

3D IC and 2.5D IC Packaging Market by Packaging Technology (3D Wafer-Level Chip Scale Packaging, 3D TSV and 2.5D), Application (Logic, Memory, MEMS/Sensors, Imaging & Optoelectronics, LED), End User and Region - Global Forecast to 2028

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Abstracts

The 3D IC and 2.5D IC packaging market is projected to reach USD 82.0 billion by 2028 from USD 49.3 billion in 2023, at a CAGR of 10.7% from 2023 to 2028. The major factors driving the market growth of the 3D IC and 2.5D IC packaging market include rising trend of increased integration density and miniaturization of electronic devices and growing demand for consumer electronics and gaming devices.

Highest interconnect density offered by 3d tsv to fuel market demand

TSVs are vertical interconnects that join the various layers of the 3D IC by slicing through the whole thickness of the silicon wafer. They enable more effective signal transmission across IC layers and shorten the distance that signals must travel, which lowers power consumption and boosts performance.

Use of IC packaging in ADAS and autonomous driving to fuel market growth

Automobiles today are integrated with various technology devices, such as ECUs, sensors, power modules, microprocessors, DSPs, and advanced driver assistance systems, among many others, which enables the usage of memories such as DRAM, NAND flash, NOR flash, and SSD storage, driven by advanced packaging of 3D IC and 2.5D IC. Low power consumption and dense packaging of 3D ICs are driving its growth in the automobile industry for memory applications.

Adoption of mems/sensors by automotive industry to drive market growth

The automotive industry has adopted MEMS sensors to boost performance, save costs, and increase reliability. For instance, inertial MEMS sensors in the automobile industry are crash-sensing for airbag control. Several advanced features of automobiles, such as crash sensing for airbag control, dynamic vehicle control, rollover detection, antitheft systems, and many more, demand MEMS with advanced packaging to ensure high performance, quick response, low power consumption, and greater compactness.

North America is expected to account for the second largest market share during the forecast period

The 3D IC and 2.5D IC packaging market in North America has been further segmented into the US., Canada, and Mexico. Being home to some of the leading semiconductor companies, such as Intel Corporation (US), Texas Instruments Inc. (US), Qualcomm Incorporated (US), and Advanced Micro Devices, Inc. (US), makes the region technologically advanced.

The break-up of profile of primary participants in the 3D IC and 2.5D IC packaging market

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

By Designation Type: C Level – 40%, Director Level – 30%, Others – 30%

By Region Type: North America – 35%, Europe – 35%, Asia Pacific – 20%, Rest of the World – 10%

The major players of 3D IC and 2.5D IC packaging market are Samsung (South Korea), Taiwan Semiconductor Manufacturing Company, Ltd. (Taiwan), Intel Corporation (US), ASE Technology Holding Co., Ltd. (Taiwan), Amkor Technology (US) among others.

Research Coverage

The report segments the 3D IC and 2.5D IC packaging market and forecasts its size based on packaging technology, application, end user and region. The report also provides a comprehensive review of drivers, restraints, opportunities, and challenges influencing the market growth. The report also covers qualitative aspects in addition to

the quantitative aspects of the market.

Reasons to buy the report:

The report will help the market leaders/new entrants in this market with information on the closest approximate revenues for the overall 3D IC and 2.5D IC packaging market and related segments. This report will help stakeholders understand the competitive landscape and gain more insights to strengthen their position in the market and plan suitable go-to-market strategies. The report also helps stakeholders understand the pulse of the market and provides them with information on key market drivers, restraints, opportunities, and challenges.

The report provides insights on the following pointers:

Analysis of key drivers (Increasing need for advanced architecture in electronic products; Rising trend of increased integration density and miniaturization of electronic devices; Growing demand for consumer electronics and gaming devices), restraints (Thermal issues resulting from higher level of integration; High unit cost of 3D IC packages), opportunities (Growing adoption of high-end computing, servers, and data centers; Miniaturization of IoT Devices; Rising number of smart infrastructure and smart city projects), and challenges (Effective supply chain management; Reliability challenges with 3D IC packaging)

Product Development/Innovation: Detailed insights on upcoming technologies, research & development activities, and new product launches in the 3D IC and 2.5D IC packaging market

Market Development: Comprehensive information about lucrative markets – the report analyses the 3D IC and 2.5D IC packaging market across varied regions

Market Diversification: Exhaustive information about new products, untapped geographies, recent developments, and investments in the 3D IC and 2.5D IC packaging market

Competitive Assessment: In-depth assessment of market shares, growth strategies and product offerings of leading players like Samsung (South Korea), Taiwan Semiconductor Manufacturing Company, Ltd. (Taiwan), Intel Corporation (US), ASE

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