

ADVANCED STAND-OFF TACTICAL RECONNAISSANCE

Stand-off and vertical imaging capabilities
and air-to-ground communication over
constrained bandwidth systems



HERITAGE

Collins Aerospace is a pioneer in modern reconnaissance, beginning more than 50 years ago with the design and manufacture of cameras for the world's first photo-reconnaissance satellite – CORONA.

This legacy continues today within airborne reconnaissance. Collins sensors have supported strategic intelligence collection on the U-2 platform from its inception to today. Our SYERS-2 multispectral sensor is the US Air Force's most advanced real-time LOROP sensor.

Collins' DB-110 dual-band airborne reconnaissance sensor, a derivative of the SYERS system, combines visible and infrared imaging capabilities in a compact, lightweight design. This system has proven its performance day and night operationally and in demonstrations worldwide on both manned and unmanned platforms.



Tactical jet



Maritime patrol aircraft



Unmanned aerial vehicle

RECONNAISSANCE POD

Collins Aerospace offers a SEEK EAGLE certified pod for F-16 and other fast jet applications. Collins' pod offers advantages over competing systems by relying on dual environmental conditioning systems, to provide robust ground cooling and multi-altitude operations. Full-size fore and aft data-link antennae enable maximum data-link range throughout a full 360° azimuth. We also offer a smaller, lighter weight pod designed for long-endurance UAV operations. Housing the same DB-110 reconnaissance system, this pod provides stand off and vertical imaging capabilities and air-to-ground communication over constrained bandwidth systems.

DB-110 AIRBORNE SENSOR

The DB-110 is unique in its design as it offers three different fields of view, enabling the following missions:

- Long-range standoff
- Medium-range operations
- Low-altitude, direct overflight

Mission planning:

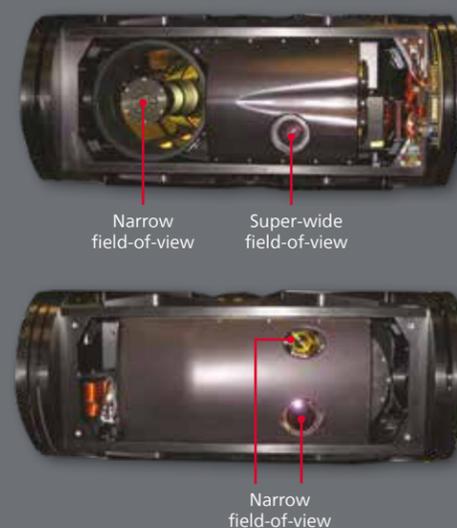
- Pre-planned
- Dynamic, in-air retasking

Multiple operational modes:

- Wide-area search
- Line search
- Pin-point target
- Multi-aspect/stereo
- Target of Opportunity (TOO)

Communication:

- Continuous real-time data link
- Store on board/transmit
- In-cockpit imagery/status display



VISIBLE IMAGERY

Simultaneous E-O imagery at 72 nautical mile slant range



INFRARED IMAGERY

Simultaneous E-O imagery at 72 nautical mile slant range

Data-link capability

As the aircraft comes into line-of-sight range of the receiving equipment, transmission of acquired imagery to the ground receiving terminal is able to take place.

If the aircraft is out of range, the collected imagery is stored on board, using a highspeed solid-state recorder – transmission takes place once the aircraft reaches line-of-sight.

The flexibility of the datalink receiving equipment and associated ground exploitation equipment permits deployment at fixed or mobile facilities.

Image exploitation systems

Collins Aerospace offers a complete range of image exploitation options to complement the airborne system. The exploitation system is configured to the user's requirements, and the costs minimized through the implementation of COTS hardware and software. The human interface and systems controls are designed to be highly intuitive, thus minimizing image analyst training requirements. Image Exploitation Systems can be supplied for fixed locations and in mobile configurations.

These systems are fully interoperable with a wide range of NATO, US and ISO standards including NITF 2.1 and STANAG versions 7023, 7024, 7085 and 4545.

In summary

In addition to high performance airborne sensors/pods, Collins Aerospace offers a full turnkey capability, including aircraft integration, mission planning, real-time communications, image processing and exploitation, training and long-term logistical support.

The DB-110 Airborne Reconnaissance System enables the commander to move towards a more persistent ISR capability through increased on-station time, real-time image exploitation and flexible dynamic retasking.



To learn more, go

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