
# AirStrato,

## Affordable solar powered stratospheric drone

AirStrato. Watch the video

The vision behind AirStrato. Watch the video

The revolutionary AirStrato (www.airstrato.com) drone comes into the market as an aircraft with the flight ceiling of 60,000 ft (18,000m) and the size of a large Predator drone, at the cost of an expensive car. AirStrato can be controlled from any part of the world via satellite or GSM; it can takeoff and land from any remote location; it is very beautiful and affordable. This will allow small businesses, research institutions and even individuals to benefit from an affordable, high performance aerial robot.
When ARCA decided to create this aircraft we had only one goal in mind: to create a tool that will expand the human capabilities to explore and discover.
There are two AirStrato models initially available:

## AirStrato Explorer

AirStrato Explorer, available from $140,000, is a stratospheric flying robot designed to meet the highest expectations of an unmanned aerial vehicle. A flight ceiling of 60,000 ft (18,000 m), 20 hours of endurance and the capability to be controlled via satellite or GSM, is far beyond any other civilian unmanned aerial vehicle can provide for this price range.
The Explorer has a take-off weight of 507 lb (230 kg) a wingspan of 52.5 ft (16 m), a length of 23.1 ft (7m) and a maximum speed of 106 mph (170 km/h), while the payload capacity is 100 lb (45kg).


## AirStrato Pioneer

AirStrato Pioneer, available from $80,000, is a slightly smaller version of the Explorer, designed to perform flights at lower altitudes. A 26,000 ft (8,000 m) flight ceiling, satellite control (with optional satellite communication device), and 12 hours of endurance makes Pioneer a very competitive air robot.
The Pioneer has a take-off weight of 485 lb (220 kg) a wingspan of 39.4 ft (12 m), a length of 23.1 ft (7m) and a maximum speed of 50 mph (120 km/h), while the payload capacity is 100 lb (45kg).

## Common features

The AirStrato models are built from composite materials, are electrical powered, relying on internal batteries and solar cells. They are also equipped with recovery parachutes. They are launched into the air with the Accelerator, a pneumatically driven catapult that allows the aircraft to take-off in less than a second.
The aircraft is equipped with inertial flight stabilization and a programmable autopilot. The onboard ADS-B system makes AirStrato already capable to operate in the US NextGeneration Air Transportation System. The aircraft uses internet connection through local GSM and satellite network. All connections between the UAV and the ground station use Transport Layer Security and are encrypted with the AES 256 standard, that is the best possible encryption for civilian applications.

# Applications

The AirStrato Explorer and Pioneer applications can include: border protection; both land and sea; disasters monitoring and management; contaminated areas monitoring; remote areas exploration, as arctic areas, ocean, mountains, forests, deserts; rescue missions; military reconnaissance; oil pipes and power lines monitoring; communication relay; high atmosphere scientific research; meteorology; auto and maritime traffic control; TV and cinema; internet delivery network over remote areas; or just flying for entertainment.

# About ARCA

ARCA SPACE CORPORATION is a for-profit aerospace corporation established in Las Cruces, New Mexico. ARCA main objective is the exploration of space. In order to reach this objective, ARCA builds and launches the most cost effective space vehicles.
In 15 years of activity we used technologies already existent, in an innovative way that allows access to space by reducing financial constraints. We strongly believe that the future of mankind is linked to the exploration of space.
We have the capability to mobilize hundreds of people from various civilian and military institutions (Navy, Air Force, Civilian Aviation, etc) and to closely work with them in order to achieve the proposed objectives. We built and launched a series of aerospace vehicles that made ARCA one of the most well known organizations involved in the development of private space flight.

ARCA achievements:
2004 - During the $10 million, Ansari X Prize Competition, ARCA launched the first rocket, Demonstrator 2B.
2006 - ARCA built the world's largest solar balloon that lifted into the stratosphere the crew capsule of Stabilo, a manned suborbital vehicle created after the end of Ansari X Prize Competition.
2007 - The Stabilo program continued, this time with an even larger solar balloon lifting the complete Stabilo vehicle into the stratosphere.
2008 - ARCA joined the $30 million Google Lunar X Prize Competition.
2010 - Helen rocket was launched at 120,000 ft, the event representing the first powered flight in the Google Lunar X Prize Competition. The rocket was transported into the stratosphere with the help of a helium balloon.
2012 - Haas rockets series was introduced, consisting of Haas 2B and 2C, a suborbital respectively orbital rocket launchers. The development of these launchers is currently our main activity.
2013 - The European Space Agency (ESA) awarded ARCA with a contract to test the parachutes system for the ExoMars spacecraft that will be launched to Mars in 2016.
2014 - AirStrato “The most amazing air robot in the world” performed the first flight at the beginning of this year.

## For more details about AirStrato products go to www.airstrato.com

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