Airborne Reconnaissance Low (ARL)

INVESTMENT COMPONENT

- **Modernization**
- Recapitalization
- Maintenance

MISSION

Provides tactical commanders with day/night, near-all-weather, 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, Ground Moving Target Indicator/Synthetic Aperture Radar (GMTI/SAR), and electro-optical (EO)/infrared (IR) full-motion video capability. Four on-board operators control the payloads via on-board open-architecture, multifunction workstations and communication directly with ground units. 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

- **1QFY12:** Installation of Phoenix Eye Radar on ARL
- **3QFY12:** Completed workstation and beyond-line-of-sight (BLOS) upgrades on ARL system M8

PROJECTED ACTIVITIES

- **3QFY13:** Workstation and BLOS upgrades on ARL system M7
- **FY13-FY14:** Continue imagery, radar, COMINT, system interoperability, and workstation architecture upgrades

ACQUISITION PHASE

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

Airborne Reconnaissance Low (ARL)

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)