MS-110 MULTISPECTRAL AIRBORNE RECONNAISSANCE SYSTEM

THE NEXT GENERATION OF AIRBORNE RECONNAISSANCE

The MS-110 represents the next generation of the widely deployed DB-110 Dual Band Airborne Reconnaissance System providing day and night-time, wide area, long-range imagery coverage.

The MS-110 provides improved intelligence advantage over legacy systems. It does this by:

- Multispectral imaging in multiple visual and IR bands
- Common ground coverage of all bands
- Improved area coverage at long standoff ranges
- Improved image quality (NIIRS)
- Imagery exploitation software designed to rapidly leverage the unique features of MS-110 imagery

- Shortening sensor to shooter timelines through rapid exploitation of multispectral imagery via high speed near-real-time datalink capability

For existing DB-110 users, the MS-110 integrates seamlessly into the existing system CONOPS and architecture, employing common ground support equipment.
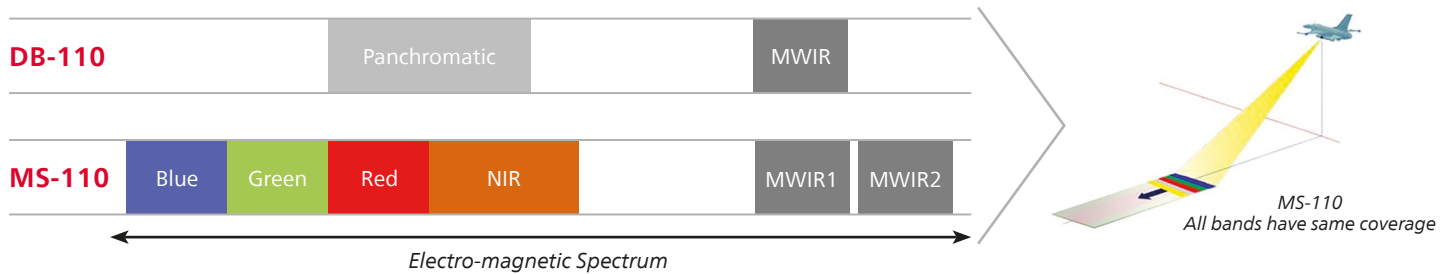
The sensor is compatible with carriage on advanced fighters (US F-16, F-15 and F-/A18 as well as Gripen and other fast jet platforms), C-130s, MPA class aircraft, ISR business jets and MALE UAVs such as MQ-9.
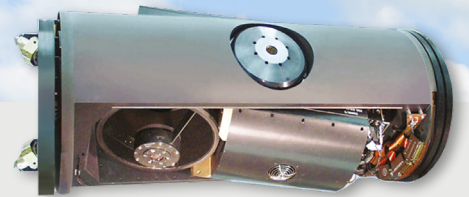
KEY FEATURES & BENEFITS

- Long range passive target detection and identification
- Capable of detecting targets in clutter and camouflage
- Capable of operations in medium and high threat environments
- Real-time data link for actionable intelligence
- Maritime and littoral surveillance
- Support Combat SAR and counter narcotics operations
- Support humanitarian assistance planning and activities

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Spectral comparison between DB-110 and MS-110

DB-110		Panchromatic			MWIR	

MS-110	Blue	Green	Red	NIR		MWIR1	MWIR2

Electro-magnetic Spectrum
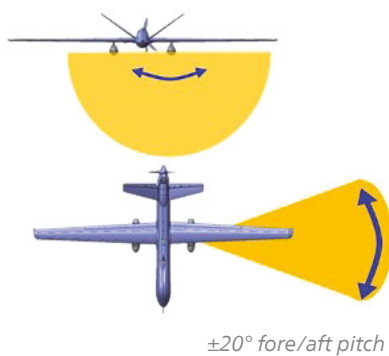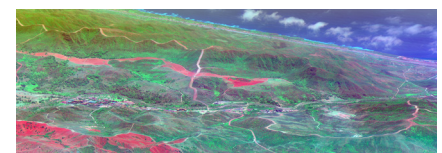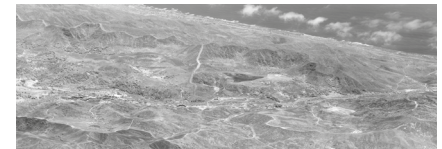
*MS-110
All bands have same coverage*

The multispectral advantage

The MS-110 Airborne Reconnaissance System is an important advancement over the 3rd generation DB-110 providing new multi-spectral detection capabilities, improved image quality, and increased coverage in a SWaP configuration that is compatible with fast jets, ISR aircraft and UAVs such as the MQ-9 Reaper.

Multispectral imagery is defined as sensor data collected simultaneously from three or more spectral regions or bands. The same scene is imaged in all the spectral bands, with each spectral image assigned a display color and overlaid to form a multi-spectral composite image.

The MS-110 enables the end-user to see 'true color' and to also discriminate between subtle features of a target that a traditional gray scale image cannot. Most importantly, by combining select three bands into certain composite views analysts gain unique knowledge of individual scenes enabling important military related analytical applications. As part of an end-to-end ISR system, the Collins Aerospace SCI-Toolset suite of imagery exploitation software tools is specially configured to gain maximum benefit from the MS-110's unique capabilities.

The simultaneous multi-band imagery collection provided by the MS-110 is a battlefield discriminator that can facilitate enhanced target discrimination and change detection while defeating enemy camouflage, concealment & deception (CC&D), and providing detailed maritime/littoral surveillance.

Near IR

Short-wave IR

Mid-wave IR

MSI color composite

±20° fore/aft pitch

MS-110 SENSOR HEAD CHARACTERISTICS

Sensor Type	Line scanning TDI; 6-channels
Collection Modes	Spot, Wide Area, Persistent Imaging
Field of Regard	Roll ±90°/Pitch ±20° max
Power	340-watts
Length	54.5" (±20° pitch)
Diameter	26.2" (±20° pitch)
Sensor Head Weight	346-lbs

Color composite image with chip out
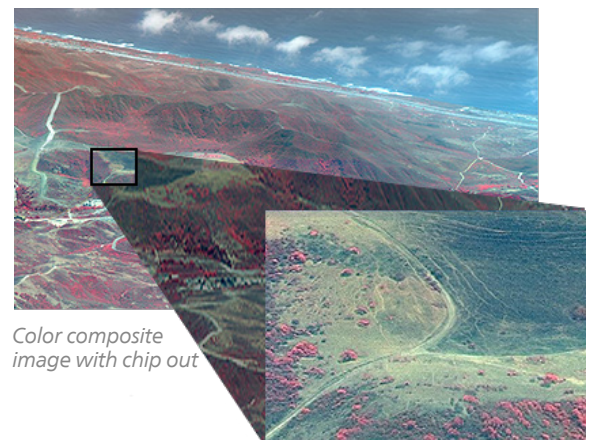
Specifications subject to change without notice.

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