

## Six Steps to Greater Air Dominance

The Air Force is investing in a range of new systems and upgrades to improve its ability to dominate the skies in future conflicts.



Photo: Cynthia Griggs/USAF

**1. Expand capacity.** “The Air Force We Need” envisions increasing combat fighter squadrons from 55 to 62. That requires buying at least 72 new fighters per year, which is also the smallest number necessary to begin reducing the average age of the fighter fleet from today’s 28 years. Air Combat Command boss Gen. James Holmes said 62 combat squadrons could be attained by 2024. Most of those fighters will be F-35A Lightning IIs.



Photo: SSgt. Jensen Stridham

**2. New engines, more range.** The Adaptive Engine Transition Program (AETP) will provide significantly longer range or loiter time than existing F-22 and F-35 engines, while also improving acceleration, speed, and altitude. Rafael Garcia, USAF’s deputy program executive officer for propulsion, said AETP will be the first new fighter propulsion program in 32 years. “We’re going to put it in everything,” he declared.



Photo: SSgt. Clayton Cupit

**3. Advanced electronic warfare for F-15.** The Eagle Passive Active Warning Survivability System, or EPAWSS, may not “make an F-15 into an F-35 or F-22,” said ACC chief Holmes, but it will help F-15s “buy back” penetrating capability, making it harder to detect them so they can get closer to enemy air defenses. A similar system could eventually be developed for the F-16 as well.



Photo: SSgt. Cory Bush

**4. Enhanced electronics.** Both the F-22 and F-35 are receiving new electronic warfare systems and weapons, as well as the ability to communicate stealthily with each other and with fourth-gen systems. The F-22 upgrade, called Increment 3.2B, will invest \$1.75 billion to add new air-to-air weapons, processors, and data links. The F-35 will gain range and payload with the addition of 480-gallon drop tanks and newly reconfigured weapons bays that will be able to accommodate six missiles instead of four. The F-35 is also set to receive the Block 4 combat enhancements package, which will include two major software updates per year for new electronic warfare sensors and weapons.



Photo: SSgt. Cearra Tinsley

**5. Improved radars for fourth-generation fighters.** The Air Force has been adding AESA (active electronically scanned array) radars to the F-15 fleet for more than a decade, and the F-16 fleet’s first AESA systems are slated to be operational this year. The F-16 is also getting new digital radar warning receivers, software-based radios, and a new operational flight program.



Photo: Ron Bookout/Boeing

**6. The new-build F-15EX.** Congress has authorized the Air Force to purchase the first eight of up to 144 F-15EXs in 2020. These jets would be used to accomplish air superiority in places where defenses are either absent or beaten down, as a domestic interceptor, or as a missile carrier outside heavily contested airspace. By shooting targets designated for them by F-22s and F-35s behind enemy lines, they might also carry hypersonic missiles.