

GROUND CONTROLLED APPROACH RADAR (GCA-2020)

Military Air Traffic Control Radar

When disaster strikes or conflict arises, precise air traffic control must be available to guarantee mission success.

L3Harris' GCA-2020 radar provides accurate terminal approach and precision landing capabilities in a single air traffic system. The GCA product line is built for mobility and is rapidly deployable for air traffic services during natural disasters or in areas of conflict. With its compact design, the system can provide air traffic control capabilities even in extreme environments and low-visibility conditions.

With over 75 years of mobile radar-based air traffic control, L3Harris is the world leader in developing technology and concepts of operations for GCA radar systems. L3Harris is a global leader in deploying standalone and net-centric, tactical air traffic management solutions that contribute to mission success in complex and changing operational environments.

RAPID DEPLOYMENT

The L3Harris GCA-2020 system deploys quickly in challenging, rapidly evolving conditions to ensure mission success.

PROVEN

L3Harris' fielded solution provides pilots and air traffic controllers safe control of airspace and landings in the most severe weather conditions.

MISSION TESTED

The L3Harris system is field proven for survivability in harsh environments and ease of operation and maintenance.



Tactical Air Traffic Management

BENEFITS

- > Provides 3-in-1 capability for simultaneous airport surveillance radar (ASR), secondary surveillance radar (SSR) and precision approach radar (PAR)
- > Deploys rapidly with compact system for airspace management
- > Delivers safe and accurate air traffic control monitoring and precision landing
- > Allows tracking of aircraft in extreme environments and low-visibility conditions
- > Transports via one C-130H aircraft for expeditionary deployment and full operations with two C-130H aircraft



Photo credit: Master Sgt. Kevin J. Gruenwald

GCA-2020

The GCA-2020 provides a unique configuration that allows for both approach and landing control. In its transportable configuration, radar can be powered by electric generators without the need for base power. The system is also available in a fixed configuration.

TECHNICAL

- > Active electronically scanned array (AESA) technology
- > Solid-state gallium arsenide transmit/receive modules
- > Multiple waveforms and moving target detector (MTD) processing
- > Modular, open system architecture
- > Graceful degradation
- > Extensive built-in-test (BIT) capabilities

GCA-2020 SPECIFICATIONS	
ASR performance	Azimuth: 360°, Elevation: 0° - 20°, Altitude: 0 - 8,000 feet
ASR range	30 nmi in clear mode, 19 nmi in rain mode
ASR updated period	<5 seconds
SSR coverage	Azimuth: 360°
SSR range	100 nmi
SSR updated period	4 seconds
PAR performance	Fully compliant to ICAO Annex 10, Volume 1, Section 3.2

PAR-2020 SPECIFICATIONS	
Coverage	Azimuth: 30°, Elevation: -1° - +7°
Range	20 nmi in clear mode, 15 nmi in rain mode
Updated period	<1 seconds
Target speed	40 to 240 knots

FEATURES

- > AESA technology using transmit/receive modules providing graceful degradation and high availability
- > Advanced pulse-doppler waveforms for operation in challenging environments
- > Supports multiple operator display positions for flexibility of operation
- > Exportable ASTERIX or CD-2 for ease of integration into the system of systems (SoS)
- > Display depicts three levels of weather intensity for safe aircraft vectoring
- > Available as transportable or fixed-site radar configurations
- > Antenna self-calibration
- > Fully compliant to ICAO Annex 10, Vol. 1, Sections 3.2 & 3.2.4

GCA-2020

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Nonexport-controlled Information

L3Harris Technologies is an agile global aerospace and defense technology innovator, delivering end-to-end solutions that meet customers' mission-critical needs. The company provides advanced defense and commercial technologies across air, land, sea, space and cyber domains.



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