

# **Metamaterial Medium Market by End User (Automotive, Telecommunication, Aerospace & Defense, Optics, Medical Instrumentation) and Application (Antenna, Beam Steering System, Frequency Selective Surfaces, Sensing) - Global Opportunity Analysis and Industry Forecast, 2014-2022**

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## **Abstracts**

Metamaterial medium can be defined as any macroscopic composite having a three-dimensional repetitive structure, engineered in such a way so as to produce an optimized combination with properties that are not usually found in nature. The unusual and exceptional properties of metamaterial medium includes its negative refractive index, and near to zero permittivity and permeability. Metamaterial medium is quoted as the material medium of the future as it holds good potential in the aerospace & defense, optics telecommunication and automotive sector. The major significance of metamaterial medium is due to the fact that they allow the manipulation of wave propagation in a way that renders novel properties in the material, just by modifying their architecture. For instance, cloaks that are capable of making a substance invisible are being developed by scientists.

The world metamaterial medium market is expected to reach \$1,389 million by 2022 from a generated revenue of \$149 million in 2015, registering a CAGR of 39.7% throughout 2016-2022. The major factors driving the metamaterial medium market are highly skilled researchers for product commercialization, the unique properties of metamaterials that are not usually found in nature and the capital investment in metamaterial medium R&D from the public as well as private sector. However, the lack of sufficient research inspite of huge investment is expected to hamper the growth of world metamaterial medium market.

In 2015, North America accounted for the largest share, more than half of the revenue share, followed by Asia-Pacific. Europe is expected to grow at the fastest rate, registering a CAGR of 45.7%, owing to the expanding end-user industries in emerging economies of Europe.

The world metamaterial medium market is segmented, based on end user, application, and geography. On the basis of end user, the market is segmented into automotive, telecommunication, aerospace & defense, optics, and medical instrumentation.

According to the applications of metamaterial medium, the market segmentation includes antenna, beam steering system, frequency selective surfaces, and sensing. As of 2015, the antenna segment is the only one with commercialized product.

Geographically, the market is segmented into North America, Europe, Asia-Pacific, and LAMEA.

The key players in the metamaterial market have adopted several developmental strategies such as agreement, partnership, and product launch. The agreements and partnerships in the metamaterial medium market are focused majorly on the R&D of metamaterial medium. The report consists profiles of the major market players including

Kymeta Corporation (U.S.)

Metamaterial Technologies Inc. (Canada)

Metamagnetics Inc. (U.S.)

Jem Engineering LLC (U.S.)

Fractal Antenna Systems, Inc. (U.S.)

Applied EM, Inc. (U.S.)

NanoSonic, Inc. (U.S.)

Alps Electric Co., Ltd. (Japan)

TeraView Limited (UK)

Plasmonics, Inc. (U.S.)

## **KEY BENEFITS FOR STAKEHOLDERS**

The report provides an in-depth analysis of the metamaterial medium market across major regions as well as the total revenue generated during the forecast period.

Quantitative analysis of the current trends and future estimations from 2016 to 2022 is presented, which assists the manufacturers to analyze the market.

The report also offers quantitative as well as qualitative market trends to facilitate the stakeholders in understanding the situations prevailing in the market.

The projections are made by analyzing the current market trends and highlighting the market potential, in terms of value.

Extensive analysis is conducted by closely following key product positioning and monitoring the top contenders within the market framework.

## **KEY MARKET SEGMENTS:**

### By End User

Automotive

Telecommunication

Aerospace & Defense

Optics

Medical Instrumentation

### By Application

Antenna

Beam Steering System

Frequency Selective Surfaces

Sensing

By Geography

North America

Europe

Asia-Pacific

LAMEA

OTHER KEY PLAYERS IN THE VALUE CHAIN

Alight Technologies ApS

Sandvik Materials Technology AB

Evolv Technology

Nanosteel Company Inc

Medical Wireless Sensing Ltd.

Fianium Ltd

Echodyne Corporation

Opalux Inc

Luminus Devices Inc

Colossal Storage Corporation

Inframat Corporation

Newport Corp.

NKT Photonics

NEC

Omniguide

Opalux

Panasonic

Photeon Technologies

Photonic Lattice Inc.

Raytheon

Samsung

Sandvik Materials Technology

Sumitomo

The above companies are not profiled in the report, can be added based on client request

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Echodyne Corporation

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Luminus Devices Inc

Colossal Storage Corporation

Inframat Corporation

Newport Corp.

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