



## EuroAvionics SUCCESS STORY: Electronics solutions for the mobility of the future

Get from London's Heathrow Airport to your meeting quickly and conveniently with drone taxis – while it may sound like science fiction, this option will be available to us within a few years. And the best part? High-end electronic assemblies from Iftest are in EuroAvionics' globally leading control systems.

Amazon, DHL, Swiss Post, agricultural machinery manufacturers and even the burger place next door – everyone is experimenting with tailored aerial services with increasing success. Packages delivered to your door in a flash, pests fought with outstanding accuracy, a burger dropped off while still warm – while these may seem like distant fantasies to some, they are already being successfully implemented in certain areas; for example, through the Skyways Airbus programme in Singapore, where drones are used by the postal service to deliver packages fully autonomously. Others are already one step further. Uber also hopes to get on board soon: from 2025, it plans to offer drone taxis to transport people using the 'payer-ride' principle. Another company in South America already provides an app for that – but its helicopters still come with pilots.

### High-performance control systems a requirement

Large aircraft corporations such as Airbus and Boeing are at the forefront of this movement. They are developing self-driving drone taxis that can fly passengers from large airports directly to the city centre. These technological ideas are viewed as so influential that even the car industry has jumped on the bandwagon.



Electronics solutions for the mobility of the future

But to make these visions a reality, the mini-helicopters and drones require high-performance, tailored control systems. This is where EuroAvionics, a subsidiary of the Hensoldt Group, comes into play – along with its new partner for high-end PCB designs and assemblies: Iftest.

### EuroAvionics – leading supplier for the air travel industry

A central element of every aircraft is its control system. It ensures smooth flight planning, performance and analysis, thus guaranteeing the required safety. Many of these control systems come from Pforzheim, Germany, where EuroAvionics has its headquarters. Recently, a development site was opened in Sissach (Basel-Landschaft), Switzerland. The company has been developing leading avionics parts for more than 25 years and its customers include OEMs such as Airbus and Leonardo Helicopters. Its parts are used in planes, helicopters and drones, and display impressive performance even under challenging circumstances. That is why helicopters used by REGA, ADAC, ÖMTC and the police are fitted with EuroAvionics components.

EuroAvionics' high-end products offer particularly strong situation-based route planning; i.e. outstanding services in situations where the journey cannot be planned in advance. This aspect is central to the future use of unpowered drones, along with longstanding industry experience in the relevant safety standards such as EASA. This vision for the future will become feasible only when goods and passenger drones can move autonomously with maximum safety in unknown terrain. The German systems have also been extensively tested in the equally important automated

‘sense and avoid’ solutions. As a leading provider of cutting-edge solutions, EuroAvionics and its partners, which now also include Iftest, is opening the doors to an interesting market with huge growth potential.

### **Iftest electronics for high performance and miniaturisation**

Until now, EuroAvionics relied on eight-layer PCBs the size of a packet of cigarettes for its product to control MF7 drones. A significantly more powerful assembly of the same size was required for the new MF8 generation of control systems. Iftest partnered with EuroAvionics for both the MF7 and the MF8.

Together with EuroAvionics, the Wettingen-based high-tech company developed a PCB design comprising 16 layers, thus offering maximum miniaturisation. By doubling the number of layers and condensing the component arrangement, the PCB can be fitted with significantly greater and more complex functions – which are key to air travel. The MF8 now features four HD video inputs and an additional safety CPU that monitors and safeguards the functionality of the system during operation, thus ensuring compliance with important safety standards.

### **Right first time**

Thanks to its longstanding experience, Iftest has already been able to supply customers with the first complete, fully functioning prototype. ‘We are very satisfied with the development of the PCB design. The collaboration was very straightforward, with small changes quickly and flexibly implemented in accordance with quality-related processes. We asked Iftest to develop two very sophisticated and complex designs, and both came out right first time,’ explains Tim Moser, Head of Engineering at EuroAvionics.

Since then, development has moved past the prototype stage. A first pilot series with 38 assembled PCBs has been produced and is being tested in EuroAvionics components used by customers. Tim Moser: ‘For us, it was important from the beginning that Iftest take over production after the approval of the PCB design and thus assume responsibility for implementation in manufacturing. This in combination with the expert support of our contacts and their proactive communication makes Iftest one of the best partners that any company could hope for.’

### **Iftest AG**

- + System partner for industrial and medical electronics
- + Services
  - Consulting
  - Hardware development
  - Embedded software development
  - PCB design
  - Fast prototyping
  - PCB Assembly: SMT and THT
  - Module and device assembly

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### **Contact**

Iftest AG | Tel. +41 56 437 32 27  
 peter.himsolt@iftest.ch