Semiconductor Logistics - Market Share Analysis, Industry Trends & Statistics, Growth Forecasts (2025 - 2030)

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Report description:

The Semiconductor Logistics Market size is estimated at USD 79.32 billion in 2025, and is expected to reach USD 125.60 billion by 2030, at a CAGR of 9.72% during the forecast period (2025-2030).

Key Highlights
- The market is driven by the huge demand for semiconductors from different segments. Furthermore, the market is driven by the huge opportunities in logistics improvement to cater to the manufacturing and supply chain in the semiconductor industry.
- As the world embraces digitization, semiconductors are becoming pivotal to our aspirations and accomplishments. Presently advanced chips empower us like never before, driving innovation across diverse domains. Take, for instance, modern vehicles, now equipped with 3,500 to 4,000 individual semiconductors, showcasing capabilities previously deemed unattainable. Furthermore, digital technology is not only augmenting healthcare services but also bolstering the efforts of medical professionals.
- With advancements in artificial intelligence, autonomous driving, and industrial automation, the demand for chips is set to skyrocket, propelling global semiconductor revenue to an anticipated USD 1 trillion by 2030. The semiconductor landscape is inherently global, characterized by the intricate design and production of chips. Crafting a single chip involves over 1,000 distinct processing steps, covering a staggering 25,000 miles, crossing 70 borders, and spanning 12 countries. This industry stands out, demanding unparalleled investments in R&D and capital expenditure. Past chip shortages and disruptions in the semiconductor supply chain have underscored the significance of these products. Such challenges have swiftly elevated the semiconductor sector to a strategic status, leading to an unmatched surge in manufacturing capacity.
- The future of semiconductor companies is dependent on finding a way to compete with logistical challenges as a signal that drastic action is required. Because the demand for semiconductors is only going to increase, those who can get them to end users more efficiently will be the ones to benefit the most in the coming years. The semiconductor value chain is unusually complex,

relying on a global network of material and equipment suppliers. This makes efficient supply chain management extremely difficult, resulting in excess stock and routine bottlenecks. A good example is freight management. Freight issues, ranging from port congestion to container shortages, can result in longer lead times and longer shipment delays. Other factors influencing the supply chain include humidity, shock impact, and theft. But without precise data on the progress of shipments and GPS tracking, leaders are often left operating in the dark.

Semiconductor Logistics Market Trends

Increasing demand for semiconductor driven by the Automotive Industry

Presently vehicles, from their safety systems to powertrains and infotainment features, are increasingly dependent on semiconductors. Estimates indicate that modern cars now contain between 1,400 and 1,500 chips, with The New York Times highlighting instances of counts reaching up to 3,000. The phrase "cars are computers on wheels" has become a common refrain, echoed by numerous tech and automotive executives. This rising trend isn't solely attributed to a chip shortage; it's also driven by significant shifts within the automotive sector. The industry's clear pivot towards electrification is underscored by a notable rise in electric and hybrid vehicles. In 2023, global registrations for new electric cars approached 14 million, bringing the total on the roads to 40 million. This aligns closely with the sales projections from the 2023 edition of the Global EV Outlook (GEVO-2023). Remarkably, 2023 witnessed a 3.5 million surge in electric car sales over 2022, translating to a robust 35% year-on-year growth. In the U.S., 2023 saw 1.4 million new electric car registrations, marking an increase of over 40% from 2022. While the annual growth rate in 2023 was more tempered than in the two prior years, both the demand for electric cars and the absolute growth figures remained robust. Such transformations in the automotive domain have profound implications for the semiconductor industry. Reports suggest that electric vehicles necessitate more advanced electronic components than their traditional internal combustion engine (ICE) counterparts.

Similarly, autonomous vehicles share this requirement. While the timeline for achieving Level 4 (L4) or Level 5 (L5) autonomy is still ambiguous, the path to get there demands a multitude of sensors and electronic components. As the need for enhanced computational power and data storage grows, so does the requirement for a higher number of control and storage chips. Furthermore, as driving autonomy advances, the appetite for sophisticated sensor chips intensifies. This trend is particularly pronounced in China, where vehicles not powered by internal combustion engines are anticipated to utilize a notably higher chip count than their ICE counterparts.

Increasing use of advanced technology and value-added services driving the market

Key decisions in the semiconductor industry often lack the necessary insight due to limited visibility in the supply chain and logistics. As truck markets fragment and shipping container costs rise, leaders must evaluate their options and weigh different courses of action. Achieving this level of insight hinges on centralized, reliable real-time data. While 83% of businesses now recognize transportation blockade risks more acutely than pre-pandemic, the challenge remains: identifying the right technology for enhanced visibility. The pandemic underscored the disruptive potential of singular events, sending shockwaves through the entire semiconductor supply chain. This underscores the paramount importance of supply chain flexibility - the agility to modify material purchases, production rates, and transportation capacity in response to demand. Yet, recognizing and acting on this need proves to be a formidable challenge.

Another pressing concern is the overreliance on singular partners within semiconductor supply chains. To bolster their supply chain resilience, semiconductor firms must diversify their partnerships, be it with material suppliers, manufacturing bases, or freight providers. However, broadening this access isn't straightforward, especially given the hidden biases prevalent among many brokers. Consequently, leaders face a choice: either traverse these intricate markets independently or collaborate with a

partner who can offer unbiased connections to providers. Trust emerges as another pivotal concern: achieving flexibility demands reliable partners who adhere to regulations. This necessitates either rigorous due diligence or the selection of a partner who can transparently shoulder this responsibility.

Semiconductor Logistics Industry Overview

The Semiconductor Logistics Market is highly competitive and fragmented with a large number of local, regional and a few global players penetrating the market. Major players are DHL, Nippon Express, Yusen Logistics, DB Schenker, Kuehne+Nagel, and many more. The use of proper and advanced technology to bring clarity in the semiconductor supply chain and logisitcs is going to bring a difference between the companies. Global players hold a good share in this market due to availibility of services compared to the regional and local players.

Additional Benefits:

- The market estimate (ME) sheet in Excel format
- 3 months of analyst support

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