

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

<https://marketpublishers.com/r/H0FDB3098543EN.html>

Date: April 2024

Pages: 178

Price: US\$ 4,175.00 (Single User License)

ID: H0FDB3098543EN

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

Contents

1. INTRODUCTION

- 1.1. Market Definition & Scope
- 1.2. Market Ecosystem
- 1.3. Currency & Limitations
- 1.4. Key Stakeholders

2. RESEARCH METHODOLOGY

- 2.1. Research Approach
- 2.2. Process of Data Collection and Validation
 - 2.2.1. Secondary Research
 - 2.2.2. Primary Research/Interviews with Key Opinion Leaders from The Industry
- 2.3. Market Sizing and Forecast
 - 2.3.1. Market Size Estimation Approach
 - 2.3.2. Growth Forecast Approach
- 2.4. Assumptions for the Study

3. EXECUTIVE SUMMARY

- 3.1. Overview
- 3.2. Market Analysis, by Offering
- 3.3. Market Analysis, by Configuration
- 3.4. Market Analysis, by End-use Industry
- 3.5. Market Analysis, by Geography
- 3.6. Competitive Analysis

4. MARKET INSIGHTS

- 4.1. Overview
- 4.2. Factors Affecting Market Growth
 - 4.2.1. Impact Analysis of Market Dynamics
 - 4.2.2. Growing Adoption of Industrial IoT (IIoT) Technologies Driving the Demand for HMI Systems
 - 4.2.3. Increasing Emphasis on User-friendly Interfaces Boosting the Adoption of HMI Systems
 - 4.2.4. High Installation & Maintenance Costs of HMI Systems Restraining Market

Growth

4.2.5. Integration of Artificial Intelligence (AI) and Edge Computing Technologies into HMI Systems Generating Growth Opportunities for Market Stakeholders

4.2.6. Emerging Applications of AR & VR Technologies Across Industries Accelerating Market Expansion

4.2.7. Security Concerns Associated with HMI Systems Expected to Remain a Major Challenge for Market Players

4.3. Key Trends

4.3.1. Adoption of Mobile-based HMI Solutions

4.4. Porter's Five Forces Analysis

4.4.1. Bargaining Power of Buyers

4.4.2. Bargaining Power of Suppliers

4.4.3. Threat of Substitutes

4.4.4. Threat of New Entrants

4.4.5. Degree of Competition

5. HUMAN MACHINE INTERFACE MARKET—BY OFFERING

5.1. Overview

5.2. Hardware

5.2.1. Control Panels

5.2.2. Display Units

5.2.3. Touchscreens

5.2.4. Connectors & Cables

5.2.5. Other Hardware

5.3. Software

5.4. Services

6. HUMAN MACHINE INTERFACE MARKET—BY CONFIGURATION

6.1. Overview

6.2. Connected HMI

6.3. Web-based HMI

7. HUMAN MACHINE INTERFACE MARKET—BY END-USE INDUSTRY

7.1. Overview

7.2. Automotive

7.3. Oil & Gas

- 7.4. Food & Beverage
- 7.5. Energy & Power
- 7.6. Chemical
- 7.7. Pharmaceuticals & Life Sciences
- 7.8. Aerospace & Defense
- 7.9. Medical Devices
- 7.10. Other End-use Industries

8. HUMAN MACHINE INTERFACE MARKET ASSESSMENT—BY GEOGRAPHY

- 8.1. Overview
- 8.2. Asia-Pacific
 - 8.2.1. China
 - 8.2.2. Japan
 - 8.2.3. India
 - 8.2.4. South Korea
 - 8.2.5. Rest of Asia-Pacific
- 8.3. Europe
 - 8.3.1. Germany
 - 8.3.2. U.K.
 - 8.3.3. Italy
 - 8.3.4. France
 - 8.3.5. Spain
 - 8.3.6. Rest of Europe
- 8.4. North America
 - 8.4.1. U.S.
 - 8.4.2. Canada
- 8.5. Latin America
- 8.6. Middle East & Africa

9. COMPETITION ANALYSIS

- 9.1. Overview
- 9.2. Key Growth Strategies
- 9.3. Competitive Benchmarking
- 9.4. Competitive Dashboard
 - 9.4.1. Industry Leaders
 - 9.4.2. Market Differentiators
 - 9.4.3. Vanguard

- 9.4.4. Emerging Companies
- 9.5. Market Ranking, by The Key Players

10. COMPANY PROFILES

- 10.1. Siemens AG
- 10.2. Schneider Electric SE
- 10.3. Mitsubishi Electric Corporation
- 10.4. Honeywell International Inc.
- 10.5. B&R Industrial Automation GmbH (A Part of ABB Ltd)
- 10.6. Rockwell Automation, Inc.
- 10.7. Emerson Electric Co.
- 10.8. Eaton Corporation plc
- 10.9. General Electric Company
- 10.10. OMRON Corporation
- 10.11. Advantech Co., Ltd.
- 10.12. Maple Systems
- 10.13. Exor International S.p.A.
- 10.14. Kinco Electric (Shenzhen) Ltd.
- 10.15. General Industrial Controls Private Limited

11. APPENDIX

- 11.1. Available Customization
- 11.2. Related Reports
 - Table 1 Currency Conversion Rate (2018–2022)
 - Table 2 Global Human Machine Interface Market, by Offering, 2022–2031 (USD Million)
 - Table 3 Global HMI Hardware Market, by Type, 2022–2031 (USD Million)
 - Table 4 Global HMI Hardware Market, by Country/Region, 2022–2031 (USD Million)
 - Table 5 Global HMI Control Panels Market, by Country/Region, 2022–2031 (USD Million)
 - Table 6 Global HMI Display Units Market, by Country/Region, 2022–2031 (USD Million)
 - Table 7 Global HMI Touchscreens Market, by Country/Region, 2022–2031 (USD Million)
 - Table 8 Global HMI Connectors & Cables Market, by Country/Region, 2022–2031 (USD Million)
 - Table 9 Global Other Hardware Market, by Country/Region, 2022–2031 (USD Million)
 - Table 10 Global HMI Software Market, by Country/Region, 2022–2031 (USD Million)
 - Table 11 Global HMI Services Market, by Country/Region, 2022–2031 (USD Million)

Table 12 Global Human Machine Interface Market, by Configuration, 2022–2031 (USD Million)

Table 13 Global Connected HMI Market, by Country/Region, 2022–2031 (USD Million)

Table 14 Global Web-based HMI Market, by Country/Region, 2022–2031 (USD Million)

Table 15 Global Human Machine Interface Market, by End-use Industry, 2022–2031 (USD Million)

Table 16 Global HMI Market for Automotive Industry, by Country/Region, 2022–2031 (USD Million)

Table 17 Global HMI Market for Oil & Gas Industry, by Country/Region, 2022–2031 (USD Million)

Table 18 Global HMI Market for Food & Beverage Industry, by Country/Region, 2022–2031 (USD Million)

Table 19 Global HMI Market for Energy & Power Industry, by Country/Region, 2022–2031 (USD Million)

Table 20 Global HMI Market for Chemical Industry, by Country/Region, 2022–2031 (USD Million)

Table 21 Global HMI Market for Pharmaceuticals & Life Sciences Industry, by Country/Region, 2022–2031 (USD Million)

Table 22 Global HMI Market for Aerospace & Defense Industry, by Country/Region, 2022–2031 (USD Million)

Table 23 Global HMI Market for Medical Devices, by Country/Region, 2022–2031 (USD Million)

Table 24 Global HMI Market for Other End-use Industries, by Country/Region, 2022–2031 (USD Million)

Table 25 Global Human Machine Interface Market, by Country/Region, 2022–2031 (USD Million)

Table 26 Asia-Pacific: Human Machine Interface Market, by Country/Region, 2022–2031 (USD Million)

Table 27 Asia-Pacific: Human Machine Interface Market, by Offering, 2022–2031 (USD Million)

Table 28 Asia-Pacific: HMI Hardware Market, by Type, 2022–2031 (USD Million)

Table 29 Asia-Pacific: Human Machine Interface Market, by Configuration, 2022–2031 (USD Million)

Table 30 Asia-Pacific: Human Machine Interface Market, by End-use Industry, 2022–2031 (USD Million)

Table 31 China: Human Machine Interface Market, by Offering, 2022–2031 (USD Million)

Table 32 China: HMI Hardware Market, by Type, 2022–2031 (USD Million)

Table 33 China: Human Machine Interface Market, by Configuration, 2022–2031 (USD Million)

Million)

Table 34 China: Human Machine Interface Market, by End-use Industry, 2022–2031 (USD Million)

Table 35 Japan: Human Machine Interface Market, by Offering, 2022–2031 (USD Million)

Table 36 Japan: HMI Hardware Market, by Type, 2022–2031 (USD Million)

Table 37 Japan: Human Machine Interface Market, by Configuration, 2022–2031 (USD Million)

Table 38 Japan: Human Machine Interface Market, by End-use Industry, 2022–2031 (USD Million)

Table 39 India: Human Machine Interface Market, by Offering, 2022–2031 (USD Million)

Table 40 India: HMI Hardware Market, by Type, 2022–2031 (USD Million)

Table 41 India: Human Machine Interface Market, by Configuration, 2022–2031 (USD Million)

Table 42 India: Human Machine Interface Market, by End-use Industry, 2022–2031 (USD Million)

Table 43 South Korea: Human Machine Interface Market, by Offering, 2022–2031 (USD Million)

Table 44 South Korea: HMI Hardware Market, by Type, 2022–2031 (USD Million)

Table 45 South Korea: Human Machine Interface Market, by Configuration, 2022–2031 (USD Million)

Table 46 South Korea: Human Machine Interface Market, by End-use Industry, 2022–2031 (USD Million)

Table 47 Rest of Asia-Pacific: Human Machine Interface Market, by Offering, 2022–2031 (USD Million)

Table 48 Rest of Asia-Pacific: HMI Hardware Market, by Type, 2022–2031 (USD Million)

Table 49 Rest of Asia-Pacific: Human Machine Interface Market, by Configuration, 2022–2031 (USD Million)

Table 50 Rest of Asia-Pacific: Human Machine Interface Market, by End-use Industry, 2022–2031 (USD Million)

Table 51 Europe: Human Machine Interface Market, by Country/Region, 2022–2031 (USD Million)

Table 52 Europe: Human Machine Interface Market, by Offering, 2022–2031 (USD Million)

Table 53 Europe: HMI Hardware Market, by Type, 2022–2031 (USD Million)

Table 54 Europe: Human Machine Interface Market, by Configuration, 2022–2031 (USD Million)

Table 55 Europe: Human Machine Interface Market, by End-use Industry, 2022–2031 (USD Million)

Table 56 Germany: Human Machine Interface Market, by Offering, 2022–2031 (USD Million)

Table 57 Germany: HMI Hardware Market, by Type, 2022–2031 (USD Million)

Table 58 Germany: Human Machine Interface Market, by Configuration, 2022–2031 (USD Million)

Table 59 Germany: Human Machine Interface Market, by End-use Industry, 2022–2031 (USD Million)

Table 60 U.K.: Human Machine Interface Market, by Offering, 2022–2031 (USD Million)

Table 61 U.K.: HMI Hardware Market, by Type, 2022–2031 (USD Million)

Table 62 U.K.: Human Machine Interface Market, by Configuration, 2022–2031 (USD Million)

Table 63 U.K.: Human Machine Interface Market, by End-use Industry, 2022–2031 (USD Million)

Table 64 Italy: Human Machine Interface Market, by Offering, 2022–2031 (USD Million)

Table 65 Italy: HMI Hardware Market, by Type, 2022–2031 (USD Million)

Table 66 Italy: Human Machine Interface Market, by Configuration, 2022–2031 (USD Million)

Table 67 Italy: Human Machine Interface Market, by End-use Industry, 2022–2031 (USD Million)

Table 68 France: Human Machine Interface Market, by Offering, 2022–2031 (USD Million)

Table 69 France: HMI Hardware Market, by Type, 2022–2031 (USD Million)

Table 70 France: Human Machine Interface Market, by Configuration, 2022–2031 (USD Million)

Table 71 France: Human Machine Interface Market, by End-use Industry, 2022–2031 (USD Million)

Table 72 Spain: Human Machine Interface Market, by Offering, 2022–2031 (USD Million)

Table 73 Spain: HMI Hardware Market, by Type, 2022–2031 (USD Million)

Table 74 Spain: Human Machine Interface Market, by Configuration, 2022–2031 (USD Million)

Table 75 Spain: Human Machine Interface Market, by End-use Industry, 2022–2031 (USD Million)

Table 76 Rest of Europe: Human Machine Interface Market, by Offering, 2022–2031 (USD Million)

Table 77 Rest of Europe: HMI Hardware Market, by Type, 2022–2031 (USD Million)

Table 78 Rest of Europe: Human Machine Interface Market, by Configuration, 2022–2031 (USD Million)

Table 79 Rest of Europe: Human Machine Interface Market, by End-use Industry,

2022–2031 (USD Million)

Table 80 North America: Human Machine Interface Market, by Country, 2022–2031 (USD Million)

Table 81 North America: Human Machine Interface Market, by Offering, 2022–2031 (USD Million)

Table 82 North America: HMI Hardware Market, by Type, 2022–2031 (USD Million)

Table 83 North America: Human Machine Interface Market, by Configuration, 2022–2031 (USD Million)

Table 84 North America: Human Machine Interface Market, by End-use Industry, 2022–2031 (USD Million)

Table 85 U.S.: Human Machine Interface Market, by Offering, 2022–2031 (USD Million)

Table 86 U.S.: HMI Hardware Market, by Type, 2022–2031 (USD Million)

Table 87 U.S.: Human Machine Interface Market, by Configuration, 2022–2031 (USD Million)

Table 88 U.S.: Human Machine Interface Market, by End-use Industry, 2022–2031 (USD Million)

Table 89 Canada: Human Machine Interface Market, by Offering, 2022–2031 (USD Million)

Table 90 Canada: HMI Hardware Market, by Type, 2022–2031 (USD Million)

Table 91 Canada: Human Machine Interface Market, by Configuration, 2022–2031 (USD Million)

Table 92 Canada: Human Machine Interface Market, by End-use Industry, 2022–2031 (USD Million)

Table 93 Latin America: Human Machine Interface Market, by Offering, 2022–2031 (USD Million)

Table 94 Latin America: HMI Hardware Market, by Type, 2022–2031 (USD Million)

Table 95 Latin America: Human Machine Interface Market, by Configuration, 2022–2031 (USD Million)

Table 96 Latin America: Human Machine Interface Market, by End-use Industry, 2022–2031 (USD Million)

Table 97 Middle East & Africa: Human Machine Interface Market, by Offering, 2022–2031 (USD Million)

Table 98 Middle East & Africa: HMI Hardware Market, by Type, 2022–2031 (USD Million)

Table 99 Middle East & Africa: Human Machine Interface Market, by Configuration, 2022–2031 (USD Million)

Table 100 Middle East & Africa: Human Machine Interface Market, by End-use Industry, 2022–2031 (USD Million)

Table 101 Recent Developments by Major Market Players (2021–2024)

Table 102 Top Companies in The Human Machine Interface Market**Figure 1 Currency and Limitations****Figure 2 Research Process****Figure 3 Primary Research Techniques****Figure 4 Key Executives Interviewed****Figure 5 Breakdown of Primary Interviews (Supply-side & Demand-side)****Figure 6 Market Sizing and Growth Forecast Approach****Figure 7 Key Insights****Figure 8 In 2024, The Hardware Segment to Account for The Largest Share of The Market****Figure 9 In 2024, The Connected HMI Segment to Account for The Larger Share of The Market****Figure 10 In 2024, The Automotive Segment to Account for The Largest Share of The Market****Figure 11 Global Human Machine Interface Market, by Region (2024 Vs. 2031)****Figure 12 Porter's Five Forces Analysis****Figure 13 Global Human Machine Interface Market, by Offering, 2024 Vs. 2031 (USD Million)****Figure 14 Global Human Machine Interface Market, by Configuration, 2024 Vs. 2031 (USD Million)****Figure 15 Global Human Machine Interface Market, by End-use Industry, 2024 Vs. 2031 (USD Million)****Figure 16 Global Human Machine Interface Market, by Region, 2024 Vs. 2031 (USD Million)****Figure 17 Asia-Pacific: Human Machine Interface Market Snapshot****Figure 18 Europe: Human Machine Interface Market Snapshot****Figure 19 North America: Human Machine Interface Market Snapshot****Figure 20 Growth Strategies Adopted by Leading Market Players (2021–2024)****Figure 21 Vendor Market Positioning Analysis (2021–2024)****Figure 22 Competitive Dashboard: Human Machine Interface market****Figure 23 Siemens AG: Financial Overview (2023)****Figure 24 Siemens AG: SWOT Analysis****Figure 25 Schneider Electric SE: Financial Overview (2022)****Figure 26 Schneider Electric SE: SWOT Analysis****Figure 27 Mitsubishi Electric Corporation: Financial Overview (2022)****Figure 28 Mitsubishi Electric Corporation: SWOT Analysis****Figure 29 Honeywell International Inc.: Financial Overview (2023)****Figure 30 Honeywell International Inc.: SWOT Analysis****Figure 31 ABB Ltd: Financial Overview (2022)**

Figure 32 B&R Industrial Automation GmbH: SWOT Analysis

Figure 33 Rockwell Automation, Inc.: Financial Overview (2023)

Figure 34 Emerson Electric Co.: Financial Overview (2023)

Figure 35 Eaton Corporation plc: Financial Overview (2022)

Figure 36 General Electric Company: Financial Overview (2023)

Figure 37 OMRON Corporation: Financial Overview (2022)

Figure 38 Advantech Co., Ltd.: Financial Overview (2022)

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