

## PCI DMA concepts ??

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Hi everybody.

I am having some doubts with a driver for a PCI card. I learned how to read/write configuration and map memory to kernel space but confused in using how to do dma read & write.

1. The pci card has built in PCI & DMA controller.

DMA controller registers (READ and WRITE registers) can be programmed by specifying (PCI\_ADDRESS, LOCAL\_SDRAM\_ADDRESS, SIZE). (These registers are memory mapped via BAR3 and can be programmed by host system or by the Local card.)

2. on the host side I have done DMA alloc (say for 5MB) using HalAllocateCommonBuffer() and also created dummy ISR to perform Receive from the pci card.

3. for Transmitting data to the pci card, I think that I can program the DMA registers that are memory mapped into host side. so that the DMA controller does the Transfer. and generate interrupt of host upon completion. Is this a correct way?

4. for Receiving from the Pci card, the card generate interrupt to the host after DMA transfer from pci to host memory by programming the DMA registers from the local side.

could you explain for dma read and write sequence so that it would be helpful for me in step ahead.

5. I created a large DMA buffer for DMA Xfer. how Read and Write use this buffer. or I have to allocate DMA buffer for Tx and Rx on the host side.

6. ReadFile and WriteFile API are meant for DMA or what? if so how this is performed? then what's the use of DMA controller registers on the pci card.?

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these are my few questions which really confuses me.cld u pls  
answer these questions so that it wld be helpful in proceeding  
furthur.

thanks

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