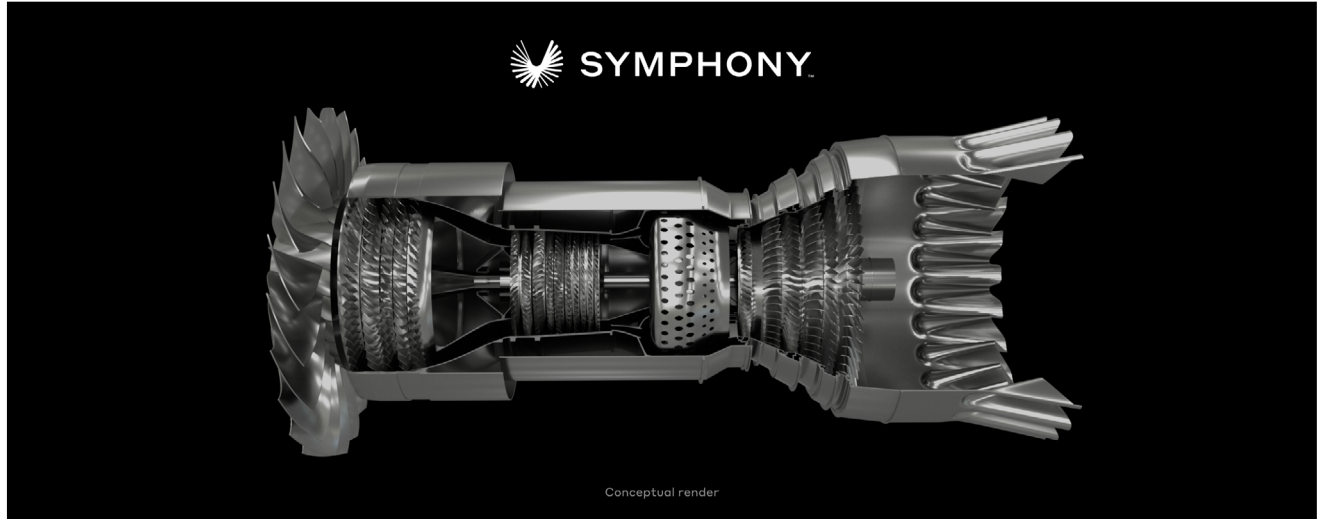




## **Boom Supersonic announces Symphony™, the sustainable and cost-efficient engine for Overture**

*Boom-led collaboration brings together world-class companies across design, manufacturing, and maintenance including FTT, GE Additive, and StandardAero*



**GREENSBORO, NC AND DENVER, CO** – December 13, 2022 — [Boom Supersonic](#), the company building the world’s fastest airliner, today announced Symphony, a new propulsion system designed and optimized for its Overture supersonic airliner. Boom also announced that it will be teaming with three industry leaders to develop Symphony including Florida Turbine Technologies (FTT) for engine design, GE Additive for additive technology design consulting, and StandardAero for maintenance.

“Developing a supersonic engine specifically for Overture offers by far the best value proposition for our customers,” said Blake Scholl, Founder and CEO of Boom Supersonic. “Through the Symphony program, we can provide our customers with an economically and environmentally sustainable supersonic airplane—a combination unattainable with the current constraints of derivative engines and industry norms.”

Symphony will be a bespoke design leveraging proven technologies and materials to achieve optimal supersonic performance and efficiency. Overture’s new propulsion system will operate at net zero carbon and meet Chapter 14 noise levels. When compared to derivative approaches, Symphony is expected to deliver a 25% increase in time on wing and significantly lower engine maintenance costs, reducing overall airplane operating costs for airline customers by 10%.

“United and Boom share a passion for making the world dramatically more accessible through sustainable supersonic travel,” said Mike Leskinen, President, United Airlines Ventures. “The team at Boom understands what we need to create a compelling experience for our passengers, and we are looking forward to a United supersonic fleet powered by Symphony.”

### **Symphony Collaboration**

Boom has selected Florida Turbine Technologies, a business unit of Kratos Defense & Security Solutions, Inc., as its engine design team. FTT has leading supersonic engine design expertise, including key engineers among the team responsible for the design of the F-119 and F-135 supersonic engines that power the F-22 and F-35.

“The team at FTT has a decades-long history of developing innovative, high-performance propulsion solutions,” said Stacey Rock, President of Florida Turbine Technologies. “We are proud to team with Boom and its Symphony partners and look forward to developing the first bespoke engine for sustainable, economical supersonic flight.”

Boom also announced that GE Additive will collaborate on the Symphony program. Symphony will benefit from GE Additive’s proven track record of designing additively manufactured engine components—enabling more streamlined development, reduced weight, and improved fuel efficiency.



“We are excited to support Overture and Symphony,” said Chris Schuppe, General Manager Engineering and Technology at GE Additive. “GE Additive will bring industry-leading capabilities to Symphony, providing additive manufacturing design consulting and technology, while looking for additional areas to potentially collaborate.”

Additionally, StandardAero, one of the aerospace industry’s largest independent maintenance, repair, and overhaul (MRO) providers, will ensure that Symphony is designed for maintainability. Boom’s collaboration with StandardAero aims to deliver reliable and economical operations, and provision of maintenance services for the life of the aircraft. Boom will also benefit from StandardAero’s experience as an assembler of supersonic engines.

“We are excited to team with Boom as its strategic engine MRO partner and for the opportunity to contribute to the company’s bright future, ensuring its aircraft will receive the industry’s finest engine MRO services,” said Russell Ford, Chairman and CEO of StandardAero. “Our current qualifications, capabilities and experience assembling and servicing supersonic military jet engines makes us the intelligent solution for future commercial, supersonic engine MRO applications.”

### **Symphony Technical Overview**

Symphony will be a medium-bypass turbofan engine with the same basic engine architecture that currently powers all modern commercial aircraft. Unlike subsonic turbofans, this new propulsion system will include a Boom-designed axisymmetric supersonic intake, a variable-geometry low-noise exhaust nozzle, and a passively cooled high-pressure turbine.

Engine design features to include:

- Architecture: twin-spool, medium-bypass turbofan engine, no afterburner
- Thrust: 35,000lbs at takeoff
- Fuel: optimized for 100% Sustainable Aviation Fuel
- Single-stage fan designed for quiet operation
- Passively cooled high-pressure turbine
- Additive manufacturing for low weight, low part count, and reduced assembly costs
- Certification: compliant with FAA and EASA Part 33 requirements

### **Overture Program Schedule**

With Symphony design already underway, Overture is on track to achieve type certification in 2029. Production is set to commence in 2024 at Overture’s Superfactory in Greensboro, NC, with rollout in 2026 and first flight in 2027.

For more information, please visit <https://boomsupersonic.com>.

### **About Boom Supersonic**

Boom Supersonic is transforming air travel with Overture, the world’s fastest airliner, optimized for speed, safety, and sustainability. Serving both civil and government markets, Overture will fly at twice the speed of today’s airliners and is designed to run on 100% sustainable aviation fuel (SAF). Overture’s order book, including purchases and options from American Airlines, United Airlines, and Japan Airlines stands at 130 aircraft. Boom is working with Northrop Grumman for government and defense applications of Overture. Suppliers and partners collaborating with Boom on the Overture program include Collins Aerospace, Eaton, Safran Landing Systems, the United States Air Force, American Express, Climeworks, and AWS. For more information, visit <https://boomsupersonic.com>.



#### **About StandardAero:**

StandardAero is one of the world's largest independent providers of services including engine and airframe maintenance, repair and overhaul (MRO) and assembly, engine component repair and manufacturing, engineering services, interior completions and paint applications. StandardAero serves a diverse array of customers in business and general aviation, airline, military, helicopter, components and energy markets. StandardAero is owned by global investment firm Carlyle. For more information about StandardAero, go to [www.standardaero.com](http://www.standardaero.com).

#### **About GE Additive:**

[GE Additive](#) – part of GE (NYSE: GE) is a world leader in metal additive design and manufacturing, a pioneering process that has the power and potential to transform businesses. Through our integrated offering of additive experts, advanced machines, and quality powders, we empower our customers to build innovative new products. Products that solve manufacturing challenges, improve business outcomes, and help change the world for the better. GE Additive includes additive machine brands Concept Laser and Arcam EBM, along with additive powder supplier AP&C.

#### **About Kratos Defense & Security Solutions**

Kratos Defense & Security Solutions, Inc. (NASDAQ:KTOS) develops and fields transformative, affordable technology, platforms and systems for United States National Security related customers, allies and commercial enterprises. Kratos is changing the way breakthrough technology for these industries are rapidly brought to market through proven commercial and venture capital backed approaches, including proactive research and streamlined development processes. At Kratos, affordability is a technology and we specialize in unmanned systems, satellite communications, cyber security/warfare, microwave electronics, missile defense, hypersonic systems, training, combat systems and next generation turbo jet and turbo fan engine development. For more information go to [www.KratosDefense.com](http://www.KratosDefense.com)

#### **Notice Regarding Forward-Looking Statements**

Certain statements in this press release may constitute “forward-looking statements” within the meaning of the Private Securities Litigation Reform Act of 1995. These forward-looking statements are made on the basis of the current beliefs, expectations and assumptions of the management of Kratos and are subject to significant risks and uncertainty. Investors are cautioned not to place undue reliance on any such forward-looking statements. All such forward-looking statements speak only as of the date they are made, and Kratos undertakes no obligation to update or revise these statements, whether as a result of new information, future events or otherwise. Although Kratos believes that the expectations reflected in these forward-looking statements are reasonable, these statements involve many risks and uncertainties that may cause actual results to differ materially from what may be expressed or implied in these forward-looking statements. For a further discussion of risks and uncertainties that could cause actual results to differ from those expressed in these forward-looking statements, as well as risks relating to the business of Kratos in general, see the risk disclosures in the Annual Report on Form 10-K of Kratos for the year ended December 26, 2021, and in subsequent reports on Forms 10-Q and 8-K and other filings made with the SEC by Kratos.

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