

At the present time, world electronics production is dominated by two nations - the United States (U.S.) and Japan. While Canada is not a major force in microelectronics by world standards, the industry has gained prominence as a significant contributor to North American technology, research and development. The industry in Canada has sales of about \$215 million and employs some 3,000 people, exclusive of software and software applications workers.

The semiconductor segment of the Canadian industry has been the growth leader over the past six years and, according to economic indicators, has excellent growth potential for years to come. While not large, this part of microelectronics has an accepted capability in several key areas centred around telecommunications. It has, in fact, gained a world leadership role in a number of specialized market niches. An indication of its success is seen in its growth rate - one of the fastest of all Canadian industrial sectors, averaging over thirty per cent a year. This growth trend is expected to continue for two reasons: the industry's growth potential has brought a number of new companies into the field in the past three years; and the market segments being exploited (e.g., in telecommunications) have a particularly strong potential for growth, both within and outside Canada.

The Canadian hybrid IC field, although not having the phenomenal growth pattern of the semiconductor area, forms an important element of the microelectronics industry. It is essential to the continued development of the electronics and telecommunications industries. This part of the microelectronics industry is characterized structurally by the existence of a few medium-sized companies and a relatively large number of small companies. A great many of the hybrid lines of these smaller companies are associated with the larger companies. Hybrid IC companies are working to stay on top of international state-of-the-art technology to better serve Canadian and U.S. markets. This effort demands investment in both technology and manufacturing facilities, since the technology being used now is fairly standard and is dependent on materials readily available in the market. A number of companies, therefore, are working with new polymer materials that have significant advantages (e.g., low temperature processing capability) as well as with substrate materials that allow integration of mechanical and electronic components in a system.