

Micro Inverter - Market Share Analysis, Industry Trends & Statistics, Growth Forecasts (2025 - 2030)

Market Report | 2025-04-28 | 120 pages | Mordor Intelligence

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Report description:

The Micro Inverter Market size is estimated at USD 3.77 billion in 2025, and is expected to reach USD 9.27 billion by 2030, at a CAGR of 19.7% during the forecast period (2025-2030).

The factors like enabling module-level monitoring, easier installation, enhanced design flexibility, removing the need for DC switching points, and better safety than conventional inverters are some factors that are fueling the growth of the micro inverter market.

Key Highlights

- Constant R&D activities and significant reductions in the costs of microinverters drive the micro inverter market. Furthermore, the market also receives a considerable boost due to its compact size and versatility. Additionally, the increasing requirement of consumers, based on modularity, safety, and maximum energy harvest, will continue to drive the market at a considerable pace in the forecast period.
- The demand for micro inverters has enabled companies to develop increased battery storage. In April 2022, energy storage provider Yotta Energy, Austin, Texas, announced that it had been awarded a USD 1.97 million contract to install a solar + storage microgrid at Nellis Air Force Base in Las Vegas.
- Due to the varying use of micro inverters, they are widely adopted worldwide. They provide various benefits such as design flexibility and capabilities like producing the maximum power from solar panels through maximum power point tracking (MPPT) technology. These factors have helped the micro-inverter market gain an advantage over other inverters in residential and commercial applications.
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The company believes batteries are headed in the same direction: module-level microstorage. The business is deploying a 52lb, 1kWh lithium-iron-phosphate battery on the same solar module racking gear, which holds the ballast.

- Worldwide renewable electricity capacity is predicted to expand by more than 60% from 2020 to over 4,800 (GW) by 2026, equalling the total global power capacity of fossil fuels and nuclear power combined, according to the International Energy Agency (an intergovernmental agency).

Micro Inverter Market Trends

Residential Segment to Drive the Market Growth

- The increasing adoption of solar photovoltaics in the residential sector in countries such as the United States and Canada is primarily driven by expected savings in electricity costs, the need for an alternative source of electricity, and the desire to mitigate climate change risk. Therefore, boosting the growth opportunities for the micro inverter market.
- During the forecast period, the share of the rooftop solar PV is expected to increase, on account of decreasing solar PV costs, supportive government policies for residential solar PV, FIT programs and incentives, and targets set by various governments for solar energy are some of the critical factors that are driving the micro inverter market.
- The majority of micro-inverter businesses throughout the world provide single-phase devices. Furthermore, considerable demand is observed globally because single-phase power transmission is best adapted for domestic applications, which is likewise among the primary marketplaces for micro-inverters. For example, the residential sector relies on single-phase power transmission in the United States and Europe.
- Continuous technological improvements, including higher solar PV module efficiencies, drive cost reductions. The industrialization of these highly modular technologies has yielded impressive benefits, from economies of scale and greater competition to improved manufacturing processes and supply chains, further accelerating the micro-inverter market growth.

Asia-Pacific to Register Highest Market Growth

- Asia-Pacific is expected to be the fastest-growing market for micro-inverters over the study period. Several countries, such as China, Japan, India, and Australia, are striving to boost their solar PV installation capacity through advanced solar PV systems that could, in turn, enhance electric stability.
- Asia-Pacific has several micro-inverter installations for residential, commercial, and PV power plant applications. Japan and Australia have been the major adopters of micro-inverter technology. Additionally, the growth in residential rooftop solar PV installations in India and Japan encourages manufacturers to cater to the needs of potential customers in this region.
- In countries such as India, China, and Japan, respective governments have laid regulations, reforms, and initiatives for modernizing the power sector.
- In India, the residential PV installation cost is estimated to be USD 1000 per KW, which is higher when compared to its commercial counterpart (USD 692 per KW). However, the Indian installation costs are cheaper than the global average for both residential (USD 1638 per KW) and commercial (USD 1379 per KW). These factors fuel the market growth in the region.
- India is also set to impose a 20% levy on imported solar module cells and inverters in 2021, replacing the current safeguard duty. The levy was proposed by the Indian power minister during a call with industry representatives, confirming that the Prime Minister of India intended to impose a Basic Custom Duty (BCD) of 20% on imports.

Micro Inverter Industry Overview

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The micro-inverter market is highly fragmented, and the major players such as Enphase Energy Inc., Altenergy Power System Inc., DARFON, ABB Ltd, and Siemens AG, among others. These market players are using strategies such as new product launches, expansions, partnerships, acquisitions, and others to increase their footprints in this market.

- April 2022 - Yotta Energy announced obtaining USD 3.5 million in new capital, bringing its total Series A funding to USD 16.5 Million. Yotta's total funding is now over USD 25.5 million due to the current funding round and award.
- October 2021 - Enphase Energy, Inc., the world's premier microinverter-based solar and battery system manufacturer, unveiled the Enphase Energy System with IQ8™ solar microinverters for clients in North America. IQ8 is Enphase's most advanced microinverter to date. Unlike rival gadgets, IQ8 can build a microgrid using sunlight throughout a power outage, delivering backup energy without a battery.

Additional Benefits:

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

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