

Industrial Sensors Market - Growth, Trends, Covid-19 Impact, and Forecasts (2023 - 2028)

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Report description:

The industrial sensors market is expected to register a CAGR of over 7.46% during the forecast period (2022-2027). The consistent and reliable performance of sensors has led the assets in heavy-industrial operations to drive critical daily metrics. Manufacturers are constantly monitoring the uptime of assets along their production lines. IIoT integrates legacy machinery commonplace within these complex industries via industrial connectivity with IIoT platforms for different use cases, roles, and applications.?

Key Highlights

The Industrial Internet of Things enabled industries to rethink business models, generating actionable information and knowledge from IIoT devices. A data-sharing ecosystem started to have built new revenue streams and partnerships.

The laser sensors measured 3D motion and vibrations of any surface to enable industrial manufacturers to monitor the real-time health and performance of engines, turbines, and pumps. Their compact and contactless form enables the sensors to work on hot, wet, and moving surfaces.?

Although the global automotive sector witnessed a recession in the past two years, the trend was also reflected in China. The number of sensor and sensor components increased in the sector. MEMS pressure sensors have witnessed significant adoption in the smart automotive sector over the past few years. For the same, Asystom recently launched a range of multi-sensor IIoT devices featuring increased autonomy. The multi-sensor capability has addressed the predictive maintenance needs of a wide array of industrial equipment, integrating new onboard, connected, energy-saving electronics performing in situ analysis. These innovative products, apart from increased performance, are eco-responsible and 100% upgradeable.

The inductive proximity sensors could detect only metallic devices, whereas other sensors detect any other materials. ?In addition, the sensing range of an inductive proximity sensor depends on the type of metal's shape, size, and coil size used in the design. Due to this, it accounted for distance limitations for sensing. This factor regarding the sensing capability and usage of

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inductive proximity sensors only on metallic objects is hindering the growth of the studied market. ?

As an important part of producing a superior temperature sensor, the high-quality raw materials choice is vital for the producer. Metals and alloys used while manufacturing includes platinum, copper, silicon, tungsten, nickel, and alloys, which are further categorized into type-K, type-M, type-E, and type-J. Platinum prices rose to a two-month high in May 2020, recovering from a 17-year low in mid-March, but the platinum-group metals markets are projected to remain under pressure because of the COVID-19 pandemic. ?

Industrial Sensors Market Trends

Image Sensors to Hold Significant Share

Image sensors take light as an input and convert it to an electrical signal. The image sensor takes the parameters of the light it receives, such as color and brightness, and passes it through the processing circuitry to be turned into an image.

The sensor constitutes a PN junction, and when it is struck by incident light, it begins to produce electron-hole pairs and thus conducts current. This makes up the pixels within the image sensors, which further make up the images. The sensors are being widely adopted for enhancing industrial equipment in terms of speed while consuming little power.

For instance, in March 2021, Toshiba Electronic Devices & Storage Corporation released the "TCD2726DG," a lens reduction type CCD linear image sensor for A3 multifunction printers that perform high-speed scanning. The new sensor contains a timing generator circuit and a smaller CCD driver pin count to prevent increased electromagnetic interference (EMI), which is a negative side effect of a faster clock rate. Customers' EMI and timing adjustment work, as well as the number of peripheral parts, are reduced, making system development easier.

Also, the need for digital transformation continues to grow in different fields of industrial equipment. This has accelerated the adoption of cameras for a variety of applications, driving the demand for (complementary metal-oxide-semiconductor) CMOS image sensors with higher imaging performance.

The vendors in the market are also combining image sensors and 3D cameras for a better offering. For instance, SICKs Ranger 3 - 3D camera uses CMOS image sensor M30 to create a 3D profile with reduced on-chip data.

Asia-Pacific to Witness the Highest Growth

Asia-Pacific is expected to hold a significant share in the market and witness the highest growth over the forecast period, owing to the increasing technological advancements and rapid industrialization.

Industry 4.0 is breaking the traditional borders of automation and control functions in the process and manufacturing industry. It is enabling a wider domain of functions and industries under global initiatives and architectural frameworks, like Society 5.0 in Japan and Made-in-China 2025 in China.

Migration to smart or automated factories has accelerated in South Korea as companies are rapidly transforming to implement Industry 4.0 elements as the government is being conducive to the market. South Korea's automotive industry is one of the largest worldwide, growing from a small government-controlled sector to one controlled by large multinational enterprises over the past few decades. The country is home to major players like Kia, Hyundai, and Renault, and it is expected to witness steady growth in the demand for automobiles.

In China, industries like food and beverage and electric power generation form a significant user base for sensors. The nuclear and thermal power generation industries have several high-temperature processes, parts, and equipment, like boilers, furnaces, turbines, super-heated steam, and water pipelines. Hence, there is a rising need for efficient temperature sensors to optimize the process.

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Multiple companies based in Japan have been engaging in product innovations. For instance, in October 2021, ROHM Semiconductor announced the launch of a new BM1390GLV (-Z) compact, high accuracy barometric pressure sensor IC. The new device features a waterproof rating of IPX8 and is ideal for home appliances, industrial equipment, and compact IoT devices. The company developed the new compact pressure sensor in response to the growing popularity of pressure sensors across various applications.

Furthermore, the rising electronics industry, burgeoning population, and the growing automobile industry are also responsible for fueling the industrial sensors market in the region.

Industrial robots can be deployed for a range of tasks in a growing number of industries. This led to the rising automation in the industrial sector in the Asia-Pacific robot sensor market. Manufacturing companies are widely implementing automation technologies to simplify operational processes.

Industrial Sensors Market Competitor Analysis

The industrial sensors market is moderately fragmented due to the presence of established industry players. These players are leveraging and incorporating advanced technologies to offer diversified products catering to varied end-user industries.

May 2021- Viezo announced the launch of the Beta Version of its Sonora wireless autonomous sensors series. These sensors are eco-friendly and cost-efficient and find their applications in railway operators, industrial companies, train manufacturers, and industrial machinery manufacturers.

September 2021, Hiber BV announced an agreement with Shell to provide well-integrity monitoring solutions globally. The agreement enables all Shell entities and subsidiaries to use the HiberHilo product globally. The solution also enables Shell to get more data on their good performance and monitor well integrity issues more effectively, thereby improving the safety of remote and offshore wells.?

Additional Benefits:

The market estimate (ME) sheet in Excel format
3 months of analyst support

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