

Printed Circuit Boards: Technologies and Global Markets

Market Research Report | 2024-09-06 | 127 pages | BCC Research

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Report description:

Description

Report Scope:

This report analyzes current trends in the global market for printed circuit boards (PCBs). It includes base year data from 2023, and projected data from 2024 to 2029. The report provides the global revenue (\$ millions) for five market segments (assembly technology, PCB type, PCB structure, PCB thickness, and end-user industry) and four regions (North America, Europe, Asia-Pacific, and Rest of the World).

The report examines the drivers and challenges to the market's growth and the leading PCB manufacturers. It analyzes the emerging technologies in the PCB market, and the competitive and technological factors differentiating the leading companies. It also evaluates the environmental, social and governance (ESG) developments in the PCB industry.

Report Includes:

- 63 data tables and 46 additional tables

- An analysis of the global markets for printed circuit board (PCB) technologies in electronic devices manufacturing

- Analyses of global market trends, with market revenue data from 2023, estimates for 2024, forecasts for 2025 and 2028, and projected CAGRs through 2029

- Estimate of the current market size and revenue prospects, along with a market share analysis by assembly technology, type of PCB, structure, thickness, end-user industry, and region

- Facts and figures pertaining to the market dynamics, technological trends and advances, regulations, and the influence of macroeconomic factors

- Porter's Five Forces and global supply chain analyses

- Overview of sustainability trends and ESG developments, with emphasis on consumer attitudes, the ESG practices of leading companies and their ESG scores

Analysis of the competitive landscape, including company shares, strategic alliances, M&A activity and venture fundings outlook
Company profiles of market leaders, including Zhen Ding Tech. Group, Sanmina Corp., Suzhou Dongshan Precision
Manufacturing Co. Ltd., Fujikura Ltd., and Unimicron

Executive Summary

Summary:

A PCB, also called a printed wiring board (PWB), is a basic part of any electronics item or electrical equipment. A PCB provides connectivity to an electronic component such as a resistor, capacitor, diode, transistor or transformer to form a complete electronic circuit. Today, it is unimaginable to consider a piece of electronic equipment without a PCB. PCBs not only provide connectivity among electronic components but also reduce component size and increase the efficiency of electronic equipment.PCBs are built into many kinds of equipment, from smartphones to automobiles to industrial machinery. They can be small enough to fit inside a hearing aid or large enough to drive a supercomputer. They can be rigid, flexible or a combination of the two, rigid-flex.Technological Advances and Applications

The PCB industry is constantly evolving with advances in materials and manufacturing processes, such as 3D printing and biodegradable PCBs, to address sustainability concerns and improve the functionality and efficiency of electronic devices. The rise of quantum computing, a multidisciplinary field comprising aspects of computer science, physics and mathematics that utilizes quantum mechanics to solve complex problems faster than on traditional computers, and photonic PCBs, also known as optical PCBs, which leverage light for data transmission instead of electrical signals, will further drive growth in the market due to the need for high-performance interconnects and materials for these technologies.

Quantum computing requires PCBs with exceptional signal integrity and thermal management to handle quantum bits (qubits), while photonic PCBs, essential for high-speed data transmission, demand sophisticated designs to support optical components. Both technologies will drive growth in the PCB market as they push the limits of current electronic and photonic systems.

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