

EchoStar Mobile, SKYFive Demonstrate C2 Link for Advanced Air Mobility Use-Cases with Airbus

Companies successfully test dual satellite and terrestrial transports for command and control of low-altitude aircraft

MUNICH, GERMANY, May 24, 2023 /EINPresswire.com/ -- Today, SKYFive and EchoStar Corporation (Nasdaq: SATS) announced the completion of a series of flight tests of dual satellite and terrestrial connectivity for command and control (C2) of urban air vehicles with Airbus. The tests paired a postage-stamp-sized air-to-ground (A2G) modem and service from SKYFive with a Hughes 4510 S-band modem and satellite service from EchoStar to control an unmanned test vehicle during a series of flight exercises. Conducted from November 2022 to February 2023 at Ludwig Bölkow Campus in Taufkirchen near Munich, the tests are part of a project to commercialize urban air mobility within and between cities – an ambition that depends on redundant satellite and terrestrial connectivity.



During the tests, telemetry data transmitted concurrently over the A2G and satellite transports, validating the dual-transport service according to International Civil Aviation Organization (ICAO) Required Communication Performance (RCP) standards and demonstrating commercial-grade Performance Based Communication & Surveillance (PBCS) for safety. Notably, due to a slight shift in the center frequencies, the satellite and ground connections operated simultaneously over the same S-band (2.1 GHz) frequency without interfering with each other, setting the stage for safety-critical satellite communications for Advanced Air Mobility (AAM).

Telemaco Melia, Vice President and General Manager, EchoStar Mobile, said: “These demonstrations underscore the enduring value of satellite connectivity for human innovation and also serve as an intriguing use case for future 5G non-terrestrial networks (NTN) like the one EchoStar plans to develop in the S-band. Thanks to the new 3GPP Release 17 standards, we’ll soon be able to put a single module into a remotely piloted urban aircraft for always on terrestrial and non-terrestrial 5G service – entering a new era of anytime, anywhere connectivity.”

“Compliance with ICAO PBCS requirements is an important step to generate trust that existing technologies can satisfy aeronautic safety requirements,” said Dr. Markus Klügel, Scientist Wireless Communications, Airbus Central Research & Technology.

“Communication plays a key role in current AAM concepts and the combination of A2G with satellite communication harmonizes well with the already existing ecosystem,” added Dr. Dominic Schupke, Research Project Leader and Senior Expert, Airbus Central Research & Technology.

Dr. Michael Ohm, Chief Technology Officer, SKYFive AG, said: “This is the first time that a drone was controlled over a C2 link underpinned by an A2G network and a satellite link used in tandem. The demonstrated communications performance is impressive, and for SKYFive this is yet another step of making our A2G technology commercially available to the Advanced Air Mobility (AAM) ecosystem.”

EchoStar Mobile Limited is the EchoStar subsidiary in Europe that operates a mobile satellite system (MSS) network using the geostationary EchoStar XXI satellite. Globally, EchoStar is developing an S-band constellation of low Earth orbit (LEO) satellites, called EchoStar Lyra™, to support Internet of Things connectivity as the company explores development of a global non-terrestrial 5G network in the S-band.

About SKYFive

SKYFive provides Inflight Connectivity services based on its unique Air-to-Ground technology. The company’s mission is to deliver true broadband services to airline passengers, enable the real-time transfer of vast amounts of aircraft data, and support ultra-reliable low latency communications required for the mass proliferation of Advanced Air Mobility. SKYFive connects aircraft of any kind and size through giant cells in the sky, thereby leveraging the performance and cost benefits of the 4G and 5G mobile ecosystem. SKYFive was established as a spin-off from Nokia in 2019, is headquartered in Munich, Germany, and operates several sites for R&D and service delivery in major aviation markets.

About EchoStar

EchoStar Corporation (Nasdaq: SATS) is a premier technology and networking services provider offering consumer, enterprise, operator and government solutions worldwide under its Hughes®, HughesNet® and EchoStar® brands. In Europe, EchoStar operates under its EchoStar Mobile

Limited subsidiary and in Australia, the company operates as EchoStar Global Australia. For more information, visit www.echostar.com and follow EchoStar on Twitter and LinkedIn.

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