

Three Dimensional (3D) Printed Rocket Engine Market to Reach \$1.48 Billion by 2029 with 21.7% CAGR

The Business Research Company's Three Dimensional (3D) Printed Rocket Engine Global Market Report 2025 – Market Size, Trends, And Forecast 2025-2034

LONDON, GREATER LONDON, UNITED KINGDOM, October 7, 2025 /EINPresswire.com/ -- What Is The Three Dimensional (3D) Printed Rocket Engine Market Size And Growth?



In recent years, the market for three-dimensional (3D) printed rocket engines has seen exponential growth. Projected to expand from \$0.55 billion in 2024 to \$0.68 billion in 2025, the market expects a compound annual growth rate (CAGR) of 22.1%. Such growth during the



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historic period can be credited to factors such as the rise in satellite launches, the growing need for cost-effective propulsion systems, an increased preference for small and medium-sized launch vehicles, the development of commercial space exploration initiatives, and amplified government investment in space programs.

Anticipated to experience massive expansion in the forthcoming years, the market size for three-dimensional (3D) printed rocket engines is projected to surge to \$1.49 billion by 2029, boasting a compound annual growth rate

(CAGR) of 21.7%. This escalation during the prediction period can be credited to the escalating demand for reusable rocket technologies, augmented investment in space startups by the private sector, increasing necessity for quick prototyping in rocket fabrication, expansion of commercial satellite internet services, and growing partnerships between space agencies and manufacturers. The forecast period will also witness major trends such as technological progress in additive manufacturing, development of light and sturdy materials, innovative changes in modular engine design, and improvement in 3D printing speed and scope.

Download a free sample of the <u>three dimensional (3d) printed rocket engine market</u> report: <u>https://www.thebusinessresearchcompany.com/sample.aspx?id=27931&type=smp</u>

What Are The Current Leading Growth Drivers For Three Dimensional (3D) Printed Rocket Engine Market?

The growth of the three-dimensional (3D) printed rocket engine market is projected to be fuelled by the escalating investments in space exploration. The study and exploration of space are conducted using spacecraft, satellites, and cutting-edge technology. There is a surge in these expeditionary investments due to the increasing demand for sophisticated satellite-based communication and data services, which offer quicker and more dependable communication. These investments are promoting advancements in propulsion technologies and manufacturing methods for 3D printed rocket engines. It also accelerates the usage of additive manufacturing, promoting the creation of lighter, more efficient, and cost-effective rocket engines, and assisting in developing innovative designs for upcoming space missions. For example, in 2025, the Space Foundation—an American nonprofit entity—reported that in 2023 international government expenditure on space programs had climbed to \$125 billion, a rise of 11% from 2022. Hence, these mushrooming investments in space exploration are propelling the growth of the 3D printed rocket engine market.

Which Companies Are Currently Leading In The Three Dimensional (3D) Printed Rocket Engine Market?

Major players in the Three Dimensional (3D) Printed Rocket Engine Global Market Report 2025 include:

- Lockheed Martin Corporation
- Northrop Grumman Corporation
- IHI Corporation
- Space Exploration Technologies Corp.
- Blue Origin LLC
- ArianeGroup SAS
- Sierra Nevada Corporation
- Stratasys Ltd.
- EOS GmbH
- Relativity Space Inc.

What Are The Main Trends, Positively Impacting The Growth Of Three Dimensional (3D) Printed Rocket Engine Market?

Principal companies in the 3D printed rocket engine industry are concentrating their efforts on innovating manufacturing methods, like additive manufacturing, to outshine their competition. Additive manufacturing is essentially the creation of metal engine parts layer upon layer from digital designs, which not only allows for part consolidation and weight reduction, but also speeds up production compared to conventional manufacturing processes. For example, in March 2023, Relativity Space Inc., an American launch vehicle producer, unveiled Terran 1, the first 3D printed rocket. Its production relies on massive custom 3D printers named Stargate,

which use proprietary metal alloys to build rockets, with the aim of significantly streamlining the production process and the necessary infrastructure for spaceflight. Terran 1 is a disposable, two-stage launch vehicle designed for small satellite missions, standing at 110 feet tall and being approximately 85% 3D-printed by mass, including engines and structural components. The rocket owes its propulsion to nine Aeon 1 engines on the first stage and a solitary Aeon Vac engine on the second stage, fueled by liquid natural gas (LNG) and liquid oxygen (LOX).

How Is The Three Dimensional (3D) Printed Rocket Engine Market Segmented? The three dimensional (3D) printed rocket engine market covered in this report is segmented

- 1) By Engine Type: Liquid Rocket Engines, Solid Rocket Engines, Hybrid Rocket Engines, Air-Breathing Engines, Electric Propulsion Systems
- 2) By Material Type: Metal Alloys, Thermoplastics, Ceramics
- 3) By Technology: Fused Deposition Modeling (FDM), Stereolithography (SLA), Selective Laser Sintering (SLS), Binder Jetting, Direct Energy Deposition (DED)
- 4) By End User: Commercial Space Companies, Government Agencies, Aerospace And Defense Contractors, Research Institutions, Educational Institutions

Subsegments:

- 1) Liquid Rocket Engines: Cryogenic Engines, Hypergolic Engines, Kerosene (RP-1) Engines, Methalox (Methane + LOX) Engines
- 2) Solid Rocket Engines: Composite Propellant Engines, Double-Base Propellant Engines, High-Energy Solid Propellant Engines
- 3) Hybrid Rocket Engines: Liquid Oxidizer + Solid Fuel Engines, Paraffin-Based Hybrid Engines, Polymer-Based Hybrid Engines
- 4) Air-Breathing Engines: Ramjet Engines, Scramjet Engines, Pulse Detonation Engines
- 5) Electric Propulsion Systems: Hall Effect Thrusters, Ion Thrusters, Electrospray Thrusters, Magnetoplasmadynamic (MPD) Thrusters

View the full three dimensional (3d) printed rocket engine market report: https://www.thebusinessresearchcompany.com/report/three-dimensional-3d-printed-rocket-engine-global-market-report

Which Is The Dominating Region For The Three Dimensional (3D) Printed Rocket Engine Market?

In 2024, North America dominated the global market for 3D printed rocket engines. However, the Asia-Pacific region is anticipated to experience the fastest expansion throughout the forecast period. The report detailing the 3D printed rocket engine market includes coverage of regions such as Asia-Pacific, Western Europe, Eastern Europe, North America, South America, the Middle East, and Africa.

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Speak With Our Expert:

Saumya Sahay

Americas +1 310-496-7795

Asia +44 7882 955267 & +91 8897263534

Europe +44 7882 955267

Email: saumyas@tbrc.info

The Business Research Company - <u>www.thebusinessresearchcompany.com</u>

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