

•To: T10 Membership
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Subject: Flow Control & Read Streaming
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With the advent of PCI-X there is a need to better manage the write operations on the SCSI bus. Multi-media and video editing require the most efficient movement of data. Write streaming is already supported, this proposal adds support for read streaming.

It is proposed that the target drive P(0) during information unit transfers [Packetized mode] to support flow control and read streaming.

Flow Control (Write Operations)

The P(0) signal is asserted by the target to indicate that the data transfer for the current ITLQ nexus will stop at the end of the packet during which it is asserted. This applies only during information unit transfers. The earlier in the packet that the P(0) signal is asserted the more efficient the data transfer is. A target supporting flow control assists the host pre-fetch operation over the PCI-X bus by allowing it to more efficiently use its buffers.

The use of flow control should be transparent and requires no change to the PPR message.

Streaming (Read Operations)

The P(0) signal is asserted by the target to indicate that the data transfer for the current ITLQ nexus will stop at the end of the packet during which it is asserted. The P(0) signal shall be asserted before the REQ signal is negated for the last data word transferred for the packet. Once P0 is asserted, it shall remain asserted until the negation of REQ for the last CRC word of the packet. This applies only during information unit transfers.

Following the last packet transferred a SPI L_Q Information Unit, a MESSAGE OUT phase, or a bus free phase occurs.

Byte 3, Bit 4 of the Port Control Page is defined as the Read Data Streaming Enable Mode (RDSEM) bit. An RDSEM bit of one indicates that read operations may use streaming mode transfers.