



DEFENCE AND SPACE

Zephyr

Pioneering the Stratosphere

AIRBUS

Zephyr

The world's most advanced and flight proven solar electric stratospheric High Altitude Pseudo-Satellite (HAPS)

Flight Proven Technology

Zephyr fills a capability gap between satellites, manned aircraft and Unmanned Aerial Systems (UAS) to deliver a real-time wide area persistent presence at low through-life cost. Running exclusively on solar power, Zephyr flies at an operating altitude above 60,000ft, above the weather and other air traffic. Zephyr is able to maintain a position over a geographical location for over 100 days providing an adaptable and persistent solution. Airbus has a unique, demonstrated lead in the design, build and operation of a HAPS allowing low risk access to a world class development.

Record Holder

Zephyr is the only unmanned aircraft of its kind to have demonstrated sustainable flight in the stratosphere whilst powering a payload throughout a 24 hour cycle. Already accumulating over 1,600 hours of safe flight, Zephyr has proven Airbus technology and holds World Records including the flight endurance record. In August 2018, Zephyr S logged a maiden flight of over 25 days, the longest duration flight ever made without refuelling.

See, Sense and Connect

Zephyr is a payload agnostic platform, capable of providing a range of continuous surveillance, communications and monitoring services to meet mission requirements. High resolution imagery and high bandwidth communication payloads have been, and continue to be, developed by Airbus and payload partners. Zephyr can be landed, re-equipped and re-deployed in very short time scales.

Evolution

Zephyr's maiden flight in 2018 exceeded performance expectations, confirming the significant potential that the platform design offers. With evolutionary development in the Zephyr DNA, work is underway to offer incremental enhancements to Zephyr-S tailored to customer payload and geographical performance requirements. For customers ready to embark on the Zephyr journey, these options are available from 2020.



Mine Museum from 65,000 feet (20km) altitude
OPAZ Images – © Airbus DS 2018 – view from Airbus Zephyr

Key Features

- World's most advanced and only flight proven HAPS.
- Capable of up to 100 days continuous flight. ...Longer than any other aircraft in the world.
- Operable globally as a constellation. ...Noticeably reducing operation costs.
- Designed and tested to allow routine flight clearance by military and civil authorities.
- Payload capabilities can include EO/IR, AIS and Radio Relay.

The Gateway to the Stratosphere

- Wyndham airfield in Western Australia is the first flight base and launch site for the Zephyr S, it is the first operational HAPS launch and recovery site in the world.

Performance and Specification



Description	Next generation of the world record setting Zephyr providing greater operational flexibility
Wingspan	25 m
Weight	Under 75 kg
Payload	5-12 kg
Payload Power	Up to 250W
Availability	In production
Example payload capabilities	<ul style="list-style-type: none"> • HD Optical / IR Video • Narrowband mobile comms (e.g. Tetra) • AIS • 100 Mbps broadcast