

# 4E Super Tomcat-21 [ST-21] - 1999, Proposed NATF alternative, AIM-152A AAAM, Hughes/Raytheon

## United States

Type: Fighter

Min Speed: 350 kt

Max Speed: 920 kt

Commissioned: 1999

Length: 19.2 m

Wingspan: 19.6 m

Height: 4.9 m

Crew: 2

Empty Weight: 20292 kg

Max Weight: 34470 kg

Max Payload: 5900 kg

Propulsion: 2x F110-GE-400



Sensors / EW: - AN/AAS-42 - Infrared,IRST, Imaging Infrared Search and Track, Max range: 185.2 km

- AN/ALQ-165 ASPJ - ECM, DECM, Defensive ECM, Max range: 0 km

- AN/APG-71(V) [ST-21 Upgrade] - (Super Tomcat-21, LPI) Radar, Radar, FCR, Air-to-Air & Air-to-Surface, Long-Range, Max range: 333.4 km

- AN/ALR-67(V)2 - (Super Tomcat-21, LPI) ESM, RWR, Radar Warning Receiver, Max range: 222.2 km

- AN/AXX-1 TCS - (Super Tomcat-21, LPI) Visual, Visual, Target Search, Slaved Tracking and Identification TV Camera, Max range: 185.2 km

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## Weapons / Loadouts:

- 267 USG Drop Tank - Drop Tank.

- AIM-120C AMRAAM P3I.1 - (1999) Guided Weapon. Air Max: 50 km.

- AIM-9M Sidewinder - (1984) Guided Weapon. Air Max: 18.5 km.

- AIM-152A AAAM [H/R] - (Hughes/Raytheon) Guided Weapon. Air Max: 296.3 km.

- ADM-141A TALD [Active RF] - (1988) Decoy (Vehicle). Surface Max: 74.1 km. Land Max: 74.1 km.

- LA-610 TARPS Pod [IR + EO] - Sensor Pod.

- AN/ALQ-167 Bullwinkle DECM Pod - Sensor Pod.

- ADM-141C TALD [Active RF] - (1999) Decoy (Vehicle). Surface Max: 296.3 km. Land Max: 296.3 km.

- GBU-10E/B Paveway II LGB [Mk84] - (USAF) Guided Weapon. Surface Max: 7.4 km. Land Max: 7.4 km.

- Night Owl Attack Pod [FLIR + LRMTS, 40k ft] - (LANTIRN Compeditor, Ford Aerospace) Sensor Pod.

- Night Owl Navigation Pod [FLIR + TFR] - (LANTIRN Compeditor, Ford Aerospace) Sensor Pod.

- GBU-10J/B Paveway II LGB [BLU-109/B] - Guided Weapon. Surface Max: 7.4 km. Land Max: 7.4 km.

- GBU-12D/B Paveway II LGB [Mk82] - Guided Weapon. Surface Max: 7.4 km. Land Max: 7.4 km.

- GBU-16B/B Paveway II LGB [Mk83] - (USN) Guided Weapon. Surface Max: 7.4 km. Land Max: 7.4 km.

- GBU-24B/B Paveway III LGB [BLU-109A/B] - (USN) Guided Weapon. Surface Max: 14.8 km. Land Max: 14.8 km.

- Mk82 500lb LDGP - (1954) Bomb. Surface Max: 1.9 km. Land Max: 1.9 km.

- Mk83 1000lb LDGP - (1954) Bomb. Surface Max: 1.9 km. Land Max: 1.9 km.

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- Mk84 2000lb LDGP - (1955) Bomb. Surface Max: 1.9 km. Land Max: 1.9 km.
- AGM-65F Maverick IR - (1990) Guided Weapon. Surface Max: 14.8 km. Land Max: 14.8 km.
- AN/AWW-13 Datalink Pod - Sensor Pod.
- AGM-84E SLAM - (1990) Guided Weapon. Surface Max: 101.9 km. Land Max: 101.9 km.
- AGM-84G Harpoon ICR - (1998) Guided Weapon. Surface Max: 138.9 km.
- AGM-88C HARM - (1994) Guided Weapon. Surface Max: 129.6 km. Land Max: 129.6 km.
- CBU-59/B APAM [717 x BLU-77/B Dual-Purpose Bomblets] - (Mk7 Dispenser) Bomb. Surface Max: 1.9 km. Land Max: 1.9 km.
- CBU-78/B GATOR [45 x BLU-91/B Bomblets + 15 x BLU-92/B Mines] - (Mk7 Dispenser) Bomb. Surface Max: 1.9 km. Land Max: 1.9 km.
- Mk20 Rockeye II CB [247 x Mk118 Dual Purpose Bomblets] - (1969, Mk7 Dispenser) Bomb. Surface Max: 1.9 km. Land Max: 1.9 km.
- Mine [Mk62 Quickstrike Mk82] - (1982) Bottom Mine.
- Mine [Mk63 Quickstrike Mk83] - (1982) Bottom Mine.
- Mine [Mk65 Mod 0 Quickstrike 2000lb] - (1984, 90m max depth) Bottom Mine.
- AGM-154A JSOW [145 x BLU-97/B Dual Purpose] - (2000) Guided Weapon. Land Max: 116.7 km.
- Mk82 500lb Snake Eye - (USN: 1967, USAF: 1970, Retarded) Bomb. Surface Max: 1.9 km. Land Max: 1.9 km.

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**OVERVIEW:** The Grumman F-14 Tomcat is a fourth-generation, supersonic, twinjet, two-seat, variable-sweep wing fighter aircraft. The Tomcat was developed for the United States Navy's Naval Fighter Experimental (VFX) program following the collapse of the F-111B project. The F-14 was the first of the American teen-series fighters, which were designed incorporating the experience of air combat against MiG fighters during the Vietnam War.

The F-14 first flew in December 1970 and made its first deployment in 1974 with the U.S. Navy aboard USS Enterprise (CVN-65), replacing the McDonnell Douglas F-4 Phantom II. The F-14 served as the U.S. Navy's primary maritime air superiority fighter, fleet defense interceptor and tactical reconnaissance platform. In the 1990s, it added the Low Altitude Navigation and Targeting Infrared for Night (LANTIRN) pod system and began performing precision ground-attack missions.

The Tomcat was retired from the U.S. Navy's active fleet on 22 September 2006, having been supplanted by the Boeing F/A-18E and F Super Hornets.

**DETAILS:** The F-14 Tomcat was designed as both an air superiority fighter and a long-range naval interceptor. The F-14 has a two-seat cockpit with a bubble canopy that affords all-round visibility. It features variable geometry wings that swing automatically during flight. For high-speed intercept, they are swept back and they swing forward for lower speed flight. It was designed to improve on the F-4 Phantom's air combat performance in most respects.

The F-14's fuselage and wings allow it to climb faster than the F-4, while the twin-tail arrangement offers better stability. The F-14 is equipped with an internal 20 mm M61 Vulcan Gatling cannon mounted on the left side, and can carry AIM-54 Phoenix, AIM-7 Sparrow, and AIM-9 Sidewinder anti-aircraft missiles. The twin engines are housed in nacelles, spaced apart by 1 to 3 ft (0.30 to 0.91 m). The flat area of the fuselage between the nacelles is used to contain fuel and avionics systems such as the wing-sweep mechanism and flight controls, and the underside used to carry the F-14's complement of Phoenix or Sparrow missiles, or assorted bombs. By itself, the fuselage provides approximately 40 to 60 percent of the F-14's aerodynamic lifting surface depending on the wing sweep position.

**SPECIFICATION:** Crew: (2) || Length: 62 ft 9 in (19.1 m) || Wingspan: Spread 64 ft (19.55 m), Swept 38 ft (11.58 m) || Height: 16 ft (4.88 m) || Max. takeoff weight: 74,350 lb (33,720 kg) || Powerplant: (2) General Electric F110-GE-400

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afterburning turbofans || Dry thrust: 13,810 lbf (61.4 kN) each || AB Thrust: 27,800 lbf (123.7 kN) each || Maximum fuel capacity: 16,200 lb internal; 20,000 lb with (2) 267 gallon external tanks.

PERFORMANCE: Max Speed: Mach 2.34 (1,544 mph, 2,485 km/h) at high altitude || Combat radius: 500 nmi (575 mi, 926 km) || Service ceiling: 50,000+ ft (15,200 m) || Rate of climb: >45,000 ft/min (229 m/s) || Thrust/weight: 0.92.

SENSORS: Hughes AN/APG-71 radar || AN/ASN-130 INS,IRST, TCS || Remotely Operated Video Enhanced Receiver (ROVER) upgrade || Tactical Airborne Reconnaissance Pod System (TARPS) || Tactical Airborne Reconnaissance Pod System (TARPS).

ARMAMENT: Guns: (1) 20 mm (0.787 in) M61A1 Vulcan 6-barreled Gatling cannon, with 675 rounds || (10) hardpoints total: (6) under-fuselage, (2) under nacelles and (2) on wing gloves with a capacity of 14,500 lb (6,600 kg) of ordnance and fuel tanks || AIM-54 Phoenix Missile || AIM-7 Sparrow Missile || AIM-9 Sidewinder Missile || JDAM precision-guided munition (PGMs) || Paveway series of laser-guided bombs || Mk 80 series of unguided iron bombs || Mk 20 Rockeye II.

SOURCE: [SCO] Wikipedia <http://en.wikipedia.org>