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Global Automotive Radar One-Chip SoC Supply, Demand and Key Producers, 2026-2032

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Abstracts

The global Automotive Radar One-Chip SoC market size is expected to reach $ 1538 million by 2032, rising at a market growth of 19.8% CAGR during the forecast period (2026-2032).

Automotive Radar One-Chip SoC is a highly integrated radar solution that consolidates RF front-end, digital signal processing, and control functions onto a single CMOS chip, enabling compact architecture, low power consumption, and stable signal performance for automotive sensing applications. Compared with traditional multi-chip radar systems, it emphasizes system-level integration, cost efficiency, and scalability, supporting core functions such as object detection, distance measurement, and multi-target tracking in advanced driver assistance systems. In 2025, production was approximately 9.33 million units and the average price was USD 45 per unit. The industry?s capacity utilization rate in 2025 was about 60% and the average gross margin was around 55%. Upstream, the most critical inputs include silicon wafers, photoresists, lithography machines, and etching tools, with representative suppliers such as ASML, Tokyo Electron, and Applied Materials providing essential semiconductor equipment and materials. The midstream segment includes system architecture design, RF front-end and baseband integration, digital signal processing, mixed-signal verification, and SoC-level functional integration, which together define computational capability, integration level, and radar performance. Downstream, Automotive Radar One-Chip SoC is used by angle radar and forward radar manufacturers such as Bosch, Continental, Aptiv, Valeo, Denso, ZF, and Huawei.

The market outlook for Automotive Radar One-Chip SoC reflects the accelerating adoption of advanced driver-assistance systems and autonomous driving technologies, where compact, highly integrated radar solutions are increasingly essential. The trend

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toward higher integration and multi-function sensing is driving continuous improvements in chip design, signal processing algorithms, and system reliability, which in turn influence industry profitability and adoption rates. Manufacturers are focusing on optimizing production yield, thermal management, and mixed-signal verification to meet stringent automotive standards. As vehicle-level sensing becomes more sophisticated, demand for single-chip radar SoCs that can support high-precision object detection, multi-target tracking, and robust environmental perception is expected to remain a key factor shaping future industry dynamics.

This report studies the global Automotive Radar One-Chip SoC production, demand, key manufacturers, and key regions.

This report is a detailed and comprehensive analysis of the world market for Automotive Radar One-Chip SoC and provides market size (US$ million) and Year-over-Year (YoY) Growth, considering 2025 as the base year. This report explores demand trends and competition, as well as details the characteristics of Automotive Radar One-Chip SoC that contribute to its increasing demand across many markets.

Highlights and key features of the study
Global Automotive Radar One-Chip SoC total production and demand, 2021-2032, (Million Units)
Global Automotive Radar One-Chip SoC total production value, 2021-2032, (USD Million)
Global Automotive Radar One-Chip SoC production by region & country, production, value, CAGR, 2021-2032, (USD Million) & (Million Units), (based on production site)
Global Automotive Radar One-Chip SoC consumption by region & country, CAGR, 2021-2032 & (Million Units)
U.S. VS China: Automotive Radar One-Chip SoC domestic production, consumption, key domestic manufacturers and share
Global Automotive Radar One-Chip SoC production by manufacturer, production, price, value and market share 2021-2026, (USD Million) & (Million Units)
Global Automotive Radar One-Chip SoC production by Type, production, value, CAGR, 2021-2032, (USD Million) & (Million Units)
Global Automotive Radar One-Chip SoC production by Application, production, value, CAGR, 2021-2032, (USD Million) & (Million Units)

This report profiles key players in the global Automotive Radar One-Chip SoC market based on the following parameters - company overview, production, value, price, gross margin, product portfolio, geographical presence, and key developments. Key

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companies covered as a part of this study include Texas Instruments, Infineon Technologies, Arbe Robotics, Smartmicro, Muniu Tech, WHST, HUAWEI, Calterah Semiconductor, etc.

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

Stakeholders would have ease in decision-making through various strategy matrices used in analyzing the World Automotive Radar One-Chip SoC market

Detailed Segmentation:

Each section contains quantitative market data including market by value (US$ Millions), volume (production, consumption) & (Million Units) and average price (US$/Unit) by manufacturer, by Type, and by Application. Data is given for the years 2021-2032 by year with 2025 as the base year, 2026 as the estimate year, and 2027-2032 as the forecast year.

Global Automotive Radar One-Chip SoC Market, By Region:

United States

China

Europe

Japan

South Korea

ASEAN

India

Rest of World

Global Automotive Radar One-Chip SoC Market, Segmentation by Type:

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4Tx/4Rx

3Tx/4Rx

Others

Global Automotive Radar One-Chip SoC Market, Segmentation by Process Node:

40nm

28nm

Others

Global Automotive Radar One-Chip SoC Market, Segmentation by Grade:

ISO 26262 ASIL-B

ISO 26262 ASIL-C

Others

Global Automotive Radar One-Chip SoC Market, Segmentation by Application:

Corner Radar

Front Radar

Others

Companies Profiled:

Texas Instruments

Infineon Technologies

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Arbe Robotics

Smartmicro

Muniu Tech

WHST

HUAWEI

Calterah Semiconductor

Key Questions Answered:

1. How big is the global Automotive Radar One-Chip SoC market?
2. What is the demand of the global Automotive Radar One-Chip SoC market?
3. What is the year over year growth of the global Automotive Radar One-Chip SoC market?
4. What is the production and production value of the global Automotive Radar One-Chip SoC market?
5. Who are the key producers in the global Automotive Radar One-Chip SoC market?
6. What are the growth factors driving the market demand?

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