Global AC-DC Medical Power Supplies Market to Double in Size by 2034

AC-DC medical power supplies market is set for strong growth, projected to rise from USD 1.1 billion in 2024 to USD 2.3 billion by 2034

Reports And Data

VANCOUVER, BRITISH COLUMBIA, CANADA, September 9, 2025 /EINPresswire.com/ -- The global AC-DC medical power supplies market is set for strong growth, projected to rise from USD 1.1 billion in 2024 to USD 2.3 billion by 2034. This reflects a compound annual growth rate (CAGR) of 7.70%, driven by advances in healthcare technology, increasing adoption of portable devices, and rising investment in sustainable solutions.

Market Overview

Diagnostic imaging equipment is expected to remain the largest segment of the market, supported by the growing need for advanced imaging in hospitals and clinics. Portable medical devices are anticipated to be the fastest-growing segment, as home healthcare and telemedicine adoption expands. Applications such as life support systems, patient monitoring devices, and imaging technologies continue to see strong demand, particularly as the global population ages and chronic diseases rise.

North America is projected to maintain leadership in the market, backed by advanced healthcare infrastructure and early adoption of new technologies. However, the Asia-Pacific region is expected to see the fastest growth due to expanding healthcare systems, increased investments, and rapid adoption of digital health tools.

Key Growth Drivers

Technological advancements and supportive regulations are central to market expansion. Integration of artificial intelligence (AI) and the Internet of Things (IoT) into medical devices is fueling the need for reliable and efficient power supply solutions. According to the World Health Organization, there has been a 40% increase in IoT-enabled medical devices in just the past three

years.

Governments and regulators are also pushing for innovation and sustainability. The U.S. Food and Drug Administration (FDA) and the European Union's Medical Device Regulation (MDR) have introduced strict safety and efficiency standards, motivating companies to design advanced and environmentally friendly products. In 2023, the U.S. Department of Health and Human Services committed USD 2 billion to support the development of energy-efficient medical technologies.

Major companies are responding with new product launches. Delta Electronics, for example, introduced a new series of high-efficiency power supplies in March 2024 that meet international standards and are expected to capture a significant share of the market.

Challenges Facing the Market

While growth opportunities remain strong, the market faces challenges linked to technical complexity and regulatory requirements. Designing products that meet global medical standards increases development costs and extends time-to-market. For instance, compliance with Europe's MDR has pushed development costs up by 20%, according to the European Commission.

The U.S. FDA's rigorous approval process can also slow down new product launches, posing a barrier for smaller players. A survey by the Medical Device Manufacturers Association revealed that 65% of companies see regulatory compliance as a top challenge. Additionally, infrastructure limitations in certain regions, particularly in Africa and parts of Asia, restrict the adoption of advanced power supply technologies.

Market Segmentation

The market is segmented by product type into enclosed, open frame, external, configurable, and encapsulated power supplies. By application, it covers diagnostic imaging, patient monitoring, surgical equipment, home healthcare, and life support devices. Key end users include hospitals, ambulatory surgical centers, home healthcare providers, and specialty clinics.

Ac Dc Medical Power Supplies Market Segmentation
By Product Type

Enclosed Power Supplies

Open Frame Power Supplies

External Power Supplies

Configurable Power Supplies

Encapsulated Power Supplies

By Application

Diagnostic Imaging Equipment

Patient Monitoring Devices

Surgical Equipment

Home Healthcare Devices

Life Support Equipment

By End User

Hospitals

Ambulatory Surgical Centers

Home Healthcare

Specialty Clinics

By Technology

Linear Power Supplies

Switching Power Supplies

By Distribution Channel

Direct Sales

Distributors

Online Retail

From a technology perspective, linear and switching power supplies are the main categories,

while sales channels range from direct sales and distributors to online retail platforms.

Future Outlook

The market outlook remains highly positive. With healthcare providers focusing on patient safety and efficiency, demand for advanced and sustainable power supplies will continue to grow. Trends such as a 30% increase in IoT-enabled devices and a 25% rise in investments in green technology, as reported by the International Energy Agency, show how innovation is reshaping this space.

Top 10 Companies
Delta Electronics

TDK-Lambda

XP Power

Artesyn Embedded Technologies

Mean Well Enterprises

GlobTek

CUI Inc.

SL Power Electronics

Advanced Energy Industries

Cosel Co., Ltd.

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As digital health adoption grows at an annual rate of 15%, and with global health systems moving towards greener and smarter solutions, the AC-DC medical power supplies market is positioned for a decade of sustained expansion.

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