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SpaceX successfully launched its first mission of the year — and its last for customer Iridium

A used SpaceX Falcon 9 rocket lofted 10 final Iridium Next satellites into orbit today (Jan. 11), completing a two-year, eight-launch contract between the two companies.

The rocket lifted off from Space Launch Complex 4E at Vandenberg Air Force Base in California at 7:31 a.m. local time during an instantaneous launch window. "Our final launch ... is by far the most important milestone of all," Matt Desch, CEO of Iridium, said during a news conference last week. "It means finally realizing the dream that the founders of this system had 30 years ago."

Once the new satellites are orbiting successfully, Iridium will spend about three weeks testing them to make sure everything is working properly. When the tests are complete, the upgraded constellation will be fully operational, with 66 active satellites and nine orbiting spares. The entire overhaul cost \$3 billion, and each Next satellite is about the size and weight of a Mini Cooper, according to Desch.

Over the course of the two years during which the Iridium Next satellites have launched, the company has been de-orbiting their predecessors. The six satellites of that generation remaining in orbit will be brought down over the coming months, Desch said.

The Iridium Next satellites also carry air traffic control technology for Aireon, a company providing air traffic surveillance services. Aireon will be able to track airplanes equipped with Automatic Dependent Surveillance-Broadcast (ADS-B) systems, which are mandated for implementation by 2020, but have not yet been installed on most planes.

Currently, airplanes can't accurately be monitored away from ground-based radar systems, which means they are required to stick to "highways in the sky" over oceans and other less densely populated areas of Earth. If they can instead report their location through satellites, airlines will be able to design more direct flights and more accurately track flights in distress.

Today's launch was the first successful rocket liftoff from the U.S. this year. SpaceX's next planned launch will be the uncrewed test flight of its Crew Dragon spacecraft, which will eventually carry NASA astronauts to the International Space Station. That launch was recently pushed to no earlier than February.