



VIOP Variable I/O Port

Background

As tape libraries continue to evolve library manufacturers must make trade offs in the design and specification process. The goal is of course to provide a product with compelling features at the right price point. Tape library designs vary widely in the number of resources that can be brought to bear on a given application. Library manufacturers design their products to meet the requirements of the broadest possible market segment. The number of tape storage slots, the number of tape drives, interface options, etc., are all carefully evaluated when designing new libraries.

Library Design Issues

Manufacturers' product marketing and development staffs specify the desired number of media storage slots, drive bays, and Input/Output ports for a given library architecture. I/O slot count doesn't usually receive the same scrutiny as other library resources since it is only used for importing and exporting media from the library. However, the number and arrangement of I/O slots can have a dramatic impact on both the backup and archival storage application itself, as well as on the way IS people interface with the library. Until the advent of Qualstar's VIOP technology the number of tapes that could be imported or exported from the library in one operation was constrained by the hardware designed into the library for that sole function, the I/O port. Some library models provide a single I/O port; others offer additional slots for "bulk" operations, but all designs are limited to the number that the library designer picked when laying out the hardware.

VIOP Solution

VIOP, Variable Input Output Port, allows the person configuring or administering the library to select the number of cartridge slots which can be dedicated to bulk import/export of media to/from the library. Originally developed for the Qualstar RLS-Series of libraries, VIOP is now incorporated in every Qualstar TLS model. An exclusive Qualstar design feature, VIOP allows users to match the number of I/O slots to their operational requirements. Applications are not constrained by limits imposed by libraries with a fixed number of I/O slots. Users can assign the number of slots to best match their requirements. For example, many organizations routinely create copies of dozens of tapes for offsite vaulting. In libraries with a fixed number of I/O slots the user might be forced to unload the copies as they are produced. With VIOP, these tapes can be directed into a range of slots assigned to a specific magazine or group of magazines that can then be exchanged in one simple operation. This facilitates more efficient copy management by keeping the set together for dispatch to the storage facility. Similarly, replacement tapes can be bulk loaded, reducing operator involvement and handling errors. The overall savings is in the operator's time and in better control over the data sets.

Supported in Logical Library and Q-Link™

The VIOP feature is also supported in Qualstar's Logical Library, a dynamic partitioning feature that enables up to four individually addressable libraries to be created within a single physical unit. Each Logical Library can be configured with its own VIOP, allowing any of the applications to take advantage of the expanded I/O capability. Both Logical Library and VIOP can be configured and monitored using the library's extensive front panel menu system, or via Q-Link, Qualstar's browser based remote library manager.

VIOP compliments the hardware I/O Ports incorporated or optional in all models.