

PC Logic Chip Sets--Executive Summary

EXECUTIVE SUMMARY

PC Logic Chip Set Market Overview

Total worldwide PC logic chip set revenue was approximately \$399 million in 1988, representing an increase of 177 percent over 1987 revenue of \$144 million. Total chip set revenue is expected to grow at a compound annual growth rate (CAGR) of 12.6 percent for the period from 1989 through 1993, as compared with a CAGR of 70 percent for the period from 1987 through 1990, the emerging period for the industry. Dataquest believes that in 1990, the penetration of chip sets into PCs will be likely to approach saturation and, at that point, the growth rate of chip sets will be tied directly to the growth rate of the PC industry.

Competition

The following points should be noted about competition in this market:

- The two largest vendors of PC logic chip sets are Chips and Technologies, a U.S. company, and Acer Laboratories, a Taiwanese company. Acer controls the major share (66 percent) of the PC XT market while Chips and Technologies controls the largest share (40 percent) of the PC AT market.
- Ranked by 1988 revenue, the top five chip set vendors have 82.7 percent of the market. The top seven vendors have 91.9 percent of the market.
- The rapid growth of the chip set market, as chip sets displace discreet logic in PCs, has attracted many new entrants to this industry. Dataquest believes that the industry capacity is currently above the expected demand and that this will cause vendors to compete aggressively on price.
- Large semiconductor companies that perceive the displacement of discreet logic products with chip sets as a direct threat to their business have turned their attention to this market and will be leveraging their resources to compete with the many start-ups and smaller participants.
- The critical success factors for vendors in this industry are listed below:
 - Systems expertise
 - Access to design tools
 - Access to high-volume/low-cost manufacturing
 - Excellent customer service and support capabilities
 - The ability to demonstrate a product growth or upgrade path for the customer

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Trends and Issues

- The PC XT bus segment is expected to lose 24 points of market share between 1987 and 1989, going from 59 percent to 35 percent of all chip set shipments. This is a result of the displacement of the PC XT with low-end PC AT products as prices on these products come down.
- The PC AT bus segment currently composes about 50 percent of all chip set shipments. Dataquest believes that the PC AT segment will continue to make up the bulk of the market, with its share going to about 74 percent by 1993 because the PC AT bus will cover both the low end of the market when implemented with the 80286 microprocessor and the middle range of the market when implemented with the 80386SX or 80386.
- Dataquest believes that the EISA bus architecture will not be successful in competing for the high end of the PC market against the MCA bus, mostly as a result of the late introduction of the EISA bus. The MCA bus currently composes about 2 percent of the chip set market and is expected to account for 17 percent of the market by 1993.
- As the market shifts away from the PC XT segment, the 8088/8086 microprocessor segment is losing ground also. The 8088/8086 segment is expected to go from 56 to 33 percent of chip set shipments between 1987 and 1989 and to fall to about 5 percent of the market by 1993.
- The 80286 segment has lost market share at the high end to both the 80386SX and the 80386, but it has made up for this by gaining at the low end. The 80286 segment is expected to go from 41 percent to 43 percent of the market between 1987 and 1989, and to 28 percent by 1993, as it continues to lose at the high end.
- As new microprocessors are introduced, the average speed grade for the market has shifted upward. In 1987, 10-MHz chip sets accounted for more than one-half of all shipments. In 1989, the median is expected to be the 12-MHz segment. Dataquest expects the median to step up one speed grade every two years, reaching 20 MHz by 1993.
- Average selling prices (ASPs) will fall in 1989 as a result of price competition. They will rise in 1990 as the introduction of EISA chip sets and increased penetration of the MCA chip sets shifts the product mix toward the high end. ASPs will then come down slowly through the rest of the period as price decreases are offset by the continued move in product mix toward the high end.