

## South Korea Printed Circuit Board Market Forecast 2024-2032

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## Report description:

#### **KEY FINDINGS**

The South Korea printed circuit board market is anticipated to develop at a CAGR of 5.09% over the forecast period of 2024-2032. The base year regarded for the studied market is 2023, and the forecasting years are from 2024 to 2032.

#### MARKET INSIGHTS

The printed circuit board industry in South Korea is experiencing significant growth due to rising demand for eco-friendly printed circuit boards. As environmental concerns gain importance, consumers and manufacturers are shifting towards sustainable practices, driving innovations in PCB production. This includes the use of biodegradable and recyclable materials, with companies investing in research and development to create more efficient and environmentally friendly manufacturing processes.

Simultaneously, the growing adoption of industrial automation and control systems is contributing to the market's expansion. Industries across South Korea are implementing advanced automation technologies to enhance productivity and efficiency, relying heavily on PCBs for their operation. This trend toward automation is expected to continue, further increasing the demand for high-quality PCBs designed to meet the stringent requirements of automated systems.

The rising demand for smart electronics is another key driver of the PCB market. Smart devices, from smartphones to home automation systems, depend on sophisticated PCBs for their functionality. As consumers seek more advanced and interconnected devices, manufacturers are developing advanced PCBs to support the complex needs of smart electronics, fueling continuous growth in the South Korea PCB market.

Additionally, the applications of semiconductors are expanding rapidly. PCBs are integral components in semiconductor devices, and their growing use in various technologies is boosting the market. From consumer electronics to industrial machinery, semiconductors and their associated PCBs are essential for a wide range of applications, driving the need for more advanced and reliable PCBs.

The use of electronics in diverse applications is also increasing. Beyond traditional uses, electronics are now vital in sectors such as healthcare, automotive, and aerospace. This diversification creates new opportunities for the market, as specialized boards are needed to meet the unique demands of these industries.

Moreover, the explosive rise in internet usage is contributing to the market's expansion. The proliferation of internet-connected devices, from smartphones to smart home systems, relies on efficient and high-performance PCBs. As more devices connect to the internet, the demand for robust PCBs that support seamless connectivity and data transfer is increasing, driving the South Korea printed circuit board market forward.

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#### SEGMENTATION ANALYSIS

The South Korea printed circuit board market segmentation incorporates the market by raw material, substrate, and application. The raw material segment is further segregated into epoxy resin, glass fabric, phenolic resin, kraft paper, and other raw materials. The glass fabric printed circuit technology introduces a new PCB material that minimizes the space between fiber weaves, significantly enhancing resistance to moisture and preventing system malfunctions and short circuits.

Further, this advanced PCB design offers protection from moisture, electrostatic discharge, power failures, and high temperatures. An innovative lamination process produces a flatter, thinner weave, resulting in a smoother surface for laser drilling and improved dimensional stability. The manufacturing process is now more flexible and efficient, yielding glass fabric with superior properties for high-performance circuitry. This advancement is crucial as the increasing penetration of smart devices drives the demand for sophisticated PCBs that effectively connect and support electronic components with conductive tracks, copper sheets, and pads. Phenolic resins are widely utilized in various industrial products, including the manufacturing of circuit boards for PCBs. Phenolic laminates are produced by saturating base materials like paper, cotton, or fiberglass with phenolic resin and then laminating them under heat and pressure. These resins find applications in numerous industries, such as electrical and chemical due to their desirable properties like mechanical strength, chemical resistance, and thermal stability. Phenolic-paper laminates, known by NEMA descriptions like FR-4 and FR-2, are commonly used in PCB production. The phenolic resins, formed by a condensation reaction between formaldehyde and phenol, penetrate and cross-link with base materials to enhance their electrical and thermal properties.

Furthermore, the demand for phenolic resin in the PCB market is driven by its cost-effectiveness, strength, and stability. Phenolic resin-based PCBs, often made with paper armored with phenolic resin and copper foil, are less expensive while offering adequate performance. These PCBs exhibit good impact resistance and dimensional stability, even at low temperatures. The increasing demand for smart devices and greater internet penetration are also contributing to the growth of the market. These factors collectively drive the global expansion of phenolic resin-based PCBs, underlining their significance in modern electronics manufacturing.

## COMPETITIVE INSIGHTS

Some of the leading players in the South Korea printed circuit board market include ISU Petasys, Nippon Mektron Ltd, Samsung Electronics Inc, etc.

Samsung Electronics Inc, established in 1938 and headquartered in Suwon, South Korea, operates globally across information technology, consumer electronics, and mobile communications. The company offers a wide range of products, including monitors, digital TVs, printers, mobile phones, smartphones, wearables, tablets, and computers. It also engages in business technology, venture capital investments, semiconductor manufacturing, and electronic device repairs. Samsung manufactures and sells home appliances such as refrigerators and air conditioners, provides logistics, credit management, medical equipment, and consulting services, and offers communication, mobile payment, and cloud services.

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