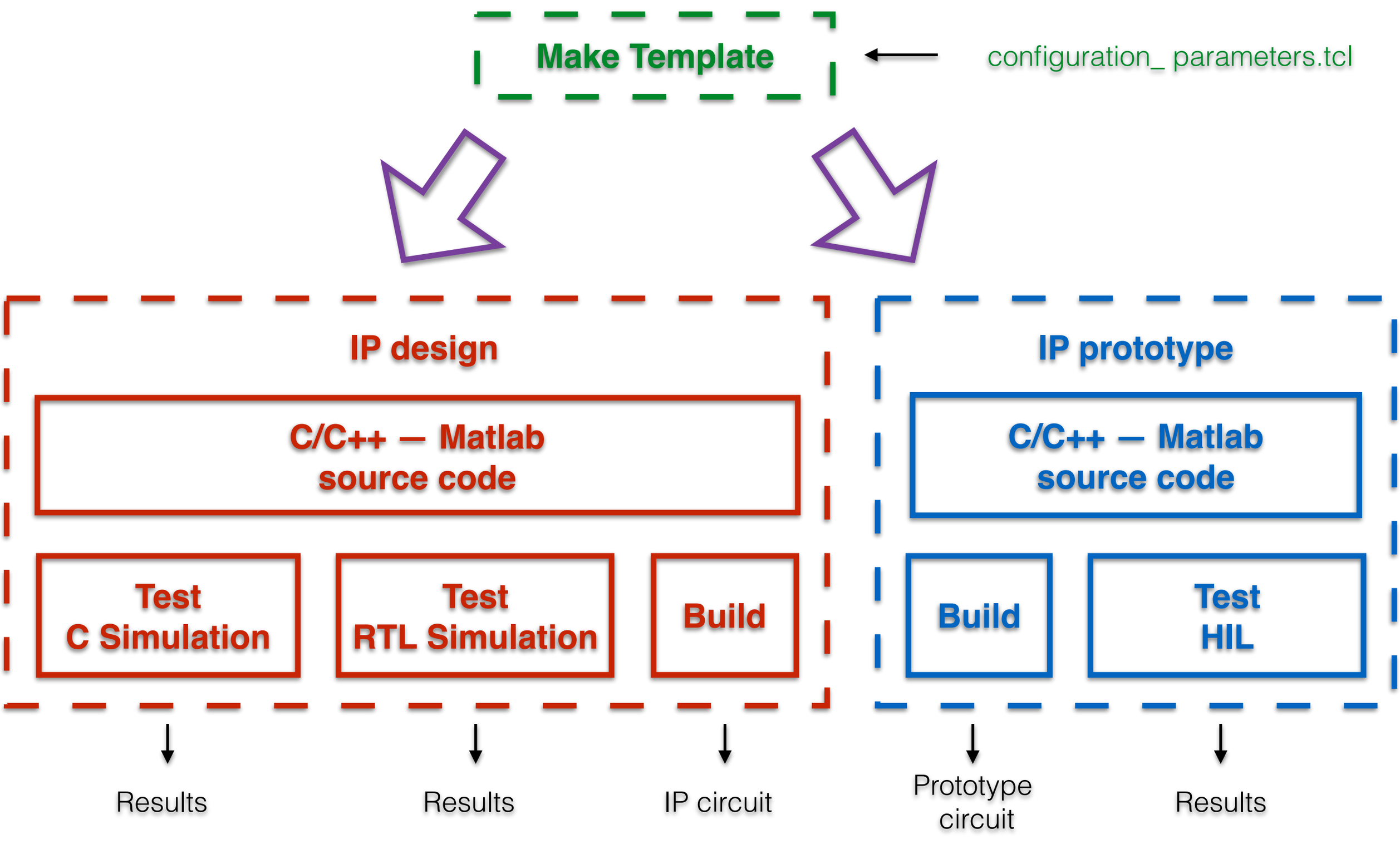


Standard approach

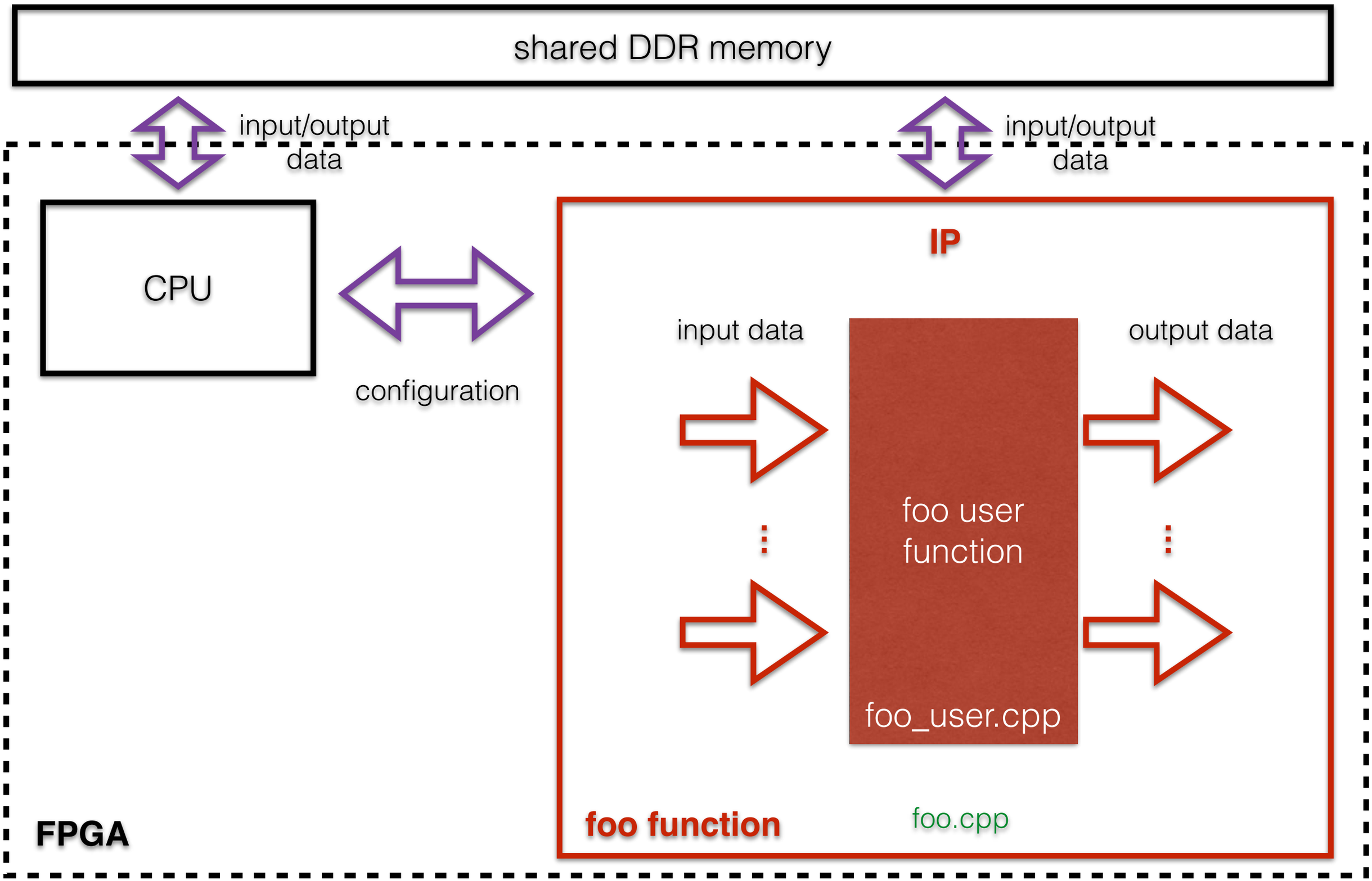


SDK4FPGA

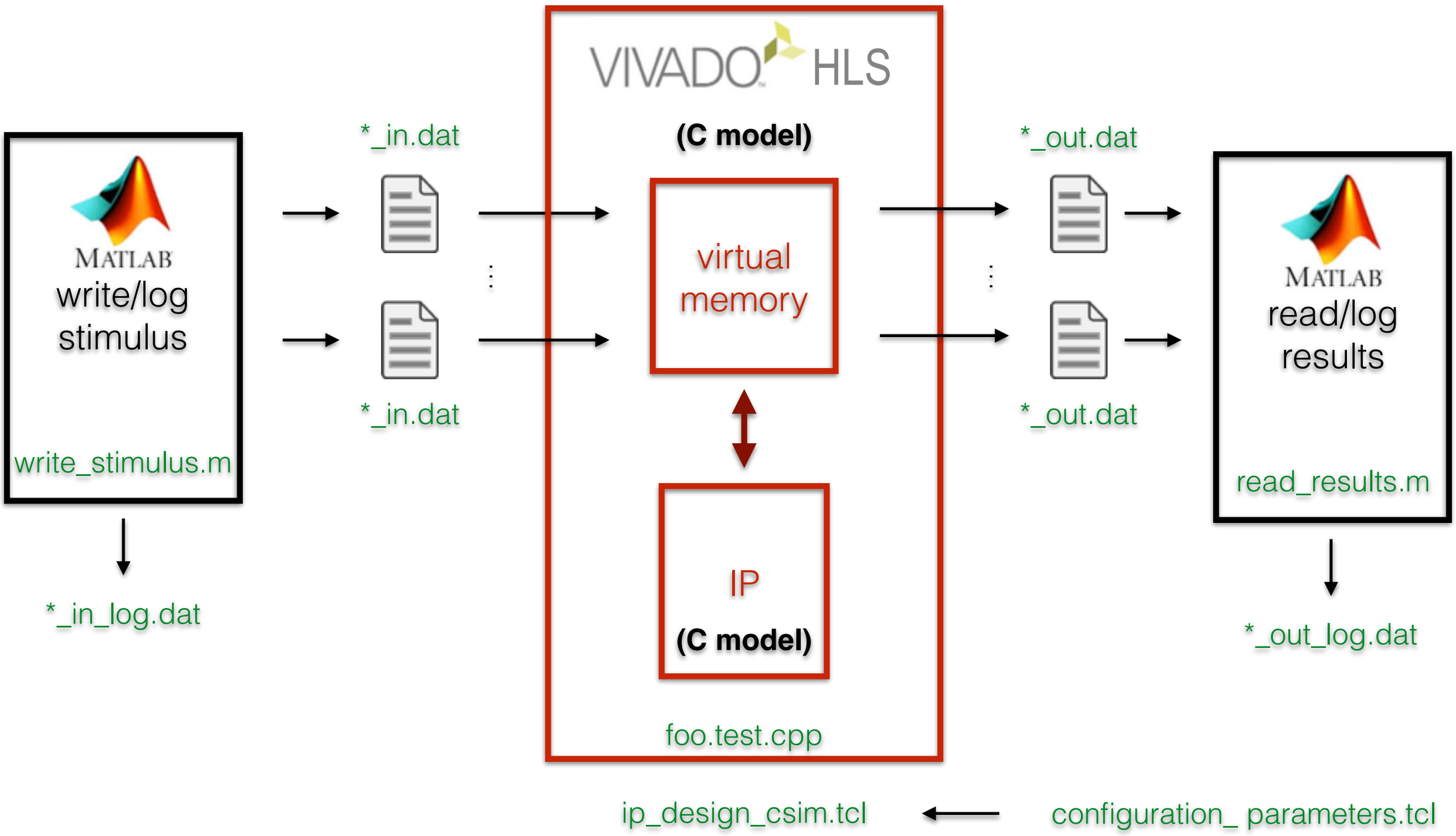
How does it work?



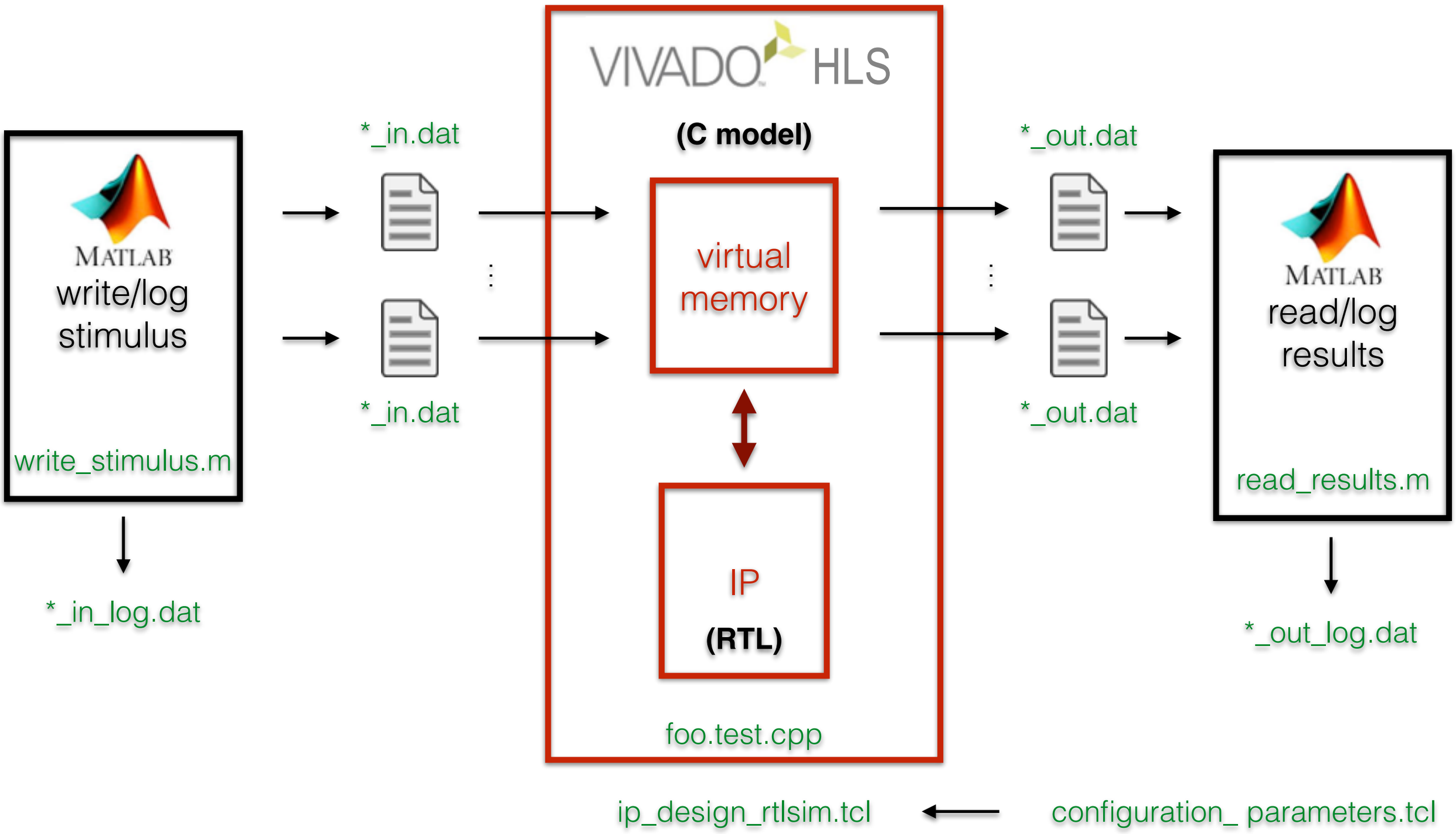
Hardware architecture



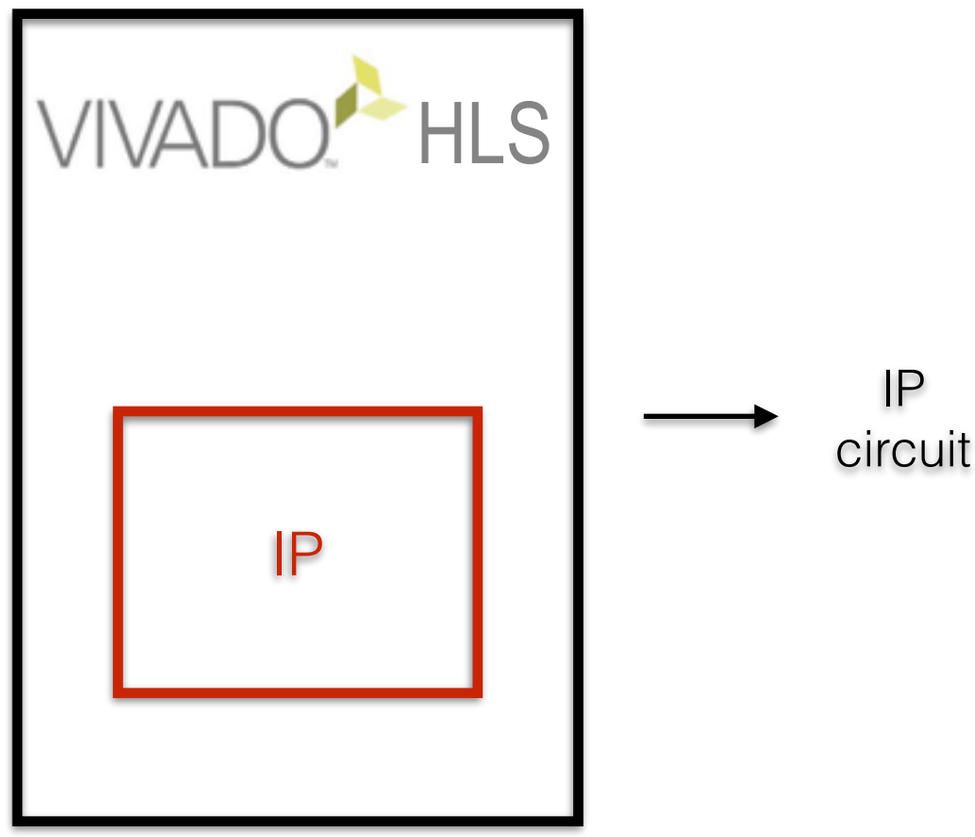
IP design: c-simulation



IP design: RTL-simulation

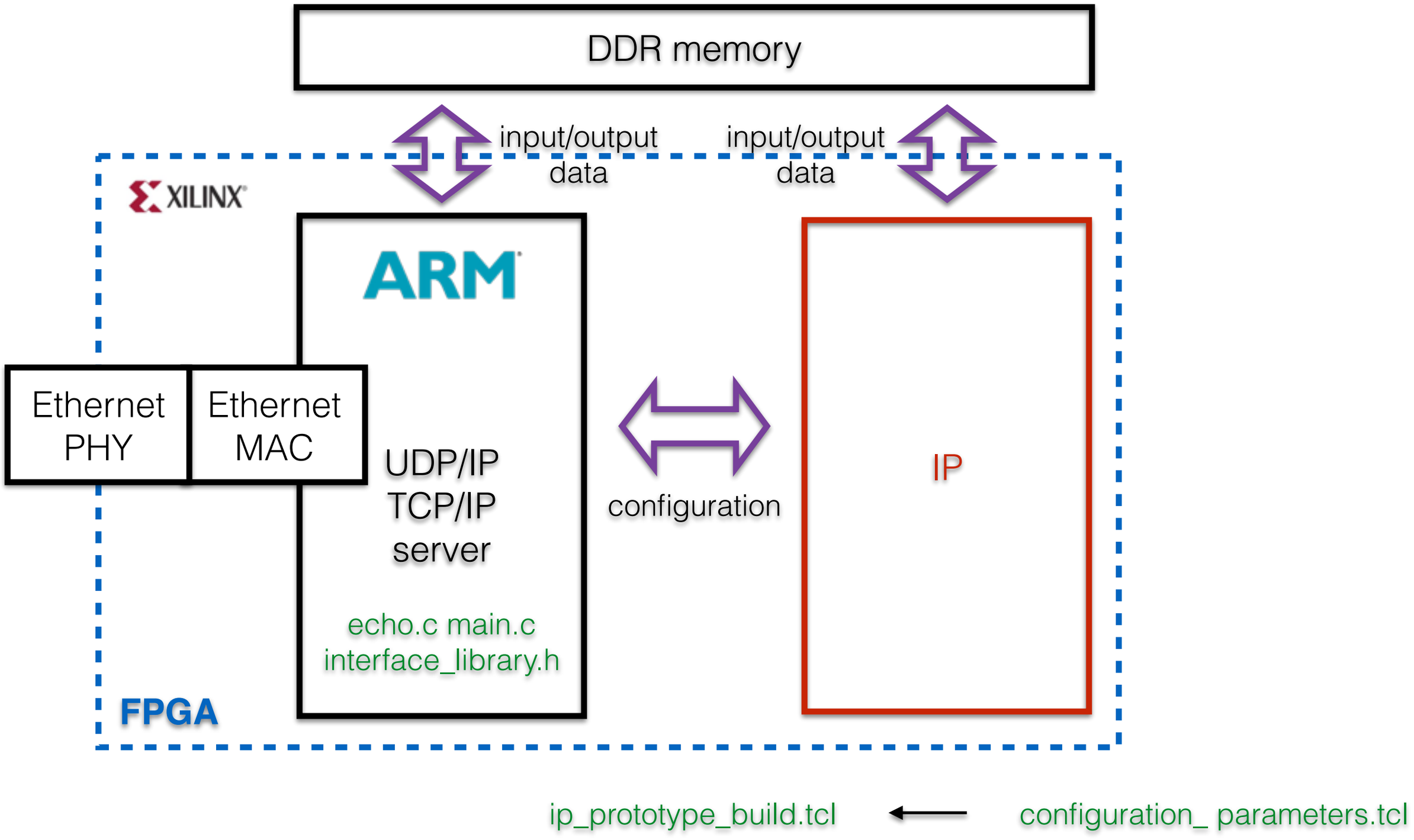


IP design: build

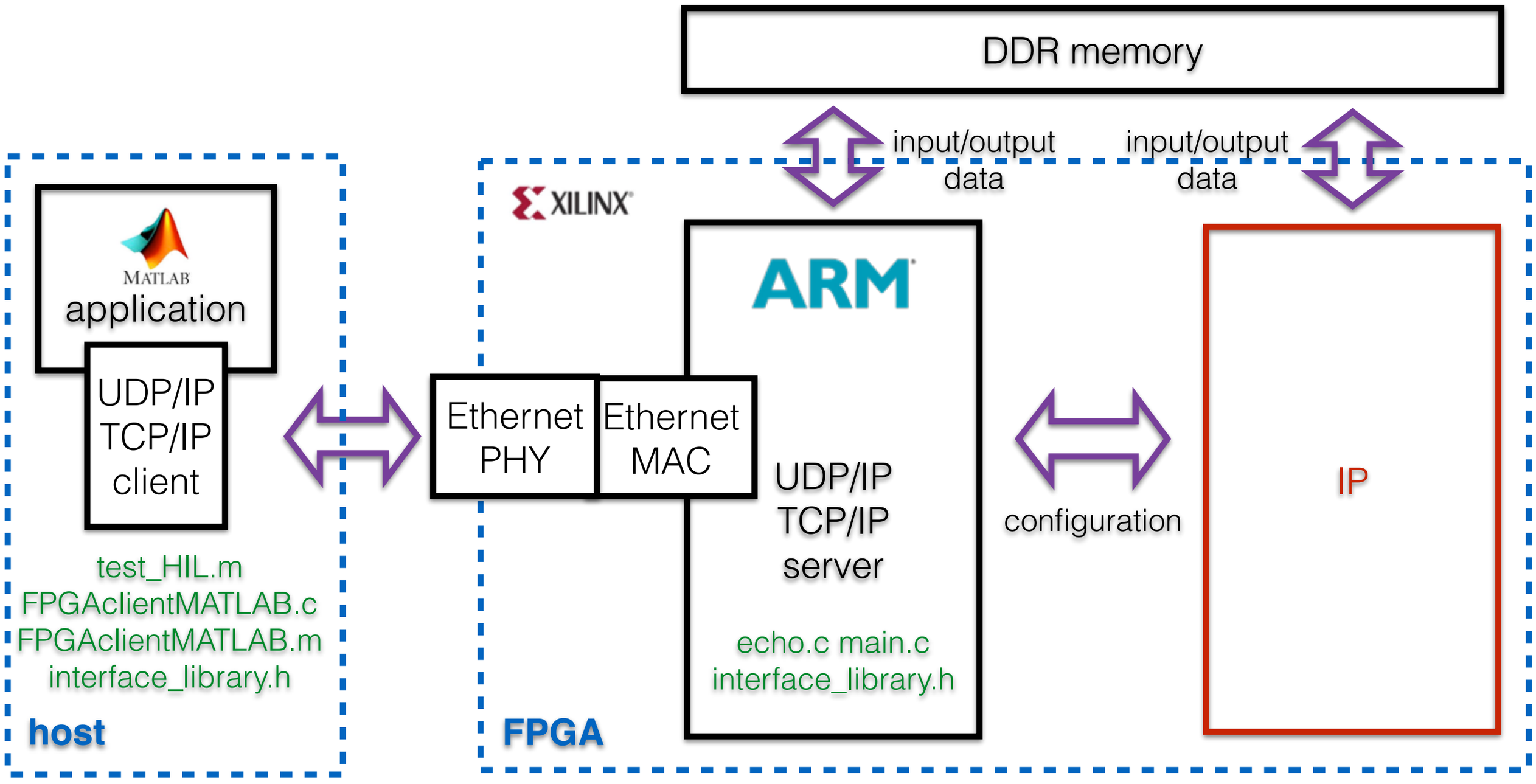


ip_design_build.tcl ← configuration_ parameters.tcl

IP prototype: build



IP prototype: test_HIL



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