Collins Aerospace next-generation radars

Elevate your surveillance experience with our latest Non-Cooperative Surveillance Radar (NCSR) solution

Welcome to our commitment to airspace modernization and cutting-edge technology. Our next-generation NCSR, the ASR-XM (S-band) is more than a solution; it is a revolution for air traffic control (ATC).

We are here to redefine the skies and effectively deal with the new operational and environmental challenges.

The operational environment has changed significantly over the last decade, requiring Non-Cooperative Surveillance Radars to deal with an environment that includes increased air traffic volume, non-static clutter (wind farms), RF spectrum congestion (4/5G telecoms), increased impact of small RCS targets (birds, drones) and an increase in severe weather events.

The ASR-XM, which can be utilized for Terminal Approach (TA) (60 nmi) or Extended Terminal Approach (ETA) (80-100 nmi) operations, is the 4th generation evolution of the RTX (Raytheon) family of ATC NCSRs. The ASR-XM has a common, modular and flexible system architecture to provide extended capabilities to deal with existing and future operational challenges.

The ASR-XM sets the standard for performance, delivering reliable and accurate results that you can trust. RTX is the only NCSR manufacturer with radars that are International Civil Aviation Organization (ICAO), Eurocontrol and FAA National Airspace System (NAS) compliant.

Collins Aerospace
An RTX Business

Key features

ICAO, Eurocontrol, FAA NAS compliant

Next-generation receiver/processor

- Concurrent multi-beam processing
- High-resolution moving target detection (MTD)
- Plot extraction and integrated tracker
- 3D target height estimation
- Radar cross-section estimation
- Next-generation wind farm mitigation
- Advanced weather processing
- Anomalous propagation mitigation
- Interference mitigation

Next-generation solid-state transmitter

- Gallium nitride (GaN) technology
- Soft-fail architecture
- Hot-swappable modules
- Narrow-spectrum emissions
- Increased reliability and efficiency

Sensor correlator and data distribution

Integrated site control and monitoring

Cyber resilience

Increased efficiency (up to 35%)

40% reduction in equipment size

High reliability – improved mean time between failure (MTBF and MTBCF)

Reduced life-cycle costs

Next generation ATC NCSR: ASR-XM

Learn more at
collinsaerospace.com

Collins Aerospace
Four Coliseum Centre
2730 West Tyvola Road
Charlotte, NC 28217
USA

Contact
airtrafficsolutions@collins.com

Connect with us

RTX.com

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