

Design Kit Overview:

Developing Xilinx FPGA-based Digital Signal Processing (DSP) applications are now much easier with Avnet Design Services DSP Design Kit. The kit includes all the hardware, software, documentation, example designs and training sessions to accelerate your next FPGA-based DSP design.

The kit hardware platform is a Xilinx Virtex-II FPGA evaluation board. The board includes an XC2V1000-4FG256 Virtex-II FPGA along with a variety of user interface components. An expansion port, compatible with a variety of Avnet designed daughtercards for Audio, Video, memory and networking functions are available as hardware purchase options.

The kit also includes the Xilinx XtremeDSP™ Software Evaluation CD Kit. This complete tool package includes the following: System Generator for DSP v6.1 (60-day timeout), ISE Foundation 6.1i- PC (60-day timeout), MATLAB/Simulink R13 (30-day timeout), ChipScope™ Pro 6.1i (evaluation), reference designs and complete documentation.

Included with the purchase of the kit is free attendance (normally a \$99 value) to an Avnet SpeedWay hands-on design workshop. At these hands-on design workshops you can learn about using ISE, ChipScope and many of the other Xilinx FPGA oriented design tools and techniques. Attend the Hardware-in-the-Loop workshop to learn about this powerful Xilinx DSP design technique.

Xilinx Virtex-II DSP Design Kit:

The main components of the kit are the Avnet Virtex-II Evaluation board and the Xilinx XtremeDSP Evaluation CD kit. These pieces work together to provide the user with a complete DSP evaluation and development platform.

The Virtex-II Evaluation board included in the kit is shown in Figure 1. The board features a Xilinx 2V1000 FPGA, an XC18V04 configuration PROM, RS-232 serial port, digital thermometer, 8 LEDs, dual-digit 7-segment LED display, 8 DIP switches, 2 push-buttons, 101 user I/O, JTAG port and Avnet standard AvBus expansion connector. User manuals, power supply, and example designs are all included with the board.

The Xilinx XtremeDSP Software Evaluation CD Kit includes MATLAB/Simulink R13, ISE Foundation v6.1i and features Xilinx System Generator for DSP v6.1. System Generator for DSP v6.1, dramatically increases your productivity. System Generator is the industry's premier software tool for designing, simulating, and implementing high-performance FPGA-based DSP systems.

This new tool features "Push-button Performance", allowing you to generate FPGA bit-streams directly from Simulink. It offers the following advanced capabilities: Hardware-in-the-Loop using JTAG in under 20 minutes, Ultra fast HDL co-simulation, In-system debug using ChipScope ILA probes.

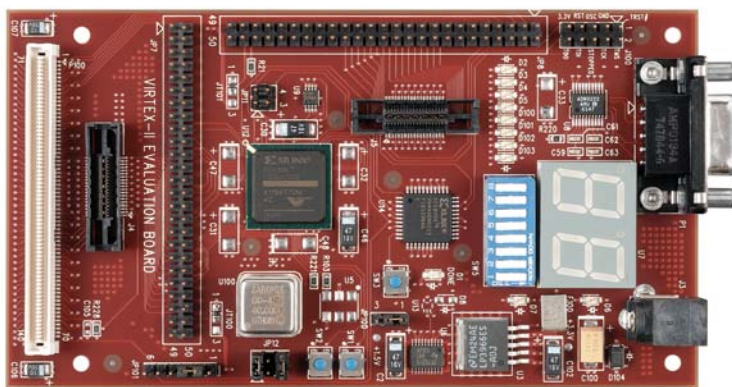


Figure 1: Avnet Virtex-II Evaluation Kit

Avnet Cilicon, Xilinx Virtex-II DSP Design Kit includes:

- Avnet Virtex-II evaluation board
- XtremeDSP software evaluation CD kit
 - User's guide
 - Bill of materials
 - Schematics
 - Data sheets
 - Application notes
- Test and demonstration design
 - Power supply

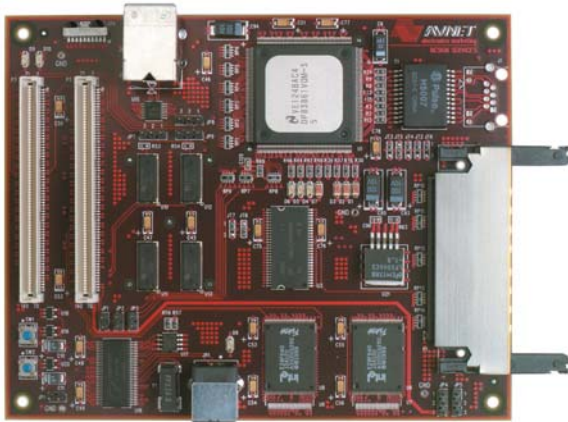
Optional DSP Oriented Add-on Cards:

Avnet Design Services provides optional add-on cards to increase the hardware devices available for DSP application development. These cards are compatible with the Virtex-II Evaluation board featured in the DSP Design Kit. Not all features are available simultaneously. Refer to the detailed kit documents to determine if the features you require in your application are compatible.

Communications/Memory Add-in Module:

Communications/Memory Module is an expansion daughtercard for use with Avnet Avenue Solutions offerings. The daughtercard interfaces via AvBus connectors and provides general purpose resources to compliment Avnet Avenue Solutions based modules. The daughtercard provides all necessary resources for implementation of Xilinx MicroBlaze core designs. Key elements of the module are:

- ▲ 64 MB SDRAM
- ▲ 16 MB FLASH
- ▲ 1 MB SRAM
- ▲ 10/100/1,000 Ethernet PHY
- ▲ IrDA
- ▲ USB 2.0
- ▲ PC Card Interface

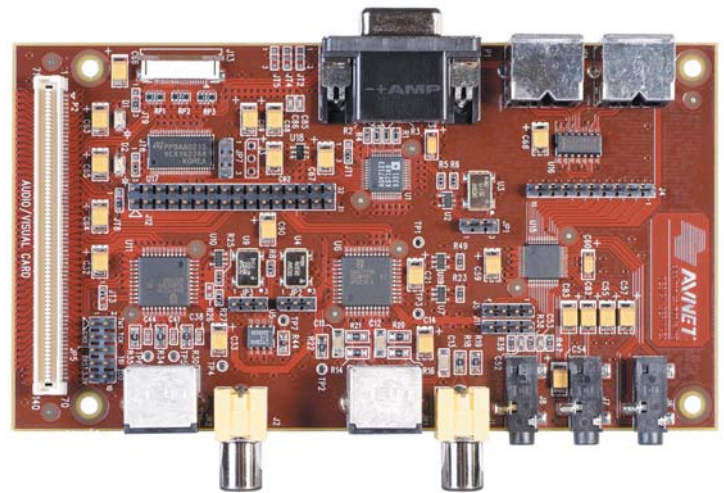


Avnet Communications/Memory Module

Audio/Video Add-in Module:

The Audio/Video Module provides additional functionality for DSP applications targeting Audio and Video processing applications. It interfaces to a host via a standard AvBus connector and provides multiple video interfaces to accommodate RGB monitors, LCD panels, as well as standard definition television monitors. The module also captures composite video and a CODEC is implemented to facilitate audio processing. A PS2 keyboard/mouse interface is provided as well as a touchscreen controller. Key elements of the module are:

- ▲ Philips SAA7113H video input processor
- ▲ Philips SAA7121H digital video encoder
- ▲ Philips UCB1400 stereo 20-bit audio CODEC
- ▲ Analog Devices ADV7123 140MHz triple video DAC
- ▲ Interface for OmniVision OV6630AA CMOS color digital camera
- ▲ Interface for Fujitsu MB86S02A CMOS color digital camera
- ▲ Interface for Sharp LQ057Q3DC02 color TFT LCD module
- ▲ AvBus expansion connector
- ▲ X/Y touchscreen controller
- ▲ PS2 keyboard and mouse interfaces
- ▲ Downloadable VHDL source for sample applications



Avnet Audio/Video Module

Ordering Information:

Part Number	Hardware	Resale
ADS-V2-DSP-EVL	Avnet Cilicon, Xilinx Virtex-II DSP Design Kit	\$400.00 USD
Optional Products		
ADS-AV-DAU	Avnet Audio/Video Module	\$300.00 USD
ADS-EMU-DAU	Avnet Communications/Memory Module	\$250.00 USD
HW-JTAG-PC	Avnet JTAG Programming Cable III	\$95.00 USD
ADS-FOUNDATION-BUNDLE	Xilinx ISE 6.2i Foundation Software (includes JTAG programming cable)	\$2,400.00 USD

Contact Information:

<u>North America</u> 2211 South 47th St. Phoenix, Arizona 85034 United States Tel: +1 800 585 1602	<u>Europe</u> Gruber Str. 60 85586 Poing Germany Tel: +49 (0) 8121 777279	<u>Asia</u> 7 Changi South St. 2 #01-00 Singapore, 486415 Tel: +6580 6000
--	---	---

www.em.avnet.com/ads

