



## WESCAM's MX-20 and MX-20D.

### Fully Digital. High Definition.

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

#### MX-20 Ideal for:

High-Altitude; Long-Range MPA and Persistent Surveillance

#### MX-20 Airborne Installations:

Fixed-Wing, Rotary-Wing, UAV, Aerostat

#### MX-20D Ideal for:

High-Altitude; Covert Intelligence, Surveillance & Reconnaissance, Armed Reconnaissance, CSAR, Target Designation

#### MX-20D Airborne Installations:

Fixed-Wing, Rotary-Wing, Aerostat



## FEATURES & BENEFITS: MX-20 and MX-20D

#### Multi-Sensor Imaging/Lasing Payload Options

- Supports up to 8 payload items simultaneously
- HD thermal, HD daylight and HD low-light cameras provide 24/7 imaging
- Continuous wide-angle zoom
- High-magnification step-zoom spotter
- High-sensitivity color low-light imaging
- Compact, efficient, reliable laser target designator
- SWIR camera images designator spot
- Eyesafe laser rangefinder
- Laser illuminator in choice of wide, narrow or ultra narrow divergence
- Laser spot tracker (designator version only)

#### High Performance Gimbal

- 5-axis stabilized turret with internal passive isolator for excellent stabilization performance
- Sharp optics and excellent stabilization performance results in industry leading target detection, recognition and identification range performance in the large turret class
- IMU mounted to optical bench for high target location accuracy
- INS auto-align to aircraft
- Full laser stabilization minimizes spot jitter

#### Advanced Image Processing

- Real-time image enhancement on all sensors
  - High-performance haze penetration
  - Improved feature recognition and ID
  - 2x, 4x Ezoom
  - Advanced video tracker with automatic target detection
  - Imaging blending

#### 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 MX-Series functional interfaces

#### Ruggedness

- MIL spec environmental, EMC, and power quality qualification
- Built-in vibration isolator protects internal payload components and minimizes vibration-induced boresight shifts
- Rigorous environmental stress screening (ESS)
- Designed to minimize maintenance requirements and simplify repair

#### Simplified Aircraft Integration

- Built-in vibration isolation
- GPS receiver built into electronics unit
- No calibration required for LRU swapout

See our products in action on [YouTube](#)

Search:

- MX-20 Product Video
- MX Targeting Family

### New for 2017:

- High sensitivity color cameras
- Advanced Video Tracker (AVT)

### System Offerings: MX-20

Base offering with  
1080p HD Resolution

### MX-20D

1080p HD Resolution  
and Designating capability



## PAYLOAD SPECIFICATIONS

### MX-20 Select up to 7 Sensors

#### Sensor Options for Thermal Imager

##### Sensor #1a - Thermal Imager:

**Type:** 3-5µm staring array  
**Resolution:** 640 x 512  
**Fields-of-View:** 18.2°, 3.7°, 0.73°, 0.24°  
720p & 1080p

or

##### Sensor #1b - HD Thermal Imager:

**Type:** 3-5µm staring array  
**Resolution:** 1280 x 1024  
**Fields-of-View:** 31.5°, 6.4°, 1.3°, 0.86°  
720p & 1080p

##### Sensor #2 - Color Low-Light Continuous Zoom:

**Type:** 2 Megapixel color low-light HD  
**Fields-of-View:** 2.9° to 30.0° - 1080p  
1.9° to 30.0° - 720p

#### Sensor Options for Spotter

##### Sensor #3 - Daylight Spotter:

**Type:** 2 Megapixel Color HD or Mono HD  
**Fields-of-View:** 1.07°, 0.54°, 0.34°, 0.2° - 1080p  
0.72°, 0.36°, 0.23°, 0.13° - 720p

##### Sensor #4a - HD Low-Light Spotter: (Requires Sensor #3)

**Fields-of-View:** Matched to daylight

or

##### Sensor #4b - SWIR Spotter: (Requires Sensor #3)

##### Sensor #5 - Laser Rangefinder (LRF)<sup>1</sup>:

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

##### Sensor #6/7 - Laser Illuminator (LI)<sup>2</sup>:

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

#### Notes:

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

## PAYLOAD SPECIFICATIONS

### MX-20D Select up to 8 Sensors

#### Sensor Options for Thermal Imager

##### Sensor #1a - Thermal Imager:

**Type:** 3-5µm staring array  
**Resolution:** 640 x 512  
**Fields-of-View:** 18.2°, 3.7°, 0.73°, 0.24°  
720p & 1080p

or

##### Sensor #1b - HD Thermal Imager:

**Type:** 3-5µm staring array  
**Resolution:** 1280 x 1024  
**Fields-of-View:** 31.5°, 6.4°, 1.3°, 0.86°  
720p & 1080p

##### Sensor #2 - Color Low-Light Continuous Zoom:

**Type:** 2 Megapixel color low-light HD  
**Fields-of-View:** 2.9° to 30.0° - 1080p  
1.9° to 30.0° - 720p

#### Sensor Options for Spotter

##### Sensor #3 - Daylight Spotter:

**Type:** 2 Megapixel Color HD or Mono HD  
**Fields-of-View:** 1.07°, 0.54°, 0.34°, 0.2° - 1080p  
0.72°, 0.36°, 0.23°, 0.13° - 720p

##### Sensor #4a - HD Low-Light Spotter: (Requires Sensor #3)

**Fields-of-View:** Matched to daylight

or

##### Sensor #4b - SWIR Spotter: (Requires Sensor #3)

##### Sensor #5 - Laser Illuminator (LI)<sup>2</sup>:

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

##### Sensor #6/7 - Laser Designator/Rangefinder: (ANSI Class 4)<sup>3</sup>

**Laser Type:** Diode Pumped Nd:Yag  
**Wavelength:** 1064nm/1570nm Selectable  
**Code Compatibility:** US & NATO Laser Guided Munition  
**Rangefinding:** Up to 20km  
**Range Resolution:** ±2m

##### Sensor #8 - Laser Spot Tracker

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

## PAYLOAD SPECIFICATIONS

### MX-20 & MX-20D

#### MX-20 Turret

**MX-20:** ≤ 200lbs (all sensors), 21.0"(D) x 26.25"(H)  
**MX-20D:** ≤ 210lbs (all sensors), 21.0"(D) x 26.25"(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)

2.2 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-461E, MIL-STD-810F

#### TURRET SPECIFICATIONS:

##### Line-of-sight Stabilization

Typically <4 pradians. 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:** 0-1rad/s

**LOS Pan Range:** Continuous 360°

**LOS Tilt Range:** +90° to -120°

#### 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.



<sup>1</sup> Consult factory for specific environmental and target conditions



WESCAM has a policy of continuous product improvement. Specifications are therefore subject to change without notice.

January 2017

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