

# CVN 70 Carl Vinson [Nimitz Class] - 1997

## United States

Type: CVN - Nuclear Powered Aircraft Carrier

Max Speed: 35 kt

Commissioned: 1997

Length: 332.8 m

Beam: 40.8 m

Draft: 11.0 m

Crew: 5680

Displacement: 84000 t

Displacement Full: 100000 t

Propulsion: 2x A4W Nuclear Reactors



## Sensors / EW:

- AN/WLR-1H(V)5 - ESM, ELINT, Max range: 926 km
- LN-66LP - (AN/SPS-59, 10kW) Radar, Radar, Surface Search, Short-Range, Max range: 59.3 km
- AN/SLQ-32(V)4 [ECM] - (Group) ECM, OECM & DECM, Offensive & Defensive ECM, Max range: 0 km
- AN/SLQ-32(V)4 [ESM] - (Group) ESM, ELINT, Max range: 926 km
- Mk23 TAS - (1982, Mk91 FCS, SWY-1) Radar, Radar, Target Indicator, 2D Surface-to-Air & Surface-to-Surface, Max range: 203.7 km
- AN/SPS-67(V)1 - (1982) Radar, Radar, Surface Search & Navigation, Max range: 64.8 km
- AN/SPS-49(V)5 NTU - (1982) Radar, Radar, Air Search, 2D Long-Range, Max range: 463 km
- AN/SPS-48E NTU - (1988) Radar, Radar, Air Search, 3D Long-Range, Max range: 407.4 km
- AN/SPN-43C - (1994) Radar, Radar, Shipboard Air Traffic Control (SATC), Max range: 129.6 km
- Mk95 [EO] - (Mk6 Mod 0, Mk91 FCS) Visual, Visual, Target Tracking and Identification TV Camera, Max range: 148.2 km
- Mk95 [Radar] - (MFCR, Mk91 FCS) Radar, Radar Illuminator, Medium-Range, Max range: 118.5 km

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## Weapons / Loadouts:

- RIM-7P Sea Sparrow - (1994) Guided Weapon. Air Max: 25.9 km. Surface Max: 25.9 km.
  - 20mm/85 Mk15 Phalanx Blk 1 Burst [300 rnds] - Gun. Air Max: 1.5 km.
  - Mk216 Sea Gnat Chaff [Distraction] - (1988) Decoy (Expendable). Surface Max: 1.9 km.
  - Mk245 GIANT Flare - (1997, DM19A1) Decoy (Expendable). Surface Max: 1.9 km.
  - Mk214 Sea Gnat Chaff [Seduction] - (1987) Decoy (Expendable). Surface Max: 1.9 km.
  - AN/SLQ-25 Nixie - Decoy (Towed). Surface Max: 1.9 km.
  - 12.7mm/50 MG Burst [10 rnds] - (Facility/Ship, No Anti-Air Capability) Gun. Surface Max: 1.9 km. Land Max: 1.9 km.
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**OVERVIEW:** The Nimitz-class supercarriers are a class of ten nuclear-powered aircraft carriers in service with the United States Navy. The lead ship of the class is named for World War II United States Pacific Fleet commander Fleet Admiral Chester W. Nimitz, the U.S. Navy's last fleet admiral. Instead of the gas turbines or diesel-electric systems used for propulsion on many modern warships, the carriers use two A4W pressurized water reactors which drive four propeller shafts and can produce a maximum speed of over 30 knots (56 km/h) and maximum power of around 260,000 shp (190 MW). As a result of the use of nuclear power, the ships are capable of operating for over 20 years without refueling and are predicted to have a service life of over 50 years. They are categorized as nuclear-powered aircraft carriers and are numbered with consecutive hull numbers between CVN-68 and CVN-77.

**DETAILS:** All ten carriers were constructed by Newport News Shipbuilding Company in Virginia. USS Nimitz, the lead ship of the class, was commissioned on 3 May 1975, and USS George H.W. Bush, the tenth and last of the class, was commissioned on 10 January 2009. Since the 1970s, Nimitz-class carriers have participated in many conflicts and operations across the world, including Operation Eagle Claw in Iran, the Gulf War, and more recently in Iraq and Afghanistan.

The angled flight decks of the carriers use a CATOBAR arrangement to operate aircraft, with steam catapults and arrestor wires for launch and recovery. As well as speeding up flight deck operations, this allows for a much wider variety of aircraft than with the STOVL arrangement used on smaller carriers. An embarked carrier air wing consisting of up to around 90 aircraft is normally deployed on board. After the retirement of the F-14 Tomcat, the air wings' strike fighters are primarily F/A-18E and F/A-18F Super Hornets and F/A-18A+ and F/A-18C Hornets. In addition to their aircraft, the vessels carry short-range defensive weaponry for anti-aircraft warfare and missile defense.

**SPECIFICATION:** Length: Overall: 1,092 feet (332.8 m) || Waterline: 1,040 feet (317.0 m) || Beam: Overall: 252 ft (76.8 m) || Waterline: 134 ft (40.8 m) || Draft: Maximum navigational: 37 ft (11.3 m) Limit: 41 ft (12.5 m) || Propulsion: (2) Westinghouse A4W nuclear reactors 260,000 shp (194 MW) || Complement Ship's company: 3,200 and Air wing: 2,480.

**PERFORMANCE:** Speed: 30+ knots (56+ km/h; 35+ mph) || Range: Unlimited distance; 20-25 years.

**SENSORS:** AN/SPS-48E 3-D air search radar || AN/SPS-49(V)5 2-D air search radar || AN/SPQ-9B target acquisition radar || AN/SPN-46 air traffic control radars || AN/SPN-43C air traffic control radar || AN/SPN-41 landing aid radars || Mk 91 NSSM guidance systems || Mk 95 radars || SLQ-32A(V)4 Countermeasures suite || SLQ-25A Nixie torpedo countermeasures.

**ARMAMENT:** (16-24) RIM-7 Sea Sparrow or NATO Sea Sparrow missiles || (3-4) Phalanx CIWSs or RIM-116 Rolling Airframe Missiles.

**CARRIER AIR WING:** In order for a carrier to deploy, it must embark one of ten Carrier Air Wings (CVW). The carriers can accommodate a maximum of 130 F/A-18 Hornets or 85-90 aircraft of different types, but current numbers are typically 64 aircraft. Although the air wings are integrated with the operation of the carriers they are deployed to, they are nevertheless regarded as a separate entity. As well as the aircrew, the air wings are also made up of support personnel involved in roles including maintenance, aircraft and ordnance handling and emergency procedures. Each person on the flight deck wears color-coded clothing to make their role easily identifiable.

A typical carrier air wing can include (12-14) F/A-18E or F Super Hornets as strike fighters; two squadrons of (10-12) F/A-18C Hornets, with one of these often provided by the U.S. Marine Corps (VMFA), also as strike fighters; (4-6) EA-6B Prowlers for electronic warfare; (4-6) E-2C Hawkeyes and ES.3 Sea Shadows used for airborne early warning; C-2 Greyhounds used for logistics; and a Helicopter Antisubmarine Squadron of (6-8) SH-60F & HH-60H Seahawks. Aircraft that have previously operated from Nimitz-class carriers include F-4 Phantoms, RA-5C Vigilantes, RF-8G

## **CVN 70 Carl Vinson [Nimitz Class] - 1997**

Crusaders, F-14 Tomcats, S-3 Vikings, A-7 Corsair II and A-6E Intruder aircraft.

SHIPS BUILT: Nimitz (CVN-68), Dwight D. Eisenhower (CVN-69), Carl Vinson (CVN-70), Theodore Roosevelt (CVN-71), Abraham Lincoln (CVN-72), George Washington (CVN-73), John C. Stennis (CVN-74), Harry S. Truman (CVN-75), Ronald Reagan (CVN-76), George H.W. Bush (CVN-77)

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