

ANTARES AEROSPACE & DEFENSE GROWING AND EXTENDING AEROSPACE DEFENSE CONTRACT BUSINESS WITH **3DEXPERIENCE** WORKS SOLUTIONS

Case Study



Antares relies on SOLIDWORKS design software and **3DEXPERIENCE** Works solutions to meet the stringent data management and documentation requirements of its defense customers. It is the sole supplier of the drag chute system used by KFIR jets, which are multi-role, supersonic, all-weather combat aircraft produced by Israel Aerospace Industries.

Challenge:

Improve data management and documentation capabilities to eliminate revision errors, shorten delivery lead times, grow internationally, and maintain AS9100 Rev. D certification for defense contractors.

Solution:

Transition to SOLIDWORKS Professional design software and 3DEXPERIENCE Works modeling, collaboration, data management, engineering release, change management, and communication solutions, including Collaborative Designer for SOLIDWORKS, Collaborative Industry Innovator, Collaborative Business Innovator, 3D Creator, 3D Sculptor, Product Release Engineer, and Change Manager roles.

Results:

- Reduced standard lead times from two years to six months
- Cut engineering release prep time from one to two weeks to half an hour
- Supported collaborative, remote work environment
- Maintained AS9100 Rev. D defense contractor certification

Antares Aerospace & Defense is a defense contractor based in Bogotá, Colombia. Founded in 2009, the company has grown since its inception, when it became the sole supplier of the drag chute system used by KFIR jets, which are multi-role, supersonic, all-weather combat aircraft produced by Israel Aerospace Industries. While the Colombian Ministry of Defense is its main customer, Antares has expanded in recent years, opening an office in Lakeland, Florida, in 2019, and entering the U.S. market as a contractor to private companies serving the U.S. Department of Defense.

The company acquired its AS9100 Rev. D certification for defense contract work in 2017 and has developed more than 200 mechanical, electronic, and textile products for different types of aircraft. When Antares was founded, the company used open-source CAD software for product development before moving to Ansys® SpaceClaim® software in 2011. To meet certification data management and documentation requirements, Antares developed its own homegrown data management system based on Google Drive.™

However, as certification requirements increased annually, Antares also experienced revision errors and difficulties accessing legacy design data and supporting a remote workforce. Thus, Antares began looking for a better product development and data management solution—not only to

maintain its certification, but also to support growth in the U.S. market, according to Engineering Director Hector Mejia. “When we initially began our certification journey, we worked to improve our quality system and organize our workflows,” Mejia recalls. “While that was sufficient at first, new requirements for certification are added every year. These new requirements, combined with the revision errors we experienced using our own system, our planned expansion in the U.S., and the need to support remote work, prompted us to seek a better cloud-based solution for both CAD [design] and PLM [product lifecycle management].”

Antares was familiar with SOLIDWORKS® design software because it is taught in Colombian universities, and learned about 3DEXPERIENCE® Works data management solutions from reseller Grupo Abstract. “I personally live an hour’s flight away from our office in Bogotá and needed a better way to share and manage data,” Mejia recalls. “When the COVID-19 pandemic hit in 2020, the idea of remote work became even more critical. Looking into the future, and given the revision control and certification issues we faced, we decided to move to SOLIDWORKS and 3DEXPERIENCE Works solutions.”

Antares management decided to move to SOLIDWORKS Professional design software and implement modeling, collaboration, data management, engineering release, change management, and communication solutions—including Collaborative Designer for SOLIDWORKS, Collaborative Industry Innovator, Collaborative Business Innovator, 3D Creator, 3D Sculptor, Product Release Engineer, and Change Manager roles—from the 3DEXPERIENCE Works portfolio. The innovation portfolio leverages the cloud-based 3DEXPERIENCE platform to give customers access to the power of industry-leading tools for design, simulation, manufacturing, and marketing from Dassault Systèmes.



“The 3DEXPERIENCE platform really hit us where we needed it, providing a joint CAD [SOLIDWORKS] and cloud-based PDM [product data management] solution.”

— Hector Mejia, Engineering Director

SHORTENING DELIVERY LEAD TIMES

By implementing SOLIDWORKS and 3DEXPERIENCE Works solutions, Antares has cut its customer delivery lead times from the two-year general defense industry standard to roughly six months. Mejia says the company has been able to increase its speed and flexibility by improving collaboration, formalizing product development workflows, better supporting remote work, and tapping the Product Release Engineer role on the 3DEXPERIENCE platform.

"With SOLIDWORKS and **3DEXPERIENCE**, we're just more efficient," Mejia stresses. "For instance, we developed a heads-up display for the Embraer 312 Short Tucano aircraft for RSW Aviation based in Phoenix, Arizona, which was retrofitting the planes for an air force in Africa. We delivered the product in six months, which our customer expected to take much longer. One example of how we saved time was using the Product Release Engineer role, which is magic because it organizes all of the data and specific details for the production in a format that links it to all of the drawings and supporting information. Without it, preparing a product design for release to manufacturing used to take a week or two. With the Product Release Engineer role, it takes about half an hour."

IMPROVING QUALITY BY ELIMINATING REVISION ERRORS

In addition to saving time, Antares has leveraged **3DEXPERIENCE** Works data management to completely resolve its revision control issues, helping the defense contractor improve its product quality in the process. "In the past, we experienced some failures because someone made a revision error, either by saving copies of a file in different locations, overwriting the correct file, or using the wrong version," Mejia notes.

"Our old homegrown database had grown in a disorderly fashion, requiring more time to clarify the information," Mejia continues. "The **3DEXPERIENCE** platform really hit us where we needed it, providing a joint CAD [SOLIDWORKS] and cloud-based PDM [product data management] solution."

GROWING INTO US MARKET

As Antares goes after the U.S. market, the move to SOLIDWORKS and **3DEXPERIENCE** Works solutions has prepared the defense contractor to both maintain its critical certification while also managing rapid growth. "We need increased speed, flexibility, and collaboration to continue to grow our business in the United States," Mejia points out.

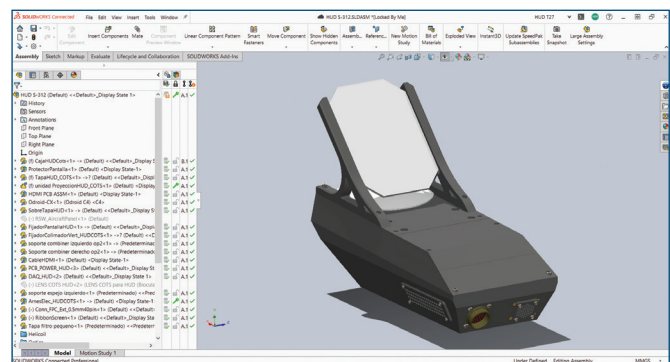
"We're saving substantial amounts of time with **3DEXPERIENCE** Works solutions managing data while also ensuring the accuracy of our revisions," Mejia continues. "With **3DEXPERIENCE** Works, we're able to keep track of everything without spending a lot of time, which will help us support future growth."

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Using SOLIDWORKS and **3DEXPERIENCE** Works solutions, Antares has cut its customer delivery lead times from the two-year general defense industry standard to roughly six months, including the heads-up display (HUD) that it developed for the Embraer 312 Short Tucano aircraft.

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