US Army: first Black Hawk ready for Autonomous Guidance

Published on 26/03/2026

The **U.S. Army** has received the first **H-60Mx Black Hawk** deeply modified to fly **with or without a pilot at the controls**. This is an important milestone for the future of **military aviation**, as it paves the way for a new generation of helicopters that are more **secure**, **intelligent**, and **versatile**.

This aircraft, defined as **autonomous-ready**, will now enter a phase of **rigorous testing**. The goal is to verify how this technology can improve operational missions and reduce risks for soldiers. It is not a project born suddenly, but the result of over **ten years of research** in the field of autonomous flight.

The technology that changes the Black Hawk

At the core of this innovation is the **ALIAS** program by **DARPA**, developed in collaboration with **Sikorsky**, a company of the **Lockheed Martin** group. From this work, the **MATRIX™**

technology was born, a sophisticated control system that functions as a true **“digital brain”** of the helicopter.

The system can manage complex phases of flight, from **takeoff** to **landing**, allowing the Black Hawk to operate autonomously or under the supervision of a remote crew from a **ground control station**. A central element is also the **ALIAS Optimally Piloted Vehicle** kit, which includes a **software development kit** capable of integrating new sensors and third-party programs.

Another fundamental change is the transition from traditional mechanical controls to a modern **fly-by-wire** electronic system. This makes the helicopter more **stable**, easier to manage, and particularly effective even in difficult conditions, such as those of **low visibility**. In this way, the **pilot's workload** is reduced, allowing more focus on the mission.

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Testing and vision for the future

In the coming months, **test pilots** and **army engineers** will put the new Black Hawk to the test in various scenarios. Its ability to be controlled from the ground, to handle complex missions autonomously, and to enhance **operational safety** will be analyzed.

This helicopter also represents the first testing ground for the **SAFE** (**Strategic Autonomy Flight Enabler**) program, which aims to create a **universal** and **scalable** autonomous kit to be installed on hundreds of Black Hawks and, in the future, on other military aircraft.

The project also involves the State of **Texas** and the **Texas A&M University System's Bush Combat Development Complex**, where some **modified UH-60L** will be used to evaluate the contribution of autonomy in civilian missions, such as **fighting wildfires**. For the American army, this delivery is not just a technological advancement, but a true step towards a future where **man and machine** will collaborate more closely to ensure mission success.

News link:
https://www.army.mil/article/291237/us_army_soars_into_future_with_delivery_of_first_autonomous_ready_black_hawk