

# **Modular & Repairable Electronics Market Forecasts to 2034 – Global Analysis By Product Type (Smartphones, Laptops & Personal Computers, Consumer Audio Devices, Home Electronics, Wearable Electronics, Other Product Types), By Modular Component, By Design Approach, By Distribution Channel, By End User and By Geography**

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## **Abstracts**

According to Statistics MRC, the Global Modular & Repairable Electronics Market is accounted for \$18.5 billion in 2026 and is expected to reach \$35.2 billion by 2034 growing at a CAGR of 8.4% during the forecast period. The Modular & Repairable Electronics Market focuses on devices designed with interchangeable components that can be easily repaired, upgraded, or replaced. Products such as smartphones, laptops, and home electronics are built with standardized parts and accessible designs to extend product lifespan and reduce electronic waste. This approach supports right-to-repair initiatives, lowers total ownership costs, and enhances sustainability. Manufacturers adopt modular architectures and provide repair documentation and spare parts. The market is driven by environmental regulations, consumer awareness, and the need to reduce resource consumption in the electronics industry.

### **Market Dynamics:**

#### **Driver:**

Rising demand for sustainable electronics products

Growing environmental concerns related to electronic waste are encouraging

consumers and manufacturers to adopt eco-friendly alternatives. Modular and repairable devices are designed to extend product lifecycles by enabling easy component replacement and upgrades. This approach reduces waste generation and promotes resource efficiency. Governments and regulatory bodies are also supporting right-to-repair initiatives and sustainable product design standards. Therefore, the increasing emphasis on sustainability in the electronics sector is expected to strongly drive market growth.

**Restraint:**

High cost of advanced systems

Designing products with interchangeable components and repair-friendly architecture requires additional engineering and manufacturing investments. These systems often involve higher-quality materials and specialized design frameworks. As a result, modular devices may be priced higher than conventional disposable electronics. This price difference can limit adoption among cost-sensitive consumers and markets. Consequently, high initial costs may act as a barrier to widespread market penetration.

**Opportunity:**

Expansion of repair service ecosystems

Increasing support for right-to-repair policies is encouraging the development of repair networks and service platforms. Manufacturers, third-party service providers, and independent repair technicians are expanding their capabilities to support modular devices. Digital platforms are also enabling easy access to spare parts, repair guides, and maintenance services. This ecosystem enhances product longevity and improves customer satisfaction. Therefore, the growth of repair infrastructure is expected to significantly support market expansion.

**Threat:**

Competition from low-cost disposable electronics

Many consumers continue to prefer affordable, short-lifecycle devices due to lower upfront costs. Mass-produced electronics often benefit from economies of scale, making them more accessible in price-sensitive markets. Additionally, rapid product innovation cycles encourage frequent device replacement. These factors may reduce the

perceived value of repairable and modular products. As a result, strong competition from inexpensive alternatives could impact market adoption rates.

### **Covid-19 Impact:**

The COVID-19 pandemic had a moderate impact on the Modular & Repairable Electronics Market. During the initial phase, disruptions in global supply chains affected electronics manufacturing and component availability. However, the pandemic also increased reliance on electronic devices for remote work, education, and communication. This heightened awareness of device durability and repairability among consumers. Many users sought to extend the lifespan of existing devices due to limited access to new products. Consequently, the pandemic contributed to a growing interest in repairable and sustainable electronics solutions.

The battery modules segment is expected to be the largest during the forecast period

The battery modules segment is expected to account for the largest market share during the forecast period as batteries are one of the most frequently replaced components in electronic devices. Modular battery systems enable easy replacement and upgrading, thereby extending device lifespan. This is particularly relevant for smartphones, laptops, and electric devices where battery performance degrades over time. Manufacturers are increasingly designing products with removable or easily replaceable battery modules. Additionally, regulatory emphasis on battery sustainability is supporting this trend.

The corporate enterprises segment is expected to have the highest CAGR during the forecast period

Over the forecast period, the corporate enterprises segment is predicted to witness the highest growth rate due to increasing focus on sustainability and cost efficiency. Organizations are adopting modular and repairable electronics to reduce long-term operational costs and electronic waste. These solutions allow companies to upgrade specific components instead of replacing entire devices. Corporate sustainability goals and ESG commitments are also encouraging the adoption of repairable electronics. Additionally, large enterprises benefit from extended device lifecycles and reduced maintenance expenses.

### **Region with largest share:**

During the forecast period, the Europe region is expected to hold the largest market share owing to the region has implemented strong regulatory frameworks supporting sustainability and right-to-repair initiatives. European policies actively promote product durability, recyclability, and repairability. Additionally, consumer awareness regarding environmental impact is relatively high in the region. Many manufacturers are aligning their product strategies with European sustainability standards. Therefore, these regulatory and consumer-driven factors position Europe as the leading regional market.

### **Region with highest CAGR:**

Over the forecast period, the Asia Pacific region is anticipated to exhibit the highest CAGR driven by rapid growth in electronics consumption and increasing awareness of sustainable practices. Expanding middle-class populations and rising demand for consumer electronics are supporting market development. Governments in the region are gradually introducing policies to address electronic waste and promote recycling. Additionally, the presence of major electronics manufacturing hubs supports innovation in modular product design. Increasing investments in sustainable technologies are further contributing to market growth.

### **Key players in the market**

Some of the key players in Modular & Repairable Electronics Market include Fairphone B.V., Framework Computer Inc., Dell Technologies, HP Inc., Lenovo Group Limited, Samsung Electronics Co., Ltd., Apple Inc., Shift GmbH, Purism SPC, Panasonic Holdings Corporation, Sony Group Corporation, Acer Inc., ASUS, Motorola Mobility (Lenovo), HMD Global (Nokia Phones), Teracube Inc. and iFixit Inc.

### **Key Developments:**

In June 2025, Fairphone launched its sixth-generation modular smartphone, moving away from numbered naming to emphasize longevity and reduce planned obsolescence . The device features 12 easily replaceable parts with a glue-free design, a five-year warranty, and guaranteed spare parts availability.

In February 2025, Framework announced the Laptop 12, a 12.2-inch touchscreen convertible designed for students and younger users, featuring 13th-gen Intel Core processors and a durable TPU coating . This model extends the company's modular, repairable philosophy to the entry-level laptop segment with a smaller form factor and 2-in-1 hinge system.

### Product Types Covered:

- Smartphones
- Laptops & Personal Computers
- Consumer Audio Devices
- Home Electronics
- Wearable Electronics
- Other Product Types

### Modular Components Covered:

- Battery Modules
- Display Modules
- Camera Modules
- Processor & Logic Board Modules
- Storage Modules
- Other Modular Components

### Design Approaches Covered:

- Fully Modular Architecture
- Semi-Modular Architecture
- Tool-less Repair Design

User-Replaceable Component Design

Other Design Approaches

Distribution Channels Covered:

Direct Manufacturer Sales

Online Retail Platforms

Specialized Sustainable Electronics Stores

Enterprise Procurement Channels

Other Distribution Channels

End Users Covered:

Individual Consumers

Corporate Enterprises

Educational Institutions

Government Organizations

Repair Service Providers

Electronics Refurbishers

Other End Users

Regions Covered:

North America

United States

Canada

Mexico

## Europe

United Kingdom

Germany

France

Italy

Spain

Netherlands

Belgium

Sweden

Switzerland

Poland

Rest of Europe

## Asia Pacific

China

Japan

India

South Korea

Australia

Indonesia

Thailand

Malaysia

Singapore

Vietnam

Rest of Asia Pacific

South America

Brazil

Argentina

Colombia

Chile

Peru

Rest of South America

Rest of the World (RoW)

Middle East

Saudi Arabia

United Arab Emirates

Qatar

Israel

Rest of Middle East

Africa

South Africa

Egypt

Morocco

Rest of Africa

What our report offers:

Market share assessments for the regional and country-level segments

Strategic recommendations for the new entrants

Covers Market data for the years 2023, 2024, 2025, 2026, 2027, 2028, 2030, 2032 and 2034

Market Trends (Drivers, Constraints, Opportunities, Threats, Challenges, Investment Opportunities, and recommendations)

Strategic recommendations in key business segments based on the market estimations

Competitive landscaping mapping the key common trends

Company profiling with detailed strategies, financials, and recent developments

Supply chain trends mapping the latest technological advancements

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All the customers of this report will be entitled to receive one of the following free customization options:

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Comprehensive profiling of additional market players (up to 3)

SWOT Analysis of key players (up to 3)

#### Regional Segmentation

Market estimations, Forecasts and CAGR of any prominent country as per the client's interest (Note: Depends on feasibility check)

#### Competitive Benchmarking

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