



DEPLOYABLE DEVELOPMENT PLATFORM

Features

- Complete Cardbus interface capable of bus speed up to 1 Gbps
- DSP capability of the Virtex-4 FPGA
- Bus interface reconfigurable to fit other bus interface protocols
- Board support packages for PowerPC embedded computing with Xilinx EDK
- Dynamic image swapping: unique design allows for many FPGA images and user software images to be stored on the PICO E-14's flash memory at one time. FPGA and software images are associated (paired). This allows image sets to be swapped dynamically. Applications can store data in SDRAM. This data can then be used by subsequent image sets seamlessly.

Applications

- Application on Card (AOC) systems. Vendors sell their applications packaged with the platform that they run on.
- Hybrid embedded processor / DSP applications
- Encryption / decryption
- Security algorithms and testing
- Software-Defined Radio (SDR)
- Embedded control systems
- Embedded web servers / applications
- Weight and size constrained environments such as UAVs, surveillance systems and environmental monitoring devices.
- Complete development environment for laptop computers. Ideal for rapid prototyping and classroom environments.

Software

- Xilinx standard tool set (ISE, EDK, and Platform SDK)
- Impulse CoDeveloper Board Support Package
- Starbridge Systems' Viva, a graphical development and modeling tool set designed for parallel computing and IP portability
- PicoUtil program for FPGA image and software executable management. Runs on Windows, Linux, and Apple Hosts
- Pico DSP Accelerator / Xilinx System Generator plug-in for Matlab/Simulink available
- Linux port
- Green Hills Integrity RTOS
- RTCA DO-178B complaint UCOS-II deterministic / pre-emptive kernel

E-14 FX20 / FX40 / FX60 FPGA CardBus Platform



Core Technologies

- Virtex-4 FPGA
- PowerPC 405 (680 DMIPS)
- 256MB DDR2 RAM
- 64MB Flash ROM
- A/D, D/A Converters
- Gigabit Ethernet (1000/100/10 Mbps)
- RS-232 Serial Port
- JTAG Hardware / Software Debugging
- 54-bit High Speed Digital I/O Bus
- 16-bit External Digital I/O Port
- Standalone Operation
- JTAG Hardware / Software Debugging
- Open Source

Mechanical Specifications

- Cardbus Type II
- Stainless Steel Case
- Temperature Range: -0C to +85C

FPGA Performance

- DES > 16 Gbps / 250M Keys / second
- RC4 > 10 Gbps / 12M Keys / second
- 16 Billion Multiply and Accumulates / second

Analog Capabilities

- 1 High Speed Analog to Digital
8 Bit @ 80 MSPS
- 1 High Speed Digital to Analog
8 Bit @ 165 MSPS

