

L-3 Sonoma E0

MODEL 12 DS/TS 650™

LONG-RANGE IMAGING SYSTEM

SONOMA M12-650 IMAGING SYSTEM

Sonoma's most advanced M12-650 is designed to meet the needs of law enforcement, paramilitary and surveillance applications on both rotary and fixed-wing aircrafts.

Through superior gyro-stabilization and long-range infrared optics, the Enforcer provides high-performance detection, recognition, identification and tracking of persons and vehicles over long distances in daylight, in total darkness and in less-than-ideal weather conditions.

The small size and light weight of the M12-650 permits this system to be installed on a wide range of rotary and fixed-wing aircrafts where compact, high-performance systems are needed. Through the SmartLink Interface Unit (SIU), the M12-650 system is compatible with other equipment such as microwave downlook equipment, searchlights, auto trackers, moving maps, GPS, radar and intercom systems.

KEY FEATURES

- High-performance 4-axis active gyro-stabilization
- 35% better stabilization than the DS 200
- Small, compact and lightweight gimbal
- Large format IR camera with 47:1 optical zoom
- Low-light color camera with 62:1 optical zoom
- Matched FLIR and TV camera FOVs
- Autofocus for both IR and visible cameras
- Optional laser illuminator
- Plug and Play SmartLink Interface
- Seamless integration with WESCAM microwave downlink equipment
- Compatible with existing installed SIU and cable kit
- Available in NTSC and PAL
- Local Area Contrast Enhancement (LACE)



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WHEN THE MISSION MATTERS

SENSOR #1 - INFRARED

Spectral Range	3-5 μm InSb staring array		
Detector Type	Midwave InSb staring FPA		
Resolution	640 x 512 (NTSC or PAL)		
Cooling	Stirling cycle cooler		
Optical Fields of View (horizontal)	VNFOV 1.85° MFOV 3.7° MFOV 12.2°	WFOV 22° VWFOV 41°	
FOV Switching Time	<0.125 second		

SENSOR #2 - VISIBLE COLOR CAMERA

Camera Type	¼ HAD CCD		
Format	NTSC or PAL		
Resolution	470 TV lines (NTSC) / 460 TV lines (PAL)		
Minimum Illumination	0.1 lux @ f1.6		
Zoom Lens Type	36x continuous zoom		
Optical Fields of View (horizontal)	0.68°-21.77° continuous		

SENSOR #3 - LASER ILLUMINATOR (OPTIONAL)

Laser Type	Diode		
Wavelength	860 nm		
Modes	Continuous or pulsed		
Range (typical)	10 km		
Power Output	1W		

TURRET PHYSICAL CHARACTERISTICS

Gimbal	46 lbs (20.9 kg) 12 in (30.5 cm) D x 14.6 in (37.1 cm) H
SmartLink Interface Unit (SIU) - optional	9 lbs (4.1 kg) 13 in (33 cm) D x 10 in (25 cm) W x 4 in (10 cm) H
Hand Controller	1.6 lbs (0.7 kg) 8in (20 cm) x 4 in (10 cm) x 3 in (8 cm)
Cables: Standard Cable Kit	Control cable 25 ft (7.6 m), hand controller 6 ft (1.8 m) and power cable 15 ft (4.6 m)
Power (nominal)	28 Vdc, 10 amps (with no ancillary equipment operating)
Active Gyro-Stabilization	2-axis inner (pitch/yaw) 2-axis outer (azimuth/elevation) <25 μrads
Vibration Isolation	6-axis passive isolation (x/y/z/pitch/roll/yaw)
Line-of-Sight Jitter	<25 μrads rms
AZ/EL Slew Rate	Max. >60°/sec
AZ Range	Continuous 360°
EL Range	+75° to -90°

Local Area Contrast Enhancement (LACE)



Without LACE processing



With LACE processing

OPTIONS AVAILABLE

SmartLink SIU-800 with Upgrades	RS-232/422; ARINC 429; GPS; video enhancer; microwave downlink; MIL-STD-1553; moving map; Nightsun slave and more
Video Equipment	CRT or LCD monitors; 8mm/VHS/SVHS/DV/Betacam/ solid-state video recorders
Microwave Equipment	OmniPod, Skypod V, Skypod LC air-to-ground microwave system
Installation	FAA-certified installation brackets



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communications

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L-3. Headquartered in New York City, L-3 Communications employs over 64,000 people worldwide and is a prime contractor in aircraft modernization and maintenance, C³ISR (Command, Control, Communications, Intelligence, Surveillance and Reconnaissance) systems and government services. L-3 is also a leading provider of high technology products, subsystems and systems.