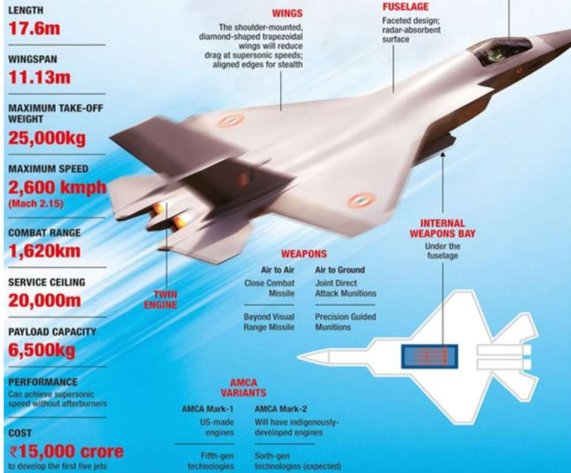


## FUTURE'S FIGHTER

Stealth aircraft are designed to avoid detection by enemy radars and radar-guided weapons. India's Advanced Medium Combat Aircraft (AMCA) Mark-1 will be a fifth-generation stealth aircraft



## (AMCA) Advanced Medium Combat Aircraft

Advanced Medium Combat Aircraft (AMCA) is a twin-engined 5.5 generation stealth multirole fighter under development by ADA. It will complement the HAL Tejas, the Sukhoi Su-30MKI, MWF and the Dassault Rafale in the Indian Air Force. The first flight is expected to be by 2028 and serial production might begin by 2032. The project has been cleared by Cabinet Committee on Security and is in prototype.

AMCA is designed as a single-seat, twin-engine combat aircraft. The AMCA Mark 1 will come equipped with 5th generation technologies and Mark 2 will have the incremental 6th generation technology upgrades. The AMCA is intended to perform a multitude of missions including Air supremacy, Ground-Strike, Suppression of Enemy Air Defenses (SEAD) and Electronic Warfare (EW) missions.

The AMCA design is optimized for low radar cross section and supercruise capability. Feasibility study on AMCA and the preliminary design stage have been completed, and the project entered the detailed design phase in February 2019. The AMCA is currently the only 5th generation fighter under development in India.

### Sixth-generation technologies

The planning process is already underway for combat systems like optionally manned sixth generation technologies, smart wingman concept, swarm drones, long persistent HALE (High-Altitude Long Endurance) platforms and hypersonic weapons, among others. He also added that it is imperative to incorporate such advanced technologies to keep AMCA relevant.

The Cabinet Committee on Security (CCS) on 8th March, 2024 cleared a Rs 15,000 crore project to design and develop the Advanced Medium Combat Aircraft (AMCA), India's fifth-generation fighter multirole fighter jet.

The Development Agency (ADA) under the Defence Research and Development Organisation (DRDO) will be the nodal agency for executing the programme and designing the aircraft. It will be manufactured by state-owned Hindustan Aeronautics Limited (HAL).

IAF has submitted a proposal to rename itself as the Indian Air and Space Force (IASF). This is part of its current drive to become a credible space force.

### Other fifth-generation fighters

Only a few countries have built a fifth-generation stealth fighter aircraft. The list of the aircraft currently in service includes the F-22 Raptor and F-35A Lightning II of the US, the Chinese J-20 Mighty Dragon, and the Russian Sukhoi Su-57.



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