

WESCAM's MX-25. Fully Digital. High Definition.

Ultra Long-Range Multi-Sensor, Multi-Spectral Imaging
and Targeting Systems

Ideal for: High-altitude, Long-endurance Intelligence, Surveillance
and Reconnaissance, and Target Designation missions (MX-25D)

Airborne Installations: Fixed-Wing, UAV, Aerostat



FEATURES & BENEFITS MX-25:

True HD Cameras

- Superior imaging resolution from EO and IR cameras
- 2 mega-pixel EO zoom and spotter cameras
- True HD Digital Imaging
 - Fully digital – easily converts to analog to ease legacy integrations
 - No image degradation due to compression

Advanced Image Processing

Real-time image enhancement for EO Day, EO Night & IR

- Increases stand-off range
- Improves feature detection & recognition
- High performance haze penetration

Solid-State IMU-Inside technology - 5-axis active stabilization

- All sensors share highest level of stabilization
- No calibration required for LRU swapout
- Auto align to aircraft
- Nav grade IMU
 - Enhanced target location accuracy

Short Wave IR Imaging

- Enhanced haze penetration & target contrast
- Laser spot imaging

Multi-Format

- Meets the needs of new & legacy platforms through multiple digital & analog output formats
- Concurrent digital & analog outputs

Multiple Laser Payloads

- Long Range Target Illumination, Pointing and Range-Finding

Laser Target Designator

- Compact, efficient and reliable diode-pumped laser
- Provides exceptional range through a small divergence high quality beam
- IMU Inside technology & exceptional EO/IR sensor range achieves unparalleled designating ranges
- Designator electronics package is incorporated into the turret payload
- Laser spot tracker detects a designator spot of a given code in the system's field of view, and slews the turret's line of sight to track it

MX-GEO Gen.3 Software Suite

- Achieves highest target location accuracy
- AVGT marries Video and GEO-Tracking to provide robust target tracking
- Discrete motion scanning for wide-area terrain visualization

MX-Series Commonality

The extensive interfacing capability of the MX-25 Family supports a wide range of installations spanning simple, single operator configurations through to complex, multi-operational systems. The software commonality and powerful built-in functionality within the MX-Series product family provides:

- Common operator interfaces and LRU's
 - ease & familiarity of use
 - simplified interchangeability
 - efficiencies in support & technology enhancements

Product Enhancements:

- Dual channel EO wide with EMCCD Lowlight
- Laser Spot Tracker (MX-25D)

System Offerings:

MX-25

Base offering with
1080p HD resolution

MX-25D

1080p HD resolution
with Designating capability



PAYLOAD SPECIFICATIONS

MX-25 Select up to 7 Sensors

Sensor #1 - Thermal Imager:

Type: 3-5µm staring array
Resolution: 1280 x 1080
Fields of View: 21.7°, 4.4°, 0.88°, 0.58°

Sensor #2 - Daylight Continuous Zoom:

Type: 5 Megapixel Color HD
Fields of View: 36.3° to 1.1° - 720p
 27.6° to 1.6° - 1080p

Sensor #3 - Lowlight Continuous Zoom: (Requires Sensor #2)

Type: Electron Multiplied CCD (Mono)
Fields of View: 40.8° to 2.38°

Sensor #4 - Daylight Spotter:

Type: 2 Megapixel Color HD
Fields of View: 0.92°, 0.46°, 0.29°, 0.17° - 1080p
 0.61°, 0.31°, 0.19°, 0.11° - 720p

Sensor #5 - Lowlight Spotter: (Requires Sensor #4)

Camera Type: Electron-Multiplied CCD
Fields of View: 0.73°, 0.37°, 0.23°, 0.14°

Sensor #6 - Laser Rangefinder (LRF)¹:

Laser Type: Erbium glass (ANSI Class I), Eyesafe
Wavelength: 1540nm
Pulse Rate: 12 pulses/min.
Range: 30km
Range Resolution: ±5m

Sensor #7 - Laser Illuminator (LI)²:

Laser Type: Diode - (ANSI Class 4)
Wavelength: 860nm
Modes: Continuous or Pulsed
Beam Divergence: Narrow or Very Narrow

Notes:

- All FOV's are for Digital outputs. Consult factory for FOV's for Analog Outputs.

PAYLOAD SPECIFICATIONS

MX-25D Select up to 9 Sensors

Sensor #1 - Thermal Imager:

Type: 3-5µm staring array
Resolution: 1280 x 1080
Fields of View: 21.7°, 4.4°, 0.88°, 0.58°

Sensor #2 - Daylight Continuous Zoom:

Type: 5 Megapixel Color HD
Fields of View: 36.3° to 1.1° - 720p
 27.6° to 1.6° - 1080p

Sensor #3 - Lowlight Continuous Zoom: (Requires Sensor #2)

Type: Electron Multiplied CCD (Mono)
Fields of View: 40.8° to 2.38°

Sensor #4 - Daylight Spotter:

Type: 2 Megapixel Color HD
Fields of View: 0.92°, 0.46°, 0.29°, 0.17° - 1080p
 0.61°, 0.31°, 0.19°, 0.11° - 720p

Sensor #5 - SWIR Spotter (Requires Sensor #4)

Sensor #6/7 - Laser Designator/Rangefinder:

Laser Type: Diode Pumped - Nd:YAG/OPO (Class 4)
Wavelength: 1064nm/1570nm Selectable
Code Compatibility: US & NATO Laser Guided Munition
Rangefinding: Up to 20km
Range Resolution: ±2m

Sensor #8 - Laser Illuminator (LI)²:

Laser Type: Diode - (ANSI Class 4)
Wavelength: 860nm
Modes: Continuous or Pulsed
Beam Divergence: Narrow or Very Narrow

Sensor #9 - Laser Spot Tracker

Type: Quadrant Detector
Wavelength: 1064nm
Code Compatibility: US & NATO Laser Guided Munitions

Notes:

- All FOV's are for Digital outputs. Consult factory for FOV's for Analog Outputs.

SYSTEM SPECIFICATIONS

MX-25 & MX-25D

MX-25 Turrets

MX-25: ≤ 220lbs (all sensors), 25.7"(D) x 30.2"(H)
MX-25D: ≤ 250lbs (all sensors), 25.7"(D) x 30.2"(H)

Power

MIL-STD-704E, 320W (Avg.); 1000W (Max.)

Digital Master Control Unit

<20 lb
 7.5"(W) x 12.13"(H) x 16.7"(D)
 50W (Avg.); 100W (Max.)
 Autotracker

Hand Controller Unit (HCU)

2 lbs, 4.25"(W) x 8.97"(L) x 3"(D)
 3.5W (Avg.); 5W (Max.)

Cables

Consult factory for available variants

Environmental

MIL-STD-461, MIL-STD-810

TURRET SPECIFICATIONS

Line-of-sight Stabilization

Typically <3 μradians. Consult factory for performance under specific vibration conditions

Stabilization and Steering

(3) Axis Inner (pitch/yaw/roll)
 (2) Axis Outer (azimuth/elevation)

Vibration Isolation

(6) Axis Passive (x/y/z/pitch/roll/yaw)

AZ/EL Slew Rate: 40 degrees / sec maximum

LOS Pan Range: Continuous 360°

LOS Tilt Range: +90° to -125°

STANDARD INTERFACES

5 Simultaneous EO/IR Digital and Analog Video channels; 1080p configurable for 720p, 1080i, 525i & 625i digital options
 MX-Hand Controller

OPTIONS AVAILABLE

MCU Interfaces:

Moving Map Interface
 Serial Remote Control
 Radar Interface
 MIL STD 1553B
 GPS Time Sync
 GPS Data
 INS Data
 Searchlight
 Microwave
 Metadata

Operator Interfaces:

Operator Control Unit & Joystick
 Moving Map system
 GEO-Pointing

Microwave Equipment:

MX-POD, Digital Transmitter
 Diversity Rx

Equipment described herein may require Canadian and/or U.S. Government authorization for export purposes.
 Diversion contrary to Canadian and/or U.S. law is prohibited.