Thales and Diehl join Airbus to develop flight control computers for CityAirbus NextGen

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Cologne, 17 November 2021 – Airbus has signed a trilateral agreement with Thales and Diehl Aerospace for the joint development of the flight control computers of CityAirbus NextGen. The central flight control system of CityAirbus NextGen, the electric vertical take-off and landing vehicle (eVTOL) being developed by Airbus, will combine extraordinary computing power with lightweight design and highest safety standards.

Diehl and Thales are joining Airbus in investing into the emerging eVTOL market. Both partners are developing their own system that will be integrated into a dissimilar architecture to comply with the new EASA regulation for eVTOL. This architecture is essential to ensuring the redundancy of the computers and the vehicle's safety. The developments will be supported with public funding from the German and French governments, respectively.

Thales is responsible for the primary computing system, while Diehl is developing the secondary flight control computer. The system ensures that the second, independent flight control computer monitors the data of the primary computer system permanently, and it can also take over the flight control itself.

"I'm delighted to announce today the first system partnership for the development of our CityAirbus NextGen" said Jörg Müller, Head of Urban Air Mobility (UAM) at Airbus. "UAM is a joint effort. Nobody can do it alone. Airbus is reaching out to potential partners from the industry to design and build an optimised vehicle for safe and efficient air transport in urban environments. With Thales and Diehl, we are proud to have two excellent partners with a lot of expertise on board."

"In the future, eVTOLs will be a key part of mobility and will enormously enrich it – in our cities but also beyond. For this, the safe operation of the innovative aircraft, of course, plays an essential role", said Josef Köcher, CEO at Diehl Aviation. "We see a trend-setting partnership in the close collaboration with Airbus and Thales for the reliability and safety of the CityAirbus. We are proud to be on board with our expertise, and we are looking forward to seeing the CityAirbus in the skies soon."

"We are thrilled to see that our close cooperation with Airbus and Diehl is once again delivering concrete results through an agreement that will add a whole new dimension to air mobility," said Yannick Assouad, Thales Executive Vice President, Avionics. "With this safe and innovative flight control solution, we are working together to build an airspace environment we can all trust."

Thales has more than 40 years of experience in electrical flight controls, having supplied the systems for the first ever fly-by-wire commercial airliner, the Airbus A310. Diehl Aerospace, a

joint venture of the French partner Thales and Diehl Aviation, has many decades of experience in avionics for civil and military aircraft and helicopters.

The fully electric CityAirbus NextGen was revealed in September 2021 at the Airbus Summit. It is equipped with fixed wings, a V-shaped tail, and eight electrically powered propellers as part of its distributed propulsion system. It is designed to carry up to four passengers in a zero emissions flight in multiple applications. CityAirbus is being developed to fly with a 80 km range and to reach a cruise speed of 120 km/h, making it perfectly suited for operations in major cities for a variety of missions. It is optimized for hover and cruise efficiency, while not requiring moving surfaces or tilting parts during transition. Designed with simplicity in mind, CityAirbus NextGen will offer best-in-class economic performance in operations and support. The first flight of a prototype is planned for 2023. Airbus is developing a UAM solution with eVTOLS not only to offer a new mobility service for urban areas but also as a first step in its quest to reduce emissions in aviation all over its product range.

Newsroom

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