



# DEPLOYABLE DEVELOPMENT PLATFORM

## Features

- Complete Compact Flash interface
- 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-12'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)
- Starbridge Systems' Viva, a graphical development and modeling tool set designed for parallel computing and IP portability
- Impulse CoDeveloper Board Support Package
- 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

## E-12 FX12 FPGA Compact Flash Platform



## Core Technologies

- Virtex-4 FX-12 FPGA
- PowerPC 405 (650 DMIPS)
- 128 MB RAM
- 64 MB Flash ROM
- Gigabit Ethernet (1000/100/10 Mbps)
- RS-232 Asynchronous
- RS-422/485 Asynchronous Serial
- RS-232 Synchronous Serial
- High Power Relay Control
- JTAG Hardware / Software Debugging
- Standalone Operation
- Open Source

## Mechanical Specifications

- Compact Flash Type II Form Factor
- Stainless Steel Case
- Temperature Range: -40C to +85C

## FPGA Performance

- 18 x18 Multiply—32 Billion / Second
- DES—400M Keys / Second
- MD4—100M Keys / Second

## Power

- Minimum: 0.4W
- Nominal: 0.75W
- Absolute Max: 4.95W
- Supply Voltage: 3.15—5.25V

