

Europe 3D Stacking Market Forecast to 2031 - Regional Analysis by Interconnecting Technology (Through-Silicon Via, Monolithic 3D Integration, and 3D Hybrid Bonding), Device Type (Memory Devices, MEMS/Sensors, LEDs, Imaging & Optoelectronics, and Others), and End User (Consumer Electronics, Telecommunication, Automotive, Manufacturing, Healthcare, and Others)

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Abstracts

The Europe 3D stacking market was valued at US\$ 398.61 million in 2023 and is expected to reach US\$ 1,257.70 million by 2031; it is expected to record a CAGR of 15.4% from 2023 to 2031.

Increasing Use of Heterogeneous Integration and Component Optimization Drives Europe 3D Stacking Market

The increasing use of heterogeneous integration and component optimization to improve the manufacturing of electronic components is a major factor driving the 3D stacking market. This approach allows for the stacking of dies on a substrate, creating chips in packages that are smaller and more energy-efficient. 3D stacking technology allows heterogeneous integration by allowing circuit layers to be created using various methods and wafer types. This tremendous flexibility allows manufacturers to significantly optimize individual components when compared to single-wafer production. This supports manufacturers in designing electrical components that meet specific requirements with precision and customization, which was previously unattainable. Heterogeneous integration and component optimization involve integrating diverse

technologies into a composite device, which might include stacking of chips and packages; using multiple semiconductor materials; and employing various electrical routing techniques such as ball grid arrays, through-silicon vias (TSVs), interposers, and wire bonding.

Europe 3D Stacking Market Overview

Chips are critical for a wide range of technological and digital products, such as household appliances, smart cars, and consumer electronics. The EU Chips Act aims to boost the ecosystem for semiconductors in Europe. The act supports the target to promote competition between the semiconductor industry in Europe with companies from APAC and North America. The semiconductor industry in the region needs to upscale and become more innovative to gain a competitive edge. Also, governments of various countries in the region are investing in research and development in semiconductors. For instance, in February 2024, the Semiconductor Joint Undertaking (Chips JU) announced the launch of US\$ 216 million in calls for proposals to support innovation and research initiatives in the fields of semiconductors. 3D stacking technology is widely utilized in semiconductor and memory manufacturing. 3D hybrid bonding represents a significant advancement in semiconductor technology, providing substantial benefits in terms of electrical performance, mechanical strength, design flexibility, and space efficiency. Europe is experiencing a high penetration rate of electronic devices, including laptops, smartphones, and other wearable devices. A majority portion of the population in European countries owns and uses these devices. The need for smartphones and laptops continues to rise as people increasingly rely on technology for multiple tasks. Laptops are primarily used to access the internet, engage in online activities, and perform daily tasks. Numerous market players in Europe are increasing the production of these devices. Acer launched a new Acer Aspire 5 laptop, powered by a 13th-generation Intel Core processor, in January 2023. The processor is paired with Nvidia GeForce RTX 2050 graphics to boost the productivity of tasks such as video editing or other tasks that can benefit from the extra GPU power. In February 2022, Nokia launched the G11 and G21 smartphones in Europe. 3D stacked memory is used to meet the high capacity and performance requirements of modern mobile devices. Smartwatches, fitness trackers, and other wearables benefit from 3D stacking by integrating multiple functionalities in a compact form factor, including sensors, processors, and memory. Therefore, the demand for 3D stacking is increasing in the region, with the presence of a growing electronic industry.

Europe 3D Stacking Market Revenue and Forecast to 2031 (US\$ Million)

Europe 3D Stacking Market Segmentation

The Europe 3D stacking market is categorized into interconnecting technology, device type, end user, and country.

Based on interconnecting technology, the Europe 3D stacking market is segmented into through-silicon via, monolithic 3D integration, and 3D hybrid bonding. The through-silicon via segment held the largest market share in 2023.

By device type, the Europe 3D stacking market is segmented into memory devices, mems/sensors, LEDs, imaging & optoelectronics, and others. The memory devices segment held the largest market share in 2023.

In the terms of end user, the Europe 3D stacking market is segmented into consumer electronics, telecommunication, automotive, manufacturing, healthcare, and others. The consumer electronics segment held the largest market share in 2023.

By country, the Europe 3D stacking market is segmented into the UK, Germany, France, Italy, Russia, and the Rest of Europe. Germany dominated the Europe 3D stacking market share in 2023.

Taiwan Semiconductor Manufacturing Co Ltd; Samsung Electronics Co Ltd; Intel Corp; MediaTek Inc.; Texas Instruments Inc; Amkor Technology Inc; ASE Technology Holding Co Ltd; Advanced Micro Devices Inc.; 3M Co.; and Globalfoundries Inc are some of the leading companies operating in the Europe 3D stacking market.

Reason to buy

Save and reduce time carrying out entry-level research by identifying the growth, size, leading players, and segments in the Europe 3D stacking market.

Highlights key business priorities in order to assist companies to realign their business strategies.

The key findings and recommendations highlight crucial progressive industry trends in the Europe 3D stacking market, thereby allowing players across the value chain to develop effective long-term strategies.

Develop/modify business expansion plans by using substantial growth offering

developed and emerging markets.

Scrutinize in-depth Europe market trends and outlook coupled with the factors driving the Europe 3D stacking market, as well as those hindering it.

Enhance the decision-making process by understanding the strategies that underpin commercial interest with respect to client products, segmentation, pricing, and distribution.

The List of Companies - Europe 3D Stacking Market

Taiwan Semiconductor Manufacturing Co Ltd

Samsung Electronics Co Ltd

Intel Corp

MediaTek Inc

Texas Instruments Inc

Amkor Technology Inc

ASE Technology Holding Co Ltd

Advanced Micro Devices Inc

3M Co

Globalfoundries Inc

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