



Guardrail Common Sensor (GRCS)

Guardrail Common Sensor (GRCS) is an enduring Special Electronic Mission Aircraft that has been providing critical Aerial Intelligence, Surveillance and Reconnaissance (AISR) capability for over 45 years. Guardrail was originally built as a Cold War system to provide indications and warnings against adversaries in both the European and Pacific Theaters of Operation. The Guardrail system has been modernized since inception to maintain relevancy and to enable continued prosecution of emerging threats within the changing battlespace. GRCS is the Army's current integrated Signals Intelligence (SIGINT) platform that provides near real-time targeting information to tactical commanders and supports full spectrum operations. GRCS is hosted on a fixed wing aircraft (King Air B200), designated RC-12X, and is the Army's premiere airborne SIGINT-collection and precision targeting location system. The GRCS fleet is comprised of 14 mission aircraft supporting multiple Combatant Commands and five training platforms. The GRCS mission aircraft's Economic Useful Life is 2034.

The GRCS capability produces high accuracy Communications Intelligence (COMINT) and Electronics Intelligence (ELINT) of common and modern signals of interest for detection, identification and geolocation of known threats. The Distributed Common Ground System – Army (DCGS-A) Operational Ground Station (OGS) Processing, Exploitation and Dissemination (PED) capabilities allow for real-time signal exploitation and reporting, ensuring information dominance to commanders.

The GRCS SIGINT capabilities enable the exploitation of common and modern signals with precision accuracy. Ground processing software and hardware are part of the Army Tactical SIGINT Baseline (TSB) and are interoperable with DCGS-A OGS and Service Center locations, which reduces the forward deployed footprint significantly. The Warfighter will benefit from planned improvements through Guardrail modernization efforts, including near-term technical refresh efforts for the ELINT and COMINT subsystems utilizing software defined open architecture as well as cockpit avionics upgrades. GRCS is the only AISR platform in the Army's inventory with an ELINT capability that is currently certified for precision long-range fires support.



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