StratoAvis Systems

Business Plan and Forecast

1. Vision/Mission of **StratoAvis Systems**

Speed, Safe, Small

- StratoAvis UAV Systems is a technological development business dedicated to developing small bionic unmanned aerial vehicles.
- The business will sell its products through online platforms and official websites. Meanwhile, demonstrations, test flights, and the development process will be conducted at offline facilities.
- The targeted customers are operators and businesses needing mid and low-altitude, long-range lightweight, or small surveying platforms, including direct operators and solution providers.
- There is a strong necessity for drones with conventional materials and construction methods to take higher loading and maintain higher maneuverability.
- We aim to provide operators with a more user-friendly, reliable, efficient, and affordable drone solution for environmental detection, aerial survey, and more.
- The StratoAvis UAV features unique bionic wings that improve its maneuverability, unlike any other products.

2. Offer and Value Proposition

S-712 (FW/QP/TR): S-712 is our newest, most technologically advanced model, with three variants that satisfy varied mission requirements. StratoAvis provides a complete set of avionic system solutions and the platform only if alternative payloads are preferred.

S-701M and S-712-1000: Aside from heavier models in the S-712 series, StratoAvis also offers two lightweight variants. Taking off at a mere 3 kg with optical sensors, such platforms can mid-range aerial survey missions with extreme mobility.

3. Audience and Ideal Customer

The ideal customer is a supplier of drone system solutions, such as those for wildfire mitigation. They require lightweight unmanned aerial vehicles that are easy to operate by one person and have strong endurance, while our StratoAvis unmanned aerial vehicle, with biomimetic technology, can meet these requirements. Through further advocation and cooperation, we hope to arouse the interest of drone manufacturers and individual operators alike, who will also benefit from our ability to produce easier and cheaper products with the potential for a larger market. This is a scenario of a positive-sum game in which StratoAvis and other collaborative companies can generate positive revenue by exchanging assets and cooperation.

4. Revenue Streams, Sales Channels and Marketing

Revenue Streams:

- **Direct sales:** revenues from selling S series UAV platforms and complete system solutions.
- **External funding:** research and development funding from government, organizations, and the public who are willing to support the development of the high performance UAS.

Direct Sales Channels:

- **E-commerce platform:** An online store on an e-commerce platform and official website payment channel.
- **Social media channels:** Facebook, Instagram, Pinterest shoppable posts/pins.
- **Industrial business groups:** Distribute product information in small gatherings for those interested in the UAV utilization and systems industry.

Other Income Channels:

- **Public donations:** Direct donations from the public through online platforms.
- **Government subsidy programs:** Governmental assistance to high-technology UAV projects.

Marketing and Advertising:

Online Marketing Methods:

- Informative blog content;
- Online landing page sales funnels;
- Social media via WeChat, Facebook, Instagram, LinkedIn, TikTok, Pinterest, Twitter;
- Advertising video content on YouTube, Facebook, or others.

Traditional Advertising and Public Relations Outlets

- Posters;
- Offline demonstration events.

5. Structure, Suppliers and Operations

- **Business structure:**
  StratoAvis is funded under the premise of a General Partnership. The company's establishment relies upon mutual agreements by all five founding members. However, the business leader, i.e., the designer, has an ultimate say over the company during potential disputes as the core of the business lies in the innovation made with aerodynamic designing.

- **Permits:**
  With related certifications, the team is able to obtain permits for test flight activities and regions. Meanwhile, the connection has also been established with TJU, NUAA, and CAAC Shanghai offices, allowing the team to be able to conduct the required experiments when needed without having permit complexions.

- **Education or certifications:**

The team is composed of high-schoolers, under the guidance of an experienced UAV system engineer. The head of the team has a valid UAV pilot license for type III VTOL UAVs as well as aerial survey engineer license from CAAC and ChALPA.

- **Roles and responsibilities:**
  The StratoAvis team is composed of the Technological Wing and the Marketing-Media Wing. The chief engineer and the two assistant engineers, who respectively work on structure and material engineering, are responsible for the development, validation, and performance calculation for the design. The chief engineer also conducts experiments in the offline facilities when applicable and acts as the test pilot for any test flights. The positions include the General/Chief Engineer, the Material Engineer, and the Structural Engineer. The marketing and Media team is composed of three people, one of them the structural engineer. The team is responsible for the advocacy of the product, such as the videos, meshes, and website construction, as well as the marketing and file production, such as the business planning, market comparison reports, and solution reports. The positions include the Product Manager, the Marketing Officer, and the Art Director. The share of the company is divided into 60%+4*10% initially among the leader and the rest of the team, who are all trustees of the group. Further investments will dissipate the shareholding of all initial members evenly according to their initial share ratios. However, the initiating team will seize all control of technological decisions made regardless of the shareholding.6
- **Standard operating procedures (SOPs):**
  Hierarchical steps, step by step,

  Design Phase: The design team and company maintenance team utilize hierarchical steps. The team ranks the importance of the work and does the most urgent work first. That is, StratoAvis operates by first constructing the most important parts of the drone, like the carbon-fiber support or the fuselage. Most of the design is done by the engineer Henry Shen throughout the first phases of the design. Then, the team moves on to support the designing phase by working on minor designs, like the weather station attached. The team then moves down the hierarchical focus to focus on minor designs only after finishing the most important parts of the drone design. The board of directors identifies the primary financial concerns, such as the funding and the suppliers and the initial planning stage and the application for business startup. Then, the board of directors moves down the list to minor issues like negotiating prices, commercial activities, and predicting the raw revenue over the following years of operation.

- **Supply Chain**
  StratoAvis runs an agile supply chain, in which the team consults external suppliers for the manufacturing major parts of the plane based on specifications produced, and the primary production work of the team is to pack and assemble. By adopting this agile supply method, StratoAvis reduces the required personnel and enhances the product's reliability.

StratoAvis Systems currently provides S-71 series FW solutions and related basic avionics. Mixed wing solutions are currently awaiting system validation.

StratoAvis Systems Business Projections

Product or Service	**Retail Price**	**(Cost)**	**Gross Profit**
S-712 TR/QP*	$ 4999	$ 3100	$ 1899
S-712 FW	$ 2950	$ 2000	$ 950
S-712-1000	$ 1499	$ 1070	$ 429
S-701-M	$ 4499	$ 3800	$ 699
StratoEye V2 Environment Monitor System (Only for TR/QP/FW)*	$ 2199	$ 1700	$ 499
Assembly and Testing Service	$ 500	$ 300	$ 200

Terms marked with * are in development and are not available as of now.

Production Method and Related Costs

Method / Model	**Time per Unit**	**Fixed Cost**	**Variable Cost**
3D Printing – S-712-1000	4-5 days	$ 0	$ 50-400
Carbon Fiber – S-712-1000	3-4 days	$ 1714	$ 300
3D Printing – S-712-FW	5 days	$ 0	$ 200-800
Carbon Fiber – S-712FW / S-701-M	5 days	$ 8571	$ 850-1200
StratoEye V2*	NA	NA	NA

Terms marked with * are in development and are not available as of now.

The production methods will be launched when determined, all related providing manufacturers have previously cooperated with the team.

Business Need	**Startup Cost**	**Ongoing Cost**	**Source/Supplier**
Business organization (DBA, LLC, etc)	$ 100	$ 0	Gov
Permits/certifications	$ 0	$ 400 / 2 yr	CAAC
Retail or mobile POS system	$ 0	$ 0	None Needed
E-commerce website	$ 300	$ 300	WIX
Store/facility cost	$ 0	$ 300/mo.	Owned by Team
Utilities costs	$ 6000	$ 100/mo.	Retailers
Mobile sales, market and fair booths	$ 0	$ 7000/event	Exhibitions

Production/office equipment	$ 10000	$ 0	Cooperating Manufactuer
Cost of goods (projected)	$ 0	$ 5000/variable	Cooperating Manufacturer
Packaging, bags and shipping supplies	$ 0	$ 50/object	SF Express
Business cards and print marketing	$ 0	$ 80/yr	Local Printing
Online and social media advertising	$ 0	$ 100/mo.	WeChat, JD, etc
Business bank account	$ 0	$ 100 /yr	HSBC

In FY2024, StratoAvis systems will focus on the manufacturing of S-712 FW as the main product and S-712-1000 as the affiliate type. The mixed variants will be launched as soon as test flights are made.

Season	**Units**	**Est. Profit**	**Est. Net Profit**
2024 S1	15 712-FW	￥150,000	￥42,000
2024 S2	15 712-FW	￥150,000	￥42,000
2024 S3	30 712-FW	￥300,000	￥84,000
2024 S4	30 712-FW	￥300,000	￥84,000
2024 Aggregate Year	90 712-FW	￥900,000	￥252,000