



TLS

TRANSPONDER LANDING SYSTEM

APPLICATIONS FOR THIS PRODUCT INCLUDE:

- **Terrain-Challenged Civil Airports**
- **Defense**
- **Disaster Recovery**
- **Airfields in GPS/GNSS-denied environments**

ANPC's TLS Transponder-Based Instrument Landing System is designed to provide precision approach guidance for airfields that cannot accommodate conventional ILS systems, and with no reliance on GPS or other satellite-based navigation. These commercial off-the-shelf (COTS) products combine the functions of an ILS, SSR, and PAR in a single integrated system. Designed for permanent installations and engineered for resilience, the TLS is ideal for any runway environment, regardless of terrain, obstacles, or climate. Little to no civil works are required to prepare the site location, and potential multipath interference from obstacles or rough terrain is mathematically eliminated in software during the system calibration process.

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KEY PRODUCT FEATURES

- Communicates with Mode 3/A/C/S transponders and ILS receivers installed on all IFR-equipped aircraft, so no aircraft avionics upgrades are required
- Localizer and Glideslope ILS/PAR guidance to 20NM
- Compliant with all ICAO signal-in-space requirements for CAT I ILS
- Area surveillance to 110NM with SSR display
- ASTERIX-compliant surveillance data output
- Deployable in any runway environment, regardless of climate or terrain
- Single-element Localizer and Glideslope antennas greatly reduce the number of failure modes
- Built-in integrity monitor ensures 24/7 accuracy and signal-space performance within specified tolerances
- Guidance for up to four aircraft on simultaneous approach on discrete ILS frequency pairs
- Localizer guidance provided on missed approach
- Support for curved and offset approaches using ILS or RNP design criteria
- Variable glideslope angles supported for obstacle avoidance or rotary-wing operations
- Interoperable with networked system frameworks such as Agile Combat Employment(ACE)
- Setup and operation is independent of GPS/ GNSS

