



BASIC INFORMATION

Lockheed Martin F-35A Lightning II is a single-engine multi-role fighter. The Government of Finland authorised the Finnish Defence Forces on 10 December 2021 to procure 64 F-35A fighters to replace the Finnish Air Force Boeing F/A-18C/D Hornet fleet that will be phased out in 2030. The procurement is based on the defence administration HX Fighter Programme's comprehensive procurement proposal.

To be delivered in 2026-30, the F-35As will be assigned to the Air Commands of the Finnish Air Force, where they will form the service's main air asset. The F-35A fleet will be flown in peacetime training and air policing missions as well as Army, Navy and Air Force joint operations.

In times of crises, the F-35A multi-role fighters' primary task is to protect the nation's vital assets, civilians and the Finnish Defence Force troops against air attacks in coordination with ground and surface-based air defence and to execute offensive counterair operations to strengthen control of the air. Multi-role fighters also take part in the Defence Forces' joint operations. They protect Army and Navy forces, support land and sea defence with air-to-ground and air-to-surface weapons, and contribute to generating and maintaining of the Defence Forces joint situational awareness as well as joint fires.

The F-35A's modern versatile weapons suite with solid future growth potential gives it an excellent capability to strike air and surface targets in all conditions. Due to its versatile electronic and optical sensors, the F-35A provides comprehensive situational awareness of the battlefield with its threats, and displays it to the pilot in a visual form that enables quick decision-making. Networked systems allow sharing of situational awareness between multi-role aircraft and Army, Navy and Air Force units, which adds new dimensions to the cooperation in the Defence Forces joint operations.

Due to stealth and self-protection systems, the F-35 is able to be effective in the demanding scenarios of current and future battlefield settings taking initiative in high threat level counterair operations. The internal sensors, high fuel capacity and weapon bays enable flying many mission types without the radius and detectability impact of external weapon, sensor or fuel tank loads. When required by the mission, the F-35A's wings can be equipped with six detachable racks for example for large air-to-ground weapons.

Apart from airfields, the F-35A can be deployed to operate from highway strips based on the road network in accordance with the Finnish Air Force dispersed operating concept.



TECHNICAL DATA

Wing span: 10.7 m

Length: 15.7 m

Empty weight: approx. 13 300 kg

Max operating weight: approx. 31 800 kg

Structure: Metal and composites

Power plant: One Pratt & Whitney F135-PW-100 bypass turbofan (highest afterburner thrust at 191 kN)

Max speed: Mach 1.6

Ceiling: 15 000 m

Armament: Air-to-air weapons: Max 12 Sidewinder infrared missiles and/or AMRAAM radar-guided missiles, of which 6 in detachable wing pylons and 6 in weapon bays. **Air-to-ground weapons:** Smart JDAM bombs (250 kg laser-guided and 1000 kg bomb), SDB I and II glide bombs, JSM surface defence missile and JASSM-ER missile. One 25-millimetre GAU-22A cannon.

Systems and equipment: E.g. active electronically scanning APG-81 AESA radar, electric-optical sensors for targeting and maintaining situational awareness, electronic warfare and self-protection ESM system, helmet-mounted display system, chaff and flares countermeasures, LINK 16 and MADL data links. Break parachute system.

In service with the Finnish Air Force: 64 aircraft (to be introduced into service in 2026-30)



FURTHER INFORMATION

The F-35 fighter was built as Lockheed Martin's response to the US Government demands in the 1990s for the corporation's defence industry to develop a future Joint Strike Fighter (JSF) multi-role aircraft type for the Air Force, Navy and Marine. At first, United Kingdom was also involved in the programme and later on many other partner nations participating in the aircraft development on different levels were included in the programme.

The F-35's first prototype, X-35A, conducted its maiden flight in 2000, and the first mass-produced F-35A flew for the first time in the year of 2006.

In 2015 the Finnish defence administration launched the HX Fighter Programme with the aim to replace the Hornet multi-role fighter fleet introduced into service in 1995 and to be phased out in 2030. The HX evaluation proved the F-35 system the best of the five multi-role fighter candidates.

The Finnish Air Force F-35As represent the newest Block 4 configuration of the aircraft. Compared to the earlier versions, the modified Block 4 has, among other things, a Sidekick weapons rack which enables the aircraft to carry six AMRAAM missiles, instead of the previous four, in an internal weapon bay.

The very first Finnish Air Force F-35A will be delivered to Finland in 2026, and the system will replace the Hornet fleet of the Air Commands in the years of 2028 and 2030.

A sustainable maintenance capability for the F-35 fleet will be created in Finland by the Finnish Defence Forces and domestic industry, including a spare part inventory under national management. In addition, the system enables joining the multinational maintenance network. As part of the procurement's direct industrial participation, domestic industry will carry out F-35 forward fuselage, structural component and engine assembly work, which contributes to national readiness in the vitally important maintenance and repair activities related to security of supply.

The F-35 multi-role fighter is manufactured in three versions. The F-35A to be procured for the Air Force is the version designed to operate from land bases. The F-35B is capable of conducting vertical take-offs and landings, and the F-35C is designed to make conventional take offs and landings from an aircraft carrier. The versions have many similarities but also remarkable technical and structural differences.

Over seven hundred F-35 fighters have been manufactured, and more than ten nations have selected this aircraft for their armed forces, including Nordic countries such as Norway and Denmark and European nations such as the Netherlands, Belgium, Great Britain, Italy and Poland. The lifetime of the F-35 is projected to extend until the 2070s.



Abbreviations

AESA: Active Electronically Scanned Array

AMRAAM: Advanced Medium Range Air-to-Air Missile

JASSM-ER: Joint Air-to-Surface Standoff Missile – Extended Range

JDAM: Joint Direct Attack Munition

JSM: Joint Strike Missile

MADL: Multifunction Advanced Data Link

SDB: Small Diameter Bomb