

Global DC Optimizer Supply, Demand and Key Producers, 2023-2029

<https://marketpublishers.com/r/G3C942EC9625EN.html>

Date: August 2023

Pages: 95

Price: US\$ 4,480.00 (Single User License)

ID: G3C942EC9625EN

Abstracts

The global DC Optimizer market size is expected to reach \$ 6948.1 million by 2029, rising at a market growth of 26.0% CAGR during the forecast period (2023-2029).

Global 5 largest manufacturers of DC Optimizer are SolarEdge, Huawei, Tigo, Ampt and GNE, which make up over 95%. Among them, SolarEdge is the leader with about 85% market share.

Europe is the largest market, with a share over 50%, followed by Americas and Asia Pacific, with the share about 40% and 6%. In terms of product type, Module-level Optimizers occupy the largest share of the total market, over 97%. And in terms of application, the largest application is Residential, followed by Commercial and Industrial.

A DC Optimizer (power optimizer) is a DC to DC converter technology developed to maximize the energy harvest from solar photovoltaic or wind turbine systems. They do this by individually tuning the performance of the panel or wind turbine through maximum power point tracking, and optionally tuning the output to match the performance of the string inverter (DC to AC inverter). Power optimizers are especially useful when the performance of the power generating components in a distributed system will vary widely, such as due to differences in equipment, shading of light or wind, or being installed facing different directions or widely separated locations.

A Power Optimizer is a DC-to-DC converter installed at the output of each module in the PV system. This device uses an MPPT technique considering the I-V curve, to improve performance on a module level. Unlike microinverters, power optimizers do not convert DC power into AC, which is why they require a string inverter to operate in what is

known an optimized string inverter configuration.

Optimizers turn each PV module in the system into smart-modules. These devices can set the voltage for the whole string, increasing the flexibility and size of the system, while also providing monitoring for each module. Some power optimizers include a SafeDC feature that brings down DC voltage to safe levels during power outages in grid-tied PV systems.

If partial shade is cast over the panel with the optimizer installed, the optimizer will increase the panel's voltage while reducing the current. As already know, the voltage stays the same in a series string, and the currents add up.

The statistics in this report include module-level power optimizers and string-level power optimizers, excluding optimizer modules integrated in inverters, and excluding sub-module-level power optimizers.

This report studies the global DC Optimizer production, demand, key manufacturers, and key regions.

This report is a detailed and comprehensive analysis of the world market for DC Optimizer, and provides market size (US\$ million) and Year-over-Year (YoY) Growth, considering 2022 as the base year. This report explores demand trends and competition, as well as details the characteristics of DC Optimizer that contribute to its increasing demand across many markets.

Highlights and key features of the study

Global DC Optimizer total production and demand, 2018-2029, (MW)

Global DC Optimizer total production value, 2018-2029, (USD Million)

Global DC Optimizer production by region & country, production, value, CAGR, 2018-2029, (USD Million) & (MW)

Global DC Optimizer consumption by region & country, CAGR, 2018-2029 & (MW)

U.S. VS China: DC Optimizer domestic production, consumption, key domestic manufacturers and share

Global DC Optimizer production by manufacturer, production, price, value and market share 2018-2023, (USD Million) & (MW)

Global DC Optimizer production by Type, production, value, CAGR, 2018-2029, (USD Million) & (MW)

Global DC Optimizer production by Application production, value, CAGR, 2018-2029, (USD Million) & (MW).

This reports profiles key players in the global DC Optimizer 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 SolarEdge, Huawei, Tigo, Ampt, Ferroamp, Alencon Systems, GNE and Fonrich, etc.

This report also provides key insights about market drivers, restraints, opportunities, new product launches or approvals, COVID-19 and Russia-Ukraine War Influence.

Stakeholders would have ease in decision-making through various strategy matrices used in analyzing the World DC Optimizer market.

Detailed Segmentation:

Each section contains quantitative market data including market by value (US\$ Millions), volume (production, consumption) & (MW) and average price (US\$/W) by manufacturer, by Type, and by Application. Data is given for the years 2018-2029 by year with 2022 as the base year, 2023 as the estimate year, and 2024-2029 as the forecast year.

Global DC Optimizer Market, By Region:

United States

China

Europe

Japan

South Korea

ASEAN

India

Rest of World

Global DC Optimizer Market, Segmentation by Type

Module-level Optimizers

String-level Optimizers

Global DC Optimizer Market, Segmentation by Application

Residential

Commercial and Industrial

Utility-Scale

Companies Profiled:

SolarEdge

Huawei

Tigo

Ampt

Ferroamp

Alencon Systems

GNE

Fonrich

Key Questions Answered

1. How big is the global DC Optimizer market?
2. What is the demand of the global DC Optimizer market?
3. What is the year over year growth of the global DC Optimizer market?
4. What is the production and production value of the global DC Optimizer market?
5. Who are the key producers in the global DC Optimizer market?
6. What are the growth factors driving the market demand?

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