

A Multi-Sensor, Multi-Spectral Targeting System

The Sonoma 1205MD™ provides low altitude target designation missions, requiring low weight installation flexibility in fixed wing, rotary wing, and unmanned aircraft.

KEY FEATURES

- Longest EO/IR recognition and identification stand off ranges in its weight class
- Larger aperture optics optimized for resolution
- Continuous zoom color camera and large-format IR FPA with step zoom magnification
- Highest line-of-sight stability, preserving resolution and pointing accuracy in the aircraft flight environment
- At < 55 lbs, the Sonoma 1205MD is half the weight of competitive mid-sized turrets. Allows direct replacement of mid-sized turrets with superior performance.
- IMU Inside™ onboard high-performance Inertial Measurement Unit (IMU)
- Real time, Local Area Contrast Enhancement (LACE) image processing
- Versatile, efficient, dual channel, laser rangefinder/designator
- Performs target acquisition for on-board or remotely fired laser guided weapons such as the HELLFIRE missile
- Powerful, low divergence targeting capability with mission selectable symbology
- Supports all tri-service and NATO qualified laserguided munitions
- Engineered to military environmental and EMI/EMC requirements. Meets MIL-STD-810, MIL-STD-704, and MIL-STD-461 standards.

BENEFITS

- Excellent optics and stability allow the Sonoma 1205MD to deliver range performance superior to competitor's mid-size turrets through class-leading resolution, magnification and stabilization
- MX-GEO technology with IMU-Inside technology that delivers maximum location accuracy facilitating GEO-Pointing, GEO-Location, GEO-Focus, and GEO targeting
- Turret provides coordinates of the image being viewed
- Designed for optimum balance of cost and mission performance
- Precision day/night/adverse weather target acquisition
- Reliable, small divergence diode pumped laser designation designates stationary or moving targets at extended ranges

APPLICATIONS

- Surveillance and target designation day or night on fixed wing, rotary wing, and UAV platforms





PAYLOAD SPECIFICATIONS

SENSOR 1: Thermal Imager

Type: 3rd gen., 3-5 μm InSb staring array

Resolution: 640 x 480 pixels

FOV: 27.60°, 6.0°, 1.1°, 0.55°

SENSOR 2a: Color Daylight with Zoom Lens

Type: 1 CCD color

Resolution: 470 TV Lines

FOV: 2.00° to 27.60° (optical)
0.65° to 2.00° (digital)

SENSOR 2b: LASER ILLUMINATOR:

Laser Type: Erbium glass

Wavelength: 860 nm

Modes: Continuous, Pulsed

Beam Power: Up to 800 mW

SENSOR 3: Designator/Rangefinder

Laser Type: Nd:YAG (ANSI Class 4)

Wavelength: 1.064 μm

Pulse Rate: 10 Hz & 20 Hz

Pulse Width: 11 ns min. (FWHM)

Beam Divergence: 210 μrad max.

Range: 20 km based on environmental and target conditions

LASER ILLUMINATOR:

Laser Type: Erbium glass (ANSI Class 1), Eyesafe

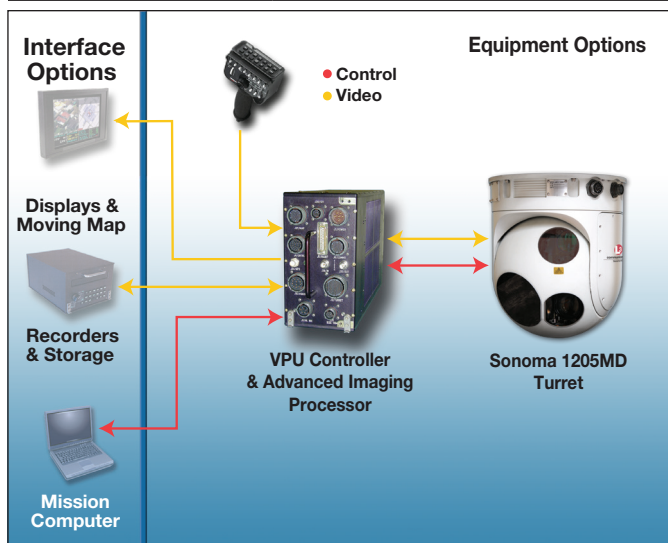
Wavelength: 1.535 μm

Pulse Rate: 60 ppm

Range: 15 km min.

Range Accuracy: ± 5 m

Range Resolution: 2 m



SYSTEM SPECIFICATIONS

TURRET:

- Less than 55 lbs (all sensors), 12.2" (D) x 14.6 (H)
- IMU-Inside, MX-GEO, Modular payload
- Premium Range Performance
- 28 V, 220 W (typical)

STANDARD VIDEO INTERFACE BOX (½ ATR):

- 20 lbs
- 4.9" (W) x 9" (H) x 14" (D)
- 90 W (Avg.), 280 W (Max.)

HAND CONTROLLER:

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

CABLES:

- Mounting and cable adapters allow replacement of legacy mid-sized turrets. Consult factory for available variants

ENVIRONMENTAL:

- MIL-STD-461, MIL-STD-810, RTCA/DO-160

TURRET SPECIFICATIONS

STABILIZATION

- Typically <15 $\mu\text{radians}$ RMS. Consult factory for performance under specific vibration conditions.

STABILIZATION AND STEERING

- (2) Axis Inner (pitch/yaw)
- (2) Axis Outer (azimuth/elevation)

VIBRATION AND MOVEMENT

- Vibration Isolation: (6) Axis Passive (x/y/z/pitch/roll/yaw)
- AZ/EL Slew Rate: 0-60 degrees/second
- LOS Pan Range: Continuous 360°
- LOS Tilt Range: +90° to -120°

MCU STANDARD INTERFACES

- IR Hotlink™ Serial Digital Video interface
- 7 EO/IR Analog Video Channels
- Hand Controller Interface



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NSF-ISR
AS 9100-C/
ISO 9001:2008

L-3 Sonoma EO, Inc

428 Aviation Blvd.

Santa Rosa, CA 95403

Tel: 707.568.3000

Fax: 707.568.3300

Email: sales.sonomaeo@L-3com.com

www.L-3com.com/seo/

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