

MS-110 fast jet reconnaissance system



The next generation of airborne reconnaissance

BENEFITS

- Long-range, wide-area, passive target detection and identification.
- Target-detecting capability in clutter and camouflage.
- Capable of operations in medium and high-threat environments.
- Real-time data link for actionable intelligence.
- Maritime and littoral surveillance.
- Combat SAR and counter narcotics operations capable.
- Supports humanitarian assistance planning and activities.
- SCI-Edge automatic target classification/machine learning feature enables rapid analysis and decision-making.

Improve your intelligence advantage

The Raytheon MS-110 represents the next generation of the widely deployed DB-110 dual-band airborne reconnaissance system, providing wide-area, long-range imagery coverage – day or night.

Our MS-110 system provides improved intelligence advantages over legacy systems by offering:

- Combat survivability due to long-range/stand-off capability – significantly longer than targeting pod coverage.
- A shortened kill chain enabled by on-demand data link and rapid target classification.
- 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.
- Shortened sensor-to-shooter timelines through rapid exploitation of multispectral imagery via high-speed, near-real-time data link capability.

MS-110 integrates seamlessly into the existing DB-110 system CONOPS and architecture, employing common ground support equipment.

The sensor is compatible with carriage on advanced fighters (U.S. F-16, F-15 and F/A-18), as well as Gripen and other fast jet platforms, C-130s, MPA class aircraft, ISR business jets and MALE UAVs, such as the MQ-9. The MS-110's architecture is also designed to support edge processing for multidomain processing.

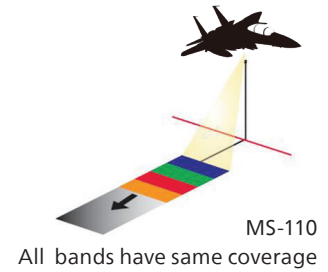
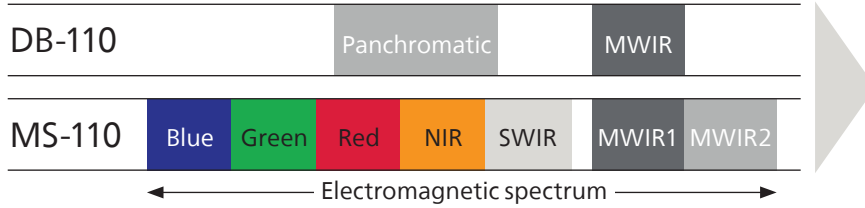
The multispectral advantage

The MS-110 airborne reconnaissance system is an important advancement over the third-generation DB-110, providing new multispectral 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 multispectral composite image.

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Spectral comparison between DB-110 and MS-110



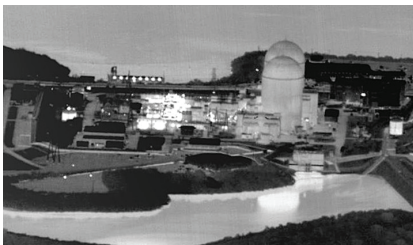
The MS-110 enables the end-user to see true color and to also discriminate between the subtle features of a target that a traditional grayscale image cannot.

Most important, 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 Raytheon SCIToolset suite of imagery exploitation software tools is specially configured to gain maximum benefit from the MS-110's unique capabilities.



The simultaneous multiband 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 and deception (CC&D) and providing detailed maritime and littoral surveillance.



MS-110 sensor head characteristics

Sensor type	Line-scanning TDI; seven channels
Collection mode	Spot, wide-area, persistent imaging
Field of regard	Roll $\pm 90^\circ$ /Pitch $\pm 20^\circ$ maximum
Power	340 W
Length	51.25" ($\pm 20^\circ$ pitch)
Diameter	26.2" ($\pm 20^\circ$ pitch)
Sensor head weight	346 lbs

Contact

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