

F135

MILITARY ENGINES

ENGINE CORE UPGRADE



ENGINE CORE UPGRADE (ECU)



THE WORLD'S MOST ADVANCED FIGHTER ENGINE

Proven Propulsion Designed to Enable Block 4 Capabilities and Beyond

The F135 Engine Core Upgrade (ECU) delivers the durability and performance needed to enable Block 4 capabilities and beyond. Easily retrofittable in all F-35 variants, ECU is the only engine that offers all global F-35 operators the increased power and thermal management capacity needed to enable next generation weapons systems and sensors. Utilizing proven technologies developed for advanced programs, ECU ensures the F-35 Lightning II remains the most advanced fighter for decades to come.



PROVEN TECHNOLOGY

Design based upon demonstrated and proven advanced technologies.



ENABLES BLOCK 4 AND BEYOND

Increased bleed air, horsepower and heat rejection enables Block 4 and beyond power and thermal needs.



VARIANT COMMON SOLUTION

Maintains the current F135 architecture while focusing on engineering changes to the power module and gearbox to accelerate modernization and minimize risk.



RESTORES FULL LIFE

Upgrades address “over bleeding” of F135 and higher mission demands to avoid looming lifecycle cost growth.



MINIMIZES COST AND ACCELERATES MODERNIZATION

with 60-70% commonality with the F135.

“DROP-IN”

Retrofits allow for upgrades to already fielded and new production F-35s.



DESIGNING TO MAXIMIZE AIR VEHICLE POWER AND THERMAL CAPACITY

ECU will be fully compatible with any PTMS solution delivering up to 80kW. When combined with a new PTMS, it will also provide additional fuel burn and thrust benefits.

DESIGNED FOR INTEGRATION WITH ALL F-35S FOR MEANINGFUL OPERATIONAL CAPABILITY