

Abstract

The Flying Squirrel is a cruise efficient, extremely short takeoff and landing short haul aircraft. It is designed to meet the 2018-2019 NASA University Engineering Design Challenge requirements for an optionally self-piloted aircraft for critical rural/suburban needs. It is fully compliant with FAR Part 23 and Part 135, and is feasible for deployment by 2025. The aircraft features a novel circulation control wing system to provide extremely high lift and laminar flow airfoils for cruise efficiency. It seats nine passengers, can be easily converted to carry cargo, and is propelled by a cutting-edge single turboprop engine. It can takeoff in 584 feet, land in 614 feet, and can travel 452 nmi in 99 minutes, thereby exceeding all the requirements laid forth by the NASA RFP.