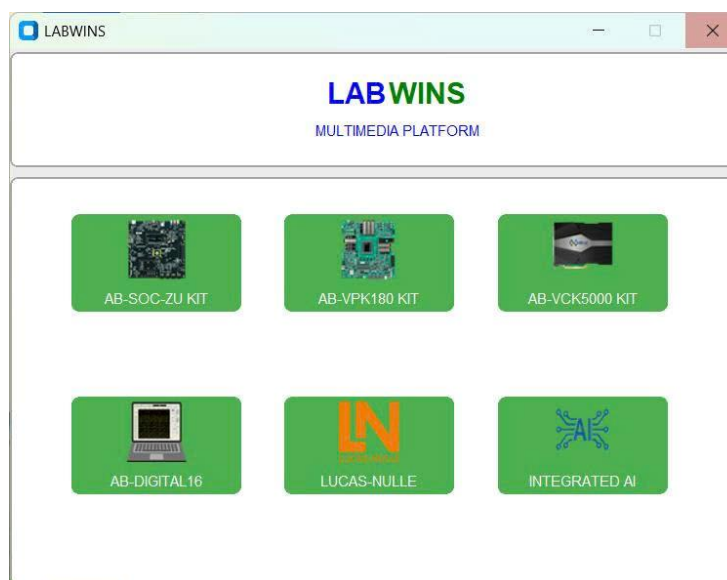
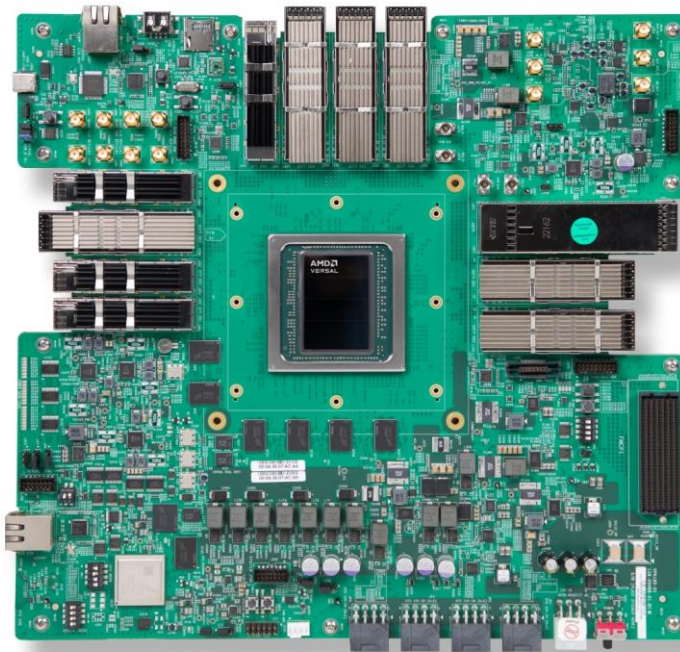


High-performance FPGA SoC board

Training system for the evaluation and development of high-performance SoC FPGA hardware and software based on the VPK180 board platform from the manufacturer AMD.



High-performance FPGA SoC board

AMD Versal™ Premium Series VPK180 Evaluation Kit

FPGA SoC processor: Featuring the Versal Premium XCVP1802-2MSELSVC4072 Adaptive SoC

Features

112G PAM4 transceivers and hardened, power-optimized cores for multi-terabit interfacing

Communication & Networking: SFP-DD, QSFP-DD, OSFP optical connectors

IEEE Std 1588 (eCPRI) support

FMC+ connector with 8 GTYPs and 68 user-defined signals

Co-Optimized Tools and Debug Method

- **Vivado™ ML Edition design suite**
- **Vitis™ unified software platform**

Shipped with pre-built boot images



Labwins Multimedia Training Platform

Features

- **LabWins** is a nationally copyrighted multimedia platform software. It is a comprehensive training platform that includes measuring tools, virtual interfaces (VI), theoretical, and practical courses.
- **Programming tool integration:** Capable of embedding software/libraries such as Vivado and Vitis for SoC design, image processing, and AI.
- Provides features ranging from simulation, monitoring, and signal analysis, to learning progress management.
- **Administration features:** Manage and evaluate learning progress: provides learning progress management tools on the teacher's server, allowing teachers to distribute lessons, track and evaluate each student's learning results and knowledge tests on client computers.
- **LabSoft Module developed by Lucas-Nülle (Germany):** Can integrate multiple courses.

The lessons include fundamental theoretical content on:

- **System startup & basic peripheral testing.**
- **Versal Premium SoC Architecture**
- **Hardware design on PL with basic IP**
- **Embedded software development on APU/RPU**
- **Running Linux / PetaLinux on board**
- **High-speed communication & I/O expansion**
- **System performance measurement & optimization**
- **Advanced applications: signal processing / AI / networking**



Labwins Multimedia Training Platform



Features for waveform measurement and logic analysis:

- Analysis of GPIO output signals
- Testing peripheral communication signals
- Monitoring clock, reset, trigger signals in the system.
- Combination with waveform generation demo (Zmod AWG) to verify input/output signals.
- Using logic analyzer function to analyze parallel/serial data bus.

Waveform Measurement and Logic Analysis Interface Unit.

- **Bandwidth: 20 MHz**
- **Sampling rate: 48 MSa/s**
- **Channels: 2 analog channels + 16 logic analyzer channels (digital)**
- **Vertical resolution: 8-bit**
- **Vertical sensitivity: 20 mV/div - 5 V/div**
- **Memory: 1M points/channel**
- **Trigger Modes: Edge, Pulse Width, Video, Slope, Alternate**
- **Connection: USB 2.0 (PC interface), compatible with LabWins.**

