

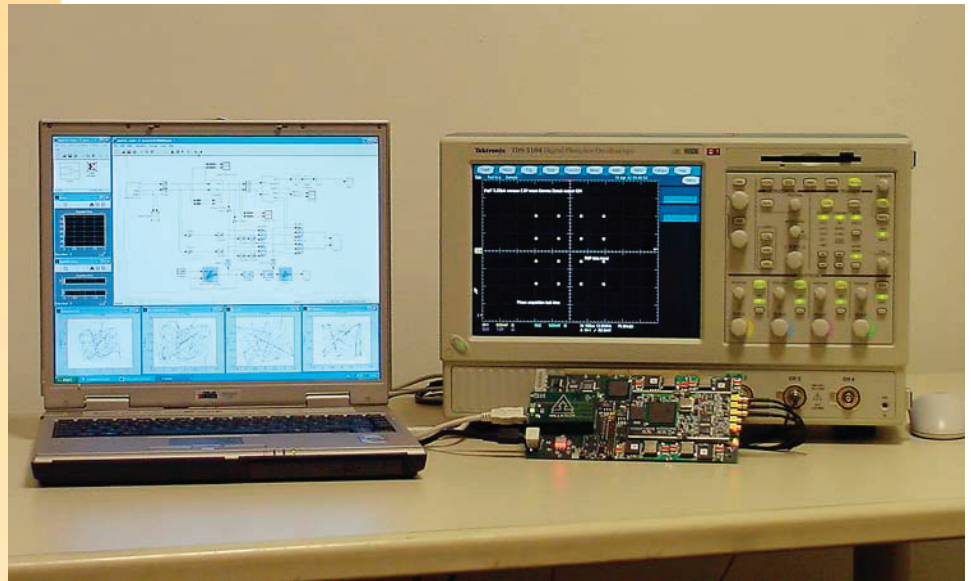


Virtex-II Pro™ XtremeDSP™ Development Kit for Digital Communication Applications

Creating extremely high-performance digital communications signal-processing solutions can present significant challenges in both design complexity and time to market. The XtremeDSP™ Development Platform from Xilinx provides a complete development solution, so your designs will be faster, easier, and earlier to market.

Virtex-II Pro FPGAs feature up to 444 embedded 18x18 multipliers, each capable of running at 300 MHz. This performance makes them the ideal co-processors for your DSP processors and the best way to increase your system performance by several orders of magnitude.

The XtremeDSP Development Platform — together with the Xilinx System Generator for DSP software and Xilinx DSP IP algorithms — provide the ideal development environment for developing Virtex-II Pro based signal-processing designs.



Hardware co-simulation with the XtremeDSP Platform and Xilinx System Generator for DSP

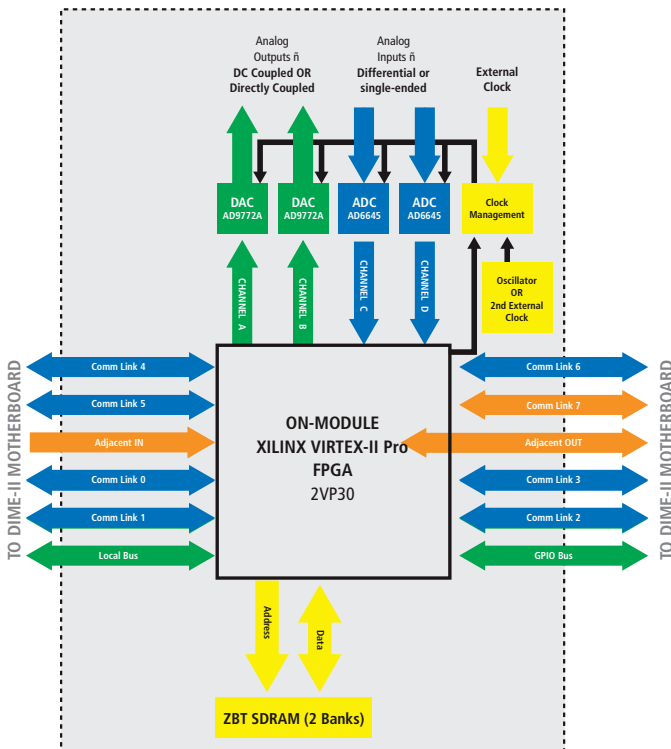
Your Complete Development Platform

Developed with Nallatech, the XtremeDSP Development Platform offers everything you need to create high-performance signal-processing designs more quickly and efficiently.

- **Exceptional Performance** – The dual-channel, high-performance ADCs and DACs, coupled with a user-programmable Virtex-II Pro FPGA, make this platform ideal for implementing high-performance digital communication systems such as Software Defined Radios. The 2VP30 FPGA features over 30,000 logic cells, 136 embedded 18x18 multipliers, and an integrated PowerPC™ 405 processor.
- **Ease of Use** – Combining the Xilinx System Generator for DSP software tool and the XtremeDSP Development Kit provides an easy transition to using FPGAs for high-performance signal processing—from algorithm concept to hardware verification. The System Generator tool interfaces with MATLAB®/Simulink® and enables you to perform hardware co-simulation on the XtremeDSP Development Platform via PCI or JTAG. This provides simulation acceleration by an order of magnitude and allows you to debug and verify the design on the FPGA.
- **Comprehensive Support** – Reduce your time to knowledge with the Xilinx DSP Design Flow and DSP Implementation Techniques courses. You can also take advantage of senior DSP support engineer expertise on the Xilinx Hotline.



Finish Faster with Xilinx DSP Design Solutions



Dime II module functional diagram

Hardware Platform Specifications

- XtremeDSP development board consisting of a motherboard (“BenONE-Kit Motherboard”) populated with a daughter card (“BenADDA DIME-II Module”).

BenONE-Kit Motherboard

- Supports the supplied BenADDA DIME-II module only
- Spartan-II™ FPGA for 3.3V/5V PCI or USB interface
- Host interfacing via 3.3V/5V PCI 32-bit/33-MHz or USB v1.1 interfaces
- Status LEDs
- JTAG configuration headers
- User 0.1-inch pitch pin headers connected directly to user programmable FPGA I/O

BenADDA DIME-II module

- Virtex-II Pro user FPGA: XC2VP30-5FF1152
- Two independent ADC channels: AD6645 ADC (14 bits up to 105 MSPS)
- Two independent DAC channels: AD9772 DAC (14 bits up to 160MSPS)
- Support for external clock, on-board oscillator, and programmable clocks
- Two banks of ZBT-SRAM (133 MHz, 512 Kx32 bits per bank)
- Multiple clocking options: internal and external
- Status LEDs

Also included with the XtremeDSP Platform

- External power supply (US Mains cable with separate UK, European or Australian Mains adapters)
- Wide ranging input (90 - 264Vac), multiple output, power supply, generating +5 Volts @ 5A, and +12 Volts @ 2A, -12 Volts @ 800mA
- USB v1.1-compatible cable, two meters long
- Five MCX-to-BNC cables for connecting to the ADC/DAC and external clock connectors
- PCI back-plate and two screws
- 2x BNC jack-to-jack adapters for use in loop-back configurations
- Large carrying case

XtremeDSP Installation Pack

- Nallatech FUSE Software CD — Enables control and configuration of FPGAs and provides tools to transfer data between the Kit and a host PC via a GUI or a C-based API

Applications

This multi-purpose board can be used for many digital communications applications including:

- Narrow-band systems (QAM demodulation, carrier timing recovery, channel coding)
- Spread-spectrum systems (e.g. chip rate processing, RACH, path profiling, TCC)
- Multi-carrier systems (e.g. OFDM, MIMO, TCC)
- And many more.

Take the Next Step

Purchase your XtremeDSP Platform at www.xilinx.com/store. For more information, visit www.xilinx.com/dsp. To learn more about the complete Nallatech platform offering, visit www.nallatech.com. Price: \$2,495



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