

Human Machine Interface (HMI) Market by Offering (Hardware (Display Units, Others), Software, Services), Configuration (Connected, Web-based), End-use Industry (Oil & Gas, Automotive, F&B, Others), & Geography - Global Forecast to 2031

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Abstracts

The research report titled, 'Global Human Machine Interface (HMI) Market By Offering (Hardware (Display Units, Others), Software, Services), Configuration (Connected, Web-based), End-use Industry (Oil & Gas, Automotive, F&B, Others), & Geography—Global Forecast to 2031', provides in-depth analysis of human machine interface market across five major geographies and emphasizes on the current market trends, market sizes, market shares, recent developments, and forecasts till 2031.

The human machine interface market is projected to reach \$8.57 billion by 2031, at a CAGR of 8.7% from 2024 to 2031. The growth of the human machine interface market is driven by the growing adoption of Industrial IoT (IIoT) and increasing emphasis on user-friendly interfaces. High costs associated with the installation and maintenance of HMIs may restrain market growth.

Additionally, the integration of AI and edge computing technologies in HMI systems and emerging applications of augmented reality (AR)/virtual reality (VR) across various industries is expected to generate growth opportunities for the players operating in this market. However, the concerns regarding security are major challenges impacting the market's growth. The adoption of mobile-based HMI solutions is a key trend in the human machine interface market.

Based on offering, the global human machine interface market is segmented into hardware, software, and services. In 2024, hardware is expected to account for the

largest share of the global human machine interface market. The large market share of this segment is driven by increased automation across industries such as manufacturing, automotive, and healthcare. This surge in demand stems from the need for advanced control and monitoring systems to optimize operational efficiency and safety. Also, the integration of IoT and Industry 4.0 initiatives further fuels segments' expansion, facilitating seamless connectivity and data exchange between machines and operators.

Furthermore, the hardware segment is projected to record the highest CAGR during the forecast period. The growth of this segment is driven by the increasing investments in research and development to prioritize efficiency and innovation.

Based on configuration, the global human machine interface market is segmented into connected HMI and web-based HMI. In 2024, the connected HMI segment is expected to account for the larger share of the global human machine interface market. The large market share of this segment is attributed to the increasing demand for robotization, automated manufacturing activities, and connectivity in industries, coupled with advancements in networking technologies.

However, the web-based HMI segment is projected to record the highest CAGR during the forecast period. The rising need for remote monitoring and management, driven by globalization and the need for operational efficiency across geographically dispersed facilities, is creating demand for web-based HMI. Also, enhanced mobile compatibility and further improvements in cybersecurity to ensure data integrity and system reliability in remote access scenarios will potentially provide certain growth opportunities for this segment.

Based on end-use industry, the global human machine interface market is segmented into automotive, oil & gas, food & beverages, energy & power, chemicals, pharmaceuticals & life sciences, aerospace & defense, medical devices, and other end-use industries. In 2024, the automotive segment is expected to account for the largest share of the global human machine interface market. The large share of the segment is the increasing consumer demand for advanced infotainment, navigation, and driver-assistance systems. Furthermore, advancements in augmented reality displays, voice recognition, and touch-sensitive interfaces are driving the adoption of sophisticated HMIs in vehicles. Additionally, regulatory requirements for enhanced safety features and the rise of autonomous driving technologies further propel the growth of HMI solutions in the automotive sector.

Moreover, the automotive segment is projected to record the highest CAGR during the forecast period.

Based on geography, the global human machine interface market is segmented into North America, Europe, Asia-Pacific, Latin America, and the Middle East & Africa. In 2024, Asia-Pacific is expected to account for the largest share of the global human machine interface market. The large share of the Asia-Pacific region is attributed to the rapid expansion of automotive, manufacturing, and consumer electronics industries. Increasing urbanization, rising disposable incomes, and technological advancements in HMI panels are driving the demand for intuitive and user-friendly interfaces in various sectors. Furthermore, government initiatives promoting industrial automation and smart infrastructure development contribute to the growth of the HMI market in Asia-Pacific.

Moreover, the Asia-Pacific region is projected to record the highest CAGR during the forecast period.

Key Players:

Some of the key players operating in the human machine interface market are Siemens AG (Germany), Schneider Electric SE (France), Rockwell Automation, Inc. (U.S.), Mitsubishi Electric Corporation (Japan), Honeywell International Inc. (U.S.), B&R Industrial Automation GmbH (Austria), Emerson Electric Co. (U.S.), General Electric Company (GE Group) (U.S.), Advantech Co., Ltd. (Taiwan), Maple Systems (U.S.), Omron Corporation (Japan), Eaton Corporation plc (Ireland), Exor International S.p.A. (Italy), Kinco Electric (Shenzhen) Ltd. (China) and General Industrial Controls Private Limited (India).

Key questions answered in the report-

Which are the high-growth market segments based on offering, configuration, and end-use industry?

What was the historical market for human machine interface?

What are the market forecasts and estimates for the period 2024–2031?

What are the major drivers, restraints, and opportunities in the human machine interface market?

Who are the major players in the human machine interface market?

How is the competitive landscape in the human machine interface market?

What are the recent developments in the human machine interface market?

What are the different strategies adopted by the major players in the human machine interface market?

What are the key geographic trends, and which are the high-growth countries?

Who are the local emerging players in the global human machine interface market, and how do they compete with the other players?

Scope of the report:

Human Machine Interface Market Assessment, by Offering

Hardware

Control Panels

Display Units

Touchscreens

Connectors & Cables

Other Hardware

Software

Services

Human Machine Interface Market Assessment, by Configuration

Connected HMI

Web-based HMI

Human Machine Interface Market Assessment, by End-use Industry

Automotive

Oil & Gas

Food & Beverage

Energy & Power

Chemical

Pharmaceuticals & Life Sciences

Aerospace & Defense

Medical Devices

Other End-use Industries

Human Machine Interface Market Assessment, by Geography

North America

U.S.

Canada

Europe

Germany

U.K.

France

Italy

Spain

Rest of Europe

Asia-Pacific

China

Japan

India

South Korea

Rest of Asia-Pacific

Latin America

Middle East & Africa

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