

# **Massive MIMO Market by Technology (LTE Advanced, LTE Advanced Pro, 5G), Spectrum (TDD, FDD), Type of Antennas (8T8R, 16T16R & 32T32R, 64T64R, 128T128R & Above), and Geography (North America, Europe, Asia Pacific, Row) - Global Forecast to 2026**

<https://marketpublishers.com/r/MD2996A7289EN.html>

Date: April 2018

Pages: 108

Price: US\$ 5,650.00 (Single User License)

ID: MD2996A7289EN

## **Abstracts**

“The global massive MIMO market is expected to exhibit significant growth between 2018 and 2026.”

The massive MIMO market is expected to grow from USD 1.29 billion in 2018 to USD 20.91 billion by 2026, at a CAGR of 41.6% between 2018 and 2026. The key factor driving the growth of the massive MIMO market is the rising importance of software implementation in a communication network, high signal to noise ratio, and link reliability. However, delay in the standardization of spectrum allocation is restraining the growth of the market.

“The 5G technology segment is expected to witness the fastest growth during the forecast period.”

The 5G segment is expected to witness the fastest growth from 2020-2026. With future 5G deployments, massive MIMO is expected to enable new high-frequency bands that suffer high propagation path losses to deliver similar coverage as low frequencies. 5G is expected to offer significant gains to accommodate more users at higher data rates with better reliability while consuming less power.

“Based on type of antennas, the 64T64R segment is expected to lead the massive MIMO market during the forecast period.”

The 64T64R type of antennas segment is expected to grow at the highest CAGR between 2018 and 2026. Most companies in the massive MIMO market use the 64T64R antenna in their testing and deployment, which is the major factor for the large market size of the 64T64R segment. Several key companies such as Sprint use 64T64R antennas to increase the capacity of the massive MIMO.

“The massive MIMO market in APAC is projected to grow at the highest CAGR during the forecast period.”

The massive MIMO market in APAC is expected to grow at the highest CAGR during the forecast period. The presence of leading massive MIMO vendors such as Huawei, ZTE, China Mobile, Samsung, and China Unicom is a key factor driving the massive MIMO market in Asia Pacific. Furthermore, Japan, China, and India play a significant role in the massive MIMO market and have the maximum 4G LTE penetration rate.

The break-up of the profiles of primary participants for the report has been given below:

By Company Type: Tier 1 = 56%, Tier 2 = 23%, and Tier 3 = 21%

By Designation: C-Level Executives = 75% and Directors = 25%

By Region: North America = 40%, Europe = 23%, APAC = 26%, and RoW = 11%

Key players operating in the massive MIMO market include Xilinx (US), Intel (US), Lattice Semiconductor (US), Microsemi (US), TSMC (Taiwan), Microchip Technology (US), United Microelectronics (Taiwan), QuickLogic (US), GLOBALFOUNDRIES(US), Achronix (US), and S2C Inc. (US).

#### Research Coverage:

The research report on the global massive MIMO market covers the market on the basis of spectrum, technology, type of antennas, and geography. Based on spectrum, the massive MIMO market has been segmented into TDD, FDD, and others. The massive MIMO market on the basis of technology has been segmented into LTE Advanced, LTE Advanced Pro, and 5G. The massive MIMO market on the basis of type of antennas has been segmented into 8T8R, 16T16R & 32T32R, 64T64R, 128T128R & Above. The report segments the market into 4 major regions, namely North America, Europe, Asia

Pacific, and RoW.

#### Key Benefits of Buying the Report:

Illustrative segmentation, analysis, and forecast for the market based on spectrum, technology, type of antennas, and geography have been conducted to give an overall view of the massive MIMO market.

Major drivers, restraints, opportunities, and challenges for the massive MIMO market have been detailed in this report.

The report includes a detailed competitive landscape, along with key players, in-depth analysis, and revenue of key players.

## Contents

### 1 INTRODUCTION

- 1.1 OBJECTIVES OF THE STUDY
- 1.2 MARKET DEFINITION
- 1.3 STUDY SCOPE
  - 1.3.1 MARKETS COVERED
  - 1.3.2 YEARS CONSIDERED FOR THE STUDY
- 1.4 CURRENCY
- 1.5 LIMITATIONS
- 1.6 STAKEHOLDERS

### 2 RESEARCH METHODOLOGY

- 2.1 RESEARCH DATA
  - 2.1.1 SECONDARY AND PRIMARY RESEARCH
    - 2.1.1.1 Key industry insights
  - 2.1.2 SECONDARY DATA
    - 2.1.2.1 List of major secondary sources
    - 2.1.2.2 Key data from secondary sources
  - 2.1.3 PRIMARY DATA
    - 2.1.3.1 Primary interviews with experts
    - 2.1.3.2 Breakdown of primaries
    - 2.1.3.3 Key data from primary sources
- 2.2 MARKET SIZE ESTIMATION
  - 2.2.1 BOTTOM-UP APPROACH
    - 2.2.1.1 Approach for capturing market share through bottom-up analysis (demand-side)
  - 2.2.2 TOP-DOWN APPROACH
    - 2.2.2.1 Approach for capturing the market share through top-down analysis (supply-side)
- 2.3 MARKET BREAKDOWN AND DATA TRIANGULATION
- 2.4 RESEARCH ASSUMPTIONS

### 3 EXECUTIVE SUMMARY

### 4 PREMIUM INSIGHTS

#### 4.1 ATTRACTIVE OPPORTUNITIES IN THE MASSIVE MIMO MARKET

#### 4.2 MASSIVE MIMO MARKET, BY TECHNOLOGY

#### 4.3 MASSIVE MIMO MARKET, BY TYPE OF ANTENNAS

#### 4.4 MASSIVE MIMO MARKET, BY SPECTRUM

#### 4.5 MASSIVE MIMO MARKET, BY GEOGRAPHY

### 5 MARKET OVERVIEW

#### 5.1 INTRODUCTION

#### 5.2 MARKET DYNAMICS

##### 5.2.1 DRIVERS

5.2.1.1 Need for a large amount of data at high speed at a given time

5.2.1.2 Increasing importance of software implementation in communication network

5.2.1.3 High signal to noise ratio and link reliability

##### 5.2.2 RESTRAINTS

5.2.2.1 Lack of standardization of spectrum allocation

##### 5.2.3 OPPORTUNITIES

5.2.3.1 Growing requirement for high throughput and long-range applications

5.2.3.2 Rapid advancements in 4G LTE & 4.5G data models

##### 5.2.4 CHALLENGES

5.2.4.1 Complex set-up and requirement for rich diversity of signal paths between transmitter and receiver

### 6 GLOBAL MASSIVE MIMO MARKET, BY TECHNOLOGY

#### 6.1 INTRODUCTION

#### 6.2 LTE ADVANCED

#### 6.3 LTE ADVANCED PRO

#### 6.4 5G

### 7 GLOBAL MASSIVE MIMO MARKET, BY TYPE OF ANTENNAS

#### 7.1 INTRODUCTION

#### 7.2 8T8R

#### 7.3 16T16R & 32T32R

#### 7.4 64T64R

#### 7.5 128T128R & ABOVE

### 8 GLOBAL MASSIVE MIMO MARKET, BY SPECTRUM

## 8.1 INTRODUCTION

### 8.2 FDD

### 8.3 TDD

### 8.4 OTHERS (FBMC, OFDM)

## 9 GEOGRAPHIC ANALYSIS

### 9.1 INTRODUCTION

#### 9.2 NORTH AMERICA

##### 9.2.1 US

##### 9.2.2 CANADA

##### 9.2.3 REST OF NORTH AMERICA

#### 9.3 EUROPE

##### 9.3.1 UK

##### 9.3.2 GERMANY

##### 9.3.3 REST OF EUROPE

#### 9.4 ASIA PACIFIC (APAC)

##### 9.4.1 CHINA

##### 9.4.2 JAPAN

##### 9.4.3 REST OF APAC

#### 9.5 ROW

## 10 COMPETITIVE LANDSCAPE

### 10.1 OVERVIEW

### 10.2 MARKET RANKING ANALYSIS: MASSIVE MIMO MARKET

### 10.3 COMPETITIVE SITUATION AND TRENDS

#### 10.3.1 SOLUTION LAUNCHES AND DEVELOPMENTS

#### 10.3.2 COLLABORATIONS AND PARTNERSHIPS

## 11 COMPANY PROFILES

### 11.1 INTRODUCTION

### 11.2 KEY PLAYERS

(Business overview, Products offered, Recent developments, MNM view, SWOT analysis)

#### 11.2.1 NOKIA

#### 11.2.2 ERICSSON

- 11.2.3 HUAWEI
- 11.2.4 VERIZON COMMUNICATIONS
- 11.2.5 ZTE
- 11.2.6 SPRINT
- 11.2.7 CHINA MOBILE
- 11.2.8 SAMSUNG
- 11.2.9 AIRTEL
- 11.2.10 DEUTSCHE TELEKOM

\*Business overview, Products offered, Recent developments, MNM view, SWOT analysis might not be captured in case of unlisted companies.

### 11.3 OTHER KEY PLAYERS

- 11.3.1 SMARTONE
- 11.3.2 T-MOBILE
- 11.3.3 CHINA UNICOM
- 11.3.4 RELIANCE JIO
- 11.3.5 IDEA
- 11.3.6 VODAFONE
- 11.3.7 TELEFONICA
- 11.3.8 SINGTEL
- 11.3.9 SMARTFREN
- 11.3.10 TELSTRA
- 11.3.11 COMMScope
- 11.3.12 KATHREIN
- 11.3.13 COMBA

## 12 APPENDIX

- 12.1 INSIGHTS OF INDUSTRY EXPERTS
- 12.2 DISCUSSION GUIDE
- 12.3 KNOWLEDGE STORE: MARKETSandMARKETS' SUBSCRIPTION PORTAL
- 12.4 AVAILABLE CUSTOMIZATIONS
- 12.5 RELATED REPORTS
- 12.6 AUTHOR DETAILS

## List Of Tables

### LIST OF TABLES

Table 1 GLOBAL MASSIVE MIMO MARKET, BY TECHNOLOGY, 2017–2026 (USD MILLION)

Table 2 LTE ADVANCED MASSIVE MIMO MARKET, BY REGION, 2017–2026 (USD MILLION)

Table 3 LTE ADVANCED PRO MASSIVE MIMO MARKET, BY REGION, 2017–2026 (USD MILLION)

Table 4 5G MASSIVE MIMO MARKET, BY REGION, 2017–2026 (USD MILLION)

Table 5 MASSIVE MIMO MARKET, BY TYPE OF ANTENNAS, 2017–2026 (USD MILLION)

Table 6 8T8R MASSIVE MIMO MARKET, BY REGION, 2017–2026 (USD MILLION)

Table 7 16T16R & 32T32R MASSIVE MIMO MARKET, BY REGION, 2017–2026 (USD MILLION)

Table 8 64T64R MASSIVE MIMO MARKET, BY REGION, 2017–2026 (USD MILLION)

Table 9 128T128R & ABOVE MASSIVE MIMO MARKET BY REGION, 2017–2026 (USD MILLION)

Table 10 GLOBAL MASSIVE MIMO MARKET, BY SPECTRUM, 2017–2026 (USD MILLION)

Table 11 FDD MASSIVE MIMO MARKET, BY REGION, 2017–2026 (USD MILLION)

Table 12 TDD MASSIVE MIMO MARKET, BY REGION, 2017–2026 (USD MILLION)

Table 13 GLOBAL MASSIVE MIMO MARKET, BY GEOGRAPHY, 2017–2026 (USD MILLION)

Table 14 MASSIVE MIMO MARKET IN NORTH AMERICA, BY TYPE OF ANTENNAS, 2017–2026 (USD MILLION)

Table 15 MASSIVE MIMO MARKET IN NORTH AMERICA, BY TECHNOLOGY, 2017–2026 (USD MILLION)

Table 16 MASSIVE MIMO MARKET IN NORTH AMERICA, BY SPECTRUM, 2017–2026 (USD MILLION)

Table 17 MASSIVE MIMO MARKET IN NORTH AMERICA, BY COUNTRY, 2017–2026 (USD MILLION)

Table 18 MASSIVE MIMO MARKET IN US, BY TYPE OF ANTENNAS, 2017–2026 (USD MILLION)

Table 19 MASSIVE MIMO MARKET IN EUROPE, BY TYPE OF ANTENNAS, 2017–2026 (USD MILLION)

Table 20 MASSIVE MIMO MARKET IN EUROPE, BY TECHNOLOGY, 2017–2026 (USD MILLION)



Table 21 MASSIVE MIMO MARKET IN EUROPE, BY SPECTRUM, 2017–2026 (USD MILLION)

Table 22 MASSIVE MIMO MARKET IN EUROPE, BY COUNTRY, 2017–2026 (USD MILLION)

Table 23 MASSIVE MIMO MARKET IN APAC, BY TYPE OF ANTENNAS, 2017–2026 (USD MILLION)

Table 24 MASSIVE MIMO MARKET IN APAC, BY TECHNOLOGY, 2017–2026 (USD MILLION)

Table 25 MASSIVE MIMO MARKET IN APAC, BY SPECTRUM, 2017–2026 (USD MILLION)

Table 26 MASSIVE MIMO MARKET IN APAC, BY COUNTRY, 2017–2026 (USD MILLION)

Table 27 MASSIVE MIMO MARKET IN CHINA, BY TYPE OF ANTENNAS, 2017–2026 (USD MILLION)

Table 28 MASSIVE MIMO MARKET IN ROW, BY TYPE OF ANTENNAS, 2017–2026 (USD MILLION)

Table 29 MASSIVE MIMO MARKET IN ROW, BY TECHNOLOGY, 2017–2026 (USD MILLION)

Table 30 MASSIVE MIMO MARKET IN ROW, BY SPECTRUM, 2017–2026 (USD MILLION)

Table 31 RANKING OF THE KEY PLAYERS IN THE MASSIVE MIMO MARKET

Table 32 PRODUCT/SOLUTION LAUNCHES AND DEVELOPMENTS, JANUARY 2015 – JANUARY 2018

Table 33 COLLABORATIONS AND PARTNERSHIPS, JANUARY 2015–JANUARY 2018

## About

According to the new market research report "Massive MIMO Market by Technology (LTE Advanced, LTE Advanced Pro, 5G), Spectrum (TDD, FDD), Type of Antennas (8T8R, 16T16R & 32T32R, 64T64R, 128T128R & Above), and Geography (North America, Europe, Asia Pacific, Row) - Global Forecast to 2026", the Massive MIMO market is estimated to be USD 1.29 Billion in 2018 and is expected to reach USD 20.91 Billion by 2026, at a CAGR of 41.6% between 2018 and 2026. The rising importance of software implementation in a communication network, high signal to noise ratio, and link reliability are some of the drivers for the massive MIMO market.

### **Some of the major players in the massive MIMO market include:**

Nokia

Ericsson

Huawei

ZTE

Verizon

Sprint

Airtel

China Mobile

Deutsche Telekom

### **On the basis of technology, LTE Advanced led the massive MIMO market in 2017**

The LTE Advanced technology segment accounted for the largest share of the massive MIMO market in 2017. LTE Advanced supports carrier load and higher order MIMO techniques and also supports a data rate of 1 Gbps in the downlink and 500 Mbps in the uplink direction.

**Based on spectrum, the TDD segment is expected to lead the massive MIMO market during the forecast period**

TDD provides greater capacity and lower cost per bit as compared to FDD. With high data rates and a huge capacity for data and HD voice, TDD significantly improves customer experience and lowers the operator's cost per bit. TDD also provides spectrum flexibility.

**Based on type of antennas, the 128T128R & above segment is expected to grow at the highest CAGR between 2018 and 2026**

The 128T128R & above segment includes 128T128R and 256T256R antenna types. The massive MIMO technology assures significant gains in both data rates and link reliability. Extra antennas help by focusing the transmission and reception of signal energy on smaller regions of space. This brings huge improvements in throughput and energy efficiency, particularly when combined with simultaneous scheduling of a large number of user terminals (tens or hundreds).

**The massive MIMO market in APAC is expected to grow at the highest CAGR between 2018 and 2026**

APAC is expected to be the fastest-growing massive MIMO market. Factors such as reduced latency, high data rate, along with inexpensive and low power components are expected to drive the massive MIMO market in Asia Pacific. Furthermore, Australia, Japan, China, South Korea, and Japan play a significant role in the LTE market and have the maximum 4G LTE penetration rate. This has led to an increased demand for massive MIMO in the telecommunication sector of the APAC.

## I would like to order

Product name: Massive MIMO Market by Technology (LTE Advanced, LTE Advanced Pro, 5G), Spectrum (TDD, FDD), Type of Antennas (8T8R, 16T16R & 32T32R, 64T64R, 128T128R & Above), and Geography (North America, Europe, Asia Pacific, Row) - Global Forecast to 2026

Product link: <https://marketpublishers.com/r/MD2996A7289EN.html>

Price: US\$ 5,650.00 (Single User License / Electronic Delivery)

If you want to order Corporate License or Hard Copy, please, contact our Customer Service:

[info@marketpublishers.com](mailto:info@marketpublishers.com)

## Payment

To pay by Credit Card (Visa, MasterCard, American Express, PayPal), please, click button on product page <https://marketpublishers.com/r/MD2996A7289EN.html>

To pay by Wire Transfer, please, fill in your contact details in the form below:

First name:  
Last name:  
Email:  
Company:  
Address:  
City:  
Zip code:  
Country:  
Tel:  
Fax:  
Your message:

**\*\*All fields are required**

Customer signature \_\_\_\_\_

Please, note that by ordering from marketpublishers.com you are agreeing to our Terms & Conditions at <https://marketpublishers.com/docs/terms.html>

To place an order via fax simply print this form, fill in the information below  
and fax the completed form to +44 20 7900 3970