

Quantum Set To Introduce New Series Of Half- Height Drives

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MILPITAS, CALIF. — Quantum Corp. this week will unveil its Q200 Series of half height intelligent disk drives, the company's third-generation product group and its second family of 5.25-inch Winchester disk drives.

With average access times of less than 30 milliseconds and formatted capacities of 80 Mbytes in the Q280 and 53 Mbytes in the Q250, Quantum is targeting its traditional OEM market among multi-user systems manufacturers as well as applications in file servers and advanced engineering workstations, company officials said.

Public Milestone

While Quantum privately previewed the Q200 as early as last fall's Comdex show, this week's formal introduction is the first public milestone in an 18-month development program, and it foreshadows the scheduled availability this July of initial customer deliveries, according to marketing director Rolf Brauchler.

General availability of evaluation units is scheduled for October, with production anticipated in December, Brauchler said. That timetable is in line with the schedule that Quantum officials projected last fall for the Q200 program.

According to Brauchler, the lead time between the unveiling of the new products and their availability is intended to give OEMs a chance to design the drives, which incorporate an on-board controller and SCSI interface, into their systems.

"We are not in a position to say, 'This customer has signed up to take X thousand units per year,'" said Brauchler. However, he said, several of Quantum's largest OEMs have indicated that they are designing future systems to use the Q200 and will purchase the drives if Quantum meets its targets.

"We feel very comfortable about having homes for the drives we build in that first three- to four-month period," said Brauchler.

Quantum's principal customers include Digital Equipment Corp., Wang Laboratories Inc. and Alpha Microsystems Inc. for its lower-capacity Q500 full-height 5.25-inch disk drives. Leading users of its 8-inch Winchester disk drives include Wang, Convergent Technologies Inc. and Altos Computer Systems Inc.

Commenting on the Q200 Series specifications, Disk/Trend Inc. president James N. Porter stated, "This is a leadership product in every way." Porter said he projects high volumes and rapid growth in the 30-to-100-Mbyte segment of the 5.25-inch Winchester disk drive market and initially expects full-height products to dominate that class. But he predicted that Quantum's half-height design will give it a unique advantage.

"They've positioned themselves well again to be in a leadership position in a part of the industry that's not crowded," Porter said. "It's not going to be a majority and it will be a thin sliver at first, but it will grow and in time will be a very significant part of that market."

Custom Controller

Quantum's half-height design incorporates two disks and four read-write heads in the Q250, and three disks with six heads in the Q280. Drive, controller and interface electronics are contained on one printed-circuit board, which will be contracted to an outside manufacturer — probably within the U.S. — for fabrication and assembly, Brauchler said. In conjunction with "one of the well-known controller companies," Quantum developed a custom controller specifically for the Q200, Brauchler said. The Q200's SCSI chip is a standard product from the same supplier, which Brauchler declined to identify.

Quantum opted for the SCSI interface primarily because it was the best documented of the non-proprietary intelligent interfaces and in part because it is a lower-cost approach than IPI-3, Brauchler said. The Q200 implements all of the basic SCSI command set and most of the optional commands, he said.

Error detection and correction capabilities provided by the Q200 on-board controller make it economically feasible to use the high-density sputtered media that allows Quantum to package 80 Mbytes in the half-height form factor, Brauchler indicated. Quantum is working with a number of sputtered media vendors and expects later to settle on primary and secondary suppliers, Brauchler indicated.

Full pricing details for the Q200 Series had not been finalized by press time, but quantity-1000 pricing for the Q280 was set at \$995, according to a Quantum spokeswoman.

R&D Spending

Brauchler was unable to cite Quantum's design costs for the Q200, but he pointed out that the company's level of research-and-development spending has edged up to the 6 percent range from its historical level between 4 percent and 5 percent of sales, partly due to the Q200 program and partly due to the activities of Quantum's Qew subsidiary, which is developing a small Winchester disk drive subsystem for introduction later this year.

In a carryover from earlier Quantum product designs, the Q200 uses similar rotary voice coil actuator technology, but the Whitney flexure readwrite heads are mounted inline in the Q200 rather than at an angle as in earlier products.

Embedded Servo

In another departure, the Q200 uses an embedded servo to accommodate the demands of high track density and to eliminate the costs of an optical servo assembly, Brauchler said.

Whereas some analysts have expressed mild concern that the Q200 project may hold certain technical risks, Brauchler commented, "We don't expect this to be a problem. One of the reasons is we are not pushing hard on basic factors such as track density."

—*Mary Brisson*

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