20-Port 4.25 Gbit/s FC-AL Cut-Through Switch

HIGH-SPEED INTERFACE

- Independent per-channel selectable high-speed outputs support 8 levels of programmable pre-emphasis and 8 levels of output swing. Selectable pre-emphasis counteracts dielectric losses and allow maximum reach on printed circuit boards.
- Independent per-channel selectable high-speed inputs support 30 levels of programmable receive equalization for improved signal integrity.
- Integrated 100 Ω differential termination for signal integrity, smaller solution footprint, and lower component count.

TEST AND CONTROL

- Supports optional 2-pin serial management interface using selectable Two-Wire Interface (TWI) protocol for configuration and diagnostic access.
- Digital Loss of Link (DLOLB) detect outputs for monitoring individual or multiple links. DLOLB can be programmed to indicate excessive 8B/10B code error rate, loss of synchronization, loss of signal, CRC32 errors, or comma density.
- External control pins can be overridden by registers.
- Interrupt output to flag changes in bypass state and DLOLB error conditions.
- Supports built-in self-test (BIST) via internal Fibre Channel pattern generation and checking.
- Supports internal serial loop back modes for each port for testing and debugging.

- Provides a standard 5-signal IEEE 1149.1 JTAG test port for boundary scan board testing purposes.
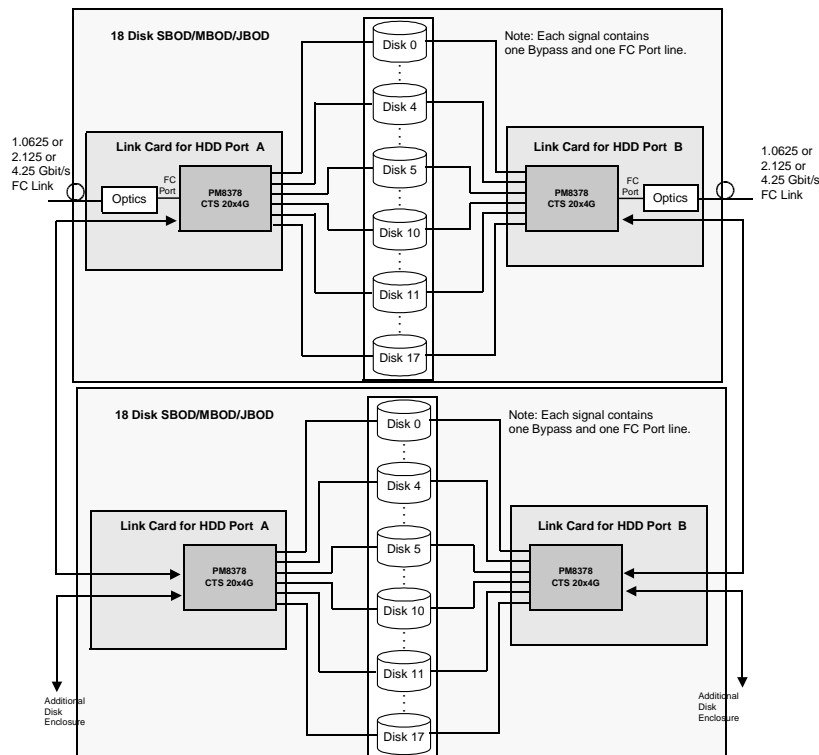
PHYSICAL

- 0.13 um (1.2 V Core and 3.3 V I/O supply) CMOS technology.
- 27 mm x 27 mm 352-pin CSBGA+.
- Ultra-low operating power of 6.5 W typical with all 20 channels active at 4.250 Gbit/s.

APPLICATIONS

- SBOD Storage Systems.
- MBOD Storage Systems.
- RAID Storage Systems.
- JBOD Storage Systems.
- FC to SATA Storage Systems.
- FC-AL Nodes.
- Fibre Channel Hubs.
- 1.0625, 2.125, and 4.25 Gbit/s Backplanes.

TYPICAL APPLICATIONS

Fibre Channel Disk Enclosure