

Reprogrammable satellite shipped to launch site

June 30 2021



The first commercial telecommunications satellite that can be completely repurposed in orbit on board an Antonov cargo plane. Developed under an ESA Partnership Project, Quantum will be able to respond to changing demands on Earth during its 15-year lifetime, providing data, communications and entertainment exactly where and when it is wanted. Rather than broadcast to Earth with fixed beams, Quantum will let people choose where to point their beams. These can move in virtual real time to provide information to passengers on-board moving planes or ships. The beams can also be adjusted at the push of

a button, so that more data is delivered when demand surges. The satellite was developed by ESA with operator Eutelsat and satellite manufacturers Airbus as the prime manufacturer and Surrey Satellite Technology Ltd for the platform.
Credit: ESA

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ESA Partnership Projects federate European industry around large-scale programmes, developing innovative cutting-edge solutions in partnership with private or public operators. They support end-to-end space systems from start-up to in-[orbit](#) validation. After that, the commercial partners operate the system.

On 29 June the [satellite](#) took its last Earth-bound journey before it is launched into space. It was loaded onto an Antonov cargo plane and flown from Toulouse in France to Cayenne's Félix Eboué Airport in French Guiana, then transported by road to Europe's Spaceport.



The first commercial telecommunications satellite that can be completely repurposed in orbit is pictured in its packing case in Toulouse. Developed under an ESA Partnership Project, Quantum will be able to respond to changing demands on Earth during its 15-year lifetime, providing data, communications and entertainment exactly where and when it is wanted. Rather than broadcast to Earth with fixed beams, Quantum will let people choose where to point their beams. These can move in virtual real time to provide information to passengers on-board moving planes or ships. The beams can also be adjusted at the push of a button, so that more data is delivered when demand surges. The satellite was developed by ESA with operator Eutelsat and satellite manufacturers Airbus as the prime manufacturer and Surrey Satellite Technology Ltd for the platform. Credit: ESA

Quantum will launch on board an Ariane 5 this summer to a geostationary transfer orbit from where it will continue to [geostationary orbit](#) some 36 000 kilometres above Earth.

François Gaullier, Head of Telecom Systems at Airbus, said: "The technology we have developed and built for Eutelsat Quantum is truly game changing, paving the way to fully reconfigurable geostationary telecommunications satellites. Our experience in pioneering this revolutionary technology demonstrates the value of partnerships—bringing together the best from Eutelsat, ESA and Airbus to achieve a new standard in flexible connectivity."

Elodie Viau, Director of Telecommunications and Integrated Applications at ESA, said: "Investing in space improves life on Earth by creating high-value jobs in the space industry and fostering new innovations, while boosting commercialisation for a green and digital Europe."

The Ariane 5 rocket is operated by Arianespace at Europe's Spaceport. It is able to carry payloads weighing more than 10 tonnes to geostationary transfer orbit and over 20 tonnes into low Earth orbit. Its performance perfectly complements that of Europe's Vega light-lift launch vehicle, and Soyuz.

Europe's next-generation Ariane 6 rocket will eventually replace Ariane 5. Available in two versions, it will be capable of a wide range of missions to any orbit.

Provided by European Space Agency

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