

# **Non-dispersive Infrared (NDIR) Market by Gas Type (Carbon Dioxide, Hydrocarbons, Refrigerant, Acetylene, Ethylene, Sulphur Hexafluoride, Carbon Monoxide, Anesthetic, VOCs, Hydrogen Sulphide, Chlorine), Product (Fixed, Portable) - Global Forecast to 2029**

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## **Abstracts**

The global NDIR market is expected to be valued at USD 681 million in 2024 and is projected to reach USD 965 million by 2029; it is expected to grow at a CAGR of 7.2% from 2024 to 2029. In critical industries such as oil & gas, chemical manufacturing, and mining, where workers are exposed to various toxic or flammable gases, reliable gas sensing technology is essential for maintaining a safe working environment and preventing costly incidents.

“Portable by product type segment to account higher market share in NDIR market during the forecast period”

NDIR portable sensors have versatility and increasing demand for on-the-go gas detection solutions across various applications. The rising focus on workplace safety and environmental monitoring drives the adoption of portable NDIR sensors in industries such as oil & gas, construction, and emergency response. Advancements in technology, including miniaturization and improved battery life, make portable NDIR sensors more convenient and effective for real-time gas detection in diverse settings, fueling their market growth.

“Refrigerant Gases to account for second highest CAGR in NDIR market by type during the forecast period”

Increasing concerns about climate change and the need to reduce greenhouse gas emissions drive demand for refrigerant gases monitoring solutions in various industries, including automotive, agriculture, and industrial manufacturing. Due to increasing demand for energy-efficient refrigeration and air conditioning systems, stringent environmental regulations promoting the adoption of low-GWP (Global Warming Potential) refrigerants, and advancements in NDIR technology enhancing gas detection accuracy and reliability. Additionally, the shift towards sustainable refrigerants to mitigate climate change further drives the market's growth trajectory.

“Automotive & Transportation to account for third higher CAGR by Vertical in NDIR Market”

The increasing regulatory requirements for emissions monitoring and workplace safety drive the adoption of NDIR sensors in industrial settings. Expansion of industrial activities, particularly in emerging economies, necessitates robust gas detection solutions to mitigate environmental risks and ensure operational efficiency. Advancements in NDIR sensor technology, offering improved sensitivity and reliability, further enhance their adoption in industrial applications, contributing to the sector's growth.

“The European region growing at third highest CAGR in NDIR market”

Europe's NDIR market is poised for a higher CAGR due to stringent environmental regulations driving demand for gas sensing technologies, particularly in sectors like automotive, industrial, and environmental monitoring. The region also emphasizes on sustainable practices and energy efficiency fosters increased adoption of NDIR solutions, propelling market growth. Moreover, technological advancements and innovations in NDIR sensor technology are likely to further boost market expansion in Europe.

The study contains insights from various industry experts, ranging from component suppliers to Tier 1 companies and OEMs. The break-up of the primaries is as follows:

By Company Type: Tier 1 – 38%, Tier 2 – 28%, and Tier 3 – 34%

By Designation: C-level Executives – 40%, Directors – 30%, and Others – 30%

By Region: North America – 35%, Europe – 20%, Asia Pacific – 35%, and RoW

– 10%

The key players operating in the NDIR market are MSA. (US), Yokogawa Electric Corporation (Japan), Amphenol Corporation. (US), Emerson Electric Co. (US), Honeywell International Inc. (US) etc.

**Research Coverage:** The research reports the NDIR market has been segmented based on gas type, product type, by application, by vertical and by region. Based on gas type, the market has been segmented into Volatile Organic Compounds (VOSs), Carbon Dioxide, Hydrocarbons, Refrigerants, Sulfur Hexafluoride, Carbon Monoxide, Ethylene, Anesthetic Gases, Acetylene, and others which include Hydrogen Sulfide, Nitrogen Oxide and Chlorine. By product type, the market has been segmented into Fixed and Portable. By Application the market has been divided into HVAC, Monitoring and Detection & Analysis. By Vertical the market has been segmented into Automotive & Transportation, Chemicals, Oil & Gas, Healthcare, Industrial & Manufacturing, Environmental, Food & Beverages, Other Verticals which include Mining, Greenhouse and Agriculture. The market by Region has been segmented into North America, Europe, Asia Pacific, and RoW.

The scope of the report covers detailed information regarding the major factors, such as drivers, restraints, challenges, and opportunities, influencing the growth of the NDIR market. A detailed analysis of the key industry players has been done to provide insights into their business overviews, products, key strategies, contracts, partnerships, and agreements. New product & service launches, mergers and acquisitions, and recent developments associated with the NDIR market. Competitive analysis of upcoming startups in the NDIR market ecosystem is covered in this report.

### Key Benefits of Buying the Report

? Analysis of key drivers (Need to contain methane leakage in oil & gas industry, Increasing demand for NDIR CO<sub>2</sub> sensors in food processing & storage industry, Enhanced emphasis on worker safety across industries, High demand for gas sensors in critical industries, Advancements in IoT and connectivity), restraints (Intense pricing pressure resulting in decreased average selling price (ASP), Time-consuming sensor development process, Need for calibration and maintenance), opportunities (Rising demand for NDIR sensors in medical industry, Need for advanced alcohol sensors in automotive & transportation industry, Growing adoption of gas sensors in consumer electronics, Growing demand in emerging markets), and challenges (Need for product

differentiation to meet unique end-use requirements, Competition from alternative technologies) influencing the growth of the NDIR market.

**Product Development/Innovation:** Detailed insights on upcoming technologies, research and development activities, and new product launches in the NDIR market

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**Market Development:** Comprehensive information about lucrative markets – the report analyses the NDIR market across varied regions.

**Market Diversification:** Exhaustive information about new products/services, untapped geographies, recent developments, and investments in the NDIR market

**Competitive Assessment:** In-depth assessment of market shares, growth strategies, and service offerings of leading players like Honeywell International Inc. (US), Emerson Electric Co. (US), Amphenol Corporation. (US) and Yokogawa Electric Corporation (Japan).

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\*Details on Business Overview, Products Offered, Recent Developments, MnM View, Right to win, Strategic choices made, Weaknesses and competitive threats might not be captured in case of unlisted companies.

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