

Railway Signaling System Market By Offering (Solution, Services), By Technology (Positive Train Control System, Communication-based Train Control System, European Train Control System, Others), By End Use (Mainline, Urban, Freight):

Global Opportunity Analysis and Industry Forecast, 2021-2031

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# Report description:

Railway signaling system controls the movement of trains. It aids in optimizing railway traffic and preventing collision of trains. In addition, it is also used to prevent derailment of train wagons and collision of trains with railway assets. Moreover, it helps in detecting train positions and provides necessary information related to routes and stations. The components of rail signaling systems include base station, wayside signal switch, network operating center, and switches. Communication takes place between wayside infrastructure, transponders, and trains through signaling systems. On-board equipment on the train receives information from transponders to alert train operator regarding current and upcoming signals, movements, and restricted work zones. Communication-based train control (CBTC) can be defined as railway signaling system that makes use of telecommunication solutions between track equipment for infrastructure control and traffic management. In addition, by using communication-based train control systems, exact location of trains is known more accurately as compared to traditional signaling systems. CBTC is a computer-aided dispatching framework which requires train information to be sent to a central location, which then distributes the information to all entities in the network. This technology uses Positioning System (GPS) to track train location and speed. CBTC is based on digital technology, facilitating interoperability among systems used by different railroads. CBTC system comprises of subsystems such as CBTC-ATS equipment, CBTC wayside equipment, CBTC train-borne equipment, and CBTC data communications equipment.

Multiple advantages associated with communication-based train control systems such as easy maintenance of communication infrastructure, easy integration of telecommunication devices, power saving, and automated operations are anticipated to propel growth of this segment. In May 2021, Thales, a French company launched the SelTrac G8 CBTC system, which comes with flexibility and evolution capabilities, relying on latest technologies to significantly reduce installation and lifecycle costs, while

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maintaining passenger safety.

In 2021, Siemens Mobility and Stadler won a contract to provide the Lisbon Metro with a state of the art signaling system and a new fleet of modern trains. Stadler will supply 14 three-car metro trains, while Siemens Mobility will install its Communications-Based Train Control (CBTC) system Trainguard MT on the Blue, Yellow and Green lines and upgrade the existing equipment. This will include installing its on-board CBTC technology across 70 trains of the existing fleet, as well as on the 14 new Stadler trains.

The railway signaling system market is segmented on the basis of offering, technology, end use, and region. Based on offering, it is segmented into solution and services. On the basis of technology, it is classified into positive train control system, communication-based train control system, European train control system, and others. By end use, it is categorized into mainline, urban, and freight. By region, the market is analyzed across North America, Europe, Asia-Pacific, and LAMEA.

Some major companies operating in the market include Alstom SA, Angelo Holding SRL (MERMEC S.p.A.), Belden Inc., Cisco Systems Inc., Hitachi Ltd. (Hitachi Rail), IBM Corporation, Huawei Technologies Co. Ltd., Nokia Corporation, Siemens AG, and Wabtec Corporation.

#### Key Benefits For Stakeholders

- -This report provides a quantitative analysis of the market segments, current trends, estimations, and dynamics of the railway signaling system market analysis from 2021 to 2031 to identify the prevailing railway signaling system market opportunities.
- -The market research is offered along with information related to key drivers, restraints, and opportunities.
- -Porter's five forces analysis highlights the potency of buyers and suppliers to enable stakeholders make profit-oriented business decisions and strengthen their supplier-buyer network.
- -In-depth analysis of the railway signaling system market segmentation assists to determine the prevailing market opportunities.
- -Major countries in each region are mapped according to their revenue contribution to the global market.
- -Market player positioning facilitates benchmarking and provides a clear understanding of the present position of the market players.
- -The report includes the analysis of the regional as well as global railway signaling system market trends, key players, market segments, application areas, and market growth strategies.

**Key Market Segments** 

By Offering

- Services
- Solution

By Technology

- Positive Train Control System
- Communication-based Train Control System
- European Train Control System
- Others

By End Use

- Mainline
- Urban
- Freight

By Region

- North America
- U.S.
- Canada
- Mexico
- Europe
- Germany
- UK
- France

- Italy
- Rest of Europe
- Asia-Pacific
- China
- Japan
- India
- Australia
- Rest of Asia-Pacific
- LAMEA
- Latin America
- Middle East
- Africa
- Key Market Players
- Alstom SA
- Cisco Systems Inc
- Hitachi Ltd.
- Huawei Technologies Co Ltd
- IBM CORPORATION
- Nokia Corporation
- Angelo Holding SRL
- Siemens AG
- Wabtec Corporation
- Belden Inc.

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