F/A-18F Super Hornet - 2016, AIM-120D

United States



Type: Multirole (Fighter/Attack)
Min Speed: 350 kt
Max Speed: 920 kt
Commissioned: 2016
Length: 18.3 m
Wingspan: 13.6 m
Height: 4.88 m
Crew: 2
Empty Weight: 13880 kg
Max Weight: 29937 kg
Max Payload: 8050 kg
Propulsion: 2x F414-GE-400

Sensors / EW: - AN/APG-79 AESA - (F/A-18E/F, LPI) Radar, Radar, FCR, Air-to-Air & Air-to-Surface, Medium-Range, Max range: 222.2 km
- AN/ALQ-214(V)3 IDECM - (F/A-18E/F) ECM, DECM, Defensive ECM, Max range: 0 km
- AN/ALR-67(V)3 - (F/A-18E/F) ESM, RWR, Radar Warning Receiver, Max range: 222.2 km

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Weapons / Loadouts:
- GBU-24B/B Paveway III LGB [BLU-109A/B] - (USN) Guided Weapon. Surface Max: 14.8 km. Land Max: 14.8 km.
- AN/ASQ-228 Terminator II ATFLIR [FLIR + LRMTS, 40k ft] - (2005) Sensor Pod.
- 480 USG Drop Tank - Drop Tank.
- AIM-9X Sidewinder - (2005) Guided Weapon. Air Max: 25.9 km.
- AIM-120D AMRAAM P3I.4 - (2015, AIM-120C-8) Guided Weapon. Air Max: 160 km.
- GBU-31(V)4/B JDAM [BLU-109A/B] - (USN) Guided Weapon. Land Max: 24.1 km.
- GBU-10J/B Paveway II LGB [BLU-109/B] - Guided Weapon. Surface Max: 7.4 km. Land Max: 7.4 km.
- GBU-24D/B Paveway III LGB [BLU-116/B] - (USN, 2001, First delivered 1999) Guided Weapon. Surface Max: 14.8 km. Land Max: 14.8 km.
- AGM-65F Maverick IR - (1990) Guided Weapon. Surface Max: 14.8 km. Land Max: 14.8 km.
- AGM-84G Harpoon ICR - (1998) Guided Weapon. Surface Max: 138.9 km.
- AGM-84K SLAMER-ATA - (2003) Guided Weapon. Surface Max: 277.8 km. Land Max: 277.8 km.
- AN/AWW-13 Datalink Pod - Sensor Pod.
- AGM-154A JSOW [145 x BLU-97/B Dual Purpose] - (2000) Guided Weapon. Land Max: 116.7 km.
- AGM-154C JSOW [BROACH] - (2004) Guided Weapon. Surface Max: 116.7 km. Land Max: 116.7 km.
- AGM-88E AARGM - (2014, HARM) Guided Weapon. Surface Max: 129.6 km. Land Max: 129.6 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-10E/B Paveway II LGB [Mk84] - (USAF) Guided Weapon. Surface Max: 7.4 km. Land Max: 7.4 km.
- GBU-24E/B Paveway III GPS/LGB [BLU-109A/B] - (USN, 2001) Guided Weapon. Surface Max: 14.8 km. Land

Max: 14.8 km.
- GBU-31(V)2/B JDAM [Mk84] - (USN, 2000) Guided Weapon. Land Max: 24.1 km.
- GBU-32(V)2/B JDAM [Mk83] - (USN, 2001) Guided Weapon. Land Max: 24.1 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.
- Mk84 2000lb LDGP - (1955) Bomb. Surface Max: 1.9 km. Land Max: 1.9 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.
- Generic Buddy Store - Buddy Store.
- AN/ASD-12 SHARP Pod [EO + IR + SAR] - (ATARS) Sensor Pod.
- ADM-141C TALD [Active RF] - (1999) Decoy (Vehicle). Surface Max: 296.3 km. Land Max: 296.3 km.
- GBU-38(V)2/B JDAM [Mk82] - (USN, 2005) Guided Weapon. Land Max: 24.1 km.
- GBU-54(V)2/B LJDAM [Mk82] - (USN, 2012) Guided Weapon. Surface Max: 24.1 km. Land Max: 24.1 km.
- AGM-88C HARM - (1994) Guided Weapon. Surface Max: 129.6 km. Land Max: 129.6 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.
- Mk82 500lb Snake Eye - (USN: 1967, USAF: 1970, Retarded) Bomb. Surface Max: 1.9 km. Land Max: 1.9 km.
- AGM-154C-1 JSOW [BROACH] - (2016) Guided Weapon. Surface Max: 116.7 km. Land Max: 116.7 km.
- GBU-12F/B Paveway II DMLGB [Mk82] - (2014) Guided Weapon. Surface Max: 7.4 km. Land Max: 7.4 km.
- ADM-160C MALD-J [Stand-In OECM] - (2014) Decoy (Vehicle). Surface Max: 926 km. Land Max: 926 km.
- AGM-65E Maverick Laser - (1986) Guided Weapon. Surface Max: 14.8 km. Land Max: 14.8 km.
- B61 Tactical/Strategic Bomb [340kT Nuclear] - (1968) Bomb. Surface Max: 1.9 km. Land Max: 1.9 km.
- 480 liter Drop Tank - Drop Tank.

OVERVIEW: The Boeing F/A-18E Super Hornet and related twin-seat F/A-18F are twin-engine carrier-based multirole fighter aircraft variants based on the McDonnell Douglas F/A-18 Hornet. The F/A-18E single-seat and F/A-18F tandem-seat variants are larger and more advanced derivatives of the F/A-18C and D Hornet. The Super Hornet has an internal 20 mm M61 rotary cannon and can carry air-to-air missiles and air-to-surface weapons. Additional fuel can be carried in up to five external fuel tanks and the aircraft can be configured as an airborne tanker by adding an external air refueling system.

Designed and initially produced by McDonnell Douglas, the Super Hornet first flew in 1995. Full-rate production began in September 1997, after the merger of McDonnell Douglas and Boeing the previous month. The Super Hornet entered service with the United States Navy in 1999, replacing the Grumman F-14 Tomcat, which was retired in 2006; the Super Hornet serves alongside the original Hornet. The Royal Australian Air Force (RAAF), which has operated the F/A-18A as its main fighter since 1984, ordered the F/A-18F in 2007 to replace its aging F-111 fleet. RAAF Super Hornets entered service in December 2010.

DETAILS: The concept of an enlarged Hornet was first proposed in 1980s, when an early version was marketed by McDonnell Douglas as Hornet 2000. The Hornet 2000 concept was an advanced version of the F/A-18 with a larger wing and a longer fuselage to carry more fuel and more powerful engines. The Hornet 2000 study was officially announced by McDonnell Douglas in January 1988. At the same time, U.S. Naval Aviation faced a number of problems. The McDonnell Douglas A-12 Avenger II program, intended to replace the obsolete Grumman A-6 Intruder and LTV A-7 Corsair II, had run into serious problems and was canceled. The end of the Cold War subsequently led to a period of

military budget cuts and considerable restructuring.

With no clean-sheet program in the works, the Navy considered updating an existing design as a more attractive approach. As an alternative to the A-12, McDonnell Douglas proposed the "Super Hornet" (initially "Hornet II" in the 1980s), an improvement of the successful early F/A-18 models, which could serve as an alternate replacement for the A-6 Intruder. At the same time, the Navy needed a fleet defense fighter to replace the canceled Navy Advanced Tactical Fighter (NATF), which was to have developed a navalized variant of the Air Force's Lockheed Martin F-22 Raptor.

The Super Hornet is largely a new aircraft. It is about 20% larger, 7,000 lb (3,200 kg) heavier empty weight, and 15,000 lb (6,800 kg) heavier maximum weight than the original Hornet. The Super Hornet carries 33% more internal fuel, increasing mission range by 41% and endurance by 50% over the "Legacy" Hornet. The empty weight of the Super Hornet is about 11,000 lb (5,000 kg) less than that of the F-14 Tomcat which it replaced, while approaching, but not matching, the F-14's payload and range.

The Super Hornet, unlike the previous Hornet, is designed so it can be equipped with an aerial refueling system (ARS) or "buddy store" for the refueling of other aircraft, filling the tactical airborne tanker role the Navy had lost with the retirement of the KA-6D and Lockheed S-3B Viking tankers. The ARS includes an external 330 US gal (1,200 L) tank with hose reel on the centerline, along with four external 480 US gal (1,800 L) tanks and internal tanks, for a total of 29,000 lb (13,000 kg) of fuel on the aircraft. On typical missions a fifth of the air wing is dedicated to the tanker role, which consumes aircraft fatigue life expectancy faster than other missions.

Survivability is an important feature of the Super Hornet design. The U.S. Navy took a "balanced approach" to survivability in its design. This means that it does not rely on low-observable technology, such as stealth systems, to the exclusion of other survivability factors. Instead, its design incorporates a combination of stealth, advanced electronic-warfare capabilities, reduced ballistic vulnerability, the use of standoff weapons, and innovative tactics that cumulatively and collectively enhance the safety of the fighter and crew.

SPECIFICATION: Crew: F/A-18E (1), F/A-18F (2) || Length: 60 ft 1 in (18.31 m) || Wingspan: 44 ft 8 in (13.62 m) || Height: 16 ft (4.88 m) || Max. takeoff weight: 66,000 lb (29,937 kg) || Powerplant: (2) General Electric F414-GE-400 turbofans || Dry thrust: 13,000 lbf (62.3 kN) each || AB Thrust: 22,000 lbf (97.9 kN) each.

PERFORMANCE: Max Speed: Mach 1.8 (1,190 mph, 1,915 km/h) || Combat radius: 390 nmi (449 mi, 722 km) || Service ceiling: 50,000+ ft (15,000+ m) || Rate of climb: 44,882 ft/min[142] (228 m/s) || Thrust/weight: 0.93.

SENSORS: Hughes APG-73 or Raytheon APG-79 Radar || Northrop Grumman/ITT AN/ALE-165 self-protection jammer pod or BAE Systems AN/ALE-214 integrated defensive electronic countermeasures system || Raytheon AN/ALE-50 or BAE Systems AN/ALE-55 towed decoy || Northrop Grumman AN/ALR-67(V)3 radar warning receiver || MIDS LVT or MIDS JTRS datalink transceiver.

ARMAMENT: (1) 20 mm (0.787 in) M61A2 Vulcan nose-mounted Gatling-style cannon, 578 rounds || Hardpoints: (11) total: (2) wingtips, (6) under-wing, and (3) under-fuselage with a capacity of 17,750 lb (8,050 kg) external fuel and ordnance || AIM-9 Sidewinder || AIM-120 AMRAAM || AIM-7 Sparrow || AIM-120 AMRAAM || AGM-65 Maverick || AGM-84H/K Standoff Land Attack Missile Expanded Range (SLAM-ER) || AGM-88 HARM Anti-radiation missile (ARM) || AGM-154 Joint Standoff Weapon (JSOW) || AGM-158 Joint Air-to-Surface Standoff Missile (JASSM) || AGM-84 Harpoon || Long Range Anti-Ship Missile (LRASM) || JDAM precision-guided munition (PGMs) || Paveway series of laser-guided bombs || Mk 80 series of unguided iron bombs || CBU-78 Gator || CBU-87 Combined Effects Munition || CBU-97 Sensor Fuzed Weapon || Mk 20 Rockeye II || SUU-42A/A Flares/Infrared decoys dispenser pod and chaff pod || Electronic countermeasures (ECM) pod || AN/ASQ-228 ATFLIR Targeting pods.

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