



## P R E S S   I N F O R M A T I O N

### **Aerion and Airbus Group, Inc. Announce New Agreement, Expanded Collaboration**

#### **More North American-based Airbus Group, Inc. resources made available to bring the supersonic AS2 to market**

**Las Vegas, NV, NBAA – November 16, 2015** With joint engineering efforts accelerating on the Aerion AS2 supersonic business jet program, Aerion and Airbus Group, Inc. today announced a new agreement that will expand North American-based Airbus Group, Inc. resources to the AS2 program. Support from Airbus Group operations in North America will include engineering, procurement and supply chain management, logistics planning, program management, and government relations. These new resources will augment engineering support from Airbus Defence and Space (AIRBUS D&S) in Spain.

“The collaboration between Aerion and Airbus Group has been extremely beneficial and productive,” said Allan McArtor, Chairman and CEO of Airbus Group, Inc. “The further we proceed along the development path with Aerion, the greater our enthusiasm for this program and the deeper our commitment. Under our new agreement, our two companies are working as one to bring Aerion’s supersonic AS2 to the business jet market,” he added.

“This undertaking is completely in line with Airbus Group’s legacy of developing innovations in flight,” said McArtor, “such as our current work on the Perlan Mission II glider - the world’s first engineless aircraft designed to reach the edge of space - which made its successful first flight recently, and the E-Fan technology demonstrator - which this summer became the first fully electric,



twin-engine aircraft taking off under its own power to fly across the English Channel.”

“Airbus Group has a long history of supporting innovation, and Aerion’s innovative aerodynamic technology unquestionably offers long-term benefits to the industry in terms of performance and efficiency,” said Doug Nichols, Aerion CEO.

### **Engineering progress report**

At the one-year anniversary of the Aerion/Airbus Group collaboration, the two companies drew back the curtains on engineering efforts that have proceeded quietly, but steadily, since the first joint engineering team meeting in 2014.

Airbus Defence and Space has made significant progress in the engineering of airframe structures, the AS2’s digital (fly-by-wire) flight control system, its integrated fuel system, and landing gear. Notable accomplishments include preliminary designs for:

- A strong and light 10-spar carbon fiber wing structure;
- Fuselage and empennage structures;
- An innovative articulating main landing gear system that minimizes space requirements in the fuselage when stowed/retracted;
- A fuel system that is integrated with the digital fly-by-wire system for control of center of gravity;
- Flight control design that takes advantage of small, powerful actuators that can be housed in the AS2’s thin flying surfaces;
- A fly-by-wire system based on Airbus Group’s long experience with digital flight control technology.



To supplement the design process, AIRBUS D&S has built a sample titanium wing leading-edge section for evaluation and is testing composite material specimens to optimize material properties.

Aerion is the lead for other systems, such as avionics, electrical, environmental control, hydraulics, and auxiliary power. In conjunction with AIRBUS D&S, Aerion had made preliminary space allocations for every system with weight and balance considerations in mind. Candidate suppliers have been identified and the supplier selection process has begun.

### **September joint design review highlights engineering progress**

This past September, senior engineering staff from Aerion, AIRBUS D&S, Airbus Group, Inc., and other tier-one equipment suppliers gathered at Aerion headquarters in Reno for a four-day technical and program review, covering engineering accomplished to date on all structures and aircraft systems.

“The results of this comprehensive quarterly review were nothing short of excellent,” said Ken McKenzie, Senior Vice President for Strategy and Corporate Development at Airbus Group, Inc. “We see clear and achievable technical solutions to the design of a supersonic jet, and a realistic roadmap for helping Aerion proceed toward construction and flight.”

“The take-away from the design review and the effort this past year,” said Aerion Senior Vice President for Aircraft Development Mike Hinderberger, “is that we have moved out of the conceptual design phase into commercializing Aerion technology.

We are doing the engineering work today that will allow us to build and fly a supersonic jet at the turn of the next decade.”



## **Engine selection nearing**

“We are targeting the first half of 2016 to select a propulsion system, which will enable us to formally launch the program shortly thereafter,” reported Nichols.

Aerion is planning on a first flight of the AS2 in 2021 and entry into service in 2023, following FAA certification. EASA certification would follow closely thereafter.

Aerion has identified existing core engines suitable for adaptation to the needs of supersonic flight. “We will proceed with an engine that allows us to meet our performance goals with the minimum changes required,” said Nichols. “Aerion is focused on an engine solution that meets Stage 4 noise standards while preserving long-range supersonic performance. This is a significant challenge with a low-bypass supersonic engine, but solutions are in sight with today’s engine technology.”

Aerion will bring to market a supersonic jet that operates efficiently within today’s regulatory environment, including rules regarding supersonic flight over land. This takes advantage of the ability of the AS2 to operate efficiently just below the speed of sound at Mach 0.95 to 0.98, and at speeds up to Mach 1.5 over water and other areas where supersonic flight is permitted.

## **A win-win collaboration**

In September 2014 Aerion and Airbus Group announced their technology collaboration. That relationship was conceived as a two-way street, with Airbus Group receiving exclusive access to Aerion high-speed technology as well as Aerion proprietary software for analyzing high-speed airflow and for airframe optimization. The collaboration brings a full spectrum of engineering disciplines



to design, build, and certify the AS2 business jet. This latest agreement will expand that support beyond the engineering of the aircraft and into its commercialization for the business jet community.

“This is Aerion’s jet and Aerion’s program, with substantial benefits accruing to Airbus Group,” said McKenzie. “We gain new technology and tools, and through our collaboration will be expanding engineering knowledge and refining processes such

as digital manufacturing. The AS2 program will be an incubator for innovation in design, engineering, and manufacturing.”

Airbus Group will provide major components and Aerion will conduct final assembly in the U.S. Both companies envision a long-term relationship for ongoing technical support.

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### **About Aerion Corporation**

Aerion Corporation of Reno, Nevada, was formed in 2002 to introduce a new era of practical and efficient supersonic flight. Over more than a decade, Aerion has demonstrated advanced wing technology in conjunction with NASA and other leading aeronautical institutions. This research includes breakthrough work in the area of supersonic natural laminar flow, the key enabling technology behind the AS2 business jet. In 2014, Aerion entered into a collaboration with Airbus Group to develop the Aerion AS2 Mach 1.5 supersonic jet. Engineering is underway with first flight planned for 2021 and entry into service in 2023. More information can be found at [www.aerionsupersonic.com](http://www.aerionsupersonic.com).



## **About Airbus Group**

Airbus Group, Inc. is the U.S.-based operation of Airbus Group, a global leader in aeronautics, space and related services. Airbus Group – comprising Airbus, Airbus

Defense and Space and Airbus Helicopters – contributes more than \$15 billion to the U.S. economy annually and supports over 245,000 American jobs through its network of suppliers. Airbus Group, Inc., headquartered in Herndon, Va., offers a broad array of advanced solutions to meet U.S. military and commercial

requirements, including fixed- and rotary-wing aircraft, homeland security systems, public safety communications, defense electronics and avionics, and threat detection systems.

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