

Human Machine Interface Market by Product (Hardware (Basic HMI, Advanced PC Based HMI, Advanced Panel Based HMI) and Software(On Premise HMI and Cloud Based HMI), Configuration (Embedded HMI, Standalone HMI) and Region - Global Forecast to 2027

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Report description:

The HMI market size is expected to grow from USD 4.9billion in 2022 to USD 7.3billion by 2027; it is expected to grow at a CAGR of 8.1% from 2022 to 2027. The key factors driving the growth of the HMI market are growing adoption of Industry 4.0 across process and discrete industries and growing necessity for predictive maintenance and real-time data analysis. Moreover, growing adoption of emerging technologies such as IIoT and cloud computing in industrial environments is another major factor contributing to the growth of the HMI market.

"HMI software is projected to grow at the highest growth rate and HMI hardware held significant share of the market in 2021" Manufacturing companies worldwide are adopting advanced technologies such as cloud-based and software solutions for improving the efficiency of manufacturing process to achieve competitive advantage for tackling changing consumer demands. HMI software helps with data storage regulations and reduces security concerns while offering the flexibility to organizations to incorporate changes in the process when required. HMIs have high scalability as data centers are allocated to meet the demand at any moment. The selection of HMI hardware is primarily dependent on the requirement and cost application for which the system is to be deployed. Ongoing technological developments in the interface technology, increasing demand for the interface solutions from end-user industries, and increasing investments in R&D processes by key market players are expected to create significant growth opportunities for the development of technically advanced HMI solutions.

"Embedded HMI is projected to grow at the highest growth rate and standalone HMI held significant share of the market in 2021"

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The increasing need for integrated systems, and ease in machine-to-machine communication are some of the prominent factors expected to encourage the adoption of embedded HMI solutions during the forecast period. Standalone HMI solutions offer initial benefits to manufacturing firms by offering a good technique to attain visibility and metrics on the shop floor. For small manufacturing firms or a single manufacturing plant, it is more feasible to adopt standalone HMIs owing to the reduction in the total cost of ownership.

"Pharmaceuticals industry to grow at the highest CAGR during the review period and automotive industry held significant share in 2021"

The rapidly increasing population, especially in the emerging economies, has given rise to the spread of diseases, which is also responsible for the industry's growth. Hence, it is expected that the industry will face an extra load in the future. Since pharmaceutical manufacturing processes are highly complex, proper monitoring of all processes in a manufacturing plant to achieve operational efficiency. Assets used in manufacturing need to be monitored continuously, which can be effectively done using HMI solutions. Intensifying competition in the automotive industry has paved the way for various innovations and advancements in automobile manufacturing technologies. As the automotive industry experiences rapid changes in manufacturing technology, an upgrade is an unavoidable aspect of this industry, thereby promoting the growth of the HMI market.

"North America held the largest share and Asia Pacific is projected to grow at the highest growth rate during the forecast period" The growth of the HMI market in the North America can be mainly attributed to the presence of a large industrial base in the country and the high production capacities of these industries. The North America has been one of the early adopters of HMI. The manufacturers in the country have invested in new technologies and disruptive tools and are already seeing the returns on the investments made. The adoption of HMI is helping manufacturers to increase productivity, improve industrial efficiency with better-quality control, and mitigate any industrial risks. The HMI market in Asia Pacific is expected to grow at the fastest CAGR during the forecast period owing to fast-track industrial development in the region. In addition, strong government support and increasing foreign investments are further favoring industrial development. The manufacturing sector, in particular, is flourishing in the region, which is anticipated to induce substantial demand for HMI solutions.

The break-up of the profiles of primary participants for the report has been given below:

- By Company Type: Tier 1 = 65%, Tier 2 = 20%, and Tier 3 = 15%
- By Designation: C-Level Executives = 57%, Directors= 27%, and Others= 16%
- By Region: North America = 24%, Europe = 24%, Asia Pacific = 46%, and RoW= 6%

Major players operating in the HMI market include Rockwell Automation Inc. (US), ABB (Switzerland), Siemens AG (Germany), Schneider Electric SE (France), Honeywell International Inc. (US), Advantech Co., Ltd. (Taiwan), Emerson Electric Co. (US), General Electric Co. (US), Mitsubishi Electric Corporation (Japan), and Yokogawa Electric Corporation (Japan), among others.

Research Coverage:

The research report on the global HMI market covers the market based on product, configuration, industry, and region. Based on product, the HMI market is segregated into hardware and software. Based on configuration, the HMI market is segregated into embedded HMI and standalone HMI. Based on industry, the HMI market is segregated into process industry and discrete industry. Process industry is further segregated into oil & gas, food & beverages, pharmaceuticals, chemicals, energy & power, metals & mining, water & wastewater, and others (pulp & paper and textiles). Discrete industry is further segregated into semiconductor & electronics, packaging, automotive, aerospace, medical devices, and others (machine manufacturing and consumer packaged goods). The report covers four major regions, namely, North America, Europe, AsiaPacific (APAC), and Rest of the World (RoW).

Key Benefits of Buying the Report:

- This report segments the HMI market comprehensively and provides the closest approximations of the overall market size, as

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well as that of the subsegments across different type, product, application, vertical, and region.

The report helps stakeholders understand the pulse of the market, and expected market scenario and provides information on key market drivers, restraints, challenges, and opportunities.

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