



FULL-FEATURED,
HIGHEST-PERFORMANCE
FPGA DESIGN PLATFORM

VIRTEX-7 FPGA VC707 EVALUATION KIT: HIGHLY FLEXIBLE BASE PLATFORM FOR SIMPLIFYING TECHNOLOGY EVALUATIONS AND ACCELERATING DESIGNS

Design Challenges

- Consumer expectations and higher traffic levels are driving insatiable bandwidth demands
- Power and performance are becoming the primary concerns for most designs
- ASIC/ASSP designs are increasingly complex (multi-chip barriers)
- Engineers are being pushed to do more (innovation, differentiation) with less (time, budget, and resources)

Xilinx Solutions

- Virtex-7 FPGA family and 28nm leadership: new benchmarks for performance (logic density, I/O bandwidth, and signal processing) and 50% power savings
- Faster start up, with integrated silicon, software, and IP and complete documentation
- Rapid evaluations with base reference design and other pre-verified examples that exercise device and board features
- Convenient, easy-to-use GUI displays combined results from different implementations

The Xilinx® Virtex®-7 FPGA VC707 Evaluation Kit gives designers an easy starting point for evaluating and leveraging devices that deliver breakthrough performance, capacity, and power efficiency. Out of the box, this platform speeds time to market for the full-range of Virtex-7 FPGA-based applications including advanced systems for wired and wireless communications, aerospace and defense, medical, and broadcasting markets. The highly flexible kit combines fully integrated hardware, software, and IP with pre-verified reference designs that maximize productivity and let designers immediately focus on their unique project requirements.

Fast Access to Virtex-7 Capacity FPGA and Performance

As a base level Targeted Design Platform, this kit provides a flexible environment for designs that need to implement a DDR3 memory interface, 10Gigabit Ethernet, PCI Express®, Analog Mixed Signal (AMS) capabilities, and other high-speed serial connectivity. Based on the Virtex-7 VX485T-2 FPGA, the kit is the optimal choice for advanced systems that need the highest performance and highest bandwidth connectivity. It speeds the development of designs that can leverage the full breadth of the Virtex-7 product families, all of which offer maximum power efficiency—requiring 50% less power than previous generation FPGAs.

Boosted Productivity and Shorter Time to Innovation

The combination of the Xilinx ISE® Design Suite Logic software and a base reference design simplifies access to the Virtex-7 features and built-in board capabilities. The source code can be scaled, to adjust the design for each target application. The easy-to-use base reference design interface presents evaluation results in a convenient, intuitive manner, and shortens the learning curve for a smooth migration to the 7 series. A variety of additional designs and demonstrations are included to save time and accelerate development for a broad range of Virtex-7 FPGA-based applications.

What's Inside the VC707 Evaluation Kit

- VC707 evaluation board with the Virtex-7 XC7VX485T-2FFG1761CES FPGA
- Full-seat ISE Design Suite Logic Edition, device-locked for the Virtex-7 XC7VX485T-2FFG1761CES FPGA
- Reference and example designs and demonstrations*
- Board design files*
- Documentation*, including a step-by-step Getting Started Guide
- USB cables, Ethernet cable, and universal power supply

Reference Designs and Demonstrations*

- Base Reference Design (scalable) and Demonstration
- PCI Express x8 Gen2 Design
- DDR3 Memory Interface Design
- Gigabit Ethernet Design
- 10Gigabit Ethernet Design
- BIST Board Diagnostic Design (built-in self test, with status GUI)
- IBERT XCVR Test Design

*Designs, demonstrations, and documentation are delivered on a USB flash drive.

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