

Global Reconfigurable Intelligent Surfaces (RIS) Hardware Supply, Demand and Key Producers, 2023-2029

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Abstracts

The global Reconfigurable Intelligent Surfaces (RIS) Hardware market size is expected to reach \$ million by 2029, rising at a market growth of % CAGR during the forecast period (2023-2029).

With 5G at last gaining commercial traction and the debate about 6G now looking at what it might actually offer in practice (rather than just in theory) attention is turning towards how the industry can ensure that 6G, unlike some other allegedly transformational technologies, isn't a triumph of hype over reality.

Hitherto, scientists and engineers have spent decades developing ever more efficient transmitters and receivers and working out ways to mitigate the apparently inevitable signal loss at the end points of a radio channel as they turned to higher and higher frequencies to obviate bandwidth congestion. They have done brilliantly, but it is evident that we are reaching the point where transmitters and receivers are as efficient as physically possible, so the focus is now on engineering the wireless channel itself.

One of the potentially most viable approaches to 6G infrastructure is the use of reconfigurable intelligent surfaces (RIS) technology. This is an artificial planar structure – that is to say, lying in a plane, and thus, by definition, two-dimensional – with integrated electronic circuits that can be programmed dynamically to reflect, refract and manipulate incoming electromagnetic fields. RIS elements come in sizes ranging from about 100 square centimetres up to about 5 square metres or even bigger, and cost a good deal less than traditional cellular antennas. What's more, RIS products are, to all intents and purposes, passive, which means they don't need amplifiers to boost the signal and so can be powered with a simple battery and a small solar panel.



Reconfigurable Intelligent Surfaces (RIS) is a relatively new and innovative technology that falls under the broader category of intelligent reflecting surfaces or metasurfaces. RIS refers to a two-dimensional array of small elements, such as passive or active antennas, sensors, or other electromagnetic components, that can be electronically reconfigured to control the propagation of radio waves, sound waves, or other forms of electromagnetic radiation.

The main idea behind RIS is to manipulate and shape the electromagnetic waves by adjusting the phase, amplitude, or polarization of the reflected or transmitted signals. This enables the RIS to adaptively modify the signal's behavior, such as focusing or redirecting it, canceling interference, enhancing signal strength, or even creating specific radiation patterns.

The advantages of RIS include its energy efficiency as it operates passively, and it can work alongside existing wireless infrastructure, making it easier to deploy in real-world scenarios. However, RIS technology is still in its early stages, and research is ongoing to further explore its potential benefits and optimize its implementation in various applications.

This report studies the global Reconfigurable Intelligent Surfaces (RIS) Hardware production, demand, key manufacturers, and key regions.

This report is a detailed and comprehensive analysis of the world market for Reconfigurable Intelligent Surfaces (RIS) Hardware, and provides market size (US\$ million) and Year-over-Year (YoY) Growth, considering 2022 as the base year. This report explores demand trends and competition, as well as details the characteristics of Reconfigurable Intelligent Surfaces (RIS) Hardware that contribute to its increasing demand across many markets.

Highlights and key features of the study

Global Reconfigurable Intelligent Surfaces (RIS) Hardware total production and demand, 2018-2029, (Units)

Global Reconfigurable Intelligent Surfaces (RIS) Hardware total production value, 2018-2029, (USD Million)

Global Reconfigurable Intelligent Surfaces (RIS) Hardware production by region &



country, production, value, CAGR, 2018-2029, (USD Million) & (Units)

Global Reconfigurable Intelligent Surfaces (RIS) Hardware consumption by region & country, CAGR, 2018-2029 & (Units)

U.S. VS China: Reconfigurable Intelligent Surfaces (RIS) Hardware domestic production, consumption, key domestic manufacturers and share

Global Reconfigurable Intelligent Surfaces (RIS) Hardware production by manufacturer, production, price, value and market share 2018-2023, (USD Million) & (Units)

Global Reconfigurable Intelligent Surfaces (RIS) Hardware production by Type, production, value, CAGR, 2018-2029, (USD Million) & (Units)

Global Reconfigurable Intelligent Surfaces (RIS) Hardware production by Application production, value, CAGR, 2018-2029, (USD Million) & (Units).

This reports profiles key players in the global Reconfigurable Intelligent Surfaces (RIS) Hardware market based on the following parameters – company overview, production, value, price, gross margin, product portfolio, geographical presence, and key developments. Key companies covered as a part of this study include AGC, NTT, ZTE????, Orange Belgium, SK Telecom, Greenerwave, Fractal Antenna Systems, Kymeta and Metamaterial, etc.

This report also provides key insights about market drivers, restraints, opportunities, new product launches or approvals, COVID-19 and Russia-Ukraine War Influence.

Stakeholders would have ease in decision-making through various strategy matrices used in analyzing the World Reconfigurable Intelligent Surfaces (RIS) Hardware market.

Detailed Segmentation:

Each section contains quantitative market data including market by value (US\$ Millions), volume (production, consumption) & (Units) and average price (US\$/Unit) by manufacturer, by Type, and by Application. Data is given for the years 2018-2029 by year with 2022 as the base year, 2023 as the estimate year, and 2024-2029 as the forecast year.

Global Reconfigurable Intelligent Surfaces (RIS) Hardware Market, By Region:



United States

China

Europe

Japan

South Korea

ASEAN

India

Rest of World

Global Reconfigurable Intelligent Surfaces (RIS) Hardware Market, Segmentation by Type

Active **RIS**

Semi-passive RIS

Passive RIS

Global Reconfigurable Intelligent Surfaces (RIS) Hardware Market, Segmentation by Application

Wireless Communications

Radar Systems

Satellite Communications

Indoor Positioning

Energy Harvesting

Global Reconfigurable Intelligent Surfaces (RIS) Hardware Supply, Demand and Key Producers, 2023-2029



Companies Profiled:

AGC

NTT

ZTE????

Orange Belgium

SK Telecom

Greenerwave

Fractal Antenna Systems

Kymeta

Metamaterial

Metacept Systems

Metawave

Pivotal Commware

SensorMetrix

Key Questions Answered

1. How big is the global Reconfigurable Intelligent Surfaces (RIS) Hardware market?

2. What is the demand of the global Reconfigurable Intelligent Surfaces (RIS) Hardware market?

3. What is the year over year growth of the global Reconfigurable Intelligent Surfaces



(RIS) Hardware market?

4. What is the production and production value of the global Reconfigurable Intelligent Surfaces (RIS) Hardware market?

5. Who are the key producers in the global Reconfigurable Intelligent Surfaces (RIS) Hardware market?

6. What are the growth factors driving the market demand?



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