

Trojan Benchmarks can be found here: <https://trust-hub.org/#/benchmarks/chip-level-trojan>

Due to a limited pin count, parallel transmission will not work, and it is necessary to use serial transmission. Ethan wrote serial\_int.v and cw305\_main.xdc, which will implement a serial transmission for the benchmarks. Those files can be found here:

[https://github.com/UCdasec/CrossSide/tree/main/code/cw305\\_fpga\\_trojan/serial\\_communication](https://github.com/UCdasec/CrossSide/tree/main/code/cw305_fpga_trojan/serial_communication)

- Open Vivado and create a new project.
  - Select RTL project
  - Select xc7a35tftg256-2 as your default part
  - Click finish
- In the sources window, right click on design sources and click add sources
  - Select add or create design sources
  - Add verilog files from your trojan
    - I used the ones found in AES-T500 found [here](#)
  - Also add serial\_int.v
- In the sources window, right click on design sources and click add sources
  - Select add or create constraints
  - Add cw305\_main.xdc
- Click Run Synthesis in the project manager
- Click Run Implementation in the project manager
- Click Generate Bitstream in the project manager