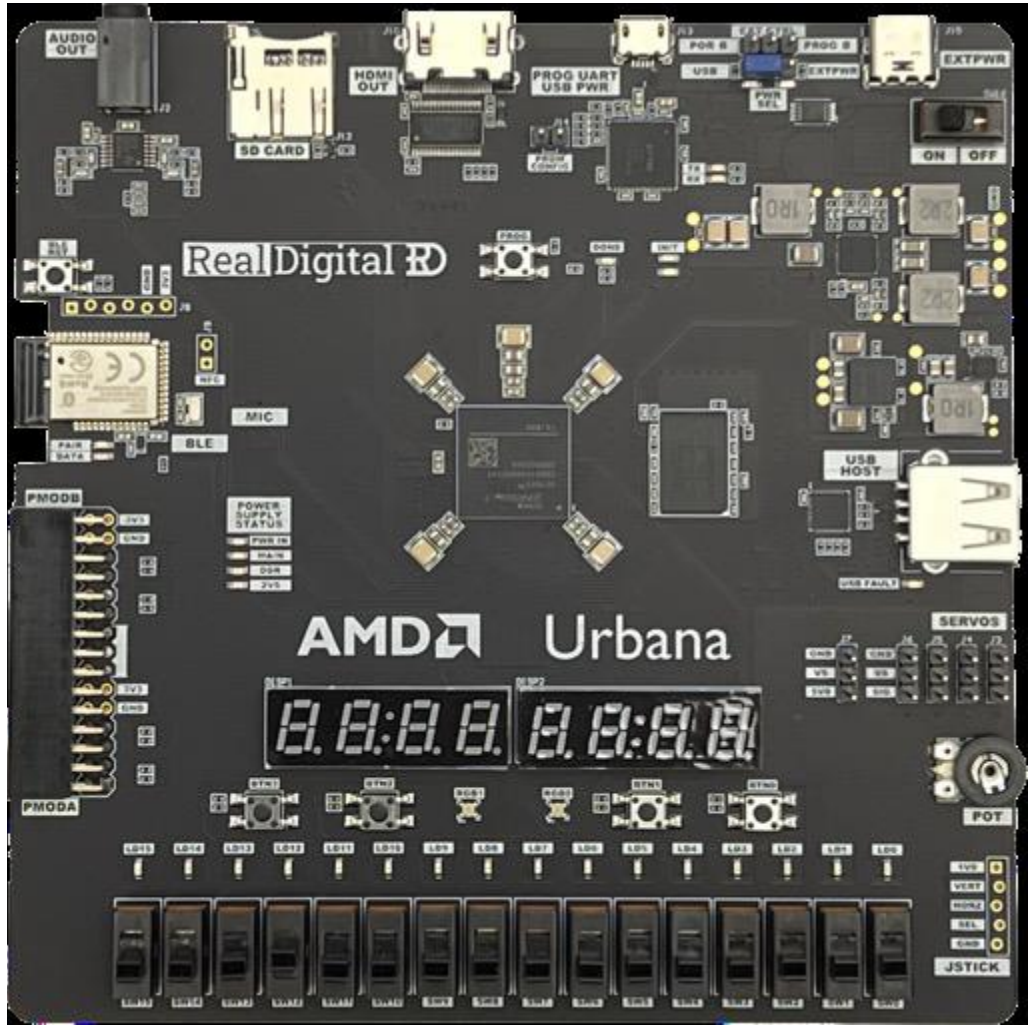


Urbana board: Low-cost FPGA teaching platform

- Co-designed with XUP
- Spartan 7 XC7S50 with 128 MB (16b) DDR3 RAM
- USB Powered, MicroSD
- Buttons, Switches, LEDs, RGB LEDs, 7-segment displays
- Potentiometer, Joystick HDR
- Pmods, Servo
- HDMI, Audio Out, Microphone
- Bluetooth Low Energy
- Extensive introductory teaching material
- All collateral open-sourced
- Including PCB designs



Target Users and Applications

- Used for: Teaching, small projects
- Appropriate for introducing digital design concepts using HDL and blocks design
- Freshman, Sophomore, Junior
- Support: Online material at Real Digital
- Combinational logic circuits
- Sequential logic circuits
- Finite State Machine design
- Synchronous and asynchronous design methods, datapath and controller, microprocessor design
- Simple audio signal processing
- Simple control system
- Video output concepts
- Servo motor control
- Use Pmod modules to provide external control and sensing such as
- Temperature monitoring
- Robot arm control