PRISM

Are You Ready For Commercial **Drone Operations?**

PRISM Experts guide you through the FAA Certification Process.

The FAA issues air carrier certificates to US applicants based on the type of services they plan to provide and where they conduct their operations. Drone operators must also obtain airspace authorization and air carrier or operating certificates before they can begin operations.

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Over the past two years, the drone industry has experienced dramatic growth. The unmanned delivery market is expected to grow from $4.4 billion in 2018 to $63.6 billion by 2025. At this rate, the delivery of important packages such as food and medicines by drone will become an everyday occurrence.

Drones, or Unmanned Aircraft (UA), are only part of an Unmanned Aircraft System (UAS). UAS includes a Ground Control Station, mission software, a pilot, a reliable link with Global Positioning System (GPS), a drone with its payload and documented procedures for operations, training and maintenance.

Drone manufacturers and UAS operators across the globe are developing custom-made and industry-specific solutions for business and customer needs. With consumer demand for faster delivery, many companies including Amazon, FedEx, UPS and DHL are utilizing or planning to utilize drones for package delivery and other services.

PART 135 Certification

UAS operators are required to obtain FAA 14 CFR Part 135 Certification to use a drone for commercial operations. Since Part 135 Certification is the only legal path for drones to fly for hire in U.S. airspace, all commercial drone operators must obtain this certification.

As a way to manage risk, the FAA requires additional safety assurances for the commercial use of drones (14 CFR Part 21). These additional certifications include three categories: Type, Production, and Airworthiness. Organizations who earn these certifications provide confidence that they meet FAA safety expectations to protect the public.

PHASE 1
Pre-application

The first step of Part 135 Certification, Pre-application, is called Phase 1. It involves submitting a Pre-application Statement of Intent (PASI) to the FAA.

PHASE 2
Formal Application

Phase 2, requires all documents to be submitted to the FAA.

PHASE 3
Design Assessment

Phase 3 of the process involves the review of manuals and other relevant documents to verify safe operating processes.

PHASE 4
Performance Assessment

Phase 4, the Performance Assessment, evaluates the proposed operating procedures, training plans and FAA compliance of the manuals of the applicant.

PHASE 5
Administrative Functions

The final phase for Administrative Functions outlines the Operation Specifications (OpSpecs) and issues the certificate.

TYPE Certification (TC)

Type Certification is the approval of the entire Unmanned Aircraft System (UAS). Type Certification falls under the certification procedure for special classes of aircraft 21.17(b), which means that an airworthiness standard has not been determined. Instead, the assessment will be made up of portions of existing standards. The design must comply with airworthiness standards. This applies to low risk UAS such as the ones used for package delivery.

The process of Type Certification with the FAA includes a Durability and Reliability (D&R) process to guarantee an acceptable safety level. One of the measures of performance for D&R includes conducting tests across the entire range of operations to determine the reliability of the UAS. The drone must complete the process without any failures that result in a loss of flight, control or containment, and without an emergency landing outside the operator's recovery zone. Ultimate approval is up to the FAA based on the evidence presented by the UAS manufacturer.

PRODUCTION Certification (PC)

Production Certification is also an integral part of the UAS manufacturing process for commercial operations. Production certification is the approval to manufacture drones under an FAA-approved design. It verifies that an organization's facilities and quality system produce drones that meet approved specifications. Production Certification is required by the FAA to receive an Airworthiness Certificate for each UAS model and tail number created.

Airworthiness certification is required for civil aircraft outside of the Small UAS Rule or those without exemption under the Special Authority for Certain Unmanned Systems (U.S.C. 44807). The Airworthiness Certificate can be earned in Standard or Special Classes. It demonstrates that a drone meets its approved type design and can operate safely.

As an FAA approved Qualified Certification Consultant, PRISM, a Division of ARGUS International, works with UAS operators worldwide to develop and implement all requirements for commercial drone operations in US airspace such as Type and Production Certifications. PRISM provides support to design and implement a Quality System to insure the highest level of safety and quality in UAS manufacturing.