+357 96 030922
info@marketpublishers.com

Global mmWave Radar ICs Market Growth 2026-2032

https://marketpublishers.com/r/G2CD4103E214EN.html
Date: July 2026
Pages: 110
Price: US$ 3,660.00 (Single User License)
ID: G2CD4103E214EN

Abstracts

The global mmWave Radar ICs market size is predicted to grow from US$ 2631 million in 2025 to US$ 7420 million in 2032; it is expected to grow at a CAGR of 14.3% from 2026 to 2032.

Millimeter-wave Radar ICs are the core semiconductor devices in radar sensing systems, integrating RF transceivers, analog front ends, ADCs, digital processing, interface control and selected safety-monitoring functions into a chip or chipset. Most Millimeter-wave Radar ICs use FMCW architecture to estimate target range, velocity, azimuth and elevation from reflected electromagnetic waves. Automotive exterior sensing is concentrated in the 76?81GHz band, while in-cabin sensing, industrial sensing, consumer electronics and smart-space applications commonly use 60GHz; 24GHz is now more associated with legacy platforms and selected low-cost applications. Key parameters include frequency band, bandwidth, Tx/Rx channel count, detection range, angular resolution, power consumption, operating temperature, functional safety and automotive qualification. Typical bandwidth is 4?5GHz, enabling centimeter-level range resolution. Entry and mainstream automotive designs often use 3T4R or 4T4R configurations, while high-resolution imaging radar is moving toward 8T8R, 24T24R, 32T32R and larger virtual arrays. Long-range front radar typically covers 200?300 meters, and premium high-resolution platforms have advanced toward the 400-meter class. Automotive-grade ICs usually target -40?C to 125/140?C operation, with more integrated devices pushing junction-temperature and long-term reliability margins higher.

The technology roadmap of Millimeter-wave Radar ICs is shifting from basic ranging and velocity sensing to high-resolution spatial perception and edge computation. Earlier designs relied on RF front ends paired with external processors, while later generations moved toward RFCMOS radar SoCs integrating PLLs, transmitters, receivers, baseband, ADCs, DSPs, MCUs, radar accelerators and in-vehicle interfaces into a

+357 96 030922
info@marketpublishers.com

single device. Premium platforms are now entering the imaging-radar phase, using MIMO, cascade expansion, on-chip calibration, low phase-noise design, interference mitigation, consistent RF packaging and dedicated radar processors to generate dense point clouds. Packaging and antenna integration have become key differentiation points for Millimeter-wave Radar ICs, as antenna-in-package, antenna-on-chip, line-on-package and waveguide interfaces reduce high-frequency loss, improve repeatability and shrink radar modules. On the software side, processing is moving from FFT, CFAR, angle-of-arrival estimation and object tracking toward raw-signal AI, semantic point clouds, occupancy grids, object classification and multi-sensor fusion.

Demand for Millimeter-wave Radar ICs is led by automotive production programs and is expanding into industrial equipment, robotics, smart buildings, security and health-related monitoring. Automotive use cases include front radar, corner radar, rear radar, parking radar, door-zone radar, in-cabin vital-sign sensing and child-presence detection. Demand is driven by automatic emergency braking, adaptive cruise control, blind-spot detection, lane-change assist, highway pilot, automated parking and higher-level automated-driving functions. Non-automotive applications value privacy, all-weather operation, low-light robustness and micro-motion detection, covering presence sensing, smart lighting, fall detection, industrial collision avoidance, level measurement, traffic monitoring, drones and mobile-robot obstacle avoidance. The upstream supply chain includes RFCMOS and SiGe processes, foundries, OSAT, low-loss substrates, high-frequency PCBs, antenna materials, EDA/IP and RF test equipment. The midstream consists of Millimeter-wave Radar ICs, radar modules, embedded algorithms and development toolchains, while downstream customers include Tier-1 suppliers, automakers, industrial equipment companies, smart-home vendors and IoT device makers.

The Millimeter-wave Radar IC industry is currently at the intersection of automotive scale-up, imaging-radar upgrade and category expansion beyond vehicles. Leading global suppliers continue to iterate 76?81GHz automotive radar SoCs, 77GHz radar transceivers, radar processors and 60GHz low-power sensing ICs, with product focus shifting from ?radar function availability? to ?cascadability, imaging capability, mass-production readiness and safety qualification.? In 2026, an 8T8R highly integrated automotive radar transceiver entered the next generation of high-resolution platforms, supporting scalability from 8T8R to 32T32R. High-resolution front radar programs have adopted architectures of up to 32 transmit and 32 receive channels, with detection moving toward the 400-meter class and customer production planned for mid-2028. In China, Millimeter-wave Radar IC vendors are accelerating automotive-grade qualification, production-vehicle adoption and capital-market preparation. One domestic

+357 96 030922
info@marketpublishers.com

supplier has exceeded 30 million cumulative automotive IC shipments, completed an over-RMB1 billion Series E financing round in 2026 and entered IPO tutoring, reflecting stronger capital allocation toward automotive-grade radar IC scale delivery, product iteration and domestic supply-chain certainty.

The growth logic of Millimeter-wave Radar ICs is moving from higher radar fitment per vehicle to higher sensing value per radar, higher chip integration and broader application boundaries. In automotive, high-resolution 4D imaging radar is migrating from premium models toward mainstream vehicle platforms. Vehicle configurations are expanding from one front long-range radar plus four corner radars toward in-cabin sensing, door-zone sensing, short-range parking perception and denser 360-degree coverage. Premium platforms will emphasize fusion with cameras, lidar and centralized compute, while mainstream platforms will focus on cost, power, form factor, functional safety and development efficiency. Technically, Millimeter-wave Radar ICs will continue to evolve toward higher channel counts, on-chip calibration, lower phase noise, stronger interference mitigation, on-chip AI acceleration, cybersecurity, OTA configuration and automotive safety alignment. Non-automotive growth will come from 60GHz presence sensing, elderly care, smart buildings, industrial safety and robotics, where customers are more fragmented, algorithms are more scenario-specific, certification cycles are relatively shorter and product iterations are faster. Competitive advantage is no longer defined by RF specifications alone; it is increasingly defined by the integrated capability of Millimeter-wave Radar ICs, packaging, antennas, algorithms, toolchains and automotive-grade mass production.

LP Information, Inc. (LPI) ' newest research report, the ?mmWave Radar ICs Industry Forecast? looks at past sales and reviews total world mmWave Radar ICs sales in 2025, providing a comprehensive analysis by region and market sector of projected mmWave Radar ICs sales for 2026 through 2032. With mmWave Radar ICs sales broken down by region, market sector and sub-sector, this report provides a detailed analysis in US$ millions of the world mmWave Radar ICs industry.

This Insight Report provides a comprehensive analysis of the global mmWave Radar ICs landscape and highlights key trends related to product segmentation, company formation, revenue, and market share, latest development, and M&A activity. This report also analyzes the strategies of leading global companies with a focus on mmWave Radar ICs portfolios and capabilities, market entry strategies, market positions, and geographic footprints, to better understand these firms? unique position in an accelerating global mmWave Radar ICs market.

+357 96 030922
info@marketpublishers.com

This Insight Report evaluates the key market trends, drivers, and affecting factors shaping the global outlook for mmWave Radar ICs and breaks down the forecast by Frequency, by Application, geography, and market size to highlight emerging pockets of opportunity. With a transparent methodology based on hundreds of bottom-up qualitative and quantitative market inputs, this study forecast offers a highly nuanced view of the current state and future trajectory in the global mmWave Radar ICs.

This report presents a comprehensive overview, market shares, and growth opportunities of mmWave Radar ICs market by product type, application, key manufacturers and key regions and countries.

Segmentation by Frequency:

24GHz

60GHz

76?81GHz

Others

Segmentation by Packaging:

Single-chip

SoC

Segmentation by Functional Range:

Long-range

Mid-range

Short-range

Segmentation by Dimension:

+357 96 030922
info@marketpublishers.com

2D

3D

4D

Segmentation by Application:

Automotive ? Exterior ADAS

Automotive ? In-cabin Sensing

Industrial/Infrastructure/Robotics

Consumer & Smart Home

Others

This report also splits the market by region:

Americas

United States

Canada

Mexico

Brazil

APAC

China

Japan

Korea

+357 96 030922
info@marketpublishers.com

Southeast Asia

India

Australia

Europe

Germany

France

UK

Italy

Russia

Middle East & Africa

Egypt

South Africa

Israel

Turkey

GCC Countries

The below companies that are profiled have been selected based on inputs gathered from primary experts and analysing the company's coverage, product portfolio, its market penetration.

Infineon

NXP

+357 96 030922
info@marketpublishers.com

Texas Instruments

Asahi Kasei Microdevices (AKM)

Socionext

Acconeer

KaiKuTeK (JMicron Technology)

Calterah

Possumic Technology

AirTouch (Shanghai) Intelligent Technology

Iclegend Micro

SGR Semiconductors

ifLabel

Key Questions Addressed in this Report
What is the 10-year outlook for the global mmWave Radar ICs market?
What factors are driving mmWave Radar ICs market growth, globally and by region?
Which technologies are poised for the fastest growth by market and region?
How do mmWave Radar ICs market opportunities vary by end market size?
How does mmWave Radar ICs break out by Frequency, by Application?

+357 96 030922
info@marketpublishers.com

Contents

+357 96 030922
info@marketpublishers.com

3 GLOBAL BY COMPANY

+357 96 030922
info@marketpublishers.com

+357 96 030922
info@marketpublishers.com

+357 96 030922
info@marketpublishers.com

+357 96 030922
info@marketpublishers.com

+357 96 030922
info@marketpublishers.com

+357 96 030922
info@marketpublishers.com

+357 96 030922
info@marketpublishers.com

List Of Tables

LIST OF TABLES

+357 96 030922
info@marketpublishers.com

+357 96 030922
info@marketpublishers.com

+357 96 030922
info@marketpublishers.com

+357 96 030922
info@marketpublishers.com

+357 96 030922
info@marketpublishers.com

+357 96 030922
info@marketpublishers.com

+357 96 030922
info@marketpublishers.com

List Of Figures

LIST OF FIGURES

+357 96 030922
info@marketpublishers.com

+357 96 030922
info@marketpublishers.com

+357 96 030922
info@marketpublishers.com

+357 96 030922
info@marketpublishers.com

I would like to order

Product name: Global mmWave Radar ICs Market Growth 2026-2032
Product link: https://marketpublishers.com/r/G2CD4103E214EN.html
Price: US$ 3,660.00 (Single User License / Electronic Delivery)

If you want to order Corporate License or Hard Copy, please, contact our Customer Service:
info@marketpublishers.com

Payment

To pay by Credit Card (Visa, MasterCard, American Express, PayPal), please, click button on product page https://marketpublishers.com/r/G2CD4103E214EN.html