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Rapidtek Successfully Launches Black Kite-1 with Taiwan Space Agency to Advance LEO IoT Constellation

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Content

Rapidtek announced that its **8U IoT CubeSat** commissioned by the **Taiwan Space Agency (TASA)** and developed in collaboration with the Industrial Technology Research Institute (ITRI), has successfully reached orbit aboard SpaceX's Falcon 9 Transporter-15 mission. The launch took place at 2:00 a.m. Taiwan time on November 21 from Vandenberg Space Force Base in California, officially initiating Rapidtek's low-earth-orbit (LEO) constellation deployment plan.

Black Kite-1 is an upgraded successor to Rapidtek's first-generation 3U CubeSat Nightjar, originally developed under the Startup CubeSat program. Named after the Black Kite, a hawk known for agility, altitude, and broad coverage - the satellite symbolizes the significant leap from a 3U to an 8U platform.

Arthur Wang, Chairman of Rapidtek, said the successful orbital insertion marks a major milestone as the company advances from single-satellite verification to multi-satellite constellation communications. He thanked TASA and ITRI for their partnership, noting that the mission reflects not only technical progress but also Taiwan's strengthening industry capabilities.

Now operating in a Sun-synchronous orbit at an altitude of roughly 500 to 600 kilometers, Black Kite-1 passes over Taiwan one to two times per day with communication windows of about five minutes. Using Rapidtek's self-developed ground stations, the mission is validating end-to-end communication performance through both local and remote data relay.



CubeSat Black Kite-1

The mission focuses on three key objectives:

- verifying system stability and pointing accuracy
- validating Rapidtek's Ku-band high-speed and LoRa low-data-rate communication payloads
- testing TASA's high-precision GPS receiver and space-grade GPGPU

Compared with the earlier 3U platform, the 8U CubeSat supports more payloads, more users, and a wider range of application scenarios. It is designed to deliver communication solutions for remote or underserved regions, demonstrating the versatility and commercial potential of LEO IoT services.

Rapidtek plans to continue expanding its LEO satellite program, with three additional **8U IoT CubeSats** from the Startup CubeSat Program scheduled for launch in 2026. These upcoming missions will further validate technologies, strengthen Taiwan's role in LEO communications, and help establish an initial IoT-focused constellation for real-time ground-to-space data transfer.

Tags:

DAS (Distributed Antenna Systems), Edge Computing, EMC / EMI

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Heading : About Signal Hound

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