

Advanced Carbon Dioxide (CO₂) Sensors Market Report by Product (Non-Dispersive Infrared (NDIR) CO₂ Sensors, Chemical CO₂ Sensors), Connectivity (Wired CO₂ Sensors, Wireless CO₂ Sensors), End Use Industry (Healthcare, Automotive, Petrochemical, Building Automation, Consumer Electronics, and Others), and Region 2024-2032

<https://marketpublishers.com/r/A7B88797813DEN.html>

Date: August 2024

Pages: 145

Price: US\$ 3,899.00 (Single User License)

ID: A7B88797813DEN

Abstracts

The global advanced carbon dioxide (CO₂) sensors market size reached US\$ 598.7 Million in 2023. Looking forward, IMARC Group expects the market to reach US\$ 1,136.3 Million by 2032, exhibiting a growth rate (CAGR) of 7.2% during 2024-2032.

Advanced carbon dioxide (CO₂) sensors refer to next-generation sensors used for measuring the concentration of CO₂ in air, water and plasma. Some of the commonly used sensors include electrochemical, photoionizing detectors (PID), catalytic, infrared, laser and holographic. They are used in terrariums and automobile exhausts and air quality measurement and food spoilage detection systems as they can automatically adjust in response to the changes in temperature, humidity and altitude. As a result, these sensors are widely used for maintaining indoor air quality and minimizing energy consumption and CO₂ levels in closed spaces.

Significant growth in the automotive, healthcare and petrochemical industries across the globe is one of the key factors creating a positive outlook for the market. Furthermore, the increasing requirement for industrial automation is providing a thrust to the market growth. Advanced CO₂ sensors are used in industrial, residential and commercial complexes to monitor and control the levels of pollutants present in the air. In line with this, the increasing awareness regarding the prevention of wide-scale contamination of

water bodies and atmosphere with toxic substances and fumes released from factories, is also contributing to the rising demand for these sensors. Various technological advancements, such as the integration of wireless sensors with the Internet of Things (IoT) and the production of 3D printed sensors, are acting as other growth-inducing factors. These sensors are utilized in smart buildings to monitor indoor air quality and facilitate automation in smart cities. Other factors, such as the miniaturization of sensors, along with extensive research and development (R&D) activities and the emerging trend of smart construction, especially in developing economies, are anticipated to drive the market further.

Key Market Segmentation:

IMARC Group provides an analysis of the key trends in each segment of the global advanced carbon dioxide (CO₂) sensors market report, along with forecasts at the global, regional and country levels from 2024-2032. Our report has categorized the market based on product, connectivity and end use industry.

Breakup by Product:

Non-Dispersive Infrared (NDIR) CO₂ Sensors

Chemical CO₂ Sensors

Breakup by Connectivity:

Wired CO₂ Sensors

Wireless CO₂ Sensors

Breakup by End Use Industry:

Healthcare

Automotive

Petrochemical

Building Automation

Consumer Electronics

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 report has also analysed the competitive landscape of the market with some of the key players being Amphenol Corporation, Asahi Kasei Corporation, Balluff GmbH, Gas Sensing Solutions Ltd., Honeywell International Inc., Johnson Controls International, Sick AG, Siemens Aktiengesellschaft, Vaisala Oyj and Veris Industries LLC (Schneider Electric).

Key Questions Answered in This Report:

How has the global advanced carbon dioxide (CO₂) sensors market performed so far and how will it perform in the coming years?

What has been the impact of COVID-19 on the global advanced carbon dioxide (CO₂) sensors market?

What are the key regional markets?

What is the breakup of the based on the product?

What is the breakup of the based on the connectivity?

What is the breakup of the based on the end use industry?

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 advanced carbon dioxide (CO₂) sensors market and who are the key players?

What is the degree of competition in the industry?

Contents

1 PREFACE

2 SCOPE AND METHODOLOGY

- 2.1 Objectives of the Study
- 2.2 Stakeholders
- 2.3 Data Sources
 - 2.3.1 Primary Sources
 - 2.3.2 Secondary Sources
- 2.4 Market Estimation
 - 2.4.1 Bottom-Up Approach
 - 2.4.2 Top-Down Approach
- 2.5 Forecasting Methodology

3 EXECUTIVE SUMMARY

4 INTRODUCTION

- 4.1 Overview
- 4.2 Key Industry Trends

5 GLOBAL ADVANCED CARBON DIOXIDE (CO₂) SENSORS MARKET

- 5.1 Market Overview
- 5.2 Market Performance
- 5.3 Impact of COVID-19
- 5.4 Market Forecast

6 MARKET BREAKUP BY PRODUCT

- 6.1 Non-Dispersive Infrared (NDIR) CO₂ Sensors
 - 6.1.1 Market Trends
 - 6.1.2 Market Forecast
- 6.2 Chemical CO₂ Sensors
 - 6.2.1 Market Trends
 - 6.2.2 Market Forecast

7 MARKET BREAKUP BY CONNECTIVITY

7.1 Wired CO2 Sensors

7.1.1 Market Trends

7.1.2 Market Forecast

7.2 Wireless CO2 Sensors

7.2.1 Market Trends

7.2.2 Market Forecast

8 MARKET BREAKUP BY END USE INDUSTRY

8.1 Healthcare

8.1.1 Market Trends

8.1.2 Market Forecast

8.2 Automotive

8.2.1 Market Trends

8.2.2 Market Forecast

8.3 Petrochemical

8.3.1 Market Trends

8.3.2 Market Forecast

8.4 Building Automation

8.4.1 Market Trends

8.4.2 Market Forecast

8.5 Consumer Electronics

8.5.1 Market Trends

8.5.2 Market Forecast

8.6 Others

8.6.1 Market Trends

8.6.2 Market Forecast

9 MARKET BREAKUP BY REGION

9.1 North America

9.1.1 United States

9.1.1.1 Market Trends

9.1.1.2 Market Forecast

9.1.2 Canada

9.1.2.1 Market Trends

9.1.2.2 Market Forecast

9.2 Asia Pacific

9.2.1 China

9.2.1.1 Market Trends

9.2.1.2 Market Forecast

9.2.2 Japan

9.2.2.1 Market Trends

9.2.2.2 Market Forecast

9.2.3 India

9.2.3.1 Market Trends

9.2.3.2 Market Forecast

9.2.4 South Korea

9.2.4.1 Market Trends

9.2.4.2 Market Forecast

9.2.5 Australia

9.2.5.1 Market Trends

9.2.5.2 Market Forecast

9.2.6 Indonesia

9.2.6.1 Market Trends

9.2.6.2 Market Forecast

9.2.7 Others

9.2.7.1 Market Trends

9.2.7.2 Market Forecast

9.3 Europe

9.3.1 Germany

9.3.1.1 Market Trends

9.3.1.2 Market Forecast

9.3.2 France

9.3.2.1 Market Trends

9.3.2.2 Market Forecast

9.3.3 United Kingdom

9.3.3.1 Market Trends

9.3.3.2 Market Forecast

9.3.4 Italy

9.3.4.1 Market Trends

9.3.4.2 Market Forecast

9.3.5 Spain

9.3.5.1 Market Trends

9.3.5.2 Market Forecast

9.3.6 Russia

9.3.6.1 Market Trends

9.3.6.2 Market Forecast

9.3.7 Others

9.3.7.1 Market Trends

9.3.7.2 Market Forecast

9.4 Latin America

9.4.1 Brazil

9.4.1.1 Market Trends

9.4.1.2 Market Forecast

9.4.2 Mexico

9.4.2.1 Market Trends

9.4.2.2 Market Forecast

9.4.3 Others

9.4.3.1 Market Trends

9.4.3.2 Market Forecast

9.5 Middle East and Africa

9.5.1 Market Trends

9.5.2 Market Breakup by Country

9.5.3 Market Forecast

10 SWOT ANALYSIS

10.1 Overview

10.2 Strengths

10.3 Weaknesses

10.4 Opportunities

10.5 Threats

11 VALUE CHAIN ANALYSIS

12 PORTERS FIVE FORCES ANALYSIS

12.1 Overview

12.2 Bargaining Power of Buyers

12.3 Bargaining Power of Suppliers

12.4 Degree of Competition

12.5 Threat of New Entrants

12.6 Threat of Substitutes

13 PRICE ANALYSIS

14 COMPETITIVE LANDSCAPE

14.1 Market Structure

14.2 Key Players

14.3 Profiles of Key Players

14.3.1 Amphenol Corporation

14.3.1.1 Company Overview

14.3.1.2 Product Portfolio

14.3.1.3 Financials

14.3.1.4 SWOT Analysis

14.3.2 Asahi Kasei Corporation

14.3.2.1 Company Overview

14.3.2.2 Product Portfolio

14.3.2.3 Financials

14.3.2.4 SWOT Analysis

14.3.3 Balluff GmbH

14.3.3.1 Company Overview

14.3.3.2 Product Portfolio

14.3.3.3 Financials

14.3.4 Gas Sensing Solutions Ltd.

14.3.4.1 Company Overview

14.3.4.2 Product Portfolio

14.3.4.3 Financials

14.3.5 Honeywell International Inc.

14.3.5.1 Company Overview

14.3.5.2 Product Portfolio

14.3.5.3 Financials

14.3.5.4 SWOT Analysis

14.3.6 Johnson Controls International

14.3.6.1 Company Overview

14.3.6.2 Product Portfolio

14.3.6.3 Financials

14.3.7 Sick AG

14.3.7.1 Company Overview

14.3.7.2 Product Portfolio

14.3.7.3 Financials

14.3.8 Siemens Aktiengesellschaft

- 14.3.8.1 Company Overview
- 14.3.8.2 Product Portfolio
- 14.3.8.3 Financials
- 14.3.8.4 SWOT Analysis
- 14.3.9 Vaisala Oyj
 - 14.3.9.1 Company Overview
 - 14.3.9.2 Product Portfolio
 - 14.3.9.3 Financials
- 14.3.10 Veris Industries LLC (Schneider Electric)
 - 14.3.10.1 Company Overview
 - 14.3.10.2 Product Portfolio

List Of Tables

LIST OF TABLES

Table 1: Global: Advanced Carbon Dioxide Sensors Market: Key Industry Highlights, 2023 and 2032

Table 2: Global: Advanced Carbon Dioxide Sensors Market Forecast: Breakup by Product (in Million US\$), 2024-2032

Table 3: Global: Advanced Carbon Dioxide Sensors Market Forecast: Breakup by Connectivity (in Million US\$), 2024-2032

Table 4: Global: Advanced Carbon Dioxide Sensors Market Forecast: Breakup by End Use Industry (in Million US\$), 2024-2032

Table 5: Global: Advanced Carbon Dioxide Sensors Market Forecast: Breakup by Region (in Million US\$), 2024-2032

Table 6: Global: Advanced Carbon Dioxide Sensors Market: Competitive Structure

Table 7: Global: Advanced Carbon Dioxide Sensors Market: Key Players

List Of Figures

LIST OF FIGURES

Figure 1: Global: Advanced Carbon Dioxide Sensors Market: Major Drivers and Challenges

Figure 2: Global: Advanced Carbon Dioxide Sensors Market: Sales Value (in Million US\$), 2018-2023

Figure 3: Global: Advanced Carbon Dioxide Sensors Market: Breakup by Product (in %), 2023

Figure 4: Global: Advanced Carbon Dioxide Sensors Market: Breakup by Connectivity (in %), 2023

Figure 5: Global: Advanced Carbon Dioxide Sensors Market: Breakup by End Use Industry (in %), 2023

Figure 6: Global: Advanced Carbon Dioxide Sensors Market: Breakup by Region (in %), 2023

Figure 7: Global: Advanced Carbon Dioxide Sensors Market Forecast: Sales Value (in Million US\$), 2024-2032

Figure 8: Global: Advanced Carbon Dioxide Sensors (Non-Dispersive Infrared/NDIR CO2 Sensors) Market: Sales Value (in Million US\$), 2018 & 2023

Figure 9: Global: Advanced Carbon Dioxide Sensors (Non-Dispersive Infrared/NDIR CO2 Sensors) Market Forecast: Sales Value (in Million US\$), 2024-2032

Figure 10: Global: Advanced Carbon Dioxide Sensors (Chemical CO2 Sensors) Market: Sales Value (in Million US\$), 2018 & 2023

Figure 11: Global: Advanced Carbon Dioxide Sensors (Chemical CO2 Sensors) Market Forecast: Sales Value (in Million US\$), 2024-2032

Figure 12: Global: Advanced Carbon Dioxide Sensors (Wired CO2 Sensors) Market: Sales Value (in Million US\$), 2018 & 2023

Figure 13: Global: Advanced Carbon Dioxide Sensors (Wired CO2 Sensors) Market Forecast: Sales Value (in Million US\$), 2024-2032

Figure 14: Global: Advanced Carbon Dioxide Sensors (Wireless CO2 Sensors) Market: Sales Value (in Million US\$), 2018 & 2023

Figure 15: Global: Advanced Carbon Dioxide Sensors (Wireless CO2 Sensors) Market Forecast: Sales Value (in Million US\$), 2024-2032

Figure 16: Global: Advanced Carbon Dioxide Sensors (Healthcare) Market: Sales Value (in Million US\$), 2018 & 2023

Figure 17: Global: Advanced Carbon Dioxide Sensors (Healthcare) Market Forecast: Sales Value (in Million US\$), 2024-2032

Figure 18: Global: Advanced Carbon Dioxide Sensors (Automotive) Market: Sales Value

(in Million US\$), 2018 & 2023

Figure 19: Global: Advanced Carbon Dioxide Sensors (Automotive) Market Forecast: Sales Value (in Million US\$), 2024-2032

Figure 20: Global: Advanced Carbon Dioxide Sensors (Petrochemical) Market: Sales Value (in Million US\$), 2018 & 2023

Figure 21: Global: Advanced Carbon Dioxide Sensors (Petrochemical) Market Forecast: Sales Value (in Million US\$), 2024-2032

Figure 22: Global: Advanced Carbon Dioxide Sensors (Building Automation) Market: Sales Value (in Million US\$), 2018 & 2023

Figure 23: Global: Advanced Carbon Dioxide Sensors (Building Automation) Market Forecast: Sales Value (in Million US\$), 2024-2032

Figure 24: Global: Advanced Carbon Dioxide Sensors (Consumer Electronics) Market: Sales Value (in Million US\$), 2018 & 2023

Figure 25: Global: Advanced Carbon Dioxide Sensors (Consumer Electronics) Market Forecast: Sales Value (in Million US\$), 2024-2032

Figure 26: Global: Advanced Carbon Dioxide Sensors (Other End Use Industries) Market: Sales Value (in Million US\$), 2018 & 2023

Figure 27: Global: Advanced Carbon Dioxide Sensors (Other End Use Industries) Market Forecast: Sales Value (in Million US\$), 2024-2032

Figure 28: North America: Advanced Carbon Dioxide Sensors Market: Sales Value (in Million US\$), 2018 & 2023

Figure 29: North America: Advanced Carbon Dioxide Sensors Market Forecast: Sales Value (in Million US\$), 2024-2032

Figure 30: United States: Advanced Carbon Dioxide Sensors Market: Sales Value (in Million US\$), 2018 & 2023

Figure 31: United States: Advanced Carbon Dioxide Sensors Market Forecast: Sales Value (in Million US\$), 2024-2032

Figure 32: Canada: Advanced Carbon Dioxide Sensors Market: Sales Value (in Million US\$), 2018 & 2023

Figure 33: Canada: Advanced Carbon Dioxide Sensors Market Forecast: Sales Value (in Million US\$), 2024-2032

Figure 34: Asia Pacific: Advanced Carbon Dioxide Sensors Market: Sales Value (in Million US\$), 2018 & 2023

Figure 35: Asia Pacific: Advanced Carbon Dioxide Sensors Market Forecast: Sales Value (in Million US\$), 2024-2032

Figure 36: China: Advanced Carbon Dioxide Sensors Market: Sales Value (in Million US\$), 2018 & 2023

Figure 37: China: Advanced Carbon Dioxide Sensors Market Forecast: Sales Value (in Million US\$), 2024-2032

Figure 38: Japan: Advanced Carbon Dioxide Sensors Market: Sales Value (in Million US\$), 2018 & 2023

Figure 39: Japan: Advanced Carbon Dioxide Sensors Market Forecast: Sales Value (in Million US\$), 2024-2032

Figure 40: India: Advanced Carbon Dioxide Sensors Market: Sales Value (in Million US\$), 2018 & 2023

Figure 41: India: Advanced Carbon Dioxide Sensors Market Forecast: Sales Value (in Million US\$), 2024-2032

Figure 42: South Korea: Advanced Carbon Dioxide Sensors Market: Sales Value (in Million US\$), 2018 & 2023

Figure 43: South Korea: Advanced Carbon Dioxide Sensors Market Forecast: Sales Value (in Million US\$), 2024-2032

Figure 44: Australia: Advanced Carbon Dioxide Sensors Market: Sales Value (in Million US\$), 2018 & 2023

Figure 45: Australia: Advanced Carbon Dioxide Sensors Market Forecast: Sales Value (in Million US\$), 2024-2032

Figure 46: Indonesia: Advanced Carbon Dioxide Sensors Market: Sales Value (in Million US\$), 2018 & 2023

Figure 47: Indonesia: Advanced Carbon Dioxide Sensors Market Forecast: Sales Value (in Million US\$), 2024-2032

Figure 48: Others: Advanced Carbon Dioxide Sensors Market: Sales Value (in Million US\$), 2018 & 2023

Figure 49: Others: Advanced Carbon Dioxide Sensors Market Forecast: Sales Value (in Million US\$), 2024-2032

Figure 50: Europe: Advanced Carbon Dioxide Sensors Market: Sales Value (in Million US\$), 2018 & 2023

Figure 51: Europe: Advanced Carbon Dioxide Sensors Market Forecast: Sales Value (in Million US\$), 2024-2032

Figure 52: Germany: Advanced Carbon Dioxide Sensors Market: Sales Value (in Million US\$), 2018 & 2023

Figure 53: Germany: Advanced Carbon Dioxide Sensors Market Forecast: Sales Value (in Million US\$), 2024-2032

Figure 54: France: Advanced Carbon Dioxide Sensors Market: Sales Value (in Million US\$), 2018 & 2023

Figure 55: France: Advanced Carbon Dioxide Sensors Market Forecast: Sales Value (in Million US\$), 2024-2032

Figure 56: United Kingdom: Advanced Carbon Dioxide Sensors Market: Sales Value (in Million US\$), 2018 & 2023

Figure 57: United Kingdom: Advanced Carbon Dioxide Sensors Market Forecast: Sales

Value (in Million US\$), 2024-2032

Figure 58: Italy: Advanced Carbon Dioxide Sensors Market: Sales Value (in Million US\$), 2018 & 2023

Figure 59: Italy: Advanced Carbon Dioxide Sensors Market Forecast: Sales Value (in Million US\$), 2024-2032

Figure 60: Spain: Advanced Carbon Dioxide Sensors Market: Sales Value (in Million US\$), 2018 & 2023

Figure 61: Spain: Advanced Carbon Dioxide Sensors Market Forecast: Sales Value (in Million US\$), 2024-2032

Figure 62: Russia: Advanced Carbon Dioxide Sensors Market: Sales Value (in Million US\$), 2018 & 2023

Figure 63: Russia: Advanced Carbon Dioxide Sensors Market Forecast: Sales Value (in Million US\$), 2024-2032

Figure 64: Others: Advanced Carbon Dioxide Sensors Market: Sales Value (in Million US\$), 2018 & 2023

Figure 65: Others: Advanced Carbon Dioxide Sensors Market Forecast: Sales Value (in Million US\$), 2024-2032

Figure 66: Latin America: Advanced Carbon Dioxide Sensors Market: Sales Value (in Million US\$), 2018 & 2023

Figure 67: Latin America: Advanced Carbon Dioxide Sensors Market Forecast: Sales Value (in Million US\$), 2024-2032

Figure 68: Brazil: Advanced Carbon Dioxide Sensors Market: Sales Value (in Million US\$), 2018 & 2023

Figure 69: Brazil: Advanced Carbon Dioxide Sensors Market Forecast: Sales Value (in Million US\$), 2024-2032

Figure 70: Mexico: Advanced Carbon Dioxide Sensors Market: Sales Value (in Million US\$), 2018 & 2023

Figure 71: Mexico: Advanced Carbon Dioxide Sensors Market Forecast: Sales Value (in Million US\$), 2024-2032

Figure 72: Others: Advanced Carbon Dioxide Sensors Market: Sales Value (in Million US\$), 2018 & 2023

Figure 73: Others: Advanced Carbon Dioxide Sensors Market Forecast: Sales Value (in Million US\$), 2024-2032

Figure 74: Middle East and Africa: Advanced Carbon Dioxide Sensors Market: Sales Value (in Million US\$), 2018 & 2023

Figure 75: Middle East and Africa: Advanced Carbon Dioxide Sensors Market: Breakup by Country (in %), 2023

Figure 76: Middle East and Africa: Advanced Carbon Dioxide Sensors Market Forecast: Sales Value (in Million US\$), 2024-2032

Figure 77: Global: Advanced Carbon Dioxide Sensors Industry: SWOT Analysis

Figure 78: Global: Advanced Carbon Dioxide Sensors Industry: Value Chain Analysis

Figure 79: Global: Advanced Carbon Dioxide Sensors Industry: Porter's Five Forces Analysis

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