

Sixth generation fighter jets

Latest fighter jet programmes around the world



Render of the Next-Generation Air Dominance (NGAD), it is officially designated as the F-47, the first sixth generation fighter jet of the United States Air Force (USAF).

What exactly is a sixth-generation fighter jet?

No! A platform “stealthier than a fifth generation one” is not the answer. Well, let’s admit that there is no clear definition of it, and aviation experts, eminent analysts, and erudite academics are divided among themselves on the paradigm of the necessary qualities. In fact, the bigger debate is what exactly differentiates a “sixth generation” one from a “fifth generation” one. Yet, whenever such a question arises, many mistake the viability of a platform through the lenses of only stealth. But stealth is one of the qualities of a platform that makes it battle worthy. There are many other aspects as well that are equally important. The “fifth generation” or the “sixth generation” does not limit itself only to the platform. It is a combat environment that determines the outcome of the battlefield. Based on the necessities, researchers have identified some key qualities that will be determining factors in the era of multi-domain collaborative combat situations. Many of these have already been explored widely for the existing fifth generation platforms and are being improved further for the sixth generation one.

Some of the aspects are: multi-spectral stealth and low observable signature management, more friendly cockpit with pilot-platform interface, integration of A.I. for better control, improved avionics with seamless and secured data transfer and information display, new generation active and passive sensors, viability in a network denied environment, advanced defensive suit, improved pilot survivability, optionally manned operation, manned-unmanned teaming, all electronic architecture for efficient interaction, integration of new armaments like DEW, and highly efficient propulsion system with fuel efficiency, cooling management, and seamless power supply to the onboard electronics as well to charge the new generation armaments. Currently, there are only three countries known to be close to a successful sixth generation project. While exploring the projects, we will know more about the qualities of the platforms.

NGAD

On 21 March 2025, the President of the US, Donald Trump, announced the award of the contract to Boeing for the development of the Next-Generation Air Dominance (NGAD). Officially designated as the F-47, the first sixth