

Solar-Powered UAVs Market Growth Global Size Reaches US\$ 2.9 Million by 2030 at 14.3% CAGR

Solar-Powered UAVs Market to reach US\$ 2.9M by 2030, growing at 14.3% CAGR with rising demand for sustainable aerial systems.

AUSTIN, GA, UNITED STATES, August 22, 2025 /EINPresswire.com/ -- Market Size and Growth

The <u>solar-powered UAV market</u> stood close to USD 1.01 million in 2022 and is set to hit nearly USD 2.9 million by 2030, advancing steadily with a CAGR of 14.3% from 2024 to 2031.



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Market Drivers & Opportunities



The U.S. solar-powered UAVs market is gaining traction, driven by defense needs and sustainable aviation, set to expand steadily by 2030"

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DataM Intelligence 4Market Research LLP Sustainability Push: The move toward low-emission and renewable technologies is driving investments in solar UAVs.

Extended Flight Endurance: Their capacity to operate for days without recharging makes them ideal for surveillance, mapping, and telecom.

Technological Innovation: Advancements in solar cell efficiency, lightweight composites, and energy storage are

unlocking new commercial and defense applications.

Geographical Share

North America holds the largest market share, supported by defense investments and commercial drone adoption.

Asia-Pacific, particularly Japan, is emerging as a fast-growing hub, driven by advanced R&D and government initiatives.

Europe is seeing momentum due to green aviation policies and strong aerospace infrastructure.

Key Players

AeroVironment, Inc.

Sunbirds

Sunlight Photonics Inc.

Bye Aerospace

Silent Falcon UAS Technologies

Alta Devices

Quaternium Technologies

Atlantik Solar

SunPower Corporation

Solar Ship Inc

Market Segments:

By Type: (Fixed-Wing Solar (UAVs), Rotorcraft UAV, Umbrella UAV)

By Range: (Up to 300 KM, Above 300 KM)

By Component: (Propulsion System, Airframe, Guidance Navigation, Control System, Payload)

By Mode of Operation: (Semi-Autonomous, Autonomous)

By Application: (Commercial, Defense & Military)

By Region: (North America, South America, Europe, Asia Pacific, Middle East, and Africa)

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Recent Developments

United States

2024: A leading U.S. A next-gen solar aircraft was flight-tested by a defense company, built to stay airborne longer and enhance surveillance ops.

2025: Expansion of solar UAV production for agriculture and environmental monitoring, supported by new government contracts.

Japan

2024: Japanese aerospace companies advanced development of solar UAVs aimed at disaster management and communication services.

2025: Japan invested in pilot projects for solar-powered drones to enhance border security and support green aviation goals.

Conclusion

The solar-powered UAVs market is on a transformative growth path. With demand rising for clean energy solutions and long-duration aerial operations, the sector presents enormous opportunities across defense, commercial, and industrial applications. Companies that embrace sustainability, innovation, and global expansion will be at the forefront of this exciting market.

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