

Integrated Defense Systems
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Boeing F/A-18E/F Super Hornet Block II

Description and Purpose:

The combat-proven F/A-18E/F Super Hornet delivers cutting-edge next generation multi-role strike fighter capability that is available today, outdistancing current and emerging threats well into the future. The Super Hornet has the capability, flexibility and performance necessary to modernize the air or naval aviation forces of any country. Built by the industry team of Boeing, Northrop Grumman, GE Aircraft Engines, Raytheon and more than 1,800 suppliers nationwide, the Super Hornet provides the warfighter with today's newest advances in multimission capability and growth for decades to come in missions, roles and technology. The Super Hornet's suite of integrated and networked systems provides enhanced interoperability and support for ground forces as well as the overall force commander.



The Super Hornet entered combat on its maiden voyage in 2002 and remains combat deployed in the Global War on Terrorism.

Customer:

Two Super Hornet versions – the single-seat E model and the two-seat F model – are in production today and in service with the U.S. Navy.

Both are true multi-role aircraft, able to perform virtually every mission in the tactical spectrum, including air superiority, day/night strike with precision-guided weapons, fighter escort, close air support, suppression of enemy air defenses, maritime strike, reconnaissance, forward air control and tanker missions.

General Characteristics:

Carrier

Max takeoff Weight	66,000 lb (29,937 kg)
Max catapult payload	34,000 lb (15,422 kg)
Max landing weight	44,000 lb (19,958 kg)

Land Based

Expeditionary Operations Capable:

Field Landing Weight	50,600 lb (22,951 kg)
Max takeoff weight	66,600 lb (30,209 kg)

Speed:	Mach 1.8
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Max bringback payload	E: 9,900 lb (4,491 kg)	Combat Ceiling	50,000+ ft (15,240+ m)
	F: 9,000 lb (4,082 kg)		Design load factor 7.6g

With a total of 11 weapons stations, the Super Hornet provides warfighters with extraordinary payload flexibility by carrying a mixed load of air-to-air and air-to-ground ordnance. A typical basic loadout for a self-escort strike mission starts with an advanced infrared targeting pod, one AIM-120 AMRAAM, two AIM-9 Sidewinder missiles, and an external fuel tank. This leaves six under-wing weapon stations available to carry a variety of weapons and other stores.

A comprehensive spiral development design concept – including the addition of the APG-79 active electronically scanned array (AESA) radar – offers continuously improving overall mission capability and supportability. Other recently incorporated upgrades include an advanced targeting forward looking infrared (ATFLIR), joint-helmet mounted cueing system (JHMCS), multifunctional information distribution system (MIDS), and an advanced aft crew station. The F/A-18E/F has exceptional combat maneuverability, an unlimited angle of attack, high resistance to spins and departures and ease of handling and training. Its reconfigurable digital flight control system can detect damage to or full loss of a flight control and still allow safe recovery. These and other enhancements ensure the Super Hornet remains combat relevant well into the 21st century.

Two General Electric F414-GE-400 engines power the Super Hornet, producing a combined 44,000 pounds of thrust. The F414's light, yet robust design yields a 9:1 thrust-to-weight ratio, one of the highest of any modern fighter engine. Increased airflow to the engine is provided through the Super Hornet's large, distinctively shaped inlets. A full authority digital electronics control (FADEC) allows for unrestricted engine response in any phase of flight.

Background:

The first production model Super Hornet was delivered to the U.S. Navy in December 1998, more than a month ahead of schedule. To date the program has delivered every Super Hornet on or ahead of schedule. After completing the most thorough operational evaluation in U.S. Naval history, the F/A-18E/F Super Hornet entered operational service in November 1999, and the program was awarded an unprecedented five-year multi-year contract for 211 aircraft. The first operational F/A-18E/F Super Hornet squadron – VFA-115 – stood up in June 2001 and deployed aboard the USS Abraham Lincoln (CVN 72) in July 2002. In April 2005, Boeing delivered the first Block II Super Hornet, complete with AESA radar. The program delivered the 300th Super Hornet to the U.S. Navy in January 2007.

Since inception, the Super Hornet program has remained on time, on weight, and on cost. Boeing is currently building Super Hornets under a second five-year multi-year contract (MYP II) with the U.S. Navy, which includes 201 F/A-18E/Fs and 56 EA-18Gs.

The contract runs from FY2005 – FY2009. Deliveries for the MYP II aircraft began in 2007. The U.S. Navy F/A-18E/F Program of Record contains 506 F/A-18E/Fs.

In 1999, the F/A-18 program team was awarded the prestigious Collier Trophy. The award recognizes the greatest achievement in aeronautics and astronautics in the United States, and has been called the greatest and most prized of all aeronautical honors in the country.

The F/A-18 program team won the *Aviation Week* Program Excellence Award in November 2005.

In January 2006, the U.S. Navy awarded Boeing a long-term performance-based logistics contract valued at \$995 million for the F/A-18 Integrated Readiness Support Teaming Program.

In May 2007, the Commonwealth of Australia signed a Letter of Offer and Acceptance to buy 24 F/A-18F Super Hornets, becoming the first international Super Hornet customer.

Miscellaneous:

- Operational in 9 U.S. Navy Carrier Air Wings (19 squadrons)
- 395 Super Hornets have been delivered as of June 1, 2009
 - 221 F-model Super Hornets
 - 174 E-model Super Hornets

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June 2009

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