

JET AVIATION ENGINEERING TEAM INNOVATES NEW AIRCRAFT ANTENNA SYSTEM

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Jet Aviation engineering team has been busy finding new and innovative solutions to the complexities of aircraft KA Band Satcom System. The initial project began in 2016, as the sales team were thinking ahead of new ways to benefit the maintenance of aircraft, and ultimately the customer. The KA Band Satcom System is used for connectivity within the aircraft, including activities that require internet access. This gives a much more ‘home-like’ feeling to the cabin, allowing customers to watch live events such as sports matches, host conferences, or stream TV shows.

The team initially began this project as a way to see if we could use new technology to develop our existing structural systems for our customers. With this new technology, the waiting time on scheduled maintenance checks is reduced, and any issues that may arise with the aircraft antenna can be dealt with swiftly.

The final design of the KA Band Satcom System solution utilizes a 2.5-meter sheet metal grid

structure, called a mounting plate. The antenna is then placed on the aircraft using seven attachment points. This number of attachments offers much more efficiency in inspections and maintenance, as there are now many individual detachable points that can be taken in and out more easily, providing quicker answers to any technical problems.

Marta Martinez, Product Owner & Compliance Verification Engineer of Structure, commented: “as a result of the new system, teams can improve their maintenance schedules and minimize the number of fuselage penetrations, which provide a lot of benefits in terms of flexibility, safety, and cost reduction. Essentially, now that we are able to remove different parts easily, we can use different suppliers to suit a timeline or customer. Ultimately, the project demonstrates how we are constantly thinking about the customer and the bigger picture for long-term benefits.”

The project involved a lot of collaboration and teamwork between different departments. Sales and SCM approached different manufacturers for parts, an European Aviation Safety Agency (EASA) team in Cologne cooperated with these teams as well, and after a year we were able to bring together everything except for three external parts plus an additional privilege for our DOA, Flight Conditions.

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