

DC-DC Converter Market Forecasts to 2032 – Global Analysis By Product (Isolated and Non-Isolated), Input Voltage, Output Voltage, Output Power, Form Factor, Application and By Geography

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Abstracts

According to Statistics MRC, the Global DC-DC Converter Market is accounted for \$13.6 billion in 2025 and is expected to reach \$29.3 billion by 2032 growing at a CAGR of 11.6% during the forecast period. A DC-DC converter is an electrical device that converts a direct current (DC) voltage from one level to another. It can either step up (boost) or step down (buck) the input voltage to meet the requirements of specific applications. These converters use components like inductors, capacitors, diodes, and switching devices to transfer power efficiently while minimizing energy loss. Commonly used in power supply systems, battery-powered devices, and renewable energy systems, DC-DC converters are integral for providing stable and regulated output voltages from varying input sources.

According to the India Brand Equity Foundation (IBEF), India is the third largest producer and consumer of electricity in the world.

Market Dynamics:

Driver:

Increasing Demand for Energy Efficiency

The increasing demand for energy efficiency is having a constructive and driving impact on the DC-DC converter market. As industries and consumers alike seek to reduce energy consumption and improve power management, the need for efficient power

conversion solutions grows. DC-DC converters are critical in optimizing energy use, particularly in renewable energy systems, electric vehicles, and portable electronics. This surge in demand fosters innovation and the development of high-performance, energy-efficient converter technologies, further propelling market growth.

Restraint:

High Initial Costs

High initial costs significantly hinder the growth of the DC-DC converter market by limiting adoption, especially among small and medium-sized enterprises. These converters often require advanced materials and complex manufacturing processes, driving up expenses. As a result, potential users may delay or avoid investment, opting for cheaper alternatives. This financial barrier restricts market expansion and slows innovation, particularly in emerging applications and developing regions.

Opportunity:

Proliferation of Electric Vehicles (EVs)

The development of electric vehicles (EVs) has greatly increased demand for DC-DC converters, which are required to manage power distribution between different voltage levels in EVs. These converters guarantee the seamless operation of electric drivetrains and charging systems, maximize energy economy, and prolong battery life. Advanced, high-performance DC-DC converters are becoming more and more necessary as EV usage increases, which benefits the market by promoting innovation and advancements in power electronics technology.

Threat:

Thermal Management Issues

Thermal management issues have a undesirable and hindering impact on the DC-DC converter market by limiting efficiency, reducing performance, and increasing the risk of component failure. Poor thermal management leads to overheating, which can cause instability, shorten the lifespan of devices, and require more complex cooling solutions, raising costs. This challenges the development and adoption of high-performance, energy-efficient DC-DC converters across various industries.

Covid-19 Impact

The COVID-19 pandemic significantly impacted the DC-DC converter market, disrupting global supply chains, production, and demand. Manufacturing delays and labor shortages affected production capabilities, while economic uncertainty led to reduced investments in industries relying on DC-DC converters, such as automotive and electronics. However, as recovery progresses, the demand for energy-efficient solutions and renewable energy systems is driving market growth, especially in electric vehicles and telecommunications sectors.

The isolated segment is expected to be the largest during the forecast period

The isolated segment is expected to account for the largest market share during the forecast period, due to its reliability, efficiency, and versatility of power conversion systems. Isolated DC-DC converters improve safety by providing electrical isolation between input and output, protecting sensitive components from voltage surges or faults. This segment's growth supports diverse applications, including industrial automation, telecommunications, and renewable energy, driving demand for high-performance, scalable power solutions across various sectors.

The medical segment is expected to have the highest CAGR during the forecast period

Over the forecast period, the medical segment is predicted to witness the highest growth rate, due to demand for reliable, efficient power management solutions for medical devices. As healthcare technologies advance, devices such as portable monitors, imaging systems, and diagnostic equipment require stable power conversion for enhanced performance and patient safety. DC-DC converters are integral in ensuring that medical devices operate with high efficiency, reliability, and low power loss, thus improving healthcare delivery and fostering innovation in medical device design.

Region with largest share:

During the forecast period, the Asia Pacific region is expected to hold the largest market share due to demand for efficient power solutions in industries like automotive, electronics, and renewable energy. With advancements in technology, DC-DC converters are becoming more compact, reliable, and energy-efficient, enabling enhanced performance in electric vehicles, industrial automation, and consumer electronics. This growth is further fueled by the region's rapid industrialization, and a

focus on reducing energy consumption, contributing to economic development and sustainability.

Region with highest CAGR:

Over the forecast period, the North America region is anticipated to exhibit the highest CAGR, owing to demand for efficient power conversion in various industries such as telecommunications, automotive, and renewable energy. The adoption of electric vehicles, along with advancements in renewable energy systems, is fueling the demand for high-performance DC-DC converters. Additionally, the rise in data centers and the need for energy-efficient solutions further propel market growth, making North America a key region for innovation and expansion in power management technologies.

Key players in the market

Some of the key players profiled in the DC-DC Converter Market include Texas Instruments Inc., Vicor Corporation, Murata Manufacturing Co., Ltd., TDK-Lambda Corporation, Delta Electronics, Inc., RECOM Power GmbH, Traco Power, Infineon Technologies AG, Flex Power Modules, ABB Ltd., Analog Devices, Inc., Artesyn Embedded Power, ROHM Semiconductor, Bel Fuse Inc., Crane Aerospace & Electronics, XP Power, Monolithic Power Systems, Mean Well Enterprises Co., Ltd., Cincon Electronics Co., Ltd. and SynQor, Inc.

Key Developments:

In March 2025, ABB has entered into a Leveraged Procurement Agreement (LPA) with Dow to serve as the automation partner for Dow's Path2Zero ethylene complex in Fort Saskatchewan, Alberta, Canada. This collaboration aims to support Dow's ambitious goal of creating the world's first net-zero Scope 1 and 2 greenhouse gas emissions ethylene and derivatives complex.

In March 2025, ABB and Charbone Hydrogen Corporation have signed a Memorandum of Understanding (MoU) to develop up to 15 modular and scalable green hydrogen production facilities across North America over the next five years.

In January 2025, ABB and Agilent Technologies have entered into a collaboration aimed at advancing laboratory automation. This partnership combines Agilent's expertise in analytical instrumentation and laboratory software with ABB's advanced robotics, targeting industries such as pharmaceuticals, biotechnology, energy, and food

and beverage.

Products Covered:

Isolated

Non-Isolated

Input Voltages Covered:

200v

Output Voltages Covered:

24v

Output Powers Covered:

0.5-9W

10-29W

30-99W

100-250W

250-500W

500-1000W

>1000W

Form Factors Covered:

SIP

DIP

DIN Rail

Box

Chassis Mount

Discrete

Brick

Applications Covered:

Telecommunication

Automotive

Industrial Robots

Service Robots

Aerospace and Defense

Medical

Railway

Server, Storage and Network

Consumer Electronics

Energy and Power

Marine

Other Applications

Regions Covered:

North America

US

Canada

Mexico

Europe

Germany

UK

Italy

France

Spain

Rest of Europe

Asia Pacific

Japan

China

India

Australia

New Zealand

South Korea

Rest of Asia Pacific

South America

Argentina

Brazil

Chile

Rest of South America

Middle East & Africa

Saudi Arabia

UAE

Qatar

South Africa

Rest of Middle East & Africa

What our report offers:

- Market share assessments for the regional and country-level segments
- Strategic recommendations for the new entrants
- Covers Market data for the years 2022, 2023, 2024, 2026, and 2030
- Market Trends (Drivers, Constraints, Opportunities, Threats, Challenges, Investment Opportunities, and recommendations)
- Strategic recommendations in key business segments based on the market estimations
- Competitive landscaping mapping the key common trends
- Company profiling with detailed strategies, financials, and recent developments
- Supply chain trends mapping the latest technological advancements

Free Customization Offerings:

DC-DC Converter Market Forecasts to 2032 – Global Analysis By Product (Isolated and Non-Isolated), Input Volta...

All the customers of this report will be entitled to receive one of the following free customization options:

Company Profiling

Comprehensive profiling of additional market players (up to 3)

SWOT Analysis of key players (up to 3)

Regional Segmentation

Market estimations, Forecasts and CAGR of any prominent country as per the client's interest (Note: Depends on feasibility check)

Competitive Benchmarking

Benchmarking of key players based on product portfolio, geographical presence, and strategic alliances

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