

REFERENCE DESIGN

January 6, 2025

Reference Design:

DFx (Dynamic Function Exchange) targeting TRIA AUBoard-15P Development Kit

Introduction:

In typical embedded systems the hardware is fixed and function changes during runtime are implemented in software. This means that the hardware must support all features at all times. With FPGAs, only the needed hardware (logic) is implemented, unlike standard SoCs.

Dynamic Function eXchange (DFX) takes this flexibility even further with hardware time slicing. This means that part of the FPGA logic can, for example, function as an Ethernet controller and then, microseconds later, switch to a MIPI core.

This technology has several advantages:

- Smaller FPGA requirements
- Simplified configuration management
- Reduced power consumption
- Easier design updates of partial bitstreams

This reference design will guide you through the DFX flow on the new Artix UltraScale+ based AUBoard-15P development kit.

Webpage:

<http://avnet.me/auboard-15p-dk-dfx>

Additional Support:

For additional support, please review the discussions and post your questions in the AUBoard-15P Development Kit Forum located here: <http://avnet.me/AUBoard-15P-forum>
Alternatively, you can also reach out to your local Avnet Field Application Engineer (FAE) for support.

Revision History:

Date	Version	Revision
6-Jan-25	1.0	Initial Release