

The New Kid On The Beat

Gippsland Aeronautics

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The latest in a family of utility aircraft designed to be economical and reliable, the GA8 Airvan ASTRA from Gippsland Aeronautics is a high-quality, low-cost alternative to sophisticated fixed-wing and helicopter platforms.

Gippsland is a regional area of the State of Victoria in Australia and the home of Gippsland Aeronautics, a specialist aircraft design, manufacturing and development company that formed in the early 1970s.

Early projects at Gippsland Aeronautics centered on the incorporation of numerous modifications in two areas: specialist modifications for the National Safety Council and Australian Government Aircraft Factory, and the incorporation of safety and load carrying capability for agricultural aircraft in what was then a booming industry. These modifications led to the ultimate development, certification and manufacture of the highly efficient GA200 agricultural aircraft that proved successful in Australia and were exported to the U.S. and several other countries. The simplicity of design and the load carrying capacity of the GA200 led to the concept of the GA8 Airvan, an eight-seat single-engine aircraft that has proven to be the most efficient and economical aircraft of its class in the world.

Many Airvans are now operating around the world, where their high certification and safety standards, as well as low operating and maintenance costs, have endeared them to commercial passenger and freight operators in 32 countries from the arctic to the tropics and everywhere in between.

A User You Know

The almost immediate success of the Airvan as a utility aircraft caught the attention of the U.S. Air Force Civil Air Patrol (CAP), which was looking for an airframe to support the 'Archer' Hyperspectral imaging system. After a thorough operational test and evaluation process, CAP acquired 16 Airvans for this purpose. In service, they have proven to be extremely capable, reliable and cost effective.

One reason CAP considered the acquisition of the Australian-built aircraft was that these aircraft are constructed using American-made components and materials, engines, propellers, instrumentation, avionics, fasteners, wheels, brakes and tires and are even finished in U.S. paint and sealant products. In fact, by weight, the Airvan is over 98 percent U.S. products. The consequence of this fact is that the continuing support of the aircraft is just as simple (more so in some cases) than U.S.-built aircraft.

CAP Airvans were some of the first aircraft in the New Orleans area in the wake of hurricanes Katrina and Rita and provided vital data to enable effective relief operations.

Other reasons Airvan was the most suitable platform were its huge cabin volume, load carrying capacity and its excellent low speed performance and flight handling characteristics. These features have become apparent to other agencies, and Gippsland Aeronautics now produces and supplies special task equipment to enable the Airvan for surveillance and observation roles.

Other Features

A retractable mounting mechanism for an imaging gimbal of up to 15 inches in diameter can be mounted in a conformal cargo pod fairing, which is also capable of accepting TX/RX aerial arrays for a variety of tasks. The large Airvan cabin can easily accept two specialist TFO work stations, as well as a hardware equipment rack, and still have room for up to two pilots if needed, two TFOs and an additional observer/trainee when required. As a three-man crew surveillance aircraft with close to 600 pounds of dedicated mission equipment on board and full fuel, the Airvan can loiter for almost eight hours on target and still carry reserves.

Due to the fact that the imaging devices, when retracted, and aerials are completely contained within the profile of the lookalike cargo pod style RF transparent fairing, the covert capability is greatly enhanced for many types of specialist operations, as the aircraft is practically indistinguishable from a standard personal aircraft and attracts no undue attention.

Gippsland Aeronautics' demonstrated ability and desire to work with its customers to provide the best possible outcomes means that several task specialists have used the company to provide solutions for their special or specific requirements. Not all manufacturers are as willing as Gippsland Aeronautics to provide the resources in engineering support and practical expertise that the special tasks customer needs to solve integration issues.

The Latest & Greatest

The latest version of the Airvan to roll from the factory is the turbo-charged variant equipped with the reliable Lycoming TIO540, rated at 300 hp at 14,000-foot and fitted with the latest optimized Hartzell three-blade scimitar propeller. This version provides outstanding climb performance to higher altitudes where the latest imaging equipment is still capable of providing meaningful data and imagery. The resultant operating noise level is less than the background noise level in metro, urban and suburban areas.

While the naturally aspirated version with its two blade prop provides the most economical late certification surveillance platform available up to about 12,500 feet, the turbo charged Airvan takes over from there and provides excellent efficiency and economy, as well as exceptional loiter time on station with an even quieter noise signature due to the optimized Hartzell three-blade propeller.

Some other considerations that flight unit managers have raised as significant in their choice of a fixed-wing platform have been duty of care and the ability to rapidly convert the aircraft from one role to another. The modular design of the Gippsland Aeronautics equipment and the unique quick release docking system enables short turnaround between different mission types, and the certification basis of FAR 23 at amendment 54/55 complies with the current high standards required for dynamic seat

testing, crashworthiness, critical system redundancy and flight handling, providing the greatest crew and passenger protection available.

The Airvan Astra is designed to serve and protect those who protect and serve.