DEFENSE & SECURITY

WESCAM MX™ - 15
FULLY DIGITAL
HIGH DEFINITION

The WESCAM MX-15 is an advanced, industry-leading stabilized multi-sensor, multi-spectral imaging system that is renowned for high performance, operator ease-of-use, and reliability.

It's ideal for a wide range of missions, including medium altitude covert intelligence, surveillance, and reconnaissance, armed reconnaissance, search and rescue.

The system provides imagers for optimal performance in a wide range of conditions; bright sunlight, overcast/dusk, smoke, and complete darkness. That is supported by a suite of advanced image processing algorithms for noise reduction, sharpening, and local area contrast enhancement that aid feature recognition.

Superior stabilization is the key to achieving the maximum target detection, recognition, and identification range performance from the imagers. The WESCAM MX-15 achieves this with a hybrid active and passive jitter suppression system.

This proven architecture stabilizes all devices on the optical bench equally. In addition, stable and accurate target geolocation ensures that the crosshairs stay on a stationary target, regardless of changes to aircraft position, attitude, and heading.

This significantly reduces the operator burden in keeping eyes on target.

Advanced processing features such as object tracking, image blending, and moving target indication further serve to automate the search and tracking process, allowing the operator to focus on the target versus the equipment.

To ensure that the WESCAM MX-15 is fit for the mission, it is fully qualified to MIL-STD-810 for environmental withstanding, MILSTD-461 for electromagnetic compatibility, and MIL-STD-704 for power quality

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FEATURES AND BENEFITS

> Multi-Sensor Imaging/Lasing Payload Options

> High-Performance Gimbal

> Advanced Image Processing

> Interface Flexibility

> Ruggedness

> Simplified Aircraft Integration

VIDEO INTERFACES
Built-in video switch matrix
6 independent HD-SDI output channels available
5 analog video (NTSC or PAL) output channels available

DATA INTERFACES
Interface Types: RS-232/422, Ethernet, MIL-STD-1553B, ARINC 429
Functional Interfaces: Aircraft GPS/INS, Remote Control, Moving Map, Microwave / Data Link, Searchlight, Radar, Metadata / Status
HMI Options: Moving Map, Mission Console
Compatible with WESCAM Microwave Communications Equipment.

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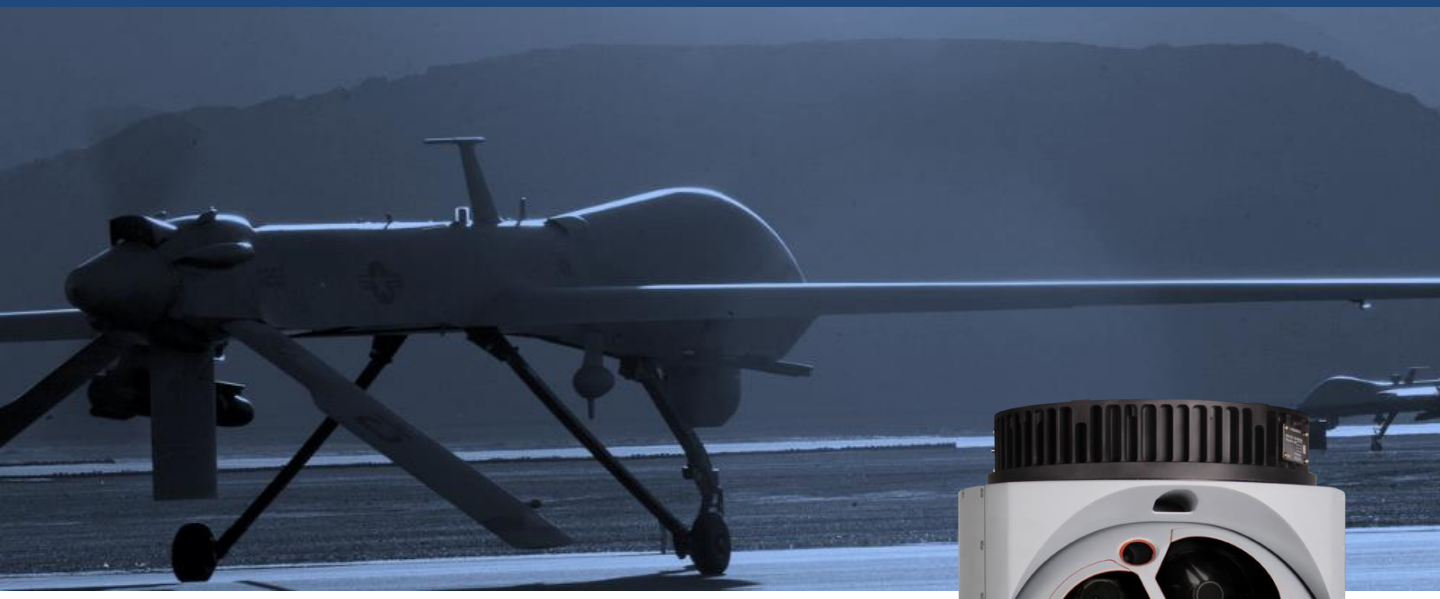
PAYLOAD SPECIFICATIONS	
Sensor Options for Thermal Imager (Select #1a or #1b)	
Sensor #1a - Thermal Imager:	
Type:	MWIR, cooled
Resolution:	640 x 512 Pixels
Fields-of-View:	26.7° to 0.54°
Sensor #1b - HD Thermal Imager:	
Type:	MWIR, cooled
Resolution:	1280 x 1024 Pixels
Fields-of-View:	35.5° to 1.2°
Sensor #2 - HD Daylight Zoom:	
Type:	Color
Resolution:	1920 x 1080 Pixels
Fields-of-View:	31.2° to 1.2° - 720p, 31.2° to 1.8° - 1080p
Sensor #3 - Low-Light Zoom:	
Fields-of-View:	40.8° to 2.4°
Sensor #4 - HD Daylight Spotter:	
Type:	Color
Resolution:	1920 x 1080 Pixels
Fields-of-View:	0.72° to 0.29° - 720p, 1.1° to 0.43° - 1080p
Sensor Options for MX-Day/Night Spotter (Select #5a or #5b)	
Sensor #5a - HD Low Light Spotter: (Used with Sensor #4)	
Resolution:	1920 x 1080 Pixels
Fields-of-View:	0.72° to 0.29° - 720p, 1.1° to 0.43° - 1080p
Sensor #5b - HD or SD SWIR Spotter: (Used with Sensor #4)	
Sensor #6 - Laser Illuminator (LI)[1]:	
Wavelength:	860nm (near IR)
Beam Power:	700mW
Beam Divergence:	Wide, Narrow or Ultra Narrow
Sensor #7 - Secondary Laser Illuminator (LI)[1]:	
Wavelength:	860nm (near IR)
Beam Power:	150mW
Beam Divergence:	Narrow
Sensor #8 - Laser Rangefinder[2]	
Wavelength:	1.54µm
Range:	20km
Notes:	All FOVs are for digital outputs: Consult factory for FOVs for analog outputs up to 4x Ezoom available.

TURRET SPECIFICATIONS	
Stabilization and Steering	(4) Axis + (6) DoF Isolator Azimuth Range: Continuous 360° Elevation Range: +90° to -120°

SYSTEM SPECIFICATIONS	
WESCAM MX-15 Turret	<95 lbs / 43.2 Kg (all sensors), 15.5”(D) x 18.95”(H), 393.7mm (D) x 481.33mm (H)
Power	MIL-STD-704F, 280W (Avg.)



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A Multi-Sensor, Multi-Spectral Imaging System in a Single Line Replaceable Unit (LRU)

The WESCAM MX-15 is ideal for medium-altitude, covert ISR, SAR missions and homeland security.

MULTI-SENSOR IMAGING/LASING PAYLOAD OPTIONS

> Supports seven payload items simultaneously
> HD thermal, HD daylight and HD low-light and HD SWIR cameras provide 24/7 imaging
> Continuous wide-angle zoom
> High-magnification step-zoom spotter
> High-sensitivity color low-light imaging
> Eye-safe laser rangefinder[1]
> Multiple laser illuminator[2] options

HIGH-PERFORMANCE GIMBAL

> 4-axis stabilized turret with internal passive isolator for excellent stabilization performance
> Sharp optics and superior stabilization performance results in industry leading target detection, recognition and identification range performance in the 15” class
> Inertial Measurement Unit (IMU) mounted to optical bench for high target location accuracy
> Inertial Navigation System (INS) auto-align to aircraft
> Real-time image enhancement on all sensors
- High-performance haze penetration
- Improved feature recognition and ID
- 2x, 4x Ezoom
- Advanced video tracker
- Imaging blending
- Embedded Moving Target Indication
- Pseudo-color IR

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WESCAM ADVANCED VIDEO ENGINE (WAVE)

> A high-performing embedded computing engine engineered to support advanced image-processing capabilities

> WAVE architecture includes a state-of- the-art graphics processing unit (GPU) - enabling future advancements in image processing & surveillance automation

INTERFACE FLEXIBILITY

> Built-in video switch matrix provides multiple HD-SDI and analog video outputs
> 720p or 1080p HD video
> Wide range of data ports: RS-232/422, Ethernet, MIL-STD-1553B, ARINC429
> All standard WESCAM MX-Series functional interfaces

RUGGEDNESS

> Rugged aerospace grade aluminum structure
> MilSpec environmental, EMC, and power quality qualification
> Built-in vibration isolator protects internal payload components
> Rigorous environmental stress screening (ESS)
> Designed to minimize maintenance requirements and simplify repair

SIMPLIFIED AIRCRAFT INTEGRATION

> Electronics unit inside the turret
> Built-in vibration isolation
> Built-in GPS receiver
> <19” turret height for better ground clearance
> Compatible with standard quick disconnect mounts
> Side mounted connectors for recessed installations
> No calibration required for LRU swapout

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