

GaN Power Devices Market- Global Industry Size, Share, Trends, Opportunities, and Forecast 2018-2028. Segmented By Device Type (Power Vs RF Power), By Voltage Range (600 Volt), By Application (Power Drivers, Supply & Inverter & Radio Frequency), By End User (Telecommunication, Industrial, Automotive, Renewables, Consumer & Enterprise, Military Defense and Aerospace & Medical), By Region, Competition

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Abstracts

GaN Power Devices Market is expected to increase during the forecast period owing to the factors such as decreasing prices of GaN devices, growing use of wireless charging, and increasing sustainability of GaN in RF applications.

GaN (Gallium Nitride) is a composite semiconductor material used in next-generation power devices. It is anticipated to see wide adoption due to its enhanced properties over silicon devices, such as tremendous high-frequency characteristics. Moreover, due to its higher switching properties and lower ON resistance than silicon devices, GaN devices are projected to contribute to lower power consumption and greater miniaturization of various power supplies and the miniaturization of peripheral components.

Increase in Need to Enhance Battlefield Performance in Defense Industry

Improved awareness regarding various defense equipment, such as radar, satellite, and missiles, to improve battlefield functioning, is considered an essential factor for the defense sector. Therefore, a high level of integration is essential between radar

communication systems and electronic warfare devices that are used in the military. The defense industry requires an enormously high level of long-term dependability for its missions. GaN power devices offers robust performance in critical environments for multiple applications including avionics systems, satellites, and combat vehicles. GaN power devices have majorly benefitted the defense industry owing to their high breakdown voltage and rapid heat dissipation capacity. In the military & defense sector, GaN material is primarily utilized in HEMT (High Electron Mobility Transistor), which is essential for high-frequency operations. Thus, the requirement for enhanced battlefield performance is likely to fuel the development of GaN power devices in the near future.

Increase in Installation of GaN Devices in Electric Vehicle

Power modules are a common feature of electric vehicles because they enable high voltage motor operation, which lowers current leakage between collector and emitter terminals and increases shifting frequency. Furthermore, power management devices are needed for the high voltage battery systems in both EVs and HEVs in order to handle the power from the battery to the motor drivers. As a result, there is an increase in the use of GaN devices, which in turn fuels market expansion. Additionally, the sales of electrical vehicles have significantly increased at this time. It is envisaged that this will present a profitable opportunity for market expansion.

Government Initiatives in HVDC and Smart Grid

High-voltage direct current (HVDC) electric power transmission systems and smart grids are two areas where GaN power devices are used. These have improved load balancing, a more flexible network topology, and real-time troubleshooting capabilities. High voltage can be controlled by power devices because it makes high frequency switching more effective. Modular multilevel converters (MMC), which reduce power loss, also employ power modules. In HVDC systems, converters using GaN power device modules are therefore frequently employed. Moreover, governments of many nations, including China, Japan, and the US, make significant investments in smart grid technology to upgrade their electrical networks. Therefore, it is expected that all of these factors will significantly fuel the expansion of the Global GaN Power Devices Market.

Market Segments

Global GaN Power Devices Market is segmented on the basis of device type, voltage range application, end user, and region. Based on device type, the market is further

segmented into power vs RF power. Based on voltage range, the market is segmented into \$\$\$200 Volt, 200-600 Volt & \$\$\$\$600 Volt. Based on application, the market is segmented into power drivers, supply & inverter & radio frequency. Based on end user, the market is segmented into telecommunication, industrial, automotive, renewables and others.

Market Players

Major market players in the Global GaN Power Devices Market are Efficient Power Conversion Corporation, NXP Semiconductors, GaN Systems, Wolfspeed, Inc., Infineon Technologies AG, EPISTAR Corporation, Rohm Co., Ltd., On Semiconductor Corporation, Qorvo, Inc, and MACOM Technology Solutions Holdings Inc.

Report Scope:

In this report, Global GaN Power Devices Market has been segmented into following categories, in addition to the industry trends which have also been detailed below:

GaN Power Devices Market, By Device Type:

Power

RF Power

GaN Power Devices Market, By Voltage Range:

\$\$\$200 Volt

200-600 Volt

\$\$\$\$600 Volt

GaN Power Devices Market, By Application:

Power Devices

Supply and Inverter

Radio Frequency

GaN Power Devices Market, By End User:

Telecommunication

Industrial

Automotive

Renewables

Consumer & Enterprise

Military Defense

Aerospace & Medical

GaN Power Devices Market, By Region:

North America

United States

Canada

Mexico

Europe

United Kingdom

Germany

France

Italy

Spain

Asia Pacific

China

Japan

South Korea

Australia

India

South America

Brazil

Argentina

Colombia

Middle East & Africa

Saudi Arabia

UAE

Iraq

South Africa

Competitive Landscape

Company Profiles: Detailed analysis of the major companies present in Global GaN Power Devices Market.

Available Customizations:

With the given market data, Tech Sci Research offers customizations according to a

GaN Power Devices Market- Global Industry Size, Share, Trends, Opportunities, and Forecast 2018-2028. Segmente...

company's specific needs. The following customization options are available for the report:

Company Information

Detailed analysis and profiling of additional market players (up to five).

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