

J-10AH Firebird - 2011, PLANAF

China

Type: Fighter

Min Speed: 350 kt

Max Speed: 920 kt

Commissioned: 2011

Length: 15.5 m

Wingspan: 9.7 m

Height: 4.8 m

Crew: 1

Empty Weight: 9750 kg

Max Weight: 19277 kg

Max Payload: 4500 kg

Propulsion: 1x AL-31F



Sensors / EW: - Generic DECM [Average] - (1980s) ECM, DECM, Defensive ECM, Max range: 0 km

- China KLJ-3 [Zhemchoug] - (J-10A, Zhuk-M Mod) Radar, Radar, FCR, Air-to-Air, Medium-Range, Max range: 111.1 km

- SPO-15LM Beryoza - (J-10A, Zhuk-M Mod) ESM, RWR, Radar Warning Receiver, Max range: 222.2 km

Weapons / Loadouts:

- PL-8B [Python 3] - (AAM) Guided Weapon. Air Max: 14.8 km.

- CH-AA-7 Adze [PL-12] - (2004) Guided Weapon. Air Max: 92.6 km.

- 800 liter Drop Tank - Drop Tank.

- 1700 liter Drop Tank - Drop Tank.

- 57mm Rocket - (Generic) Rocket. Surface Max: 1.9 km. Land Max: 1.9 km.

- 90mm Rocket - (Generic) Rocket. Surface Max: 3.7 km. Land Max: 3.7 km.

- 250kg GPB - (Generic) Bomb. Surface Max: 1.9 km. Land Max: 1.9 km.

- 500kg GPB - (Generic) Bomb. Surface Max: 1.9 km. Land Max: 1.9 km.

- LT-2 LGB [LS-500J, 500kg HE] - (China) Guided Weapon. Surface Max: 7.4 km. Land Max: 7.4 km.

- K/JDC-01A Blue Sky Pod [FLIR + LRMTS, 12k ft] - (China) Sensor Pod.

- PL-8C [Python 3] - (AAM) Guided Weapon. Air Max: 14.8 km.

- China Type 200-4 [Durandal Copy] - (1997) Bomb. Land Max: 1.9 km.

OVERVIEW: The Chengdu J-10, Nato reporting name Firebird, export designation F-10 Vanguard is a multirole fighter aircraft designed and produced by the People's Republic of China's Chengdu Aircraft Corporation (CAC) for the People's Liberation Army Air Force (PLAAF). Known in the West as the "Vigorous Dragon", the J-10 is a multirole combat aircraft capable of all-weather operation.

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Currently, the Pakistan Air Force is the only export contractor for the J-10.

DETAILS: The airframe is constructed from metal alloys and composite materials for high strength and low weight, the airframe's aerodynamic layout adopts a "tail-less canard delta" wing configuration. A large delta wing is mid-mounted towards the rear of the fuselage, while a pair of canards (or foreplanes) are mounted higher up and towards the front of the fuselage, behind and below the cockpit. This configuration provides very high agility, especially at low speeds, and also reduces stall speed, allowing for a lower airspeed during instrument approaches. A large vertical tail is present on top of the fuselage and small ventral fins underneath the fuselage provide further stability.

A rectangular air intake is located underneath the fuselage, providing the air supply to the engine. Also under the fuselage and wings are 11 hardpoints, used for carrying various types of weaponry and drop-tanks containing extra fuel.

The retractable undercarriage comprises a steerable pair of nose-wheels underneath the air intake and two main gear wheels towards the rear of the fuselage.

The cockpit is covered by a two-piece bubble canopy providing 360 degrees of visual coverage for the pilot. The canopy lifts upwards to permit cockpit entry and exit. The Controls take the form of a conventional centre stick and a throttle stick located to the left of the pilot. These also incorporate "hands on throttle and stick" (HOTAS) controls.[citation needed] A zero-zero ejection seat is provided for the pilot, permitting safe ejection in an emergency even at zero altitude and zero speed.

Due to the J-10's aerodynamically unstable design, a digital quadruplex-redundant fly-by-wire (FBW) flight control system (FCS) aids the pilot in flying the aircraft. The FCS typically monitors pilot control inputs, (similar in purpose to a high performance vehicle equipped with electronic stability control) preventing the pilot from accidentally exiting the flight envelope from applying too much control input during high performance flight situations. This is critical in canard wing aircraft, as they are capable of turning in a much tighter radius than conventional aircraft. The massive control surfaces are capable of moving so far that they can completely destroy the aircraft in flight at high airspeeds if not kept in check by the FCS.

SPECIFICATION: Crew: (1) || Length: 15.49 m (50.82 ft) || Wingspan: 9.75 m (31.99 ft) || Height: 5.43 m (17.81 ft) || Max. takeoff weight: 19,277 kg (42,500 lb) || Powerplant: (1) Saturn-Lyulka AL-31FN or WS-10A turbofan || Dry thrust: 79.43 kN / 89.17 kN (17,860 lbf / 19,000 lbf) || AB Thrust: 125 kN / 130 kN (27,999 lbf / 29,000 lbf).

PERFORMANCE: Max speed: Mach 2.2 at altitude || Combat radius: 1,600 km (with air to air refueling), 550 km (without air to air refueling) || Service ceiling: 18,000 m (59,055 ft) || Thrust/weight: 1.024 (with AL-31); 1.085 (with WS-10A) || Maximum g-load: +9/-3 g.

SENSORS: NRIET KLJ-10 multi-mode fire-control planar array radar || Type Hongguang-I infra-red search and track pod || BM/KG300G self-protection jamming pod || KZ900 electronic reconnaissance pod || Blue Sky navigation/attack pod || FILAT (Forward-looking Infra-red Laser Attack Targeting) pod.

ARMAMENT: (1) 23mm twin-barrel cannon || Hardpoints: 11 in total, (6) under-wing, (5) under-fuselage with a capacity of 6,000 kg (13,228 lb) external fuel and ordnance || 90 mm unguided rocket pods || Air-to-air missiles: PL-8, PL-9, PL-11, PL-12 || Air-to-surface missiles: PJ-9, YJ-9K || Bombs: laser-guided bombs (LT-2), glide bombs (LS-6) and unguided bombs.

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

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