Airbus, Diehl and Thales open a new chapter in safe and sustainable air mobility

- Airbus has selected Thales and Diehl to supply the electrical flight controls for its future CityAirbus NextGen air taxi, providing a safe and secure response to tomorrow’s air mobility needs.
- The new-generation flight control computer meets the size and weight requirements of an eVTOL (electrically powered vertical take-off and landing) aircraft and is particularly well suited to the emerging urban and regional air mobility markets.
- 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.

Airbus has selected Thales and Diehl to supply the electrical flight controls for CityAirbus NextGen, the future air taxi due to make its maiden flight in 2023.

By 2030, 60% of the world's population will live in cities. This sustained growth in urban populations is expected to drive demand for innovative mobility solutions as ground transportation systems become increasingly congested. One way forward could be to offer a safe, sustainable and efficient alternative that makes optimum use of urban airspace.

Flight control systems are critical to flight safety, calculating and adjusting the position of the aircraft’s control surfaces and managing engine thrust. Electrical flight control systems are progressively replacing conventional mechanical systems and offer significant advantages in terms of safety, performance and reliability, as well as reducing aircraft weight and improving passenger comfort.

The system selected by Airbus will combine Thales primary flight computers with secondary flight computers from Diehl. The choice of different flight computers will help improve flight safety and guarantee system integrity to comply with the new EASA regulation for eVTOL.
The streamlined architecture of the flight control computers will make certification simpler while retaining the capacity to accommodate further developments and host multiple functions such as navigation, guidance and pilot assistance.

Drawing on its long-standing experience of electrical flight controls, which dates back to the 1980s with the pioneering fly-by-wire systems for the Airbus A310, and with a total of 12,000 aircraft equipped to date, Thales is joining Airbus and Diehl to write the next chapter in the future of air mobility.

The fully electric CityAirbus NextGen 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. Its first flight of a prototype is planned for 2023.

"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."

“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."

“eVTOLs will be a key part of mobility in the future 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.”

About Thales

Thales (Euronext Paris: HO) is a global leader in advanced technologies, investing in digital and “deep tech” innovations – connectivity, big data, artificial intelligence, cybersecurity and quantum computing – to build a confident future crucial for the development of our societies. The Group provides its customers – businesses, organisations and governments – in the defence, aeronautics, space, transport, and digital identity and security domains with solutions, services and products that help them fulfil their critical role, consideration for the individual being the driving force behind all decisions.

Thales has 81,000 employees in 68 countries. In 2020 the Group generated sales of €17 billion.