The “Viator Series” UAS

IP Technical Description

ALL COMPOSITE FLYING WING

The Viator Series

The Viator Series is our new UAS family

Viator is a flying wing and command & control system of our own design

Viator is a second generation UAS based on our “Inventus Series” airframes which have been in service with several military, intelligence and civil agencies in the United States, since their development in 2002

The IP purchaser will be able produce its own airframes in under six months

UAS Design and Advantages

- **Proprietary Flying Wing UAV Blended Body Design**

  Incorporates fuselage into the wings, to yield low power consumption, larger payloads volumes and weight, slower stall speeds for improved loitering and lower damage rates under all flight conditions

- **Proprietary Advanced Carbon Composite Monocoque Design**

  Facilitates the scaling of the airframe from three feet (3’) up to forty feet (40’) with no changes in design or construction , thereby significantly reducing the cost and time of designing and manufacturing larger airframes

- **Proprietary Plug and Play Command & Control System**

  Features our custom designed advanced communications and flight management system that offers exceptional control of all mission flight and recovery events

- **Proprietary Plug and Play Multiple Payload System**

  Accommodates multiple mission requirements on a single flight and facilitates quick in-out changes of payloads between flights on a single mission

Research, Development and Manufacturing Costs

The Viator Series has the lowest cost of Research, Development and Manufacturing of any large portfolio of UAS’s.

The entire Viator Series of twelve airframes are scaled from a single fixed design.

The airframes are all-composite and each model is constructed from a single mold.

The range of airframes models meets most military, civil and civilian mission and operational requirements without any changes to the design.

The airframes can carry a large number of different ISR payloads without changes to the design.

Most of the same manufacturing assets and human skill sets can be used across the entire range of models.

Shaping of the air foil and use of different material in the composite weave, to satisfy special mission requirements, can be done quickly and cost effectively without changing the design.

All of these factors materially minimize the cost of R&D and manufacturing and contribute to the Viator being the lowest cost per airframe across the line in the market.

The “Viator Series” UAS

ISR Payload, Command & Control and Propulsion Systems Costs

The Viator Series has the lowest overall cost of employable payloads, Command & Control , and Propulsion Systems.

The sensors, cameras and propulsion systems are all modular and can be inserted in the airframe through a number of all purpose hatches, or on the top or bottom of the airframe.

The entire Viator Series can accommodate almost all types of off the shelf sensors, cameras and special payloads in its hatches without changes to the airframe.

The Viator Series can accommodate our own C&C, which has many off the shelf components, or third party C &C, and without changes to the airframe.

The Viator Series accommodates modular electric, petrol, and heavy oil propeller propulsion systems which can be slotted in the rear of the UAS without any changes to the airframe.

This degree of modularity, flexibility and use of our own C&C or off the shelf payloads and propulsion systems contribute materially to the overall low cost of the UAS.

Training, Support, Operations, Repair, Maintenance and Transport Costs

The Viator Series delivers the lowest overall operational and support costs.

Training, including flight, command & control, autonomous and LOL operations, ISR operation and propulsion systems, is the same across Viator’s twelve models, significantly minimizing time, costs and personnel numbers while maximizing highly skilled staff in a growing trend toward all-composite UAS’s.

The operational simplicity of the airframe, plug and play payloads, and C&C require fewer in-theatre and out-of-theatre operations and support staff, contributing to lower costs for both.

The blended flying wing structure dramatically minimizes damage to normal fuselage, wings and tail structures of typical airframes. The all-composite construction offers an exceptionally strong airframe with minimal damage characteristics. Together, the all composite and blended wing construction contribute to very low repair and maintenance costs.

The Advanced Carbon Composite Monocoque, whereby the outer skin is the actual airframe, creates an exceptionally large internal volume, accommodating greater payloads and fuel capacity, in a very compact airframe. Equally important, the compact airframe can be transported to theatre less expensively.

IP Offering

- An Intellectual Property (“IP”) License
- An all inclusive single one-off price
- A full package of design, manufacturing, and support documentation
- A package of manufacturing and testing consultancy services
- The right to redesign, scale and manufacture on an exclusive basis in the home country and use and/or sell an unlimited number of airframes anywhere in the world
- The option to purchase ten UAS’s including airframes and command & control systems as an option of the IP license purchase in cases where the purchaser has special immediate requirements

Value Proposition for IP Purchaser

- Minimize the time and cost of entering the rapidly growing UAS industry or expanding your existing line with a highly competitive and versatile UAS design and manufacturing process
- Acquire the complete set of designs, manufacturing processes, testing routines and specific consultancy services for a highly competitive operational UAS with full rights to scale the airframe up or down or refine the UAS’s current model and design
- Pay a single one off price with no royalties or support fees
- Build an unlimited number of airframes
- Manufacture the Viator Series UAS’s on an exclusive basis within the purchaser’s country
- Sell, distribute and/or use on a non exclusive basis the Viator Series UAS’s anywhere in the world
- Materially Reduce the cost per UAS as volume increases

VIATOR2™ Primary Technology Transfer Activity Summary

Phase 1 Fabrication of Airframe

1. Tool and Mold Drawings for VIATOR2™ Airframe
2. Carbon fiber specification and sourcing appropriate for all VIATOR™ sizes
3. Proprietary carbon fiber composite laminate design appropriate for all VIATOR™ sizes
4. Proprietary molding and carbon fiber composite curing technology for all VIATOR™ sizes
5. Step-by-step instructions for manufacture of VIATOR2™ Airframe
6. Material and equipment list required to manufacture VIATOR2™ Airframe
7. Source for material and equipment required to manufacture VIATOR2™ Airframe
8. Resources and support required to manufacture VIATOR2™ Airframe
9. Step-by-step instructions for outfitting Airframe with equipment and components required for piloted-flight
10. Material and equipment list required for outfitting VIATOR2™ Airframe with equipment and components required for piloted-flight
11. Resources and support required for outfitting VIATOR2™ Airframe with equipment and components required for piloted-flight as per item #8.
12. Painting and Finishing for all VIATOR™ sizes
13. Bungee Type Launcher for VIATOR2™ Airframe

(Upon completion of phase 1, the VIATOR2™ platform is complete and ready for flight)

VIATOR2™ Primary Technology Transfer Activity Summary

Phase 2 Piloted Flight Validation and Training

1. VIATOR2™Single-flight airworthiness flight validation by professional pilot (seller supplied)
2. 40 Hours Simultaneous Flight Training with VIATOR2™ for three (purchaser’s) pilots, with high R/C aptitude (120 total hours)
3. Installation and Integration of Command and Control (C2) Autonomous System for VIATOR2™ (Platform Based, as opposed to ground based)
4. Installation and Integration of Intelligence, Surveillance, Reconnaissance (ISR) System for VIATOR2™
5. Installation and Integration of a single Payload System (PS) for VIATOR2™
6. Design, Fabrication and Integration of a Ground Control Station for VIATOR2™
7. Scaling of VIATOR™
8. Radar Cross-Section (RCS) Characteristics, Materials, and Design pertaining to all VIATOR™ sizes

VIATOR2™ Primary Technology Transfer Activity Summary

Phase 3 Fully Autonomous Flight Validation and Training

1. Single-flight airworthiness flight validation for VIATOR2™ controlled by seller’s staff
2. Single-flight airworthiness flight validation of VIATOR2™ controlled by purchaser’s staff
3. Training Manual for VIATOR2™

Further Detailed Information

The following detailed pricing information is available on request.

- IP technology transfer price
- Price of providing support on an ‘as required’ basis outside the IP fixed price package
- Budget for capital items, including plant and tools, to manufacture the Airframe
- Budget for materials and labour
- Total cost of IP, capital and materials & labour
- Cost per air frame analysis