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Global Solid–Liquid Hybrid Capacitor Supply, Demand and Key Producers, 2026-2032

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Abstracts

The global Solid–Liquid Hybrid Capacitor market size is expected to reach $ 1191 million by 2032, rising at a market growth of 7.9% CAGR during the forecast period (2026-2032).

In 2025, the global solid–liquid hybrid capacitor market is estimated at approximately 4.67 billion units, with an average selling price of around USD 0.15 per unit (approximately RMB 1.1 per unit). Solid–liquid hybrid capacitors combine the advantages of solid polymer capacitors and liquid electrolytic capacitors, typically using conductive polymers as the primary electrolyte with a small amount of liquid electrolyte. This enables low ESR, excellent high-frequency performance, and strong thermal stability, while significantly improving lifetime and reliability. These products are widely used in electric vehicles, power management systems, ICT equipment, industrial electronics, and high-reliability applications. The structure includes aluminum electrode systems, conductive polymer systems, auxiliary electrolyte systems, separator paper, and packaging structures, with variations in temperature resistance, lifetime, and vibration resistance. Mainstream products are typically rated up to 135°C, with ongoing development toward capabilities exceeding 200°C.

Solid–liquid hybrid capacitors are currently in a critical transition phase, moving from the technology introduction stage toward large-scale expansion. Their growth logic is not driven by a single industry, but by the superposition of three structural forces that together form an explosive demand curve.First, the rapid development of new energy vehicles (NEVs) is the most fundamental and core demand driver at present, accounting for more than 60% of total demand. More importantly, beyond incremental demand, a substitution effect is accelerating: many application scenarios that previously used solid capacitors are systematically shifting toward hybrid capacitors. At the same time, the

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increasing complexity of EV electronic and electrical architectures (including electric drive, power control, BMS, and OBC systems) is further raising requirements for low ESR, high reliability, and high temperature stability, making hybrid capacitors an important upgrade component in onboard power systems. Therefore, EVs are not only the largest market but also the most stable and deterministic underlying demand engine.The second key driver comes from AI data center servers, which is widely regarded as the most explosive variable for the industry after 2026. Starting from April 2026, demand for hybrid capacitors in AI servers is expected to be released at scale. Industry expectations suggest that a single leading platform (such as the NVIDIA ecosystem) may reach monthly procurement levels of around 15 million units (15KK). If AI server demand is fully unlocked, the total market size could reach 3–5 times that of the EV sector. This view has already been partially validated in the industry, as server OEMs in Taiwan and mainland China have begun large-scale adoption and ordering. Therefore, AI demand is no longer a forward-looking assumption but an ongoing structural expansion. The period from 2026 to 2032 is expected to be the most critical growth window, potentially reshaping the overall demand structure and making servers the second or even primary application segment after EVs.The third long-term driver is 6G communication infrastructure. Although large-scale deployment of 6G base stations and related equipment has not yet begun, the technological evolution path is already clear. Future base station upgrades and new deployments are expected to generate demand comparable to that of the EV sector. This segment has a longer cycle but extremely large scale, making it a typical infrastructure-level long-term growth driver.In addition to these three core drivers, demand from medical devices, consumer appliances, military systems, robotics, low-altitude economy (such as heavy-duty drones), and high-end industrial equipment is also steadily increasing. In particular, in high-temperature, high-voltage, vibration-resistant, and high-reliability environments, the substitution of traditional solid capacitors by hybrid capacitors is becoming increasingly evident. Although these segments are smaller individually compared to automotive and servers, together they form a “high-reliability long-tail demand” that continuously expands the industry boundary.On the supply side, the industry has rapidly expanded from fewer than 10 companies in the early stage to around 65 participants today. A large number of aluminum electrolytic capacitor and solid capacitor manufacturers are accelerating their entry, leading to intensified competition and structural expansion. Prices have declined rapidly from approximately RMB 10 at automotive-grade level to around RMB 1.5, with further potential decline to RMB 0.5 or even RMB 0.2 in the future. This process is fundamentally driven by scale expansion, intensifying competition, and process maturity. However, it is important to note that the current core competition is still not price-based, but centered on performance stability, process capability, and rapid engineering adaptability.The industry is generally dominated by

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Japanese and Chinese players, with manufacturing and demand concentrated in East Asia, particularly China. European and US markets mainly focus on high-value applications such as automotive, medical, and high-end servers. The sales structure is dominated by direct sales (around 70%), with distributors accounting for about 30%, playing an important role in small-batch and multi-SKU supply. Due to the low unit price but extremely high cost of failure, customers generally prioritize quality over price and tend to adopt a multi-supplier strategy (typically 2–3 suppliers) for joint development and supply stability.From a technological evolution perspective, the industry continues to break through material system and process boundaries. Cost reductions in key raw materials such as electrolytes, separator paper, and polymers, combined with process improvements, are continuously enhancing product performance. In the future, temperature resistance is expected to exceed 200°C, enabling broader applications in aerospace, satellites, racing, and ultra-high-end servers. At the same time, due to rapid model iteration and frequently changing customer parameters, companies face extremely high requirements for process adaptability and R&D responsiveness, and not all suppliers are able to keep pace with such dynamic demand.Overall, solid–liquid hybrid capacitors have evolved from a single automotive electronics upgrade component into a foundational electronic component upgrade track driven jointly by NEVs, AI servers, and 6G infrastructure. Over the next 5–10 years, the industry is expected to experience sustained expansion and structural transformation.

This report studies the global Solid–Liquid Hybrid Capacitor production, demand, key manufacturers, and key regions.

This report is a detailed and comprehensive analysis of the world market for Solid–Liquid Hybrid Capacitor and provides market size (US$ million) and Year-over-Year (YoY) Growth, considering 2025 as the base year. This report explores demand trends and competition, as well as details the characteristics of Solid–Liquid Hybrid Capacitor that contribute to its increasing demand across many markets.

Highlights and key features of the study
Global Solid–Liquid Hybrid Capacitor total production and demand, 2021-2032, (Million Units)
Global Solid–Liquid Hybrid Capacitor total production value, 2021-2032, (USD Million)
Global Solid–Liquid Hybrid Capacitor production by region & country, production, value, CAGR, 2021-2032, (USD Million) & (Million Units), (based on production site)
Global Solid–Liquid Hybrid Capacitor consumption by region & country, CAGR, 2021-2032 & (Million Units)
U.S. VS China: Solid–Liquid Hybrid Capacitor domestic production, consumption, key

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domestic manufacturers and share
Global Solid–Liquid Hybrid Capacitor production by manufacturer, production, price, value and market share 2021-2026, (USD Million) & (Million Units)
Global Solid–Liquid Hybrid Capacitor production by Type, production, value, CAGR, 2021-2032, (USD Million) & (Million Units)
Global Solid–Liquid Hybrid Capacitor production by Application, production, value, CAGR, 2021-2032, (USD Million) & (Million Units)

This report profiles key players in the global Solid–Liquid Hybrid Capacitor market based on the following parameters - company overview, production, value, price, gross margin, product portfolio, geographical presence, and key developments. Key companies covered as a part of this study include Panasonic, Nippon Chemi-Con, TAIYO YUDEN-ElNA, Nichicon, TDK Electronics, Lelon Electronics, Zhuhai Gree Xinyuan Electronic, Nantong Jianghai Capacitor, Hunan Aihua Group, SUN Electronic Industries, etc.

This report also provides key insights about market drivers, restraints, opportunities, new product launches or approvals.

Stakeholders would have ease in decision-making through various strategy matrices used in analyzing the World Solid–Liquid Hybrid Capacitor market

Detailed Segmentation:

Each section contains quantitative market data including market by value (US$ Millions), volume (production, consumption) & (Million Units) and average price (US$/Unit) by manufacturer, by Type, and by Application. Data is given for the years 2021-2032 by year with 2025 as the base year, 2026 as the estimate year, and 2027-2032 as the forecast year.

Global Solid–Liquid Hybrid Capacitor Market, By Region:

United States

China

Europe

Japan

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South Korea

ASEAN

India

Rest of World

Global Solid–Liquid Hybrid Capacitor Market, Segmentation by Type:

Automotive Grade

Industrial Grade

Global Solid–Liquid Hybrid Capacitor Market, Segmentation by Load Life:

?2000H

2000-5000H

10000H

>10000H

Global Solid–Liquid Hybrid Capacitor Market, Segmentation by Voltage:

?25v

25-35V

35-55v

?55v

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Global Solid–Liquid Hybrid Capacitor Market, Segmentation by Capacitance:

?220uf

220-330uf

330-470Uf

?470Uf

Global Solid–Liquid Hybrid Capacitor Market, Segmentation by Application:

New Energy Vehicles (NEVs)

ICT

Medical Devices

Photovoltaics (PV)

Others

Companies Profiled:

Panasonic

Nippon Chemi-Con

TAIYO YUDEN-ElNA

Nichicon

TDK Electronics

Lelon Electronics

Zhuhai Gree Xinyuan Electronic

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Nantong Jianghai Capacitor

Hunan Aihua Group

SUN Electronic Industries

Shanghai Yongming Electronic

DongGuan ChuangHui Electronics

Su'scon

Kaimei Electronic

Vishay

Samwha Electric

SAMYOUNG Electronic

Capxon Electronic Technology

Shenzhen PolyCap Electronic

Shenzhen Jianghao Electronics

Zhao Qing Beryl Electronic Technology

Zhuhai Leaguer Capacitor

Nanjing Xingfan Electronic Technology

APAQ

KNSCHA ELECTRONICS

Zhaoqing Ruilong Electronics

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Dongguan HEC Tech R&D

Changzhou Huawei Electronics

Man Yue Technology Holdings

EATON

KYOCERA AVX

VinaTech

Taiwan Chinsan Electronic Industrial

Toshin Kogyo

Cornell Dubilier

Jarson Group

jb Capacitors Company

W?rth Elektronik

Guangdong FOLLON Electronics Technology

Guangdong Fenghua Advanced Technology

Guizhou Yunrui Electronic Technology

Dongguan Honor Electronics

Dongguan Chengtao Electronics

Key Questions Answered:
1. How big is the global Solid–Liquid Hybrid Capacitor market?
2. What is the demand of the global Solid–Liquid Hybrid Capacitor market?
3. What is the year over year growth of the global Solid–Liquid Hybrid Capacitor

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market?
4. What is the production and production value of the global Solid–Liquid Hybrid Capacitor market?
5. Who are the key producers in the global Solid–Liquid Hybrid Capacitor market?
6. What are the growth factors driving the market demand?

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