Gate Driver IC Market: Global Industry Trends, Share, Size, Growth, Opportunity and Forecast 2023-2028

Market Report | 2023-09-04 | 144 pages | IMARC Group

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Report description:

Market Overview:

The global gate driver IC market size reached US$ 1.4 Billion in 2022. Looking forward, IMARC Group expects the market to reach US$ 2.0 Billion by 2028, exhibiting a growth rate (CAGR) of 5.8% during 2023-2028.

A gate driver IC is a power amplifier that accepts a low-power input from a controller IC and generates the necessary high-current gate drive for power devices. It enhances the performance of external power transistor gates that are used to supply current to an electric motor. It serves as a link between the logic level control inputs and the power metal-oxide-semiconductor field-effect transistors (MOSFETs). It is robust and flexible for offering an intelligent solution to drive the power semiconductor efficiently and ensuring minimal internal resistance to the transistor. Apart from this, it provides several advantages like reducing switching losses in the load transistor, decreasing its switching time, and driving the transistor into the conductive and non-conductive states.

Gate Driver IC Market Trends:
The growing traction of smart homes among individuals across the globe represents one of the key factors driving the market. Moreover, there is a rise in the demand for high voltage devices in the residential and commercial sectors. This, along with the increasing electrification of automobiles to replace gasoline vehicles with an electric powertrain, is propelling the growth of the market. In addition, there is a rise in the utilization of transistors in different renewable energy systems for amplifying, controlling, and generating electrical signals. This, coupled with the growing initiatives by governments of several countries to use renewable energy sources such as tidal, solar, and wind power, is positively influencing the market. Besides this, the increasing implementation of smart grids for effective power management is offering lucrative growth opportunities to industry investors. Additionally, key market players are extensively investing in research and development (R&D) activities to introduce a slimmer version of gate driver IC and decrease the size of consumer goods, which is bolstering the growth of the market.

Key Market Segmentation:
IMARC Group provides an analysis of the key trends in each sub-segment of the global gate driver IC market report, along with forecasts at the global, regional and country level from 2023-2028. Our report has categorized the market based on transistor type, semiconductor material, mode of attachment, isolation technique and application.

Breakup by Transistor Type:

MOSFET
IGBT

Breakup by Semiconductor Material:

Si
SiC
GaN

Breakup by Mode of Attachment:

On-Chip
Discrete

Breakup by Isolation Technique:

Magnetic Isolation
Capacitive Isolation
Optical Isolation

Breakup by Application:

Residential
Industrial
Commercial

Breakup by Region:

North America
United States
Canada
Asia-Pacific
China
Japan
India
South Korea
Australia
Indonesia
Others

Europe
Germany
France
United Kingdom
Italy
Spain
Russia
Others
Latin America
Brazil
Mexico
Others
Middle East and Africa
Competitive Landscape:
The competitive landscape of the industry has also been examined along with the profiles of the key players being Hitachi Power Semiconductor Device Ltd. (Hitachi Ltd.), Infineon Technologies AG, Microchip Technology Inc., Mouser Electronics (TTI Inc., Berkshire Hathaway Inc.), NXP Semiconductors N.V., Onsemi, Renesas Electronics Corporation, Rohm Semiconductor, Semtech Corporation, STMicroelectronics, Texas Instruments Incorporated and Toshiba Corporation.

Key Questions Answered in This Report:
How has the global gate driver IC market performed so far and how will it perform in the coming years?
What has been the impact of COVID-19 on the global gate driver IC market?
What are the key regional markets?
What is the breakup of the market based on the transistor type?
What is the breakup of the market based on the semiconductor material?
What is the breakup of the market based on the mode of attachment?
What is the breakup of the market based on the isolation technique?
What is the breakup of the market based on the application?
What are the various stages in the value chain of the industry?
What are the key driving factors and challenges in the industry?
What is the structure of the global gate driver IC market and who are the key players?
What is the degree of competition in the industry?

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