

INTRODUCTION

PCB is a product containing specific circuitry design to provide the necessary electrical connection among the electrical components or parts that are mounted onto it. PCBs are one of the fundamental components found in most electronic products and are used in the automotive, telecommunications, precision instruments and networking industries.

PCBs may be classified into three categories, namely (i) single-sided; (ii) double-sided; or (iii) multilayer. While the majority of PCB manufacturers specialise in the manufacture of single-sided or double-sided boards, approximately half of them produces multilayer PCBs.

Single-sided PCBs

Single-sided PCBs are the simplest and most common type of PCB. The first PCBs were introduced during the 1950s and they have been an integral part of the electronics industry ever since. Their introduction was the impetus for the huge growth in all segments of the electronics industry in the past. The single-sided PCB was the first device used for the interconnection and assembly of electronic components forming a cohesive and functional operating system. The primary industry that uses these boards is the consumer electronics industry.

Double-sided PCBs

Double-sided PCBs have circuitry on both sides of the board of which each side being connected by metal deposited on the walls of holes. The development of the double-sided PCBs has further transformed the electronics industry. The electronics industry has always demanded smaller components. The introduction of double-sided PCBs allowed electronic manufacturers to place components on both sides of the board, thus decreasing the overall space needed for the electronics assembly. Such circuit design also shortens and simplifies the length of cross linking circuitry and allows significant board savings as compared to single-sided PCBs.

Double-sided PCBs are suitable for use in medium technology electronic goods such as simple computer peripherals including printers, videos and certain telecommunications products.

Multilayer PCBs

Multilayer boards can accommodate a larger number of interconnections than double-sided PCBs. Multilayer PCBs are created by putting more layers with circuitry inside the board and are commonly used in computers, telecommunications equipment, automobile electronics and other electronic products where space is at a premium.

INDUSTRY OVERVIEW

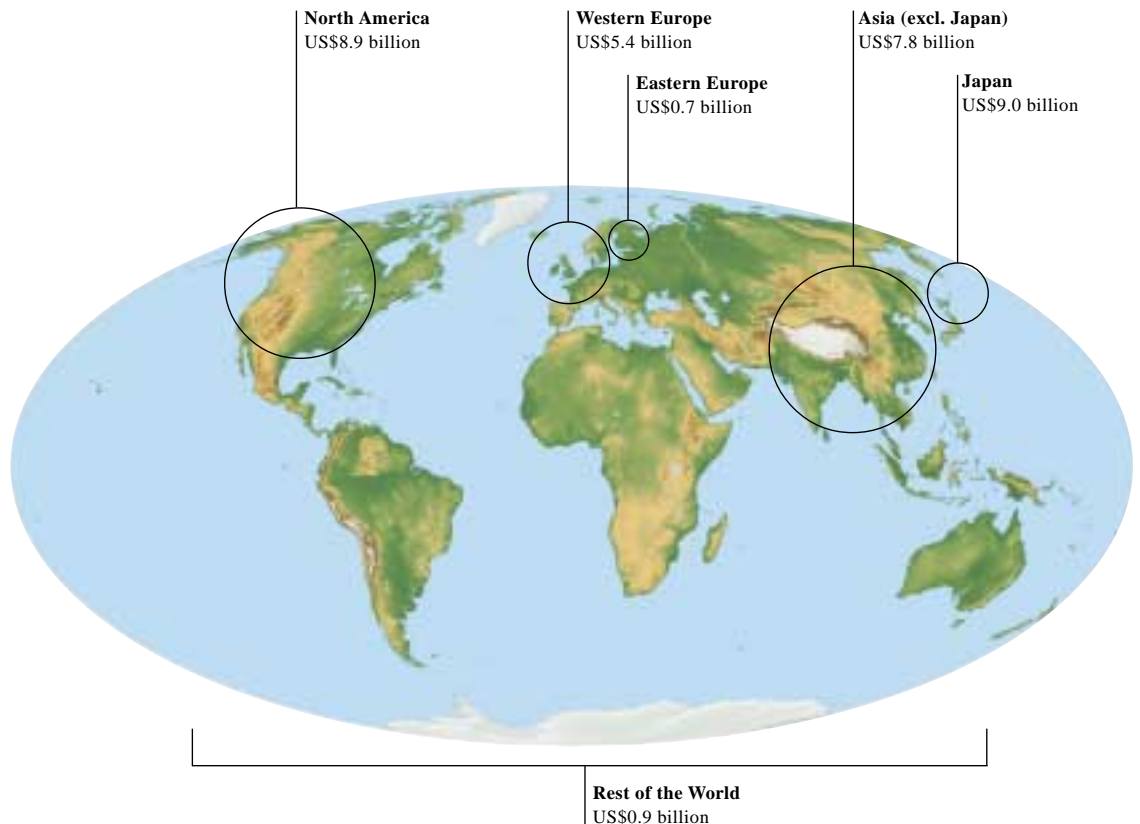
WORLD PCB MARKET

The year 2000 was one of the strongest growth years for the PCB industry. Orders and shipment for PCBs around the world rose by 22% and 18% respectively as compared to 1999. One impetus for this strong PCB growth was strong electronic equipment orders.

Global market

BPA (Technology & Management) Ltd., an international consulting company based in the UK advising organisations on the global electronics industry, expects the demand for PCB products to grow at an annual compound growth rate of approximately 8.8% from 2001 to 2005. The table and chart below set forth the forecast of the global PCB market from 2001 to 2005 and the geographical breakdown of the global PCB market in 2001, respectively:—

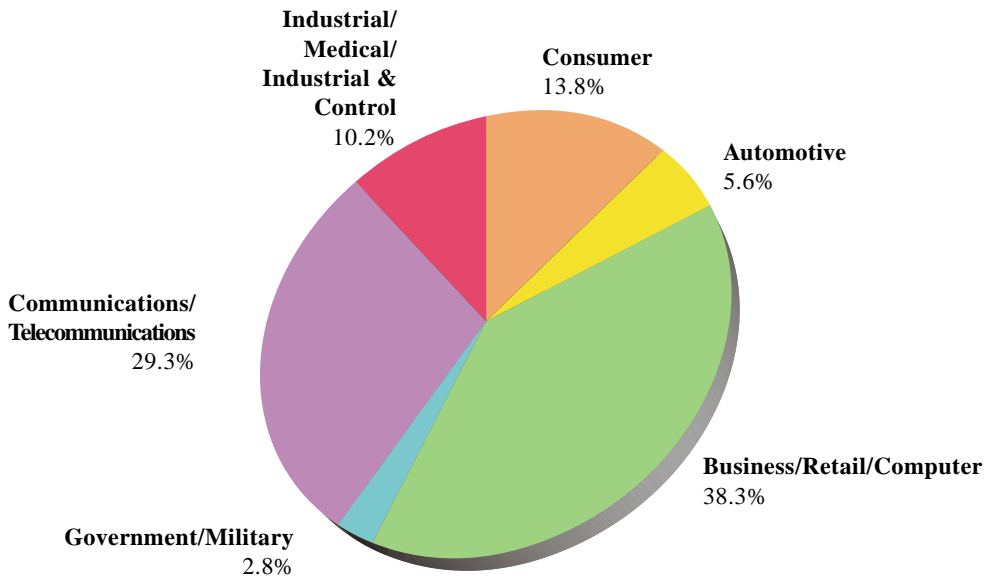
	2001	2002	2003	2004	2005
Global PCB market (US\$ billion)	32.8	33.4	39.0	42.8	45.9



Source: BPA (Technology & Management) Ltd.

INDUSTRY OVERVIEW

The following chart sets forth the breakdown of application of PCB in the world market in 2001:—



Source: BPA (Technology & Management) Ltd.

RECENT TECHNOLOGY TRENDS

The drive for more powerful and advanced electronics has led to an increase in demand for higher technologies such as multilayer PCBs and high-density interconnection (“HDI”) techniques. The overall electronics industry’s demand for small and portable products has led to the development of HDI PCBs. Such high demand for the products continues to make it a lucrative market for all manufacturers capable of producing the complex multilayer PCBs.

FUTURE PROSPECTS

The Directors are of the view that in the short term, the PCB industry is influenced by US economic development and the world’s electronics producing countries, such as the US and Japan. Asian electronics industries outside Japan are dominated by Taiwan, the PRC, and South Korea. The PCB industries in the US and Europe are expected to consolidate further and several major manufacturers have shut down their plants in the US and Europe and are either investing in or expanding their capacities in the PRC.

Moreover, the Directors consider that evidence of a technology-sector recovery from the worst downturn in history is starting to trickle in. In early 2002, it was reported that expenditure on computers, computer chips, PCs, and communications equipment has been increasing on a yearly basis. All of these contribute to the underlying demand for PCBs.