

# PCI Controller with DSP HPI/DMA Interface

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## Abstract

We present a PCI controller with DSP HPI and DMA interfaces. PCI2040 was provided only DSP HPI interface. However, we proposed a new PCI controller that assigns one channel of EMIF to the PCI control for a DMA function to transfer a high-speed rate of data. It can be supported both directions of Read and Write from/to DMA. A memory device of DMA can be used any device depending upon the operational environment such as SDRAM, SBSRAM, Asynchronous Memory, etc. Fig. 1 shows a block diagram of PCI controller. The controller uses a slave mode for HPI interface and a master mode for EMIF/DMA interface. Fig. 2 shows a block diagram for the image processing application. The image processing board consists of a C6x DSP chip, video decoder, FIFO, SDRAM or

SBSRAM, and PCI controller.

## Block Diagram

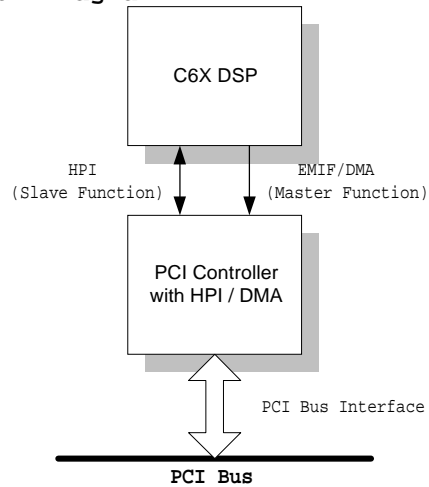


Fig. 1 A block diagram of PCI controller

## Application

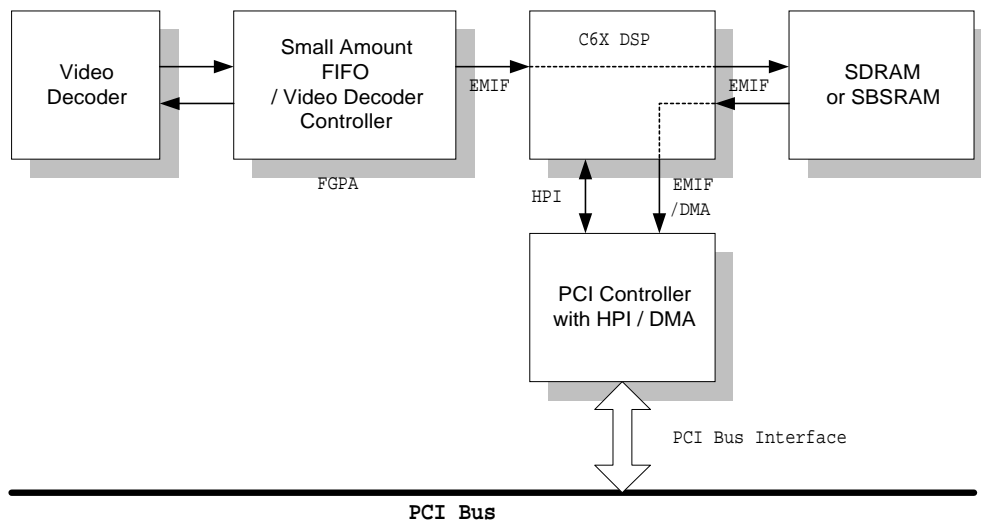


Fig. 2 A block diagram of image processing application