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### **Report Information**

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# RF GaN Market Research Report - Global Forecast till 2027

Report / Search Code: MRFR/SEM/5017-CR Publish Date: July, 2019

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**Price** 1-user PDF: \$ 4950.0 Enterprise PDF: \$ 7250.0

#### **Description:**

### **RF GaN Market Overview:**

RF GaN Market is projected to expand at 21.6% CAGR over the forecast period (2018-2023), according to Market Research Future (MRFR) in its latest report.. According to the forecasting estimation report, the global **RF GaN Industry** is expected to show positive growth in the upcoming year.

With the increasing demands for IT and Telecommunication devices, the **RF GaN Market Size** tends to grow positively in the forecasted periods. Plus, the wide range of acceptance of power and energy applications leads to drive the **Global RF GaN Market** in the upcoming years till 2023. The developments and rise in the RF power amplifiers will also play a vital part in the international growth of the **RF GaN Market**.

Another factor that tends to rise the **GaN RF devices market** is the increasing demand for 5G technology and electric vehicles. However, the competitive market from silicon carbide (SiC) shows the chances of hampering the international market growth in the forthcoming years. It is expected that the market will hinder all the restraining factors and lead to an ultimate positive growth till the forecasted the year 2023.

### **RF GaN Market Covid 19 Analysis:**

The uncertain outbreak of the Covid 19 pandemics has led to hinder the growth of several industrial markets and the **RF GaN Industry** is one of them. The strict implementation of lockdown during the pandemics in almost every nation affected the import and export events of RF Gan. Covid 19 pandemics directly affected the demand and production and disrupted the market and supply chain that hampers the international **RF GaN Market size.** 

Another effect is the financial impacts on the financial markets and enterprises that hinder international growth. However, the **RF GaN Market Analysis** depicts that the international market will provide compensable predictions for the producers after the Covid 19 pandemics ends. The global market will steadily develop and will hinder all the restrictions in the forthcoming forecasting years.

#### **Market Dynamics:**

Market dynamics are the prime factors that influence the international market of any enterprise or organization. It includes a detailed analysis of market drivers, opportunities, restraints, challenges, and other important responsible factors.

#### **Drivers:**

The first and foremost driving factor that increases the global RFGallium nitride Industry is the increasing demands for IT and Telecommunication tools as well as the 5G Technologies. With an increasing demand in this sector, the market tends to rise with a positive growth rate in upcoming years. Another developing factor that will help the RF GaN manufacturers to boost their market is the wide-range adoption of energy and power applications during the forecast period. The development and acceptance of wireless technologies are other important factors that boost the international market.

According to the forecast report, the growth in RF power amplifiers and the adaption of electric vehicles will also drive the international **RF Gallium Nitride (GaN)** Market. Developments in defense equipment and tools also increase the need for high-power semiconductors such as **RF Gan Device Market**. These factors are the reasons for developing the market share in the forthcoming forecasting years.

#### **Opportunities:**

Growing demand for 5G technology and automation advancements are the vital factors that lead to the **RF Gan Market** opportunities. An increase in the use of transmitter circuits in a wide range of products and services is another factor of opportunity. The **RF** 

**GaN technology** offers higher frequencies and thus is it essential in the 5G and advance 4G systems too. Also, the growing demands for these devices in the defense industries act as an opportunity to increase the market share in the upcoming years.

#### **Restraints:**

The main restraining factor for the **RF GaN Market Size** is the huge competition from the Silicon Carbide technologies that can hamper the growth of the international market. Other important factors that hinder the positive effects in the international market are huge cost involvements in the raw materials. Moreover, the high-cost investments in the production processes are another restraining factor that hampers the development of the international market. Thus, it is essential to overcome these situations to gain international growth.

#### **Challenges:**

Despite several growth and benefits of **RF GaN Technology**, such as frequency and high power, some major technical challenges can hamper the growth. The **RF GaN companies** face problems in developing the GaN epitaxial films. In the native manufacturing process of GaN substrate, there is a need for another substrate of Heteroepitaxial development.

Due to the lack of thermal conductivity, the substrate materials become very critical during the manufacturing procedures. This can lead to framework disparity with the GaN and thus it is a major challenge.

#### **Cumulative Growth Analysis:**

The increasing demands for IT and telecommunications and 5G technologies will tend to rise the **RF GaN Market Share.** The market share is expected to grow with a compound annual growth of 19.71%. With this rapid growth percentage, the overall market share is expected to rise at 1,295.5 million US Dollars during the forecasting period 2023. Also, the need in the defense sectors will become another important factor leading to the growth and development of the international market.

#### **Value Chain Analysis:**

With an upsurge and development in IT and telecommunication and technological advancements, the need for **RF GaN technology** will also increase. The automation needs and the wide range acceptance of RF amplifiers and electric vehicles in the upcoming years will propel growth in the international market. The involvement of more wireless technology and its wide range acceptance will boost the market globally.

### **RF GaN Market Segment Overview:**

Several types of market segmentation are present in the **RF GaN Market growth** according to the market research. These are typically based on the material type, Device, region, and application.

## **By Material Type:**

- GaN-On-Silicon
- GaN-On-SiC

### By Device:

- Front End Modules
- HEMT
- Switches
- MMIC
- SART
- Others

#### By Region:

- North America
- South America
- Europe
- Asia Pacific

· Rest of the World

### By Application:

- Aerospace
- · Defense and Military
- IT and Telecommunication
- Wireless Infrastructure
- Others

#### **RF GaN Market Regional Analysis:**

According to the **RF GaN Market Analysis**, the regional analysis of the **RF GaN Market** covers North America, Europe, Asia Pacific, and the Rest of the World. It is estimated that North America will dominate the market during the forecast period as it consists of international **RF GaN companies.** It is the most contributing region in the market due to the huge demands in the defense and military sectors.

Also, the end-users of North America are well known for the updated**RF GaN Market Trends** and technologies in the market. There is also an expectation that the Asia Pacific region will show an increase in the CAGR of 22.82% during the forecast period. This is due to the increasing demands and wide-range acceptance of electric vehicles and 5G cellular networks in this region.

#### **RF GaN Market Competitive Landscape:**

The competitive landscapes depict the information about the rivalry among the key players in the **RF GaN Market growth.** The upcoming competitive industries and startups with their innovative technics and capabilities have offered to lead the global market development. The key players with their research and developments, collaborations, strategic partnerships, and achievements can attain a strong place in the market.

Some of the leading **RF GaN Market** Key players that offers competitive benefits to other players are as under:

- NXP Semiconductors NV
- STMicroelectronics NV
- Analog Devisces Inc.
- Cree Inc.
- Toshiba Corporation
- ROHM Semiconductors
- Aethercomm Inc.
- Microchip Corporation
- Qorvo Inc.
- Raytheon Company

### **Recent Developments:**

- October 2018: Texas Instruments had tossed a new portfolio of 600-V GaN FET, with power stages of 50 and 70 ohm that supports the 10 KW applications.
- **January 2020:** Qorvo had launched their wideband Power Amplifier with its high performance. The product is known as TGA 2962which is useful in electronic warfare, test applications, and radar.
- March 2020: STMicroelectronics NV had declared a contract that they will attain majority of stakes in the French GaN innovator Exagan.

• **July 2020:** Mitsubishi Electric Corporation developed an advanced technology that comprehends the GaN power amplifier module for 5G Base-stations. It provides an amalgamation of extra-high-power efficiency and a compact footprint that later on exceeds an uncertain rating of 43%.

### **Report Overview:**

Under this report, there is a detailed analysis of several market dynamics consisting of drivers, opportunities, challenges, restraints that leads to rising in the **RF GaN market.** Plus, the other factors that are mentioned in this research report are pandemics effects and market segmentation, etc. The resources used in the report are taken from primary and secondary sources.

# **Report Detail:**

• Historic Period: 2018-2021

• Base Year: 2021

• Forecast Period: 2021-2023

# **Geographic Distributions:**

• Europe

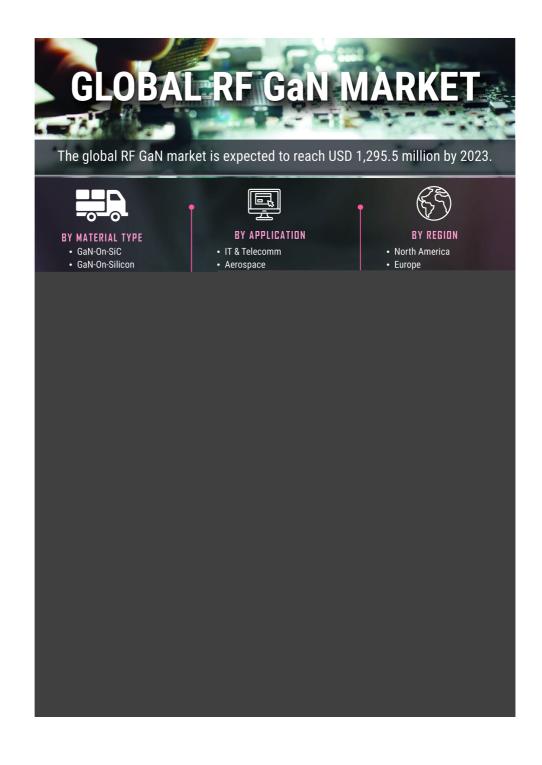
• North America

• South America

• Asia Pacific

• Rest of the World

Infographic Summary:



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