

Time-of-Flight (TOF) Sensor Market: Global Industry Trends, Share, Size, Growth, Opportunity and Forecast 2023-2028

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Abstracts

The global time-of-flight (TOF) sensor market size reached US\$ 3.8 Billion in 2022. Looking forward, IMARC Group expects the market to reach US\$ 10.6 Billion by 2028, exhibiting a growth rate (CAGR) of 17% during 2023-2028.

Time-of-flight (ToF) sensor is a small and lightweight sensor that measures depth and distance by using the time-of-flight principle. It helps calculate distances using the time taken by photons to travel from the emitter of a sensor to the target and then back to the receiver. It offers insights into key business metrics, including periodic occupancy counting to space optimization. Besides this, it is a reliable and cost-effective technology that provides a more extended range, precise and faster readings, and better safety and accuracy than other distance sensors. As a result, the TOF sensor finds extensive applications in robot navigation, 3D mapping, industrial automation, vehicle monitoring, and object detection.

Time-of-Flight (TOF) Sensor Market Trends:

The rising employment of ToF sensors in the automotive industry to support hand position interaction and operate the sunroof, air conditioning, and radio system represents one of the key factors positively influencing the market. In addition, the growing global population is driving the demand for consumer electronic goods, such as smartphones, laptops, tablets, and wearables. TOF sensors in smartphones support front-facial recognition and rear-facing applications with high reliability, low power consumption and cost, and easy integration. Apart from this, the increasing utilization of three-dimensional (3D) TOF cameras in object scanning and tracking, security systems, indoor navigation, obstacle avoidance, and medical imaging is creating a positive market outlook. Furthermore, the deployment of industry 4.0 and the increasing

employment of 3D machine vision systems across various industry verticals are contributing to market growth. Additionally, leading market players are introducing technologically advanced product variants to expand their market reach and increase profitability. Moreover, investments in research and development (R&D) in the electronic industry are expected to drive the market.

Key Market Segmentation:

IMARC Group provides an analysis of the key trends in each sub-segment of the global time-of-flight (TOF) sensor market report, along with forecasts at the global, regional and country level from 2023-2028. Our report has categorized the market based on type, application and end user.

Breakup by Type:

- RF-Modulated Light Sources with Phase Detectors
- Range-Gated Imagers
- Direct Time-of-Flight Imagers

Breakup by Application:

- Augmented Reality and Virtual Reality
- LiDAR
- Machine Vision
- 3D Imaging and Scanning
- Robotics and Drone

Breakup by End User:

- Consumer Electronics
- Automotive
- Entertainment and Gaming
- Industrial
- Healthcare
- Others

Breakup by Region:

- North America
- United States

Canada
Asia-Pacific
China
Japan
India
South Korea
Australia
Indonesia
Others
Europe
Germany
France
United Kingdom
Italy
Spain
Russia
Others
Latin America
Brazil
Mexico
Others
Middle East and Africa

Competitive Landscape:

The competitive landscape of the industry has also been examined along with the profiles of the key players being Adafruit Industries, ams AG, Broadcom Inc., Infineon Technologies AG, Keyence Corporation, Melexis (Xtrion N.V.), Omron Corporation, pmdtechnologies ag, Renesas Electronics Corporation, Sharp Corporation, Sony Semiconductor Solutions Corporation (Sony Group Corporation), STMicroelectronics N.V., Teledyne e2v (Teledyne Technologies Incorporated) and Texas Instruments Incorporated.

Key Questions Answered in This Report:

How has the global time-of-flight (TOF) sensor market performed so far and how will it perform in the coming years?

What has been the impact of COVID-19 on the global time-of-flight (TOF) sensor market?

What are the key regional markets?

- What is the breakup of the market based on the type?
- What is the breakup of the market based on the application?
- What is the breakup of the market based on the end user?
- What are the various stages in the value chain of the industry?
- What are the key driving factors and challenges in the industry?
- What is the structure of the global time-of-flight (TOF) sensor market and who are the key players?
- What is the degree of competition in the industry?

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