

Autonomous Train Market: Global Industry Trends, Share, Size, Growth, Opportunity and Forecast 2023-2028

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Abstracts

The global autonomous train market size reached US\$ 8.5 Billion in 2022. Looking forward, IMARC Group expects the market to reach US\$ 12.0 Billion by 2028, exhibiting a growth rate (CAGR) of 5.9% during 2023-2028.

Autonomous trains are driverless mass-transit locomotives that are monitored from the control station and operated automatically without any human intervention. Some of the commonly used autonomous passenger and freight trains include metros, monorails, light rails and high-speed rail or bullet trains. They are managed through stations that control the arrival, departure, movement, and automatic halting of the trains.

Autonomous trains consist of an odometer, tachometer, radio set, camera, and accelerometer. In comparison to manually controlled trains, autonomous trains have improved acceleration capabilities, enhanced system efficiency, and reduced ongoing operational costs while providing consistent train speed and safety.

Autonomous Train Market Trends:

The increasing electrification and automation of the transportation industry is one of the key factors driving the growth of the market. Autonomous trains are integrated with advanced systems that provide improved control over stopping, departure and movement of the locomotive between stations. They also offer automatic and sensor-based opening and closing of doors to enhance passenger safety and convenience. Moreover, the rising demand for safe, secure, and efficient transport systems is providing a thrust to the market growth. Autonomous trains run on ground and underground levels and are highly secured by walls and fences to prevent trespassing and fatalities. Additionally, various technological advancements, such as the integration of the Internet of Things (IoT) and artificial intelligence (AI) solutions with railway

systems, are favoring the market growth. These technologies aid in improving the overall operational efficiency and maintaining freight operations and systems. In line with this, the widespread adoption of communications-based train control (CBTC) technology to reduce the time intervals between trains is positively impacting the market growth. Other factors, including the implementation of various government initiatives to improve public transportation systems, along with rising environment consciousness among the masses, are anticipated to drive the market toward growth.

Key Market Segmentation:

IMARC Group provides an analysis of the key trends in each sub-segment of the global autonomous train market report, along with forecasts at the global, regional and country level from 2023-2028. Our report has categorized the market based on component, train type, automation grade, technology and application.

Breakup by Component:

- Camera
- Accelerometer
- Odometer
- Tachometer
- Radio set
- Others

Breakup by Train Type:

- Metro/Monorail
- Light Rail
- High-Speed Rail/Bullet Train

Breakup by Automation Grade:

- GoA 1
- GoA 2
- GoA 3
- GoA 4

Breakup by Technology:

- CBTC

ERTMS

ATC

PTC

Breakup by Application:

Passenger Train

Freight Train

Breakup by Region:

North America

United States

Canada

Asia-Pacific

China

Japan

India

South Korea

Australia

Indonesia

Others

Europe

Germany

France

United Kingdom

Italy

Spain

Russia

Others

Latin America

Brazil

Mexico

Others

Middle East and Africa

Competitive Landscape:

The competitive landscape of the industry has also been examined along with the profiles of the key players being ABB Ltd., Alstom SA, Belden Inc., Bombardier Inc.,

CAF Construcciones y Auxiliar de Ferrocarriles S.A., CRRC Corporation Limited, General Electric Company, Hitachi Ltd., Kawasaki Heavy Industries Ltd., Mitsubishi Heavy Industries Ltd., Siemens AG, and Thales Group.

Key Questions Answered in This Report

1. What was the size of the global autonomous train market in 2022?
2. What is the expected growth rate of the global autonomous train market during 2023-2028?
3. What are the key factors driving the global autonomous train market?
4. What has been the impact of COVID-19 on the global autonomous train market?
5. What is the breakup of the global autonomous train market based on the automation grade?
6. What is the breakup of the global autonomous train market based on the technology?
7. What is the breakup of the global autonomous train market based on the application?
8. What are the key regions in the global autonomous train market?
9. Who are the key players/companies in the global autonomous train market?

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