

New CardBus and PCMCIA Cores for Xilinx FPGAs

Mobile Media Research, a leading supplier of FPGA development kits and PCMCIA tools is introducing two CardBus cores and a new multi-function core for 16-bit PCMCIA applications, each supported by a comprehensive test bench and development boards.

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The CardBus cores are offered as target only and target/master. They support the following features:

- Full CardBus configuration header support.
- Support for an external CIS ROM.
- A generic card-side interface that can be customized for a variety of applications.
- 33MHz operation with Xilinx XC4000XL family.
- Three memory base address registers.
- One I/O base address register.
- Interrupt support.
- Support for PCMCIA-specific event control signals.
- Full compatibility with Mobile Media's upcoming PCI cores.

The CardBus cores, implemented in Verilog, are supported by a comprehensive set of development boards such as the CardBus prototyping environment, and

CardBus extender. **Figure 1** shows a block diagram of a CardBus PC card based on the CardBus target/master core.

PCMCIA Multi-Function Core

The PCMCIA Multi-Function Core (PCMC) is a universal PCMCIA interface. It is Mobile Media's third PCMCIA core offering, designed to support multi-function cards as well as any application of single function cards. It provides a simple card-side interface which can be customized to your specific devices. The PCMC comes fully supported with a test bench, a PCMCIA host model, and a comprehensive set of PCMCIA development solutions. The PCMC can be implemented in any Xilinx device, including the XC3000, XC4000, or XC5000 series devices.

The main features of the PCMC are:

- 100% programmable single-chip PCMCIA interface for PC cards.
- Function configuration registers per PC card 97.
- Support for up to 32KB of attribute memory.
- Interface for an external EEPROM.
- Interface for an external SRAM.
- Configurable address space.
- Supports the following configuration options:
 - I/O Base Address configurable within a 64KB address range
 - Memory base address configurable within a 64MB space
 - Support for multi-function cards
 - Support for DMA
 - Support for speaker/audio output through the PCMCIA bus
 - Digital audio (enable/disable)
 - Ring indicate (enable/disable)
 - Card enable/disable
 - Power down (enable/disable)
 - Card reset

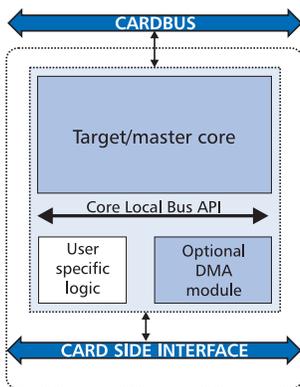


Figure 1 -
CardBus
target/master
core block
diagram

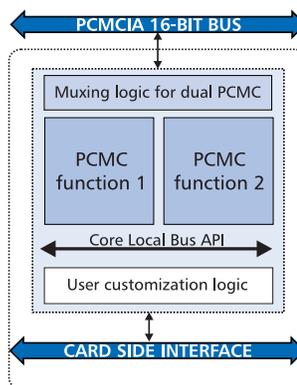


Figure 2 -
PCMC-
based dual
function PC
card block
diagram

Figure 2 shows a block diagram of a multi-function PC card design using PCMC.

Support Products

The CardBus cores are supported with a variety of development tools, including:

- CardBus prototyping card.
- CardBus extender/logic analyzer card.
- CardBus test suite.
- CardBus host model.

The PCMCIA Cores are supported by the following development solutions:

- PCMCIA logic analyzer/extender card.
- PCMCIA host card.
- PCMCIA exerciser.
- PCMCIA type converter.
- PCMCIA prototyping card. ☒

Availability

The PCMC is available for beta customers now. The CardBus cores will be available for beta customers in June.

For more information:

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