

DNA Data Storage Market by Type (Cloud, On-Premises), Technology (Sequence-based DNA Data Storage, Structure-based DNA Data Storage), End Users (Government, Healthcare & Biotechnology, Media & Telecommunication) and Geography - Global Forecast to 2030

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Report description:

The DNA Data storage market is projected to grow from USD 76 million in 2024 and is expected to reach USD 3,348 million by 2030, growing at a CAGR of 87.7% from 2024 to 2030. The rising demand for big data applications is one of the key driving factors for the DNA data storage market. Big data applications generate vast amounts of data, ranging from scientific research to business analytics. Traditional storage solutions struggle to handle this massive volume of data efficiently. Also, Big data applications require fast and efficient data retrieval for real-time analytics and decision-making. DNA data storage provides a solution by offering an incredibly dense and scalable storage medium capable of accommodating these large datasets. Moreover, once optimized, it can offer rapid access to stored information, making it suitable for applications where quick retrieval of large datasets is essential.

"Sequence-based DNA data storage in the DNA data storage market to witness significant growth during the forecast period."

Sequence-based DNA data storage as a technology leverages the unique properties of DNA molecules to store vast amounts of digital information. Sequence-based DNA data storage is a type of DNA data storage in which data is encoded in the sequence of DNA bases. Sequence-based DNA data storage has a number of potential advantages over traditional data storage methods, such as magnetic tape and optical discs. Although, it is a new technology, and it is still under development. However, it has the potential to revolutionize the way data is stored. Sequence-based DNA data storage could be used to store data for long periods of time, such as historical records and scientific data. It could also be used to store data in remote or inaccessible locations. "The Government sector is expected to witness significant growth in the DNA data storage market growth during the forecast period."

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In terms of national security and defense, the government sector relies on large volumes of classified and sensitive data. DNA data storage can ensure the secure storage of classified information, protecting it from unauthorized access while allowing for efficient retrieval when needed. It can also be utilized for creating backup copies of critical national security data. Its stability ensures that essential information remains intact even in the event of natural disasters or cyber-attacks. Moreover, Law enforcement agencies maintain a huge database of forensic DNA samples for criminal investigations. DNA data storage facilitates the efficient storage of these databases, ensuring the integrity of genetic information for forensic analysis. Government health agencies use genomic data for disease surveillance and public health research. It allows archiving of large genomic datasets, supporting ongoing health research efforts.

"US is expected to hold the largest market size in North America region during the forecast period."

US is expected to hold the largest share market size of the DNA data storage market in North America during the forecast period. The presence of large data centres in the US creates a demand for data storage solutions that are durable, secure, and scalable. DNA data storage can help data centres meet these demands. DNA data storage is more energy-efficient than traditional data storage solutions. This can help data centres reduce their energy costs. DNA data storage is more durable than traditional data storage solutions, meaning that data centres can reduce their spending on hardware replacement. Several US companies such as Illumina, Inc. (US), Microsoft (US), Iridia, Inc. (US), Twist Bioscience (US), Catalog (US), Thermo Fisher Scientific Inc. (US), and Micron Technology, Inc. (US), are investing heavily in DNA data storage to develop and innovate new technology in this market.

- -□By Company Type: Tier 1 52%, Tier 2 31%, and Tier 3 17%
- By Designation: C-level Executives 47%, Directors -31%, and Others 22%
- By Region: North America -36%, Europe 29%, Asia Pacific- 30%, and RoW 5%

The report profiles key DNA data storage market players with their respective market ranking analysis. Prominent players profiled in this report include Illumina, Inc. (US), Microsoft (US), Iridia, Inc. (US), Twist Bioscience (US), Catalog (US), and Thermo Fisher Scientific Inc. (US). Micron Technology, Inc. (US), Helixworks Technologies Ltd (Ireland), Agilent Technologies, Inc. (US), Beckman Coulter (US), Eurofins Scientific (Luxembourg), Siemens (Germany), Oxford Nanopore Technologies (UK), Evonetix (UK), Quantum Corporation (US), Molecular Assemblies (US), and BGI GROUP GUANGDONG ICP (China), are among a few other key companies in the DNA data storage market.

Report Coverage

The report defines, describes, and forecasts the DNA data storage market based on type, technology, end-user, and region. It provides detailed information regarding drivers, restraints, opportunities, and challenges influencing the growth of the DNA data storage market. It also analyzes competitive developments such as collaborations, acquisitions, expansions, contracts, partnerships, and actions carried out by the key players to grow in the market.

Reasons to Buy This Report

The report will help the market leaders/new entrants in the market with information on the closest approximations of the revenue for the overall DNA data storage market and the subsegments. The report will help stakeholders understand the competitive landscape and gain more insight to position their business better and plan suitable go-to-market strategies. The report also helps stakeholders understand the pulse of the market and provide them with information on key drivers, restraints, opportunities, and challenges.

The report will provide insights into the following pointers:

- Analysis of key drivers (Increasing demand for data storage), restraints (Higher establishment cost), opportunities (Increasing application of DNA data storage market), and challenges (Standardization and Interoperability of DNA data storage market) of the DNA data storage market.
- Product development /Innovation: Detailed insights on upcoming technologies, research & development activities, and new product & service launches in the DNA data storage market.
- Market Development: Comprehensive information about lucrative markets; the report analyses the DNA data storage market across various regions.
- Market Diversification: Exhaustive information about new products & services, untapped geographies, recent developments, and investments in the DNA data storage market.

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- Competitive Assessment: In-depth assessment of market share, growth strategies, and services, offering of leading players like Illumina, Inc. (US), Microsoft (US), Iridia, Inc. (US), Twist Bioscience (US), Catalog (US) among others in the DNA data storage market.

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