Airborne Reconnaissance Low (ARL)

INVESTMENT COMPONENT

- **Modernization**
- Recapitalization
- Maintenance

MISSION

Provides tactical commanders with a day/night, near all-weather, near real-time airborne communications intelligence/imagery intelligence (COMINT/IMINT) collection and designated area surveillance system.

DESCRIPTION

Airborne Reconnaissance Low (ARL) is a self-deploying, multisensor, day/night, all-weather reconnaissance, intelligence system. It consists of a modified DeHavilland DHC-7 fixed-wing aircraft equipped with COMINT/IMINT and Ground Moving Target Indicator/Synthetic Aperture Radar (GMTI/SAR), and electro-optical (EO)/infrared (IR) full-motion video capability. The payloads are controlled and operated via on-board open-architecture, multifunction workstations. Intelligence collected on the ARL can be analyzed, recorded, and disseminated on the aircraft workstations in real time and stored on board for post-mission processing. During multi-aircraft missions, data can be shared between cooperating aircraft via ultra high frequency air-to-air data links allowing multiplatform COMINT geolocation operations. The ARL system includes a variety of communications subsystems to support near-real-time dissemination of intelligence and dynamic retasking of the aircraft. ARL provides real-time down-link of MTI data to the Common Ground Station (CGS) at the Brigade Combat Team through echelon-above-corps level. Eight aircraft are configured as ARL–Multifunction (ARL-M), equipped with a combination of IMINT, COMINT, and SAR/MTI payload and demonstrated hyperspectral imager applications and multi-intelligence (multi-INT) data fusion capabilities. Four mission workstations are on board the aircraft and are remote-operator capable. The Intelligence and Security Command (INSCOM) operates all ARL systems and currently supports Southern Command (SOUTHCOM) with one to four ARL-M aircraft, United States Forces Korea (USFK) with three ARL-M aircraft, and U.S. Central Command (CENTCOM) with one aircraft. Future sensor enhancements are focused on upgrades to the COMINT, IMINT, and radar payloads to support emerging threats.

Capabilities include:

- **Endurance/ceiling:** 8 hours/20,000 feet
- **Speed/gross weight:** 231 knots/47,000 pounds
- **Range with max payload:** greater than 1,400 nautical miles
- **Mission completion rate:** greater than 90 percent

ARL will continue to support current operations until a future system is fielded.

SYSTEM INTERDEPENDENCIES

None

PROGRAM STATUS

- **2QFY09:** Phoenix Eye upgrade on ARL-M1
- **2QFY10:** Convert ARL C2 into ARL-M7
- **3QFY10:** Convert ARL C1 into ARL-M8

PROJECTED ACTIVITIES

- **FY11:** Continue imagery, radar, COMINT, system interoperability, and workstation architecture upgrades

ACQUISITION PHASE

Technology Development | Engineering & Manufacturing Development | **Production & Deployment** | Operations & Support

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FOREIGN MILITARY SALES
None

CONTRACTORS
Sierra Nevada Corp. (Hagerstown, MD)
Aircraft Survivability:
Litton Advanced Systems
(Gaithersburg, MD)
COMINT Subsystem:
BAE Systems (Manchester, NH)
EO/IR Subsystem:
WESCAM (Hamilton, Ontario, Canada)
Engineering Support:
CACI (Berryville, VA)
Radar Subsystem:
Lockheed Martin (Phoenix, AZ)