

Global Humanoid Robot Force-Torque Sensor Market 2026 by Manufacturers, Regions, Type and Application, Forecast to 2032

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Abstracts

According to our (Global Info Research) latest study, the global Humanoid Robot Force-Torque Sensor market size was valued at US\$ 700 million in 2025 and is forecast to a readjusted size of US\$ 6414 million by 2032 with a CAGR of 37.1% during review period.

In 2025, global Humanoid Robot Force-Torque Sensor production reached approximately 544.00 k units, with an average global market price of around US\$1,250 per unit.

The gross profit margin of major companies in the industry is between 35%–55%.

In 2025, the global production capacity of Humanoid Robot Force-Torque Sensor was approximately 725.33 k units.

Humanoid Robot Force-Torque Sensor is a precision sensing component used to measure multi-axis force and torque signals in humanoid robot joints, wrists, ankles, hands, and interaction modules. It helps robots achieve balance control, compliant motion, grasping feedback, collision detection, and safe human-machine interaction.

The industrial chain of Humanoid Robot Force-Torque Sensor covers upstream materials and components such as elastic bodies, strain gauges, MEMS chips, signal conditioning circuits, connectors, precision machining parts, calibration equipment, and packaging materials. The midstream consists of sensor design, micro-deformation structure processing, circuit integration, signal calibration, temperature compensation, assembly, and reliability testing. Downstream applications mainly include humanoid

robots, collaborative robots, dexterous hands, rehabilitation equipment, industrial automation, and research platforms.

This report is a detailed and comprehensive analysis for global Humanoid Robot Force-Torque Sensor market. Both quantitative and qualitative analyses are presented by manufacturers, by region & country, by Type and by Application. As the market is constantly changing, this report explores the competition, supply and demand trends, as well as key factors that contribute to its changing demands across many markets. Company profiles and product examples of selected competitors, along with market share estimates of some of the selected leaders for the year 2025, are provided.

Key Features:

Global Humanoid Robot Force-Torque Sensor market size and forecasts, in consumption value (\$ Million), sales quantity (K Units), and average selling prices (US\$/Unit), 2021-2032

Global Humanoid Robot Force-Torque Sensor market size and forecasts by region and country, in consumption value (\$ Million), sales quantity (K Units), and average selling prices (US\$/Unit), 2021-2032

Global Humanoid Robot Force-Torque Sensor market size and forecasts, by Type and by Application, in consumption value (\$ Million), sales quantity (K Units), and average selling prices (US\$/Unit), 2021-2032

Global Humanoid Robot Force-Torque Sensor market shares of main players, shipments in revenue (\$ Million), sales quantity (K Units), and ASP (US\$/Unit), 2021-2026

The Primary Objectives in This Report Are:

To determine the size of the total market opportunity of global and key countries

To assess the growth potential for Humanoid Robot Force-Torque Sensor

To forecast future growth in each product and end-use market

To assess competitive factors affecting the marketplace

This report profiles key players in the global Humanoid Robot Force-Torque Sensor market based on the following parameters - company overview, sales quantity, revenue, price, gross margin, product portfolio, geographical presence, and key developments. Key companies covered as a part of this study include ATI Industrial Automation, Bota Systems, Schunk, OnRobot, Robotiq, FUTEK Advanced Sensor Technology, Kistler, HBK, JR3, Wacoh-Tech, etc.

This report also provides key insights about market drivers, restraints, opportunities, new product launches or approvals.

Market Segmentation

Humanoid Robot Force-Torque Sensor market is split by Type and by Application. For the period 2021-2032, the growth among segments provides accurate calculations and forecasts for consumption value by Type, and by Application in terms of volume and value. This analysis can help you expand your business by targeting qualified niche markets.

Market segment by Type

Single-Axis Force-Torque Sensor

Three-Axis Force-Torque Sensor

Six-Axis Force-Torque Sensor

Market segment by Sensing Technology

Strain Gauge Force-Torque Sensor

Capacitive Force-Torque Sensor

Optical Force-Torque Sensor

Market segment by Rated Load

Low-Load Force-Torque Sensor (?50N)

Medium-Load Force-Torque Sensor (50–200N)

High-Load Force-Torque Sensor (>200N)

Market segment by Application

Humanoid Robot Manufacturing

Collaborative Robot Control

Research and Testing Equipment

Other

Major players covered

ATI Industrial Automation

Bota Systems

Schunk

OnRobot

Robotiq

FUTEK Advanced Sensor Technology

Kistler

HBK

JR3

Wacoh-Tech

Nitta Corporation

MinebeaMitsumi

Nordbo Robotics

SynTouch

Kunwei Technology

SRI

Xinjingcheng Sensor

Huiding Intelligent

AFT Sensor

BlueDot Touch

Paxini Technology

Hefei Xinghui Sensing Technology

Hypersen

Haozhi Electromechanical

ZEMIC

Hefei IntelliSense Technology

Market segment by region, regional analysis covers

North America (United States, Canada, and Mexico)

Europe (Germany, France, United Kingdom, Russia, Italy, and Rest of Europe)

Asia-Pacific (China, Japan, Korea, India, Southeast Asia, and Australia)

South America (Brazil, Argentina, Colombia, and Rest of South America)

Middle East & Africa (Saudi Arabia, UAE, Egypt, South Africa, and Rest of Middle East & Africa)

The content of the study subjects, includes a total of 15 chapters:

Chapter 1, to describe Humanoid Robot Force-Torque Sensor product scope, market overview, market estimation caveats and base year.

Chapter 2, to profile the top manufacturers of Humanoid Robot Force-Torque Sensor, with price, sales quantity, revenue, and global market share of Humanoid Robot Force-Torque Sensor from 2021 to 2026.

Chapter 3, the Humanoid Robot Force-Torque Sensor competitive situation, sales quantity, revenue, and global market share of top manufacturers are analyzed emphatically by landscape contrast.

Chapter 4, the Humanoid Robot Force-Torque Sensor breakdown data are shown at the regional level, to show the sales quantity, consumption value, and growth by regions, from 2021 to 2032.

Chapter 5 and 6, to segment the sales by Type and by Application, with sales market share and growth rate by Type, by Application, from 2021 to 2032.

Chapter 7, 8, 9, 10 and 11, to break the sales data at the country level, with sales quantity, consumption value, and market share for key countries in the world, from 2021 to 2026. and Humanoid Robot Force-Torque Sensor market forecast, by regions, by Type, and by Application, with sales and revenue, from 2027 to 2032.

Chapter 12, market dynamics, drivers, restraints, trends, and Porters Five Forces analysis.

Chapter 13, the key raw materials and key suppliers, and industry chain of Humanoid Robot Force-Torque Sensor.

Chapter 14 and 15, to describe Humanoid Robot Force-Torque Sensor sales channel, distributors, customers, research findings and conclusion.

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