

HAPSMobile's Sunlider Succeeds in Stratospheric Test Flight

Milestone achieved approximately three years after development began

HAPSMobile Inc. ("HAPSMobile"), a subsidiary of SoftBank Corp. (TOKYO: 9434) and minority-owned by AeroVironment, Inc. ("AeroVironment," NASDAQ: AVAV), today announced that an altitude of 62,500 feet (approximately 19 kilometers) was reached during the fifth test flight for "Sunlider," a solar-powered unmanned aircraft system ("UAS") designed for stratospheric telecommunications platform systems. The test flight took place on September 21, 2020 (MT) at Spaceport America ("SpA"), New Mexico. Sunlider successfully reached the stratosphere in the short span of approximately three years since its development began.



Sunlider flying in the stratosphere

The test flight lasted a total 20 hours and 16 minutes, with 5 hours and 38 minutes of them in the stratosphere. The world-class sized UAS not only reached the stratosphere, it successfully completed its flight on a pre-flight battery charge and solar energy during the flight. Sunlider also demonstrated its high-performance capabilities under extremely demanding conditions where wind speeds were greater than 58 knots (approximately 30 meters per second) and temperatures fell as low as -73 degrees Celsius.

5th Test Flight Overview (all times stated in US Mountain Time)

Maximum altitude		62,500 feet (approx. 19 kilometers)
Total flight time		20 hours and 16 minutes Take off: September 21, 5:16 AM Landing: September 22, 1:32 AM
Flight time in stratosphere		5 hours and 38 minutes Stratosphere entry: September 21, 1:57 PM Stratosphere exit: September 21, 7:35 PM
Test environment	Max. wind speed	58 knots (approx. 30 meters per second)
	Lowest temp.	-73 degrees Celsius

Footage of the test flight can be seen [here](#).

In addition to reaching the stratospheric flight milestone, an Internet connectivity test using a [communications payload jointly developed with Loon LLC \("Loon"\)](#) was successfully performed during the test flight. Using smartphones connected to the Internet through the payload in the stratosphere, members from Loon and AeroVironment successfully made a video call to HAPSMobile members based in Japan. More details on the payload test are in [this press release](#).

The success of this stratospheric test flight is a major step forward for HAPSMobile as it continues to pursue its mission of bridging the digital divide by building its business in the stratosphere, a new frontier for humankind. HAPSMobile will continue to work to revolutionize mobile networks by leveraging HAPS.

Junichi Miyakawa, Representative Director & CTO of SoftBank Corp., and also President & CEO of HAPSMobile, said, "Watching this test flight, I was reminded of 'Castle in the Sky,' the anime directed by Hayao Miyazaki in 1986, and how the airship in the story filled me with aspiration. We once again moved one step closer to our goal of building a base station that floats in the sky solely on solar energy. Even though the temperature fell below 73 degrees Celsius, our work on endurance tests bore fruit and resulted in a successful test flight. On the day of the test, Sun glider faced aerial currents of roughly 30 meters per second, so I was relieved when it hit the runway after clearing all test items. In this test flight, we also successfully conducted communications with smartphones on the ground and obtained data for fully automated piloting. While there is still much room for improvement, we will continue to work toward realizing our dream."

About HAPSMobile

HAPSMobile Inc. is a subsidiary of SoftBank Corp. that plans and operates a High Altitude Platform Station (HAPS) business with the aim of bridging the world's digital divide. HAPSMobile is primarily engaged in network equipment research and development for the HAPS business, construction of core networks, new business planning and activities for spectrum usage. AeroVironment, Inc. is HAPSMobile's minority owner and aircraft development partner for "Sun glider," a solar-powered unmanned aircraft designed for stratospheric telecommunications platform systems that flies approximately 20kms above ground in the stratosphere. HAPSMobile has a strategic relationship with Loon, a subsidiary of Alphabet, the parent company of Google. For more information, please visit <https://www.hapsmobile.com>.

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