



HENSOLDT ASR-NG

Civil Airport Surveillance Radar

Given that it is responsible for the safety of air traffic in an airspace with various users such as airlines, military pilots and private pilots, the air navigation service provider (ANSP) requires perfect awareness of the air situation. To provide safe air traffic management, a state-of-the-art air surveillance radar is required. ASR-NG[®] delivers excellent non-cooperative detection performance covering different aircraft sizes and speeds. The challenge of unmanned aerial vehicles and drones and the increasing number of wind power plants in the proximity of an airport are addressed by the radar's unique triple beam design and dedicated radar processing technologies. ASR-NG increases situational awareness and supports the ANSP by reducing incident risks and increasing flight safety for all aircraft under control.

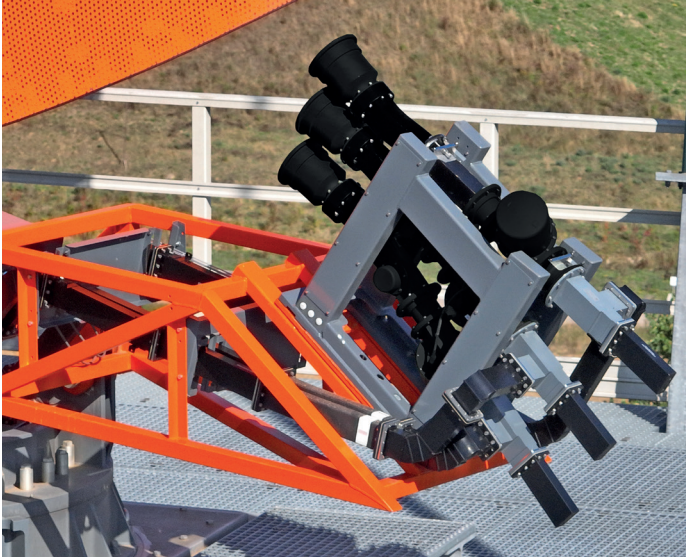
Increase your flight safety

- Detection range up to 120 NM and 50,000 ft
- 3D height information of non-cooperative targets
- Proven wind farm mitigation

Future-proven 3D technology

Given the rapidly growing presence of disturbing factors such as wind farms or telecommunication influences, it is of utmost importance for air traffic control radars to be able to cope with highly dynamic clutter environments and to be resistant to disturbing signals like 4G/LTE.

Using a three-horn antenna feed, ASR-NG also offers the unique feature of 3D target detection with PSR. This third beam allows the measurement and calculation of altitudes of non-cooperative targets, for example aircraft with or without their transponder turned off.



The three-horn antenna solution



Triple beam

Situational awareness

- Dynamic clutter cancellation
- Proven automatic wind farm mitigation
- 3D height information with PSR
- Extended range of 120 NM for PSR

Surveillance

- S-band primary surveillance radar with implemented failover and redundancy
- Dual redundant monopulse
- Secondary surveillance radar
- Optionally with IFF Mode 5

Reliability

- Remote monitoring and control
- Reduced preventive maintenance
- Service life extension programme
- Highest operational availability

| Type | Data |
|---|---|
| Operational frequency range | 2.7-2.9 GHz (PSR); 1030 MHz and 1090 MHz (SSR) |
| Transmitter | Solid-state GaN – lowest power consumption |
| Coverage volume | 0.2 NM ... 120 NM / up to 50,000 ft |
| Scan rate | 12 rpm / 15 rpm |
| Antenna beams | 3 beams – 2 Cosec ² high beams and 1 pencil low beam |
| Number of operational frequencies | 4 selectable frequencies |
| Plot accuracy – Range / Azimuth | < 60 m / < 0.1° |
| Resolution – Range / Azimuth | < 150 m / < 2.9° |
| Subclutter visibility | ≥ 60 dB |
| Processing channels | Three-channel architecture with coherent processing |
| Weather detection | Six-level intensity classification according to US NWS – ASTERIX CAT008 |
| Number of tracks | Up to 1,200 |
| Secondary radar | Modes 1, 2, 3 A/C, 4, 5, S |
| Application layer protocols | ASTERIX (categories 007, 008, 017, 021, 034, 048, 253), NTP |