



# DRDMA

## Dual Read DMA

### Industry Challenge

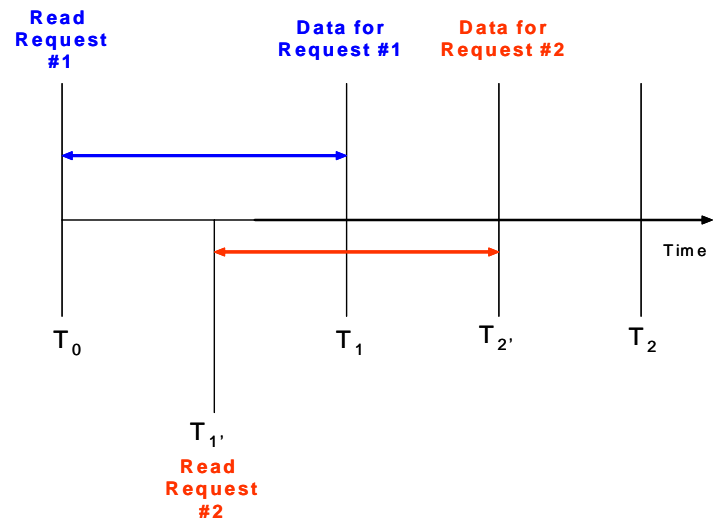
The adoption of multi-core high performance CPUs and virtualization technologies require FC HBAs to be able to process multiple I/Os and multiple operating system requests faster.

### Higher Throughput Solution

A Direct Memory Access (DMA) read request is a request from a DMA module (or channel) to transfer data from a host system to a storage device. QLogic's DRDMA technology significantly improves overall system performance by allowing multiple DMA read requests to be issued/processed efficiently. Competitive HBAs do not support DRDMA like functionality and don't issue the next DMA read request until the previous DMA read request has completed. This results in lower performance.

### User Benefits:

- **Higher Performance** with increased I/Os per second (IOPs) and higher throughput in real world applications such as MS-Exchange and Oracle.
- Enhances the Return-on-Investment (ROI) in multi-core CPUs by enabling faster parallel processing.



### How QLogic DRDMA Works

QLogic's proprietary, **Patent Pending**, DRDMA technology optimizes DMA read request processing. In the diagram above, DMA read request #1 is received at time  $T_0$  and before DMA read request #1 is processed by time  $T_1$ , DMA read request #2 is issued at  $T_{1'}$ . Before DMA read request #1 is completed, DMA read request #2 processing has already started. Without DRDMA, DMA read request #2 would not have started until  $T_1$  and data for read request #2 would not have been available until  $T_2$  instead of  $T_{2'}$ .