



Choose certainty.
Add value.

Unmanned aircraft systems

Testing and certification services that ensure safety and reliability.

Your challenges

The use of unmanned aircraft systems (UAS) is expanding rapidly beyond traditional military and public safety applications. These devices are now being widely adopted by commercial enterprises and consumers. Some studies estimate a global UAS market in excess of US\$5 billion by 2020, up from just over US\$15 million in 2014. The anticipated growth in UAS adoption, the high rate of technological change and the urgency in meeting the latest consumer trends are creating new challenges. At the same time, an increasingly complex regulatory environment is emerging with national and international aviation and product safety regulations being developed to cover these products and their operation. In December 2015, the U.S. Federal Aviation Administration launched a registration system for operators of UAS up to 25kg. Manufacturers also need expert insight to determine if their product falls under the European Toy Safety Directive, the new European Radio Equipment Directive (RED) or general electrical safety regulations.

Why are UAS testing and certification services important?

Testing and certification can minimise the risk of non-compliance and product liability. By ensuring your UAS products are in compliance with stringent standards for performance, quality and safety, our testing, inspection, auditing, certification and training services will assist you in achieving reliable market entry. Since the brand value of UAS products correlates directly with their perceived quality and safety, these services will ensure safer products and promote the healthy growth of the industry.

How can we help you?

At TÜV SÜD, we are fluent in the complex language of electrical and electronics safety. With our testing facilities and expert staff around the world, we can test UAS products for safety and advise on the electrical and mechanical safety aspects.



Our UAS testing and certification services

▪ Electrical safety testing

TÜV SÜD tests products for electrical safety to minimise the risk of electrical shock, thereby maintaining a safe environment for the drone.

▪ Battery safety testing

TÜV SÜD is a trusted expert in battery testing. Our holistic approach and commitment to safety will optimise the reliability of batteries and other energy storage devices.

▪ Functional safety testing

We provide practical testing of main and additional functions. This includes evaluation of power consumption, work result, working speed and battery capacity.

▪ Environmental testing

We have one of the largest environmental testing portfolios in the world. Our experts have been conducting climatic testing and mechanical shock and vibration testing on electrical products for over 50 years.

▪ Mechanical safety testing

This type of safety evaluation involves assessment of a product's mechanical aspects such as fast-moving blades or propellers as well as the conditions under which a mechanical failure could pose a potential safety risk to users.

▪ Chemical safety testing

Our experts have direct knowledge of chemical and restricted substance regulations applicable worldwide. In addition, we actively track pending and potential regulatory changes that can affect the acceptance of your products.

▪ Wireless testing

From the beginning of the product cycle, TÜV SÜD can offer you compliance-related guidance backed by complete testing and certification services. We ensure that your product conforms to all of the regulatory requirements of your intended market.

Your business benefits

- **Save time and money** – by resolving issues of product safety, quality and usability from the onset, thus reducing unplanned costs and delays due to rework.
- **Minimise risk** – by working closely with TÜV SÜD's experts along the entire supply chain to avert hazards and defects that could result in costly product recalls and damage to your reputation.
- **Gain a competitive edge** – by certifying your products with the TÜV SÜD Octagon, a trusted and recognised mark with enormous marketing potential throughout the world.

Why choose TÜV SÜD?

TÜV SÜD is renowned as an independent and impartial third-party service provider with a network of international and local experts in all key markets. We support you throughout the product development lifecycle with our extensive technical expertise to ensure a safe and reliable product. Our testing can be conducted at various stages of the product lifecycle to help you meet consumer expectations for safety and reliability. We set quality and ergonomic standards beyond normal safety requirements, which helps to differentiate your brand from its competitors. Our experts have devised our own UAS requirements and keep up to date with the latest developments in this emerging regulatory environment.

Choose certainty. Add value.

TÜV SÜD is a premium quality, safety and sustainability solutions provider that specialises in testing, inspection, auditing, certification, training and knowledge services. Represented in over 850 locations worldwide, we hold accreditations in Europe, the Americas, the Middle East, Africa and Asia. By delivering objective solutions to our customers, we add tangible value to businesses, consumers and the environment.

Related services

TÜV SÜD provides the following related services:

- EMC testing
- Electrical safety testing
- FCC testing
- Toy testing
- CE marking