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_commmunication

- 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

References:

1. H. Salmani, M. Tehranipoor, and R. Karri, "On Design vulnerability analysis and trust benchmark development", IEEE Int. Conference on Computer Design (ICCD), 2013.
2. B. Shakya, T. He, H. Salmani, D. Forte, S. Bhunia, M. Tehranipoor, “Benchmarking of Hardware Trojans and Maliciously Affected Circuits”, Journal of Hardware and Systems Security (HaSS), April 2017.